

Critical Release Notice

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The content of this customer NTP supports the
ISN09 (TDM) software release.

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Volume 21

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Volume 24

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Volume 28

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Volume 13

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Volume 4

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Volume 16

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DMS-100 Family

DMS-100 MMP

Translations Guide Volume 8 of 29

Screening and Routing Datafill Part 1 of 2

MMP15 and up Standard 03.01 May 2001

DMS-100 Family

DMS-100 MMP

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1 Introduction to Universal Translations

Understanding Universal translations

The international DMS-100 switch performs call processing by translating digit strings received over an originating agent. Digit translation can do the following operations:

- route the call to a terminating subscriber line, an outgoing trunk group, or another network
- determine the applicable treatment code to direct translations to the correct combination of announcements, tones, or both,
- recognize or replace the received digit string before outpulsing
- determine the parameters required for screening and billing

The universal translations tables translate the incoming digit string into functional digit segments. Translation of a digit segment involves the selection of a specific translations selector. These translations selectors are known as translations systems or XLASYS. Each translations system groups a different set of digit string modifiers.

Translations systems are made up of universal translations tables. These tables are organized to translate the incoming digit string in segments as described below.

Table 1-1 Universal translations systems (Sheet 1 of 2)

Digit string segment	XLASYS
Access code	AC
Prefix code	PX
Utility code	FT
Country code	CT
Foreign area code	FA
Office code	OFC

Table 1-1 Universal translations systems (Sheet 2 of 2)

Digit string segment	XLASYS
Ambiguous code	AM
Number services code	NSC

The access code (AC) translations system identifies codes dialed to access another network, an attendant, or a feature.

Note: Systems running GSF call processing use table XLA instead of the AC tables to perform feature access translations.

The prefix code (PX) translations system translates information about the type of call being dialed, for example, domestic or international direct distance dialing.

The utility code system can serve several needs. This system is called from office parameters and is used to perform such translations as validating announcements (called from office parameter CDIV_SDN_XLA) and call diversion destinations (called from office parameter CDS_DN_CHECK).

The utility code (FT) system can serve several needs. This system is used to perform such translations as validating announcements and call diversion destinations.

The country code (CT) translations system screens the country code digits received in the dialed numbers. Country codes are internationally accepted one-, two-, or three-digit numbers beginning with the zone digit.

The foreign area code (FA) translations system screens the area codes that are assigned to an area of the country. Whenever possible, these codes are distinguished from office codes so that if the called number is in the same area as the calling number, it is not necessary to dial the area code.

The office code (OFC) translations system is used if it is necessary to screen the dialed destination digits down to the local exchange code level to determine the route a call should take.

The ambiguous code (AM) translations system is used whenever the total number of digits dialed will affect the outcome of translations.

The number services code (NSC) translations system is used to access the NSE database to obtain special routing and call handling information.

Note: NCS tables are not available on systems running GSF call processing.

Signaling for Universal translations

Not applicable

Preparing to datafill Universal translations

The call processing for universal translations systems, except for the AM system, is made up of the following tables:

- HEAD
- CODE
- RTE

For example, to translate the prefix code digit segment of a received digit stream, the PX system is used. The following tables make up this translations system:

- PXHEAD
- PXCODE
- PXRTE

The ambiguous code translations system consists of only tables AMHEAD and AMCODE. These tables are divided into subtables, each XLANAME in table AMHEAD denotes the name of the subtable. Each subtable translates one ambiguous code.

The entry points into the universal translations tables are the translations system (XLASYS) and the translations name (XLANAME). Translations names are defined in the head tables and referenced from table TRKGRP, table LINEATTR (Integrated Business Network (IBN) trunks), head tables, code tables, route tables, or any combination of these.

For switches running legacy call processing, the entry points into the universal translations tables are the translations system (XLASYS) and the translations name (XLANAME). Translations names are defined in the head tables and referenced from table TRKGRP, table LINEATTR (Integrated Business Network (IBN) trunks), head tables, code tables, route tables, or any combination of these.

For switches running GSF call processing, the entry point into the universal translations tables is determined by the translations system (XLASYS) and

translations system name (XLANAME). Translations systems are defined in the head tables and are referenced from tables PEOPTS and PCOS.

Trunking for universal translations

Trunking for an international DMS-100 switch is defined by the following tables:

- call processing universal translations tables (HEAD, CODE, RTE)
- CLLI
- TRKGRP
- TRKSGRP
- TKSIGSYS
- TRKMEM

IBN trunks require additional datafill for the following tables:

- CUSTHEAD
- NCOS
- IBNXLA
- LINEATTR

For more information on these tables refer to the Data Schema section of this document.

Functional groups for Universal translations

Universal translations has no functional groups.

2 Introduction to Universal Call Processing

Understanding universal call processing translations

The international DMS-100 switch uses universal translations tables to accomplish the following tasks:

- identify the access codes and destination digits dialed by operating company subscribers and sends to treatment if required
- identify feature activation codes
- identify feature activation codes (for legacy call processing only, GSF call processing feature activation codes are defined in the public and business environment tables)
- modify or replace the destination digits received, if required, before transmitting them
- determine the outgoing route for a call
- perform re-routing of calls due to network congestion
- perform time-of-day routing
- identify the minimum and maximum number of digits expected for the first two stages of digit collection
- for legacy call processing, identify the minimum and maximum number of digits expected for the first two stages of digit collection. In GSF call processing, this function is performed by the digit collection mechanism.

For calls originating on a trunk, call processing is pointed to from the fields `XLASYS` and `XLANAME` in the entry in table `TRKGRP` for the originating trunk group. Call processing activity is based on the digit stream received over the originating trunk group.

For calls originating on a line, call processing is pointed to from the field `XNAME` in table `PCOS`.

Call processing for the DMS-100 switch with international software uses seven translations systems that interpret the access codes, prefix codes, and any ambiguous codes present in subscriber-dialed digits.

The universal translations systems (XLASYS) handle all call processing translation activities. Each of the translations systems is made up of three tables, except for the AM (ambiguous code) system, which has two tables.

The following is a list of all tables involved in the universal translations system.

Table 2-1 Universal translations tables

XLASYS	Function	Tables
AC	Access code	ACHEAD ACCODE ACRTE
PX	Prefix code	PXHEAD PXCODE PXRTE
FT	Utility code	FTHEAD FTCODE FTRTE
CT	Country code	CTHEAD CTCODE CTRTE
FA	Foreign area code	FAHEAD FACODE FARTE
OFC	Office code	OFCHEAD OFCCODE OFCRTE
AM	Ambiguous code	AMHEAD AMCODE
NSC	Number service code digits	NSCHEAD NSCCODE NSCRTE

Note: NSC tables are not available to systems running GSF call processing. As well, GSF systems use table XLA instead of the AC tables for feature access translations

Universal translation tables internal overview

The universal translation tables are organized to translate the incoming digit string in segments according to the order shown below.

Table 2-2 Digit string segment descriptions

Digit string segment descriptions	XLASYS	Tables
Access code digits	AC	ACHEAD, ACCODE
Utility code digits	FT	FTHEAD, FTCODE
Prefix code digits	PX	PXHEAD, PXCOD
Country code digits	CT	CTHEAD, CTCODE
Foreign area code digits	FA	FAHEAD, FACODE
Office code digits	OFC	OFCHEAD, OFCCODE
Number service code digits	NSC	NSCHEAD, NSCCODE
Ambiguous code	AM	AMHEAD, AMCODE

Note: The XLASYS translation stages described in this section (AC, CT, FA, FT, FA, NSC, OFC, and PX) are all identical in format and function. The mnemonic names and descriptive titles of each of the six XLASYS translation stages in this section are only a guideline for the translation of a typical digit string. The software treats each of the seven XLASYS translation stages identically.

Universal translation stages for ambiguous codes (tables AMHEAD and AMCODE) and directory numbers (DN tables DNHEAD and DNCODE) are also used for translating some segments of the incoming digit string and form an integral part of the universal digit translations scheme.

For GSF and legacy call processing, a universal translation stage for ambiguous codes (tables AMHEAD and AMCODE) is also used for translating some segments of the incoming digit string. For legacy call processing, another additional universal translation stage for variable length directory numbers (DN tables DNHEAD and DNCODE) is used for translating some segments of the incoming digit string.

A generalization of all numbering plans is shown below.

```

access code
+ prefix code
  + country code
    + foreign area code

```

+ office code
+ number service code
+ station number

Access code (XLASYS AC)

The access code is for access to another network, an attendant, or a feature. If a feature access code is dialed, the digits following do not correspond to the numbering plan. The access code of a network is usually required only when dialing into another network. For example, the user must dial an access code of 9 to access the local operating telephone company network from the a private tie line network.

Note: Systems running GSF call processing use table XLA instead of the AC tables for feature access translations.

Prefix code (XLASYS PX)

The prefix code gives information about the local operating telephone company type of call being dialed. For example, in North America there usually are prefix codes for domestic direct distance dialing (DDD), international DDD, domestic operator-handled calls, and international operator-handled calls. The default is usually not to dial the prefix code for a local call.

Country code (XLASYS CT)

Country codes are internationally agreed upon one-, two-, or three-digit numbers, beginning with the zone digit. Each country also has a pseudo country code, which is used for operator handled traffic. All country codes are uniquely defined. The country code can be omitted if dialing a destination inside the same country (and sometimes if the destination is in an adjacent country).

Foreign area code (XLASYS FA)

An area code is assigned to an area of the country. In North America, area codes are distinguishable from office codes so that if the called number is within the same area as the calling number, the area code is not dialed. (If it is dialed, it is ignored or blocked.)

Office code (XLASYS OFC)

An office code is an exchange within the area.

Number service code (XLASYS NSC)

A number service code is for service switching point (SSP) applications that require access to a database.

Note: NSC tables are not available to systems running GSF call processing.

Ambiguous code (XLASYS AM)

The ambiguous code universal translation tables are invoked when the total number of digits received in addition to the leading digits received determine which terminating route applies.

Utility code (XLASYS FT)

The utility code system can serve several needs. This system is called from office parameters and is used to perform such translations as validating announcements (called from office parameter CDIV_SDN_XLA) and call diversion destinations (called from office parameter CDS_DN_CHECK).

The utility code system can serve several needs. This system is used to perform such translations as validating announcements and call diversion destinations.

Line to Line

Ordering codes

Functional group ordering code: not applicable

Functionality ordering code: not applicable

Release applicability

TL03 and up

Prerequisites

Line to Line has no prerequisites.

Description

The call processing flow for a line to line call, followed by the associated datafill, is shown in the "Translations table flow for Line to Line calls" section.

Operation

In table LINEATTR, if subfield XLASYS is set to PX, translations enters the universal environment starting with table PXHEAD.

If no selector is defined in table PXHEAD (subfield OSEL) translations continues to table PXCORE. The XLANAME is also identified in this table and corresponds to the entries in the DN tables.

Translations continues to look for a tuple match in table PXCORE. The datafill for table PXCORE allows for a route to be specified. This route can be either to other universal translations tables (PXRTE), to other translations tables (DNRTE), or to a treatment. If field XLASEL is set to DNRTE, table DNRTE is accessed and translations goes directly to table DNINV. If XLASEL RTE is selected, translations must go through tables PXRTE and OFRT (RTESEL equals DN) before entering DNINV.

From DNINV, translations continues to table DNROUTE where field DNSEL determines the routing for the call. These routes include routing to a directory number (DN), to a treatment, establishing a meet-me conference, routing to a synonym DN, or establishing of services. The call finally gets sent to the requested DN.

The following table lists the datafill content used in the flowchart.

Line to Line (continued)

Translations table flow

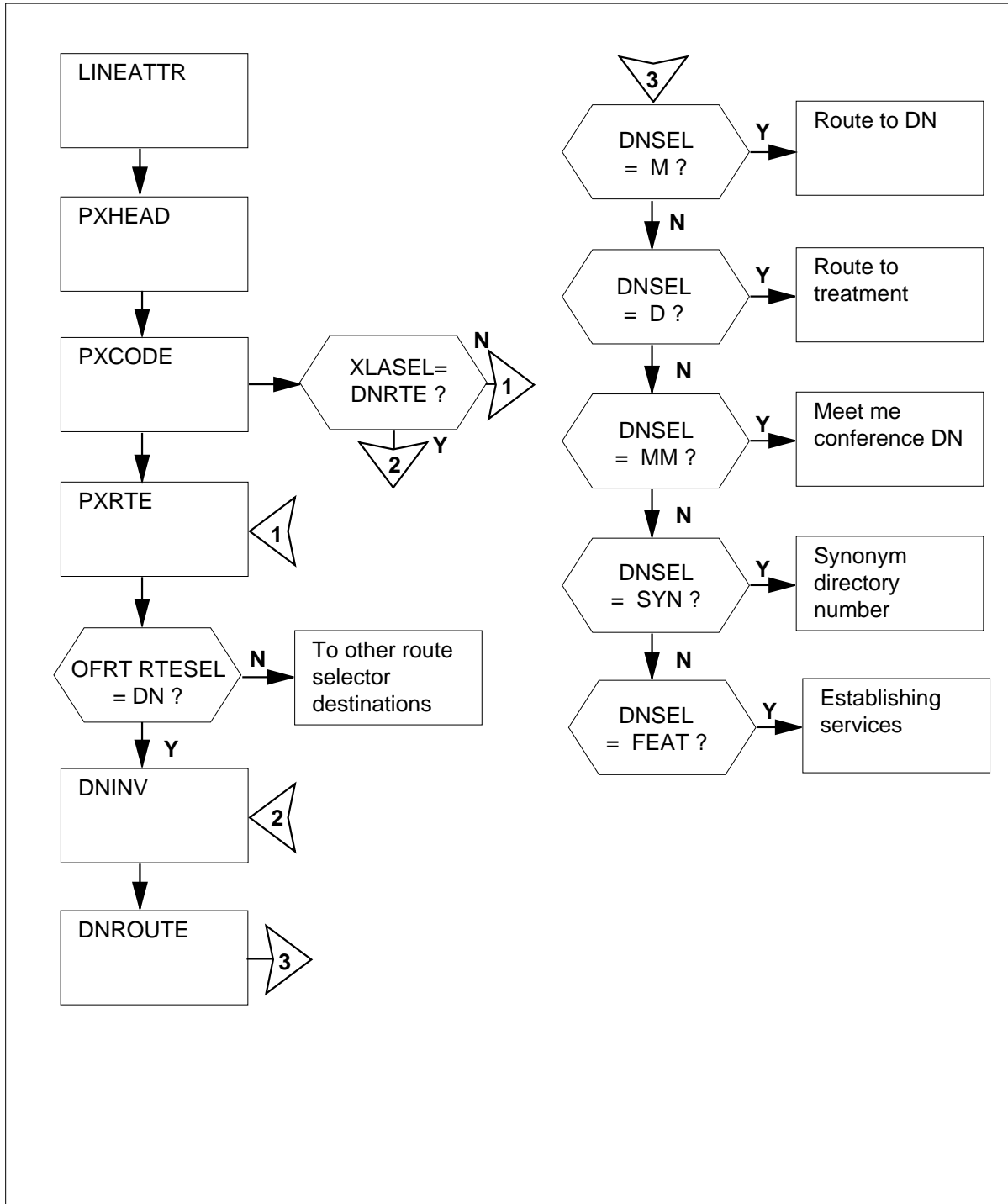
The Line to Line translations tables are described in the following list:

- LINEATTR
- PXHEAD
- PXCOD
- PXRTE
- OFRT
- DNINV
- DNROUTE

The Line to Line call translation process is shown in the flowchart that follows. Refer to the "Table flow for call processing data flow" in the "Universal call processing" section of this document for a general translations overview.

Line to Line (continued)

Table flow for Line to Line calls



Line to Line (continued)

The following table lists the datafill content used in the flowchart.

Datafill example for local calls Line to Line

Datafill table	Example data
LINEATTR	98 IBN NONE NT NSCR 0 003 NPRT NLCA NONE 0 NIL NILSFC NILLATA 0 PX JAL NIL 00 N
PXHEAD	JAL SDFLT DFOP (MM 7 9) (CLSSS LCL) \$ NOCON STD
PXCODE	JAL 116 116 RTE (PF 3) (MM 7 8) (DEST 3)
PXRTE	JAL 3 T OFRT
OFRT	501 DN 003 116
DNINV	003 116 2000 M JAL 0 10 N
DNROUTE	003 116 2000 M JAL 0 10 N

Limitations and restrictions

The following limitations and restrictions apply to Line to Line:

- Table DNINV is a read-only table. After datafilling the DNROUTE table, the DN is also be added to table DNINV.
- In table DNROUTE, tuples can be added if the value of field OFCCODE is \$, as specified in table TOFCNAME. The tuples cannot contain STNCODEs whose leading digits are an OFCCODE in the same area code.
- In table DNROUTE, ambiguity within the STNCODEs of one TOFC is not permitted. For example, 8594 and 859 cannot be specified as STNCODEs within one TOFC.
- In the xxCODE tables, adding or changing a tuple affects all digit combinations between fields FROMD and TOD. However, the DELETE command deletes only the tuple at field FROMD.
- In the xxCODE tables, due to the way the FROM and TO digit key is implemented, the operation of table control requires additional explanation. If a tuple is datafilled such that the value in field TOD is greater than the value in field FROMD (for example field FROMD is set to 3 and field TOD is set to 8) and the user positions on the tuple, the tuple is displayed as if only those digits are datafilled as the key.

In this example, the user positions on the tuple with fields FROMD and TOD both are equal to 5. The tuple is displayed with both fields equal to 5. The information is being requested for the given key. If the user then displays the previous tuple, fields FROMD and TOD contain the digits

Line to Line (continued)

originally datafilled before the current FROMD digit. In this example, the FROMD and TOD digits are 3 and 8. If the user displays the next tuple, the digits following the currently displayed TOD field are displayed. They are 5 and 8 in this example.

Interactions

Line to Line has no functionality interactions.

Activation/deactivation by the end user

Line to Line requires no activation or deactivation by the end user.

Billing

Line to Line does not affect billing.

Station Message Detail Recording

Line to Line does not affect Station Message Detail Recording.

Datafilling office parameters

The following table shows the office parameters used by Line to Line. For more information about office parameters, refer to *Office Parameters Reference Manual*.

Office parameters used by Line to Line

Table name	Parameter name	Explanation and action
OFCENG	ACTIVE_DN_SYSTEM	This parameter specifies the type of directory numbers (DN) that can be used in an office. Enter UNIVERSAL.

Datafill sequence

The following table lists the tables that require datafill to implement Line to Line. The tables are listed in the order in which they are to be datafilled.

Datafill tables required for Line to Line (Sheet 1 of 2)

Table	Purpose of table
PXHEAD	The prefix code head table aids in determining the type of call being dialed. For example, domestic or international direct distance dialing.
PXCODE	The prefix code table aids in determining the type of call being dialed.
PXRTE	The prefix code route routes the call being dialed.

Line to Line (continued)**Datafill tables required for Line to Line (Sheet 2 of 2)**

Table	Purpose of table
OFRT	The office route table is used if an originating call is being translated and a preceding stage identifies a route reference index.
DNINV	The directory number inventory table contains the data for all assigned and unassigned DNs, including the DNs in table DNROUTE.
DNROUTE	The directory number route table lists information for writable DNs in the switch (such as a DN that identifies a route), rather than line equipment numbers (LEN). Table DNROUTE associates a DN with a specific trunk group member.
LINEATTR	The line attribute index table assigns line attributes and points calls to appropriate screening and routing tables.

Datafilling table PXHEAD

The following table shows the datafill specific to Line to Line for table PXHEAD. Only those fields that apply directly to Line to Line are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table PXHEAD (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
XLANAME		alphanumeric (1 to 8 characters)	Translator name. Enter 1- to 8-alphanumeric characters to identify the universal translator.
DFLT		see subfields	Default. This field consists of subfield DFLTSEL. DFLT is used when translations find that the dialed digits are not datafilled in the code table associated with this head table.
	DFLTSEL	DFLT or SDFLT	Default selector. Enter SDFLT, if a standard default is required for dialed digits not found in the code table. The standard default is TRMT OFC VACT. Go to field DFOP. Enter DFT if the standard default is not correct and datafill refinement XLASEL If the entry in field DFLTSEL is DFLT, complete subfields XLASEL and OSEL.

Line to Line (continued)**Datafilling table PXHEAD (Sheet 2 of 3)**

Field	Subfield or refinement	Entry	Explanation and action
	XLASEL	CONT	Translations selector. Enter CONT to indicate that further translations screening is required to determine the route a call should take.
	OSEL	XLT	Option selector. Enter XLT to allow the next translations system and translations name used to be overridden by specifying a new translations system (AC, PX, FA, CT, OFC, AM, FT, or NIL), a new translations name, or both.
	XLASYS	AC, AM, CT, DN, FA, FT, NSC, OFC, PX or NIL	<p>Translation system. If subfield OSEL is set to XLT datafill this refinement. Enter the next translation system to use, followed by a space, then datafill refinement XLANAME.</p> <ul style="list-style-type: none"> • AC (access) • AM (ambiguous) • CT (country) • DN (directory number) • FA (foreign area code) • FT (utility) • NSC (number service code) • OFC (office) • PX (prefix) <p>Note: NIL is not a valid entry. NIL is only used to satisfy internal software functionality.</p>
	XLANAME	alphanumeric (1 to 8 characters)	Translation name. Enter 1- to 8-alphanumeric characters to identify the universal translator.
	DFOP	NODFOP	Default options. Enter NODFOP if there are no default options.

Line to Line (continued)**Datafilling table PXHEAD (Sheet 3 of 3)**

Field	Subfield or refinement	Entry	Explanation and action
	CON	NOCON	Consume digits. Enter NOCON if digits are not to be consumed (the next table is indexed using the same digits as the current table, except the prefix digits).
	MAXIDX	9 or STD	Maximum index. Enter STD or 9 if the translation tables are to be indexed by dialed digits in the range of 0 to 9. The default is 9.

Datafill example for table PXHEAD

The following example shows sample datafill for table PXHEAD.

MAP display example for table PXHEAD

XLANAME		DFLT
		DFOP
CON	MAXIDX	
<hr/>		
JAL		SDFLT
		DFOP(MM 7 9) (CLASS LCL) \$
NOCON	STD	\$

Line to Line (continued)**Datafilling table PXC0DE**

The following table shows the datafill specific to Line to Line for table PXC0DE. Only those fields that apply directly to Line to Line are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table PXC0DE (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
XLANAME		alphanumeric (1 to 8 characters)	Translator name. Enter 1- to 8-alphanumeric characters to specify the translator name from the corresponding head table.
FROMD		vector of 1 to 11 digits	From digit. Enter 1 to 11 digits to identify either a single number or the first number in a block of consecutive numbers that have the same translations requirements as described in field XLASEL and its refinements.
TOD		vector of 1 to 11 digits	To digit. If field FROMD represents a single number, enter the same number here. If field FROMD represents the first number of a block of consecutive numbers, enter the last number in the block.
XLADATA		see subfield	Universal translation data. This field consists of subfield XLASEL and its refinements.
	XLASEL	RTE	Translations selector. Enter RTE.
	OSEL	DEST, PF, or MM	Option selector. Enter the option selector.
	PFDIGS	0 to 24	Number of prefix digits. If the entry in subfield OSEL is PF, datafill this refinement. Enter the number of prefix digits. If prefix digits were identified in a previous table, then this number is added to the existing value. Prefix digits are not stored in call detail records, outputted or used to index the next translation table.
	DEST	0 to 1023	Destination route list index. Enter the number in the route list of the same translation system to which the call is routed.

Line to Line (continued)**Datafilling table PXC CODE (Sheet 2 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
	MIN	0 to 30	Minimum digits. If the entry in subfield OSEL is MM, datafill this refinement. Enter the minimum number of digits expected. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.
	MAX	0 to 30	Maximum digits. If the entry in subfield OSEL is MM, datafill this refinement. Enter the maximum number of digits expected. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.

Datafill example for table PXC CODE

The following example shows sample datafill for table PXC CODE.

MAP display example for table PXC CODE

XLANAME	FROMD	TOD	XLADATA
JAL	116	116	RTE (PF 3) (MM 7 8) (DEST 3) \$

Line to Line (continued)

Datafilling table PXRTE

The following table shows the datafill specific to Line to Line for table PXRTE. Only those fields that apply directly to Line to Line are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table PXRTE

Field	Subfield or refinement	Entry	Explanation and action
XLANAME		alphanumeric (1 to 8 characters)	Translator name. Enter 1- to 8-alphanumeric characters to identify the universal translator.
RTEREF		0 to 1023	Route reference. Enter the route reference index that corresponds to the destination (from option DEST) used in table ACCODE for the given XLANAME.
RTELIST		see subfield	Route list. This field consists of subfield RTESEL and refinements dependent on the value in subfield RTESEL. The route list consists of up to eight routes, where a route has a selector and data.
	RTESEL	T	Default selector. Enter T (table name route) and datafill refinements TABNAME, XLASYS, XLANAME, and RTEREF, if the route is to a route table.
	TABNAME	OFRT, OFR2, OFR3, or OFR4	Table name. Enter the respective office route table name.
	INDEX	0 to 1023	Route reference index. Enter the index of the route table to which the call is transferred.

Datafill example for table PXRTE

The following example shows sample datafill for table OFCHEAD.

Line to Line (continued)**MAP display example for table PXRTE**

XLANAME	RTEREF	RTELIST
JAL	3	T OFRT 501 \$

Datafilling table OFRT

The following table shows the datafill specific to Line to Line for table OFRT. Only those fields that apply directly to Line to Line are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table OFRT

Field	Subfield or refinement	Entry	Explanation and action
RTE		1 to 1023 or blank	Route reference index. If the record is the first in the route list, enter the route reference number assigned to the route list. Otherwise, leave the entry blank.
RTELIST		see subfield	Route list. This field consists of subfield RTESEL and refinements dependent on the value in subfield RTESEL. The route list consists of up to eight routes, where a route has a selector and data.
	RTESEL	DN	Route selector. Enter DN.
	SNPA	numeric	Serving NPA. Enter the serving numbering plan area (NPA) of the DN to which the call terminates. If field FROMD represents the first number of a block of consecutive numbers, enter the last number in the block.
	OFC	numeric (up to 7 digits)	Office (NNX) code. Enter an office code of up to seven digits that the DN uses to terminate the call.

Line to Line (continued)

Datafill example for table OFRT

The following example shows sample datafill for table OFRT.

MAP display example for table OFRT

RTE	RTELIST
501	DN 003 116 \$

Datafilling table DNINV

The following table shows the datafill specific to Line to Line for table DNINV. Only those fields that apply directly to Line to Line are shown. For a description of the other fields, refer to the data schema section of this document.

Note: Table DNINV is a read-only table. The DN is added to DNINV after table DNROUTE is datafilled.

Datafilling table DNINV (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
AREACODE		0 to 9999999 (1 to 7 digits)	Area code. The area code identifies a major geographical area served by the switch. If office parameter ACTIVE_DN_SYSTEM in table OFCENG is set to North American, the area code must be three digits long.
OFCCODE		0 to 9999999 (1 to 7 digits)	Office code digit register. The office code is a subregion of the area code. If office parameter ACTIVE_DN_SYSTEM in table OFCENG is set to North American, the area code must be three digits long. The office code must be specified in table TOFCNAME.

Line to Line (continued)

Datafilling table DNINV (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
STNCODE		0 to 99999999 (1 to 8 digits)	<p>Station code. The station code identifies a unique station within the terminating office (TOFC). If office parameter ACTIVE_DN_SYSTEM in table OFCENG is set to North American, the area code must be one or four digits in length. If one digit is entered, it is treated as a D-digit, where the D-digit represents the fourth digit in the format ABC-DEFG.</p> <p>A D-digit is given the appropriate DN result. For example, if area code 613 and office code 226 are entered, and if 5 is entered as the station code, any calls to a number beginning with 6132265 are automatically routed to the specified treatment. If 5 is the D-digit, and DNROUTE is datafilled as 613 226 5 D OPRT, any numbers for 6132265 are routed to the operator treatment as set in table TMTCNTL.</p>
DNRESULT		see subfield	Directory number result. This field consists of subfield DN_SEL.
	DN_SEL	D, M, MEM, MM, SYN, T, or FEAT	<p>Directory number selector. Enter one of the following required DN selectors and datafill the appropriate refinements:</p> <ul style="list-style-type: none"> • D (treatment) • M (listed DN) • MEM (direct routing to trunk member) • MM (meet me conference) • SYN (synonym DN) • T (route list) • FEAT features)

Datafill example for table DNINV

The following example shows sample datafill for table DNINV.

Line to Line (continued)

MAP display example for table DNINV

AREACODE	OFCCODE	STNCODE	DNRESULT
003	116	2000	M JAL 0 10 N

Datafilling table DNROUTE

The following table shows the datafill specific to Line to Line for table DNROUTE. Only those fields that apply directly to Line to Line are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table DNROUTE (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
AREACODE		0 to 9999999 (1 to 7 digits)	Area code. The area code identifies a major geographical area served by the switch. If office parameter ACTIVE_DN_SYSTEM in table OFCENG is set to North American, the area code must be three digits long.
OFCCODE		0 to 9999999 (1 to 7 digits)	Office code digit register. The office code is a subregion of the area code. If office parameter ACTIVE_DN_SYSTEM in table OFCENG is set to North American, the area code must be three digits long. The office code must be specified in table TOFCNAME.

Line to Line (continued)**Datafilling table DNROUTE (Sheet 2 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
STNCODE		0 to 99999999 (1 to 8 digits)	<p>Station code. The station code identifies a unique station within the terminating office (TOFC). If office parameter ACTIVE_DN_SYSTEM in table OFCENG is set to North American, the area code must be one or four digits in length. If one digit is entered, it is treated as a D-digit, where the D-digit represents the fourth digit in the format ABC-DEFG.</p> <p>A D-digit is given the appropriate DN result. For example, if area code 613 and office code 226 are entered, and if 5 is entered as the station code, any calls to a number beginning with 6132265 are automatically routed to the specified treatment. If 5 is the D-digit, and DNROUTE is datafilled as 613 226 5 D OPRT, any numbers for 6132265 are routed to the operator treatment as set in table TMTCNTL.</p>
DNRESULT		see subfield	Directory number result. This field consists of subfield DN_SEL.
	DN_SEL	D, M, MEM, MM, SYN, T, or FEAT	<p>Directory number selector. Enter one of the following required DN selectors and datafill the appropriate refinements:</p> <ul style="list-style-type: none"> • D (treatment) • M (listed DN) • MEM (direct routing to trunk member) • MM (meet me conference) • SYN (synonym DN) • T (route list) • FEAT (features)

Datafill example for table DNROUTE

The following example shows sample datafill for table DNROUTE.

Line to Line (continued)

MAP display example for table DNROUTE

AREACODE	OFCCODE	STNCODE	DNRESULT
003	116	2000	M JAL 0 10 N \$

Datafilling table LINEATTR

The following table shows the datafill specific to Line to Line for table LINEATTR. Only those fields that apply directly to Line to Line are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table LINEATTR

Field	Subfield or refinement	Entry	Explanation and action
LNATTIDX		0 to 31 999	Line attribute index. Enter the index into table LINEATTR.
LCC		alphanumeric (up to 8 characters) or NLCC	Line class code. Enter the line class code (LCC) assigned to the line attribute index. The LCC of an existing tuple cannot be changed. If there is no LCC enter NLCC.
IXNAME		see subfields	International translations system start. This field consists of subfields XLASYS and XLANAME.
	XLASYS	PX	Translation system. Enter OFC.
	XLANAME	alphanumeric (1 to 8 characters)	Translation name. Enter 1- to 8-alphanumeric characters to identify the universal translator.

Datafill example for table LINEATTR

The following example shows sample datafill for table LINEATTR.

Line to Line (continued)**MAP display example for table LINEATTR**

LNATTIDX	LCC	CHGCLSS	COST	SCRNCL	LTG	STS	PRTNM	LCANAME
ZEROMPOS	TRAFSNO							
MRSA	SFC	LATANM	MDI		IXNAME	DGCLANME	FANIDIGS	
		RESINF					OPTIONS	
98		IBN NONE	NT	NSCR	0	003	NPRT NLCA	
NONE	0							
NIL	NILSFC	NILLATA	0		PX	JAL	116	
116					RTE (PF 3)	(MM 7 8)	(DEST 3)	

Translation verification tools

The following example shows the output from TRAVER when it is used to verify Line to Line.

Line to Line (continued)

TRAVER output example for Line to Line

```
>TRAVER L 1162000 1162001 B
TABLE KSETLINE
REM1 02 0 19 01 1 ACD Y 1162000 JAL 0 0 003 INCALLS N JAL_INFORMATION 1
N (MSBI) (ACDNR) $
TABLE DNATTRS
003 116 2000
(PUBLIC (NONUNIQUE) $) $ $
TABLE DNGRPS
TUPLE NOT FOUND
TABLE KSETFEAT
TUPLE NOT FOUND
TABLE CUSTSTN
TUPLE NOT FOUND
TABLE OFCVAR
AIN_OFFICE_TRIGGRP NIL
AIN ORIG ATTEMPT TDP: NO SUBSCRIBED TRIGGER.
TABLE NCOS
JAL 0 0 0 NTTCOS $
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND
DIGCOL
JAL NXLA JALXLA JALXLA 1 ABC
TABLE DIGCOL
TUPLE NOT FOUND
DEFAULT IS RPT
NCOS PRELIM XLA NAME IS NIL. GO TO NEXT XLA NAME.
CUST PRELIM XLA NAME IS NIL. GO TO NEXT XLA NAME.
TABLE IBNXLA: XLANAME JALXLA
JALXLA 116 NET N N N 0 N POTS N Y DOD N 98 NONE $
TABLE DIGCOL
POTS SPECIFIED: POTS DIGIT COLLECTION
```

-continued-

Line to Line (end)**TRAVER output example for Line to Line**

```

TABLE LINEATTR
98 IBN NONE NT NSCR 0 003 NPRT NLCA NONE 0 NIL NILSFC NILLATA 0 PX JAL
NIL 00 N
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE PXHEAD
JAL SDFLT DFOP (MM 7 9) ( CLASS LCL) $ NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:                1162001
TABLE PXCDE
JAL 116 116 RTE (PF 3) (MM 7 8) (DEST 3) $
TABLE PXRTE
KEY:      JAL      3
.  T OFRT 501
.  .  501 DN 003 116
.  .  . EXIT TABLE OFRT
EXIT TABLE PXRTE

+++TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

1 LINE                0031162001                ST

TREATMENT ROUTES.  TREATMENT IS: GNCT
1 T60
2 LKOUT

+++ TRAVER: SUCCESSFUL CALL TRACE +++

                                -end-

```

SERVORD

Line to Line does not use SERVORD.

Line to Treatment

Ordering codes

Line to Treatment has no ordering codes.

Release applicability

TL03 and up

Prerequisites

Line to Treatment has no prerequisites.

Description

The call processing flow for a line to treatment call, followed by the associated datafill is shown in the "Translations table flow for Line to Treatment calls" section.

Operation

In table LINEATTR subfield XLASYS is set to PX, therefore translations enters the universal environment starting with table PXHEAD.

If DFLT is entered in field DFLTSEL in table PXHEAD, and field XLASEL is datafilled with TRMT, translations goes directly to subtable TMTCNTL.TREAT. If SDFLT is entered in field DFLTSEL, the call is sent to standard defaults, such as VACT or TRMT.

If no route or treatment is specified in table PXHEAD, translations will continue to table PXCOD. From table PXCOD, there are two paths the call may take to reach treatment. If field XLASEL is set to RTE, table PXRTE is accessed. However, if field XLASEL is set to TRMT, the call is directed to table TMTCNTL.TREAT.

In table PXRTE, if the RTESEL field is set to T (table) and OFRT or IBNRTE are specified, the call is directed to one of these tables and sent to treatment from this point.

Translations table flow for Line to Treatment calls

Note: The list follows the correct order of call translations.

The Line to Treatment translations tables are described in the following list:

- LINEATTR
- PXHEAD

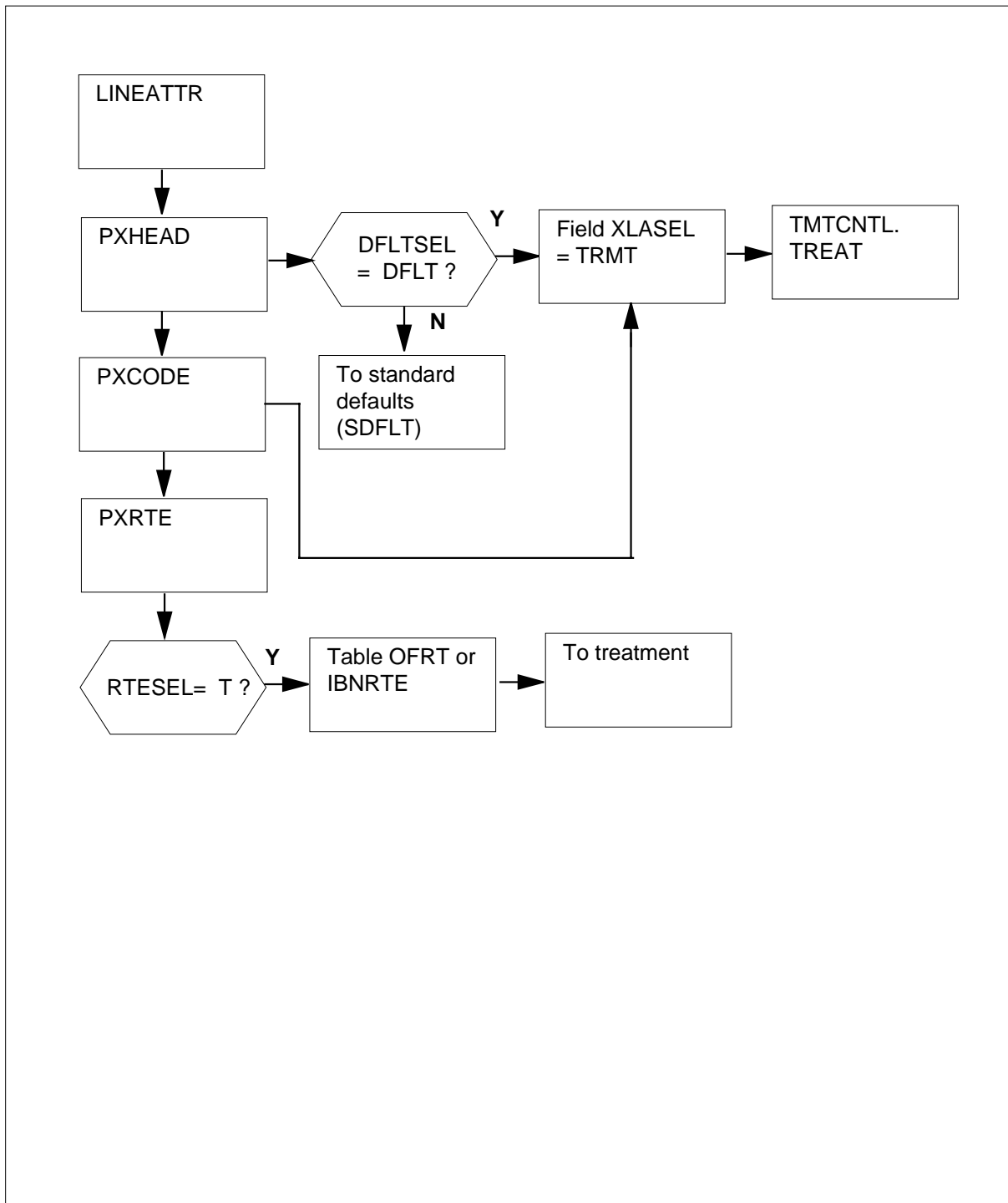
Line to Treatment (continued)

- PXCODE
- TMTCNTL.TREAT
- PXRTE
- OFRT
- IBNRTE

Local calls translation process is shown in the flowchart that follows.

Line to Treatment (continued)

Table flow for Line to Treatment calls



Line to Treatment (continued)

The following table lists the datafill content used in the flowchart.

Datafill example for local calls Line to Treatment

Datafill table	Example data
LINEATTR	98 IBN NONE NT NSCR 0 003 NPRT NLCA NONE 0 NIL NILSFC NILLATA 0 PX JAL NIL 00 N
PXHEAD	JAL SDFLT DFOP (MM 7 9) (CLSSS LCL) \$ NOCON STD
PXCODE	JAL 88 88 TRMT (OFC BLDN)
TMTCNTL. TREAT	BLDN N S T60
PXRTE	JAL 3 T OFRT 501
OFRT	1 TRMT BNCI
IBNRTE	1 TRMT BNCI

Limitations and restrictions

The following limitations and restrictions apply to Line to Treatment:

- In the xxCODE tables, adding or changing a tuple affects all digit combinations between fields FROMD and TOD. However, the DELETE command deletes only the tuple at field FROMD.
- In the xxCODE tables, because of the way the FROM and TO digit key is implemented, the operation of table control requires additional explanation. If a tuple is datafilled such that the value in field TOD is greater than the value in field FROMD (for example field FROMD is set to 3 and field TOD is set to 8) and a user positions on a tuple with fields FROMD and TOD within the datafilled range, the tuple is displayed as if only those digits are datafilled as the key. In this example, the user positions on the tuple with fields FROMD and TOD both equal to 5. The tuple is displayed with both fields equal to 5. The information is being requested for the given key. If the user then displays the previous tuple, fields FROMD and TOD contain the digits originally datafilled before the current FROMD digit. In this example, the FROMD and TOD digits are 3 and 8. If the user no displays the next tuple, the digits following the currently displayed TOD field are displayed. They are 5 and 8 in this example.

Billing

Line to Treatment does not affect billing.

Line to Treatment (continued)

Datafilling office parameters

The following table shows the office parameters used by Line to Treatment. For more information about office parameters, refer to *Office Parameters Reference Manual*.

Office parameters used by Line to Treatment

Table name	Parameter name	Explanation and action
OFCVAR	AIN_OFFICE_TRIGGRP	This parameter is used to subscribe trigger behaviors for an office. The range of values is that of field AINGRP in table TRIGGRP. This parameter provides a reference to table TRIGGRP. The default is NIL.

Datfill sequence

The following table lists the tables that require datfill to implement Line to Treatment. The tables are listed in the order in which they are to be datafilled.

Datfill tables required for Line to Treatment

Table	Purpose of table
PXHEAD	The prefix code head table aids in determining the type of call being dialed. For example, domestic or international direct distance dialing.
PXCODE	The prefix code table aids in determining the type of call being dialed.
TMTCNTL. TREAT	The treatment control treatment subtable is used by the operating company to define the codes, announcements, states or combinations of these that are returned to the originator of a call if a specified treatment code is encountered during call translation.
PXRTE	The prefix code route routes the call being dialed.
OFRT	The office route table is used if an originating call is being translated and a preceding stage identifies a route reference index.
IBNRTE	The IBN route table consists of route lists identified by route reference index numbers.
LINEATTR	The line attribute index table assigns line attributes and points calls to appropriate screening and routing tables.

Datafilling table PXHEAD

The following table shows the datfill specific to Line to Treatment for table PXHEAD. Only those fields that apply directly to Line to Treatment are

Line to Treatment (continued)

shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table PXHEAD

Field	Subfield or refinement	Entry	Explanation and action
XLANAME		alphanumeric (1 to 8 characters)	Translator name. Enter the universal translator name.
DFLT		see subfields	Default. This field consists of subfield DFLTSEL. DFLT is used when translations find that the dialed digits are not datafilled in the code table associated with this head table.
	DFLTSEL	DFLT or SDFLT	Default selector. Enter SDFLT, if a standard default is required for dialed digits not found in the code table. The standard default is TRMT OFC VACT. Go to field DFOP. Enter DFLT if the standard default is not correct and datafill refinement XLASEL. If the entry in field DFLTSEL is DFLT, complete subfields XLASEL and OSEL.
	XLASEL	TRMT	Translations selector. Enter TRMT to indicate that the call should route to treatment.
	OSEL	OFC	Option selector. Enter OFC.
	OFC	alphanumeric (1 to 4 characters)	Office treatment. Enter a treatment name that is contained in the office treatment subtable TMTCNTL.TREAT.

Datafill example for table PXHEAD

The following example shows sample datafill for table PXHEAD.

Line to Treatment (continued)

MAP display example for table PXHEAD

XLANAME		DFLT
		DFOP
CON	MAXIDX	
<hr/>		
JAL		SDFLT
		DFOP (MM 7 9) (CLASS LCL)
NCON	STD \$	

Datafilling table PXCORE

The following table shows the datafill specific to Line to Treatment for table PXCORE. Only those fields that apply directly to Line to Treatment are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table PXCORE (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
XLANAME		alphanumeric (1 to 8 characters)	Translator name. Enter the translator name from the corresponding head table.
FROMD		numeric (1 to 11 digits)	From digit. Enter 1 to 11 digits to identify either a single number or the first number in a block of consecutive numbers that have the same translations requirements as described in field XLASEL and its refinements.
TOD		numeric	To digit. If field FROMD represents a single number, enter the same number here. If field FROMD represents the first number of a block of consecutive numbers, enter the last number in the block.
XLADATA		see subfield	Universal translation data. This field consists of subfield XLASEL and its refinements.
	XLASEL	TRMT or RTE	Translations selector. Enter TRMT or RTE.
	OSEL	OFC or DEST	Option selector. Enter OFC or DEST.

Line to Treatment (continued)**Datafilling table PXCOD** (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	OFC	alphanumeric (1 to 4 characters)	Office treatment. Enter a treatment name that is contained in the office treatment subtable TMTCNTL.TREAT.
	DEST	numeric(0 to 1023)	Destination route list index. Enter the number in the route list of the same translation system to which the call is routed.

Datafill example for table PXCOD

The following example shows sample datafill for table PXCOD.

MAP display example for table PXCOD

XLANAME	FROMD	TOD	XLADATA
JAL	88	88	TRMT (OFC BLDN) \$

Datafilling subtable TMTCNTL.TREAT

The following table shows the datafill specific to Line to Treatment for subtable TMTCNTL.TREAT. Only those fields that apply directly to Line to Treatment are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table PXCOD (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
TREATMT		alphanumeric (1 to 4 characters)	Treatment name. Enter the treatment name.
LOG		Y or N	Log. Enter Y (yes) for a trunk of line message 138 printout each time translation is routed to a treatment. Otherwise, enter N (no).

Line to Treatment (continued)

Datafilling table PXCOD (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	FSTRSEL	S	First route selector. Enter the first route selector S.
	CLLI	alphanumeric (1 to 16 characters)	Common language location identifier. Enter the CLLI of the tone to which translation routes.

Datafill example for subtable TMTCNTL.TREAT

The following example shows sample datafill for subtable TMTCNTL.TREAT

MAP display example for subtable TMTCNTL.TREAT

TREATMT	LOG	FSTRTE
BLDN	N	S T60\$

Datafilling table PXRTE

The following table shows the datafill specific to Line to Treatment for table PXRTE. Only those fields that apply directly to Line to Treatment are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table PXRTE (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
XLANAME		alphanumeric (1 to 8 characters)	Translator name. Enter the universal translator name.
RTREF		0 to 1023	Route reference. Enter the route reference index that corresponds to the destination (from option DEST) used in table ACCODE for the given XLANAME.

Line to Treatment (continued)**Datafilling table PXRTE (Sheet 2 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
RTELIST		see subfield	Route list. This field consists of subfield RTESEL and refinements dependent on the value in subfield RTESEL. The route list consists of up to eight routes, where a route has a selector and data.
	RTESEL	T	Default selector. Enter T (table name route) and datafill refinements TABNAME, XLASYS, XLANAME, and RTEREF, if the route is to a route table.
	TABNAME	OFRT, OFR2, OFR3, OFR4, IBNRTE, IBNRT2, IBNRT3, or IBNRT4	Table name. Enter the respective office route table name.
	INDEX	0 to 1023	Route reference index. Enter the index of the route table to which the call is transferred.

Datafill example for table PXRTE

The following example shows sample datafill for table OFCHEAD.

MAP display example for table PXRTE

XLANAME	RTEREF	RTELIST
JAL	3	T OFRT 501 \$

Datafilling table OFRT

The following table shows the datafill specific to Line to Treatment for table OFRT. Only those fields that apply directly to Line to Treatment are shown.

Line to Treatment (continued)

For a description of the other fields, refer to the data schema section of this document.

Datafilling table OFRT

Field	Subfield or refinement	Entry	Explanation and action
RTE		1 to 1023 or blank	Route reference index. If the record is the first in the route list, enter the route reference number assigned to the route list. Otherwise, leave the entry blank. An entry outside of this range is invalid.
RTELIST		see subfield	Route list. This field consists of subfield RTESEL and refinements dependent on the value in subfield RTESEL. The route list consists of up to eight routes, where a route has a selector and data.
	RTESEL	TRMT	Route selector. Enter TRMT.
	RTETRMT	alphanumeric	Route treatment. Enter the required treatment routed to. A list of valid treatments can be found in subtable TMTCNTL.TREAT.

Datafill example for table OFRT

The following example shows sample datafill for table OFRT.

MAP display example for table OFRT

RTE	RTELIST
1	(TRMT BNCI)\$

Datafilling table IBNRTE

The following table shows the datafill specific to Line to Treatment for table IBNRTE. Only those fields that apply directly to Line to Treatment are shown.

Line to Treatment (continued)

For a description of the other fields, refer to the data schema section of this document.

Datafilling table IBNRTE

Field	Subfield or refinement	Entry	Explanation and action
RTE		1 to 1023 or blank	IBN route reference index. Enter the route reference number that is assigned to the route list.
	IBNRTSEL	TRMT	IBN route selector. Enter TRMT.
	RTETRMT	alphanumeric (1 to 4 characters)	Route treatment. Enter the treatment the switch has selected to route the call.

Datafill example for table IBNRTE

The following example shows sample datafill for table IBNRTE.

MAP display example for table IBNRTE

```
RTE  RTELIST
-----
1  (TRMT  BNCI) $
```

Datafilling table LINEATTR

The following table shows the datafill specific to Line to Treatment for table LINEATTR. Only those fields that apply directly to Line to Treatment are

Line to Treatment (continued)

shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table LINEATTR

Field	Subfield or refinement	Entry	Explanation and action
LNATTIDX		0 to 31 999	Line attribute index. Enter the index into table LINEATTR.
LCC		alphanumeric (up to 8 characters) or NLCC	Line class code. Enter the line class code (LCC) assigned to the line attribute index. The LCC of an existing tuple cannot be changed. If there is no LCC enter NLCC.
IXNAME		see subfields	International translations system start. This field consists of subfields XLASYS and XLANAME.
	XLASYS	PX	Translation system. Enter OFC.
	XLANAME	alphanumeric (1 to 8 characters)	Translation name. Enter 1 to 8 alphanumeric characters to identify the universal translator.

Datafill example for table LINEATTR

The following example shows sample datafill for table LINEATTR.

MAP display example for table LINEATTR

LNATTIDX	LCC	CHGCLSS	COST	SCRNCL	LTG	STS	PRTNM	LCANAME
ZEROMPOS	TRAFSNO							
MRSA	SFC	LATANM	MDI		IXNAME	DGCLANME	FANIDIGS	
		RESINF					OPTIONS	
98		IBN	NONE	NT	NSCR	0	003	NPRT NLCA
NONE	0							
NIL	NILSFC	NILLATA	0		PX	JAL	NIL	00 N

Translation verification tools

The following example shows the output from TRAVER when it is used to verify Line to Treatment.

Line to Treatment (continued)**TRAVER output example for Line to Treatment**

```

>TRAVER L 1162000 8882000 B
TABLE KSETLINE
REM1 02 0 19 01 1 ACD Y 1162000 JAL 0 0 003 INCALLS N JAL_INFORMATION 1
N (MSBI) (ACDNR) $
TABLE DNATTRS
003 116 2000
(PUBLIC (NONUNIQUE) $) $ $
TABLE DNGRPS
TUPLE NOT FOUND
TABLE KSETFEAT
TUPLE NOT FOUND
TABLE CUSTSTN
TUPLE NOT FOUND
TABLE OFCVAR
AIN_OFFICE_TRIGGRP NIL
AIN ORIG ATTEMPT TDP: NO SUBSCRIBED TRIGGER.
TABLE NCOS
JAL 0 0 0 NTTCOS $
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND
DIGCOL
JAL NXLA JALXLA JALXLA 1 NTT
TABLE DIGCOL
TUPLE NOT FOUND
DEFAULT IS RPT
NCOS PRELIM XLA NAME IS NIL. GO TO NEXT XLA NAME.
CUST PRELIM XLA NAME IS NIL. GO TO NEXT XLA NAME.
TABLE IBNXLA: XLANAME JALXLA
JALXLA 8 NET N N N 1 N NDGT N N DOD N 98 NONE $
TABLE DIGCOL
NDGT SPECIFIED: POTS DIGIT COLLECTION

```

-continued-

Line to Treatment (end)

TRAVER output example for Line to Treatment

```
TABLE LINEATTR
98 IBN NONE NT NSCR 0 003 NPRT NLCA NONE 0 NIL NILSFC NILLATA 0 PX JAL
NIL 00 N
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE PXHEAD
JAL SDFLT DFOP (MM 7 9) ( CLASS LCL) $ NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:           882000
TABLE PXCORE
TUPLE NOT FOUND
DEFAULT FROM HEAD TABLE USED
WARNING: EXTRA DIGITS RECEIVED

+++ TRAVER: TREATMENT SET +++

TREATMENT ROUTES.  TREATMENT IS: VACT
1 T60
2 LKOUT

+++ TRAVER: SUCCESSFUL CALL TRACE +++

                                -end-
```

Line to Trunk

Ordering codes

Functional group ordering code: not applicable

Functionality ordering code: not applicable

Release applicability

TL03 and up

Prerequisites

Line to Trunk has no prerequisites.

Description

The call processing flow for a line to trunk call, followed by the associated datafill, is shown in the ``Translations table flow for Line to trunk calls" section.

Operation

In table LINEATTR, if subfield XLASYS is set to PX, translations enters the universal environment starting with table PXHEAD.

If field DFLTSEL is set to DFLT in table PXHEAD and field XLASEL is set to RTE, table PXRTE is accessed. Otherwise, the call is sent to standard defaults (SDFLT) or to other HEAD and CODE tables for further translations.

In table PXRTE, field RTESEL can be set to T (table) to point to other routing tables, such as IBNRTE or OFCRTE. From these a trunk is identified and the call is directed to an outgoing or two-way trunk. Refer to the ``Table flow for Line to Trunk calls", in the Universal call processing section of this document for a general translations overview.

Translations table flow

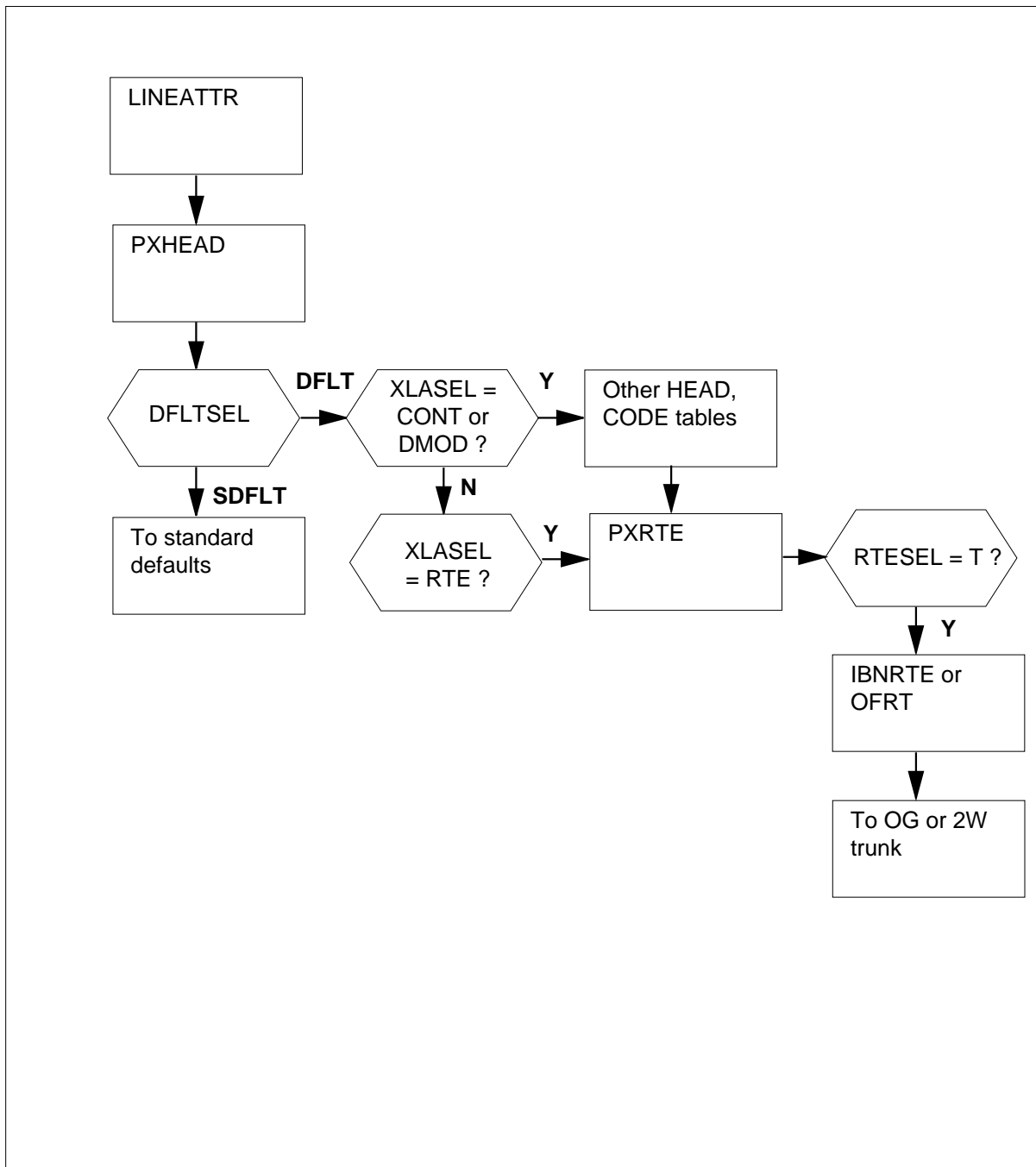
The Line to Trunk translations tables are described in the following list:

- LINEATTR
- PXHEAD
- PXCORE
- PXRTE
- IBNRTE
- OFRT

Line to Trunk (continued)

The Line to Trunk call translation process is shown in the flowchart that follows.

Table flow for Line to Trunk calls



Line to Trunk (continued)

The following table lists the datafill content used in the flowchart.

Datafill example for local calls Line to Trunk

Datafill table	Example data
LINEATTR	100 IBN NONE NT NSCR 0 003 NPRT NLCA NONE 0 NIL NILSFC NILLATA 0 PX ABCISUP NIL
PXHEAD	ABCISUP SDFLT DFOP (MM 2 18) (CLASS LCL) \$ NOCON STD
PXCODE	ABCISUP 41 41 RTE (PF 2) (MM 8 18) (DEST 511)
PXRTE	ABCISUP 511 T OFRT 511
IBNRTE	15 VFG N N N OGTRK01 0
OFRT	511 N D JISUP1 0 \$ N

Limitations and restrictions

The following limitations and restrictions apply to Line to Trunk:

- Table DNINV is a read-only table. After datafilling the DNROUTE table, the DN is also added to table DNINV.
- In table DNROUTE, tuples can be added if the value of field OFCCODE is \$ as specified in table TOFCNAME. The tuples cannot contain STNCODEs whose leading digits are an OFCCODE in the same area code.
- In table DNROUTE, ambiguity in the STNCODEs of one TOFC is not permitted. For example, 8594 and 859 cannot be specified as STNCODEs in one TOFC.
- In the xxCODE tables, adding or changing a tuple affects all digit combinations between fields FROMD and TOD. However, the DELETE command deletes only the tuple at field FROMD.
- In the xxCODE tables, because of the way the FROM and TO digit key is implemented, the operation of table control requires additional explanation. If a tuple is datafilled such that the value in field TOD is greater than the value in field FROMD (for example field FROMD is set to 3 and field TOD is set to 8) and a user positions on a tuple with fields FROMD and TOD within the datafilled range, the tuple is displayed as if only those digits are datafilled as the key.

In this example, the user positions on the tuple with fields FROMD and TOD both are equal to 5. The tuple is displayed with both fields equal to 5. The information is being requested for the given key. If the user then displays the previous tuple, fields FROMD and TOD contain the digits originally datafilled before the current FROMD digit. In this example, the

Line to Trunk (continued)

FROMD and TOD digits are 3 and 8. If the user no displays the next tuple, the digits following the currently displayed TOD field are displayed. They are 5 and 8 in this example.

Interactions

Line to Trunk has no functionality interactions.

Activation/deactivation by the end user

Line to Trunk requires no activation or deactivation by the end user.

Billing

In field CANCEORC, in table OFRT, if the type of call is direct dial (DD) and no charge is required for the call, or the type of call is no prefix (NP) and coin is returned to prepay or coin-dial-tone-first line, enter Y (yes). Otherwise, enter N (no).

If the call is routed to an announcement and the call is billed (coins collected, off-hook returned, message rate pegged), enter Y. Otherwise, enter N (no). If field CANCEORC is set to Y, the call is charged.

If field CANCEORC is set to Y, then a nonrevenue call is assumed and reflected in the call code of the bearer capability (BC) automatic message accounting (AMA) record.

When field CANCEORC is set to N, a revenue record is assumed and reflected in the call code of the AMA record (provided nonrevenue is not indicated in another manner).

Station Message Detail Recording

Line to Trunk does not affect Station Message Detail Recording.

Line to Trunk (continued)

Datafilling office parameters

The following table shows the office parameters used by Line to Trunk. For more information about office parameters, refer to *Office Parameters Reference Manual*.

Office parameters used by Line to Trunk

Table name	Parameter name	Explanation and action
OFCVAR	AIN_OFFICE_TRIGGRP	This parameter is used to subscribe trigger behaviors on an office-wide basis. The range of values is that of field AINGRP in table TRIGGRP. This parameter provides a reference to table TRIGGRP. The default is NIL.

Datafill sequence

The following table lists the tables that require datafill to implement Line to Trunk. The tables are listed in the order in which they are to be datafilled.

Datafill tables required for Line to Trunk

Table	Purpose of table
PXHEAD	The prefix code head table aids in determining the type of call being dialed. For example, domestic or international direct distance dialing.
PXCODE	The prefix code table aids in determining the type of call being dialed.
PXRTE	The prefix code route routes the call being dialed.
IBNRTE	The IBN route table consists of route lists identified by route reference index numbers.
OFRT	The office route table is used if an originating call is being translated and a preceding stage identifies a route reference index.
LINEATTR	The line attribute index table assigns line attributes and points calls to appropriate screening and routing tables.

Line to Trunk (continued)**Datafilling table PXHEAD**

The following table shows the datafill specific to Line to Trunk for table PXHEAD. Only those fields that apply directly to Line to Trunk are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table PXHEAD (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
XLANAME		alphanumeric (1 to 8 characters)	Translator name. Enter 1 to 8 alphanumeric characters to identify the universal translator.
DFLT		see subfields	Default. This field consists of subfield DFLTSEL. DFLT is used when translations find that the dialed digits are not datafilled in the code table associated with this head table.
	DFLTSEL	DFLT or SDFLT	Default selector. Enter SDFLT, if a standard default is required for dialed digits not found in the code table. The standard default is TRMT OFC VACT. Go to field DFOP. Enter DFLT if the standard default is not correct and datafill refinement XLASEL. If the entry in field DFLTSEL is DFLT complete subfields XLASEL and OSEL.
	XLASEL	CONT	Translations selector. Enter CONT to indicate that further translations screening is required to determine the route a call should take.
	OSEL	XLT	Option selector. Enter XLT to allow the next translations system and translations name used to be overridden by specifying a new translations system (AC, PX, FA, CT, OFC, AM, FT, or NIL), a new translations name, or both.

Line to Trunk (continued)

Datafilling table PXHEAD (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	XLASYS	AC, AM, CT, DN, FA, FT, NSC, OFC, PX or NIL	<p>Translation system. If subfield OSEL is set to XLT datafill this refinement. Enter the next translation system to use, followed by a space, then datafill refinement XLANAME.</p> <ul style="list-style-type: none"> • AC (access) • AM (ambiguous) • CT (country) • DN (directory number) • FA (foreign area code) • FT (utility) • NSC (number service code) • OFC (office) • PX (prefix) <p>Note: NIL is not a valid entry. NIL is only used to satisfy internal software functionality.</p>
	XLANAME	alphanumeric 1 to 8 characters	Translation name. Enter 1- to 8-alphanumeric characters to identify the universal translator.
	DFOP	NODFOP	Default options. Enter NODFOP if there are no default options.
CON		NOCON	Consume digits. Enter NOCON if digits are not to be consumed (the next table is indexed using the same digits as the current table, except the prefix digits).
MAXIDX		9 or STD	Maximum index. Enter STD or 9 if the translation tables are to be indexed by dialed digits in the range of 0 to 9. The default is 9.

Datafill example for table PXHEAD

The following example shows sample datafill for table PXHEAD.

Line to Trunk (continued)

MAP display example for table PXHEAD

XLANAME		DFLT
		DFOP
CON	MAXIDX	
<hr/>		
ABCISUP		SDFLT
	DFOP (MM 2 18) (CLASS LCL)	\$
NOCON	STD	\$

Datafilling table PXCODE

The following table shows the datafill specific to Line to Trunk for table PXCODE. Only those fields that apply directly to Line to Trunk are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table PXCODE (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
XLANAME		alphanumeric (1 to 8 characters)	Translator name. Enter 1- to 8-alphanumeric characters to specify the translator name from the corresponding head table.
FROMD		vector of 1 to 11 digits	From digit. Enter 1 to 11 digits to identify either a single number or the first number in a block of consecutive numbers that have the same translations requirements as described in field XLASEL and its refinements.
TOD		vector of 1 to 11 digits	To digit. If field FROMD represents a single number, enter the same number here. If field FROMD represents the first number of a block of consecutive numbers, enter the last number in the block.
XLADATA		see subfield	Universal translation data. This field consists of subfield XLASEL and its refinements.
	XLASEL	RTE	Translations selector. Enter RTE.
	OSEL	DEST, PF, or MM	Option selector. Enter the option selector.

Line to Trunk (continued)**Datafilling table PXC CODE (Sheet 2 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
	PFDIGS	numeric (0 to 24)	Number of prefix digits. If the entry in subfield OSEL is PF, datafill this refinement. Enter the number of prefix digits. If prefix digits were identified in a previous table, this number is added to the existing value. Prefix digits are not stored in call detail records, outpulsed, or used to index the next translation table.
	DEST	numeric (0 to 1023)	Destination route list index. Enter the number in the route list of the same translation system to which the call is routed.
	MIN	numeric (0 to 30)	Minimum digits. If the entry in subfield OSEL is MM, datafill this refinement. Enter the minimum number of digits expected. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.
	MAX	numeric (0 to 30)	Maximum digits. If the entry in subfield OSEL is MM, datafill this refinement. Enter the maximum number of digits expected. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.

Datafill example for table PXC CODE

The following example shows sample datafill for table PXC CODE.

MAP display example for table PXC CODE

XLANAME	FROMD	TOD	XLADATA
ABCISUP	41	41	RTE (PF 2) (MM 8 18) (DEST 511) \$

Line to Trunk (continued)**Datafilling table PXRTE**

The following table shows the datafill specific to Line to Trunk for table PXRTE. Only those fields that apply directly to Line to Trunk are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table PXRTE

Field	Subfield or refinement	Entry	Explanation and action
XLANAME		alphanumeric (1 to 8 characters)	Translator name. Enter 1- to 8-alphanumeric characters to identify the universal translator.
RTEREF		0 to 1023	Route reference. Enter the route reference index that corresponds to the destination (from option DEST) used in table ACCODE for the given XLANAME.
RTELIST		see subfield	Route list. This field consists of subfield RTESEL and refinements dependent on the value in subfield RTESEL. The route list consists of up to eight routes, where a route has a selector and data.
	RTESEL	T	Default selector. Enter T (table name route) and datafill refinements TABNAME, XLASYS, XLANAME, and RTEREF, if the route is to a route table.
	TABNAME	OFRT, OFR2, OFR3, OFR4, IBNRTE, IBNRT2, IBNRT3, or IBNRT4	Table name. Enter the respective office route table name.
	INDEX	0 to 1023	Route reference index. Enter the index of the route table to which the call is transferred.

Datafill example for table PXRTE

The following example shows sample datafill for table OFCHEAD.

Line to Trunk (continued)**MAP display example for table PXRTE**

XLANAME	RTEREF	RTELIST		
ABCISUP	511	T	OFRT	511 \$

Datafilling table IBNRTE

The following table shows the datafill specific to Line to Trunk for table IBNRTE. Only those fields that apply directly to Line to Trunk are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table IBNRTE

Field	Subfield or refinement	Entry	Explanation and action
RTE		1 to 1023 or blank	IBN route reference index. Enter the route reference number that is assigned to the route list.
	IBNRTSEL	VFG	IBN route selector. Enter VFG.
	VFG	alphanumeric (1 to 6 characters)	Virtual facility group. Enter the name of the VFG to which translation routes. Final route is defined by the translation, based on digits in the called number and the DIGMAN index that is specified.

Datafill example for table IBNRTE

The following example shows sample datafill for table IBNRTE.

MAP display example for table IBNRTE

RTE	RTELIST
15	VFG N N N OGTRK01 0

Line to Trunk (continued)

Datafilling table OFRT

The following table shows the datafill specific to Line to Trunk for table OFRT. Only those fields that apply directly to Line to Trunk are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table OFRT

Field	Subfield or refinement	Entry	Explanation and action
RTE		1 to 1023 or blank	Route reference index. If the record is the first in the route list, enter the route reference number assigned to the route list. Otherwise, leave the entry blank.
RTELIST		see subfield	Route list. This field consists of subfield RTESEL and refinements dependent on the value in subfield RTESEL. The route list consists of up to eight routes, where a route has a selector and data.
	RTESEL	N	Route selector. Enter N.
	CONNTYPE	D	Connection type. This field is not used by the system logic. Enter D to satisfy table control.
	CLLI	alphanumeric	Common language location identifier. Enter the code in table CLLI to which translations is routed.

Datafill example for table OFRT

The following example shows sample datafill for table OFRT.

MAP display example for table OFRT

RTE	RTELIST
511	N D JISUP1 0 \$ N \$

Line to Trunk (continued)**Datafilling table LINEATTR**

The following table shows the datafill specific to Line to Trunk for table LINEATTR. Only those fields that apply directly to Line to Trunk are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table LINEATTR

Field	Subfield or refinement	Entry	Explanation and action
LNATTIDX		0 to 31 999	Line attribute index. Enter the index into table LINEATTR.
LCC		alphanumeric (up to 8 characters) or NLCC	Line class code. Enter the line class code (LCC) assigned to the line attribute index. The LCC of an existing type cannot be changed. If there is no LCC enter NLCC.
IXNAME		see subfields	International translations system start. This field consists of subfields XLASYS and XLANAME.
	XLASYS	PX	Translation system. Enter OFC.
	XLANAME	alphanumeric (1 to 8 characters)	Translation name. Enter 1- to 8-alphanumeric characters to identify the universal translator.

Datafill example for table LINEATTR

The following example shows sample datafill for table LINEATTR.

MAP display example for table LINEATTR

LNATTIDX	LCC	CHGCLSS	COST	SCRNCL	LTG	STS	PRTNM	LCANAME
ZEROMPOS	TRAFSNO							
MRSA	SFC	LATANM	MDI		IXNAME	DGCLANME	FANIDIGS	
		RESINF					OPTIONS	
100	IBN	NONE	NT	NSCR	0	003	NPRT	NLCA
NONE	0							
NIL	NILSFC	NILLATA	0		PX	ABCISUP	NIL	

Translation verification tools

The following example shows the output from TRAVER when it is used to verify Line to Trunk.

Line to Trunk (continued)

TRAVER output example for Line to Trunk

```
>TRAVER L 1162000 9911162001 B
TABLE KSETLINE
REM1 02 0 19 01 1 ACD Y 1162000 JAL 0 0 003 INCALLS N JAL_INFORMATION 1
N (MSBI) (ACDNR) $
TABLE DNATTRS
003 116 2000
(PUBLIC (NONUNIQUE ) $) $ $
TABLE DNGRPS
TUPLE NOT FOUND
TABLE KSETFEAT
TUPLE NOT FOUND
TABLE CUSTSTN
TUPLE NOT FOUND
TABLE OFCVAR
AIN_OFFICE_TRIGGRP NIL
AIN ORIG ATTEMPT TDP: NO SUBSCRIBED TRIGGER.
TABLE NCOS
JAL 0 0 0 NTTCOS $
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND
DIGCOL JAL NXLA JALXLA 1 ABC
TABLE DIGCOL
NTT 9 RPT
NCOS PRELIM XLA NAME IS NIL. GO TO NEXT XLA NAME.
CUST PRELIM XLA NAME IS NIL. GO TO NEXT XLA NAME.
TABLE IBNXLA: XLANAME JALXLA
JALXLA 9 NET N Y N 1 Y NDGT N Y DOD N 100 NONE $
TABLE DIGCOL
NDGT SPECIFIED: DIGITS COLLECTED INDIVIDUALLY
TABLE LINEATTR
100 IBN NONE NT NSCR 0 003 NPRT NLCA NONE 0 NIL NILSFC NILLATA 0 PX
ABCISUP NIL
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
```

Line to Trunk (end)**TRAVER output example for Line to Trunk (continued)**

```

TABLE PXHEAD
ABCISUP SDFLT DFOP ( MM 2 18) ( CLASS LCL) $ NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          411162001
TABLE PXCDEF
ABCISUP 41 41 RTE ( PF 2) ( MM 8 18) ( DEST 511) $
TABLE PXRTE
KEY: ABCISUP 511
. T OFRT 511
. . TABLE OFRT
. . 511 N D JISUP1 0 $ N
. . EXIT TABLE OFRT
EXIT TABLE PXRTE

+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

1 JISUP1          1162001          ST

TREATMENT ROUTES.  TREATMENT IS: GNCT
1 T60
2 LKOUT

+++ TRAVER: SUCCESSFUL CALL TRACE +++

```

SERVORD

Line to Trunk does not use SERVORD.

Subscriber dialed international prefix 99

Ordering codes

Functional group ordering code: not applicable

Functionality ordering code: not applicable

Release applicability

TL03 and up

Prerequisites

Subscriber dialed international prefix 99 has no prerequisites.

Description

The call processing flow for a subscriber-dialed international prefix 99+ call, followed by the associated datafill, is shown in the following figure. The incoming trunk groups have been datafilled in table TRKGRP with subfield XLADSEL set to UNIV, subfield XLASYS set to PX, and subfield XLANAME set to ICTOLL. International calls are routed to a gateway office on an outgoing trunk group with the CLLI set to OGTOGATE.

Operation

The datafill for table PXC CODE indicates that the dialed digits include two prefix (PF 2) digits. The translation data (XLADATA) for the tuple containing the digits 99 specifies a translations selector of XLT, sending translations to the country code (CT) table at instance CC. The prefix option causes the dialed digits 99 to be treated as prefix digits and disregarded when indexing the next table accessed. Field XLADATA also indicates that a minimum of 8 and a maximum of 12 (MM 8 12) digits (extra digits are ignored) must be received before translations can continue.

Translations now move to table CTCODE, at instance CC. The digits following the prefix digits (99) are checked to determine if they fall into the range 1 to 9. If they do, the call is routed to destination 12 in table CTRTE, which in turn sends the call to outgoing trunk group OGTOGATE to the gateway office.

If the digit following the prefix digits is 0, control of the translations transfers from CTCODE to CTHEAD, and the call is routed to the standard default VACANT CODE.

Subscriber dialed international prefix 99 (continued)

Translations table flow

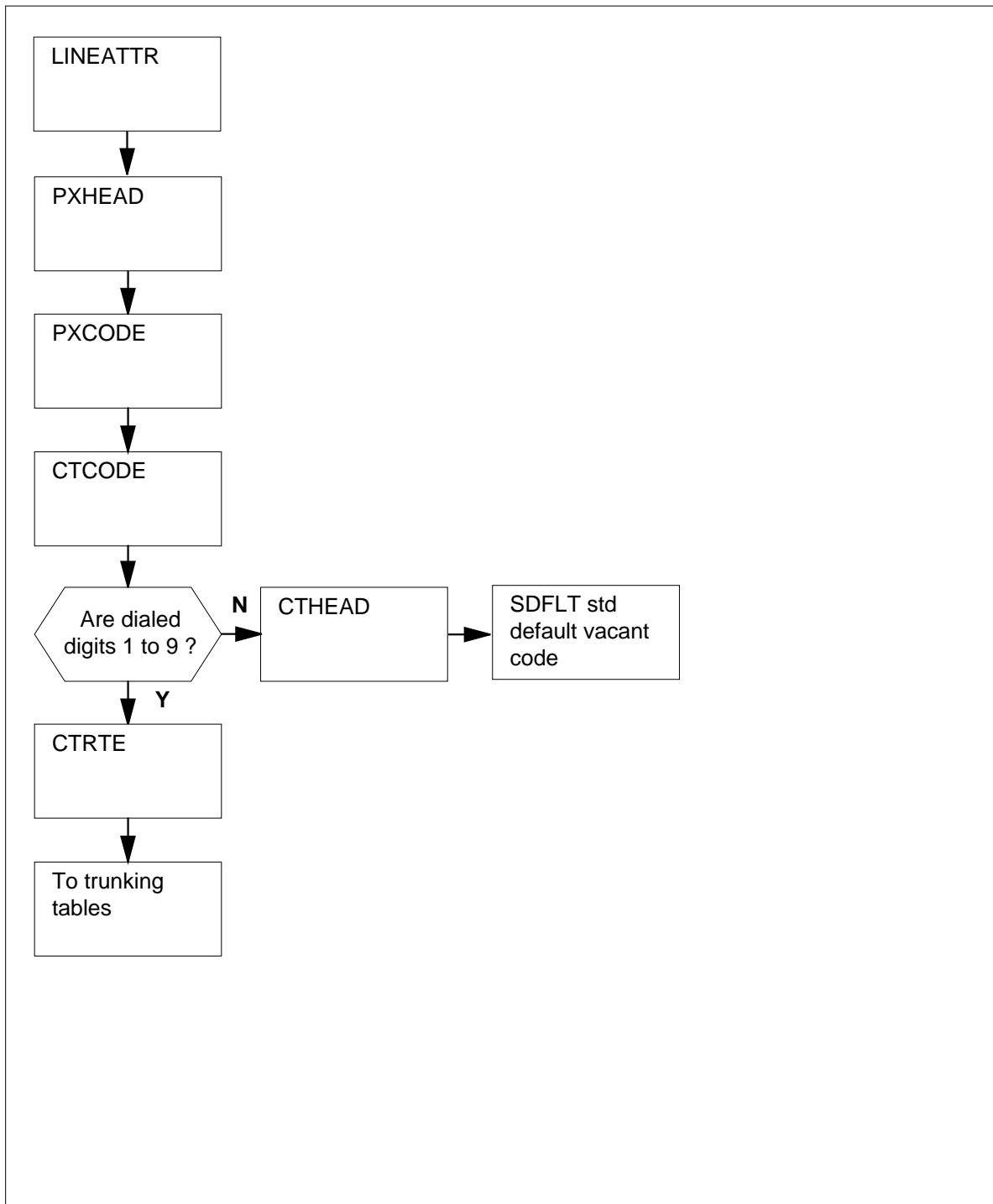
The Subscriber dialed international prefix 99 translations tables are described in the following list:

- LINEATTR
- PXHEAD
- PXCORE
- CTHEAD
- CTCODE
- CTRTE

The Subscriber-dialed international prefix 99 translation process is shown in the flowchart that follows.

Subscriber dialed international prefix 99 (continued)

Table flow for subscriber-dialed international prefix 99



Subscriber dialed international prefix 99 (continued)

The following table lists the datafill content used in the flowchart.

Subscriber dialed international prefix 99

Datafill table	Example data
LINEATTR	1 STD NONE NT NSCR 0 003 NPRT NLCA NONE 0 NIL NILSFC NILLATA 0 PX ICTOLL NIL OO N
PXHEAD	ICTOLL DFLT (CONT XLT OFC OFC18)
PXCODE	ICTOLL 99 99 CONT (PF 2) (XLT CT CC) (MM 8 12)
CTHEAD	CC SDFLT NODFOP NOCON 9
CTCODE	CC 1 9 RTE (DEST 12)
CTRTE	CC 12 (S OGTOGATE)

Limitations and restrictions

To access a tuple in table LINEATTR, the tuple must be owned by the user. Ownership of tuples is defined in table DATAOWNER field OWNER.

Interactions

Subscriber dialed international prefix 99 has no functionality interactions.

Activation/deactivation by the end user

Subscriber dialed international prefix 99 requires no activation or deactivation by the end user.

Billing

Subscriber dialed international prefix 99 does not affect billing.

Station Message Detail Recording

Subscriber dialed international prefix 99 does not affect Station Message Detail Recording.

Datafilling office parameters

Subscriber dialed international prefix 99 does not affect office parameters.

Subscriber dialed international prefix 99 (continued)

Datafill sequence

The following table lists the tables that require datafill to implement Subscriber dialed international prefix 99. The tables are listed in the order in which they are to be datafilled.

Datafill tables required for Subscriber dialed international prefix 99

Table	Purpose of table
PXHEAD	The prefix code head table aids in determining the type of call being dialed. For example, domestic or international direct distance dialing.
PXCODE	The prefix code table aids in determining the type of call being dialed. For example, domestic or international direct distance dialing.
CTHEAD	The country code head table aids in screening the country code digits received in the dialed numbers. Country codes are internationally accepted one-, two-, or three-digit numbers beginning with the zone digit.
CTCODE	The country code table further screens the country code digits received in the dialed numbers and sends them to the route table.
CTRTE	The country code route table aids in routing the country code digits received in the dialed numbers.
LINEATTR	The line attribute index table assigns line attributes and points calls to appropriate screening and routing tables.

Datafilling table PXHEAD

The following table shows the datafill specific to Subscriber dialed international prefix 99 for table PXHEAD. Only those fields that apply directly to Subscriber dialed international prefix 99 are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table PXHEAD (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
XLANAME		alphanumeric (1 to 8 characters)	Translator name. Enter 1- to 8-alphanumeric characters to identify the universal translator.
DFLT		see subfields	Default. This field consists of subfield DFLTSEL. DFLT is used when translations find that the dialed digits are not datafilled in the code table associated with this head table.

Subscriber dialed international prefix 99 (continued)**Datafilling table PXHEAD (Sheet 2 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
	DFLTSEL	DFLT	Default selector. Enter DFLT where the standard default is not correct. If the entry in field DFLTSEL is DFLT, complete subfields XLASEL and OSEL.
	XLASEL	CONT	Translations selector. Enter CONT to indicate that further translations screening is required to determine the route a call should take.
	OSEL	XLT	Option selector. Enter XLT to allow the next translations system and translations name used to be overridden by specifying a new translations system (AC, PX, FA, CT, OFC, AM, FT, or NIL), a new translations name, or both. Note: If XLT is not datafilled, translation defaults to the current XLA system.
	XLASYS	OFC	Translation system. Enter OFC.
	XLANAME	alphanumeric (1 to 8 characters)	Translation name. Enter 1- to 8-alphanumeric characters to identify the universal translator.

Datafill example for table PXHEAD

The following example shows sample datafill for table PXHEAD.

MAP display example for table PXHEAD

XLANAME	DFLT
	DFOP
CON	MAXIDX
<hr/>	
ICTOLL	DFLT
(CONT	XLT OFC OFC18) \$

Datafilling table PXC CODE

The following table shows the datafill specific to Subscriber dialed international prefix 99 for table PXC CODE. Only those fields that apply

Subscriber dialed international prefix 99 (continued)

directly to Subscriber dialed international prefix 99 are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table PXCOD (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
XLANAME		alphanumeric (1 to 8 characters)	Translator name. Enter 1- to 8-alphanumeric characters to specify the translator name from the corresponding head table.
FROMD		99	From digit. Enter 1 to 11 digits to identify either a single number or the first number in a block of consecutive numbers that have the same translations requirements as described in field XLASEL and its refinements.
TOD		99	To digit. If field FROMD represents a single number, enter the same number here. If field FROMD represents the first number of a block of consecutive numbers, enter the last number in the block.
XLADATA		see subfield	Universal translation data. This field consists of subfield XLASEL and its refinements.
	XLASEL	CONT	Translations selector. Enter CONT further translations screening is required.
OPT		see subfield	Options. This field is a vector consisting of up to ten options. Each option consists of subfield OSEL and refinements. For each option, specify OSEL, followed by a space, then the refinements, each separated by a space. End the options with a \$.

Subscriber dialed international prefix 99 (continued)

Datafilling table PXCODE (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	OSEL	XLT or MM	Option selector. Option XLT (translate) allows the next translations system and translations name used to be overridden by specifying a new translations system (AC, PX, FA, CT, OFC, AM, FT, or NIL), a new translations name, or both. XLT can be specified when XLASEL is set to CONT or DMOD. Enter XLT, then complete subfields XLASYS and XLANAME. XLASYS specifies the next translations system to be used (AC, PX, FA, CT, OFC, AM, FT, or NIL). XLANAME specifies the translations name of the table instance in the XLASYS where the call is to be routed.
	XLASYS	CT	Translation system. If the entry in subfield OSEL is XLT, datafill this refinement. Enter CT, the next translation system to use, followed by a space, then datafill refinement XLANAME.
	XLANAME	alphanumeric (1 to 8 characters)	Translation name. If the entry in subfield OSEL is XLT, datafill this refinement. Enter the translation name of the table instance within the XLASYS to which the call is routed.
	MIN	0 to 18	Minimum digits. If the entry in subfield OSEL is MM, datafill this refinement. Enter the minimum number of digits expected. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.
	MAX	0 to 18	Maximum digits. If the entry in subfield OSEL is MM, datafill this refinement. Enter the maximum number of digits expected. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.

Datafill example for table PXCODE

The following example shows sample datafill for table PXCODE.

Subscriber dialed international prefix 99 (continued)

MAP display example for table PXCOD

XLANAME	FROMD	TOD	XLADATA
ICTOLL	99	99	
	CONT	(PF 2)	(XLT CT CC) (MM 8 12) \$

Datafilling table CTHEAD

The following table shows the datafill specific to Subscriber dialed international prefix 99 for table CTHEAD. Only those fields that apply directly to Subscriber dialed international prefix 99 are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table CTHEAD (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
XLANAME		alphanumeric (1 to 8 characters)	Translator name. Enter 1- to 8-alphanumeric characters to identify the universal translator.
	DFLTSEL	SDFLT	Default selector. Enter SDFLT where a standard default is used for dialed digits not found in the code table. Continue to field DFOP when DFTSEL is equal to SDFLT.
DFOP		see subfields	Default options. This field consists of subfield DFOPSEL.
	DFOPSEL	NODFOP	Default options. Enter NODFOP if there are no default options.

Subscriber dialed international prefix 99 (continued)

Datafilling table CTHEAD (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
CON		NOCON	Consume digits. Enter NOCON. With NOCON, the next table in call progression is to be indexed using the same digits, excluding any prefixes, that were used to index the current table.
MAXIDX		9	Maximum index. This field specifies the range of the first digit in the digit streams indexing the universal translations tables. A value of 9 specifies the range 0 to 9.

Datafill example for table CTHEAD

The following example shows sample datafill for table CTHEAD.

MAP display example for table CTHEAD

XLANAME		DFLT
		DFOP
CON	MAXIDX	
<hr/>		
CC		SDFLT
		NODFOP
NOCON	9	

Datafilling table CTCODE

The following table shows the datafill specific to Subscriber dialed international prefix 99 for table CTCODE. Only those fields that apply directly to Subscriber dialed international prefix 99 are shown. For a

Subscriber dialed international prefix 99 (continued)

description of the other fields, refer to the data schema section of this document.

Datafilling table CTCODE

Field	Subfield or refinement	Entry	Explanation and action
XLANAME		alphanumeric 1 to 8 characters	Translator name. Enter 1- to 8-alphanumeric characters to specify the translator name from the corresponding head table.
FROMD		1	From digit. Enter 1 to identify the first number in a block of consecutive numbers that have the same translations requirements as described in field XLASEL and its refinements.
TOD		9	To digit. Field FROMD represents the first number of a block of consecutive numbers, enter the last number in the block in field TOD.
XLADATA		see subfield	Universal translation data. This field consists of subfield XLASEL and its refinements.
	XLASEL	RTE	Translations selector. RTE is used when the destination of the call and the outgoing trunk group used for termination can be specified without screening any additional digits.
OPT		see subfield	Options. This field is a vector consisting of up to 10 options. Each option consists of subfield OSEL and refinements. For each option, specify OSEL, followed by a space, then the refinements, each separated by a space. End the options with a \$.
	OSEL	DEST	Option selector. Option DEST (destination) is used when the destination of the call, as well as the outgoing trunk group to be used for termination, can be specified without screening any additional digits. DEST can be specified when XLASEL is set to CONT or RTE. Enter DEST, then complete subfield DEST. DEST specifies the number in the route list (0 to 1023) that indicates the route the call is to take.
	DEST	(0 to 1023)	Destination route list index. If the entry in subfield OSEL is DEST datafill this refinement. Enter the number in the route list of the same translation system to which the call is routed.

Subscriber dialed international prefix 99 (continued)

Datafill example for table CTCODE

The following example shows sample datafill for table CTCODE.

MAP display example for table CTCODE

XLANAME	FROMD	TOD	XLADATA
CC	1	9	
RTE	(DEST 12)	\$	

Datafilling table CTRTE

The following table shows the datafill specific to Subscriber dialed international prefix 99 for table CTRTE. Only those fields that apply directly to Subscriber dialed international prefix 99 are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table CTRTE (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
XLANAME		alphanumeric (1 to 8 characters)	Translator name. Enter 1- to 8-alphanumeric characters to specify the translator name from the corresponding head table.
RTEREF		0 to 1023	Route reference. Enter a value from 0 to 1023 to specify the route reference index. This entry must be the same as field DEST in table CTCODE.
RTELIST		see subfield	Route list. This field consists of subfield RTESEL and refinements dependent on the value in subfield RTESEL. The route list consists of up to eight routes, where a route has a selector and data.

Subscriber dialed international prefix 99 (continued)

Datafilling table CTRTE (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	RTESEL	S or SX	Route selectors. Enter S (standard) if no additional digit manipulation is required before call termination. Standard routing ignores prefix digits as specified by PF (prefix fence) commands. Enter SX (expanded standard) if additional digit manipulation is required before call termination. Expanded standard routing ignores prefix digits as specified by PF (prefix fence) commands.
	CLLI	alphanumeric 1 to 16 characters	Common language location identifier. Enter the CLLI of a trunk group.
	ROUTATTR_ INDEX	alphanumeric 1 to 16 characters	Route attribute index. If route selector SX is to be used, enter the index into table ROUTATTR containing the expanded routing information to be applied to the call.

Datafill example for table CTRTE

The following example shows sample datafill for table CTRTE.

MAP display example for table CTRTE

XLANAME	RTEREF	RTELIST
CC	12	(S OGTOGATE) \$

Datafilling table LINEATTR

The following table shows the datafill specific to Subscriber dialed international prefix 99 for table LINEATTR. Only those fields that apply directly to Subscriber dialed international prefix 99 are shown. For a

Subscriber dialed international prefix 99 (continued)

description of the other fields, refer to the data schema and trunking sections of this document.

Datafilling table LINEATTR

Field	Subfield or refinement	Entry	Explanation and action
LNATTIDX		0 to 31 999	Line attribute index. Enter the index into table LINEATTR.
LCC		STD	Line class code. Enter the line class code assigned to the line attribute index. Enter STD.
SCRNCL		NSCR	Class of service screening subtable name. Enter NSCR to indicate that screening by class of service is not required.
IXNAME		see subfields	International translation system start. This field consists of subfield XLASYS and refinement XLANAME.
	XLASYS	PX	International translations system. Enter PX.
	XLANAME	alphanumeric (1 to 8 characters)	International translations name. Enter the index into the head table referenced by field XLASYS.

Datafill example for table LINEATTR

The following example shows sample datafill for table LINEATTR.

MAP display example for table LINEATTR

LNATTIDX	LCC	CHGCLSS	COST	SCRNCL	LTG	STS	PRTNM	LCANAME
ZEROMPOS	TRAFSNO							
MRSA	SFC	LATANM	MDI		IXNAME	DGCLANME	FANIDIGS	
		RESINF					OPTIONS	
1	STD	NONE	NT	NSCR	0	003	NPRT	NLCA
NONE	0							
NIL	NILSFC	NILLATA	0		PX	ICTOLL	NIL	
		00					N	

Translation verification tools

The following example shows the output from TRAVER when it is used to verify Subscriber dialed international prefix 99.

Subscriber dialed international prefix 99 (end)

TRAVER output example for Subscriber dialed international prefix 99

```
>TRAVER L 1162000 99123456789 B
TABLE LINEATTR
1 STD NONE NT NSCR 0 003 NPRT NLCA NONE 0 NIL NILSFC NILLATA 0 PX ICTOLL
NIL 00 N
TABLE PXHEAD
ICTOLL DFLT CONT (XLT OFC OFC827) $ NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          99123456789
TABLE PXCDE
ICTOLL 99 99 CONT (PF 2) (MM 8 12) (XLT CT CC)$
TABLE CTHEAD
CC SDFLT NODFOP NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          123456789
TABLE CTCDE
CC 11 RTE (DEST 12) $
TABLE: CTRTE
KEY:      CC      12
. S OGTOGATE

EXIT TABLE CTRTE

+++TRAVER: SUCCESFUL CALL TRACE +++

DIGIT TRANSLATIONS ROUTES

1 LINE          123456789

TREATMENTS ROUTES.  TREATMENT IS: GNCT
1 CONGESTION
2 LKOUT

+++TRAVER: SUCCESSFUL CALL TRACE+++
```

SERVORD

Subscriber dialed international prefix 99 does not use SERVORD.

Trunk to Line

Ordering codes

Trunk to line has no ordering codes.

Release applicability

TL03 and up

Prerequisites

Trunk to Line has no prerequisites.

Description

The call processing flow for a trunk to line call, followed by the associated datafill is shown in the "Translations table flow for Trunk to Line calls" section.

Operation

The originating trunk is datafilled in table TRKGRP.

In table LINEATTR, if subfield XLASYS is set to PX, translations enters the universal environment starting with table PXHEAD. Refer to the MDC to Universal routing section of this document for more information.

If no selector is defined in table PXHEAD (subfield OSEL), translations continues to table PXCORE. The XLANAME is identified in this table.

Translations continues to look for a tuple match in table PXCORE. The datafill for table PXCORE allows for a route to be specified. This route can be either to other universal translations tables (PXRTE), to other translations tables (DNRTE) or to a treatment. If field XLASEL is set to DNRTE, table DNINV is accessed.. If XLASEL RTE is selected, translations must go through tables PXRTE and OFRT (RTESEL equals DN) before entering table DNINV.

From table DNINV, translations obtains the line equipment number (LEN) and the call is sent to a line.

Translations table flow for Trunk to Line calls

The Trunk to Line translations tables are described in the following list:

- TRKGRP
- LINEATTR
- PXHEAD

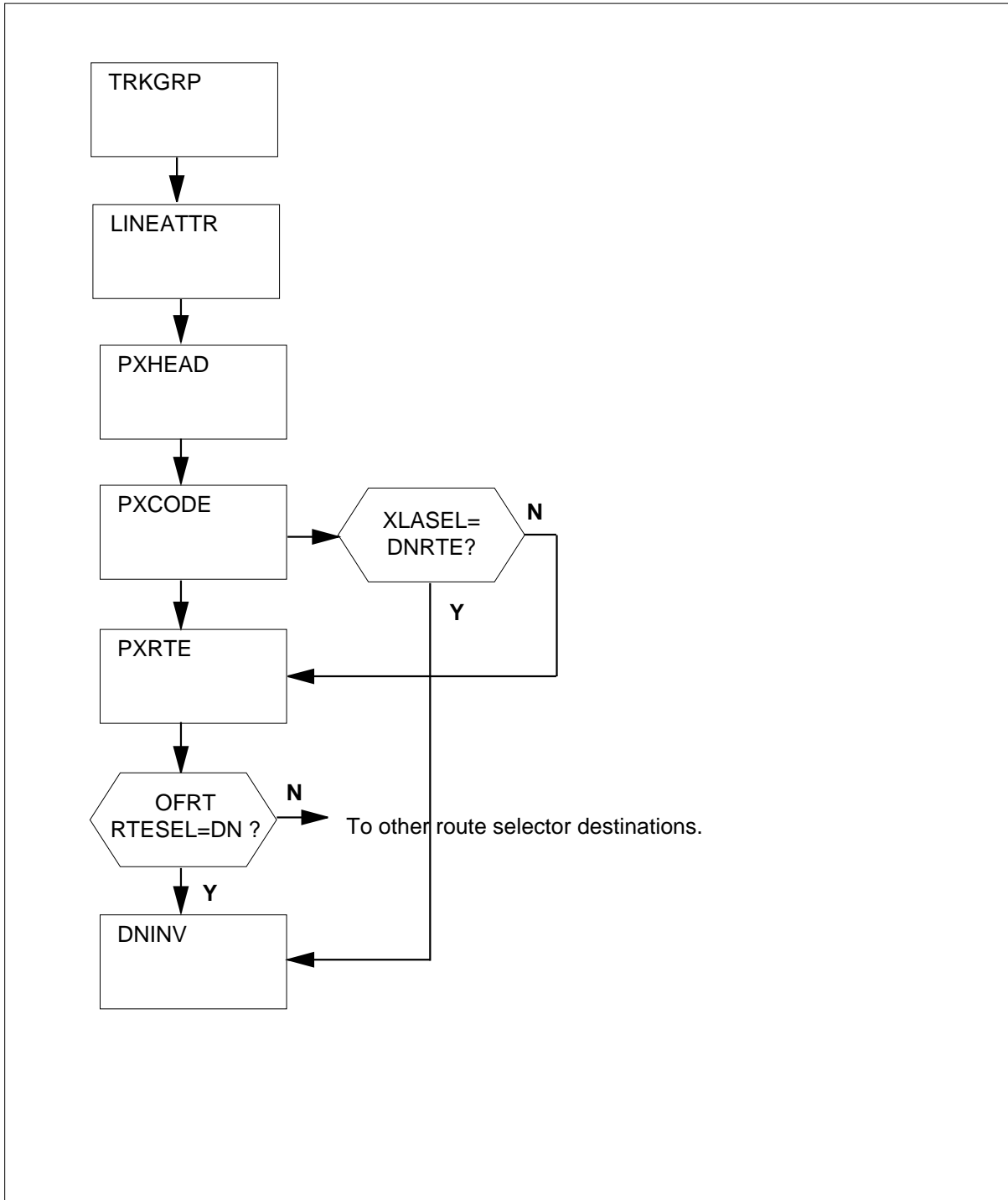
Trunk to Line (continued)

- PXCODE
- PXRTE
- OFRT
- DNINV

The Trunk to Line call translation process is shown in the flowchart that follows.

Trunk to Line (continued)

Table flow for Trunk to Line calls



Trunk to Line (continued)

The following table lists the datafill content used in the flowchart.

Datafill example for Trunk to Line calls

Datafill table	Example data
TRKGRP	JISUP3 IBNT2 0 ELO NCRT ABCGRP 0 CNTLEVN 0 N ANSDISC 0 Y N N N N N N 0 0 N 0 0 0 0 N N N N N N N N NATL
LINEATTR	100 IBN NONE NT NSCR 0 003 NPRT NLCA NONE 0 NIL NILSFC NILLATA 0 PX ABCISUP NIL
PXHEAD	ABCISUP SDFLT DFOP (MM 2 18) (CLASS LCL) \$ NOCON STD
PXCODE	ABCISUP 116 116 RTE (PF 2) (MM 3 18) (DEST 501)
PXRTE	ABCISUP 501 T OFRT 501
OFRT	501 DN 003 116
DNINV	003 116 2001 M ABCISUP 0 10 N

Limitations and restrictions

The following limitations and restrictions apply to Trunk to Line:

- Table DNINV is a read-only table. After datafilling the DNROUTE table, the DN will also be added to table DNINV.
- In table DNROUTE, tuples can be added if the value of field OFCCODE is \$ as specified in table TOFCNAME. The tuples cannot contain STNCODEs whose leading digits are an OFCCODE in the same area code.
- In table DNROUTE, ambiguity within the STNCODEs of one TOFC is not permitted. For example, 8594 and 859 cannot be specified as STNCODEs within one TOFC.
- In the xxCODE tables, adding or changing a tuple affects all digit combinations between fields FROMD and TOD. However, the DELETE command deletes only the tuple at field FROMD.
- In the xxCODE tables, because of the way the FROM and TO digit key is implemented, the operation of table control requires additional explanation. If a tuple is datafilled such that the value in field TOD is greater than the value in field FROMD (for example field FROMD is set to 3 and field TOD is set to 8) and a user positions on a tuple with fields FROMD and TOD within the datafilled range, the tuple is displayed as if only those digits are datafilled as the key. In this example, the user positions on the tuple with fields FROMD and TOD both equal to 5. The tuple is displayed with both fields equal to 5. The information is being requested for the given key. If the user then displays the previous tuple, fields

Trunk to Line (continued)

FROMD and TOD contain the digits originally datafilled before the current FROMD digit. In this example, the FROMD and TOD digits are 3 and 8. If the user no displays the next tuple, the digits following the currently displayed TOD field are displayed. They are 5 and 8 in this example.

Billing

Field BILLDN in table TRKGRP establishes the billing directory number. If no incoming digits are to be received (seizure only), enter the directory number, station number, or attendant access code to which translation routes. If the trunk group is arranged to receive incoming digits and a local automatic message accounting (LAMA) recording is required for all calls that tandem through the switch, enter the ten-digit directory number to which calls are billed. If the trunk group is arranged to receive incoming digits and no billing is required, enter N.

Datafilling office parameters

The following table shows the office parameters used by Trunk to Line. For more information about office parameters, refer to *Office Parameters Reference Manual*.

Office parameters used by Trunk to Line

Table name	Parameter name	Explanation and action
OFCVAR	AIN_OFFICE_TRIGGRP	This parameter is used to subscribe trigger behaviors on an office-wide basis. The range of values is that of field AINGRP in table TRIGGRP. This parameter provides a reference to table TRIGGRP. The default is NIL.

Datafill sequence

The following table lists the tables that require datafill to implement Trunk to Line. The tables are listed in the order in which they are to be datafilled.

Datafill tables required for Trunk to Line (Sheet 1 of 2)

Table	Purpose of table
TRKGRP	The trunk group table contains customer-defined data associated with each trunk group.
PXHEAD	The prefix code head table aids in determining the type of call being dialed. For example, domestic or international direct distance dialing.
PXCODE	The prefix code table aids in determining the type of call being dialed.

Trunk to Line (continued)

Datafill tables required for Trunk to Line (Sheet 2 of 2)

Table	Purpose of table
PXRTE	The prefix code route routes the call being dialed.
OFRT	This table is used if an originating call is being translated and a preceding stage identifies a route reference index.
DNINV	The directory number inventory table contains the data for all assigned and unassigned directory numbers (DN), including the DNs in table DNROUTE.
LINEATTR	The line attribute index table assigns line attributes and points calls to appropriate screening and routing tables.

Datafilling table TRKGRP

The following table shows the datafill specific to Trunk to Line for table TRKGRP. Only those fields that apply directly to Trunk to Line are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table TRKGRP (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
GRPKEY		see subfield	Group key. This field consists of subfield CLLI.
	CLLI	alphanumeric (1 to 16 characters)	Common language location identifier. Enter the code that is assigned to the trunk group in table CLLI.
GRPINFO		see subfields	Group information. This field consists of subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, CUSTNAME, SUBGRPNO, SELSEQ, NCOS, BILLDN, SUPV, DISCTSEL, INTRAGR, DIGIT0, DIGIT1, DTI, TES, CDR, SMDR, TRC, ALTNCOS, TRKDSR, LSCFN, ALTLSCFN, LSCINCPT, ALSCINCPT, IGA, FDN, FDV, FLASH, DPX, PREEMPT, AIODOPT, REORIG, OFFNETOPT, COFFTYP, and OPTIONS. Refer to the data schema section of this document for more information.
	GRPTYP	IBNT2 or IBNTO	Trunk group type. Enter IBNT2 to specify the two-way IBN trunk group type. Enter IBNTO to specify an outgoing trunk group type.

Trunk to Line (continued)**Datafilling table TRKGRP (Sheet 2 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
	CUSTNAME	alphanumeric (1 to 16 characters)	Customer name. Enter the name assigned to the customer group to which the trunk group belongs.
	SUBGRPNO	0 to 7	Subgroup number. Enter the subgroup number of the attendant consoles to which all attendant calls must be routed.

Datafill example for table TRKGRP

The following example shows sample datafill for table TRKGRP.

MAP display example for table TRKGRP

GRPKEY	GRPINFO
JISUP	IBNT2 0 ELO NCRT ABCGRP 0 CNTLEVN 0 N
ANSDISC	O Y N N N N N N N O0 0 N 0 0 0 0 N N N N N N N N N
NATL	\$

Datafilling table PXHEAD

The following table shows the datafill specific to Trunk to Line for table PXHEAD. Only those fields that apply directly to Trunk to Line are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table PXHEAD (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
XLANAME		alphanumeric (1 to 8 characters)	Translator name. Enter 1 to 8 alphanumeric characters to identify the universal translator.
DFLT		see subfields	Default. This field consists of subfield DFLTSEL. DFLT is used when translations find that the dialed digits are not datafilled in the code table associated with this head table.

Trunk to Line (continued)**Datafilling table PXHEAD (Sheet 2 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
	DFLTSEL	DFLT or SDFLT	<p>Default selector. Enter SDFLT, if a standard default is required for dialed digits not found in the code table. The standard default is TRMT OFC VACT. Go to field DFOP.</p> <p>Enter DFLT if the standard default is not correct and datafill refinement XLASEL.</p> <p>If the entry in field DFLTSEL is DFLT complete subfields XLASEL and OSEL.</p>
	XLASEL	CONT	Translations selector. Enter CONT to indicate that further translations screening is required to determine the route a call should take.
	OSEL	XLT	Option selector. Enter XLT to allow the next translations system and translations name used to be overridden by specifying a new translations system (AC, PX, FA, CT, OFC, AM, FT, or NIL), a new translations name, or both.
	XLASYS	OFC	Translation system. Enter OFC.
	XLANAME	alphanumeric (1 to 8 characters)	Translation name. Enter 1 to 8 alphanumeric characters to identify the universal translator.
	DFOP	NODFOP	Default options. Enter NODFOP if there are no default options.
CON		NOCON	Consume digits. Enter NOCON if digits are not to be consumed. The next table is indexed using the same digits as the current table, except the prefix digits.
MAXIDX		9 or STD	Maximum index. Enter STD or 9 if the translation tables are to be indexed by dialed digits in the range of 0 to 9. The default is 9.

Datafill example for table PXHEAD

The following example shows sample datafill for table PXHEAD.

Trunk to Line (continued)**MAP display example for table PXHEAD**

XLANAME		DFLT
		DFOP
CON	MAXIDX	
<hr/>		
ABCISUP		SDFLT
	DFOP(MM 2 8) (CLASS LCL) \$	
NOCON	STD \$	

Datafilling table PXC CODE

The following table shows the datafill specific to Trunk to Line for table PXC CODE. Only those fields that apply directly to Trunk to Line are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table PXC CODE (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
XLANAME		alphanumeric (1 to 8 characters)	Translator name. Enter 1 to 8 alphanumeric characters to specify the translator name from the corresponding head table.
FROMD		vector of 1 to 11 digits	From digit. Enter 1 to 11 digits to identify either a single number or the first number in a block of consecutive numbers that have the same translations requirements as described in field XLASEL and its refinements.
TOD		vector of 1 to 11 digits	To digit. If field FROMD represents a single number, enter the same number here. If field FROMD represents the first number of a block of consecutive numbers, enter the last number in the block.
XLADATA		see subfield	Universal translation data. This field consists of subfield XLASEL and its refinements.
	XLASEL	RTE	Translations selector. Enter RTE.
	OSEL	DEST, PF, or MM	Option selector. Enter DEST

Trunk to Line (continued)

Datafilling table PXC CODE (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	PFDIGS	numeric (0 to 24)	Number of prefix digits. If the entry in subfield OSEL is PF, datafill this refinement. Enter the number of prefix digits. If prefix digits were identified in a previous table, then this number is added to the existing value. Prefix digits are not stored in call detail records, outpulsed or used to index the next translation table.
	DEST	numeric (0 to 1023)	Destination route list index. Enter the number in the route list of the same translation system to which the call is routed.
	MIN	numeric (0 to 30)	Minimum digits. If the entry in subfield OSEL is MM, datafill this refinement. Enter the minimum number of digits expected. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.
	MAX	numeric (0 to 30)	Maximum digits. If the entry in subfield OSEL is MM, datafill this refinement. Enter the maximum number of digits expected. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.

Datafill example for table PXC CODE

The following example shows sample datafill for table PXC CODE.

MAP display example for table PXC CODE

XLANAME	FROMD	TOD	XLADATA
ABCISUP	116	116	RTE (PF 2) (MM 3 18) (DEST 501) \$

Trunk to Line (continued)**Datafilling table PXRTE**

The following table shows the datafill specific to Trunk to Line for table PXRTE. Only those fields that apply directly to Trunk to Line are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table PXRTE

Field	Subfield or refinement	Entry	Explanation and action
XLANAME		alphanumeric (1 to 8 characters)	Translator name. Enter 1 to 8 alphanumeric characters to identify the universal translator.
RTEREF		0 to 1023	Route reference. Enter the route reference index that corresponds to the destination (from option DEST) used in table ACCODE for the given XLANAME.
RTELIST		see subfield	Route list. This field consists of subfield RTESEL and refinements dependent on the value in subfield RTESEL. The route list consists of up to eight routes, where a route has a selector and data.
	RTESEL	T	Default selector. Enter T (table name route) and datafill refinements TABNAME, XLASYS, XLANAME, and RTEREF, if the route is to a route table.
	TABNAME	OFRT, OFR2, OFR3, or OFR4	Table name. Enter the office route table name.
	INDEX	0 to 1023	Route reference index. Enter the index of the route table to which the call is transferred.

Datafill example for table PXRTE

The following example shows sample datafill for table OFCHEAD.

Trunk to Line (continued)

MAP display example for table PXRTE

XLANAME	RTEREF	RTELIST	
ABCISUP	501	T	OFRT 501 \$

Datafilling table OFRT

The following table shows the datafill specific to Trunk to Line for table OFRT. Only those fields that apply directly to Trunk to Line are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table OFRT

Field	Subfield or refinement	Entry	Explanation and action
RTE		1 to 1023 or blank	Route reference index. If the record is the first in the route list, enter the route reference number assigned to the route list. Otherwise, leave the entry blank. An entry outside of this range is invalid.
RTELIST		see subfield	Route list. This field consists of subfield RTESEL and refinements dependent on the value in subfield RTESEL. The route list consists of up to eight routes, where a route has a selector and data.
	RTESEL	DN	Route selector. Enter DN.
	SNPA	numeric	Serving NPA. Enter the serving numbering plan area (NPA) of the DN to which the call terminates. If field FROMD represents the first number of a block of consecutive numbers, enter the last number in the block.
	OFC	numeric (up to 7 digits)	Office (NNX) code. Enter an office code of up to seven digits that the directory number uses to terminate the call.

Trunk to Line (continued)**Datafill example for table OFRT**

The following example shows sample datafill for table OFRT.

MAP display example for table OFRT

RTE	RTELIST
501	DN 003 116 \$

Datafilling table DNINV

The following table shows the datafill specific to Trunk to Line for table DNINV. Only those fields that apply directly to Trunk to Line are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table DNINV (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
AREACODE		0 to 9 999 999(1 to 7 digits)	Area code. The area code identifies a major geographical area served by the switch. If office parameter ACTIVE_DN_SYSTEM in table OFCENG is set to North American, the area code must be three digits long.
OFCCODE		0 to 9 999 999(1 to 7 digits)	Office code digit register. The office code is a subregion of the area code. If office parameter ACTIVE_DN_SYSTEM in table OFCENG is set to North American, the area code must be three digits long. The office code must be specified in table TOFCNAME.
Note: Table DNINV is a read-only table. The DN will be added to table DNINV after table DNROUTE is datafilled.			

Trunk to Line (continued)

Datafilling table DNINV (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
STNCODE		0 to 99999999 (1 to 8 digits)	<p>Station code. The station code identifies a unique station within the terminating office (TOFC). If office parameter ACTIVE_DN_SYSTEM in table OFCENG is set to North American, the area code must be one or four digits in length. If one digit is entered, it is treated as a D-digit, where the D-digit represents the fourth digit in the format ABC-DEFG.</p> <p>A D-digit is then given the appropriate DN result. For example, if area code 613 and office code 226 are entered, and if 5 is entered as the station code, any calls to a number beginning with 6132265 are automatically routed to the specified treatment. If 5 is the D-digit, and DNROUTE is datafilled as 613 226 5 D OPRT, any numbers for 6132265 are routed to the operator treatment as set in table TMTCNTL.</p>
DNRESULT		see subfield	<p>Directory number result. This field consists of subfield DN_SEL.</p>
	DN_SEL	D, M, MEM, MM, SYN, T, or FEAT	<p>Directory number selector. Enter the required DN selector and datafill the appropriate refinements. Refer to the data schema section of this document for more information.</p> <ul style="list-style-type: none"> • D (treatment) • M (listed directory number) • MEM (direct routing to trunk member) • MM (meet me conference) • SYN (synonym directory number) • T (route list) • Feat (features)
<p>Note: Table DNINV is a read-only table. The DN will be added to table DNINV after table DNROUTE is datafilled.</p>			

Datafill example for table DNINV

The following example shows sample datafill for table DNINV.

Trunk to Line (continued)**MAP display example for table DNINV**

AREACODE	OFCCODE	STNCODE	DNRESULT
003	116	2001	M ABCISUP 0 10 N

Datafilling table LINEATTR

The following table shows the datafill specific to Trunk to Line for table LINEATTR. Only those fields that apply directly to Trunk to Line are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table LINEATTR

Field	Subfield or refinement	Entry	Explanation and action
LNATTIDX		numeric (0 to 31 999)	Line attribute index. Enter the index into table LINEATTR.
LCC		alphanumeric (up to 8 characters) or NLCC	Line class code. Enter the line class code (LCC) assigned to the line attribute index. The LCC of an existing tuple cannot be changed. If there is no LCC enter NLCC.
IXNAME		see subfields	International translations system start. This field consists of subfields XLASYS and XLANAME.
	XLASYS	PX	Translation system. Enter OFC.
	XLANAME	alphanumeric (1 to 8 characters)	Translation name. Enter 1 to 8 alphanumeric characters to identify the universal translator.

Datafill example for table LINEATTR

The following example shows sample datafill for table LINEATTR.

Trunk to Line (continued)

MAP display example for table LINEATTR

LNATTIDX	LCC	CHGCLSS	COST	SCRNCL	LTG	STS	PRTNM	LCANAME
ZEROMPOS	TRAFSNO							
MRSA	SFC	LATANM	MDI		IXNAME	DGCLANME	FANIDIGS	
		RESINF					OPTIONS	
100		IBN NONE	NT	NSCR	0	003	NPRT	NLCA
NONE	0							
NIL	NILSFC	NILLATA	0		PX	ABCISUP		NIL

Translation verification tools

The following example shows the output from TRAVER when it is used to verify Trunk to Line.

Trunk to Line (continued)**TRAVER output example for Trunk to Line**

```

>TRAVER TR JISUP3 1162001 B
TABLE TRKGRP
JISUP3 IBNT2 0 ELO NCRT ABCGRP 0 CNTLEVN 0 N ANSDISC 0 Y N N N N N N 0 0
N 0 0 0 0 N N N N N N N N N NATL $
TABLE CUSTSTN
TUPLE NOT FOUND
TABLE OFCVAR
AIN_OFFICE_TRIGGRP NIL
TABLE NCOS
NTTGRP 0 0 0 ABCNCO $
TABLE CUSTHEAD: CUSTGRP, PRELMIMXLA, CUSTXLA, FEATXLS, VACTRMT, AND
DIGCOL
TABLE DIGCOL
TUPLE NOT FOUND
DEFAULT IS RPT
NCOS PRELIM XLA NAME IS NIL. GO TO NEXT XLA NAME.
CUST PRELIM XLA NAME IS NIL. GO TO NEXT XLA NAME.
TABLE IBNXLA: XLANAME ABCXLA
ABCXLA 1 NET N N N 0 N POTS N Y DOD N 100 NONE $
TABLE DIGCOL
POTS SPECIFIED: POTS DIGIT COLLECTION
TABLE LINEATTR
100 IBN NONE NT NSCR 0 003 NPRT NLCA NONE 0 NIL NILSFC NILLATA 0 PX
ABCISUP NIL
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE PXHEAD
ABCISUP SDFLT DFOP ( MM 2 18) ( CLASS LCL) $ NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE:          1162001
TABLE PXCDE
ABCISUP 116 116 RTE ( PF 2) (MM 3 18) ( DEST 501) $

```

Trunk to Line (end)

TRAVER output example for Trunk to Line (continued)

```
TABLE PXRTE
KEY:  ABCISUP 501
.  T OFRT 501
.  . 501 DN 003 116
.  .EXIT TABLE OFCRTE
EXIT TABLE PXRTE

+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

1 LINE                0031162001          ST

TREATMENT ROUTES.  TREATMENT IS: GNCT
1 T60

+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

Trunk to Treatment

Ordering codes

Functional group ordering code: not applicable

Functionality ordering code: not applicable

Release applicability

TL03 and up

Prerequisites

Trunk to Treatment has no prerequisites.

Description

The call processing flow for a trunk to treatment call, followed by the associated datafill, is shown in the "Translations table flow for Trunk to Treatment calls" section.

Operation

The originating trunk has been datafilled in table TRKGRP.

In table LINEATTR, subfield XLASYS is set to PX. Translations enters the universal environment starting with table PXHEAD.

If DFLT is entered in field DFLTSEL in table PXHEAD and field XLASEL is datafilled with TRMT, translations goes directly to subtable TMTCNTL.TREAT. If SDFLT is entered in field DFLTSEL, the call is sent to standard defaults, such as VACT or TRMT.

If no route or treatment is specified in table PXHEAD, translations continues to table PXCOD. From table PXCOD there are two paths the call can take to reach treatment. If field XLASEL is set to RTE, table PXRTE is accessed. However, if field XLASEL is set to TRMT, the call is directed to table TMTCNTL.TREAT.

In table PXRTE, if field RTESEL is set to T (table) and OFRT or IBNRTE are specified, the call is directed to one of these tables and sent to treatment from this point.

Translations table flow

The Trunk to Treatment translations tables are described in the following list:

- TRKGRP
- LINEATTR

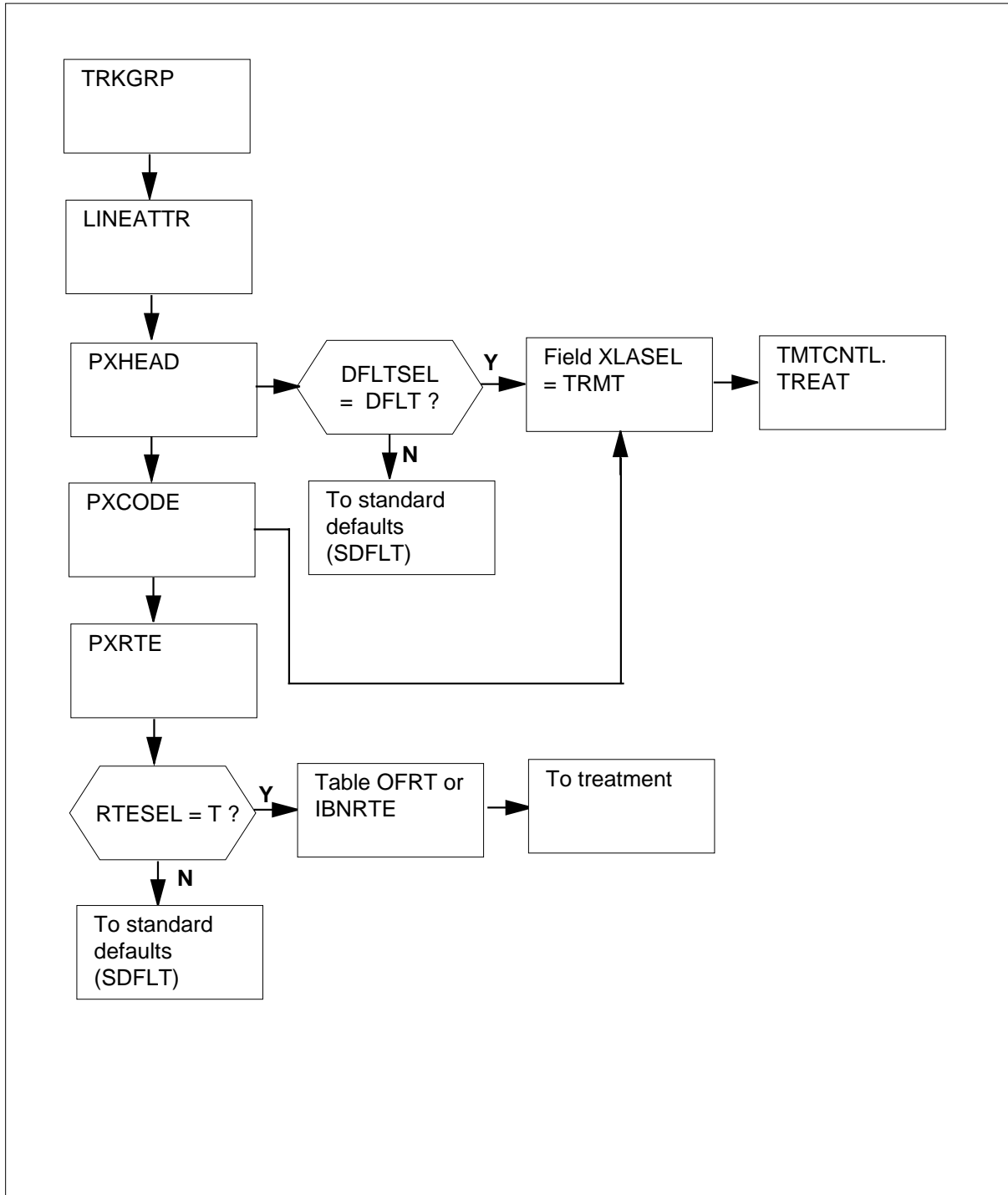
Trunk to Treatment (continued)

- PXHEAD
- PXCORE
- TMTCTL.TREAT
- OFRT
- IBNRTE

The trunk to treatment call translation process is shown in the flowchart that follows.

Trunk to Treatment (continued)

Table flow for Trunk to Treatment calls



Trunk to Treatment (continued)

The following table lists the datafill content used in the flowchart.

Datafill example for local calls Trunk to Treatment

Datafill table	Example data
TRKGRP	JISUP1 IBNT2 0 ELO NCRT ABCGRP 0 CNTLEVN 0 N ANSDISC 0 Y N N N N N N 0 0 N 0 0 0 0 N N N N N N N N NATL
LINEATTR	100 IBN NONE NT NSCR 0 003 NPRT NLCA NONE 0 NIL NILSFC NILLATA 0 PX ABCISUP NIL
PXHEAD	ABCISUP SDFLT DFOP (MM 2 18) (CLASS LCL) \$ NOCON STD
PXCODE	ABCISUP 77 77 TRMT (OFC BLDN)
TMTCNTL. TREAT	BLDN N S T60
PXRTE	ABCISUP 3 T OFRT 501
OFRT	1 TRMT BNCI
IBNRTE	1 TRMT BNCI

Limitations and restrictions

The following limitations and restrictions apply to Trunk to Treatment:

- In the xxCODE tables, adding or changing a tuple affects all digit combinations between fields FROMD and TOD. However, the DELETE command deletes only the tuple at field FROMD.
- In the xxCODE tables, because of the way the FROM and TO digit key is implemented, the operation of table control requires additional explanation. If a tuple is datafilled such that the value in field TOD is greater than the value in field FROMD (for example field FROMD is set to 3 and field TOD is set to 8) and a user positions on a tuple with fields FROMD and TOD within the datafilled range, the tuple is displayed as if only those digits are datafilled as the key.

In this example, the user positions on the tuple with fields FROMD and TOD both equal to 5. The tuple is displayed with both fields equal to 5. The information is being requested for the given key. If the user then displays the previous tuple, fields FROMD and TOD contain the digits originally datafilled before the current FROMD digit. In this example, the FROMD and TOD digits are 3 and 8. If the user no displays the next tuple, the digits following the currently displayed TOD field are displayed. They are 5 and 8 in this example.

Trunk to Treatment (continued)

Interactions

Trunk to Treatment has no functionality interactions.

Activation/deactivation by the end user

Trunk to Treatment requires no activation or deactivation by the end user.

Billing

Field BILLDN in table TRKGRP establishes the billing directory number (DN). If no incoming digits are to be received (seizure only), enter the DN, station number, or attendant access code to which translation routes. If the trunk group is arranged to receive incoming digits and a local automatic message accounting (LAMA) recording is required for all calls that tandem through the switch, enter the ten-digit DN to which calls are billed. If the trunk group is arranged to receive incoming digits and no billing is required, enter N.

Station Message Detail Recording

Trunk to Treatment does not affect Station Message Detail Recording.

Datafilling office parameters

The following table shows the office parameters used by Trunk to Treatment. For more information about office parameters, refer to *Office Parameters Reference Manual*.

Office parameters used by Trunk to Treatment

Table name	Parameter name	Explanation and action
OFCVAR	AIN_OFFICE_TRIGGRP	This parameter is used to subscribe trigger behaviors for an office. The range of values is that of field AINGRP in table TRIGGRP. This parameter provides a reference to table TRIGGRP. The default is NIL.

Trunk to Treatment (continued)

Datafill sequence

The following table lists the tables that require datafill to implement Trunk to Treatment. The tables are listed in the order in which they are to be datafilled.

Datafill tables required for Trunk to Treatment

Table	Purpose of table
TRKGRP	The trunk group table contains customer-defined data associated with each trunk group.
PXHEAD	The prefix code head table aids in determining the type of call being dialed. For example, domestic or international direct distance dialing.
PXCODE	The prefix code table aids in determining the type of call being dialed.
TMTCNTL. TREAT	The treatment control treatment subtable is used by the operating company to define the codes, announcements, states or combinations of these that are returned to the originator of a call if a specified treatment code is encountered during call translation.
PXRTE	The prefix code route routes the call being dialed.
OFRT	The office route table is used if an originating call is being translated and a preceding stage identifies a route reference index.
IBNRTE	The IBN route table consists of route lists identified by route reference index numbers.
LINEATTR	The line attribute index table assigns line attributes and points calls to appropriate screening and routing tables.

Datafilling table TRKGRP

The following table shows the datafill specific to Trunk to Treatment for table TRKGRP. Only those fields that apply directly to Trunk to Treatment are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table TRKGRP (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
GRPKEY		see subfield	Group key. This field consists of subfield CLLI.
	CLLI	alphanumeric (1 to 16 characters)	Common language location identifier. Enter the code that is assigned to the trunk group in table CLLI.

Trunk to Treatment (continued)**Datafilling table TRKGRP (Sheet 2 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
GRPINFO		see subfields	Group information. This field consists of subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, CUSTNAME, SUBGRPNO, SELSEQ, NCOS, BILLDN, SUPV, DISCTSEL, INTRAGRP, DIGIT0, DIGIT1, DTI, TES, CDR, SMDR, TRC, ALTNCOS, TRKDSR, LSCFN, ALTLSCFN, LSCINCPT, ALSCINCPT, IGA, FDN, FDV, FLASH, DPX, PREEMPT, AIODOPT, REORIG, OFFNETOPT, COFFTYP, and OPTIONS. Refer to the data schema section of this document for more information.
	GRPTYP	IBNT2 or IBNTO	Trunk group type. Enter IBNT2 to specify the two-way IBN trunk group type. Enter IBNTO to specify an outgoing trunk group type.
	CUSTNAME	alphanumeric (1 to 16 characters)	Customer name. Enter the name assigned to the customer group to which the trunk group belongs.
	SUBGRPNO	0 to 7	Subgroup number. Enter the subgroup number of the attendant consoles to which all attendant calls must be routed.

Datafill example for table TRKGRP

The following example shows sample datafill for table TRKGRP.

MAP display example for table TRKGRP

GRPKEY	GRPINFO
JISUP1	IBNT2 0 ELO NCRT ABCGRP 0 CNTLEVN 0 N
ANSDISC	O Y N N N N N N O0 0 N 0 0 0 0 N N N N N N N N N
NATL	\$

Datafilling table PXHEAD

The following table shows the datafill specific to Trunk to Treatment for table PXHEAD. Only those fields that apply directly to Trunk to Treatment are

Trunk to Treatment (continued)

shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table PXHEAD

Field	Subfield or refinement	Entry	Explanation and action
XLANAME		alphanumeric (1 to 8 characters)	Translator name. Enter the universal translator name.
DFLT		see subfields	Default. This field consists of subfield DFLTSEL. DFLT is used when translations find that the dialed digits are not datafilled in the code table associated with this head table.
	DFLTSEL	DFLT or SDFLT	Default selector. Enter SDFLT, if a standard default is required for dialed digits not found in the code table. The standard default is TRMT OFC VACT. Go to field DFOP. Enter DFT if the standard default is not correct and datafill refinement XLASEL. If the entry in field DFLTSEL is DFLT, complete subfields XLASEL and OSEL.
	XLASEL	TRMT	Translations selector. Enter TRMT.
	OSEL	OFC	Option selector. Enter OFC.
	OFC	alphanumeric (1 to 4 characters)	Office treatment. Enter a treatment name that is contained in the office treatment subtable TMTCNTL.TREAT.

Datafill example for table PXHEAD

The following example shows sample datafill for table PXHEAD.

MAP display example for table PXHEAD

XLANAME		DFLT
		DFOP
CON	MAXIDX	
ABCISUP		SDFLT
		DFOP (MM 2 18) (CLASS LCL)
NCON	STD \$	

Trunk to Treatment (continued)**Datafilling table PXC CODE**

The following table shows the datafill specific to Trunk to Treatment for table PXC CODE. Only those fields that apply directly to Trunk to Treatment are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table PXC CODE

Field	Subfield or refinement	Entry	Explanation and action
XLANAME		alphanumeric (1 to 8 characters)	Translator name. Enter the translator name from the corresponding head table.
FROMD		numeric (1 to 11 digits)	From digit. Enter 1 to 11 digits to identify either a single number or the first number in a block of consecutive numbers that have the same translations requirements as described in field XLASEL and its refinements.
TOD		numeric (1 to 11 digits)	To digit. If field FROMD represents a single number, enter the same number here. If field FROMD represents the first number of a block of consecutive numbers, enter the last number in the block.
XLADATA		see subfield	Universal translation data. This field consists of subfield XLASEL and its refinements.
	XLASEL	TRMT or RTE	Translations selector. Enter TRMT or RTE.
	OSEL	OFC or DEST	Option selector. Enter OFC.
	OFC	alphanumeric (1 to 4 characters)	Office treatment. Enter a treatment name that is contained in the office treatment subtable TMTCNTL.TREAT.
	DEST	numeric(0 to 1023)	Destination route list index. Enter the number in the route list of the same translation system to which the call is routed.

Datafill example for table PXC CODE

The following example shows sample datafill for table PXC CODE.

Trunk to Treatment (continued)

MAP display example for table PXCOD

XLANAME	FROMD	TOD	XLADATA
ABCISUP	77	77	TRMT (OFC BLDN) \$

Datafilling subtable TMTCNTL.TREAT

The following table shows the datafill specific to Trunk to Treatment for subtable TMTCNTL.TREAT. Only those fields that apply directly to Trunk to Treatment are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table TMTCNTL.TREAT

Field	Subfield or refinement	Entry	Explanation and action
TREATMT		alphanumeric (1 to 4 characters)	Treatment name. Enter the treatment name.
LOG		Y or N	Log. Enter Y (yes) for a trunk of line message 138 printout each time translation is routed to a treatment. Otherwise, enter N (no).
	FSTRTSEL	S	First route selector. Enter the first route selector S.
	CLLI	alphanumeric (1 to 16 characters)	Common language location identifier. Enter the CLLI of the tone to which translation routes.

Datafill example for subtable TMTCNTL.TREAT

The following example shows sample datafill for subtable TMTCNTL.TREAT

Trunk to Treatment (continued)**MAP display example for subtable TMTCNTL.TREAT**

TREATMT	LOG	FSTRTE
BLDN	N	S T60\$

Datafilling table PXRTE

The following table shows the datafill specific to Trunk to Treatment for table PXRTE. Only those fields that apply directly to Trunk to Treatment are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table PXRTE (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
XLANAME		alphanumeric (1 to 8 characters)	Translator name. Enter 1 to 8 alphanumeric characters to identify the universal translator.
RTEREF		numeric (0 to 1023)	Route reference. Enter the route reference index that corresponds to the destination (from option DEST) used in table ACCODE for the given XLANAME.
RTELIST		see subfield	Route list. This field consists of subfield RTESEL and refinements dependent on the value in subfield RTESEL. The route list consists of up to eight routes, where a route has a selector and data.
	RTESEL	T	Default selector. Enter T (table name route) and datafill refinements TABNAME, XLASYS, XLANAME, and RTEREF, if the route is to a route table.

Trunk to Treatment (continued)

Datafilling table PXRTE (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	TABNAME	OFRT, OFR2, OFR3, OFR4, IBNRTE, IBNRT2, IBNRT3, or IBNRT4	Table name. Enter the respective office route table name.
	INDEX	0 to 1023	Route reference index. Enter the index of the route table to which the call is transferred.

Datafill example for table PXRTE

The following example shows sample datafill for table OFCHEAD.

MAP display example for table PXRTE

XLANAME	RTEREF	RTELIST	
ABCISUP	3	T	OFRT 501 \$

Datafilling table OFRT

The following table shows the datafill specific to Trunk to Treatment for table OFRT. Only those fields that apply directly to Trunk to Treatment are shown.

Trunk to Treatment (continued)

For a description of the other fields, refer to the data schema section of this document.

Datafilling table OFRT

Field	Subfield or refinement	Entry	Explanation and action
RTE		1 to 1023 or blank	Route reference index. If the record is the first in the route list, enter the route reference number assigned to the route list. Otherwise, leave the entry blank. An entry outside of this range is invalid.
RTELIST		see subfield	Route list. This field consists of subfield RTESEL and refinements dependent on the value in subfield RTESEL. The route list consists of up to eight routes, where a route has a selector and data.
	RTESEL	TRMT	Route selector. Enter TRMT.
	RTETRMT	alphanumeric	Route treatment. Enter the required treatment routed to. A list of valid treatments can be found in subtable TMCNTL.TREAT.

Datafill example for table OFRT

The following example shows sample datafill for table OFRT.

MAP display example for table OFRT

RTE	RTELIST
1	(TRMT BNCI)\$

Datafilling table IBNRTE

The following table shows the datafill specific to Trunk to Treatment for table IBNRTE. Only those fields that apply directly to Trunk to Treatment are

Trunk to Treatment (continued)

shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table IBNRTE

Field	Subfield or refinement	Entry	Explanation and action
RTE		1 to 1023 or blank	IBN route reference index. Enter the route reference number that is assigned to the route list.
	IBNRTSEL	TRMT	IBN route selector. Enter TRMT.
	RTETRMT	alphanumeric (1 to 4 characters)	Route treatment. Enter the treatment the switch has selected to route the call.

Datafill example for table IBNRTE

The following example shows sample datafill for table IBNRTE.

MAP display example for table IBNRTE

```

RTE  RTELIST
-----
1   (TRMT  BNCI)$
    
```

Datafilling table LINEATTR

The following table shows the datafill specific to Trunk to Treatment for table LINEATTR. Only those fields that apply directly to Trunk to Treatment are

Trunk to Treatment (continued)

shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table LINEATTR

Field	Subfield or refinement	Entry	Explanation and action
LNATTIDX		0 to 31 999	Line attribute index. Enter the index into table LINEATTR.
LCC		alphanumeric (up to 8 characters) or NLCC	Line class code. Enter the line class code (LCC) assigned to the line attribute index. The LCC of an existing tuple cannot be changed. If there is no LCC enter NLCC.
	XLASYS	PX	Translation system. Enter PX.
	XLANAME	alphanumeric (1 to 8 characters)	Translation name. Enter the universal translator name.

Datafill example for table LINEATTR

The following example shows sample datafill for table LINEATTR.

MAP display example for table LINEATTR

LNATTIDX	LCC	CHGCLSS	COST	SCRNCL	LTG	STS	PRTNM	LCANAME
ZEROMPOS	TRAFSNO							
MRSA	SFC	LATANM	MDI		IXNAME	DGCLANME	FANIDIGS	
			RESINF				OPTIONS	
100		IBN NONE	NT	NSCR	0	003	NPRT NLCA	
NONE	0							
NIL	NILSFC	NILLATA	0		PX	ABCISUP	NIL	

Translation verification tools

The following example shows the output from TRAVER when it is used to verify Trunk to Treatment.

Trunk to Treatment (continued)

TRAVER output example for Trunk to Treatment

```
>TRAVER TR JISUP1 770000 B
TABLE TRKGRP
JISUP1 IBNT2 0 ELO NCRT ABCGRP 0 CNTLEVN 0 N ANSDISC 0 Y N N N N N N 0 0
N 0 0 0 0 N N N N N N N N N NATL $
TABLE CUSTSTN
TUPLE NOT FOUND
TABLE OFCVAR
AIN_OFFICE_TRIGGRP NIL
TABLE NCOS
ABCGRP 0 0 0 ABCNCO $
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND
DIGCOL
ABCGRP NXLA JPNXLA NXLA 0 ABC
TABLE DIGCOL
ABC 7 COL S 2
NCOS PRELIM XLA NAME IS NIL. GO TO NEXT XLA NAME.
CUST PRELIM XLA NAME IS NIL. GO TO NEXT XLA NAME.
TABLE IBNXLA: XLANAME JPNXLA
JPNXLA 7 NET N N N 0 N POTS N Y DOD N 100 NONE $
TABLE DIGCOL
POTS SPECIFIED: POTS DIGIT COLLECTION
TABLE LINEATTR
100 IBN NONE NT NSCR 0 003 NPRT NLCA NONE 0 NIL NILSFC NILLATA 0 PX
ABCISUP NIL
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE PXHEAD
ABCISUP SDFLT DFOP ( MM 2 18) ( CLASS LCL) $ NOCON STD
THE DIGITS USED TO TINDEX THE NEXT TABLE ARE:          770000
TABLE PXCOD
TUPLE NOT FOUND
DEFAULT FROM HEAD TABLE USED
```

Trunk to Treatment (end)

TRAVER output example for Trunk to Treatment (continued)

```
WARNING: EXTRA DIGITS RECEIVED

+++ TRAVER: TREATMENT SET +++

TREATMENT ROUTES.  TREATMENT IS: VACT
1 T60

+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

SERVORD

Trunk to Treatment does not use SERVORD.

Trunk to Trunk

Ordering codes

Trunk to Trunk has no ordering codes.

Release applicability

TL03 and up

Prerequisites

Trunk to Trunk has no prerequisites.

Description

The call processing for a trunk to trunk call, followed by the associated datafill is shown in the "Translations table flow for Trunk to Trunk calls" section.

Operation

The originating trunk is datafilled in table TRKGRP.

In table LINEATTR if subfield XLASYS is set to PX, translations enters the universal environment starting with table PXHEAD.

If no selector is defined in table PXHEAD (subfield OSEL), translations continues to table PXC CODE.

Translations continues to look for a tuple match in table PXC CODE. The datafill for table PXC CODE allows for a route to be specified. This route can be either to other universal translations tables (PXRTE), or to a treatment. If XLASEL RTE is selected, translations must go through tables PXRTE and OFRT or IBNRTE before entering table DNINV.

From table DNINV, translations obtains the line equipment number (LEN) and the call is sent to a line.

Translations table flow for Trunk to Trunk calls

Note: The list follows the correct order of call translations.

The Trunk to Trunk translations tables are described in the following list:

- TRKGRP
- LINEATTR
- PXHEAD

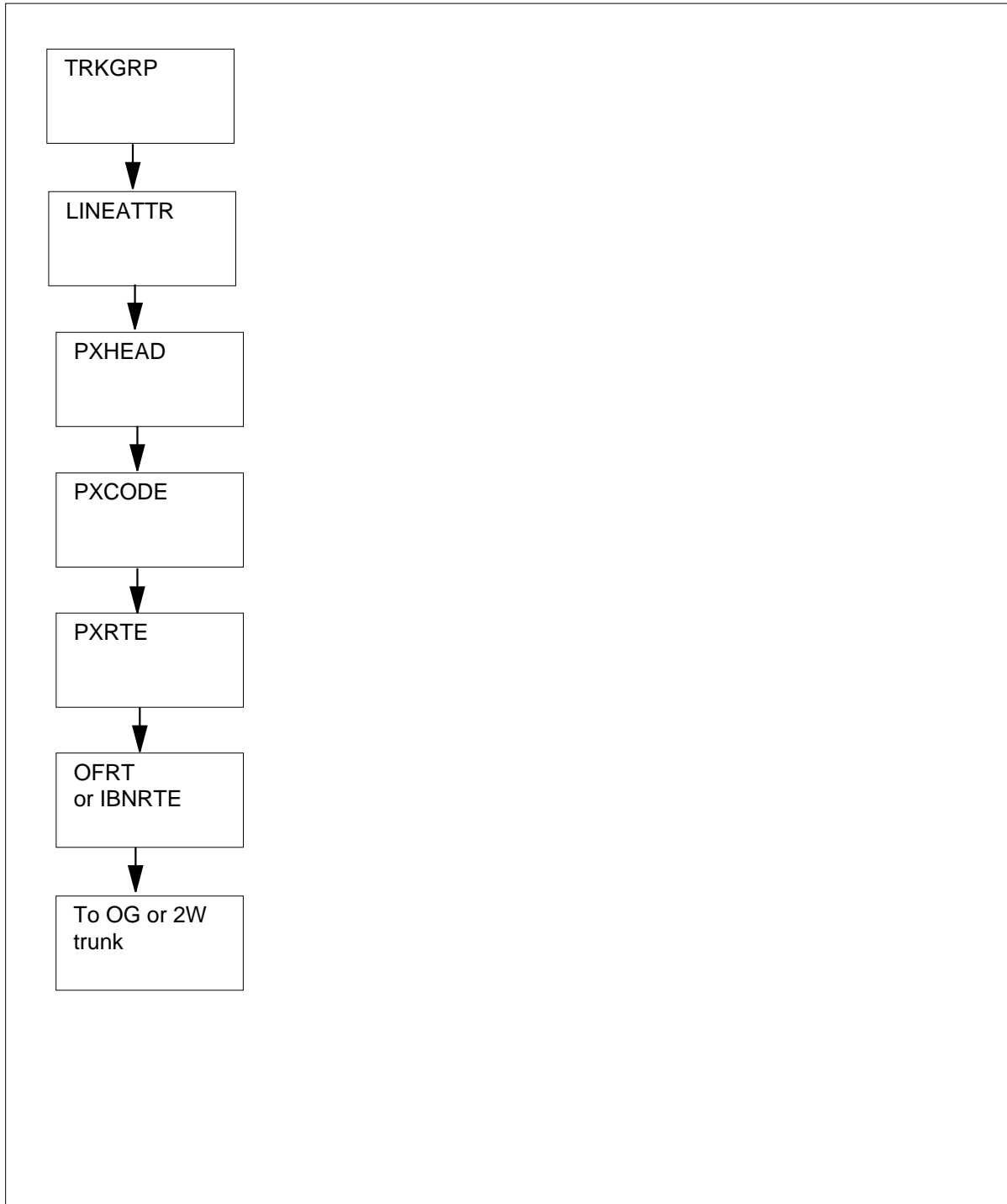
Trunk to Trunk (continued)

- PXCODE
- PXRTE
- OFRT
- IBNRTE

The Trunk to Trunk call translation process is shown in the flowchart that follows.

Trunk to Trunk (continued)

Table flow for Trunk to Trunk calls



Trunk to Trunk (continued)

The following table lists the datafill content used in the flowchart.

Datafill example for local calls Trunk to Trunk

Datafill table	Example data
TRKGRP	JISUP3 IBNT2 0 ELO NCRT ABCGRP 0 CNTLEVN 0 N ANSDISC 0 Y N N N N N N 0 0 N 0 0 0 0 N N N N N N N N NATL
LINEATTR	100 IBN NONE NT NSCR 0 003 NPRT NLCA NONE 0 NIL NILSFC NILLATA 0 PX ABCISUP NIL
PXHEAD	ABCISUP SDFLT DFOP (MM 2 18) (CLASS LCL) \$ NOCON STD
PXCODE	ABCISUP 43 43 RTE (PF 2) (MM 8 18) (DEST 513)
PXRTE	ABCISUP 513 T OFRT 513
OFRT	513 N D JISUP3 0 \$ N
IBNRTE	15 VFG N N N OGTRK01 0

Limitations and restrictions

The following limitations and restrictions apply to Trunk to Trunk:

- In the xxCODE tables, adding or changing a tuple affects all digit combinations between fields FROMD and TOD. However, the DELETE command deletes only the tuple at field FROMD.
- In the xxCODE tables, because of the way the FROM and TO digit key is implemented, the operation of table control requires additional explanation. If a tuple is datafilled such that the value in field TOD is greater than the value in field FROMD (for example field FROMD is set to 3 and field TOD is set to 8) and a user positions on a tuple with fields FROMD and TOD within the datafilled range, the tuple is displayed as if only those digits are datafilled as the key. In this example, the user positions on the tuple with fields FROMD and TOD both equal to 5. The tuple is displayed with both fields equal to 5. The information is being requested for the given key. If the user then displays the previous tuple, fields FROMD and TOD contain the digits originally datafilled before the current FROMD digit. In this example, the FROMD and TOD digits are 3 and 8. If the user no displays the next tuple, the digits following the currently displayed TOD field are displayed. They are 5 and 8 in this example.

Billing

Field BILLDN in table TRKGRP establishes the billing directory number. If no incoming digits are to be received (seizure only), enter the directory number, station number, or attendant access code to which translation routes.

Trunk to Trunk (continued)

If the trunk group is arranged to receive incoming digits and a local automatic message accounting (LAMA) recording is required for all calls that tandem through the switch, enter the ten-digit directory number to which calls are billed. If the trunk group is arranged to receive incoming digits and no billing is required, enter N.

Datavfilling office parameters

The following table shows the office parameters used by Trunk to Trunk. For more information about office parameters, refer to *Office Parameters Reference Manual*.

Office parameters used by Trunk to Trunk

Table name	Parameter name	Explanation and action
OFCVAR	AIN_OFFICE_TRIGGRP	This parameter is used to subscribe trigger behaviors on an office-wide basis. The range of values is that of field AINGRP in table TRIGGRP. This parameter provides a reference to table TRIGGRP. The default is NIL.

Datavfill sequence

The following table lists the tables that require datavfill to implement Trunk to Trunk. The tables are listed in the order in which they are to be datavfilled.

Datavfill tables required for Trunk to Trunk

Table	Purpose of table
TRKGRP	The trunk group table contains customer-defined data associated with each trunk group.
PXHEAD	The prefix code head table aids in determining the type of call being dialed. For example, domestic or international direct distance dialing.
PXCODE	The prefix code table aids in determining the type of call being dialed.
PXRTE	The prefix code route routes the call being dialed.
OFRT	The office route table is used if an originating call is being translated and a preceding stage identifies a route reference index.
IBNRTE	The IBN route table consists of route lists identified by route reference index numbers.
LINEATTR	The line attribute index table assigns line attributes and points calls to appropriate screening and routing tables.

Trunk to Trunk (continued)**Datafilling table TRKGRP**

The following table shows the datafill specific to Trunk to Trunk for table TRKGRP. Only those fields that apply directly to Trunk to Trunk are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table TRKGRP

Field	Subfield or refinement	Entry	Explanation and action
GRPKEY		see subfield	Group key. This field consists of subfield CLLI.
	CLLI	alphanumeric (1 to 16 characters)	Common language location identifier. Enter the code that is assigned to the trunk group in table CLLI.
GRPINFO		see subfields	Group information. This field consists of subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, CUSTNAME, SUBGRPNO, SELSEQ, NCOS, BILLDN, SUPV, DISCTSEL, INTRAGR, DIGIT0, DIGIT1, DTI, TES, CDR, SMDR, TRC, ALTNCOS, TRKDSR, LSCFN, ALTLSCFN, LSCINCPT, ALSCINCPT, IGA, FDN, FDV, FLASH, DPX, PREEMPT, AIODOPT, REORIG, OFFNETOPT, COFFTYP, and OPTIONS. Refer to the data schema section of this document for more information.
	GRPTYP	IBNT2 or IBNTO	Trunk group type. Enter IBNT2 to specify the two-way Integrated Business Network (IBN) trunk group type. Enter IBNTO to specify an outgoing trunk group type.
	CUSTNAME	alphanumeric (1 to 16 characters)	Customer name. Enter the name assigned to the customer group to which the trunk group belongs.
	SUBGRPNO	0 to 7	Subgroup number. Enter the subgroup number of the attendant consoles to which all attendant calls must be routed.

Datafill example for table TRKGRP

The following example shows sample datafill for table TRKGRP.

Trunk to Trunk (continued)

MAP display example for table TRKGRP

GRPKEY	GRPINFO
JISUP	IBNT2 0 ELO NCRT ABCGRP 0 CNTLEVN 0 N
ANSDISC O Y N N N N N N N O O 0 N 0 0 0 0 N N N N N N N N N	
NATL \$	

Datafilling table PXHEAD

The following table shows the datafill specific to Trunk to Trunk for table PXHEAD. Only those fields that apply directly to Trunk to Trunk are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table PXHEAD (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
XLANAME		alphanumeric (1 to 8 characters)	Translator name. Enter 1 to 8 alphanumeric characters to identify the universal translator.
DFLT		see subfields	Default. This field consists of subfield DFLTSEL. DFLT is used when translations find that the dialed digits are not datafilled in the code table associated with this head table.
	DFLTSEL	DFLT or SDFLT	Default selector. Enter SDFLT, if a standard default is required for dialed digits not found in the code table. The standard default is TRMT OFC VACT. Go to field DFOP. Enter DFLT if the standard default is not correct and datafill refinement XLASEL. If the entry in field DFLTSEL is DFLT complete subfields XLASEL and OSEL.
	XLASEL	CONT	Translations selector. Enter CONT to indicate that further translations screening is required to determine the route a call should take.

Trunk to Trunk (continued)**Datafilling table PXHEAD (Sheet 2 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
	OSEL	XLT	Option selector. Enter XLT to allow the next translations system and translations name used to be overridden by specifying a new translations system (AC, PX, FA, CT, OFC, AM, FT, or NIL), a new translations name, or both.
	XLASYS	OFC	Translation system. Enter OFC.
	XLANAME	alphanumeric (1 to 8 characters)	Translation name. Enter 1 to 8 alphanumeric characters to identify the universal translator.
	DFOP	NODFOP	Default options. Enter NODFOP if there are no default options.
CON		NOCON	Consume digits. Enter NOCON if digits are not to be consumed (the next table is indexed using the same digits as the current table, except the prefix digits).
MAXIDX		9 or STD	Maximum index. Enter STD or 9 if the translation tables are to be indexed by dialed digits in the range of 0 to 9. The default is 9.

Datafill example for table PXHEAD

The following example shows sample datafill for table PXHEAD.

MAP display example for table PXHEAD

XLANAME	DFLT
	DFOP
CON	MAXIDX
<hr/>	
ABCISUP	SDFLT
	DFOP(MM 2 18) (CLASS LCL) \$
NOCON	STD \$

Datafilling table PXC CODE

The following table shows the datafill specific to Trunk to Trunk for table PXC CODE. Only those fields that apply directly to Trunk to Trunk are shown.

Trunk to Trunk (continued)

For a description of the other fields, refer to the data schema section of this document.

Datafilling table PXC CODE (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
XLANAME		alphanumeric (1 to 8 characters)	Translator name. Enter 1 to 8 alphanumeric characters to specify the translator name from the corresponding head table.
FROMD		vector of 1 to 11 digits	From digit. Enter 1 to 11 digits to identify either a single number or the first number in a block of consecutive numbers that have the same translations requirements as described in field XLASEL and its refinements.
TOD		vector of 1 to 11 digits	To digit. If field FROMD represents a single number, enter the same number here. If field FROMD represents the first number of a block of consecutive numbers, enter the last number in the block.
XLADATA		see subfield	Universal translation data. This field consists of subfield XLASEL and its refinements.
	XLASEL	RTE	Translations selector. Enter RTE.
	OSEL	DEST, PF, or MM	Option selector. Enter the option selector.
	PFDIGS	numeric (0 to 24)	Number of prefix digits. If the entry in subfield OSEL is PF, datafill this refinement. Enter the number of prefix digits. If prefix digits were identified in a previous table, then this number is added to the existing value. Prefix digits are not stored in call detail records, outpulsed, or used to index the next translation table.
	DEST	numeric (0 to 1023)	Destination route list index. Enter the number in the route list of the same translation system to which the call is routed.

Trunk to Trunk (continued)**Datafilling table PXC CODE (Sheet 2 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
	MIN	numeric (0 to 30)	Minimum digits. If the entry in subfield OSEL is MM, datafill this refinement. Enter the minimum number of digits expected. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.
	MAX	numeric (0 to 30)	Maximum digits. If the entry in subfield OSEL is MM, datafill this refinement. Enter the maximum number of digits expected. This value includes the digits used to index the current tuple and must also include the prefix digits specified in the current tuple.

Datafill example for table PXC CODE

The following example shows sample datafill for table PXC CODE.

MAP display example for table PXC CODE

XLANAME	FROMD	TOD	XLADATA
ABCISUP	43	43	RTE (PF 2) (MM 8 18) (DEST 513) \$

Datafilling table PXRTE

The following table shows the datafill specific to Trunk to Trunk for table PXRTE. Only those fields that apply directly to Trunk to Trunk are shown.

Trunk to Trunk (continued)

For a description of the other fields, refer to the data schema section of this document.

Datafilling table PXRTE

Field	Subfield or refinement	Entry	Explanation and action
XLANAME		alphanumeric (1 to 8 characters)	Translator name. Enter 1 to 8 alphanumeric characters to identify the universal translator.
RTEREF		numeric (0 to 1023)	Route reference. Enter the route reference index that corresponds to the destination (from option DEST) used in table ACCODE for the given XLANAME.
RTELIST		see subfield	Route list. This field consists of subfield RTESEL and refinements dependent on the value in subfield RTESEL. The route list consists of up to eight routes, where a route has a selector and data.
	RTESEL	T	Default selector. Enter T (table name route) and datafill refinements TABNAME, XLASYS, XLANAME, and RTEREF, if the route is to a route table.
	TABNAME	OFRT, OFR2, OFR3, or OFR4	Table name. Enter the respective office route table name.
	INDEX	numeric (0 to 1023)	Route reference index. Enter the index of the route table to which the call is transferred.

Datafill example for table PXRTE

The following example shows sample datafill for table OFCHEAD.

MAP display example for table PXRTE

XLANAME	RTEREF	RTELIST	
ABCISUP	513	T	OFRT 513 \$

Trunk to Trunk (continued)**Datafilling table OFRT**

The following table shows the datafill specific to Trunk to Trunk for table OFRT. Only those fields that apply directly to Trunk to Trunk are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table OFRT

Field	Subfield or refinement	Entry	Explanation and action
RTE		1 to 1023 or blank	Route reference index. If the record is the first in the route list, enter the route reference number assigned to the route list. Otherwise, leave the entry blank. An entry outside of this range is invalid.
RTELIST		see subfield	Route list. This field consists of subfield RTESEL and refinements dependent on the value in subfield RTESEL. The route list consists of up to eight routes, where a route has a selector and data.
	RTESEL	N	Route selector. Enter N.
	CONNTYPE	D	Connection type. This field is not used by the system logic. Enter D to satisfy table control.
	OFC	numeric (up to 7 digits)	Office (nnx code). Enter the office code of up to seven digits that the directory number uses to terminate the call.
	CLLI	alphanumeric	Common language location identifier. Enter the code in table CLLI to which translations is routed.

Datafill example for table OFRT

The following example shows sample datafill for table OFRT.

Trunk to Trunk (continued)

MAP display example for table OFRT

RTE	RTELIST
513	N D JISUP3 0 \$ N \$

Datafilling table IBNRTE

The following table shows the datafill specific to Trunk to Trunk for table IBNRTE. Only those fields that apply directly to Trunk to Trunk are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table IBNRTE

Field	Subfield or refinement	Entry	Explanation and action
RTE		1 to 1023 or blank	IBN route reference index. Enter the route reference number that is assigned to the route list.
	IBNRTSEL	VFG	IBN route selector. Enter VFG.
	VFG	alphanumeric (1 to 6 characters)	Virtual facility group. Enter the name of the VFG to which translation routes. Final route is defined by the translation, based on digits in the called number and the DIGMAN index that is specified.

Datafill example for table IBNRTE

The following example shows sample datafill for table IBNRTE.

MAP display example for table IBNRTE

RTE	RTELIST
15	VFG N N N OGTRK01 0

Trunk to Trunk (continued)**Datafilling table LINEATTR**

The following table shows the datafill specific to Trunk to Trunk for table LINEATTR. Only those fields that apply directly to Trunk to Trunk are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table LINEATTR

Field	Subfield or refinement	Entry	Explanation and action
LNATTIDX		0 to 31 999	Line attribute index. Enter the index into table LINEATTR.
LCC		alphanumeric (up to 8 characters) or NLCC	Line class code. Enter the line class code (LCC) assigned to the line attribute index. The LCC of an existing tuple cannot be changed. If there is no LCC enter NLCC.
IXNAME		see subfields	International translations system start. This field consists of subfields XLASYS and XLANAME.
	XLASYS	PX	Translation system. Enter OFC.
	XLANAME	alphanumeric (1 to 8 characters)	Translation name. Enter 1 to 8 alphanumeric characters to identify the universal translator.

Datafill example for table LINEATTR

The following example shows sample datafill for table LINEATTR.

MAP display example for table LINEATTR

LNATTIDX	LCC	CHGCLSS	COST	SCRNCL	LTG	STS	PRTNM	LCANAME	ZEROMPOS	TRAFSNO	MRSA	SFC	LATANM	MDI	IXNAME	DGCLANME	FANIDIGS	RESINF	OPTIONS
100		IBN	NONE	NT	NSCR	0	003	NPRT	NLCA										
NONE		0																	
NIL		NILSFC	NILLATA	0		PX	ABCISUP		NIL										

Translation verification tools

The following example shows the output from TRAVER when it is used to verify Trunk to Trunk.

Trunk to Trunk (continued)

TRAVER output example for Trunk to Trunk

```
>TRAVER TR JISUP1 431162001 B $
TABLE TRKGRP
JISUP1 IBNT2 0 ELO NCRT ABCGRP 0 CNTLEVN 0 N ANSDISC 0 Y N N N N N N 0 0
N 0 0 0 0 N N N N N N N N N NATL $
TABLE CUSTSTN
TUPLE NOT FOUND
TABLE OFCVAR
AIN_OFFICE_TRIGGRP NIL
TABLE NCOS
ABCGRP 0 0 0 ABCNCO $
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND
DIGCOL
NTT 4 COL S 2
NCOS PRELIM XLA NAME IS NIL. GO TO NEXT XLA NAME.
CUST PRELIM XLA NAME IS NIL. GO TO NEXT XLA NAME.
TABLE IBNXLA: XLANAME ABCXLA
ABCXLA 4 NET N N N 0 N POTS N Y DOD N 100 NONE $
TABLE DIGCOL
POTS SPECIFIED: POTS DIGIT COLLECTION
TABLE LINEATTR
100 IBN NONE NT NSCR 0 003 NPRT NLCA NONE 0 NIL NILSFC NILLATA 0 PX
ABCISUP NIL
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE PXHEAD
ABCISUP SDFLT DFOP ( MM 2 18) ( CLASS LCL) $ NOCON STD
THE DIGITS USED TO INDEX THE NEXT TABLE ARE: 431162001
TABLE PXCODE
ABCISUP 43 43 RTE ( PF 2) ( MM 8 18) ( DEST 513) $
```

Trunk to Trunk (end)

TRAVER output example for Trunk to Trunk (continued)

```
TABLE PXRTE
KEY:  ABCISUP 513
. T OFRT 513
. . 513 N D JISUP3 0 $ N
. .EXIT TABLE OFCRTE
EXIT TABLE PXRTE

+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

1 JISUP3                1162001          ST

TREATMENT ROUTES.  TREATMENT IS: GNCT
1 T60

+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

Universal call processing

Ordering codes

Universal call processing has no ordering codes.

The ordering code for DCR in Universal Translations is DCR00004.

Release applicability

TL03 and up

Prerequisites

Universal call processing has no prerequisites.

DCR in Universal Translations (DCR00004) requires DCR Base (DCR00001).

Description

The international DMS-100 switch uses universal translations tables to accomplish the following tasks:

- identify the access codes and destination digits dialed by operating company subscribers and sends to treatment if required
- identify feature activation codes
- modify or replace the destination digits received, if required, before transmitting them
- determine the outgoing route for a call
- perform time-of-day routing
- identify the minimum and maximum number of digits expected for the first two stages of digit collection

DCR in Universal Translations

When the Dynamically Controlled Routing (DCR) feature is active on a switch, DCR can be used in the universal routing tables. The DCR feature examines network traffic and calculates the best routing scheme for call processing. See "Datafilling RTE tables" in this feature description for more information.

Universal call processing (continued)

Operation

The Universal call processing translations tables include:

- table xxHEAD
- table xxCODE
- table xxRTE

Note: xx refers to the specific XLASYS system required (AC, AM, FA, FT, NSC, PX, CT, or OFC).

Each of the translations systems, except for the XLASYS AM system, has a head table, a code table, and a route table associated with it. The XLASYS AM system does not have a route table. The universal translations systems tables are all identical in format and function.

Head tables contain default information (routes and treatments) for each code table. Translations occurs in the code table, where an entry is selected based on the digits received and the XLANAME from table TRKGRP. The route tables list the outgoing route choices associated with the address digits previously identified in one of the code tables.

An incoming digit string is translated in the universal translation tables in functional digit segments. The translation of a digit segment can lead the translation path back into the universal translation tables for the translation of the next digit segment.

Each passage through the universal translation tables can modify some of the charging parameters and the digit strings used for transmitting, billing, and translation. It is sometimes necessary to send the call for further translation in the universal translation tables to set the charging parameters to the required values and modify the various digit strings.

Translation of a digit segment involves the selection of a specific translation selector. Each translation selector groups a different set of charging parameter and digit string modifiers.

The entry point into the universal translation tables (where the translation of the incoming digits begins) is defined as XLASYS (the translation system) and XLANAME (the translator name). Translations cannot begin in the AM system tables.

If a call is originated by a subscriber line in an international office, fields XLASYS and XLANAME of table LINEATTR, determine the point where translation of the received dialed digits begins.

Universal call processing (continued)

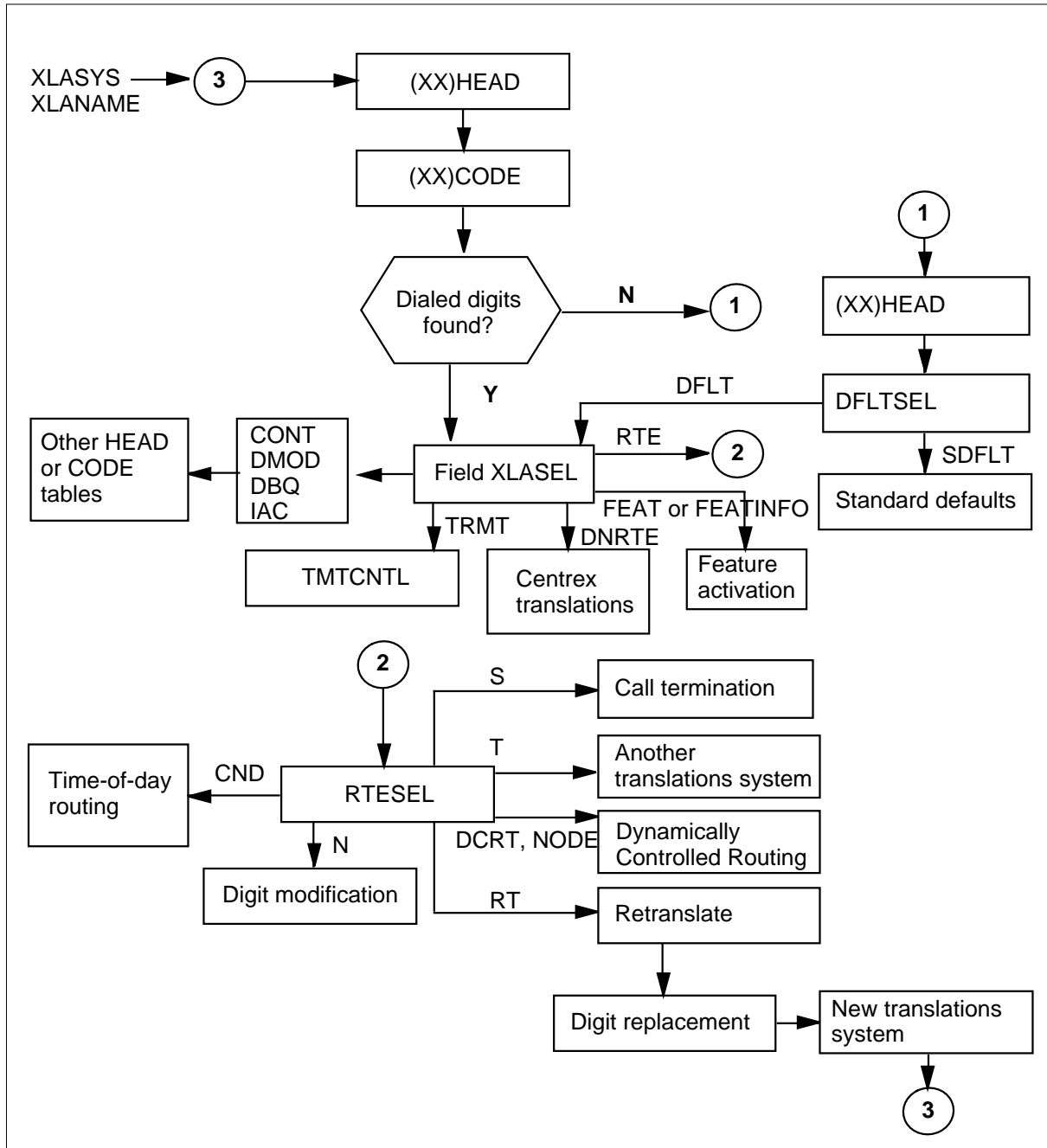
Similarly, an originating incoming call on a trunk of group type such as MTR, OPR, or TPS101 is translated in the universal translation tables using fields XLASYS and XLANAME of table TRKGRP, if field XLADSEL is set to UNIV in table TRKGRP; in table NETATTR, if field XLASEL is set to NETATTR in table TRKGRP, using the table NETATTR tuple index specified in table TRKGRP, field NETINDX.

Translations table flow for call processing data flow

The Universal translation process is shown in the flowchart that follows. This example does not reflect specific dialed digits. Instead, it reflects the fields and datafill options that control the movement of a call through the translations systems.

Universal call processing (continued)

Table flow for legacy call processing data flow



The value in field XLANAME determines which translations system processes the call. The head table of this translations system is indexed using this value. Once the XLANAME is located in the head table for the translations system,

Universal call processing (continued)

table (XX)CODE (where XX is the translations system) is accessed to determine if the dialed digits are specifically located in the table.

If the dialed digits are not found, control returns to table (XX)HEAD to determine which translations system to access next. Translations continues in table (XX)HEAD of the next system.

Subfield XLASEL, the translations selector field, has a variety of options.

If subfield XLASEL in table (XX)HEAD is set to CONT, further translations screening is performed before the call is routed. These screening activities can include digit-string modification or routing to another translations system.

If subfield XLASEL in table (XX)HEAD is set to DMOD, digit-string modification is performed before the call is routed for further translations.

If subfield XLASEL in table (XX)HEAD is set to DBQ, a database query is performed before the call is routed for further translations.

If subfield XLASEL in table (XX)HEAD is set to IAC, insert area code is required when an ambiguous area code is found in translations.

If subfield XLASEL in table (XX)HEAD is set to DNRTE, the call is routed to the specified DN.

If subfield XLASEL in table (XX)HEAD is set to TRMT, calls are routed to the treatments table.

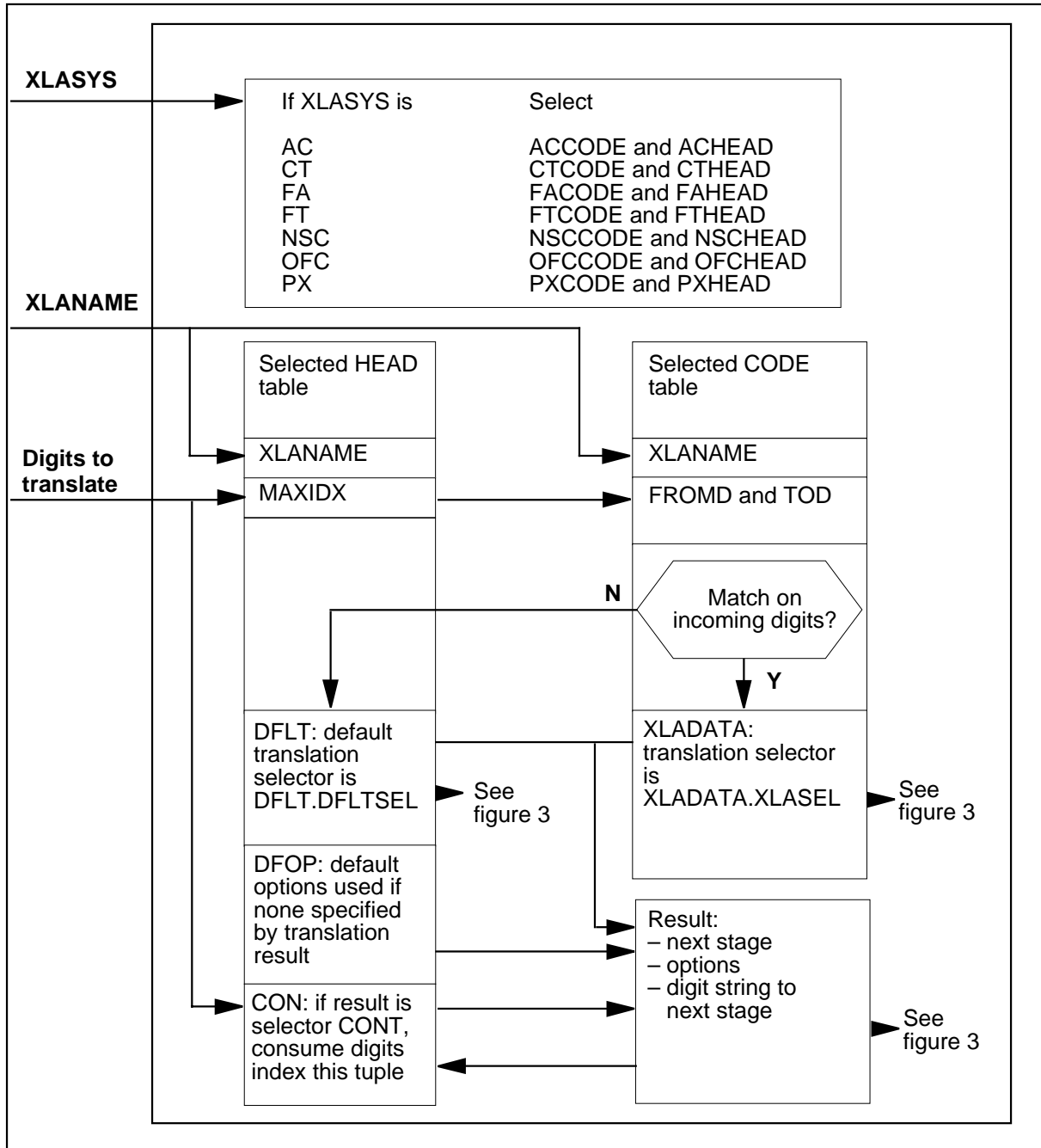
If subfield XLASEL in table (XX)HEAD is set to FEAT, specific features are activated in the switch.

If subfield XLASEL in table (XX)HEAD is set to RTE, control transfers to table (XX)RTE of the current translations system. In table (XX)RTE, field RTESEL is checked to determine the next step the call will take.

An illustration of legacy call processing translations in tables HEAD and CODE with field XLASYS set to AC, CT, FA, FT, PX, NSC, and OFC is shown in the following figure.

Universal call processing (continued)

Translations in tables HEAD and CODE



Universal call processing (continued)

The results of the digit translation in the universal translation tables are shown below:

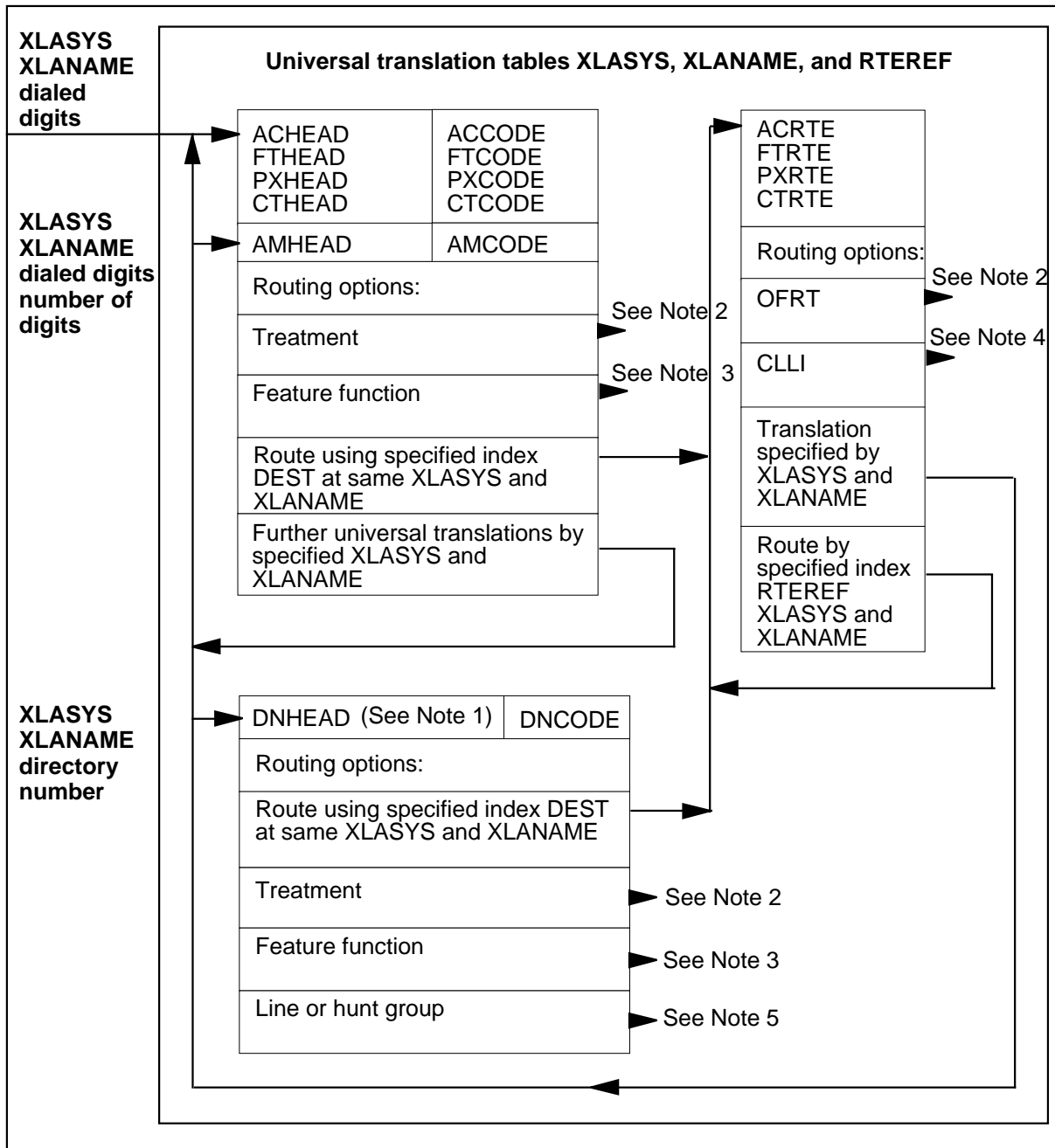
- Route the call to one of the following places:
 - terminating subscriber line
 - outgoing trunk group
 - another network
- Fail to route the call and determine the applicable treatment code, which results in the prescribed combination of announcements and tones being returned to the originator.
- Recognize that the digits dialed are a specific function code of a specific feature and select treatment.
- Modify or replace the received digit string before transmitting it and enable call data recording.
- Determine the parameters required for screening and billing.

Routing

A routing block diagram of the legacy universal translation tables is shown in the following figure..

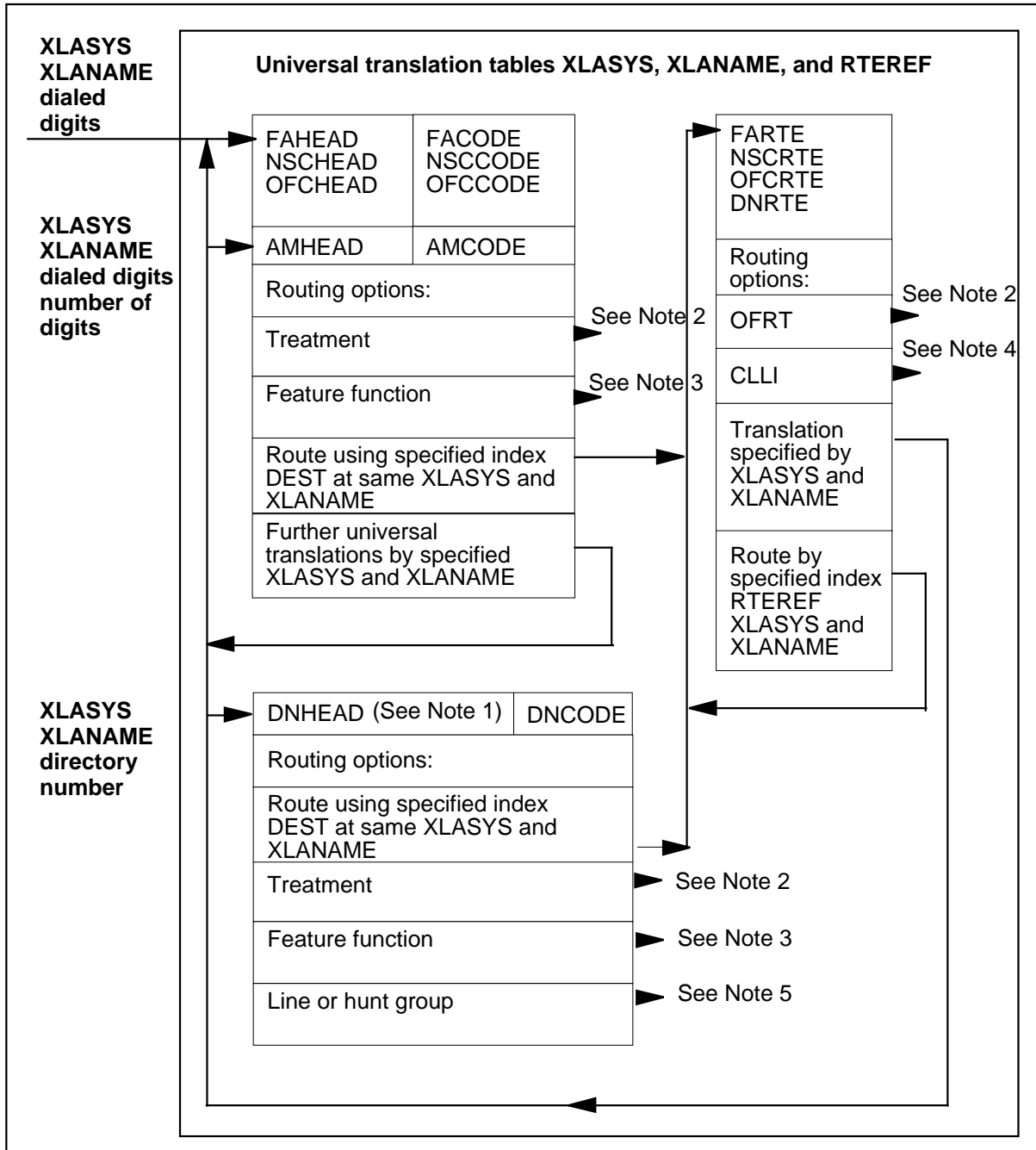
Universal call processing (continued)

Universal translation tables routing block diagram



Universal call processing (continued)

Universal translation tables routing block diagram (continued)



Universal call processing (continued)

Routing block diagram notes

Note 1: GSF call processing does not use tables DNHEAD and DNCODE for variable length directory number translations. This function is performed by the digit collection mechanism.

Note 2: Translation results in one of the following indices being returned to the originator of the call:

a treatment code index into one of the treatment tables leading to a tone, announcement, and state common language location identifier (CLLI)

a route reference index into table OFRT for a series of tones, announcements, and state CLLIs (for legacy call processing only)

Note 3: The dialed digits are recognized as a function of a specific feature. The DMS-100 software then performs all associated functions related to the feature.

Note 4: The call is routed to an outgoing trunk group CLLI through trunk tables. Digits or charging information, or both, can be transmitted. Two-stage transmission can be specified.

Note 5: The call is routed to a line or hunt group through line or hunt group tables.

Digit or default translations

To translate each of the digit string segments all three universal translation tables (HEAD, CODE and RTE) are used.

For example, to translate the prefix code digits segment, translation system PX is used. The tables required are PXHEAD, PXC CODE, and PXRTE.

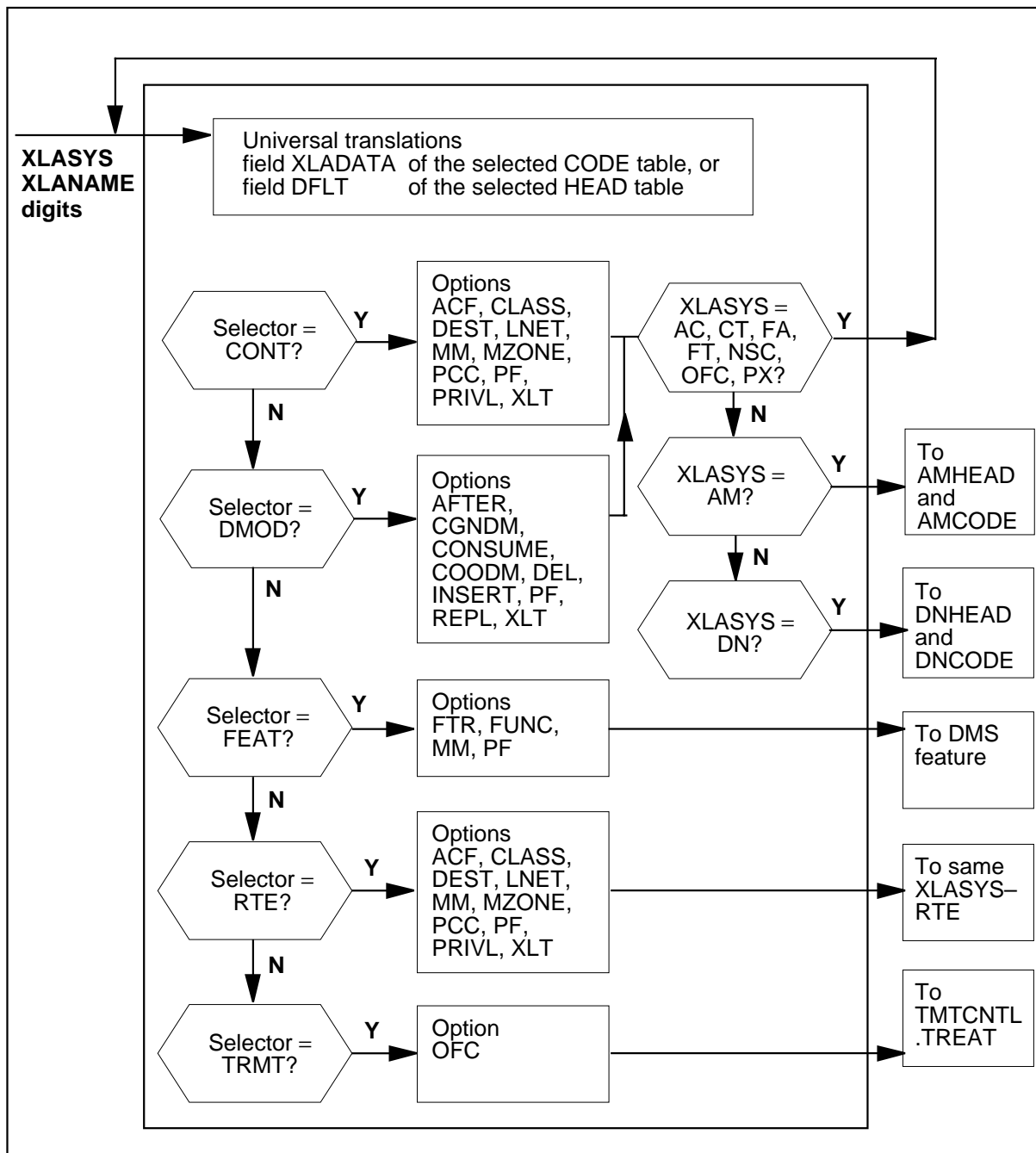
For the tables described in this section, each

- (XLASYS)HEAD table is identical to other (XLASYS)HEAD tables
- (XLASYS)CODE table is identical to other (XLASYS)CODE tables
- (XLASYS)RTE table is identical to other (XLASYS)RTE tables

An illustration of digit or default translations is shown in the following figure.

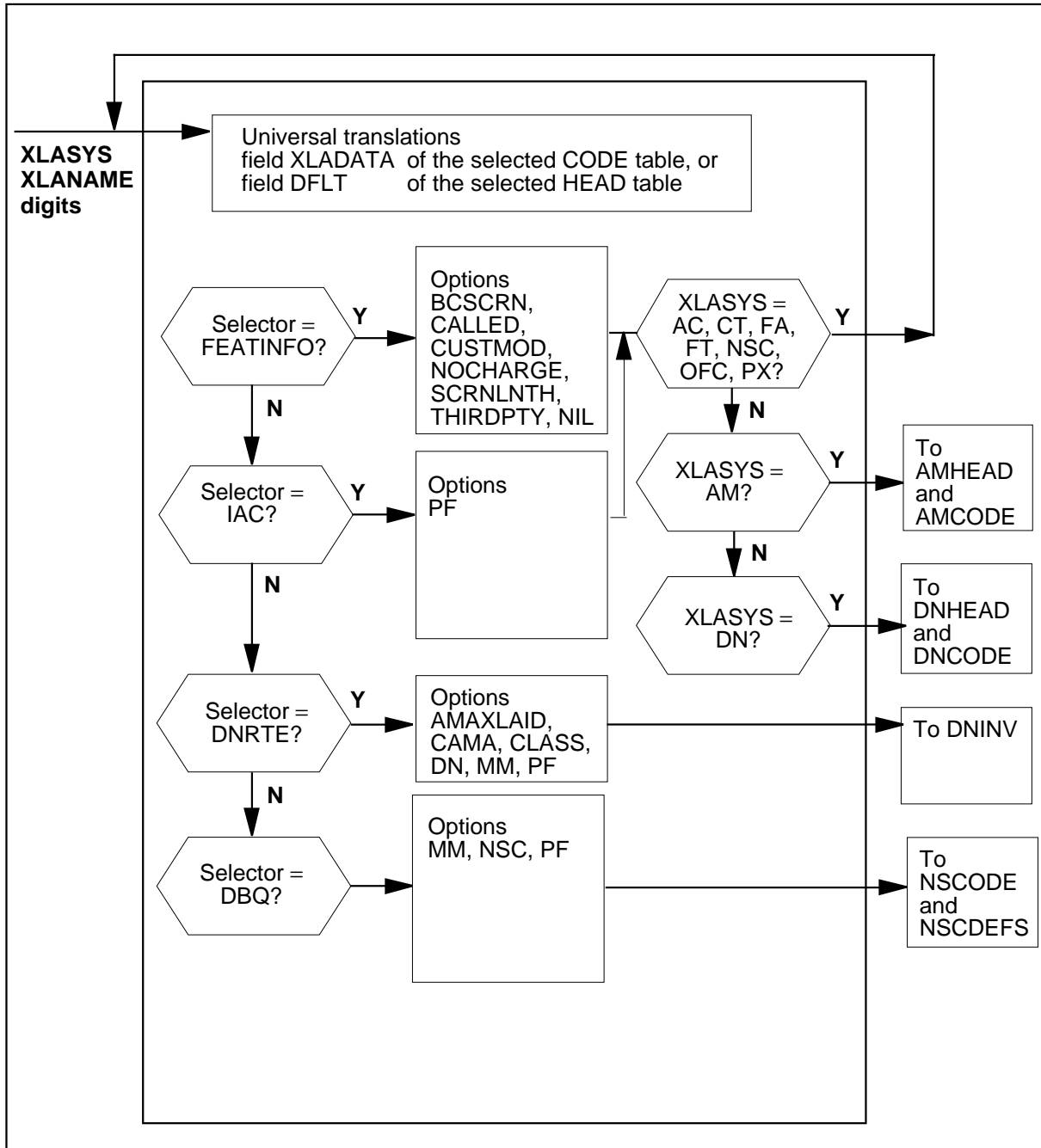
Universal call processing (continued)

Digit or default translations



Universal call processing (continued)

Digit or default translations



Universal translations selector options

Field XLADATA from the code tables and field DFLT from the head tables are identical in format and are made up of a translations selector (subfield

Universal call processing (continued)

XLASEL) and translations selector-dependent groups of options (subfield OSEL) for routing, digit manipulation, screening, and charging. The head table is used for translations when call processing is unable to locate the dialed digits in the translations system code table.

Translation selector TRMT

Translation proceeds to specific extended treatment in table TMTCNTL.OFFTREAT.

Translation selector CONT

Table xxCODE field XLADATA and table xxHEAD field DFLT are identical in format and consist of a translation selector, a group of options for routing, digit manipulation, screening, and charging.

Translation continues in a translation system code table using the translation name field (XLANAME) after processing the other options in the same tuple.

The following options can be specified:

- routing options: XLT and DEST
 - XLT: This option specifies the XLASYS and XLANAME of the next xxCODE table where translation is to continue. The XLASYS can be the same as the current XLASYS or another one. If option XLT is not datafilled, translation proceeds to the current XLASYS. However, it is recommended that XLASYS be explicitly datafilled in at least one of the following tables:
 - table xxCODE at field XLANAME in the tuple that matches the dialed digits and with translation selector XLASEL CONT
 - table xxHEAD field DFLT if the digits dialed are not found in table xxCODE at field XLANAME
 - table xxHEAD field DFOP if option XLT is not datafilled in either of the above
 - DEST: This option provides tentative destinations to be used, if subsequent translations do not result in a treatment or another route.
- digit string checking option: MM
- digit string manipulation option: PF
- screening and charging options (for legacy call processing): MZONE, PRIVL, ACF, LNET, CLASS, CALLCTRL, CPMCALL, VPN, CAMA, TOC, and AMAXLAID

Universal call processing (continued)

Translation selector RTE

Translation continues to the current xxRTE table at XLANAME and specified route index DEST after processing the other options in the same tuple.

The following options can be specified:

- digit string checking option: MM
- digit string manipulation option: PF
- screening and charging options (for legacy call processing): MZONE, PRIVL, ACF, CLASS, and LNET

Translation selector DMOD

Translation continues in an xxCODE table at XLANAME after processing the other options in the same tuple to modify the digit string.

The following options can be specified:

- routing option: XLT This option specifies the XLASYS and XLANAME of the next (XLASYS)CODE table where translation is to continue. The XLASYS can be the same as the current XLASYS or another one. It is recommended that XLASYS be datafilled in at least one of the following tables:
 - table xxCODE at XLANAME in the tuple that matches the dialed digits and with translation selector XLASEL MOD
- digit string modification options: PF, AFTER, CONSUME, DEL, INSRT, and REPL

Translation selector FEAT

The dialed digit string represents the function code FUNC of option FUNC for feature FTR (feature) of option FTR after processing the other options in the same tuple.

The following options can be specified:

- feature name: FTR This is the name of a feature known to the DMS software in this office.
- feature function code: FUNC This identifies the function code for feature FTR that the dialed digits represent for the software to take the appropriate actions.
- digit string checking option: MM
- digit string modification option: PF

Universal call processing (continued)

Translation selector FEATINFO

Translation continues in an xxCODE table at XLANAME after processing the other options in the same tuple to modify the digit string.

The following options can be specified:

- routing option: XLT This option specifies the XLASYS and XLANAME of the next (XLASYS)CODE table where translation is to continue. The XLASYS can be the same as the current XLASYS or another one. If the XLT option is not datafilled, translation proceeds to the current XLASYS. However, it is recommended that XLASYS be datafilled in at least one of the following tables:
 - table xxCODE at XLANAME in the tuple that matches the dialed digits and with translation selector XLASEL MOD
 - table xxHEAD field DFLT if the digits dialed are not found in table xxCODE at XLANAME
- feature options:
 - CALLBACK
 - CALLCHAR
 - CLCTDIGS
 - NTC

Universal call processing (continued)

- TLC
- VALIDATE
- digit string modification options:
 - BCSCRN
 - CALLED
 - CLDTCOLG
 - CUSTMOD
 - LCASCRN
 - NOCHARGE
 - SCRNLNTH
 - SUBSCRN
 - TCNOTSCR
 - THIRDPTY
 - VERDEST
 - V3PTYBIL
 - NIL

Translation selector IAC

The following options can be specified:

- routing option: XLT This option specifies the XLASYS and XLANAME of the next (XLASYS)CODE table where translation is to continue. The XLASYS can be the same as the current XLASYS or another one. If the XLT option is not datafilled, translation proceeds to the current XLASYS. However, it is recommended that XLASYS be datafilled in at least one of the following tables:
 - table xxCODE at XLANAME in the tuple that matches the dialed digits and with translation selector XLASEL MOD
 - table xxHEAD field DFLT if the digits dialed are not found in table xxCODE at XLANAME
- insert area code options: PF.

Universal call processing (continued)

Translation selector DBQ

Translations continues to database query.

- database query options: MM, NSC and PF.

Translation selector DNRTE

Translations continues to table DNINV.

- directory number route option: DN
- screening and charging options: AMAXLAID, CAMA and CLASS
- digit string modification options: PF and SF
- digit string checking option: MM

Digit string manipulation options

The digit string manipulation options include:

- PF (prefix digits)
- CONSUME (consume digits)
- AFTER
- DEL (delete)
- INSRT (insert)
- REPL (replace)

The digit string presented for translation at every stage of universal translations determines what digit string, if any, is presented to the next stage of translation or routing. The digit string presented for translation at any stage is the result of digit manipulations in the preceding stages.

In addition to being used for translation of the call, the received digits determine what digit string, is recorded for charging purposes and what digit string is transmitted.

Each of the digit manipulation option in various translation tables can affect some or all of the three-digit strings (digit string for translation in the next stage, the call detail record digit string, and the transmitted digit string).

Universal call processing (continued)

The universal translation tables digit manipulation options, listed and described in the following table, can occur in one or more tables.

Digit string manipulation options (Sheet 1 of 2)

Option	Refinements, values, and explanations
PF	<p>PFDIGS (0 to 24) Typical input: PF 1 Number of prefix digits</p> <p>This is the number of prefix digits in the digit strings presented to this stage for translation, call detail recording, and transmission. Prefix digits are not used to index any further translation tables, are not stored in call detail records, and are not transmitted.</p>
CONSUME	<p>(Default: NOCON) Typical input: CONSUME 3 Consume digits</p> <p>This option applies if the result of translations in the current stage points to further digit translation in the following stage.</p> <p>If this option is set not to consume leading digits required to index into the current stage, the digit string presented for translation in the following stage is the same as the digit string presented for translation in the current stage, minus any leading prefix (PF) digits.</p> <p>If this option is set to consume leading digits required to index into the current stage, the digit string presented for translation in the following stage is the same as the digit string presented for translation in the current stage, minus PF leading digits, that is, excluding the prefix digits, and, minus the leading digits following the prefix digits, required to index into the current stage.</p> <p>Note: This option does not affect the digit strings for call detail recording and transmission.</p>
AFTER	<p>AFTER (0 to 29) Typical input: AFTER 2 Number of digits to skip</p> <p>This option is used in conjunction with options DEL, INSRT, and REPL to define the number of leading digits to be skipped after the prefix digits before deleting, inserting, or replacing digits.</p> <p>All these operations affect all three-digit strings, that is, the digit string presented to the next translation stage, the call detail record digit string, and the transmitted digit string.</p>
DEL	<p>DELDIGS (0 to 29) Typical input: DEL 2 Number of digits to delete</p>

Universal call processing (continued)

Digit string manipulation options (Sheet 2 of 2)

Option	Refinements, values, and explanations
INSRT	<p>This option specifies the number of leading digits to be deleted from the digits string presented for translation in this stage after the PF leading digits are deleted and after the prescribed number of digits are skipped.</p> <p>The digits to be deleted are processed by the DMS switch before inserting digits using the option INSRT.</p> <p>The digits are deleted from all three-digit strings, that is, the digit string presented to the next translation stage, the call detail record digit string, and the transmitted digit string.</p> <p>INSRDIGS (string of up to 29 digits) Typical input: INSRT 27 Digits to insert</p> <p>This option specifies the digits to be inserted into the digit string presented for translation in this stage, after deleting PF leading digits and after skipping the prescribed number of digits.</p> <p>The digits to be deleted using option DEL are processed by the DMS switch before digits are inserted.</p> <p>Digit replacement using option REPL cannot be done in the same tuple as digit insertion through option INSRT. If both options are datafilled, the second one in the tuple is used.</p> <p>The digits are inserted into all three-digit strings, that is, the digit string presented to the next translation stage, the call detail record digit string, and the outputted digit string.</p>
OSID	<p>This option specifies the outputting scheme identification (OSID). It is the index into field OSID of table DESTNODE to identify the outputting scheme defined in table DESTNODE. OSID applies only to the DCRT and NODE selectors.</p>
REPL	<p>REPLDIG (string of up to 30 digits) Typical input: REPL 4522453 Replacement digits</p> <p>This option specifies the digits that are to replace those in the digit string presented for translation in this stage, after deleting PF leading digits and after skipping the prescribed number of digits.</p> <p>Digit replacement through option REPL cannot be done in the same tuple as digit insertion through option INSRT. If both options are datafilled, the second one in the tuple is used.</p> <p>The digit replacement occurs in all three-digit strings, that is, the digit string presented to the next translation stage, the call detail record digit string, and the outputted digit string.</p>

Universal call processing (continued)

Digit string checking options

Digit strings are checked at every stage of universal translations to ensure that a minimum and maximum number of digits have been received. Since the dialed digits are used to index the translations tables, they are also checked to ensure they fall within specific ranges. The options controlling these checks are MM (minimum, maximum, or both) and MAXIDX (maximum index) as described in the following table..

Digit string checking options

Option	Refinements, values, and explanations
MM	<p>MIN (0 to 30) MAX (0 to 30) Typical input: MM 7 10 Minimum and maximum total number of digits expected</p> <p>The call terminates in a treatment if the total number of digits received is less than the minimum number specified in this option.</p> <p>Digits received after the specified maximum number of digits is received are ignored.</p>
MAXIDX	<p>STD (or 9), C, or F (default: 9) Typical input: MAXIDX C Maximum index</p> <p>The translation tables are indexed by dialed digits. The default case is that these digits fall in the range of 0 to 9. Certain code tables are required to include hex digit B (*), hex digit C (#) or the range 0 to 9 and hex digits B, C, D, E, and F in their indexes. An example of this is feature access codes, that can have format *XX (where * is hex B). This is done by specifying an entry of B in field MAXIDX in the head table.</p>

The digit string presented for translations at each stage of universal translations determines what digit string, if any, is presented to the next stage of translations or routing. The digit string presented for translations at any stage is the result of manipulations of the digits in the preceding stages.

Universal call processing (continued)

The table below lists the options available for the universal translations.

Universal translations options (Sheet 1 of 5)

Options and fields	Table xHEAD field DFLT or table xCODE field XLADATA				y H E A D		D N H H E A D			Tables DNCODE and WRDNCODE field DNTDATA			Tables xRTE field RTELIST										
	F	T	C		D	N	D	D	T	F	H			T	C	D	N						
	E	R	O	R	D	I	R	M	F	R	E	U	L	I	R								
	A	M	N	T	B	A	T	O	O	M	A	N	N	T	S	S	N	R	R	D			
	T	T	T	E	Q	C	E	D	P	T	T	T	E	E	S	X	O	D	T	T	E	T	N
<i>Digit string checks:</i>																							
MIN and MAX number of digits: MM	Y		Y	Y	Y		Y	Y															
range for each digit: field MAXIDX	Y	Y	Y	Y	Y		Y	Y															
<i>Digit string manipulation:</i>																							
field CONSUME (consume digits)	Y	Y	Y	Y			Y																
field DC (digit collect)																							
<p>Note: xHEAD tables: ACHEAD, AMHEAD, CTHEAD, FAHEAD, FTHEAD, NSCHEAD, OFCHEAD, PXHEAD, xCODE tables: ACCODE, AMCODE, CTCODE, FACODE, FTCODE, NSCCODE, OFCCODE, PXC CODE, yHEAD DFOP tables: ACHEAD, FAHEAD, CTHEAD, FTHEAD, NSCHEAD, OFCHEAD, PXHEAD, xRTE tables: ACRTE, CTRTE, NSCRTE, FTRTE, OFCRTE, PXRTE, n/a: not available</p>																							

Universal call processing (continued)

Universal translations options (Sheet 2 of 5)

	Table xHEAD field DFLT or table xCODE field XLADATA										Tables DNCODE and WRDNCODE field DNTDATA										Tables xRTE field RTELIST																																			
	D										D										D																																			
	N										N										N																																			
	H										H										H																																			
	E										E										E																																			
	A										A										A																																			
	D										D										D																																			
Options and fields	<i>F</i>	<i>T</i>	<i>C</i>								<i>N</i>	<i>D</i>	<i>D</i>								<i>T</i>	<i>F</i>	<i>H</i>																				<i>D</i>	<i>N</i>												
	<i>E</i>	<i>R</i>	<i>O</i>	<i>R</i>	<i>D</i>	<i>I</i>	<i>R</i>	<i>M</i>	<i>F</i>													<i>R</i>	<i>E</i>	<i>U</i>	<i>L</i>	<i>R</i>							<i>T</i>	<i>C</i>										<i>C</i>	<i>O</i>											
	<i>A</i>	<i>M</i>	<i>N</i>	<i>T</i>	<i>B</i>	<i>A</i>	<i>T</i>	<i>O</i>	<i>O</i>														<i>M</i>	<i>A</i>	<i>N</i>	<i>N</i>	<i>T</i>							<i>S</i>	<i>S</i>	<i>N</i>	<i>R</i>	<i>R</i>	<i>D</i>																	
	<i>T</i>	<i>T</i>	<i>T</i>	<i>E</i>	<i>Q</i>	<i>C</i>	<i>E</i>	<i>D</i>	<i>P</i>														<i>T</i>	<i>T</i>	<i>T</i>	<i>E</i>	<i>E</i>							<i>S</i>	<i>X</i>	<i>O</i>	<i>D</i>	<i>T</i>	<i>T</i>	<i>E</i>	<i>T</i>	<i>N</i>														
fields AFTER, CGCDNM, CONSUME, COODM, DEL, INSRT, REPL																																																								
field PF (number of prefix digits)	Y		Y	Y	Y	Y	Y	Y	Y	Y																																														
replace with string: RT_DIGITS PDELETE,PF XDIGS, PFXAFTER, DELAFTER, INSRT																																																								
OSID																																																								
<i>Screening and charging options:</i>																																																								

Note: xHEAD tables: ACHEAD, AMHEAD, CTHEAD, FAHEAD, FTHEAD, NSCHEAD, OFCHEAD, PXHEAD, xCODE tables: ACCODE, AMCODE, CTCODE, FACODE, FTCODE, NSCCODE, OFCCODE, PXC CODE, yHEAD DFOP tables: ACHEAD, FAHEAD, CTHEAD, FTHEAD, NSCHEAD, OFCHEAD, PXHEAD, xRTE tables: ACRTE, CTRTE, NSCRTE, FTRTE, OFCRTE, PXRTE, n/a: not available

Universal call processing (continued)

Universal translations options (Sheet 3 of 5)

Options and fields	Table xHEAD field DFLT or table xCODE field XLADATA										Tables DNCODE and WRDNCODE field DNTDATA										Tables xRTE field RTELIST																																
	F	T	C								D	N	D	D							T	F	H								T	C																					
	A	M	N	T	B	A	T	O	O	N	D	D								R	E	U	L	I	R					M	A	N	N	T						T	T	T	E	E	S	X	O	D	T	T	E	T	N
CLASS, LNET, MZONE, ACF, AMAXLAID			Y	Y	Y			Y	Y																																												
PRIVL			n/	n/																																																	
MODCHG																																											Y										
<i>Proceed to:</i>																																																					
XLT XLASYS XLANAME			Y									Y	Y																														Y										
OFC treatment		Y																				Y																					Y										
NW (another network)																																																					
hunt group GRP MEM																																											Y										
party line LEN PTY																																											Y										

Note: xHEAD tables: ACHEAD, AMHEAD, CTHEAD, FAHEAD, FTHEAD, NSCHEAD, OFCHEAD, PXHEAD, xCODE tables: ACCODE, AMCODE, CTCODE, FACODE, FTCODE, NSCCODE, OFCCODE, PXC CODE, yHEAD DFOP tables: ACHEAD, FAHEAD, CTHEAD, FTHEAD, NSCHEAD, OFCHEAD, PXHEAD, xRTE tables: ACRTE, CTRTE, NSCRTE, FTRTE, OFCRTE, PXRTE, n/a: not available

Universal call processing (continued)

Universal translations options (Sheet 4 of 5)

Options and fields	Table xHEAD field DFLT or table xCODE field XLADATA										Tables DNCODE and WRDNCODE field DNTDATA										Tables xRTE field RTELIST																		
	F	T	C								N	D	D								T	F	H								T	C							
	A	M	N	T	B	A	T	O	O	D	E	D								M	A	N	N	T						S	S	N	R	R	D				
	T	T	T	E	Q	C	E	D	P										T	T	T	E	E						S	X	O	D	T	T	E	T	N		
feature function FTR FUNC	Y																		Y																				
<XLASYS> RTE at XLANAME DEST		Y	Y							Y																													
<XLASYS> RTE at XLANAME RTEREF																																						Y	
table OFRT at INDEX																																						Y	
DCR_NETW ORK																																						Y Y	
DESTNAME																																						Y Y	
CLLI with two-stage outpulsing: FSTSTAGE, FSTNUM																																						Y Y Y Y	

Note: xHEAD tables: ACHEAD, AMHEAD, CTHEAD, FAHEAD, FTHEAD, NSCHEAD, OFCHEAD, PXHEAD,xCODE tables: ACCODE, AMCODE, CTCODE, FACODE, FTCODE, NSCCODE, OFCCODE, PXCODE,yHEAD DFOP tables: ACHEAD, FAHEAD, CTHEAD, FTHEAD, NSCHEAD, OFCHEAD, PXHEAD,xRTE tables: ACRTE, CTRTE, NSCRTE, FTRTE, OFCRTE, PXRTE,n/a: not available

Universal call processing (continued)

Universal translations options (Sheet 5 of 5)

Options and fields	Table xHEAD field DFLT or table xCODE field XLADATA		Tables DNCODE and WRDNCODE field DNTDATA		Tables xRTE field RTELIST
	F	T	C	D	N
conditionally:					Y
<XLASYS>					Y
RTE at XLANAME,					Y
RTEREF after SKIPNUM					Y
route elements					
table OFRT at INDEX					Y
<p>Note: xHEAD tables: ACHEAD, AMHEAD, CTHEAD, FAHEAD, FTHEAD, NSCHEAD, OFCHEAD, PXHEAD, xCODE tables: ACCODE, AMCODE, CTCODE, FACODE, FTCODE, NSCCODE, OFCCODE, PXCODE, yHEAD DFOP tables: ACHEAD, FAHEAD, CTHEAD, FTHEAD, NSCHEAD, OFCHEAD, PXHEAD, xRTE tables: ACRTE, CTRTE, NSCRTE, FTRTE, OFCRTE, PXRTE, n/a: not available</p>					

Limitations and restrictions

The following limitations and restrictions apply to Universal call processing:

- Audible ringback is an option provided while the DMS-100 switch is transmitting to a line using dual tone multifrequency (DTMF) signaling. In addition, the DMS-100 switch sends an address complete message (ACM) to the ISDN user part (ISUP) trunk before transmitting to a line.
 - Table IBNRTE is required for ACM and audible ringing.

Interactions

The following paragraphs describe interactions between DCR with Universal call processing and the Trunk class-of-service (TRKCOS) feature.

TRKCOS may interact with DCR in the following manner. If the DCR dynamic transit for pair A-B is D, TRKCOS restrictions may prevent the call

Universal call processing (continued)

from completing on the second leg (D-B) of the DCR alternative path, even if there is capacity available.

The proper interworking between DCR and TRKCOS is context dependent and requires careful investigation of the operating company's network setup.

Metering

For switches running legacy call processing, metering is not supported after BCS36.

Billing

Note: The descriptions in this section refer to non-European configurations of AMA, and so describe options and settings not applicable to European environments. For European AMA configurations, refer to 297-8041-800 'European DMS-100 AMA Reference Guide'.

The universal translation tables options for charging or screening, listed and described in the following table, can occur in one or more tables.

In general, if the same option is found in two tuples during a pass-through translation, the value in the last tuple is used. For example, if option CLASS

Universal call processing (continued)

is set to LCL in table PXC CODE, then it can be reset to NATL in table FACODE.

Screening and charging options (Sheet 1 of 2)

Option	Refinements, values, and explanations
CLASS	<p>CLASS (see list below) Translation class Typical input: CLASS LCL</p> <p>The DMS switch recognizes the following translation classes:</p> <ul style="list-style-type: none"> • ATT Attendant (business services only) • CNTL Continental call (international call within the same continent) • DATT Dial attendant (business services only) • EMRG Emergency call • IAGRP Intragroup call (business services only) • ICNTL Intercontinental call (international call to a different continent) • INTL International call • IOPRA International operator-assisted call • LCL Local call • NATL National call (within the nation, but nonlocal tariff) • NIL No class assigned • OPRA Operator-assisted call • RURAL Rural call • SPEC Special call (for example, repair service or call to operator) • UNKW Unknown class (This can be used if the class cannot be determined yet, for example, ambiguous codes.)
LNET	<p>LNET (string in LNETWORK) Logical Typical input: LNET LOCAL (metering) network</p> <p>This option is used by the DMS international metering system to find a tariff for the call. This network is a string that must already be datafilled in table LNETWORK.</p>
MZONE	<p>MZONE (0 to 63) Metering zone Typical input: MZONE 2</p> <p>This option specifies the metering zone of the call in the logical network above. It is used by the DMS international metering system to determine a tariff for the call.</p>
PRIVL	<p>If the entry in PRIVL is N (no) or is omitted, the call is not affected by this option.</p>

Universal call processing (continued)

Screening and charging options (Sheet 2 of 2)

Option	Refinements, values, and explanations
	<p>If the entry in PRIVL is Y (yes), calls from privileged originators (for example, operators) can proceed, whereas calls from non-privileged originators are treated as if no match for the digits dialed is found so that the default prescription of table (XLASYS)HEAD field DFLT is taken, which is usually datafilled to block the call by sending it to treatment VACT (vacant code).</p> <p>This allows two classes of originator to use the same translation tables if the privileged user can dial all the same codes as a non-privileged user as well as some other privileged codes. The privileged user is given full access to all the codes, while the ordinary subscriber is prevented from using the privileged codes. This saves datafill, because otherwise two separate copies of all the codes would have to be datafilled.</p>
AMAXLAID	Option AMAXLAID (AMA translation identifier) points to a name identified in table AMAXLAID.
ACF	Option ACF (area code fence) defines the area code fence and can be specified when XLASEL is set to CONT or RTE. Enter ACF, then complete subfield ACF, specifying the number of digits (0 to 18) between the beginning of the digits currently indexing the table, and the end of the area code.
MODCHG	<p>Option MODCHG (modify standard charging characteristics) is used to modify charging characteristics.</p> <p>The options of the MODCHG field are as follows:</p> <ul style="list-style-type: none"> • NOMOD — For this value, no charge modification is required. The zone, as calculated by translations, is used for billing. • CANCHG — On a route that is normally chargeable, cancel the charge. This feature is not available at this time. • CANTOLL — On a route that is normally chargeable, reduce the charge to a local charge. This feature is not available at this time. • ADDCHG — On a normally free route, charge for the call based on the zone calculated by translations. Initially, this is only implemented for terminations to announcement. This allows announcement billing as required.

Field MODCHG (route tables) can be modified to affect billing. Refer to the data schema section of this document for more information.

If option selector VPNOVE is enabled, Australian billing is enabled.

Datafilling office parameters

Universal translations call processing activities do not require any additional or special datafill for office parameters. Standard office parameters still must

Universal call processing (continued)

be completed. For more information about office parameters, refer to *Office Parameters Reference Manual*.

The utility code system (FT) requires certain information found in office parameters. This information is used to validate announcements and determine call diversion destinations.

The following table shows the office parameters called by Universal call processing.

Office parameters called by Universal call processing

Table name	Parameter name	Explanation and action
OFCVAR	CDIV_SDN_XLA	This parameter specifies the default translation information for a call diversion using the SDN selector. If the switching unit has this feature a valid FT translation system instance must be specified as input. The valid FT translation instances can be found in table FTHEAD.
	CDS_DN_CHECK	This parameter is required for a local or toll switching unit with universal translations. It specifies the 1 to 8 character name that is assigned to the instance in table FTCODE for the checking of routing restrictions.
OFCENG	ALLOC_UNIV_EXT_BLK	This parameter is required when a universal extension block is active on a call, it is held for the duration of the call. The memory allocated for the extension blocks is permanently allocated unless ALLOC_UNIV_EXT_BLK or NCCBS parameter values are altered.
	UNIVERSAL_AMA_BILLING	This parameter indicates whether the billing structures should utilize open numbering schemes, where possible, in the Bellcore format automatic message accounting (AMA) subsystems. It is primarily intended to identify offices that are using open number dialing arrangements.
	NUM_IBN_IXLA_EXT_BLOCKS	This parameter is required for a Meridian Digital Centrex (MDC) switch with International Direct Distance Dialing (IDDD) through the Automatic Route Selection (ARS) feature. It specifies the maximum number of MDC world system (international) translation extension blocks required for the engineering interval.

Datafill sequence

In a particular translations system, a head table tuple must be filled before the corresponding code or route tables because the XLANAME does not exist

Universal call processing (continued)

until it is defined in the head table. An XLANAME cannot be referenced from another table until it is defined in the head table of its own translations system.

When datafilling the tables, start with the last translations system to be referenced. Once these tables are completed, work backward through the translations systems to the first table referenced.

If an entry is deleted from a head table, all code and route table entries with the given XLANAME are also deleted. Any references to the deleted XLANAME in other translations systems must be removed manually and should be removed before the XLANAME is deleted.

The universal translations tables perform similar functions to the tables listed below:

- STDPRTCT
- HNPACONT
- FNPACONT
- CLSVSCRC
- LCASCRCN
- PFXTREAT
- TOFCNAME
- DNROUTE
- DNINV

For switches that have the Automatic Call Distribution (ACD) feature, some of the above tables are still present. ACD uses MDC data tables. Consequently, MDC tables will be present in the switch and must be datafilled. Refer to the MDC translations section of this document for more information.

Universal call processing (continued)

The following table lists the tables that require datafill to implement Universal call processing. The tables are listed in the order in which they are to be datafilled.

Datafill tables required for Universal call processing

Table	Purpose of table
AC (HEAD, CODE, RTE)	The access code is for access to another network, an attendant, or a feature. If a feature access code is dialed, the digits following do not correspond to the numbering plan. The access code of a network is usually required only when dialing into another network.
PX (HEAD, CODE, RTE)	The prefix code gives information about the local operating company type of call being dialed. For example, in North America, there usually are prefix codes for domestic direct distance dialing (DDD), international DDD, domestic operator-handled calls, and international operator-handled calls. The default is usually not to dial the prefix code for a local call.
CT (HEAD, CODE, RTE)	Country codes are internationally agreed upon one-, two-, or three-digit numbers, beginning with the zone digit. Each country also has a pseudo country code, which is used for operator handled traffic. All country codes are uniquely defined. The country code can be omitted if dialing a destination inside the same country (and sometimes if the destination is in an adjacent country).
FA (HEAD, CODE, RTE)	The foreign area code screens codes that are assigned to an area of the country. These codes are distinguished from office codes so that if the called number is in the same area as the calling number, it is not necessary to dial the area code.
OFC (HEAD, CODE, RTE)	An office code is used if it is necessary to screen the dialed destination digits down to the local exchange code level to determine the route a call should take.
FT (HEAD, CODE, RTE)	The utility code system can serve several needs. This system is called from office parameters and is used to perform such translations as validating announcements (called from office parameter CDIV_SDN_XLA) and call diversion destinations (called from office parameter CDS_DN_CHECK).
NSC (HEAD, CODE, RTE)	The number service code system provides inward call management features that require the dialing of special numbers.
AM (HEAD, CODE)	The ambiguous code universal translation tables are invoked when the total number of digits received in addition to the leading digits received determine which terminating route applies.

Datafilling HEAD tables

The HEAD tables are as follows:

- ACHEAD (network access code)
- PXHEAD (call type information)

Universal call processing (continued)

- FTHEAD (utility code information)
- FAHEAD (foreign area (city code) translation)
- CTHEAD (country code)
- OFCHEAD (office code)
- NSCHEAD (number service code)
- AMHEAD (ambiguous code)

HEAD tables contain the default routes and treatments for each code table. The information in the HEAD tables is used when the dialed digits cannot be located in the corresponding code table.

Note: The datafill configurations shown in this section are for example purposes only. Each operating company must design the datafill that is appropriate for its office configuration and dialing plan.

The following table shows the legacy call processing datafill specific to Universal call processing for head tables. Only those fields that apply directly to Universal call processing are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling HEAD tables - legacy call processing (Sheet 1 of 12)

Field	Subfield or refinement	Entry	Explanation and action
XLANAME		alphanumeric (1 to 8 characters)	Translator name. Enter 1 to 8 alphanumeric characters to identify the universal translator.
DFLT		see subfields	Default. This field consists of subfield DFLTSEL. DFLT is used when translations find that the dialed digits are not datafilled in the code table associated with this head table.
	DFLTSEL	DFLT or SDFLT	Default selector. Enter SDFLT where a standard default is used for dialed digits not found in the code table. Continue to field DFOP when DFTSEL is equal to SDFLT. Enter DFLT where the standard default is not correct. If the entry in field DFLTSEL is DFLT complete subfields XLASEL and OSEL.

Universal call processing (continued)**Datafilling HEAD tables - legacy call processing (Sheet 3 of 12)**

Field	Subfield or refinement	Entry	Explanation and action
	OSEL	ACF, AFTER, AMAXLAID, CALLCTRL, CAMA, CDN, CLASS, CONSUME, CPMCALL, DEL, DEST, DN, FTR, FUNC, INSRT, LNET, MM, MODCHG, NSC, OFC, PF, PRIVL, RBP, REPL, SMDR, XLT, VPN, VPNOVE	<p>Option selector. Each translations selector can have up to ten options specified through field OSEL. Unless noted, these options can be used with any of the XLASEL options.</p> <p>Option ACF (area code fence) defines the area code fence and can be specified when XLASEL is set to CONT or RTE. Enter ACF, then complete subfield ACF, specifying the number of digits (0 to 18) between the beginning of the digits currently indexing the table, and the end of the area code.</p>

Universal call processing (continued)

Datafilling HEAD tables - legacy call processing (Sheet 4 of 12)

Field	Subfield or refinement	Entry	Explanation and action
	<p>OSEL (continued)</p>		<p>Option AFTER (after) skips an additional number of digits before modifying digits. This option can only be specified after REPL, DEL, or INSRT. The AFTER option refers to the option datafilled immediately before it. AFTER can be specified when XLASEL is set to DMOD. Enter AFTER, then complete subfield AFTER, specifying the number of digits (1 to 29) to be skipped before replacement, deletion, or insertion. Under the DMOD selector, 0 is the default, and should not be datafilled if the AFTER requirement is zero digits.</p> <p>Option AMAXLAID (AMA translation identifier) points to a name identified in table AMAXLAID.</p> <p>Option CALLCTRL (call control) indicates who has control of the call: the calling party, the called party, or both. CALLCTRL can be specified when XLASEL is set to CONT or RTE. Enter CALLCTRL, then complete subfield CALLCTRL, specifying if the call is released immediately when the calling party (CALLING), the called party (CALLED), or either party (MUTUAL) goes on-hook.</p> <p>Option CAMA (Centralized Automatic Message Accounting) indicates whether the CAMA record is generated with the directory number (DN) signaled originally or the final PSTN number. CAMA can be specified when XLASEL is set to CONT, DNRTE, or RTE. Enter CAMA, then complete subfield CLDFMT, specifying either CURRENT or POSTXLA.</p>

Universal call processing (continued)**Datafilling HEAD tables - legacy call processing (Sheet 5 of 12)**

Field	Subfield or refinement	Entry	Explanation and action
	OSEL (continued)		<p>Option CDN (called party number) is used to specify the called party nature of address (NOA). CDN can be specified when XLASEL is set to RTE or CONT. Valid entries for the NOA subfield are:</p> <ul style="list-style-type: none"> • remote timer (STOPRTMR) and specify the AMA prefix (PFXAMA). • LOCAL (called party is local number) • NATL (called party is national number) • INTL (called party is international number) • NET (called party is Intelligent Network Services) <p>Option CLASS (custom local area signaling service) is used when the class may be determined by the dialed digits. CLASS can be specified when XLASEL is set to CONT, DNRTE, or RTE. Enter CLASS, then complete subfield CLASS, specifying the translations class (ATT, CNTL, DATT, EMRG, IAGRP, ICNTL, INTL, IOPRA, LCL, NATL, OPRA, RURAL, SPEC, or UNKW).</p> <p>Option CONSUME (consume digits) specifies how many of the digits used to index the current table are not to be used to index the next table. The next table in call progression is indexed with those digits in the digit stream that follow the digits that were consumed. CONSUME can be specified when XLASEL is set to CONT, DMOD, or RTE. Enter CONSUME, then complete subfield CONDIGS, specifying the number of digits (0 to 29) to be deleted.</p>

Universal call processing (continued)

Datafilling HEAD tables - legacy call processing (Sheet 6 of 12)

Field	Subfield or refinement	Entry	Explanation and action
	<p>OSEL (continued)</p>		<p>Option CPMCALL (called party metering call) specifies whether the call is to be charged to the called party (rather than the calling party) for intra-office calls. CPMCALL can be specified when XLASEL is set to RTE or CONT. Enter CPMCALL, then complete subfield CPMCALL with Y or N.</p> <p>Option DEL (delete) deletes digits from the dialed number received, after optionally skipping over a selected number of digits before continuing with translations. If PF digits are specified in the same entry, they are processed before the DEL command. DEL can be specified when XLASEL is set to DMOD. Enter DEL, then complete subfield DELDIGS, specifying the number of digits (0 to 29) to be deleted.</p> <p>Option DEST (destination) is used when the destination of the call, as well as the outgoing trunk group to be used for termination, can be specified without screening any additional digits. DEST can be specified when XLASEL is set to CONT or RTE. Enter DEST, then complete subfield DEST. DEST specifies the number in the route list (0 to 1023) that indicates the route the call is to take.</p> <p>Option DN (directory number) can be specified when XLASEL is set to DNRTE. Enter DN, then complete subfields SNPA and NXX. For the serving numbering plan area (SNPA), enter a three-digit numbering plan area. For NXX, enter a three-digit code consisting of the digits 0 to 9, letters B to F, and the letter N.</p>

Universal call processing (continued)**Datafilling HEAD tables - legacy call processing (Sheet 7 of 12)**

Field	Subfield or refinement	Entry	Explanation and action
	OSEL (continued)		<p>Option FTR (feature) identifies an international line feature. FTR can be specified when XLASEL is set to FEAT. Enter FTR, then complete subfield FTR. The only valid entry for the subfield is NIL.</p> <p>Option FUNC (function) is used with option selector FTR and identifies an international line feature function code. FUNC can be specified when XLASEL is set to FEAT. Enter FUNC, then complete subfield FUNC.</p> <p>Option INSRT (insert) inserts digits into the initial digit stream after optionally skipping over a selected number of digits. Any digits to be deleted (by options PF or DEL) are processed before the DMS switch inserts any digits. Options REPL and INSRT cannot both be specified in the same entry. If both are present, only the second is used. INSRT can be specified when XLASEL is set to DMOD. Enter INSRT, then complete subfield INSRDIGS, specifying up to 29 digits to be inserted.</p> <p>Option LNET is used by the DMS international metering system to find a tariff for the call. This network is a string that must already be datafilled in table LNETWORK.</p>

Universal call processing (continued)

Datafilling HEAD tables - legacy call processing (Sheet 8 of 12)

Field	Subfield or refinement	Entry	Explanation and action
	<p>OSEL (continued)</p>		<p>Option MM (minimum/maximum) allows screening of the incoming digit streams to ensure that the minimum and maximum number of digits expected for a given call type are received before the digits continue through translations. MM can be specified if XLASEL is set to FEAT, DNRTE, CONT, RTE, or DBQ. Enter MM, then complete the MIN and MAX subfields, specifying the minimum and maximum number of digits, respectively.</p> <p>Note: The Attendant Console does not abide by normal digit collection timers. When the max digits in translations have not been dialed, a ten second post dial delay (PDD) occurs. Long and short timers are ignored.</p> <p>Option MODCHG (modify standard charging characteristics) is used to modify charging characteristics.</p> <p>Option NSC (number service code) allows inward call management features that require the dialing of special numbers.</p> <p>Option OFC (office treatment) can be specified when XLASEL is set to TRMT. Enter OFC, then complete subfield OFC. In OFC, enter a treatment code to index table TMTCNTL.TREAT. This subfield specifies the predefined treatment the call is to receive, for example, VACT (vacant code treatment).</p> <p>Option PF (prefix fence) indicates the number of digits in the dialed number that are to be interpreted as prefix digits and deleted. PF can be specified when XLASEL is set to FEAT, DNRTE, CONT, RTE, DMOD, DBQ, or IAC. Enter PF, then complete subfield PFDIGS. This subfield specifies the number of digits that are to be considered prefix digits; it can be a number from 0 to 24.</p>

Universal call processing (continued)**Datafilling HEAD tables - legacy call processing (Sheet 9 of 12)**

Field	Subfield or refinement	Entry	Explanation and action
	OSEL (continued)		<p>Option PRIVL (privileged) specifies that the user is privileged, for example, an operator. PRIVL can be specified when XLASEL is set to CONT or RTE. Enter PRIVL, then complete subfield PRIVL, specifying whether the user is privileged (Y or N).</p> <p>Option RBP (ring-back price) indicates that a call is to be marked as ring-back price. A hexadecimal E is suffixed to the calling digits for a call that translates using a tuple with the RBP option. RBP can be specified when XLASEL is set to DMOD.</p> <p>Option REPL (replace) replaces an entire digit stream after optionally skipping over a selected number of digits. REPL can be specified when XLASEL is set to DMOD. Enter REPL, then complete subfield REPLDIGS, specifying up to 30 replacement digits.</p> <p>Option SMDR (station message detail recording) assigns station message detail recording. SMDR can be specified when XLASEL is set to NET. Enter SMDR, then complete subfield SMDR with Y or N.</p>
	OSEL (continued)		<p>Option XLT (translate) allows the next translations system and translations name used to be overridden by specifying a new translations system (AC, PX, FA, CT, OFC, AM, FT, or NIL), a new translations name, or both. XLT can be specified when XLASEL is set to CONT or DMOD. Enter XLT, then complete subfields XLASYS and XLANAME. XLASYS specifies the next translations system to be used (AC, PX, FA, CT, OFC, AM, FT, or NIL). XLANAME specifies the translations name of the table instance in the XLASYS where the call is to be routed.</p> <p>Option VPN (virtual private network).</p> <p>Option VPNOVE (virtual private network overlay) when activated enables billing in Australia.</p>

Universal call processing (continued)

Datafilling HEAD tables - legacy call processing (Sheet 10 of 12)

Field	Subfield or refinement	Entry	Explanation and action
DFOP		see subfields	Default options. This field consists of subfield DFOPSEL.
	DFOPSEL	DFOP or NODFOP	<p>Default options. Enter NODFOP if there are no default options.</p> <p>Enter DFOP if destination digits with the same attributes are to be grouped together with applicable screening requirements. This minimizes the amount of datafill required in a code table. Screening requirements are defined through the OSEL (option selector) entries.</p> <p>Field DFOP is accessed by call processing only when the CONT or RTE translations selectors are specified in a universal translations code table.</p> <p>If the entry for field DFOPSEL is DFOP, complete subfield OSEL.</p>

Universal call processing (continued)**Datafilling HEAD tables - legacy call processing (Sheet 11 of 12)**

Field	Subfield or refinement	Entry	Explanation and action
	OSEL	1 to 9 options	<p>Option selector. Enter up to 9 of the options listed below along with their refinements as described in field DFLTSEL.</p> <ul style="list-style-type: none"> • ACF (area code fence) • AMAXLAID (AMA translations identification) • CALLCTRL (call control) • CAMA (Centralized Automatic Message Accounting) • CDN (called party number) • CLASS (class of the dialed digits) • CONSUME (consume digits) • CPMCALL (called party metering call) • DEL (delete) • DEST (destination) • DN (directory number) • FTR (feature) • FUNC (function) • INSRT (insert) • LNET (line network) • MM (minimum and maximum digits) • MODCHG (modify standard charging characteristics) • OFC (office treatment) • PF (prefix screening) • PRIVL (privileged user) • RBP (ring-back price)

Universal call processing (continued)

Datafilling HEAD tables - legacy call processing (Sheet 12 of 12)

Field	Subfield or refinement	Entry	Explanation and action
CON	OSEL (continued)	CONSUME or NOCON	<p>Option selector (continued). Enter up to 9 of the options listed below along with their refinements as described in field DFLTSEL.</p> <ul style="list-style-type: none"> • REPL (replace) • SMDR (station message detail recording) • VPN (virtual private network) • VPNOVE (virtual private network overlay) • XLT (translate option) <p>Consume digits. Enter NOCON or CONSUME. With NOCON, the next table in call progression is to be indexed using the same digits, excluding any prefixes, that were used to index the current table.</p> <p>With CONSUME, the digits used to index the current table are consumed or deleted. The next table in call progression is indexed with those digits in the digit stream that follow the digits that were consumed.</p> <p>Field CON is accessed by call processing only when the CONT or DMOD translations selectors are specified in a universal translations code table.</p>
MAXIDX		STD, 9, C, F	<p>Maximum index. This field specifies the range of the first digit in the digit streams indexing the universal translations tables.</p> <ul style="list-style-type: none"> • STD or 9 specifies the range 0 to 9 • Hex C (#) in addition to digits within the range 0 to 9 • F specifies 0 to 9 and hex digits B to F

Datafill example for HEAD tables

All HEAD tables use the same data format. The following example shows sample datafill for table CTHEAD.

Universal call processing (continued)

MAP display example for table CTHEAD

XLANAME		DFLT
		DFOP
CON	MAXIDX	
<hr/>		
ABCEDFG		DFLT TRMT (OFC VACT)\$
		DFOP (MM 3 10) \$
NOCON	STD	

Datafilling CODE tables

The CODE tables are as follows:

- ACCODE
- PXCOD
- FTCODE
- CTCODE
- OFCCODE
- FACODE
- AMCODE
- NSCCODE

The order of travel through the translations tables is given exclusively by the XLT option as specified in the CONT or DMOD selectors in the CODE table or in the DFOP and DFLT fields of the head table.

Note 1: When deleting a tuple from the CODE tables ensure that every occurrence is deleted. For example, if the tuple entered has a FROMD of 00 and a TOD of 99, in actuality 100 tuples are created. When deleting 00 to 99 only the first tuple is deleted, the subsequent 99 tuples still remain.

Note 2: To suppress the consumption of digits contained in field CONDIGS in a CODE table enter NOCON in the corresponding HEAD table, which will cause any to-be-consumed digits contained in field CONDIGS to be ignored. It is not necessary to remove the digits contained in field CONDIGS of a CODE table to suppress the consumption of these digits.

The following table shows the datafill specific to Universal call processing for AMCODE table. Only those fields that apply directly to Universal call processing are shown. For a description of the other fields, refer to the

Universal call processing (continued)

description of other CODE tables and the data schema section of this document.

Datafilling table AMCODE

Field	Subfield or refinement	Entry	Explanation and action
XLANAME		alphanumeric (1 to 8 characters)	Translator name. Enter the name assigned to subtable AMCODE. The name must be datafilled in table AMHEAD.
NUMDIGS		numeric (0 to 18)	Number of digit. Enter the number of digits to compare with the actual number of digits dialed.
RELATION		EQ, GE, LE	Relationship. Enter the relationship that must be satisfied between the actual number of digits dialed and the value in field NUMDIGS. Enter EQ (equal to), GE (greater than), or LE (less than equal to).
XLADATA		see subfield	Translation data. This field consists of subfield XLASEL plus a set of options dependant on the entry in XLASEL. Refer to other CODE tables for a description of other fields.

Note: The datafill configurations shown in this section are for example purposes only. Each operating company must design the datafill that is appropriate for its office configuration and dialing plan.

The following table shows the legacy call processing datafill specific to Universal call processing for code tables. Only those fields that apply directly

Universal call processing (continued)

to Universal call processing are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling CODE tables - legacy call processing (Sheet 1 of 10)

Field	Subfield or refinement	Entry	Explanation and action
XLANAME		alphanumeric (1 to 8 characters)	Translator name. Enter 1 to 8 alphanumeric characters to specify the translator name from the corresponding head table.
FROMD		numeric (1 to 11 digits)	From digit. Enter 1 to 11 digits to identify either a single number or the first number in a block of consecutive numbers that have the same translations requirements as described in field XLASEL and its refinements.
TOD		numeric (1 to 11 digits)	To digit. If field FROMD represents a single number, enter the same number here. If field FROMD represents the first number of a block of consecutive numbers, enter the last number in the block.
XLADATA		see subfields	Translations data. This field consists of subfields XLASEL and OSEL.
	XLASEL	CONT, DBQ, DMOD, DNRTE, FEAT, FEATINFO, IAC, RTE, or TRMT	Translations selector. Specifies a translations selection used to determine the route a call takes when call processing cannot find the dialed digits in the code table. Enter CONT, DBQ, DMOD, DNRTE, FEAT, FEATINFO, IAC, RTE, or TRMT. CONT (continued) is entered when further translations screening is required. It can be used with the XLT option to specify the next table to be used. DBQ (database query) is used when a database query is to be performed. DMOD (digit modification) is used when digit manipulation on the dialed digits received is required before an outgoing route can be selected.

Universal call processing (continued)

Datafilling CODE tables - legacy call processing (Sheet 2 of 10)

Field	Subfield or refinement	Entry	Explanation and action
	<p>XLASEL (continued)</p>		<p>DNRTE (directory number route) allows translations to be continued in table DNINV.</p> <p>FEAT (feature) is used when the dialed digits are to provide access to a feature.</p> <p>FEATINFO feature information.</p> <p>IAC (insert area code) is used when insertion of own area code is required when an ambiguous code is found.</p> <p>RTE (route) is used when the destination of the call and the outgoing trunk group used for termination can be specified without screening any additional digits.</p> <p>TRMT (treatment) is a known exception or failure condition. Translations are terminated with an indication that treatment has been encountered and decoded into a route. Call processing routes the call to table TMTCNTL for final termination.</p>
	<p>OSEL</p>	<p>ACF, AFTER, AMAXLAID, CALLCTRL, CAMA, CDN, CLASS, CONSUME, CPMCALL, DEL, DEST, DN, FTR, FUNC, INSRT, MM, NSC, OFC, PF, PRIVL, RBP, REPL, SMDR, XLT, VPN, or VPNOVE</p>	<p>Option selector. Each translations selector can have up to ten options specified through field OSEL. Unless noted, these options can be used with any of the XLASEL options.</p> <p>Option ACF (area code fence) defines the area code fence and can be specified when XLASEL is set to CONT or RTE. Enter ACF, then complete subfield ACF, specifying the number of digits (0 to 29) between the beginning of the digits currently indexing the table, and the end of the area code.</p>

Universal call processing (continued)**Datafilling CODE tables - legacy call processing (Sheet 3 of 10)**

Field	Subfield or refinement	Entry	Explanation and action
	OSEL (continued)		<p>Option AFTER (after) skips an additional number of digits before modifying digits. This option can only be specified after REPL, DEL, or INSRT. The AFTER option refers to the option datafilled immediately before it. AFTER can be specified when XLASEL is set to DMOD. Enter AFTER, then complete subfield AFTER, specifying the number of digits (1 to 29) to be skipped before replacement, deletion, or insertion. Under the DMOD selector, 0 is the default, and should not be datafilled if the AFTER requirement is zero digits.</p> <p>Option AMAXLAID (AMA translation identifier) points to a name identified in table AMAXLAID.</p> <p>Option CALLCTRL (call control) indicates who has control of the call: the calling party, the called party, or both. CALLCTRL can be specified when XLASEL is set to CONT or RTE. Enter CALLCTRL, then complete subfield CALLCTRL, specifying if the call is released immediately when the calling party (CALLING), the called party (CALLED), or either party (MUTUAL) goes on-hook.</p> <p>Option CAMA (Centralized Automatic Message Accounting) indicates whether the CAMA record is generated with the DN signaled originally or the final PSTN number. CAMA can be specified when XLASEL is set to CONT, DNRTE, or RTE. Enter CAMA, then complete subfield CLDFMT, specifying either CURRENT or POSTXLA.</p>

Universal call processing (continued)

Datafilling CODE tables - legacy call processing (Sheet 4 of 10)

Field	Subfield or refinement	Entry	Explanation and action
	<p>OSEL (continued)</p>		<p>Option CDN (called party number) is used to specify the called party nature of address (NOA), CDN can be specified when XLASEL is set to RTE or CONT. Valid entries for the NOA subfield are:</p> <ul style="list-style-type: none"> • timer (STOPRTMR) and specify the AMA prefix (PFXAMA). • LOCAL (called party is local number) • NATL (called party is national number) • INTL (called party is international number) • NET (called party is Intelligent Network Services subscriber) <p>Option CLASS (custom local area signaling service) is used when the class may be determined by the dialed digits. CLASS can be specified when XLASEL is set to CONT, DNRTE, or RTE. Enter CLASS, then complete subfield CLASS, specifying the translations class (ATT, CNTL, DATT, EMRG, IAGRP, ICNTL, INTL, IOPRA, LCL, NATL, OPRA, RURAL, SPEC, or UNKW).</p>

Universal call processing (continued)

Datafilling CODE tables - legacy call processing (Sheet 5 of 10)

Field	Subfield or refinement	Entry	Explanation and action
	OSEL (continued)		<p>Option CONSUME (consume digits) specifies how many of the digits used to index the current table are not to be used to index the next table. The next table in call progression is indexed with those digits in the digit stream that follow the digits that were consumed. CONSUME can be specified when XLASEL is set to CONT, DMOD, or RTE. Enter CONSUME, then complete subfield CONDIGS, specifying the number of digits (0 to 29) to be deleted.</p> <p>Option CPMCALL (called party metering call) specifies whether the call is to be charged to the called party (rather than the calling party) for intra-office calls. CPMCALL can be specified when XLASEL is set to RTE. Enter CPMCALL, then complete subfield CPMCALL with Y or N.</p> <p>Option DEL (delete) deletes digits from the dialed number received, after optionally skipping over a selected number of digits before continuing with translations. If PF digits are specified in the same entry, they are processed before the DEL command. DEL can be specified when XLASEL is set to DMOD. Enter DEL, then complete subfield DELDIGS, specifying the number of digits (0 to 29) to be deleted.</p>

Universal call processing (continued)

Datafilling CODE tables - legacy call processing (Sheet 6 of 10)

Field	Subfield or refinement	Entry	Explanation and action
	<p>OSEL (continued)</p>		<p>Option DEST (destination) is used when the destination of the call, as well as the outgoing trunk group to be used for termination, can be specified without screening any additional digits. DEST can be specified when XLASEL is set to CONT or RTE. Enter DEST, then complete subfield DEST. DEST specifies the number in the route list (0 to 1023) that indicates the route the call is to take.</p> <p>Option DN (directory number) can be specified when XLASEL is set to DNRTE. Enter DN, then complete subfields SNPA and NXX. For SNPA, enter a three-digit numbering plan area. For NXX, enter a three-digit code consisting of the digits 0 to 9, letters B to F, and the letter N.</p> <p>Option FTR (feature) identifies an international line feature. FTR can be specified when XLASEL is set to FEAT. Enter FTR, then complete subfield FTR. The only valid entry for the subfield is NIL.</p>

Universal call processing (continued)**Datafilling CODE tables - legacy call processing (Sheet 7 of 10)**

Field	Subfield or refinement	Entry	Explanation and action
	OSEL (continued)		<p>Option FUNC (function) is used with option selector FTR and identifies an international line feature function code. FUNC can be specified when XLASEL is set to FEAT. Enter FUNC, then complete subfield FUNC. Valid entries for the subfield are:</p> <ul style="list-style-type: none"> • ACT (activate) • DEACT (deactivate) • INTER (interrogate) • USAGE (usage) • PROG (programming) • DELETE (delete) <p>Option INSRT (insert) inserts digits into the initial digit stream after optionally skipping over a selected number of digits. Any digits to be deleted (by options PF or DEL) are processed before the DMS switch inserts any digits. Options REPL and INSRT cannot both be specified in the same entry. If both are present, only the second is used. INSRT can be specified when XLASEL is set to DMOD. Enter INSRT, then complete subfield INSRDIGS, specifying up to 29 digits to be inserted.</p>

Universal call processing (continued)

Datafilling CODE tables - legacy call processing (Sheet 8 of 10)

Field	Subfield or refinement	Entry	Explanation and action
	<p>OSEL (continued)</p>		<p>Option MM (minimum/maximum) allows screening of the incoming digit streams to ensure that the minimum and maximum number of digits expected for a given call type are received before the digits continue through translations. MM can be specified if XLASEL is set to FEAT, DNRTE, CONT, RTE, or DBQ. Enter MM, then complete the MIN and MAX subfields, specifying the minimum and maximum number of digits, respectively.</p> <p>Option NSC (number service code) allows inward call management features that require the dialing of special numbers.</p> <p>Option OFC (office treatment) can be specified when XLASEL is set to TRMT. Enter OFC, then complete subfield OFC. In OFC, enter a treatment code to index table TMTCNTL.TREAT. This subfield specifies the predefined treatment the call is to receive, for example, VACT (vacant code treatment).</p>

Universal call processing (continued)

Datafilling CODE tables - legacy call processing (Sheet 9 of 10)

Field	Subfield or refinement	Entry	Explanation and action
	OSEL (continued)		<p>Option PF (prefix fence) indicates the number of digits in the dialed number that are to be interpreted as prefix digits and deleted. PF can be specified when XLASEL is set to FEAT, DNRTE, CONT, RTE, DMOD, DBQ, or IAC. Enter PF, then complete subfield PFDIGS. This subfield specifies the number of digits that are to be considered prefix digits; it can be a number from 0 to 24.</p> <p>Option PRIVL (privileged) specifies that the user is privileged, for example, an operator. PRIVL can be specified when XLASEL is set to CONT or RTE. Enter PRIVL, then complete subfield PRIVL, specifying whether the user is privileged (Y or N).</p> <p>Option RBP (ring-back price) indicates that a call is to be marked as ring-back price. A hexadecimal E is suffixed to the calling digits for a call that translates using a tuple with the RBP option. RBP can be specified when XLASEL is set to DMOD.</p> <p>Option REPL (replace) replaces an entire digit stream after optionally skipping over a selected number of digits. REPL can be specified when XLASEL is set to DMOD. Enter REPL, then complete subfield REPLDIGS, specifying up to 30 replacement digits.</p>

Universal call processing (continued)

Datafilling CODE tables - legacy call processing (Sheet 10 of 10)

Field	Subfield or refinement	Entry	Explanation and action
	OSEL (continued)		<p>Option SMDR (station message detail recording) assigns station message detail recording. SMDR can be specified when XLASEL is set to NET. Enter SMDR, then complete subfield SMDR with Y or N.</p> <p>Option VPN (virtual private network).</p> <p>Option VPNOVE (virtual private network overlay) when activated enables billing in Australia.</p> <p>Option XLT (translate) allows the next translations system and translations name used to be overridden by specifying a new translations system (AC, PX, FA, CT, OFC, AM, FT, or NIL), a new translations name, or both. XLT can be specified when XLASEL is set to CONT or DMOD. Enter XLT, then complete subfields XLASYS and XLANAME. XLASYS specifies the next translations system to be used (AC, PX, FA, CT, OFC, AM, FT, or NIL). XLANAME specifies the translations name of the table instance in the XLASYS where the call is to be routed.</p>

Datafill example for CODE tables

All CODE tables use the same data format. The following example shows sample datafill for table CTCODE.

MAP display example for table CTCODE

XLANAME	FROMD	TOD	XLADATA
ABCEDFG	3200	3205	
	DMOD (PF 2) (INSRT 00) (XLT CT ABCDEABC) \$		
ABCABCA	3207	3209	
	DMOD (DEL 2) (INSRT 03) (XLT CT ABCDEABC) \$		

Universal call processing (continued)

Datafilling RTE tables

The RTE tables are as follows:

- ACRTE
- PXRTE
- FTRTE
- FARTE
- OFCRTE
- CTRTE
- NSCRTE

When the head or code tables' translations selectors RTE or CONT specify the DEST (destination) option, call processing continues to the universal translations route tables. The DEST option specifies a route reference number in the range of 0 to 1023. This reference provides the second part of the index into the route tables. The route table used is based on the XLANAME specified in the head or code tables.

The key to the route table consists of XLANAME and RTEREF. The route reference index corresponds to the destination number (from the DEST option) in the code table for the given XLANAME.

Note 1: The datafill configurations shown in this section are for example purposes only. Each operating company must design the datafill that is appropriate for its office configuration and dialing plan.

Note 2: When DCR in Universal Translations is active on a switch, the DCRT and NODE selectors in route lists of universal translations are used for determining the routing and termination of calls. When this feature is not active on a switch, these route selectors are not functional. However, the datafill of DCRT and NODE selectors in universal translations routing tables is still allowed.

The following table shows the legacy call processing datafill specific to Universal call processing for RTE tables. Only those fields that apply directly

Universal call processing (continued)

to Universal call processing are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling RTE tables - legacy call processing (Sheet 1 of 6)

XLANAME	alphanumeric (1 to 8 characters)	Translator name. Enter 1 to 8 alphanumeric characters to specify the translator name from the corresponding head table.
RTEREF	numeric (0 to 1023)	Route reference. Enter a value from 0 to 1023 to specify the route reference index.
RTELIST	see subfield	Route list. This field consists of subfield RTESEL.
RTESEL	CND, DCRT, N, NODE, NOT, RT, S, SX, T	<p>Route selectors. Enter up to eight of the following route selectors and their refinements' values. To terminate the vector, enter \$.</p> <p>CND (conditional) is used for time-of-day routing. Enter CND and datafill refinements CNDSEL, TODNAME, TIMES, PERCENT, CALLCHR, SNPA_CND_RTE, RTETYPE, SKIPNUM, RTEREF, TABNAME, XLASYS, XLANAME, RTEREF, and RTDIGITS.</p> <p>DCRT is used for DCR tandem calls that arrive on a DCR trunk group within the same network. Enter DCRT and datafill refinements DCR_NETWORK, DESTNAME, and OSID.</p> <p>Note: DCRT is datafilled only once in a route list.</p> <p>N (nonstandard) is specified when additional digit prefixing, digit deletion or both are required before call termination. Enter N and datafill refinements CLLI, MODCHG, DELETE, PFXDIGS and PFXAFTER.</p> <p>NODE is used for DCR calls that are to be carried on an alternate (recommended) route. Enter NODE and datafill refinements DCR_NETWORK, DESTNAME, and OSID.</p> <p>Note: NODE is datafilled only once in a route list.</p>

Universal call processing (continued)

Datafilling RTE tables - legacy call processing (Sheet 2 of 6)

RTESEL
(continued)

NOT is the inverse of route selector CND. (For example, if CND is set to 10 pm then routing occurs at 10 pm, whereas if NOT is set to 10 pm, routing occurs any time other than 10 pm.) Enter NOT and datafill refinements CNDSEL, TODNAME, TIMES, PERCENT, CALLCHR, SNPA_CND_RTE, RTETYPE, SKIPNUM, RTEREF, TABNAME, XLASYS, XLANAME, RTEREF, and RTDIGITS.

RT (retranslate) is used to replace the digits received in their entirety by the number specified and then retranslate them in the translations system specified. Enter RT and datafill refinements RTDIGITS, XLASYS, and XLANAME.

S (standard) is used when no additional digit manipulation is required before call termination. Standard routing ignores prefix digits as specified by PF (prefix fence) commands. Enter S and datafill refinement CLLI.

SX (extended standard) is used when additional manipulation using table ROUTATTR is required before call termination. Extended standard routing ignores prefix digits as specified by PF (prefix fence) commands.

T (table) is used to route translation to another universal translations table. Enter T and datafill refinements TABNAME, XLASYS, XLANAME, and RTEREF.

Universal call processing (continued)

Datafilling RTE tables - legacy call processing (Sheet 3 of 6)

CNDSEL	ALWAYS, CALLCHR, NRR, RND, SNPA, TOD	Condition selector. Enter ALWAYS, CALLCHR, NRR, RND, SNPA, or TOD. If the entry in field CNDSEL is TOD, complete subfields TODNAME and TIMES. If the entry in field CNDSEL is RND, complete subfield PERCENT. If the entry in field CNDSEL is CALLCHR, complete subfield CALLCHR. If the entry in field CNDSEL is SNPA, complete subfield SNPA_CND_RTE. Complete subfields RTETYPE, SKIPNUM, RTEREF, TABNAME, XLASYS, XLANAME and RTEREF for all CNDSEL values.
TODNAME	alphanumeric	Time of day name. Enter the name of the time-of-day system previously assigned in table TODHEAD.
TIMES	see explanation	Times. Enter the times at which the transfer to another route list element can occur. Time ranges are defined in table TIMEODAY, field TOD. A maximum of 14 times, with no space between the times, can be entered.
PERCENT	numeric	Percent. Enter the percent of calls that are to be routed to this route.
CALLCHR	DIGDATA or SAT	Call charge. Enter DIGDATA or SAT.
SNPA_CND_RTE	numeric (0 to 1023)	Single numbering plan area conditional route. Enter the route number.

Universal call processing (continued)**Datafilling RTE tables - legacy call processing (Sheet 4 of 6)**

RTETYPE	SK, ST, or T		<p>Route type. Enter the route type.</p> <p>SK is used to skip the call to another route element in the same route list. This option requires field SKIPNUM to be completed.</p> <p>ST is used to transfer the call to another route list in the same table. This option requires field RTEREF to be completed.</p> <p>T is used to transfer the call to a route list in one of the universal translations route tables. This option requires fields TABNAME, XLASYS, XLANAME, and RTEREF to be completed.</p>
SKIPNUM	numeric (0 to 7)	(0	Skip number. Enter a value from 0 to 7 to specify the number of elements in the same route list to skip for the call to be transferred to the proper route when the condition is met.
RTEREF	numeric (0 to 1023)	(0	Route reference. Enter a value from 0 to 1023 to specify the route reference number in the same table to which the call is transferred when the condition is met. The route reference number to which the call is transferred must be higher than the route reference number from which it was transferred.
TABNAME	OFRT or IBNRTE		Table name. Enter a route table.
XLASYS	AC, AM, CT, FA, FT, NIL, OFC, or PX		Translations system. Enter the translations system to which to route the call.
XLANAME	alphanumeric (1 to 8 characters)		Translations name. Enter the translations name of the table instance in the XLASYS to which to transfer the call.
RTEREF	numeric (0 to 1023)	(0	Route reference. Enter a value from 0 to 1023 to specify the index to the specified route table to which to transfer the call.
RTDIGITS	numeric 1 to 11 digits		Retranslated digits. Enter the 1 to 11 digits that are to be retranslated in the appropriate translations system and that will replace the dialed digits.

Universal call processing (continued)

Datafilling RTE tables - legacy call processing (Sheet 5 of 6)

DCR_NETW ORK	alphanumeric		DCR network. The network of the DCR destination node as defined in table DCRNETID.
DESTNAME	alphanumeric		DCR destination node name. The destination node name is one of the names datafilled in table DESTKEY.
OSID	numeric	(1 to 55)	Outpulsing scheme identification. OSID is the index into table DESTNODE, field OSID to identify the outpulsing scheme defined in table DESTNODE.
CLLI	alphanumeric	(1 to 16 characters)	Common language location identifier. Enter the CLLI of a trunk group.
MODCHG	ADDCHG, CANCHG, CANTOLL, or NOMOD		<p>Modifier charge. Enter ADDCHG, CANCHG, CANTOLL or NOMOD.</p> <p>ADDCHG is used where a route is normally free and charge for the call is based on the zone calculated by translations.</p> <p>Note: Each zone can have a different tariff rate. Refer to table MDESTIDX, the destination tariff index table, in the data schema section of this document for more information.</p> <p>CANCHG is used where a route is normally chargeable and the charge is to be cancelled.</p> <p>CANTOLL is used where a route is normally chargeable and the charge is to be reduced to a local charge.</p> <p>NOMOD is used if no charge modification is required.</p>
DELETE	numeric	(0 to 18)	Delete. Enter a value from 0 to 18 to specify the number of digits to be deleted before outpulsing.
PFXDIGS	0 to 11 alphanumeric digits (0 to 9, B, C, or N)		Prefix digits. Enter up to 11 alphanumeric digits, 0 to 9, B (code 11), C (code 12), or N (no digits) to be prefixed before outpulsing. The code 11 forward signal requires the incoming call to be routed to an operator at the terminating exchange. The code 12 forward signal requires the incoming call to be routed to a special international operator.

Universal call processing (continued)

Datafilling RTE tables - legacy call processing (Sheet 6 of 6)

PFXAFTER	numeric to 15)	(0	Prefix after. Enter a value from 0 to 15 to specify the number of leading digits to skip before inserting the digits specified in field PFXDIGS above.
DEL	numeric to 29)	(0	<p>Delete. Enter the number of leading digits to be deleted from the digits string presented for translation in this stage after the PF leading digits are deleted and after the prescribed number of digits are skipped.</p> <p>The digits to be deleted are processed by the DMS switch before inserting digits using the option INSRT.</p> <p>The digits are deleted from all three-digit strings, that is, the digit string presented to the next translation stage, the call detail record digit string, and the transmitted digit string.</p>
AFTER	numeric to 29)	(0	<p>After. Enter the number of leading digits to be skipped after the prefix digits before deleting, inserting, or replacing digits.</p> <p>All these operations affect all three-digit strings, that is, the digit string presented to the next translation stage, the call detail record digit string, and the transmitted digit string.</p>
INSRT	alphanumeric (up to 29 characters)		<p>Insert. Enter the digits to be inserted into the digit string presented for translation in this stage, after deleting PF leading digits and after skipping the prescribed number of digits.</p> <p>The digits to be deleted using option DEL are processed by the DMS switch before digits are inserted.</p> <p>Digit replacement using option REPL cannot be done in the same tuple as digit insertion through option INSRT. If both options are datafilled, the second one in the tuple is used.</p> <p>The digits are inserted into all three-digit strings, that is, the digit string presented to the next translation stage, the call detail record digit string, and the outpulsed digit string.</p>

Universal call processing (continued)

Datafill example for RTE tables

All RTE tables use the same data format. The following example shows sample datafill for table CTRTE.

MAP display example for table CTRTE

XLANAME	RTEREF	RTELIST
ABCDEFGH	2	(S OGTRK001) \$

Translation verification tools

TRAVER is the tool used to verify legacy call processing translations. The following example shows the output from TRAVER when it is used to verify line to line Universal call processing.

Universal call processing (continued)

TRAVER output example for Universal call processing

```

>TRAVER L 1162000 1162001 B
TABLE KSETLINE
REM1 02 0 19 01 1 ACD Y 1162000 JAL 0 0 003 INCALLS N JAL_INFORMATION 1
N (MSBI) (ACDNR) $
TABLE DNATTRS
003 116 2000
(PUBLIC (NONUNIQUE) $) $ $
TABLE DNGRPS
TUPLE NOT FOUND
TABLE KSETFEAT
TUPLE NOT FOUND
TABLE CUSTSTN
TUPLE NOT FOUND
TABLE OFCVAR
AIN_OFFICE_TRIGGRP NIL
AIN ORIG ATTEMPT TDP: NO SUBSCRIBED TRIGGER.
TABLE NCOS
JAL 0 0 0 ABCCOS $
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND
DIGCOL
JAL NXLA JALXLA JALXLA 1 ABC
TABLE DIGCOL
TUPLE NOT FOUND
DEFAULT IS RPT
NCOS PRELIM XLA NAME IS NIL. GO TO NEXT XLA NAME.
CUST PRELIM XLA NAME IS NIL. GO TO NEXT XLA NAME.
TABLE IBNXLA: XLANAME JALXLA
JALXLA 116 NET N N N 0 N POTS N Y DOD N 98 NONE $
TABLE DIGCOL
POTS SPECIFIED: POTS DIGIT COLLECTION
TABLE LINEATTR
98 IBN NONE NT NSCR 0 003 NPRT NLCA NONE 0 NIL NILSFC NILLATA 0 PX JAL
NIL 00 N
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPENIL 00 N

```

-continued-

Universal call processing (end)

TRAVER output example for Universal call processing

```
TABLE:  CTRTE
KEY:   DCR_PT   11
      DCR1 IXLN_NTWK IXLN_DEST 1
      S IXLN_1TO3_OG
      NODE IXLN_NTWK IXLN_DEST 1
      TABLE DESTNODE (ACCESSED IF DCR IS ACTIVATED IN OFFICE)
      NORMAL ROUTING RESUMES IF NODE TUPLE IS SKIPPED
      DCR NETWORK:  IXLN_NTWK
      IXLN_DEST IXLN_TANDEM 1 T OFR4 21 T OFR4 22
      IXLN_TANDEM CONT 1 T OFR4 25 NIL
      TABLE OFR4
      25 N D IXLN_1TO2_OF 3 665625 N
      EXIT TABLE OFR4
      IXLN_DEST IXLN_TANDEM 1 T OFR4 21 T OFR4 22
      TABLE OFR4
      22 N D IXLN_1TO2_EXC_OG 3 665625 N
      N D IXLN_1TO2_EXC2_O 3 665625 N
      EXIT TABLE OFR4
      EXIT TABLE DESTNODE
      T OFR4 24
      TABLE OFR4
      24 N D IXLN_2TO3_EXC_OG 3 621 N
      EXIT TABLE OFR4
      EXIT TABLE CTRTE
```

+++TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

1 LINE 0031162001 ST

TREATMENT ROUTES. TREATMENT IS: GNCT

1 T60

2 LKOUT

+++ TRAVER: SUCCESSFUL CALL TRACE +++

-end-

3 Understanding AIN Essentials translations

Introduction to AIN Essentials translations

The Advanced Intelligent Network Release 0.1 (AIN Essentials) is a network architecture. The AIN allows an operating company to design and use the services of that operating company. The AIN allows the operating company to provide those services across the public and private networks. The AIN Essentials allows the telephone operating company to quickly design and deploy new, customized services on a standard architecture with many vendors. The architecture can change to meet future requirements.

Feature logic and data in a service control point (SCP) node in the network determines the services and features in an AIN network. Feature logic and data in each switching system node does not determine the services and features in an AIN network. The switching system node recognizes calls that require the SCP-based services. The switching system node communicates with the SCP node for information to process the calls.

Calls that require these services must trigger a query to a central database in the common channel signaling 7 (CCS7) network. The system uses the translations in the service switching point (SSP) to set up triggers.

The following are the improvements to AIN Essentials:

- Transaction capability application part (TCAP) issue 2 provides new messages and provides more complex power.
- New automatic message accounting (AMA) and operational measurement (OM) coding is in the basic call model (BCM).
- additionaltriggers and trigger detection points (TDP)
- TRAVER supports the response part of a call.
- increase of control and flexibility to launch queries to the SCP

AIN Essentials parts

The following are the parts of AIN Essentials:

- Service Creation Environment (SCE)
- Service Management System (SMS)
- Service Control Point (SCP)
- Signaling Transfer Point (STP)
- Adjunct (available in a lab trial only)
- Intelligent Peripheral (IP)
- Service Switching Point (SSP)
- Network Access Point (NAP)

SCE

The SCE provides tools to create and customize services that are in the SCP. The SCE can be available as a stand-alone piece of equipment that serves several SCP.

SMS

The SMS supports the provisioning and administration of the master database. The master database controls AIN services. The operating company can load a copy of this master database in one or more SCP. The SMS collates operational measurements (OMs) and log reports that the SCP sends. The SMS collates OMs and log reports as part of the routine audit and maintenance functions.

The SCP-to-SMS interface performs the following functions:

- transfers operational measurements to the SMS
- transfers log reports to the SMS
- exchanges database management information between the SCP and the SMS

SCP

The SCP is an off-board processor. The SCP combines a large consolidated database and the service logic required to access and use the data to apply call services. The SCP responds to query messages that an SSP sends. The SCP can provide a service creation environment. Operating companies can use this service creation environment to create and customize services.

STP

The STP is an optional part of a CCS7 network. In North America, CCS7 networks use the STP.

The STP is available in mated pairs. The STP performs the following functions:

- global title translations. The translation of an indirect address, like a directory number, to a specified CCS7 node ID
- link management
- tandeming of messages between different CCS7 nodes
- network recovery

The following two functions are important to an AIN network:

- pseudo addressing that allows the data query load to balance between two or more SCP.
- alternative routing that allows messages to route around a network failure to provide the high reliability an AIN network requires

Adjunct

Like an SCP, an adjunct provides service control functions. An adjunct connects to a single switch through high-speed (non-CCS7) interface. An SCP does not directly connect to a single switch through a high speed interface. An adjunct normally supports a single service that requires a fast response to user requests. Calls from other switches in the area have to route to the adjunct supported switch to access the adjunct. The adjunct is available for laboratory use.

IP

The intelligent peripheral is an intelligent telecommunications device. An AIN call can connect to the IP.

The IP provides the following capabilities:

- playback (prompt or announcement)
- record (long and short term)
- DTMF digit collection and detection
- tone generation
- compression
- call control
- voice recognition

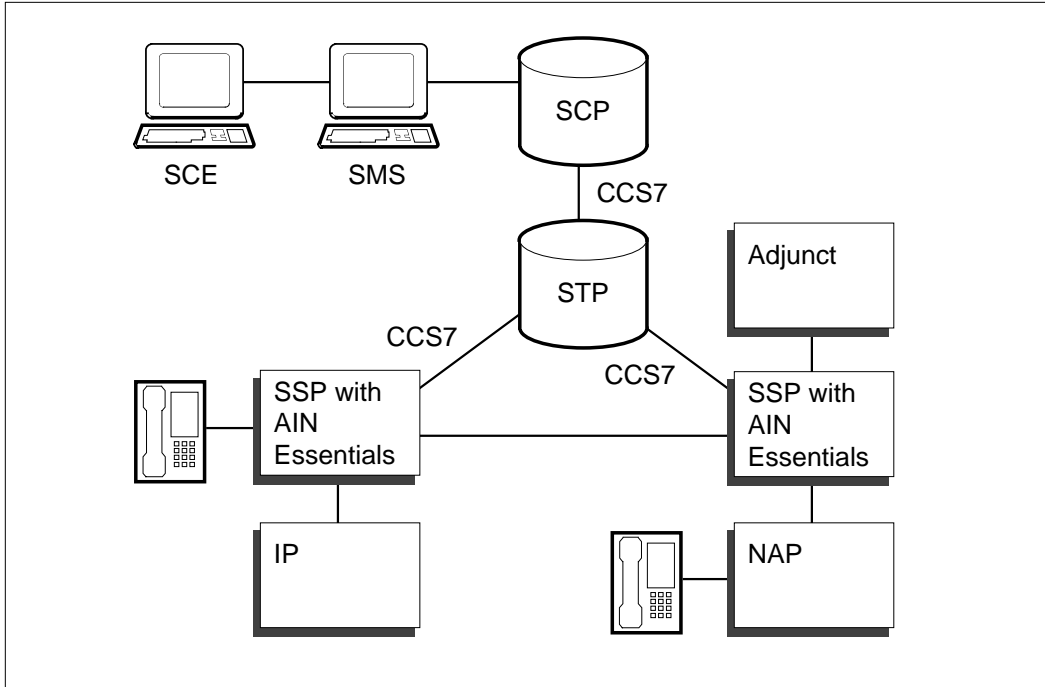
The IP connects to one or more SSP. The SSP uses lines or trunks like ISDN BRI or PRI. The lines or trunks provide a separate voice path and signaling path.

3-4 Understanding AIN Essentials translations

The IP is application separate and provides capabilities. Multiple applications can use these applications.

The AIN Essentials service-driven network parts appear below.

Figure 3-1 AIN Essentials parts



SSP

The SSP enhanced for AIN uses a special set of TCAP messages. The SSP uses these messages to communicate with the appropriate AIN service logic in an SCP. This communication is in addition to the basic SSP abilities that use CCS7 messages. These SSP abilities use these messages for call setup and switch-to-switch transaction requests.

Triggering is a process that identifies calls that require AIN Essentials services. Triggering depends on the detection of specified call characteristics (triggers). Triggers can occur at different points in call processing (trigger detection points). When a the system encounters a trigger, the SSP sends a query message to the SCP to request instructions. The SSP uses the instructions to complete the call.

The response message from the SCP can instruct the SSP to perform one of the following actions:

- continue with normal call processing
- override normal call processing and perform specified actions. These specified action can be to collect additional digits, route the call to a new DN, route the call with a specified route list, or play an announcement.

NAP

The NAP is an end office (EO) without AIN Essentials capabilities. The NAP connects to an AIN Essentials SSP with trunks. The trunks can carry the called number and the calling number (CCS7 or Equal Access Multifrequency (EAMF)). The NAP routes calls to an SSP for AIN processing.

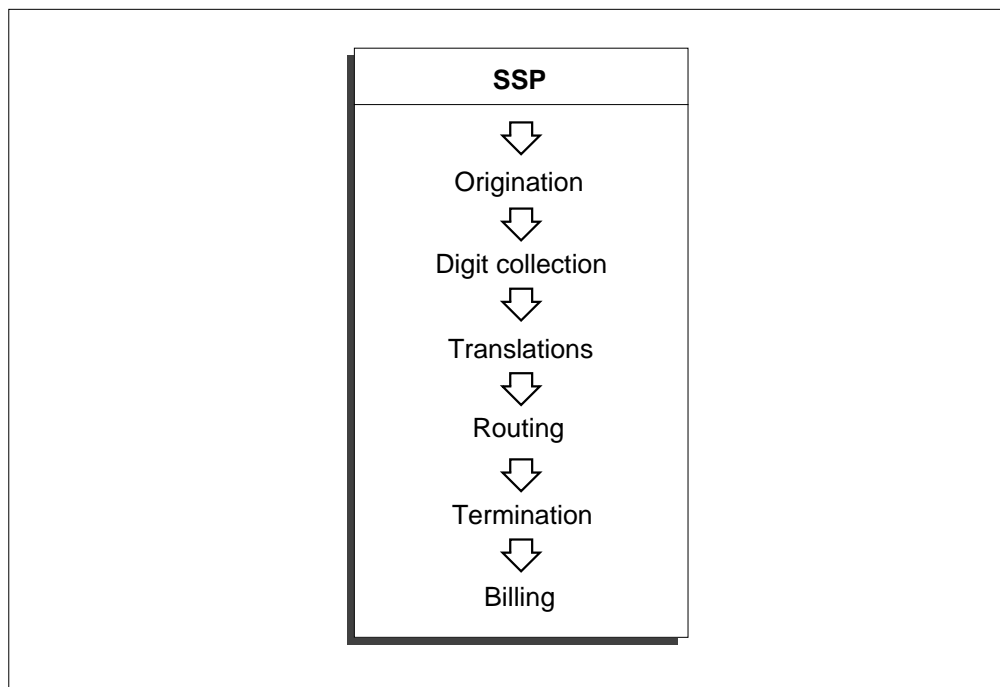
SSP call processing evolution

Call processing control in a CCS7 network evolved through three stages: pre-intelligent network (pre-IN), IN, and AIN Essentials.

Pre-intelligent network

In the pre-intelligent CCS7 network, control of call flow remains in the SSP node. The SSP has separate control of call processing functions like origination, digit collection, translation, routing, termination, and billing. The following is an example how a pre-intelligent network controls call flow.

Figure 3-2 Pre-IN call flow control



Intelligent Network

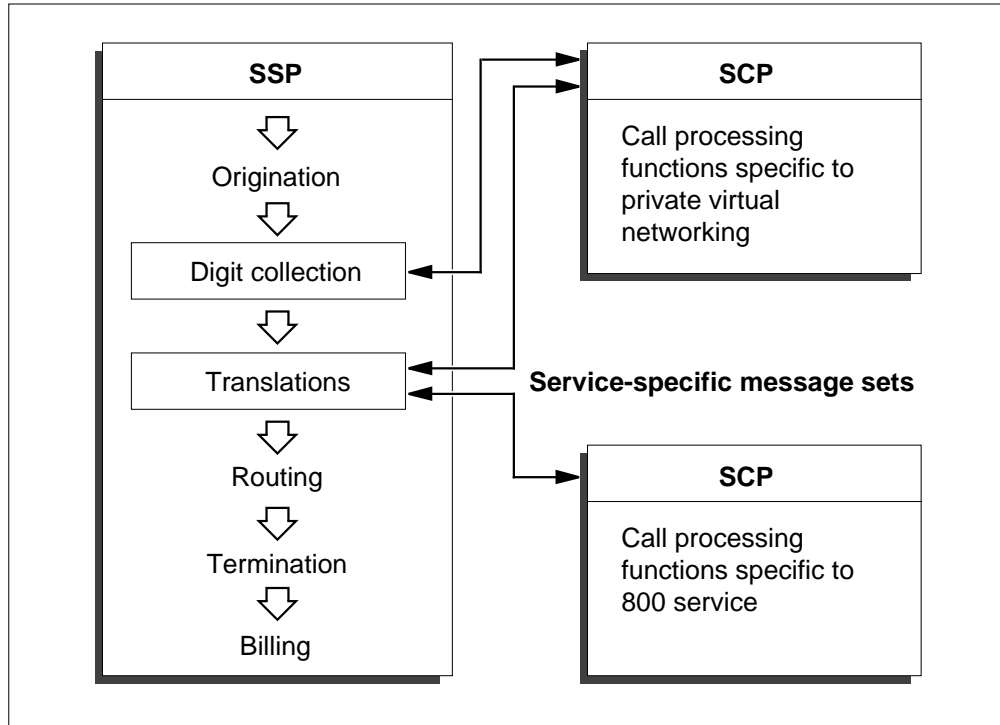
With Intelligent Network (IN) services like 800 Service, some of the service-related control data moved out of the switch. With IN services, the associated processing resources moved out of the switch. The data and the associated processing resources moved to an SCP. Associated processing resources are service logic. In this first step of service evolution, the messages that route between the IN switches and the SCP are service-specified. These messages change to meet the needs of one specified service.

The access of data on an off-switch computer from multiple switches implements specified services. This procedure has the following advantages:

- a single switch to SCP interface for each service allows a common implementation across multiple switches. Multiple vendors supply the switches.
- reduction of data management with only one set of service control data to maintain
- reduction of operation costs

An example how an intelligent network controls call flow appears in the following figure.

Figure 3-3 Intelligent network call flow control



Advanced Intelligent Network

The Intelligent Network customized interface messages and customized end office switch and SCP processing are built for each service. The AIN implements several services with a set of standardized interface messages. The end office switch call processing and SCP database processing can support the exchange of standardized interface messages.

An Advanced Intelligent Network has the following features:

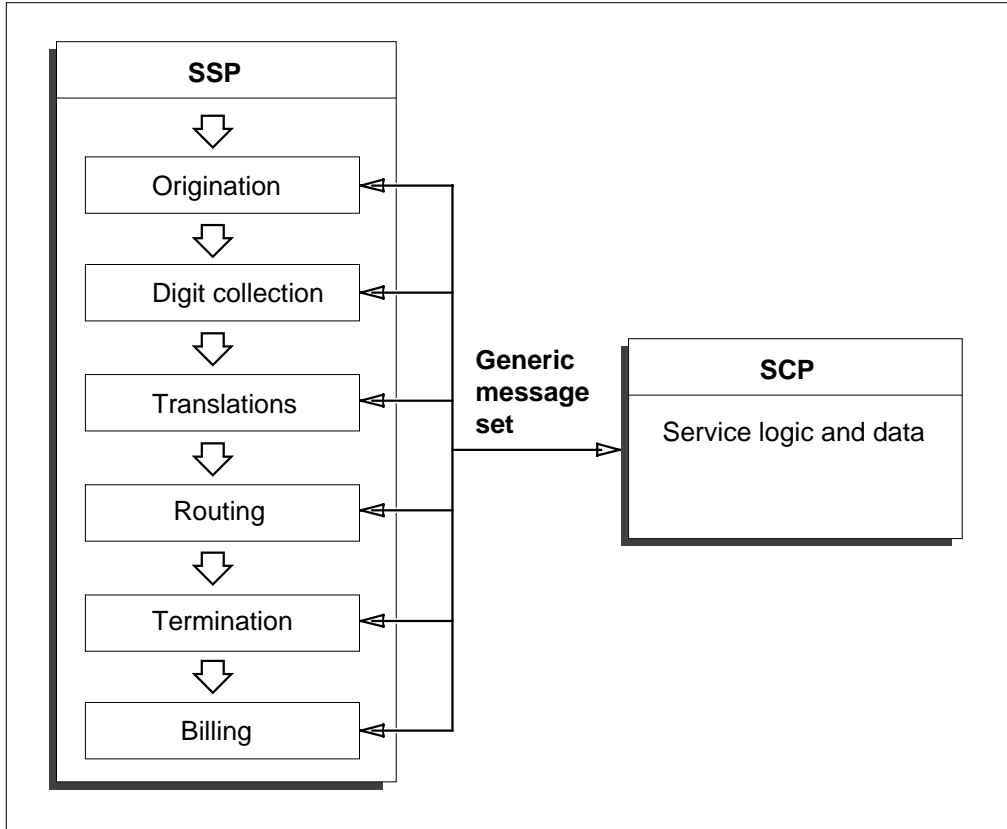
- specified hold points in the processing of a call with an end office switch. At a hold point, the processing of the call suspends while the system sends a query message to the SCP. The response message directs additional processing of the call. The start of the switch end of a new service can occur with the addition of datafill to the switch. This datafill causes the system to send an appropriate query message to the SCP.
- an SCP database and service operation software (service logic) that can support multiple services. Telephone operating company personnel with service building blocks can build the logic for a new service.
- additional nodes intelligent peripherals that can provide enhanced service capabilities like voice recognition, and voice menu operation.
- a set of service independent query (switch-to-SCP) and response (SCP-to-switch) messages.

The use of the AIN capability to build services set offers the following advantages:

- service independence. Operating companies can develop and customize services to match the needs of each customer.
- openness (an AIN part can interface with an AIN part)
- support of many vendors (all AIN part vendors support the same AIN messages)

How AIN Essentials have external control of call flow appears in the following figure.

Figure 3-4 AIN Essentials call flow control



SSP software architecture

The DMS-100, DMS-100/200, and DMS-200 supports the AIN Essentials SSP software. The software is in the DMS SuperNode switch.

The AIN Essentials SSP software is built on top of the call processing software in a DMS SSP switch. The focus of Release 0.1 is trigger processing capability. Release 0.1 develops a processing environment in the DMS feature processing environment (FPE).

AIN Essentials software operation

The AIN Essentials separates the different aspects of service requirements to functional elements. The AIN Essentials map the functional elements to platforms in the current switching network. These elements include service creation and operations management, service feature logic and data and service switching.

The AIN Essentials software performs the following operations.

Basic call model. The AIN Essentials supports the originating and terminating BCM. A BCM defines stages in a two-party call where the system can send a query to an off-board processor. An off-board processor is an SCP or adjunct.

Triggers. The AIN Essentials supports eight triggers. The SSP uses triggers to determine when the SSP must suspend the call in progress and send a query to an off-board processor.

Response processing. The AIN Essentials can interpret and perform instructions. The AIN Essentials receives the instructions in a response message from an off-board processor. Types of responses are different. For example, a response message can instruct the SSP to route the call to a specified address.

Billing. The off-board processor can instruct AIN Essentials to generate a billing record with Bellcore AMA call codes.

Traffic and maintenance measurement. The AIN Essentials provides traffic and failure measurements like resource failures and invalid response messages.

Error handling. The AIN Essentials can handle and report errors in response messages the off-board processor sends. The AIN essentials can process error messages the off-board processor receives. The AIN Essentials can continue call processing or take down the call and issue a final treatment.

Interface to SCP through CCS7. The AIN Essentials can send and receive TCAP messages to and from an SCP through a CCS7 link.

Other operation, administration, and maintenance functions. The AIN Essentials provides tools to operating company personnel. The tools allows operating company personnel to perform the following:

- provision triggers
- routing determination checks
- test SSP queries that the system sends to an off-board processor

AIN Essentials call processing

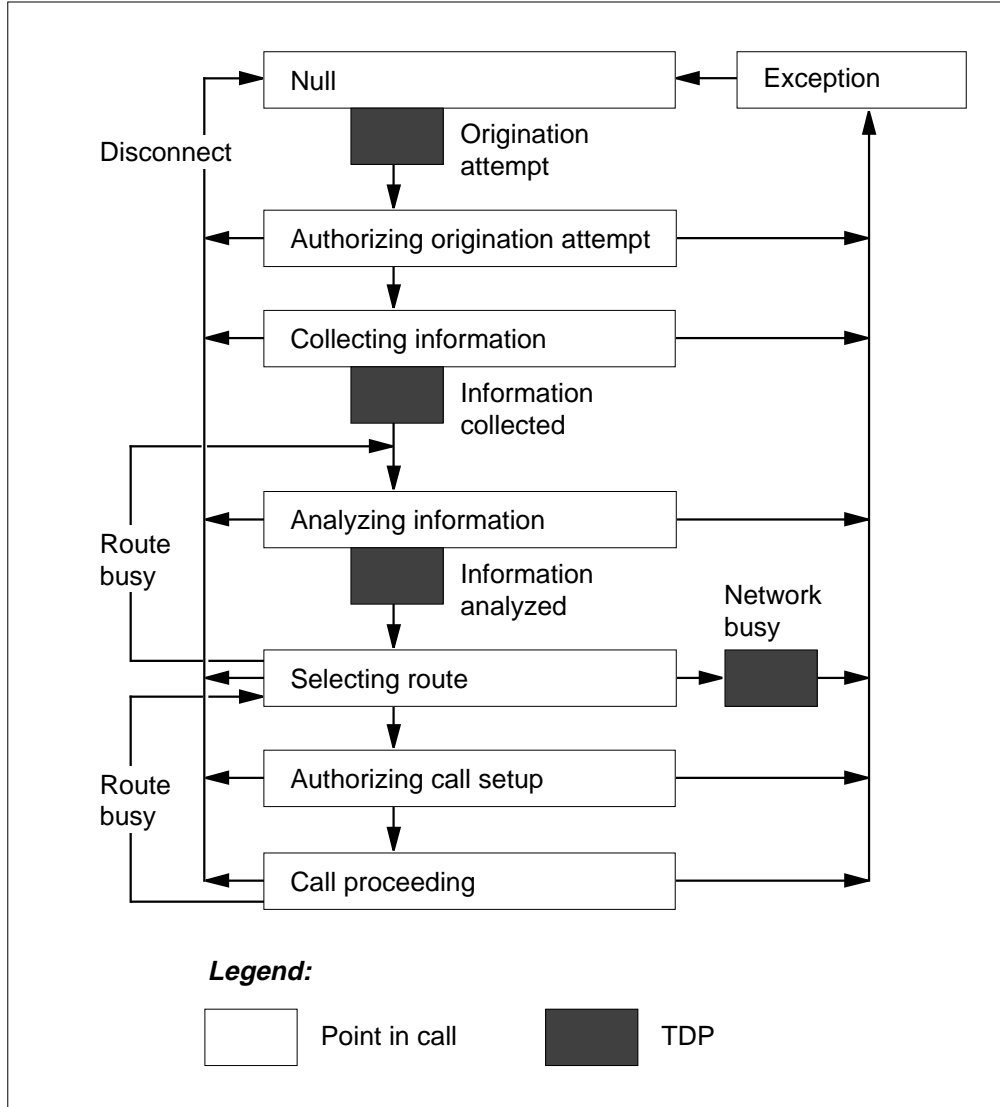
The AIN Essentials call processing involves the interaction of different parts. These parts include basic call models, trigger detection points and triggers.

Basic call model

The basic call model specifies the stages of the call where call processing occurs. The basic call model specifies where the SSP can suspend a call and query an off-board processor.

The originating BCM appears in the following figure. The call processing to the originating party requires to set up a call appears in this figure.

Figure 3-5 Originating basic call model



The BCM partitions to points in call (PIC). A point in call describes what part of call processing occurs at that specified stage of the call. A point in call describes the information about the call the system collects.

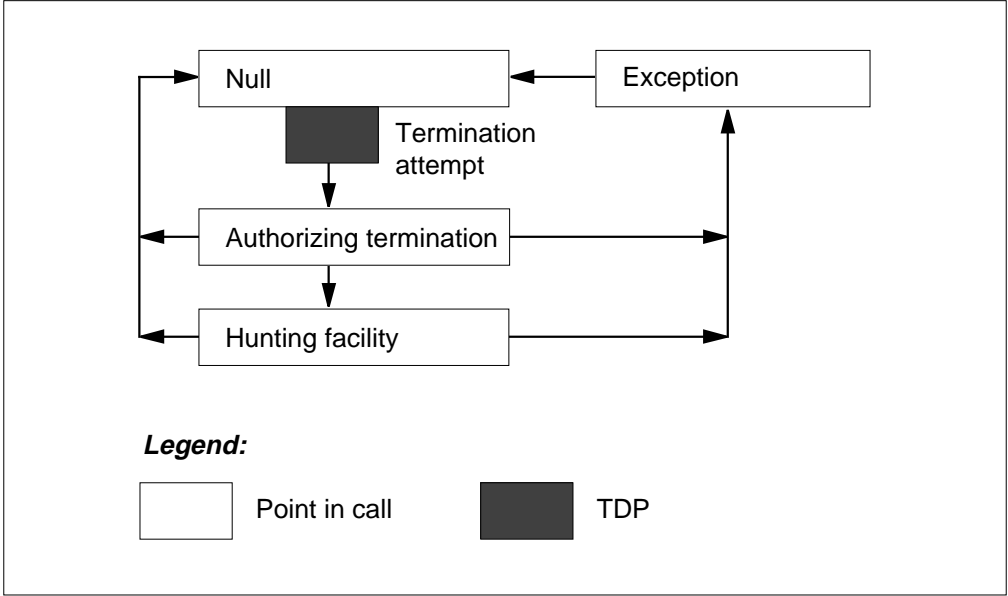
The following table describes the points in call in the originating BCM. The table indicates the TDP the call encounters when the call exits the point in call, when this condition applies.

Table 3-1 Originating basic call model points in call

Point in call	Description	Applicable TDP
Null	The call is idle and a connection is not present.	Origination Attempt
Authorizing Origination Attempt	Verification of the authority of the originating agent to place a call.	Does not apply
Collecting Information	Collection of complete initial address information from the originating agent. For example, access code and dialed digits.	Information Collected
Analyzing Information	Translation of digits collected according to the dial plan of the agent. Determination of the CalledPartyID, type of call, and carrier are determined.	Information Analyzed
Selecting Route	The SSP attempts to route the call to the route indexes or terminating resource group.	Network Busy
Authorizing Call Setup	The SSP verifies the authority of the calling party to place the call. For example, business group limits.	Does not apply
Call Proceeding	The SSP sends a message to the terminating resource to set up the call.	Does not apply

The terminating BCM and the process that the terminating party requires to terminate an incoming call appears in the following figure.

Figure 3-6 Termination of basic call model



The following table describes the point in call in the terminating BCM. The table indicates the TDP the call can encounter when the call exits the point in call.

Table 3-2 Terminating basic call model points in call

Point in call	Description	Applicable TDP
Null	The call is idle and a connection is not present.	Termination Attempt
AuthorizingTermination	The SSP verifies the authority to route the call to the terminating resource.	Does not apply
Hunting Facility	Determination of the busy and idle status of the terminating agent.	Does not apply

Trigger detection points

The BCM indicates the TDP. The TDP are stages in the call where the SSP determines when the call must query an off-board processor. When the SSP does not need to perform a query, call processing resumes to the next point in call.

Triggers define the conditions that must occur for a call to send a query to the off-board processor. A call triggers and sends a query when the following conditions occur:

- the call reaches the TDP
- an individual subscribes to the trigger (line or trunk group), a group (customer group), or an office
- the call meets trigger requirement and the trigger is active

Several triggers can associate with one TDP. A call can trigger several times during a call. The operating company enters the maximum number of triggers. The default value is six.

Trigger requirement

A trigger can contain one or more requirement types. For a call to trigger, the call must meet the specified requirements. The following are the different requirement types.

Call type. The CT specifies the type of calls that can trigger and send a query message. A type of call is voice or data.

Digits dialed. The DG specifies the digits that you must dial for a call to trigger and send a query message.

Escape code. The ESC specifies that the calls that an escape code has not dialed can trigger and send a query message.

Escape coin. The ESCCN does not allow specified coin agent calls (POTS and RES) to trigger the PODP trigger. This condition applies on the originating switch.

Escape equal access. The ESCEA escapes the PODP trigger when the call is an equal access call.

Escape operator. The ESCOP escapes the PODP trigger when the call is an operator call.

Escape directory number. The ESCDN escapes the PODP trigger when the dialed DN is resident on the switch.

Not all of the preceding requirement types apply to each AIN Essentials SSP trigger. For specified triggers, some requirement types are a requirement. Other requirement types are optional.

When a line, trunk group, customer group, or office subscribes to a trigger, the subscription is to an event of the trigger. An instance of a trigger specifies the

requirements that must be met for the call to trigger. Several subscribers can subscribe to the same trigger. Each subscriber can have a different set of requirements. The subscriber must meet the requirements for the call to trigger. There can be as many events of a trigger as combinations of requirements.

For example, Customer Group A and Customer Group B subscribe to the Customized Dialing Plan trigger. The event of the CDP trigger Customer Group A subscribes to specifies you must dial digits 222 to trigger. The event of the CDP trigger that Customer Group B subscribes to specifies that the call can trigger. The call triggers when you dial digits 234.

Trigger activation states

Each subscribed event of a trigger can have an activation state set to active or inactive. For a call to trigger, set the activation state to active. The activation state is always set to active for all triggers other than Off-Hook Immediate, Off-Hook Delay, and Termination Attempt. For subscribers to these three triggers, the system stores a set of activation states for each AIN agent subscription. A line, trunk group, or DN can subscribe to one of these three triggers. When this event occurs, a set of activation states that corresponds is present. The activation states control when these triggers are active or inactive for the subscriber. The activation states default to the active state.

The system can administer activation states for a specified AIN subscriber to the Off-Hook Immediate, Off-Hook Delay, and Termination Attempt triggers. Administration occurs through the Update_Request Off-Board Processor-to-SSP message. Refer to Trigger Processing II module for additional information. Administration occurs when you use a command line utility.

TDP and triggers

The AIN Essentials SSP uses a combination of five TDP and eight triggers. The following section describes these five TDP and the associated triggers. The position and flow of the TDP and points in call in an originating BCM appear in the following figure. The figure is in the basic call model section.

Origination Attempt TDP. This TDP is in the originating BCM. This TSP is between the Null point in call and Authorizing Origination Attempt point in call. The Off-Hook Immediate trigger applies to this TDP.

Off-Hook Immediate trigger. This trigger formulates and sends a query to an off-board processor. This trigger send the query as the associated line goes off-hook. The trigger is subscribed to for each line. Call type is the correct requirement for this trigger. The specification of call type is an option. When specification of call type does not occur, the call triggers for all call types. The call types are voice or data.

Information Collected TDP. This TDP is in the originating BCM between the Collecting Information and Analyzing Information points in call. The Off-Hook Delay and Shared Interoffice Trunk triggers apply to this TDP.

Off-Hook Delay trigger. This trigger sends a query to the off-board processor. This trigger sends the query after the system sends dialed digits from the line that subscribes to this trigger. This trigger applies to all calls from subscribing lines or trunk group. This trigger does not apply to calls when an escape code is dialed. The trigger does not apply to calls when the dialed digits correspond to the activation of, deactivation of, or access to a switch based feature.

Shared Interoffice Trunk trigger This trigger is assigned to individual public trunk groups for calls routed to an AIN Essentials SSP from an equal access end office (EAEO). The identification of an AIN Essentials call depends on the 0ZZ-XXX digits that the EAEO conveys to the AIN Essentials SSP. The public trunk group supports the trigger with the Equal Access Multi-Frequency (EAMF) and CCS7 facilities.

Information Analyzed TDP This TDP is in the originating BCM between the Analyzing Information and Selecting Route points in call.

Public Office Dialing Plan 3 to 10 trigger This trigger depends on a number in a national numbering plan (NPA) format. When the end user dials seven digits, the NPA is appended, if possible, to ten digits. When the end user dials 101XXXX+1+10 digits, the system strips off the carrier access code. The trigger depends on the ten digits. The AIN Essentials attempts to convert the number the end user dials to a ten-digit national number. The AIN Essentials can trigger from this number. The digit code that triggering depends on can be NPA, NPAN, NPANX, NPANXX, NPANXXX, NPANXXXX, NPANXXXXX, or NPANXXXXXXX. The digits matched from the datafill in table TRIGDIG determine the digit code that triggering depends on. The digits in table TRIGDIG are trigger digits. When the number the end user dials is from the private dial plan of a private facility agent, the call cannot encounter this trigger. When an end user dials an international number, the call does not encounter this trigger. Conversion of numbers to a national number format must occur to use this trigger.

N11 trigger This trigger is for three-digit special service dialing. This trigger is for each office and applies to facilities with access to the public office dialing plan. The trigger requirements are met when the user dials a designated N11 code.

Customized Dialing Plan trigger A customer group assigned to a customized dialing plan can subscribe to this trigger. When you dial an access code, extension number, or vertical service code in a customized dialing plan, the triggering requirements are met.

This trigger has the following three variants:

- CDP Access Code. When you dial an access code, the system detects the variant of the trigger. Entry of the codes digits occurs in table TRIGDIG.
- CDP Feature Access Code. When you dial a feature access code for an SCP defined feature, the system detects this variant of the trigger. Entry of the codes digits occurs in table TRIGDIG.
- CDP Intercom. When you dial an extension or intercom number, the system detects this variant of the trigger. Entry of the numbers digits occurs in table TRIGDIG.

Public Office Dialing Plan Feature Code trigger This trigger supports RES and BRI lines that the current AIN Essentials originating triggers support. The public office dial plan specifies feature codes for this trigger. Feature codes are vertical service codes. The following actions occur at the Information_Analyzed TDP. When the subscriber dials the feature codes, the system detects the feature codes. The call triggers and launches a query to an SCP. The system performs subscription control for this trigger during call processing run time.

Network Busy TDP

This TDP is in the originating BCM after the Selecting Route point in call. This TDP is reached when all routes in the routing list are busy. The Automatic Flexible Routing trigger applies to this TDP.

Automatic Flexible Routing trigger. Subscription to the trigger can occur for each individual, group, or office. The Automatic Flexible Routing (AFR) trigger is an entry in the route list. The trigger occurs when none of the previous routes are available. The previous routes appear in the Automatic Route Selection (ARS) pattern. All routes busy is an example of a route in the ARS pattern.

Termination Attempt TDP

This TDP is in the terminating BCM. The TDP is between the Null point in call and the Authorizing Termination point in call. The Termination Attempt trigger applies to this TDP.

Termination Attempt trigger Assignment of this trigger can occur for each DN. The trigger sends a query to an off-board processor when an attempt to terminate on the DN occurs. The DN subscribes to this trigger.

Note: Short forms for triggers include the following: Off-Hook Immediate (OHI), Off-Hook Delay (OHD), Shared Interoffice Trunk (SIT) (SHAIO), Customized Dialing Plan (CDP), and Termination Attempt Trigger (TAT).

The following table is a summary of AIN Essentials SSP TDP, triggers, and requirement types.

Table 3-3 TDP, triggers, and requirement types

TDP	Trigger	Requirements	Subscription
Origination Attempt (ORIGATT)	Off-Hook Immediate (OFFHKIMM)	call type	line
Information Collected (INFOCOL)	Off-Hook Delay (OFFHKDEL)	call type, escape code (M)	line, trunk group
	Shared Interoffice Trunk (INTEROFF)	call type digits dialed (M), escape code	office
Information Analyzed (INFOANAL)	Public Office Dialing Plan 3 to 10 (PODP)	call type, digits dialed (M)	office
	N11	call type, digits dialed (M)	customer group, office
	Customized Dialing Plan (CDPCODE)	call type, digits dialed (M)	customer group
	Public Office Dialing Plan Feature Code (PODPFEAT)	call type digits dialed (M)	individual RES line (supported by AIN Essentials originating triggers)
Network Busy (NETBUSY)	Automatic Flexible Routing (AFR)	call type	line, trunk group, customer group, office
Termination Attempt (TERMATT)	Termination Attempt (TERMATT)	call type	DN
Note: (M) is required			

Trigger processing

Trigger processing follows specified requirements. This requirement incorporates trigger order and escape codes.

Trigger precedence

When a call encounters a TDP where subscription of triggers can occur, the SSP checks for trigger subscription in order of precedence. The order the SSP follows is line or trunk group, customer group, or office.

Line or trunk group The SSP checks the subscription tables to determine if the line or trunk group subscribes to triggers at the current TDP.

When the line or trunk group subscribes to one or more triggers at the current TDP, the SSP searches trigger tables. The SSP searches trigger tables in sequence. The SSP searches trigger tables until a trigger, the line or trunk group subscribes to meets the trigger criteria. When the trigger meets the requirements, the call triggers sends a query message. When requirements are not met, the SSP searches until assigned triggers are not available.

The following are the supported AIN Essentials line type agents:

- POTS individual flat rate, residence (1FR)
- POTS individual message rate, residence (1MR)
- Residential enhanced services lines (RES)
- Private branch exchange rate (PBX)
- Integrated Business Network (IBN) (except attendant consoles and data units)
- Electronic business set (EBS) (excludes integrated voice and data (IVD), data units, ISDN functional signaling; includes Meridian feature transparency (MFT)).

The following are the supported AIN Essentials trunk type agents:

- Incoming end office (TI)
- Two-way end office (T2)
- InterToll (IT)
- Integrated Business Network incoming (IBNTI)
- Integrated Business Network two-way (IBNT2)
- Primary rate access (PRA)

Customer group When the line or trunk group does not subscribe to a trigger, the SSP searches the subscription tables. When the assigned triggers do not meet the requirements, the SSP searches the subscription tables. The search determines when the customer group of the agent subscribes to a trigger at the current TDP.

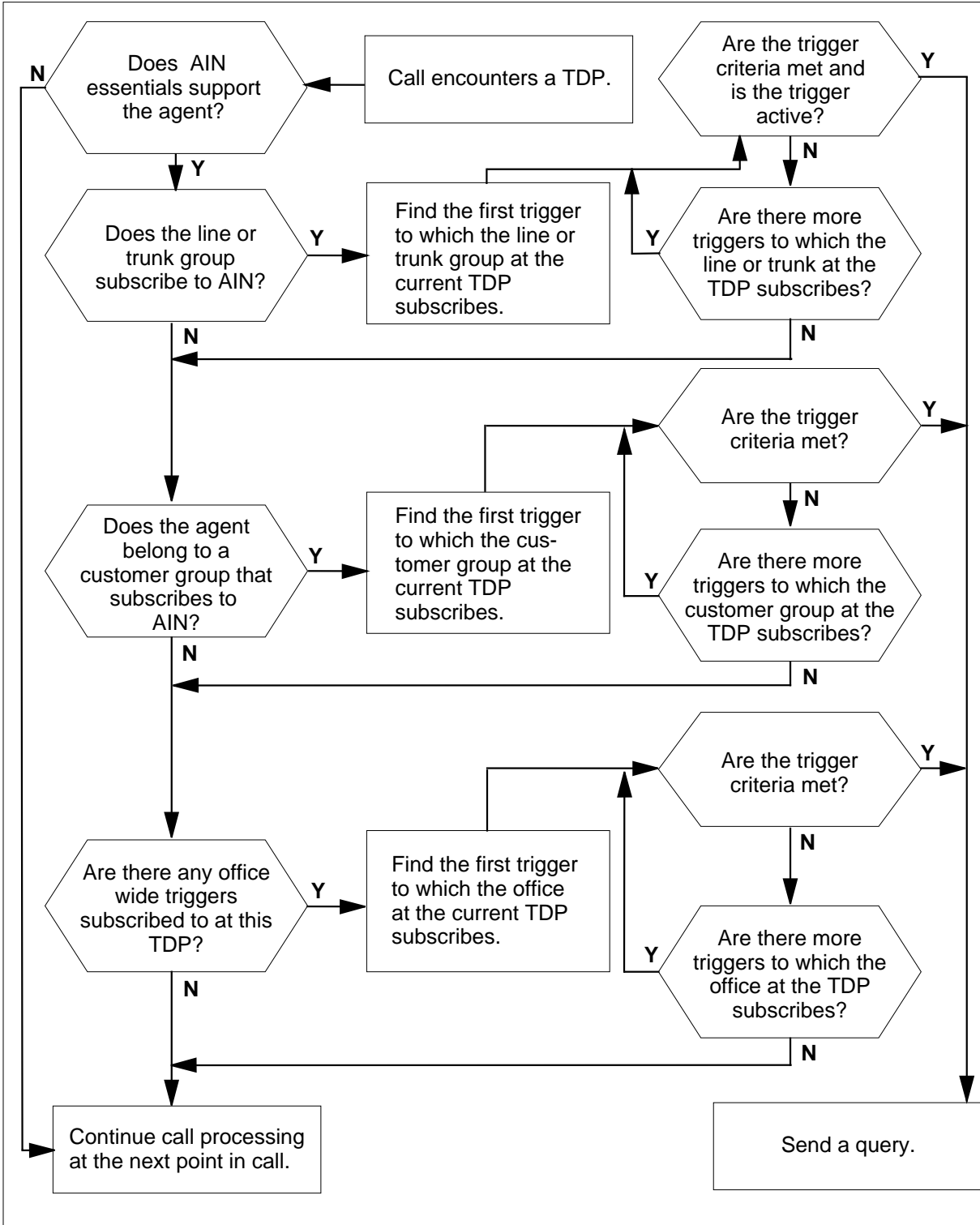
When the customer group subscribes to one or more triggers at the current TDP, the SSP determines when the call can trigger. The method is the same as the previous description. The method depends on the customer group subscription.

Office When the line or trunk group, or the customer group, does not subscribe to a trigger, the SSP searches the subscription tables. When the assigned triggers do not meet the requirements, the SSP searches the subscription tables. The search determines when the office of the agent subscribes to a trigger at the current TDP.

When the office subscribes to one or more triggers at the current TDP, the SSP determines when the call can trigger. The method is the same as the description for lines or trunk groups. The method depends on the office subscription.

The logical flow of precedence checking appears in the following figure.

Figure 3-7 Trigger checking flow diagram



Trigger assignments

The following table contains a summary of the triggers. You can assign the triggers in the table to the different types of AIN Essentials agents. The table indicates the tables you use to subscribe the triggers.

Table 3-4 Valid trigger assignment

Agent	Subscription tables	Triggers	TDP
line	LENFEAT KSETFEAT IBNFEAT	Off-Hook Immediate, Off-Hook Delay, Automatic Flexible Routing, Public Office Dial Plan Feature Code	Origination Attempt, Information Collected, Network Busy, Information Analyzed
trunk group	TRKAIN	Off-Hook Delay, Shared Interoffice Trunk, Automatic Flexible Routing	Information Collected, Network Busy
customerg roup	CUSTSTN	Customized Dialing Plan, Automatic Flexible Routing	Information Analyzed, Network Busy
office	OFCVAR	Public Office Dial Plan 3 to 10, N11, Automatic Flexible Routing	Information Analyzed, Network Busy
DN	DNFEAT	Termination Attempt	Termination Attempt

Determining the system datafill sequence

The datafill hierarchy for AIN Essentials appears in the figure on the following page. This figure is available to serve as a reference.

Note 1: Entry of the announcement tables must occur when the addition of an SCP announcement occurs. Set up the Send_To_Resource routing to tones.

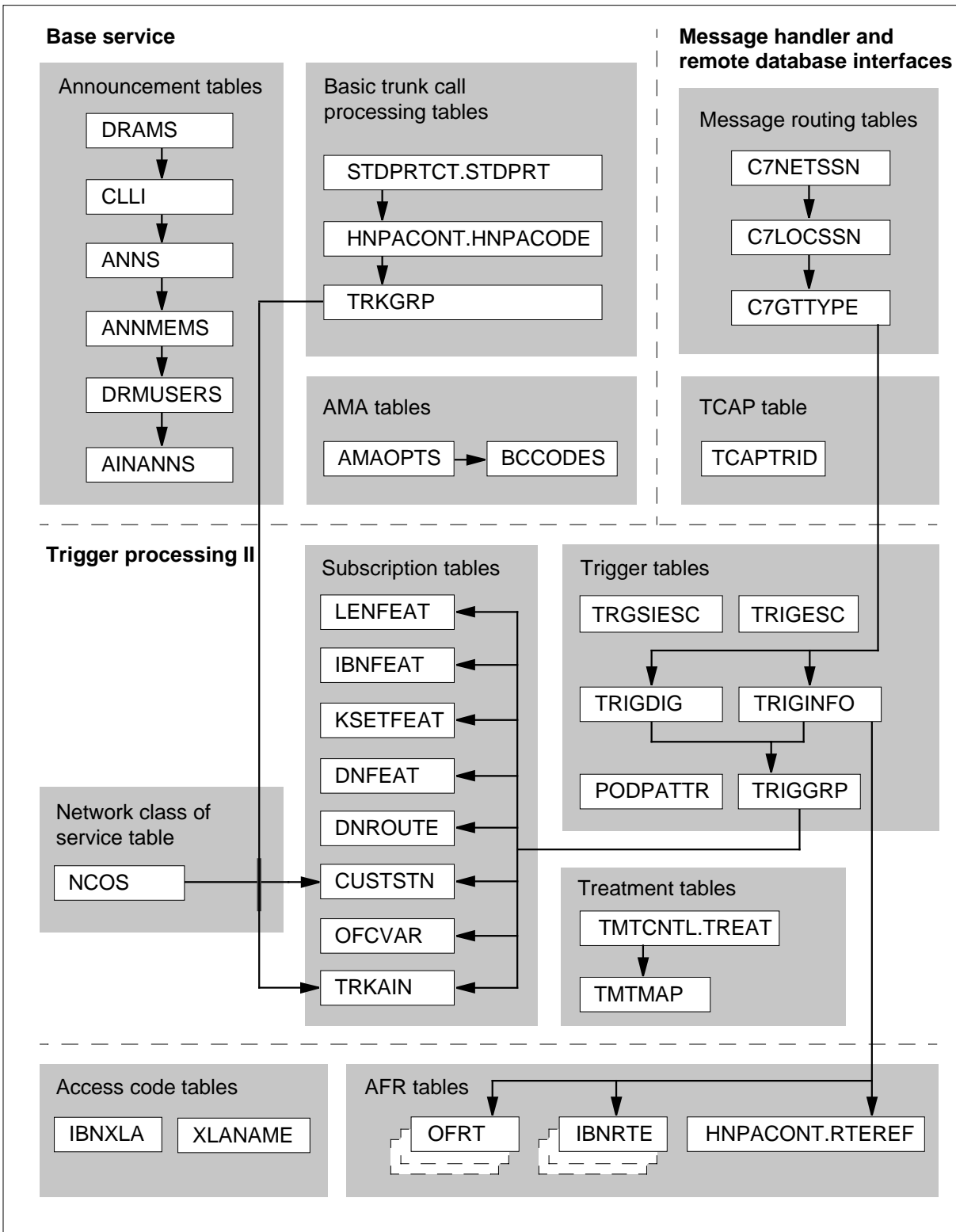
Note 2: Entry of table TCAPTRID must occur before AIN Essentials calls occur.

Note 3: To set up the INTEROFF trigger, entry of the digits must occur in the tables STDPRTCT.STDPRT and TRIGDIG.

Note 4: To set up feature access codes, entry of the trigger must occur in tables CUSTSTN and TRIGGRP. Entry of the feature service must occur in table IBNXLA or XLANAME.

Note 5: Routing characteristic tables like RCNAME, RTECHAR, PXLAMAP, and XLAMAP are for use with AIN Essentials. Changes do not occur to these tables. These tables are an integral part of response processing. Refer to *Advanced Intelligent Network 0.1 Response Translation Guide*, 297-5161-353 for more information on the response translations tables.

Figure 3-8 Datafill hierarchy



Software Optionality Control for AIN Essentials

The AIN Essentials SSP software features group to form units called SOC options. As a group, these SOC options control the activation and deactivation of the software. Each SOC option can be in the ON or IDLE state. The ON state provides feature service and call processing. The IDLE state allows non-call processing parts to function. An example of these parts are data entry. Switch and option specified passwords are required to go to an ON state.

The AIN Essentials has the following SOC options:

- AIN00002 (AIN Essentials) that controls AIN subscription checking and the basic call processing. The SSP cannot generate queries when this SOC option is IDLE.

Note: The AIN Essentials option removes the AIN_ACTIVE tuple from table OFCENG during the first one night process.

- AIN00006 (AIN Call Management) that controls the AIN Essentials call processing. The AIN Essentials option is a requirement for this SOC option.

Note: To activate AIN Essentials SSP call processing, the AIN Essentials and AIN Call Management options must be in the ON state. The above conditions allows triggering at the TDP. This event allows a database query. When the two options are in the IDLE state, the system disables triggering. The system allows entry and tests to occur.

- AIN00007 (AIN Call Model Control) provides enhancements to AIN Essentials. The AIN Call Management option is a requirement for this option.

Note 1: AIN00007 (AIN Call Model Control) is a tracked option. This option does not have states. The system does not enforce dependency on this SOC option.

Note 2: The state of this SOC option does not affect automatic code gapping (ACG) functionality.

- AIN00008 (AIN Display Services) provides the call processing to handle the DisplayText parameter. This action allows the termination of residential (RES) and Meridian digital centrex (MDC) agents. In the SOC ON state, the system allows DisplayText functionality. In the IDLE state, the system disables DisplayText functionality. The AIN Call Model Control option is a requirement for this SOC option.
- AIN00009 (AIN Services Support) provides support for different AIN services that include CallingParty business group identifier (BGID). The system assigns the originating access to a basic business group (BBG) or

multilocation business group (MBG). The originating access is non-ISDN, ISDN interface, or private facility trunk group. The originating access can associate with the caller or a user that forwards the call through a switch-based call forward feature. The system sends the Info_Analyzed message in response to a customized dial plan (CDP) trigger. The AIN Call Model Control option is a requirement for this option.

- AIN00010 (AIN Default Routing) that controls default routing in tables TRIGINFO and TRIGDIG. This SOC option allows calls to continue call processing. The system does not allow calls to route to AIN Final (AINF) treatment. The AIN Call Management option is a requirement for this SOC option.

Note: The AIN Default Routing option is an AIN Service Enablers requirement. This requirement applies to AIN Essentials.

- AIN00011 (AIN SSP Service Enhancement) provides enhanced Centrex services functionality. The AIN Call Model Control option is a requirement for this SOC option.
- AIN00015 (AIN Network Services Enhancements) provides enhanced network services functionality. The AIN Call Model Control option is a requirement for this SOC option.
- AIN00018 (AIN ACB/AR Premium) is available for each office. This option provides Automatic Call Back (ACB) and Automatic Recall (AR) enhanced feature interactions with AIN Essentials services. The AIN Call Model Control option is a requirement for this SOC option.
- AIN00022 (AIN Maintenance Enhancements) provides enhanced maintenance functionality. The AIN Services Supporting option is a requirement for this SOC option.
- AIN00025 (AIN Essentials CPC LNP) provides carrier portability code (CPC) local number portability (LNP) functionality. The AIN Services Supporting option is a requirement for this SOC option.

Datafilling AIN Essentials

The organization of this document occurs by groups of features that you can enter. Not all features affect this document. The AIN Essentials contains features that the SOC option groups.

Note: Feature numbers in the following sections marked with an asterisk * have a Data Schema (DS) section in the feature document.

SOC option AIN00002

This SOC option has the following features:

- AR0450* AINSSP: Rel 0.1
- AR0219* AINSSP Base: Trigger Tables
- AR0231* AIN Recorded Announcements Enhancements
- AR0235* AINSSP: Basic Trunks Trigger Processing II
- AR0238* AINSSP: AIN AMA
- AR0242 AINSSP: AIN OM
- AR0229* AINSSP Base: Trigger Processing II
- AR0449 AINSSP Base: AIN TRAVER
- AR0226 AINSSP: Message Encoder/Decoder I
- AR0227* AINSSP Base: Message Handler Application Interface
- AD4443* RDB Enhancements for Conversational Messaging
- AR0374 AINSSP: Message Encoder/Decoder II
- AR0223 AINSSP: AIN Line Call Processing to Support Orig/Term Triggers
- AR0228 AINSSP: Feature Interactions with AIN Basic Call Model - I
- AD4446 Generic RDB Interface Package
- AD4600* CCITT TCAP Enhancements
- AR0521 TCAP Over Ethernet
- AR0239 AINSSP Tool: Test Queries I (refer to *Advanced Intelligent Network 0.1 Complete Maintenance Guide*, 297-5161-510)

SOC option AIN00006

This SOC option has the following features:

- AR0943 AINSSP: AIN/Call Forwarding Enhancements
- AG3289* AINSSP: Trigger Tables Enhancement
- AG3291 AINSSP: AIN and CFU Interworking
- AG3294* AIN 0.1: Enhanced TR Compliance - II
- AG3296 AINSSP: SCP Control of Answer Supervision
- AN1065 AINSSP: Agent I/W to Term Call Model (refers to AR0940)
- AN1066 AINSSP: Enhanced TR Compliance - II (refers to AG3294)
- AR0940 AINSSP: Agent I/W to Term Call Model

- AG4550 AINSSP: AIN Software Optionality Control Phase 2
- AR1502 AINSSP: AIN Software Restructure (CCM) (ETSI INAP)
- AR1633 AINSSP: AIN Software Restructure - CNA (refers to AR1502)
- AR1634 AINSSP: AIN Call Processing SHR Changes (refers to AR1502 and AR1535)
- AR1501* AINSSP: AIN Response Translations Enhancements (new table PODPATR) (refers to AN1797 in SOC option LOC00005)

SOC option AIN00007

This SOC option has the following features:

- AG3290 AINSSP: ACG and SOCC (refer to *Advanced Intelligent Network 0.1 Complete Maintenance Guide*)
- AG3293* AINSSP: Call Processing for ATC trunks
- AG3295 AINSSP: CCM BRI I/W to Term Call Model
- AG4163* AIN SOC Phase 1
- AG4164* AIN Enhanced Trigger-Related Data Operation
- AG4167 AIN SOC Phase 1 (refers to AG4163)
- AG4168 AINSSP: AIN Enhanced Trigger-Related Data Operations (refers to AG4164)
- AJ3999 AINSSP: TRK-FGD Interworking
- AR0387* AINSSP: PODP Feature Code Trigger for RES Agents
- AR0420* AINSSP: AIN and E800 I/W
- AR0423 AINSSP: Agent I/W to Term Call Model II
- AR1325 AINSSP: AIN Support of 15-Digit IDDD
- AR1241 AINTRACE Debugging Facility (refer to *Advanced Intelligent Network 0.1 Complete Maintenance Guide*)
- AR1276* AIN Trunk Group Subscription Enhancements
- AR1390 AINSSP: AIN Support for T-Selector
- AR1612 AINSSP: ACG and SOCC (refers to AG3290)
- AR1507 AINSSP: AIN 0.1 GAME Enhancements (SHR) (refers to AR1613)
- AR1636 AINSSP: Interactions with AUTH & ACCT Codes
- AR1637* AINSSP: AIN 0.1 Interworking with 0.0

- AR1682 AINSSP: AIN 0.1 Interworking with AIN 0.0 (CNA) (refers to AR1637)
- AR1648 AINSSP: Interactions with MADN Features
- AR1649 AINSSP: Interactions with DISA/Reset Dialing
- AR1651 AINSSP: VAPN Agent I/W to TERMATT
- AR1630 AINSSP: Update Request for Trigger Act/Deact
- AR1647 AINSSP: AIN E800 I/W (refers to AR0420)
- AR0812 AINSSP: Call Processing for Coin Line (Phase I)
- AR1438* AINSSP: Send Termination Notification
- AR1441 AINSSP: WATS Line Interworking to AIN - Phase 1
- AR1443 AINSSP: BRI Interworking to AIN
- AR1641 AINSSP: Interactions with Display Features
- AR1642 AINSSP: Feature Interactions I
- AR1644 AINSSP: Interactions with VFG Features
- AR1650 AINSSP: Feature Interactions II
- AR1657 AINSSP: Party Lines (2/4FR) Interworking to AIN - Phase 1
- AR1659 AINSSP: Trunk Agent Support for SHR Changes

SOC option AIN00008

This SOC option has the following features:

- AJ4008 AINSSP: DisplayText for MDC Agents (CNA)
- AR1440 AINSSP: DisplayText for RES (CCM)
- AR1535 AINSSP: DisplayText for RES - CNA Portion (refer to *Advanced Intelligent Network 0.1 Complete Maintenance Guide*)

SOC option AIN00009

This SOC option has the following features:

- AJ4005 AINSSP: Calling Party BGID
- AR1700 AINSSP: AIN 0.1 Interworking with 0.0 (Phase 2)
- AN1751 AINSSP: Post-VFG PODP Subscription & Triggering
- AR1781 AINSSP: 0.1 Interworking 0.0 (Phase 2) - CNA (refers to AR1700)
- AR1785 AINSSP: AIN Feature Interactions
- AR1790 AINSSP: BRI Agent Development

- AR1791* AINSSP: Trunk Agent Development 1
- AR1792 AINSSP: Trunk Agent Development 2
- AR1794 AINSSP: Trunk Agent Development Shared (refers to AR1792)
- AR1807 AINSSP: Trunk Agent Development 1 (CNA) (refers to AR1791)
- AR1808 AINSSP: Trunk Agent Development 2 (CNA) (refers to AR1792)
- AR1809 AINSSP: DATA/PDATA Line Agent Development

SOC option AIN00010

This SOC option has the following feature:

- AR1061* Default Routing for Ameritech

SOC option AIN00011

This SOC option has the following AIN Centrex Services I features:

- AQ1474* AIN 0.1 SMDR Interworking
- AR1640 AINSSP: Feature Interactions III
- AR1646 AINSSP: Interactions with Call Park/Call Pickup

SOC option AIN00015

This SOC option has the following features:

- AR1786* AINSSP: DISA Interactions with AIN Originating Triggers
- AR1645 AINSSP: Interactions with ADSI Features
- AR1687* AINSSP: STR to Standard Announcements
- AR1691 AINSSP: AIN PODP Response Processing Enhancements

SOC option AIN00018

This SOC option has the following feature:

- AR1638 AINSSP: Interactions with ACB/AR

SOC option AIN00022

This SOC option has the following features:

- AR1503 AINSSP: AIN Tools Enhancements (refer to *Advanced Intelligent Network 0.1 Complete Maintenance Guide*, 297-5161-510)
- AR1780 AINSSP: AINTRACE Tool Enhancements (refer to *Advanced Intelligent Network 0.1 Complete Maintenance Guide*, 297-5161-510) (refers to AR1503)

SOC option AIN00025

This SOC option has the following features:

- AR2030 AINSSP: CPC LNP Support
- AF6326* AINSSP: CPC LNP Support

4 How to enter data in AIN Essentials Base Service

The chapter describes the datafill implementation of the AIN Essentials Base Service requires. The chapter supports all AIN applications.

Datafill procedures for the following capabilities are in the module:

- AIN Essentials AMA
- Basic Trunk Call Processing
- Recorded Announcements Enhancements

AIN Essentials AMA

Ordering codes

SOC option: AIN00002

Release applicability

NA008 and later versions

Requirements

The AIN Essentials AMA does not have requirements.

Description

During AIN call processing, the service switching point (SSP) produces Bellcore Automatic Message Accounting format (BAF) records. The SCP database and switch-based translations specify the production of these records. A Response message can contain an AMA Service Logic Program Identification (AMAslpID) parameter. The presence of this parameter can override switch-based AMA and invoke AIN AMA recording. Switch-based AMA data, like Call Type and Service Feature Code, are part of the AIN Essentials AMA structure.

The SCP database and AMA information provide AMA information. The information encountered during SSP translations can append to the base AMA structure through module codes. If the SCP database Response message does not contain an AMAslpID parameter, normal switch-based AMA recording applies to the call.

This feature defines the following two structure codes for AIN Essentials:

- AIN Call Completion structure code 0220
- AIN Call Termination structure code 0221

This feature defines the following four module codes for AIN Essentials:

- Translation Settable module code 030
- Service Logic Program Identification module code 039
- Digits module code 040
- Account Code module code 103

AIN Essentials AMA (continued)

This feature changes the following module code:

- Line Number module code 307

This feature defines the following call code and service feature code (SFC) for AIN Essentials:

- call type 047
- service feature code 027

This feature requires extension blocks from the pools CRS_PRU_POOL2_SIZE, CRS_SUBRU_POOL1_SIZE and CRS_SUBRU_POOL2_SIZE. See "Datafilling office parameters" in this feature description.

The AIN 0.1 introduces the following call codes. The system routes these codes to FGC/OTC carriers ACTID AQ1590 in NA008:

- call code 006, operator telephone company (OTC)
- call code 110, feature group C (FGC)

The EAEO or AT routes calls to a querying switch over a feature group D carrier. These calls redirect the call to an FGC or OTC carrier. These calls are modified to accept AMA billing. To make sure the EAEO or AT generates the appropriate billing records, ACTID AQ1590 introduces the following billing behavior:

- When the service control point (SCP) returns an AMA service logic program identification (AMAslpID) parameter, the SSP initiates AIN AMA processing. A EAEO or AT can originate a query and route a call to an inter-exchange carrier (IEC). The EAEO or AT that performs these actions generates an AMA record with call code 110 and structure code 220 (AIN). When a local exchange carrier (OTC carrier) routes the call, the EAEO or AT generates an AMA record with call code 006. The SCP returns billing related parameters in the response. These parameters append to the AMA record through the appropriate module code.
- When the AIN Essentials response does not contain an AMAslpID parameter, the SCP initiates switch-based AMA processing. The EAEO or AT generates an AMA record with call code 110 (FGC) and structure code 625. The EAEO or AT can generate an AMA record with call code 006 (OTC) and structure code 500.

AIN Essentials AMA (continued)

Limits

The following limits apply to AIN Essentials AMA:

- This feature does not provide MDR module code 105.
- Some switch-based features cause a module to append to the AMA record while a feature is active. The SSP generates the AMA record for the call. The system supports a subset of the switch-based features available on the DMS for AIN. The system does not support some features for AIN. For these features, the system cannot generate an AIN AMA record with the module that corresponds.
- The AIN billing and universal billing are not compatible. Universal billing has priority over AIN.
- The SCP routes AIN calls to an operator position. The SCP includes the AMAslpID parameter in the response. These calls do not generate AIN or switch-based AMA records. When the call is an operator assisted (OA) type of call, AMA record generation is overridden. The operator position must generate AMA records. With non-AIN operator assisted calls, the switch-based AMA is overridden.
- The following conditions must be present to enable the function of AIN 0.1. The SCP routes these calls to FGC/OTC carriers (feature AQ1590):
 - pre-query condition
 - the pre-query leg of the call must use an FGD carrier, an inter-toll (IT), cellular (CELL) or access tandem to carrier (ATC) trunk-type
 - the system encounters the public office dialing plan (PODP) 3 to 10 digits, or the shared interoffice trunk (SIT) trigger.

Note: For the SIT trigger, the system does not support international signaling that is flagged by 1NX+XXX(X) digits. An active PODP trigger can affect agents that the system supports.
 - post-query condition
 - the post-query leg of the call uses an FGC carrier (ATC trunk-type) or OTC carrier (IT trunk-type)
 - the post-query leg of the call is a long-distance inter-local access and transport area (LATA) or intraLATA call
 - the response from the SCP is an Analyze_Route message with a carrier identification code CIC in the response

AIN Essentials AMA (continued)

Interactions

For information about AIN Essentials AMA functionality interactions, refer to *Advanced Intelligent Network 0.1 Feature Interactions*, 297-5161-107.

Activation/deactivation by the end user

The AIN Essentials AMA does not require activation or deactivation by the end user.

Billing

The AINSSP: AIN AMA feature implements the following AMA coding:

- AIN Call Completion structure code 0220
- AIN Call Termination structure code 0221
- AIN Default call code 047
- AIN Default Service feature code 027
- Translations Settable module code 030
- Service Logic Program Identification module code 039
- Digits module code 040
- Account Code module code 103
- Module code 307

The AIN AMA record uses fields. The names of these fields and the number of characters allowed for each field appear in the following table.

Basic AIN AMA record fields (Sheet 1 of 2)

Field name	Number of characters
Hexadecimal identifier	2
Structure code	6
Call code (call type)	4
Sensor type	4
Sensor identification	8
Recording office type	4
Recording office identification	8
Date of answer	6

AIN Essentials AMA (continued)

Basic AIN AMA record fields (Sheet 2 of 2)

Field name	Number of characters
Timing indicator	6
Study indicator	8
Completion indicator	4
Operator action	2
Service feature	4
Originating NPA	4
Originating number	8
Terminating overseas indicator	2
Terminating NPA	6
Terminating number	8
Connect time	8
Elapsed time	10
Service logic program identification	10

Structure codes

The AIN AMA records produce structure codes. The TDP encountered and the component in the response message determine which structure codes the records must produce. The AIN Essentials AMA introduces two structure codes. The codes are structure codes 0220 and 0221.

Structure code 0220

The AIN AMA records produce structure code 0220 for an AIN call. The records produce this code when the response message for the following TDP includes the AMAslpID parameter. The TDP appear in the following list:

- Origination Attempt
- Information Collected
- Information Analyzed
- Network Busy

The AIN AMA records can also produce structure code 0220 for the Termination Attempt TDP. The records produce this code if the response

AIN Essentials AMA (continued)

message contains a Forward_Call part. An example of an AMA record with structure code 0220 appears in the following example.

AMA record example that uses structure code 0220

```
*HEXID:AA STRUCTURE CODE:40220C CALL CODE:047C SENSOR
TYPE:036C SENSOR ID:0001435C REC OFFICE TYPE:036 REC
OFFICE ID:0001435C DATE:20527C TIMING IND:00000C STUDY
IND:0000000C COMPLETION IND:001C OPER ACTION:0C SERVICE
FEATURE:027C ORIG NPA:613C ORIG NUMBER:6211234C OVERSEAS
IND:1C TERM NPA:00613C TERM NUMBER:5555009C CONNECT
TIME:1030085C ELAPSED TIME:000000345C SLP ID:0012345678C
MODULE CODE:030C CONTEXT ID:001C TRANS SETTABLE:006C
MODULE CODE:030C CONTEXT ID:002C TRANS SETTABLE:000C
MODULE CODE:000C
```

Structure code 0221

The AIN AMA records generate structure code 0221. The records generate this code under two conditions. The first condition is that the response message for the Termination Attempt TDP contains an AMAsplID parameter. The second condition is that the response message does not contain the FORWARD_Call component. An example of an AMA record with structure code 0221 appears in the following figure.

AMA record example that uses structure code 0221

```
*HEXID:AA STRUCTURE CODE:40221C CALL CODE:047C SENSOR
TYPE:036C SENSOR ID:0001435C REC OFFICE TYPE:036 REC
OFFICE ID:0001435C DATE:20527C TIMING IND:00000C STUDY
IND:0000000C COMPLETION IND:001C SERVICE FEATURE:027C
TERM NPA:00613C TERM NUMBER:5555009C CONNECT
TIME:1030085C ELAPSED TIME:000000345C SLP ID:0012345678C
MODULE CODE:030C CONTEXT ID:001C TRANS SETTABLE:006C
MODULE CODE:030C CONTEXT ID:002C TRANS SETTABLE:000C
MODULE CODE:000C
```

Call codes and feature codes

The AIN Essentials AMA implements a default call code that the base structure records when the system cannot determine a switch-based call code. The service feature code specifies the type of telephone the originator uses.

Call code 047 and service feature code 027

The system uses AIN Default Call code 047 and Service Feature code 027 in structure code 0220 or 0221. The system uses these codes when the system

AIN Essentials AMA (continued)

cannot determine the SCP value. Translation Settable module code 030 records the Call code and Service Feature code. This code is supplied in the BillingIndicator parameter of the response message. The Call code and Service Feature modules do not record the code. The previous figure is an example of Call code 047 and Service Feature code 027 with structure code 0221.

Module codes

The system determines module codes through call data. The system can determine module codes with three procedures. The first procedure involves the examination of data in the primary recording unit (PRU). In the second procedure, product specified data in the extended recording unit (XRU) determine the module codes. The third procedure involves the examination of data for the call in relation to the modular recording unit (MRU).

The possible modules that can append to an AIN structure code appear in the following table. The place at which the system determines the modules also appear.

Note: Module codes appear on a record at different times.

AIN appended modules (Sheet 1 of 2)

Module code	Module name	Determination procedure
020	Carrier access (terminating)	not possible
021	Carrier access (originating)	XRU
022	Long duration	base
023	WATS	XRU
024	PSDS	XRU
025	Circuit seizure	base
027	Business customer ID	XRU
029	Alternate billing number	XRU
030	Translation settable	XRU and MRU
039	Service logic program ID	MRU
040	Digits	MRU
070	ISDN core	XRU

AIN Essentials AMA (continued)**AIN appended modules (Sheet 2 of 2)**

Module code	Module name	Determination procedure
071	ISDN core (abv)	XRU
102	Authorization code	MRU
103	Account code	MRU
104	Trunk network number	MRU
105	MDR	not supported
307	Line number	MRU

Module code 030

Translation Settable module code 030 records the Call code or Service Feature code that the SCP returns. This module code can record the message billing index (MBI) information the system encounters in SSP translations. Module code 030 can appear a maximum of three times in the same AMA record. Module code 030 consists of fields Module code, Context ID and Translation settable.

The Context ID field can contain the following codes:

- 001 Call type code
- 002 Service feature code
- 003 Message billing indicator (MBI)

Module code 039

Service Logic Program Identification module code 039 records the SLP ID that the SCP includes in the Response message. The module code records the first SLP ID sent from SCP in the base AIN in structure codes 0220 or 0221. The module code records additional SPL ID in the SLP ID module code 039. Module code 039 can appear a maximum of five times in the same AMA record. An example of an AMA record with module code 039 appears in the following figure.

AIN Essentials AMA (continued)

AMA record example using module code 039

```
*HEXID:AA STRUCTURE CODE:40220C CALL CODE:047C SENSOR
TYPE:036C SENSOR ID:0001435C REC OFFICE TYPE:036 REC
OFFICE ID:0001435C DATE:20527C TIMING IND:00000C STUDY
IND:0000000C COMPLETION IND:001C OPER ACTION:0C SERVICE
FEATURE:027C ORIG NPA:613C ORIG NUMBER:6211234C OVERSEAS
IND:1C TERM NPA:00613C TERM NUMBER:5555009C CONNECT
TIME:1030085C ELAPSED TIME:000000345C SLP ID:0012345678C
MODULE CODE:039C SLP ID:0012345679C MODULE CODE:030C
CONTEXT ID:001C TRANS SETTABLE:006C MODULE CODE:030C
CONTEXT ID:002C TRANS SETTABLE:000C MODULE CODE:000C
```

Module code 040

Digits module code 040 records AMA digits that the SCP returns. The module code records the AMA parameter AMADigitsDialedWC in this module. Module code 040 can appear a maximum of six times in the same AMA record. An example of an AMA record with module code 040 appears in the following figure.

AMA record example using module code 040

```
*HEXID:AA STRUCTURE CODE:40220C CALL CODE:047C SENSOR
TYPE:036C SENSOR ID:0001435C REC OFFICE TYPE:036 REC
OFFICE ID:0001435C DATE:20527C TIMING IND:00000C STUDY
IND:0000000C COMPLETION IND:001C OPER ACTION:0C SERVICE
FEATURE:027C ORIG NPA:613C ORIG NUMBER:6211234C OVERSEAS
IND:1C TERM NPA:00613C TERM NUMBER:5555009C CONNECT
TIME:1030085C ELAPSED TIME:000000345C SLP ID:0012345678C
MODULE CODE:040C DIGITS ID:005C SIG DIGITS NEXT FIELD:010C
DIGITS DIALED1:061362111111C DIGITS DIALED2:FFFFFFFFFFFFFFC
MODULE CODE:030C CONTEXT ID:001C TRANS SETTABLE:006C
MODULE CODE:030C CONTEXT ID:002C TRANS SETTABLE:000C
MODULE CODE:000C
```

The Digits ID field can contain the following codes:

- 000 not used
- 001 Authorization code
- 002 Account code
- 003 Access code
- 004 Digits dialed
- 005 Outpulse number

AIN Essentials AMA (continued)

Module code 040 uses fields. The names of these fields, and the number of characters that each field can contain, appear in the following table.

Module code 040 record fields

Field name	Number of characters
Digits identifier	4
Significant digits next field	4
Digits dialed 1	12
Digits dialed 2	14

The Analyze_Route or Forward_Call response can route a call to a DN selector. This response causes the SSP to generate a structure code 220 AMA record. The Terminating NPA and Terminating Number are populated from the CalledPartyID if this ID routes calls. When an OutpulseNumber is in use, the Terminating NPA and Terminating Number contains zeros. Appended module 040 receives data through the OutpulseNumber.

Module code 102

Authorization Code/CDAR module code 102 records account codes that a switch-based feature uses. In the past, the first character of the Structure code field indicated that Customer Dialed Account Recording (CDAR) information appended to the record. Currently, module code 102 appends to the base structure and the structure code field is not marked. An example of an AMA record with module code 102 appears in the following figure.

AMA record example using module code 102

```
*HEXID:AA STRUCTURE CODE:40220C CALL CODE:047C SENSOR
TYPE:036C SENSOR ID:0001435C REC OFFICE TYPE:036 REC
OFFICE ID:0001435C DATE:20527C TIMING IND:00000C STUDY
IND:0000000C COMPLETION IND:001C OPER ACTION:0C SERVICE
FEATURE:027C ORIG NPA:613C ORIG NUMBER:6211234C OVERSEAS
IND:1C TERM NPA:00613C TERM NUMBER:5555009C CONNECT
TIME:1030085C ELAPSED TIME:000000345C SLP ID:0012345678C
MODULE CODE:103C SIG DIGITS NEXT FIELD:005C CDAR
NUMBER:000000000012345C MODULE CODE:030C CONTEXT
ID:001C TRANS SETTABLE:006C MODULE CODE:030C CONTEXT
ID:002C TRANS SETTABLE:000C MODULE CODE:027C BUSINESS
CUSTOMER ID:06136215509C MODULE CODE:000C
```

AIN Essentials AMA (continued)

Module code 103

Account Code/CDAR module code 103 records account codes that a switch-based feature collects. In the past, the first character of the Structure code field indicated that Customer Dialed Account Recording (CDAR) information appended to the record. Currently, module code 103 appends to the base structure and the structure code field is not marked. An example of an AMA record with module code 103 appears in the following example.

AMA record example using module code 103

```
*HEXID:AA STRUCTURE CODE:40220C CALL CODE:047C SENSOR
TYPE:036C SENSOR ID:0001435C REC OFFICE TYPE:036 REC
OFFICE ID:0001435C DATE:20527C TIMING IND:00000C STUDY
IND:0000000C COMPLETION IND:001C OPER ACTION:0C SERVICE
FEATURE:027C ORIG NPA:613C ORIG NUMBER:6211234C OVERSEAS
IND:1C TERM NPA:00613C TERM NUMBER:5555009C CONNECT
TIME:1030085C ELAPSED TIME:000000345C SLP ID:0012345678C
MODULE CODE:103C SIG DIGITS NEXT FIELD:005C CDAR
NUMBER:000000000012345C MODULE CODE:030C CONTEXT
ID:001C TRANS SETTABLE:006C MODULE CODE:030C CONTEXT
ID:002C TRANS SETTABLE:000C MODULE CODE:027C BUSINESS
CUSTOMER ID:06136215509C MODULE CODE:000C
```

Module code 307

The AIN Essentials AMA changes the Line Number module code 307. An example of an AMA record with module code 307 appears in the following example. The following codes apply:

- 001 DA requested
- 002 Intercept number
- 003 Forwarded
- 004 Incoming terminating number
- 005 Calling party ID
- 006 ANI delivered

AIN Essentials AMA (continued)

AMA record example using module code 307

```
*HEXID:AA STRUCTURE CODE:40220C CALL CODE:047C SENSOR
TYPE:036C SENSOR ID:0001435C REC OFFICE TYPE:036 REC
OFFICE ID:0001435C DATE:20527C TIMING IND:00000C STUDY
IND:0000000C COMPLETION IND:001C OPER ACTION:0C SERVICE
FEATURE:027C ORIG NPA:613C ORIG NUMBER:6211234C OVERSEAS
IND:1C TERM NPA:00613C TERM NUMBER:5555009C CONNECT
TIME:1030085C ELAPSED TIME:000000345C SLP ID:0012345678C
MODULE CODE:307C LINE NUMBER TYPE:005C NPA:00613C LINE
NUMBER:6213345C MODULE CODE:030C CONTEXT ID:001C TRANS
SETTABLE:006C MODULE CODE:030C CONTEXT ID:002C TRANS
SETTABLE:000C MODULE CODE:000C
```

Note: For unanswered call recording, data must be entered in tables AMAOPTS and BCCODES correctly.

Station Message Detail Recording

The AIN Essentials AMA does not affect Station Message Detail Recording.

AIN Essentials AMA (continued)

Datafilling office parameters

The office parameters AIN Essentials AMA uses appear in the following table. For additional information about office parameters, refer to *Office Parameters Reference Manual*.

Office parameters by AIN Essentials AMA

Table name	Parameter name	Description
OFCENG	CRS_SUBRU_POOL1_SIZE	The AMA uses this parameter to store data the SCP returns during call processing. For the Billing Indicator parameter, the AMA uses one of the four parameters. The route the call takes determines which parameter the AMA must use. The module code records the first AMASlpID parameter in the CRS_SUBRU_POOL2_SIZE extension block. The five AMASlpID parameters that remain use this extension block. Switch-based MBI calls are recorded here. Correct entries are from 0 to 393216.
OFCENG	CRS_SUBRU_POOL2_SIZE	The AMA uses this parameter to store data the SCP returns during call processing. The first AMASlpID parameter uses this extension block. If received, the module code also records parameters AMABusinessCustomerID and AMAAlternateBillingNumbers here. Correct entries are from 0 to 393216.
OFCENG	CRS_PRU_POOL2_SIZE	The AMA uses this parameter for Bellcore format billable calls. The provisioning must change to allow for calls that become billable because the calls are AIN calls. Correct entries are from 0 to 393216.

AIN Essentials AMA (continued)

Datafill sequence

The tables that require datafill to implement AIN Essentials AMA appear in the following table. The tables appear in the correct entry order.

Datafill requirements for AIN Essentials AMA

Table	Purpose of table
AMAOPTS	This table controls the activation and scheduling of the recording options. This table contains one tuple for every option, and first contains the default values for each option.
BCCODES	This tables defines call type and call codes.

Datafilling table AMAOPTS

Options UNANS_LOCAL, UNANS_TOLL, and UNANS_TOPS in table AMAOPTS provide switch-based unanswered call recording. Option UNANS_AIN provides AIN-specific unanswered call recording. Unanswered calls also include intra-office and inter-office routing termination on:

- BUSY DN
- blank DN (BLDN)
- GNCT through Analyse_Route or Forward_Call response

AIN Essentials AMA (continued)

Datafill for AIN Essentials AMA for table AMAOPTS appear in the following table. Fields that apply directly to AIN Essentials AMA appear in this table. Refer to *Customer Data Schema* for a description of the other fields.

Datafilling table AMAOPTS

Field	Subfield or refinement	Entry	Description
OPTION		alphanumeric	Option. Enter an AMA option value. Enter one of the following values for AIN: ACBAR_MOD_CO, ACBAR_STY_IN, AUDIT, BCLID_USPAUD, BCLONGCALL, CALL_FWD, CALL_TIMECHG, CDAR, CDRDUMP, CDRLONGCALL, CDRSYNC, CHG411, CHG555, CIDSUSPAUD, CMCICWK, CMCORIG, CMCTERM, COIN, CRSEQNUM, DA411, DA555, ENFIA_B_C, FREECALL, HIGHREV, INWATS, ISDNCIRCUIT, LOGAMA, LOGOPT, LOGTEST, LONGCALL, LUSORIG, LUSTERM, OBSERVED, OCCTERM, OUTWATS, OCCOVFL, OVERFLOW, SUSP, TIMECHANGE, TRACER, TWC, UNANS_AIN, UNANS_LOCAL, UNANS_TOLL, UNANNS_TOPS UNANS_AIN is for AIN unanswered call recording.
SCHEDULE	AMASEL	see subfield ON, OFF, DEFAULT, PERIODIC, or TIMED	Schedule. This field contains subfield AMASEL. The AMA selector. This field defines the schedule of the associated option. The default value is OFF.

Datafill example for table AMAOPTS

Sample datafill for table AMAOPTS appears in the following example.

AIN Essentials AMA (continued)**MAP example for table AMAOPTS**

OPTION	SCHEDULE
-----	-----
TIMECHANGE	ON
TWC	ON
UNANS_AIN	ON

Datafilling table BCCODES

For switch-based unanswered call recording, table BCCODES specifies the call types for which unanswered call recording must occur. In table BCCODES, tuples are available for LOCAL, TOLL, TOPS and HIGHREV, and AIN. When a user activates option UNANS_AIN in table AMAOPTS, the unanswered billable AIN calls generate an AMA record. The calls generate an AMA record if the call type is entered in table BCCODES.

Switch-based unanswered call recording must take priority over AIN unanswered call recording. For example, if UNANS_AIN is OFF and UNANS_TOLL is ON, the module code records the unanswered AIN calls. The module code records the calls if the switch-based call type is entered against tuple TOLL in table BCCODES.

AIN Essentials AMA (continued)

Datafill for table BCCODES appears in the following table. The fields that apply to AIN Essentials AMA appear in this table. Refer to *Customer Data Schema* for a description of the other fields.

Datafilling table BCCODES

Field	Subfield or refinement	Entry	Description
CALLTYPE		AIN	Bellcore call type. Enter the call type to be coded. Enter AIN for AIN-specific unanswered call recording. Note: If the UNANS_AIN parameter in table AMAOPTS is ON, this call type has an effect.
CODES		001 to 012, 014 to 019, 021 to 024, 026 to 037, 041 to 045, 047, 054, 055, 057, 058, 063 to 069, 071, 072, 074, 085, 088 to 090, 092, 107, 108, 110, 111, 114, 117, 119 to 121, 131, 132, 134, 135, 136, 141, 142, 159 to 167, 174, 175, 181, 182, 184, 189 to 199, 215, 250, 251, 264, 270 to 282, 330, 332, or 800 to 999	Bellcore call codes. Enter the desired combination of call codes. Code 047 is for AIN default call type.

AIN Essentials AMA (end)

Datafill example for table BCCODES

Sample datafill for table BCCODES appears in the following example.

MAP example for table BCCODES

CALLTYPE	CODES
AIN	(006) (047) (110) (134)\$

Tools for verifying translations

TRAVER

The AIN Essentials AMA does not use tools for verifying translations.

SERVORD

The AIN Essentials AMA does not use SERVORD.

Basic Trunk Call Processing

Ordering codes

The SOC options: AIN00002, AIN00006, AIN00007, and AIN00009

Release applicability

The NA008 and later versions

Requirements

Basic Trunk Call Processing requires the SOC option AIN00006.

Description

Basic Trunk Call Processing aligns DMS basic trunk call processing software with the AIN Essentials basic call models. Basic Trunk Call Processing implements the AIN Essentials trigger detection points (TDP) that apply for trunks.

The Basic Call Model (BCM) describes the processing performed to establish a two-party call. The two-party call appears in the figure on the page that follows. This process is the base for AIN functions. This process is the base for actions between AIN functions and switch features.

Operation

The following sections describe the basic trunk call processing that implements the AIN Essentials trigger detection points.

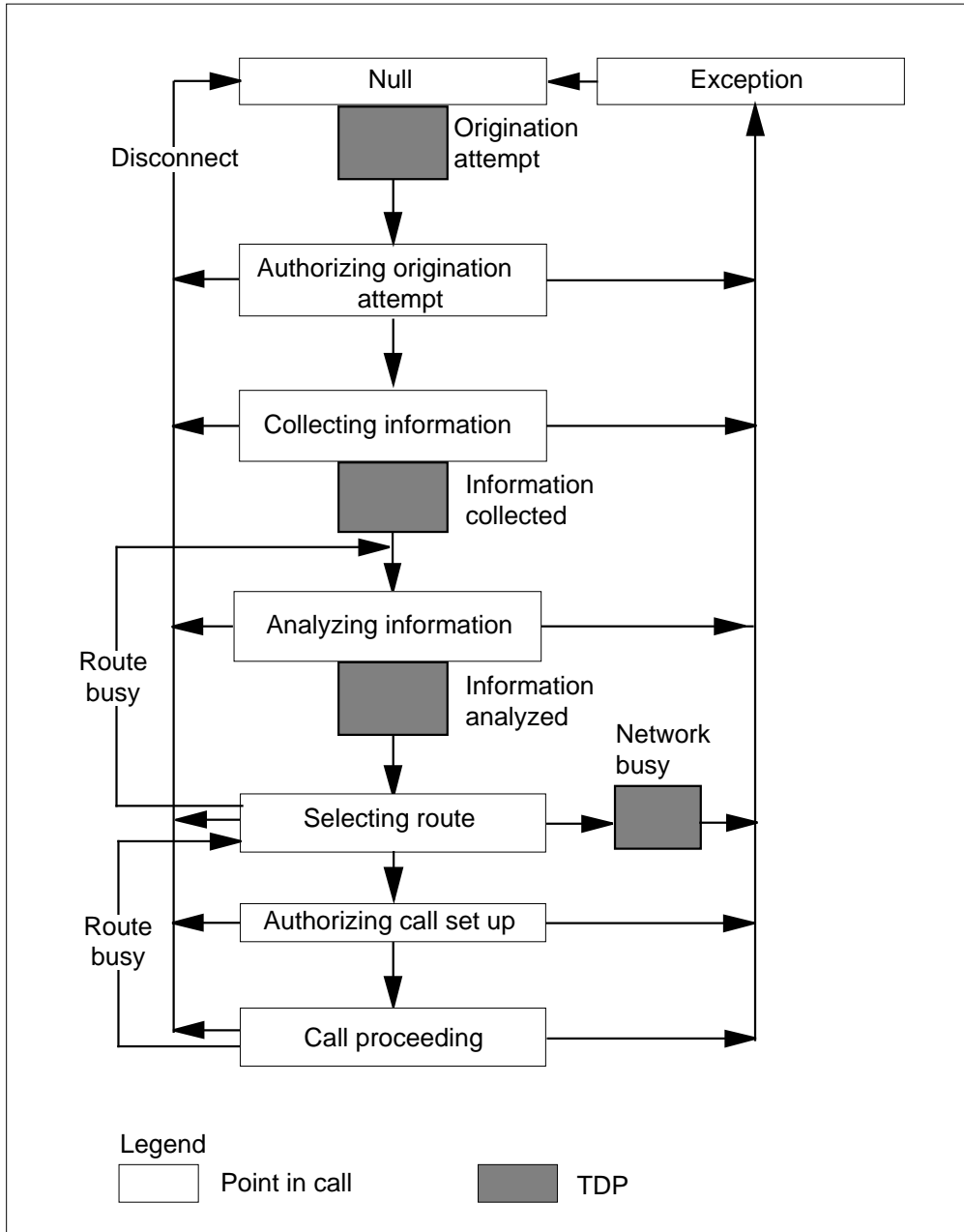
Basic call model

The BCM specifies the stages of the call where the system performs call processing. The BCM specifies the stages of the call where the service switching point (SSP) can suspend the call. The SSP can query a service control point (SCP) database for this call. The originating BCM appears in the figure, "Originating BCM". This figure describes the call processing required to set up a call by the party that originates the call. The terminating BCM appears in figure, "Terminating BCM". This figure describes the processing the party that terminates the call requires to terminate an incoming call.

The originating BCM appears in the following figure. The call processing required to set up a call by the party that originates the call appears in the following figure.

Basic Trunk Call Processing (continued)

Originating BCM

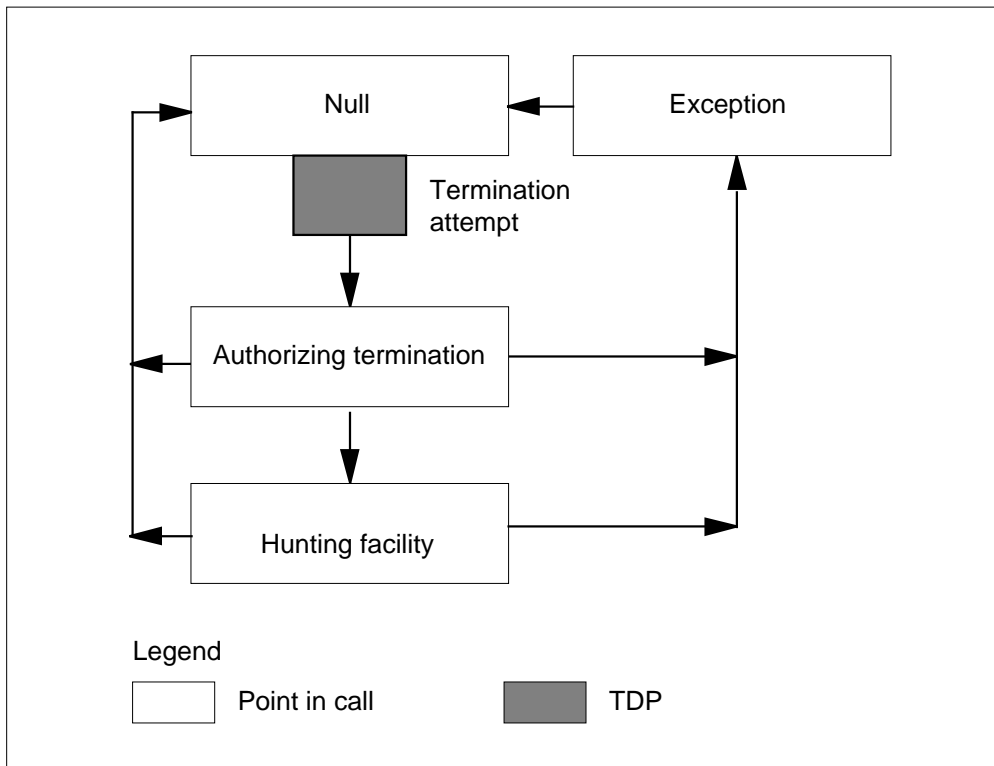


Basic Trunk Call Processing (continued)

The following is a description of the trunk processing that occurs at each point in a call:

- Null - The call is idle. A connection is not present. The switch provides supervision on the trunking facility.
- Authorizing Origination Attempt - The originating trunk verifies the authorization to place a call. This process includes verification of trunk limits. This process resolves any glare conditions.
- Collecting Information - The originating trunk collects first information according to a specified dial plan. The system sends a correct start signal for standard trunks. An attachment of the digit receiver, collection of digits, and application of timing is made. The Initial Address Message (IAM) contains the information available for signaling system 7 (SS7) trunks. A check makes sure that the IAM contains the information required to process the call.
- Analyzing Information - The system translates digits according to the dialing plan. The switch makes calling party ID, type of call, intraLATA, or inter-exchange carrier determinations.
- Selecting Route - The switch attempts to route to the route indices or terminating resource group.
- Authorizing Call Setup - Verification of the authorization of the originating trunk facility to place the call occurs. The verification of business group limits occurs. The switch continues to collect information for normal trunk interfaces where overlap outpulsing occurs.
- Call Proceeding - The switch delivers the call to the terminating resource.

The terminating BCM appears in the following figure. The call processing that the party that terminates the call requires to terminate an incoming call appears in the following figure.

Basic Trunk Call Processing (continued)**Terminating BCM**

The following is a description of the trunk processing that occurs at each point in a call:

- Null - The call is idle and a connection is not present. The switch provides supervision on the trunking facility.
- Authorizing Termination - The system verifies the authorization to terminate the call on the terminating facility.

The shaded squares in the previous figures identify TDP in basic call processing. The system identifies a TDP between point in call. The system indicates when in call processing the database functions can affect call processing. The database functions are SCP or Adjunct.

Call processing can move through a TDP during the change from one point in call to another point in call. Triggering occurs at the TDP. Triggering is the process that identifies the calls that require AIN handling. Individuals, groups, or offices can subscribe to triggers. The trigger datafill requirement is in an active or inactive state.

Basic Trunk Call Processing (continued)

Seven-digit local number translation

The AIN response translation uses a home number plan area (HNPA) selector. This selector is HNPA 1. Field CDRRTMT of table HNPACONT, subtable HNPACODE contains HNPA 1. The AIN response translation uses HNPA 1 to allow ten-digit local number dialing while the outpulsing is seven-digit. This selector strips off the foreign number plan area (FNPA) digits on ten-digit intraoffice calls that terminates on a trunk. This action achieves standard seven-digit outpulsing.

Note: The HNPA 1 selector allows the local NPA calls to complete with a ten-digit dialing design. If you want to block a ten-digit HNPA number, one method is to change table STDPRTCT.STDPRT of the user. This change routes the call to treatment when a subscriber dials the home NPA. Table STDPRTCT.STDPRT requires an entry that corresponds for AIN response translation to allow the call to go through. The system does not root the call to treatment. The following is an example of the table STDPRTCT.STDPRT tuples that you can use for a line that is local to area code 613.

Table STDPRTCT.STDPRT example datafill

Table	Example data					
STDPRTCT. STDPRT	613	613	D	HNPI		
	613	613	N	NP	0	NA

Note: The HNPA 1 is available in SOC option LOC00005.

Trigger detection points

The following are TDPs:

- Information Collected
- Information Analyzed
- Network Busy

Information Collected TDP

The Information Collected TDP is encountered during the change from Collecting Information point in call, to Analyzing Information point in call. The Off-Hook Delay and Shared Interoffice Trunk triggers apply to this TDP.

Information Analyzed TDP

The Information Analyzed TDP is encountered during the change from Analyzing Information point in call, to Selecting Route point in call. The

Basic Trunk Call Processing (continued)

Public Office Dialing Plan 3 to 10, N11, and Customized Dialing Plan triggers apply to this TDP.

Network Busy TDP

The Network Busy TDP is in the Originating BCM after the Selecting Route point in call. This TDP is encountered when each route in a route list is busy. The trigger that applies to this TDP is Automatic Flexible Routing.

Triggers

A trigger occurs when the AIN SSP determines that the AIN SSP must query the SCP database before call processing continues. Triggers occur only at TDPs.

A call triggers when the following conditions occur:

- A TDP is encountered during call processing.
- The call originates on trunk group types that use the following:
 - multifrequency (MF) signaling
 - dial pulse (DP) signaling
 - Digitone (DT) signaling
 - Q.931 protocol that Primary Rate Interface (PRI) uses
 - integrated services digital network (ISDN) User Part (ISUP)
 - Q.764 (protocol that North American ISUP uses)
- Subscription to the trigger is an individual trunk group, customer group or office-wide base.
- The trigger criteria is met (contains CT, ESC, and DG criteria)
- The trigger is active.
- The SOC option is enabled.

Refer to subfield GRPTYP in table TRKGRP.

The following are triggers that can occur:

- Off-Hook Delay
- Shared Interoffice Trunk
- Public Office Dialing Plan 3 to 10
- N11
- Customized Dialing Plan
- Automatic Flexible Routing

Basic Trunk Call Processing (continued)

Off-Hook Delay trigger

Subscription to this trigger is on a trunk group base. The following trunks are the only trunks that subscribe to this trigger:

- IBNTI
- IBNT2
- primary rate access (PRA)

The IBNT1 or IBNT2 and PRA trunks trigger as a result of the Off-Hook Delay trigger.

An example of table datafill for the Off-Hook Delay trigger appears in the following table.

Off-Hook Delay trigger example datafill

Table	Example data
TRKGRP	SS7_IBN_INCOMING IBNTI
TRIGGRP	AINGRP1 INFOCOL (OFFHKDEL (ESC)\$ INFOIDX) \$
TRIGINFO	INFOIDX INTEROFF 088110 EVENT TCAP R01 SS7 GTT DFLT\$
TRKAIN	SS7_IBN_INCOMING AINGRP1 \$
TRIGESC	411

Shared Interoffice Trunk trigger

This trigger only allows public facility trunk groups to subscribe to this trigger. The intertoll trunks are the only type of trunk to subscribe to this trigger. The intertoll trunks trigger as a result of the Shared Interoffice Trunk trigger. The only correct trunk signaling types for this trigger are EAMF and ISUP with TR-317 compliant signaling. The only valid criteria for this trigger are digits dialed, call type and escape criteria. This trigger requires digits dialed. Call type and escape requirements are optional for this trigger.

The SSP uses the XXX information in the transit network selection (TNS) for SS7 facilities. The SSP uses this information to determine the requirement of SSP processing that uses the 110 code. The TNS parameter is in the ISUP IAM. The OZZ information determines if AIN Essentials processing is a requirement. The OZZ information is not in the IAM. The IAM contains only the circuit digit. Table CKTDIGIT converts the circuit digit back to the OZZ code.

Basic Trunk Call Processing (continued)

The routing selector SSP in subtable STDPRT identifies the SSP processing requirement. The trunk facility receives the 0ZZ-110 digits with the SSP selector to indicate the route to the SSP. Triggering occurs if the digit criteria matches the 0ZZ-XXX digits received over the trunk with the digit information in table TRIGDIG (Trigger Digits).

An example of table datafill for the Shared Interoffice Trunk trigger appears in the following table. The entry in subtable STDPRT, 088 represents the 0ZZ digits. These digits indicate AIN Essentials processing. The entry 110 indicates SSP processing. The digit sequence in table TRGSIESC escapes the Shared Interoffice Trunk trigger. The called number uses this digit sequence.

Shared Interoffice Trunk trigger example datafill

Table	Example data
STDPRTCT. STDPRT	088110 088110 SSP DD 6 6 NA
TRKGRP	SS7_IT_INCOMING IT
TRIGGRP	AINGRP1 INFOCOL (INTEROFF (DG TKOZZXXX) (ESC) \$ NIL
TRIGDIG	TKOZZXXX INTEROFF 088110 INTEROFF EVENT TCAP R01 SS7 GTT DFLT
TRKAIN	SS7_IT_INCOMING AINGRP1 \$
TRGSIESC	888375

Public Office Dialing Plan 3 to 10 trigger

The Public Office Dialing Plan 3 to 10 is an office wide trigger. When active, this trigger affects each supporting trunking agent. An example of table datafill for this trigger appears in the following table.

Public Office Dialing Plan 3 to 10 trigger example datafill

Table	Example data
OFCVAR	AIN_OFFICE_TRIGGRP AINGRP1
TRIGGRP	AINGRP1 INFOANAL (PODP (DG DIGNXX) \$ NIL \$
TRIGDIG	DIGNXX PODP 621 PODP EVENT TCAP R01 SS7 SS7 GTT DFLT\$

Basic Trunk Call Processing (continued)

N11 trigger

The N11 is an office wide trigger. If active, this trigger affects each supporting trunking agent. An example of table datafill for the N11 trigger appears in the following table.

N11 trigger example datafill

Table	Example data
OFCVAR	AIN_OFFICE_TRIGGRP AINGRP1
TRIGGRP	AINGRP1 INFOANAL (N11 (DG DIGN11) \$ NIL \$
TRIGDIG	DIGN11 N11 911 N11 EVENT TCAP R01 SS7 GTT DFLT\$

Customized Dialing Plan trigger

The system assigns this trigger to trunk group types IBNTI and IBNT2. Trunks IBNTI and IBNT2 must belong to a customer group with a customized dialing plan. This trigger supports PRI with call type private. The triggering criteria occurs when the user dials an access code, extension number or SCP vertical service code (VSC) in a customer group. The correct criteria types for this trigger are call type and digits dialed.

An example of table datafill for the Customized Dialing Plan trigger appears in the following table.

Customized Dialing Plan trigger example datafill

Table	Example data
IBNFEAT	HOST 02 0 00 01 0 AIN AIN AINGRP1
TRIGGRP	AINGRP1 INFOANAL (PODPFEAT (DG PODPFDIG) \$ NIL \$
TRIGDIG	PODPFDIG PODPFEAT 7B23 PODPFEAT EVENT TCAP R01 SS7 AINJAZZ DFLT \$

Automatic Flexible Routing trigger

This trigger is the last entry in the Automatic Route Select (ARS) pattern. The trigger occurs if the previous routes in the ARS pattern are not available. The correct criteria type is call type.

Note: Subscription to the AFR trigger is for each trunk group.

Basic Trunk Call Processing (continued)

An example of table datafill for the AFR trigger appears in the following table.

AFR trigger example datafill

Table	Example data
OFCVAR	AIN_OFFICE_TRIGGER AINGRP1
TRIGGRP	AINGRP1 NETBUSY (AFR \$ NIL) \$
OFRT	29 (S D TRUNK_OUTGOING) (AFR INFOIDX)\$
TRIGINFO	INFOIDX EVENT TCAP R01 SS7 GTT DFLT\$

Translations table flow

The Basic Trunk Call Processing translation process appears in the following flowchart. The flowchart and the following information describe the tables that affect this feature.

Table TRKGRP specifies the name of the STDPRT to analyze the leading digits dialed. Table TRIGGRP must contain a definition of the trigger group before the trigger group is referenced in table TRKGRP.

Table STDPRTCT lists the name of the standard pretranslator subtable assigned to a line or a trunk.

Subtable STDPRT is the first table in translations the received leading digits dialed from a line or trunk index. The line attribute or table TRKGRP specifies the name of a pretranslator if other than a no pretranslator (NPRT). A value for the Pretranslator Route Selector (PRERTSEL) field indicates if SSP processing must occur.

Table TRKAIN allows assignment of AIN to a trunk group. Field AINGRP specifies the AIN group name in table TRIGGRP.

Table HNPACONT allows access to the HNPACONT code subtables.

Subtable HNPACODE lists the route, treatment, or table the translation routes to. This process occurs for each of the 1000 three-digit codes (000 to 999). The serving number plan areas (SNPA) or serving translation scheme (STS) assigned in table HNPACONT contain these three-digit codes.

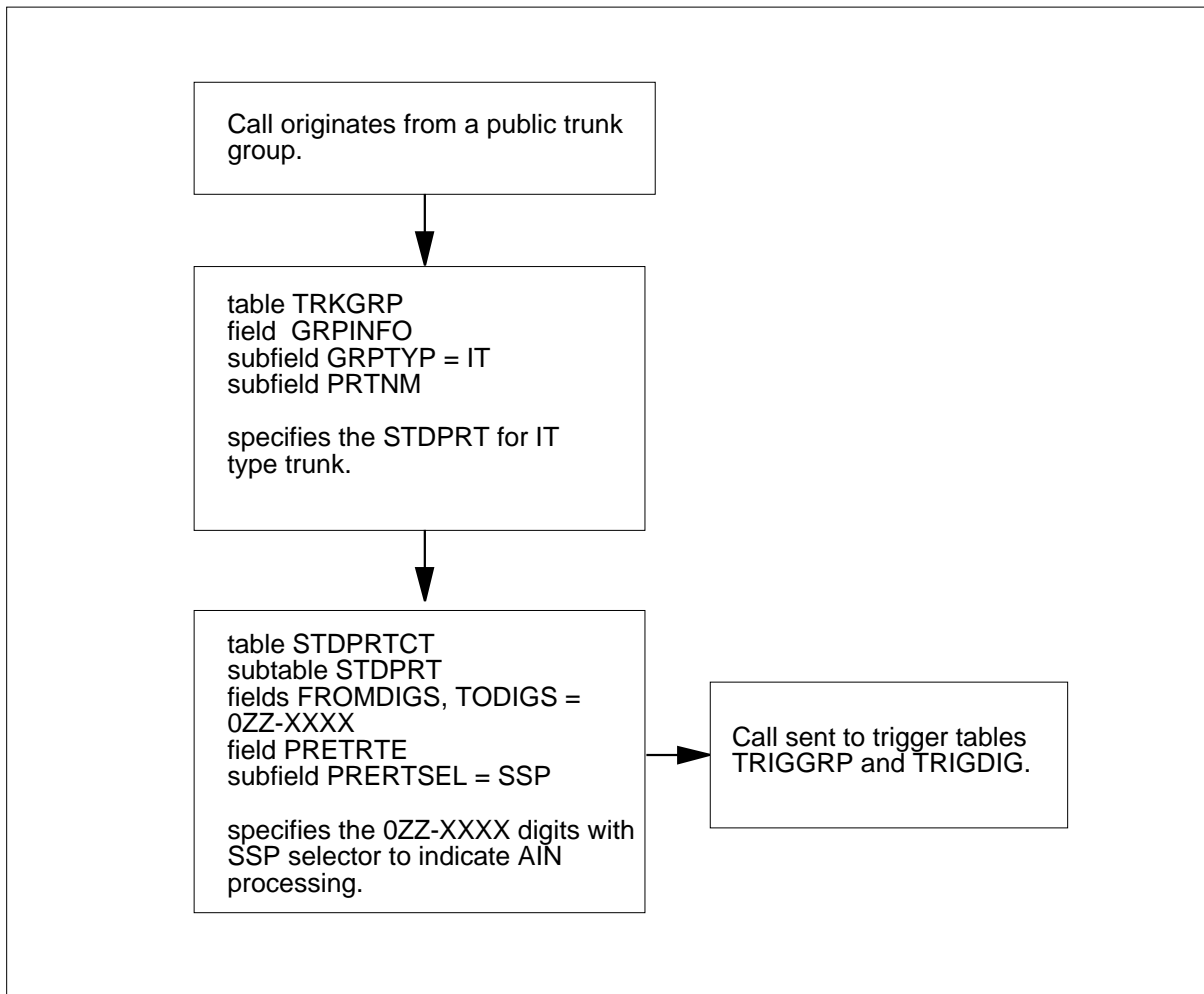
The subtable is initialized with each of the three-digit codes that the system routes to a vacant code.

Basic Trunk Call Processing (continued)

Each of the three-digit codes can expand to ten digits or more, if the incoming call equipment can send that many digits. The number of leading digits that field NOPREDIG in subtable STDPRTCT.STDPRT defines as prefix digits are stripped from a digit string. This digit string indexes to subtable HNPACONT.HNPACODE.

Note: If the use of four digit carrier codes allow conversion to the office, the incoming digits are in the 0ZZ-XXXX. The XXXX digits must be coded to 0110 to encounter the Shared Interoffice Trunk trigger.

Table flow for Basic Trunk Call Processing



Note: This flowchart is an example for INTEROFF. This flowchart does not apply to the N11, PODP or CDP triggers.

Basic Trunk Call Processing (continued)

The datafill content in the flowchart appears in the following tables.

Sample data for Basic Trunk Call Processing

Item	Example data
0880110	Represents the OZZ digits the system receives over a trunk group

Datafill example for Basic Trunk Call Processing

Datafill table	Example data
TRKGRP	LINETRIGGRP IT 0 TLD NCIT 2W IT MIDL 919 AIN1 NSCR 919 001 Y N \$
STDPRTCT. STDPRT	0880110 0880110 SSP DD 6 6 NA

Limits

The following limits apply to Basic Trunk Call Processing:

- Every public facility trunk group subscribes to the Shared Interoffice Trunk trigger. This trigger triggers only the intertoll trunk groups.
- The Shared Interoffice Trunk trigger identifies a call that requires AIN processing by the OZZ-XXXX digits received over the trunking facility. The system does not support identification that the call requires AIN processing by the ANI-II information.
- The Shared Interoffice Trunk trigger and NSC E800 can use the same OZZ pattern. When the trigger and NSC E800 use the same pattern, and not carrier, the system needs to escape the trigger. Shared Interoffice Trunk and E800 use the same carrier 0110. The Shared Interoffice Trunk and E800 can have a different OZZ pattern. Enter 800NXX in table TRGSIESC. Make sure NSC selector is in table HNPACONT.HNPACODE. The tuple entry is 800 800 NSC E800.
- The system does not support the identification based on the called digits the system receives in signaling.
- For table TRKAIN, entries that use the Automatic Time and Charges (ATC) trunk group type, the system does not support outgoing ATC trunks for AIN. When an outgoing trunk attempts to subscribe to an AIN option an error message appears. The system does not allow the change.
- The system does not support rerouting over an equal access network in some conditions. Rerouting cannot occur when a call is incoming to an equal access end office (EAEO) from an inter-LATA exchange carrier (IXC). The call travels through the feature group B (FGB) or feature group D (FGD) ATC trunk. The call can be direct or indirect.

Basic Trunk Call Processing (continued)

- The system does not support AIN Routing to feature group C (FGC) carriers when the call originates from an FGD signaling trunk. The absence of a billing wink from the FGC carrier prevents correct billing of the original FGD call.
- The system does not support individual subscription to the OFFHKDEL and AFR triggers for virtual access to private networks (VAPN) trunks.
- The system does not support individual subscription to the OFFHKDEL and AFR triggers. Triggering at CDPCODE does not apply to P2, PX, and CELL trunks.
- The system does not support triggering at CDPCODE and N11 for VAPN trunks.
- When a call involves SuperCama (SC) local access and transport area (LATA) Equal Access System (LEAS) and AIN, you must enter data in SC trunks. You must enter this data for the SC trunks to carry equal access (EA) traffic. When the SCP returns a CHARGENUMBER in response after triggering, you must enter the CHARGENUMBER parameter in table TRKLATA. You must enter data in table TRKLATA before LATA screening. Table TRKLATA associates the LATA for an incoming trunk. Table TRKLATA bases this association on the CHARGENUMBER parameter.
- When table TRKLATA does not contain the specified CHARGENUMBER the default CHARGENUMBER 000 locates the LATA that associates with the call. When the response is the CALLEDPARTYID, you must enter table DNPIC or DNLPIC. Enter table DNPIC when the call is an inter-LATA call. Enter table DNLPIC when the call is an intra-LATA call.
- Send To Resource Conversation does not receive support for operator incoming (OI) or operator (OP) trunks. When an OI or OP trunk receives a Send To Resource Conversation response, AIN sends Resource Clear message to the database. This message indicates an Unavailable Resource failure. The restriction results from the OI and OP trunks lack of support for the feature processing environment (FPE). The FPE controls digit collection. These trunks cannot perform this process correctly. The system supports Send To Resource Disconnect for OI and OP trunks.

Interactions

Refer to *Advanced Intelligent Network 0.1 Feature Interactions*, 297-5161-107.

Basic Trunk Call Processing (continued)

Activation/deactivation by the end user

Basic Trunk Call Processing does not require activation or deactivation by the end user.

Billing

The system saves call type codes 119 and 135 as separate records in addition to any AIN records. Call type code 119 is Terminating Access Record. Call type code 135 is Feature Group B - Terminating. The system saves the codes separately when following occurs:

- the call involves AIN Essentials triggering
- the call involves ATC trunks
- the call terminates to a trunk or directory number (DN)

The AIN originating record has a structure code 0220 and call code 047 when the call is FGD. The AIN originating record has a structure code 0220 and call code 047 when the call is FGB.

In billing record 119 and 135, the terminating number is not known when the following two conditions occur:

- the outpulse number in the Analyze Route response from the SCP is less than seven digits.
- the DN selector routes the call

The generation of CELL trunk billing records depends on the route selected for the CELL call. The AIN response processing can change the routing of the call. The change depends on the type of AIN response received from the SCP. This change can affect the generation of CELL terminating billing records.

A CELL terminating record is not generated for the Send_to_Resource without AnswerIndicator Response and Disconnect messages. The system can generate a CELL terminating record for the following messages:

- Send_to_Resource Conversation. This record depends on how the system routes the call. The final response message determines how the system routes the call.
- Send_To_Resource (with AnswerIndicator Response)
- Analyze_Route
- Continue messages

The P2, PX, CELL, and VAPN trunk agents provide Bellcore AMA Format (BAF) recording for AIN Essentials.

Basic Trunk Call Processing (continued)

The RMR (Answer Supervision on Local Calls) and RMT (Answer Supervision on Toll Calls) options provide answer supervision for P2/PX trunks. Table CXGRP assigns RMR and RMT to P2/PX trunks. This is important for Cell trunks because these trunks have billing records. The type 2B MF Cell trunk is a PX trunk with LOCALCMC=Y. For calls that involve type 2B MF Cell trunks, the RMR and RMT must provide Answer Supervision to this trunk. Answer Supervision allows the system to generate the CELL 2B billing record. If a Cell trunk connects to a P2/PX trunk, answer supervision must be present to make sure that the system generates the Cell billing record.

The DMS switch can generate specified originating and terminating billing records for CELL 2A and CELL 2B trunks. The CELL 2A trunk billing record has a call code 064 for the originating record. The CELL 2A trunk billing record has a call code 066 for the terminating record. The CELL 1, 2B trunk billing record has a call code 063 for the originating record. The CELL 1 2B trunk billing record has a call code 065 for the terminating record.

When a trunk encounters an N11 trigger, the system creates an AMA record for the post-query part of a call. In this event, the AMA record can contain correct ORIG NPA and ORIG DN values. The AMA record does not always contain correct ORIG NPA and ORIG DN values. If the system receives ANI digits through the trunk, the system records the NPA and DN of the originating line. If the system does not receive ANI digits, the ORIG NPA and ORIG DN are zeros.

If the system routes a no-prefix (NP) call that uses an SC trunk, the call can trigger at the PODP trigger. In this event, the ORIG DN of the pre-query AMA record is populated with the ChargeNumber. This number appears in the response message from the SCP. The message also contains zeroes when the call does not involve AIN Essentials.

The system generates an AMA record with Call Code 110 for incoming local trunk calls. This event occurs when the system routes the calls to the interexchange carrier (IEC) with FGD signaling. The system generates the record when the system receives an acknowledgment wink. This process occurs if the SCP does or does not return an AMA service logic program identification (AMASLPID). In NA005, billing records did not generate when AMASLPID was not present. The AMA record uses a Structure Code of 220 when the SCP provides an AMASLPID, as in NA005. When the SCP does not provide an AMASLPID the SSP determines the Structure Code.

Station Message Detail Recording

Basic Trunk Call Processing does not affect Station Message Detail Recording.

Basic Trunk Call Processing (continued)

Datafill sequence

The tables that require datafill to implement Basic Trunk Call Processing appear in the following table. The tables appear in the correct entry order.

Datafill tables for Basic Trunk Call Processing

Table	Purpose of table
STDPRTCT. STDPRT	This is the first table leading digits dialed from an originating line or trunk that specifies a pretranslator name index.
HNPACONT. HNPACODE	This table strips off the FNPA digits on ten-digit intra-office calls that terminate on a trunk. This process achieves standard seven-digit outpulsing to translate a local HNPA number.
TRKGRP	This table specifies the name of the STDPRT to analyze the leading digits dialed.
TRKAIN	This table allows subscription to AIN trigger processing on a trunk group base.

Datafilling table STDPRTCT.STDPRT

Datafill for Basic Trunk Call Processing for table STDPRTCT.STDPRT appears in the following table. Specified descriptions apply to FGD calls. The fields that apply directly to Basic Trunk Call Processing appear in this table.

Basic Trunk Call Processing (continued)

See the data schema section of this document for a description of the other fields.

Datafilling table STDPRTCT.STDPRT (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
FROMDIGS		numeric (a maximum of 18 digits)	From digits. Enter the digit or digits to translate. For an FGD call, this field contains the 0ZZ-XXXX digits from the first stage of the three stage equal access call. The EAEO and the AIN SSP must agree on the exact value of the 0ZZ digits. The value of the XXXX is set to 0110 to indicate SSP processing.
TODIGS		numeric (a maximum of 18 digits)	To digits. The entry is equal to the entry in field FROMDIGS. For FGD call, this field contains the 0ZZ-XXXX digits from the first stage of the three stage equal access call. The EAEO and the AIN SSP must agree on the exact value of the 0ZZ digits. The value of the XXXX is set to 0110 to indicate SSP processing.
PRETRTE		see subfields	Pretranslation route. This field contains subfields PRERTSEL, TYPCALL, MINIDIGSR, MAXDIGSR, and TRANSYS.
	PRERTSEL	SSP	Pretranslator route selector. This subfield contains the value SSP that indicates that the use of this selector requires SSP processing.
	TYPCALL	DD, OA, or NP	Type of call. This subfield contains the type of call. Enter DD for direct dial. Enter OA for operator assisted. Enter NP for no prefix.
	MINDIGSR	6 or 7	Minimum digits received. This subfield specifies the minimum number of digits to collect before routing the call.

Basic Trunk Call Processing (continued)**Datafilling table STDPRTCT.STDPRT (Sheet 2 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
	MAXDIGSR	6 or 7	Maximum digits received. This subfield is equal to the entry in subfield MINDIGS.
	TRANSYS	NA	Translation system. This subfield specifies the translations system a call routes to for the next stage of translations. Enter NA for national translations.

Datafill example for table STDPRTCT.STDPRT

Sample datafill for table STDPRTCT.STDPRT appears in the following example. In the example, 088 is the OZZ digits that the EAEO sends over the trunk.

MAP example for table STDPRTCT.STDPRT

FROMDIGS	TODIGS	PRETRTE

0880110	0880110	SSP DD 6 6 NA

Datafilling table HNPACONT.HNPACODE

Datafill for Basic Trunk Call Processing for table HNPACONT.HNPACODE appears in the following table. The fields that apply to Basic Trunk Call Processing appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table HNPACONT.HNPACODE (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
FROMDIGS		numeric (three digits)	From digits. Enter the three-digit number assigned as the HNPAC.
TODIGS		numeric (three digits)	To digits. Enter the same three-digit number as in FROMDIGS.

Basic Trunk Call Processing (continued)

Datafilling table HNPACONT.HNPACODE (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
CDRRTMT		see subfield	Code type, route reference, and treatments. Enter a code type and route reference.
	CD	HNPA	Code type. Enter HNPA if the system allows you to dial local HNPAs. The HNPA applies if the system permits a dialed three-digit code and three-digit codes dialed are HNPAs. Code type HNPA ignores digit translation that follows. The system allows the following combination for the HNPA code type: <ul style="list-style-type: none"> • a digit pattern of HNPA-NNX-XXXX • a ten digit number • a local or non-local originating source
	RR	1	Route reference index. Enter 1.

Datafill example for table HNPACONT.HNPACODE

Sample datafill for table HNPACONT.HNPACODE appears in the following table.

MAP example for table STDPRTCT.STDPRT

FROMDIGS	TODIGS
	CDRRTMT
-----	-----
818	818
	HNPA 1

Basic Trunk Call Processing (continued)

Datafilling table TRKGRP

Datafill for Basic Trunk Call Processing for table TRKGRP appears in the following table. The fields that apply to Basic Trunk Call Processing appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table TRKGRP (Sheet 1 of 5)

Field	Subfield or refinement	Entry	Explanation and action
GRPKEY		see subfield	Group key. This field contains subfield CLLI.
	CLLI	alphanumeric (1 to 16 characters)	Common language location identifier. The trunk group name that subscribes to an AIN trigger group. The trunk group name is from table CLLI.
GRPINFO		see subfields	Group information. This field contains many information subfields.

Basic Trunk Call Processing (continued)

Datafilling table TRKGRP (Sheet 2 of 5)

Field	Subfield or refinement	Entry	Explanation and action
	GRPTYP	IBNTI, IBNT2, PRA, TI, T2, IT, ATC, OI, OP, OC, SC, P2, PX, CELL, or E911	<p>Group type. The trunk group type. Enter one of the following values:</p> <ul style="list-style-type: none"> • IBNTI for Integrated Business Network (IBN) incoming • IBNT2 for IBN two-way • PRA for primary rate access • TI for plain old telephone service (POTS) incoming • T2 for POTS two-way • IT for intertoll • ATC for access to carrier • OI for operator incoming • OP for operator • OC for outgoing centralized automatic message accounting (CAMA) • SC for superCAMA • P2 for PBX two-way analog • PX for PBX two-way digital • CELL for cellular • E911 for enhanced 911 <p>Note: The system supports AIN Essentials trunk type agents IBNTI, IBNT2, PRA, TI, T2, and IT.</p> <p>Note: The IBNTI, IBNT2, TI, T2, and IT trunks support DP, DT, MF, and Q.764 signaling. The IBNT2 and PRA trunks support the Q.931 protocol. The FGB and Equal Access Plan (EAPLAN) (FGD) ATC trunks support MF. The EAPLAN ATC trunks support ISUP.</p>

Basic Trunk Call Processing (continued)

Datafilling table TRKGRP (Sheet 3 of 5)

Field	Subfield or refinement	Entry	Explanation and action
			<p>Note: The ATC trunks the system supports are EAPLAN over ISUP or MF trunks, or FGB over MF trunks. The term FGD refers to the EAPLAN. The FGB is 950+ dialing. The national call processing of an ATC trunk call allows the ATC trunk to encounter the PODP and N11 triggers at the Information Analyzed TDP, and the AFR trigger at the Network Busy TDP. Calls that originate from an ATC trunk can encounter the TERMATT trigger at the Termination Attempt TDP.</p> <p>Note: The far end of an OC trunk can be an OC or SC trunk. The OI, OP, OC, and SC trunks support MF and DP protocols.</p> <p>Note: You can enter the SC trunks as a LEAS trunk to provide equal access type services in a non-equal access office. The system does not support N11 triggering when you enter the SC trunk as a LEAS trunk.</p> <p>Note: The OI, OP, OC, and SC trunks can encounter the PODP and N11 triggers directly at the Information Analyzed TDP. The OI, OP, OC and SC trunks can encounter the TERMATT trigger directly at the Termination Attempt TDP. An OP trunk must have the NRMLTRAF option assigned to it in order to trigger.</p> <p>Note: Operator Verification calls on OI, OP and OC trunks cannot trigger at any of the AIN Essentials triggers.</p> <p>Note: Operator Number Identification (ONI) calls on OI, OP, OC, and SC trunks cannot trigger on any of the AIN Essentials triggers.</p> <p>Note: Enter two-way VAPN trunks as ATC trunks for outgoing. Enter two-way VAPN as IBN, TI, or T2 trunks for incoming with FGD in OFFNTACC and Y in AMIDIGS.</p>

Basic Trunk Call Processing (continued)

Datafilling table TRKGRP (Sheet 4 of 5)

Field	Subfield or refinement	Entry	Explanation and action
			<p>Note: The P2, PX, CELL, VAPN, and E911 trunks can encounter the TERMATT trigger directly at the Termination Attempt TDP. The P2, PX and CELL trunks can encounter the PODP, N11 and AFR office based triggers directly. The VAPN trunk can encounter the PODP and AFR office based triggers directly. The P2, PX and CELL trunks encounter the PODP and N11 triggers at the Information Analyzed TDP. The VAPN trunk encounters the AFR trigger at the Network Busy TDP.</p> <p>Note: The system does not support PX trunks with the loop start FX signaling protocol. The P2, PX, and CELL trunks cannot trigger at CDP because these trunks are public trunks. These trunks do not use IBN translations.</p> <p>Note: When P2/PX trunks trigger at PODP, N11, or AFR the trunks can receive an Analyze Route response from an SCP. This SCP routes the call to a carrier. When this event occurs, the P2/PX trunk tuple in table TRKGRP must have EA=Y. You must correctly enter the subfields that correspond.</p> <p>Note: The VAPN signaling is MF or ISUP. Carrier emulation accepts incoming FGD signaling in the MF or ISUP format. An ANI or a range of ANIs indexes table CGNSCRN. Table CGNSCRN resides on the VAPN node. Table CGNSCRN determines the treatment for each ANI. The ANI screening specifies that only certain ANIs can use the VAPN service. Calls with ANI that fail screening receive a different treatment. The system generates a different log report. The ANI must be ten digits long when ANI screening is on. When ANI screening is not on, the ANI can be three digits long. The VAPN node ignores the OLI parameter.</p>

Basic Trunk Call Processing (continued)**Datafilling table TRKGRP (Sheet 5 of 5)**

Field	Subfield or refinement	Entry	Explanation and action
			<p>Note: Trunk signaling for CELL trunks can be digital trunk signaling MF or ISUP. For MF CELL 2A, use the CELL. For MF CELL 1, 2B, use the PX entry with Y for subfield LOCALCMC. For ISUP CELL 2A, use the IT entry with CELL 2A in subfield OPTION. For ISUP CELL 2B, use the IT entry with CELL 2B in subfield OPTION.</p>
	PRTNM	alphanumeric (one to four characters)	<p>Standard pretranslator name. This subfield contains the pretranslator name used to analyze the digits (OZZ-XXX digits).</p> <p>Note: The use of this subfield occurs when subfield GRPTYP is TI, T2, IT, ATC, OI, P2, PX, SC, or CELL.</p>
	OPTION	NRMLTRAF	<p>Normal traffic. This option indicates that the operator trunk carries normal traffic and can trigger on AIN Essentials triggers. When this option is not entered, the operator trunk defaults to carrying essential services. Enter a \$ to end this subfield for essential services.</p> <p>Note: The use of this subfield occurs when subfield GRPTYP is OP.</p> <p>Note: Only OP trunks with the NRMLTRAF option assigned can encounter AIN Essentials triggers.</p> <p>Note: During a dump and restore, the addition of this option does not occur.</p>

Datafill example for table TRKGRP

Sample datafill for table TRKGRP appears in the following table. In the example, the standard pretranslator name is AIN1.

Basic Trunk Call Processing (continued)

MAP example for table TRKGRP

```

                GRPKEY
                GRPINFO
-----
                AINTRK1
                IT 0 TLD NCIT 2W IT MIDL 919 AIN1 NSCR 919 001 Y N $
    
```

Datafilling table TRKAIN

Datafill for Basic Trunk Call Processing for table TRKAIN appears in the following table. The fields that apply to Basic Trunk Call Processing appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table TRKAIN

Field	Subfield or refinement	Entry	Explanation and action
GRPKEY		alphanumeric (1 to 16 characters)	Group key. This field is the CLLI of the trunk group that subscribes to an AIN trigger group. Note: Table TRKGRP must contain the CLLI.
AINGRP		alphanumeric (1 to 16 characters)	The AIN group name. This field is the name of an AIN trigger group. Note 1: Table TRIGGRP must already contain the AIN trigger group. See module AIN SSP Base Trigger Tables. This module uses table TRKAIN. Note 2: The trigger group entered against a specified trunk group must not contain triggers that are not compatible with the type of trunk group.

Datafill example for table TRKAIN

Sample datafill for table TRKAIN appears in the following example.

Basic Trunk Call Processing (end)

MAP example for table TRKAIN

GRPKEY	AINGRP
AINTRK1	AINGRP1 \$

Tools for verifying translations

Refer to the AIN Essentials Translation Verification (TRAVER) module for information and examples of TRAVER.

SERVORD

Basic Trunk Call Processing does not use SERVORD.

Recorded Announcements Enhancements

Ordering codes

SOC options: AIN00002 and AIN00015

Release applicability

NA008 and later versions

Requirements

Recorded Announcements Enhancements requires Advanced Intelligent Network (AIN) software.

Description

The AIN Essentials provides the capability to create and modify telecommunications services for subscribers. The AIN Essentials provides a call processing architecture which defines a set of trigger detection points (TDP). When a call encounters a TDP, the service switching point (SSP) sends a query message to the database. The SSP suspends normal call processing and waits for a response that directs the behavior of the call.

The AIN Essentials SSP does not require a set of announcements. Applications on the service control point (SCP) database can require the SSP to make announcements. Use the following guidelines when you provision the announcements on the SSP:

- to provide recorded announcements, use an NT1X75BA Digital Recorded Announcement Machine (DRAM) card or an NT1X80AA Enhanced DRAM (EDRAM) card
- the AIN Essentials does not place limits on the types of programmable read-only memory (PROM), erasable programmable read-only memory (EPROM), or random access memory (RAM) cards used
- To provide announcements with spoken digits, use an NT1X76AG digits PROM card (English) or an NT1X76BG digits PROM card (French). Use an EPROM card or RAM card to record the equivalent digits phrases.

Recorded Announcements Enhancements functionality provides a connection to current standard and customized announcements that the SSP provides. The interface is a mapping table that indicates which SSP announcement must play. The interface bases the indication on the announcement identifier the interface receives from the SCP.

Recorded Announcements Enhancements (continued)

Recorded Announcements Enhancements provides the following abilities for AIN Essentials applications:

- table AINANNS converts the external system announcement identifier into an internal standard or customized announcement. The SCP sends the external system announcement identifier. The announcement is at the DMS-100 switch and plays for the calling party.
- the digits received from the database to the calling party are spoken
- legacy agents can use standard and customized announcements

For AIN Essentials, the database can return a Send_To_Resource (STR) message in response to a query from a TDP. The STR message directs the SSP to play an announcement or tone. The STR message can request that the SSP collect digits from the calling party.

An STR message can contain the parameters in the following table.

Send_To_Resource message parameters

Parameter	Mandatory/Optional
ResourceType	mandatory
StrParameterBlock	mandatory
DisconnectFlag	mandatory in the response package. Must not appear in the conversation package
AnswerIndicator	optional
PrimaryBillingIndicator	optional
AMAAlternateBillingNumber	optional
AMABusinessCustomerID	optional
AMALineNumber	optional
AMASlpID	optional
AMADigitsDialedWC	optional

The StrParameterBlock contains the system announcement identifier, which indicates to the SSP the announcement to play. The StrParameterBlock receives the system announcement identifier from the database. The system

Recorded Announcements Enhancements (continued)

announcement can correspond to values from 1 to 32 767 for AIN Essentials. The StrParameterBlock parameter provides the following information:

- the announcement on the SSP to play to the calling party
- if the caller can interrupt the announcement while the announcement plays
- if digits that follow must be collected on completion of the announcement or interruption (when you play the announcement as interruptible). If digits are to be collected, the types are fixed, variable, or normal
- any digits that are to be spoken with the announcement

Note: A maximum of 32 digits can be sent, but a maximum of 24 digits can be spoken. Digits from 25 to 32 are ignored. Each spoken digit is a phrase. You must take this information into account for DRAM limits on the number of phrases that can be spoken.

Send_To_Resource routing to tones

The system can route the STR operation request to specified values of hardcoded tones. The system requires one tone ID that the system supports to route a call to a tone in an STR request. Provide the tone IDs in the STR conversation or response package. You must not enter the announcement with ID that corresponds to the tone ID in table AINANNS.

When you enter an announcement with the requested ID in table AINANNS, the announcement plays instead of the tone.

You can request the following tones:

- silent (nil) (STR ID = 5)
- confirmation (STR ID = 12)
- special dial (STR ID = 6)
- reorder (STR ID = 13)
- dial tone (STR ID = 14)

Only the silent tone, dial tone, and special dial tone are interruptible tones. Only digit collection can follow the confirmation tone when the confirmation tone is uninterruptible. All tones are correct as uninterruptible terminating. When you send a special dial tone over an MF trunk, the special tone sounds like a plain dial tone.

Only use the silent tone, dial tone, and special dial tone when you apply digit collection.

Recorded Announcements Enhancements (continued)

Error conditions

The following error conditions apply to Recorded Announcements Enhancements:

- The StrParameterBlock of the Send_To_Resource message receives the system announcement identifier. If the system announcement identifier corresponds to a customized announcement that is not available, the SSP performs the following actions:
 - A Resource_Clear message returns to the database with a clear cause of Failure and a failure cause of Unavailable Resource. This message appears if the unavailable resource occurred when the StrParameterBlock received the STR message with a conversation package type.
 - The calling party receives reorder treatment if the unavailable resource occurs. This failure occurred when the the StrParameterBlock received the STR message with a response package type.
- The StrParameterBlock of the STR receives the system announcement identifier. Table AINANNS defines the announcement ID. If the system announcement identifier cannot correspond to an announcement ID, the SSP performs the following actions:
 - An Application_Error returns to the database with an error cause of Erroneous Data Value. This condition occurs if the erroneous data value occurs after the system receives the STR message. The STR message contains a conversation package type.
 - The calling party receives final treatment if the erroneous data value occurs when the StrParameterBlock receives the STR message. The system receives the message with a response package type.
- The StrParameterBlock contains digits that must be spoken to the calling party. If the customized announcement does not have data to speak digits, the digits received are discarded. The announcement continues to play.
- The StrParameterBlock does not contain digits that must be spoken to the calling party. If the customized announcement specifies that digits are to be spoken, only the announcement plays.

Operation

Announcements for AIN are not pre-recorded in the DRAM facility. Operating companies use the DRAMREC utility to record the announcements on electronically erasable (EEPROM) cards.

Recorded Announcements Enhancements (continued)

Creating announcements with the DRAMREC tool

The DRAMREC tool records announcements in the following manner. Each EEPROM card has a recording capacity of 31.74 s.

1. Install the NT1X75BA card, if not present.
2. Datafill correct announcement tables on the switch. Refer to Datafill sequence on page 13.
3. Determine the text of each announcement and make sure that no single phrase is longer than 18 s.
4. At the DRAM recording facility, connect the headset to the communications module and to the HSET trunk.
5. At the MAP terminal, to enter the DRAMREC tool, type

```
>DRAMREC
```

and press the Enter key.

6. To enter the Connect command, type

```
>CONNECT DRAM_number trunk_CLLI member
```

and press the Enter key.

where

DRAM_number

is number of the DRAM

trunk_CLLI

is the common language location identifier of the trunk

member

is the member

7. To record the announcement, type

```
>RECORD phrase_name length PAD
```

and press the Enter key.

where

phrase_name

is the name of the phrase

length

is the length of the phrase in seconds

8. After three prompt tones sound, speak clearly in the mouthpiece to record the announcement.

Recorded Announcements Enhancements (continued)

9. To play the announcement again through the headset, type

```
>PLAYBACK DRAM_number phrase_name
```

and press the Enter key.

where

DRAM_number

is the number of the DRAM

phrase_name

is the name of the phrase

10. To quit the DRAMREC tool, type

```
>QUIT
```

and press the Enter key.

You can specify announcements that terminate and announcements that do not terminate in table AINANNS. Announcements that terminate route the call to a treatment tone after the announcement. Announcements that terminate describe error conditions. An example of an error condition is a changed number. An announcement that terminates can also say, "Our offices close for the weekend". These announcements are not interruptible. The user that disconnects the call can only interrupt these calls.

Announcements that do not terminate request the caller to provide additional information such as a personal identification number (PIN) or authorization code. These announcements can be interruptible or non-interruptible. Interruptible announcements stop when the user begins to send additional information. Non-interruptible announcements play completely when the user begins to send additional information. The parameters in the STR messages determine if an announcement is interruptible or non-interruptible.

Table AINANNS maps the external system announcement identifier to an internal DMS-100 customized announcement. Customized announcements in the DMS-100 switch are defined as a tuple in table DRMUSERS. The common language location identifier (CLLI) field and the announcement number (ANNNUM) field index the customized announcements. You must define the CLLI in table ANNS with announcement type AIN in field ANTYPE. Perform this action before you enter data in table AINANNS. You must enter the CLLI and ANNNUM fields in table DRMUSERS.

Tuples of table AINANNS reference individual tuples in table DRMUSERS. You cannot add tuples to table AINANNS if these tuples reference tuples that are not present in table DRMUSERS. If there is a reference to table

Recorded Announcements Enhancements (continued)

DRMUSERS in table AINANNS the system blocks deletion of a tuple in table DRMUSERS.

The phrase or phrases in table DRMUSERS do not always represent hardware phrases. Some phrases are place holders for actions that occur as the DMS-100 switch prepares to play the given message. The DMS-100 prepares to play the message to an agent.

For example, phrase ENGVARDNF identifies a point in a phrase list where you are to insert digits the SCP response provides. An example is the digits 123 becoming phrases for speaking digits 1, 2, and 3.

The following phrases are for pronouncing digits:

- ENGVARDNM
- ENGVARDNF
- FREVARDNM
- FREVARDNF

These phrases require an NT1X76AG PROM card or the equivalent EDRAM voice file, EA0SS0AG. These phrases also require an acceptable manual recording of phrases of the same name. The language phrases LANGUAGE1 and LANGUAGE2 specify the DMS-100 switch languages that play the announcement. If the language request is not in the switch, the phrases that remain in the message do not play. A request to switch to the other language allows correct pronunciation of the phrases that remain in the message.

Translations table flow

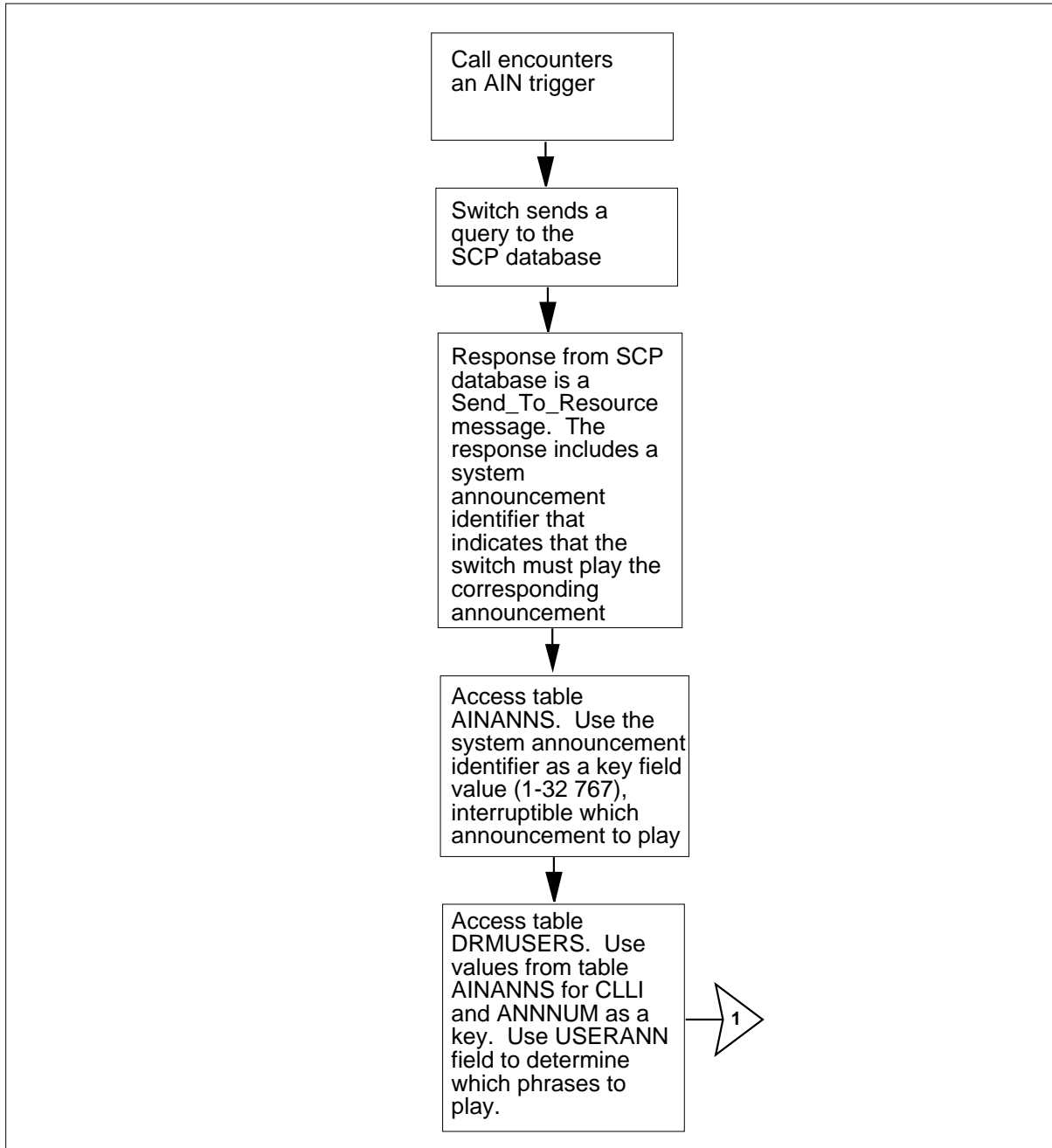
The system translates the Recorded Announcements Enhancements translations tables in the following order:

- CLI
- AINANNS
- DRMUSERS
- ANNMEMS
- ANNS
- DRAMS

The Recorded Announcements Enhancements translation process appears in the following flowchart.

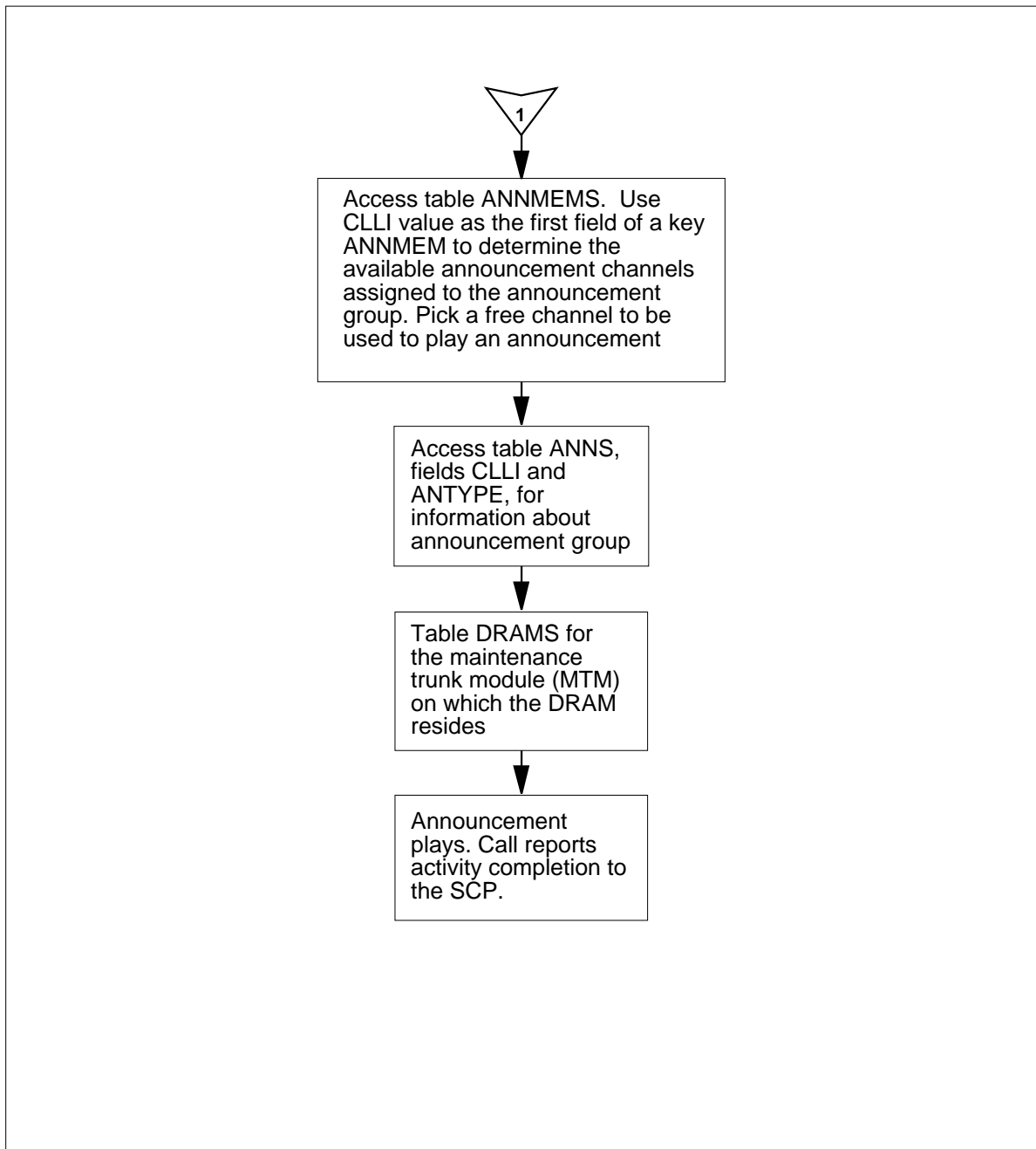
Recorded Announcements Enhancements (continued)

Table flow for Recorded Announcements Enhancements



Recorded Announcements Enhancements (continued)

Table flow for Recorded Announcements Enhancements (continued)



Recorded Announcements Enhancements (continued)

Datafill in the flowchart appears in the following tables.

Sample data used in Recorded Announcements Enhancements

Item	Example data
Card code	NT1X75BA
CLLI	AINPHRASES
DRAM number	0

Datafill example for Recorded Announcements Enhancements

Datafill table	Example data
DRAMS	0 1 MTM 5 2 1X75BA EEPROM (0) \$
CLLI	AINPHRASES 213 16 CAR_CUSTOMIZED_ANNS
ANNS	AINPHRASES AIN 0 1 0 1
ANNMEMS	AINPHRASES 1 DRAM DRA (0 MTM 5 2)\$
DRMUSERS	AINPHRASES 1 (SILENCE) (AINANN1) (AINANN3)\$
AINANNS	76 AINPHRASES 1

Limits

The following limits apply to Recorded Announcements Enhancements:

- sixty-four DRAMS for each DMS-100 switch. Each DRAM can hold a maximum of 254 s of speech. This announcement time is for all types of announcements. These types are standard, customized and application specified.
- each DRAM is in a maintenance trunk module (MTM) or in a service maintenance module (STM). Each MTM has a maximum of 30 speech channels. Speech channel 0 is for maintenance. The other 29 channels play announcements. Each office can have a maximum of 64 DRAMs. A maximum of 1856 speech channels are available to play all types of announcements.
- a CLLI defines each announcement group in table ANNS. Limited space is available in table CLLI because this functionality increases the number of announcement groups in table ANNS.
- use of customized AIN announcements requires DRAM controller card NT1X75BA instead of NT1X75AA.

Recorded Announcements Enhancements (continued)

- the system can pronounce a maximum of 32 phrases on receipt of an StrParameterBlock. Each digit that the system receives takes up one phrase, as do each of the voice phrases in the table DRMUSERS. A maximum of 24 of the 32 phrases can have digit phrases. The system ignores a request for pronunciation of more than 24 digits.
- the system can use only standard announcements in the Send_To_Resource response package.

Interactions

Refer to *Advanced Intelligent Network 0.1: Feature Interactions*.

Activation/deactivation by the end user

Recorded Announcements Enhancements does not require activation or deactivation by the end user.

Billing

Recorded Announcements Enhancements does not affect billing.

Station Message Detail Recording

Recorded Announcements Enhancements does not affect Station Message Detail Recording.

Datafilling office parameters

Recorded Announcements Enhancements does not affect office parameters.

Datafill sequence

The following table lists the tables that require datafill to implement Recorded Announcements Enhancements. The tables appear in the correct entry order.

Datafill requirements for Recorded Announcements Enhancements (Sheet 1 of 2)

Table	Purpose of table
DRAMS	The digital recorded announcement machine table contains information about the configuration of the DRAM hardware.
CLLI	Table CLLI defines announcement group names. Table CLLI defines the maximum number of announcement group members (channels).
ANNS	The announcement table contains information about the announcement groups.
ANNMEMS	The announcement member table contains information about announcement group members. You can enter data into this table last.

Recorded Announcements Enhancements (continued)

Datafill requirements for Recorded Announcements Enhancements (Sheet 2 of 2)

Table	Purpose of table
DRMUSERS	The digital recorded announcement machine users table contains the lists of phrases that constitute one announcement.
AINANNS	The AIN announcements table recognizes system announcement identifiers. This table maps the system announcement identifiers to a DMS-100 internal customized announcement in table DRMUSERS. The AIN announcements table provides Send_To_Resource routing to tones. You can enter data in standard and customized announcements.

Datafilling table DRAMS

Table DRAMS provides information on the location of the hardware table ANNMEMS identifies. The information includes the DRAM controller and the DRAM number.

Datafill for Recorded Announcements Enhancements for table DRAMS appears in the following table. The fields that apply to Recorded Announcements Enhancements appear in this table. Refer to *Commands Reference Manual* for information on DRAM recording (DRAMREC).

Datafill for Recorded Announcements Enhancements for table DRAMS appears in the following table. The fields that apply to Recorded Announcements Enhancements appear in this table. See the data schema section of this document for a description of the other fields.

ATTENTION

Refer to *DRAM and EDRAM Guide* before you determine the settings for the EEPROM cards on the switch.

Datafilling table DRAMS (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
DRAMCARD		refer to subfields	Digital Recorded Announcement Machine Key field. The field contains the subfields DRAM and CARD.
	DRAM	0 to 63	Digital Recorded Announcement Machine. Enter the number of the number assigned to the DRAM.

Recorded Announcements Enhancements (continued)

Datafilling table DRAMS (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
TMTYPE	CARD	0 to 8	Card. Enter the number assigned to the card.
		MTM, STM, or DTM	Trunk module type. Enter one of the following trunk module (TM) types that has the card: <ul style="list-style-type: none"> • MTM for maintenance trunk module • STM for service maintenance module • DTM for DRAM trunk module. Enter DTM when an EDRAM is in use.
TMNO		0 to 2047	Trunk module number. Enter the number assigned to the STM or MTM.
TMCKT		0 to 29	Trunk module circuit. Enter the TM circuit number assigned to the trunk card. <p>Note: Each TM circuit activates two circuits. For example, when operating company personnel enable TM circuit 2, TM circuits 2 and 3 activate. Recommended entries are 2, 4, 6, 8 10, and greater in multiples of 2.</p>
CARDCODE		alphanumeric	Card code. Enter the PEC code for the card. Use electronically erasable PROM (EEPROM) NT1X79AA cards for customer on-site announcement recording. The AIN announcements require the NT1X75BA controller card.
CARDINFO		refer to subfields	Card information. This field contains subfields CARDTYPE and CLLI or BLKLIST.
	CARDTYPE	CTLR, EEPROM, RAM, or PROM	Card type. Enter the card type. The DRAM contains one controller card and the rest EEPROM cards. <p>Note: Card number 0 must be the controller card.</p> Enter CTLR for refinement CLLI. Enter EEPROM, RAM, or PROM for refinement BLKLIST.

Recorded Announcements Enhancements (continued)

Datafilling table DRAMS (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	CLLI	alphanumeric (1 to 16 characters)	Common language location identifier. Enter a name to identify the announcement.
	BLKLIST	0 to 31	Block list. Enter the number of the speech block assigned to the card. The system permits a maximum of 16 entries. Note: The terms block number and virtual card number are equal.

Datafill example for table DRAMS

Sample datafill for Recorded Announcements Enhancements in table DRAMS appears in the following example. In the example, the system defines a single DRAM on MTM 5. The DRAM contains a controller card and eight single density EEPROM cards. The DRAM0 is the CLLI the system prompts on the controller (CTRL) card.

Recorded Announcements Enhancements (continued)

MAP example for table DRAMS

DRAMCARD	TMTYPE	TMNO	TMCKT	CARDCODE	CARDINFO	
0 0	MTM	5	0	1X75BA	CTLR	DRAM0
0 1	MTM	5	2	1X79AA		
EEPROM (0) \$						
0 2	MTM	5	4	1X79AA		
EEPROM (1) \$						
0 3	MTM	5	6	1X79AA		
EEPROM (2) \$						
0 4	MTM	5	8	1X79AA		
EEPROM (3) \$						
0 5	MTM	5	10	1X79AA		
EEPROM (4) \$						
0 6	MTM	5	12	1X79AA		
EEPROM (5) \$						
0 7	MTM	5	14	1X79AA		
EEPROM (6) \$						
0 8	MTM	5	16	1X79AA		
EEPROM (7) \$						

Datafilling table CLLI

Table CLLI associates a name to an announcement group. Each announcement group has a name in this table. The name that you enter in table CLLI is used as a key into table ANNS. The name that you enter in table CLLI is used as a part of the key into tables ANNMEMS and DRMUSERS.

The announcement group name is addressed as CLLI in the table flow for AIN Recorded Announcements Enhancements. Use table CLLI only for datafill purposes to determine an announcement group name and CLLI of the announcement group. You can use table CLLI for the maximum number of announcement channels associated with the announcement group. Access of table CLLI cannot occur during processing of the Send_To_Resource response.

Datafill for Recorded Announcements Enhancements for table CLLI appears in the following table. The fields that apply to Recorded Announcements

Recorded Announcements Enhancements (continued)

Enhancements appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table CLLI

Field	Subfield or refinement	Entry	Explanation and action
CLLI		alphanumeric (1 to 16 characters)	Common language location identifier. Enter a name to identify the announcement.
ADNUM		0 to 8191	Administrative trunk group number. Enter a number to identify the announcement CLLI.
TRKGRSIZ		0 to 255	Trunk group size. Enter the number of announcement members for the announcement CLLI group that are in table ANNMEMS.
ADMININF		alphanumeric (1 to 32 characters)	Administrative information. Enter an identifier.

Datafill example for table CLLI

Sample datafill for Recorded Announcements Enhancements in table CLLI appears in the following example. In the example, the number in the field TRKGRSIZ indicates the number of members in table ANNMEMS.

MAP example for table CLLI

CLLI	ADNUM	TRKGRSIZ	ADMININF
AINPHRASES1	215	32	AIN_0_1_CUST_ANNS

Datafillingtable ANNS

Table ANNS provides information about how the system plays messages in this announcement group. For example, table ANNS defines the time period and repeatability of the messages.

Datafill for Recorded Announcements Enhancements for table ANNS appears in the following table. The fields that apply to Recorded Announcements

Recorded Announcements Enhancements (continued)

Enhancements appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table ANNS

Field	Subfield or refinement	Entry	Explanation and action
CLLI		alphanumeric (1 to 16 characters)	Common language location identifier. Enter the code that represents the announcement in table CLLI.
ANTYPE		AIN orSTND	Announcement type. Enter AIN for custom announcements. Enter STND for standard announcements.
TRAFSNO		0 to 127	Traffic separation number. Enter the outgoing traffic separation number. Enter a number from 1 to 127 if the switch has traffic separation software. Enter zero if the switch does not have traffic separation software.
MAXCONN		1	Maximum connections. Enter the number of connections allowed. Note: The AIN announcements allow a maximum of one simultaneous connection for each channel when an announcement plays.
CYTIME		1 to 18 or 0	Cycle time. Enter 0. Note: Enter data in this field as 0. The DRAM utility determines the cycle time when an announcement plays.
MAXCYC		1 to 30	Maximum cycles. Enter the number of times the system is to play an announcement for a user.

Datafill example for table ANNS

Sample datafill for Recorded Announcements Enhancements in table ANNS appears in the following example. In the example, the announcements with the CLLI of AINPHRASES1, AINPHRASES2, and AINPHRASES3 are entered with the announcement type of AIN. The standard announcement BLDN has the ANTYPE of STND.

Recorded Announcements Enhancements (continued)

MAP example for table ANNS

CLLI	ANTYPE	TRAFSNO	MAXCONN	CYTIME	MAXCYC
AINPHRASES	AIN	25	1	10	1
AINPHRASES1	AIN	25	1	10	1
AINPHRASES2	AIN	25	1	10	1
BLDN	STND	0	90	15	2

Datafilling table ANNMEMS

Table ANNMEMS provides the physical location of the hardware. The hardware parts in this table are announcement channels. The system maps the hardware parts to the announcement groups in the table. Table ANNS defines announcement group members. You must enter data in table ANNMEMS before the system plays the messages.

Datafill for Recorded Announcements Enhancements for table ANNMEMS appears in the following table. The fields that apply to Recorded Announcements Enhancements appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table ANNMEMS (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
ANNMEM		see subfields	Announcement member key. This field contains subfields ANN and MEMBER.
	ANN	alphanumeric (1 to 16 characters)	Announcement. Enter the CLLI that represents the announcement group, as entered in table ANNS earlier.
	MEMBER	0 to 255	Member. Enter the assigned number.
HDWTYPE		DRAM	Hardware type. Enter DRAM.
CARD		DRA	Card code. Enter DRA.
MEMINFO		see subfields	Member information
	TRCKLIST	see subfields	Track list
	TRACK	0	Track member. Enter the track member number.

Recorded Announcements Enhancements (continued)

Datafilling table ANNMEMS (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	PMTYPE	MTM or STM	Peripheral module type. Enter DTM when the ED RAM is in use. Complete refinements TMNO and TMCKT.
	TMNO	0 to 2047	Trunk module number. Enter the trunk module number.
	TMCKT	0 to 29	Trunk module circuit. Enter the trunk module circuit number.

Datafill example for table ANNMEMS

Sample datafill for Recorded Announcements Enhancements in table ANNMEMS appears in the following example. In the example, on MTM 5 there are five members of AINPHRASES1 group. The AINPHRASES2 uses all 29 speech channels on MTM 6.

Recorded Announcements Enhancements (continued)

MAP example for table ANNMEMS

ANNMEM	HDWTYPE	CARD	MEMINFO

AINPHRASES1 0	DRAM	DRA	(0 MTM 5 1)\$
AINPHRASES1 1	DRAM	DRA	(0 MTM 5 2)\$
AINPHRASES1 2	DRAM	DRA	(0 MTM 5 3)\$
AINPHRASES1 3	DRAM	DRA	(0 MTM 5 4)\$
AINPHRASES1 4	DRAM	DRA	(0 MTM 5 5)\$
AINPHRASES2 0	DRAM	DRA	(0 MTM 6 1)\$
AINPHRASES2 1	DRAM	DRA	(0 MTM 6 2)\$
AINPHRASES2 2	DRAM	DRA	(0 MTM 6 3)\$
AINPHRASES2 3	DRAM	DRA	(0 MTM 6 4)\$
AINPHRASES2 4	DRAM	DRA	(0 MTM 6 5)\$
AINPHRASES2 5	DRAM	DRA	(0 MTM 6 6)\$
AINPHRASES2 6	DRAM	DRA	(0 MTM 6 7)\$
AINPHRASES2 28	DRAM	DRA	(0 MTM 6 29)\$

Recorded Announcements Enhancements (continued)

Datafilling table DRMUSERS

Table DRMUSERS identifies the phrase or phrases that make an announcement. The system maps announcements to announcement groups in the table.

Datafill for Recorded Announcements Enhancements for table DRMUSERS appears in the following table. The fields that apply to Recorded Announcements Enhancements appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table DRMUSERS

Field	Subfield or refinement	Entry	Explanation and action
USERANN		see subfields	User announcement. This field contains the subfields CLLI and ANNNUM.
	CLLI	alphanumeric (1 to 16 characters)	Common language location identifier. Enter the announcement group name in table ANNS.
	ANNNUM	1 to 255	Announcement number. Enter the number assigned to the announcement.
PHSLIST		alphanumeric	Phrases list. Enter a maximum of 32 phrases associated with the announcement.

Datafill example for table DRMUSERS

Sample datafill for Recorded Announcements Enhancements in table DRMUSERS appears in the following example. The example gives phrases for the announcement groups.

Note: The phrases in the following example do not exist. These phrases appear for example purposes only. The operating company records announcements in this table with the DRAMREC utility.

Recorded Announcements Enhancements (continued)

MAP example for table DRMUSERS

USERANN		PHSLIST		
AINPHRASES1	1	(AINANN5)	(AINANN7)	(AINANN32)\$
AINPHRASES1	2	(AINANN5)	(AINANN7)	(AINANN32)\$
AINPHRASES1	3	(AINANN9)	(AINANN5)	(AINANN32)\$
AINPHRASES1	4	(AINANN2)	(AINANN3)	(AINANN6)\$
AINPHRASES1	5	(AINANN21)	(AINANN23)	(AINANN54)\$
AINPHRASES2	1	(AINANN13)	(AINANN14)	(AINANN15)\$
AINPHRASES2	2	(AINANN11)	(AINANN12)	(AINANN17)\$
AINPHRASES3	1	(AINANN41)	(AINANN42)	(AINANN43)\$
AINPHRASES3	2	(AINANN41)	(AINANN44)	(AINANN45)\$
AINPHRASES3	3	(AINANN42)	(AINANN44)	(AINANN43)\$

Datafilling table AINANNS

Table AINANNS maps an external system announcement identifier from a database to a standard announcement. Table AINANNS maps to an internal DMS-100 customized announcement to play for the calling party. Tables DRMUSERS and AINANNS maintain a relationship that allows many tuples of table AINANNS to reference individual tuples in table DRMUSERS.

The CLLI and an announcement number indexes table DRMUSERS. Tuples in table AINANNS must reference current tuples in table DRMUSERS. Tuples that you add to table AINANNS must correspond with a tuple in table ANNS. The tuple that corresponds must have a CLLI that matches. The tuple that corresponds must have field ANTYPE entered as AIN or STND. The system blocks deletion of a tuple in table DRMUSERS if there is a reference to table DRMUSERS in table AINANNS.

Note: For Send_To_Resource routing to tones, make sure you know the ID the tones use in table AINANNS. You cannot enter a custom announcement ID that uses the same ID the tones use in table AINANNS.

Recorded Announcements Enhancements (continued)

The routing behavior for Send_To_Resource appears in the following table.

AINANNS datafill and Send_To_Resource routing behavior

Table AINANNS datafill	Send_To_Resource in response	Send_To_Resource in conversation
Custom announcement	Play a custom announcement.	Play a custom announcement.
Standard announcement	Play the standard announcement.	Send the call to treatment.
Nothing datafilled for the external ID	Send the call to AINF treatment unless the ID maps to a tone the system supports as terminating.	Send the call to AINF treatment unless the ID maps to a tone the system supports as non-terminating.

Note: Use standard announcements only in the Send_To_Resource response package.

Datafill for Recorded Announcements Enhancements for table AINANNS appear in the following table. The fields that apply to Recorded

Recorded Announcements Enhancements (continued)

Announcements Enhancements appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table AINANNS

Field	Subfield or refinement	Entry	Explanation and action
KEY		1 to 32 767	<p>Key for AIN announcement identification. This field is the announcement message identifier received from the SCP in a response operation.</p> <p>Note: The table editor allows values in the range 1 to 65 535. Only the range 1 to 32 767 is valid for AIN Essentials.</p> <p>There is no limit on datafill order. You can enter data into ranges such that the table is not contiguous. Contiguous datafill uses less memory. The table software dynamically allocates memory in segments. A segment contains enough memory to support 128 consecutive keys.</p>
CLLI		alphanumeric (1 to 16 characters)	<p>Common local language identifier. This field is the common language name of the announcement group, that appears in tables CLLI and ANNS.</p>
ANNNUM		1 to 255	<p>Announcement number. This field represents an announcement member as entered in table DRMUSERS.</p> <p>For legacy agents, the CLLI and ANNNUM fields can specify any announcement table DRMUSERS defines. In this event, table DRMUSERS is part of group AIN in table ANNS.</p> <p>For GSF agents, the CLLI and ANNNUM fields can specify any announcement table DRMUSERS defines. In this event, table DRMUSERS is part of group STND in table ANNS.</p>

Datafill example for table AINANNS

Sample datafill for Recorded Announcements Enhancements in table AINANNS appears in the following example. In the first three tuples, legacy AIN announcement identifiers 25, 76, and 100 map to internal customized announcements. The CLLI value AINPHRASES1, from table ANNS, and

Recorded Announcements Enhancements (end)

announcement numbers 1, 2, and 3 represent internal customized announcements.

In the last tuple, STND announcement identifier 4 maps to an announcement CLLI BLDN (from table ANNS) and standard announcement number 1 represent.

MAP example for table AINANNS

KEY	CLLI	ANNNUM
25	AINPHRASES1	1
76	AINPHRASES1	2
100	AINPHRASES1	3
4	BLDN	1

Tools for verifying translations

Recorded Announcements Enhancements does not use TRAVER.

SERVORD

Recorded Announcements Enhancements does not use SERVORD.

5 How to enter data in AIN Essentials Message Handling

This chapter describes the datafill required to implement the AIN Essentials Message Handling.

The module provides datafill procedures for the following capabilities:

- Message Handler
- Remote Database Interfaces.

Message Handler and Remote Database Interfaces

Order codes

SOC option: AIN00002

Release applicability

NA008 and later versions

Requirements

Message Handler and Remote Database Interfaces does not have requirements.

Description

This module contains Message Handler Application Interface and Generic RDB Interface Package. This module contains RDB Enhancements for Conversational Messaging. Communication with remote databases in Advanced Intelligent Network (AIN) Essentials applications requires this module.

A call that encounters a trigger at a point in call processing activates the AIN utility processor. The trigger event processor indicates that a query must launch to the SCP. The AIN generic message handler provides an internal software interface and message handling ability. This ability occurs between the different AIN Essentials applications and encoders and decoders for a specified market. The AIN generic message handler uses the appropriate transport mechanism to route the AIN message.

Generic RDB Interface Package provides a generic data communication interface for the AIN applications. The AIN applications use this interface to request data from a remote database. The AIN applications use this interface to repackage the current remote database platform. This event makes the platform available to all product lines. The Generic RDB Interface Package does not have datafill.

The RDB Enhancements for Conversational Messaging provides the transaction ID management and timing facilities. The AIN generic message handler uses these facilities.

Operation

The Message Handler Application Interface feature provides the internal software interface part of the AIN SSP generic message handler. The feature allows the separation of applications from messaging protocols and transport mechanisms. This generic interface provides a common software base between different switching markets. This common software base allows for

Message Handler and Remote Database Interfaces (continued)

effective software maintenance. This base minimizes development costs for new applications and maximizes software reuse in applications.

In the past, applications required different remote database driver interfaces for each protocol and transport combination. The AIN remote database driver can handle multiple transport mechanisms. The AIN remote database can route messages to remote databases with the appropriate protocol. With Generic RDB Interface Package, the transaction ability application part (TCAP) message protocol is supported. This package uses the signaling connection control part (SCCP) transport mechanism to provide this support.

This condition allows for the separation of applications from messaging protocols and transport mechanisms. Applications inform the remote database driver what protocol to use for messaging to the remote database. The message encoding and decoding, and the transport mechanisms that relay messages are now transparent to the application. This transparency creates a generic interface that provides a common software base for different switching markets.

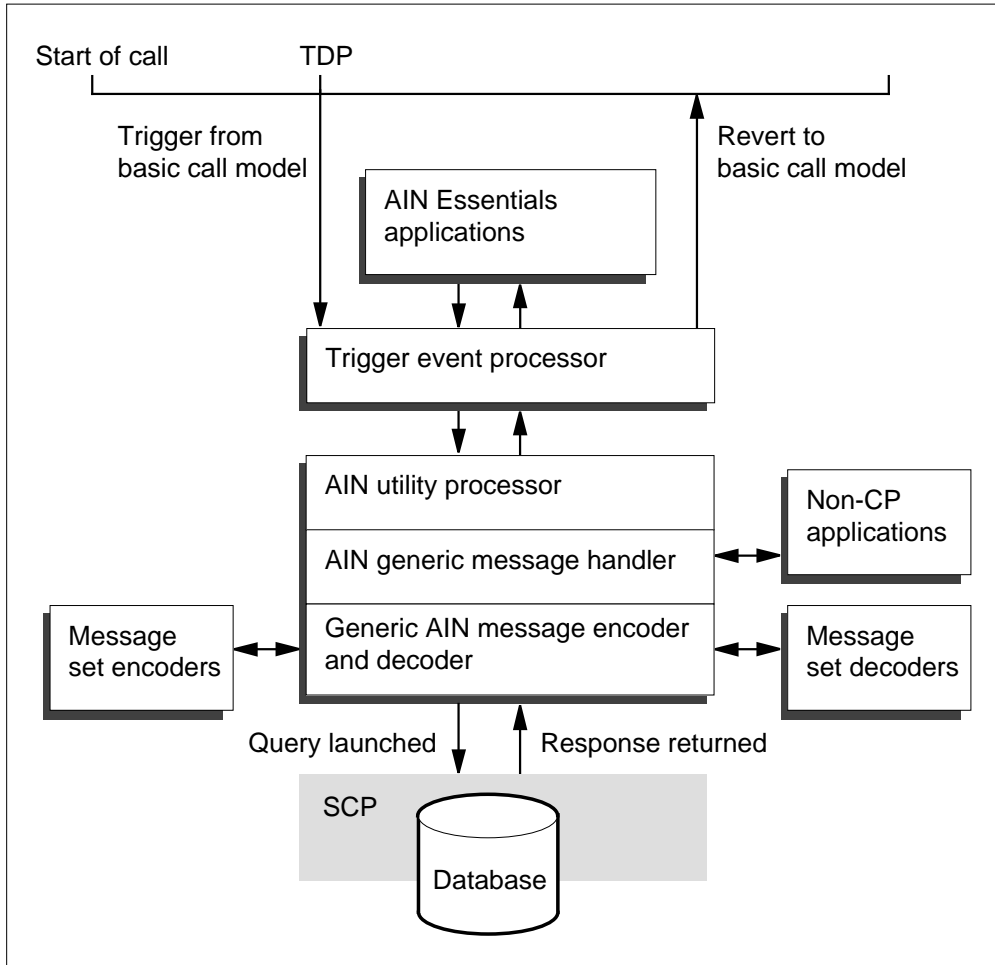
The transaction ID facilities the TCAP monitor provides handles the transaction ID management. The system adds a TCAP application tuple to table TCAPTRID to allocate transaction ID for the AIN application. Table TCAPTRID specifies the maximum number of transaction ID available to a specified TCAP application. Table TCAPTRID specifies the number of transaction ID for the TCAP AIN application. This number is the total transaction ID required for all AIN applications. The AIN generic message handler uses the TCAP monitor timing facilities.

Prior to RDB Enhancements for Conversational Messaging, 820 transaction ID of all types were allowed in the DMS switch. The RDB Enhancements for Conversational Messaging enhances the allocation of the transaction ID. This action occurs to allow the system to allocate a greater number of transactions ID. The system creates an optional office parameter, MAX_NO_OF_TRANS_ID, to indicate the maximum number of transaction ID allowed for each switch. With the optional parameter in the switch, the maximum number of transaction ID defaults to 4096.

The relationship between different AIN Essentials applications, the AIN generic message handler and SCP database appears in the following figure.

Message Handler and Remote Database Interfaces (continued)

AIN Essentials message handling



Translations table flow

Message Handler Application Interface does not affect translations table flow.

Limits

The following limits apply to Message Handler and Remote Database Interfaces:

- The TCAP message protocol that uses the SCCP transport mechanism is supported.
- When MAX_NO_OF_TRANS_ID is in the switch, the default number of transaction ID is 4096. The RDB Enhancements for Conversational Messaging provides this office parameter.
- Office parameter MAX_NO_OF_TRANS_ID can have a maximum value of 16000. Each transaction ID has an associated 50 word data store

Message Handler and Remote Database Interfaces (continued)

requirement. Each application must determine the number of transaction ID required.

- The total number of transaction ID entered in table TCAPTRID cannot exceed the number specified by office parameter MAX_NO_OF_TRANS_ID.
- The allocation of the store of table TCAPTRID is now continuously adjusted. The store allocation or deallocation occurs when the addition, deletion or modification of tuple TCAPTRID occurs. Because of the requirement of other resources, the system needs a cold restart or reload restart. The system needs these restarts when you modify the table. Removal of the restart requirement does not occur in RDB Enhancements for Conversational Messaging.

Interactions

Refer to *Advanced Intelligent Network 0.1 Feature Interactions*, 297-5161-107.

Activation/deactivation by the end user

Message Handler and Remote Database Interfaces does not require activation or deactivation by the end user.

Billing

Message Handler and Remote Database Interfaces does not affect billing.

Station Message Detail Recording

Message Handler and Remote Database Interfaces does not affect Station Message Detail Recording.

Message Handler and Remote Database Interfaces (continued)

Datafilling office parameters

The office parameters for Message Handler and Remote Database Interfaces appear in the following table. Refer to *Office Parameters Reference Manual* for more information about office parameters

Office parameters by Message Handler and Remote Database Interfaces

Table name	Parameter name	Explanation and action
OFCENG	MAX_NO_OF_TRANS_ID	<p>Parameter MAX_NO_OF_TRANS_ID specifies the maximum number of transaction ID that a DMS switch can allocate.</p> <p>Each transaction ID has an associated 50 words of data store. The RDB Enhancements for Conversational Messaging enhances the store allocation of table TCAPTRID. The RDB Enhancements for Conversational Messaging allows the allocation of a greater number of transaction ID. The total transaction ID that you enter in this table determines the data store required for table TCAPTRID. The total number of transaction ID entered in this table must not exceed the value of this parameter.</p> <p>The range of values is 0 to 16000. The default value is 4096 when AIN Essentials is in the office.</p>

Datafill sequence

The tables that require datafill to implement Message Handler and Remote Database Interfaces appear in the following table. The tables appear in the correct entry order.

Datafill requirements for Message Handler and Remote Database Interfaces (Sheet 1 of 2)

Table	Purpose of table
C7NETSSN	The CCS7 Network Subsystem table provides the set of remote point code and subsystems at the remote point codes.
C7LOCSSN	The CCS7 Local Subsystem table makes the subsystem name AIN available.

Message Handler and Remote Database Interfaces (continued)

Datafill requirements for Message Handler and Remote Database Interfaces (Sheet 2 of 2)

Table	Purpose of table
C7GTTYPE	The CCS7 Global Title Translation Type table makes the GTT identifier available.
TCAPTRID	Enter the application name AIN in TCAP Transaction ID table field TCAPAPPL. Application AIN specifies the number of transaction ID allocated for AIN calls.

Datafilling table C7NETSSN

Table C7NETSSN depends on the C7RTESET table. Enter each point code name in the C7RTESET table before you enter data into this table.

Enter replicated point codes in C7NETSSN with a subsystem entry that corresponds. Enter point code names in the ADJTRANSNODES or PCNAMES lists in table C7NETSSN.

Table C7NETSSN provides the set of remote CCS7 nodes and subsystems at the remote nodes where the SCCP routes messages. The remote nodes can be an SSP, STP, or SCP. A subsystem is an application that uses the CCS7 network through the SCCP layer.

This table has a one-part key, the point code name, common language location identifier (CLLI). For each point code, a list of subsystem names and the numbers located at the point code are specified.

Datafill for Message Handler and Remote Database Interfaces for table C7NETSSN appears in the following table. The fields that apply to Message Handler and Remote Database Interfaces appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table C7NETSSN

Field	Subfield or refinement	Entry	Explanation and action
PCNAME		alphanumeric (1 to 16 characters)	Point code name.
SSNAMES		see subfields	Subsystem names. This field contains subfields SSNAME and SSNUMBER.
	SSNAME	AIN01	Subsystem name.
	SSNUMBER	2 to 255	Subsystem number.

Message Handler and Remote Database Interfaces (continued)

Datafill example for table C7NETSSN

Sample datafill for table C7NETSSN appears in the following example. In the example, the subsystem name SCP1 is assigned. The AIN Essentials with subsystem number 120 associate with the point code name SCP1.

MAP example for table C7NETSSN

PCNAME	SSNAMES
SCP1	(AIN01 120)\$

Datafilling table C7LOCSSN

The C7LOCSSN table provides information about each local subsystem. Table C7LOCSSN depends on the C7NETSSN table.

Datafill for Message Handler and Remote Database Interfaces for table C7LOCSSN appears in the following table. The fields that apply to Message Handler and Remote Database Interfaces appear in this table. See the data schema section of this document for a description of the other fields.



WARNING

This warning applies when your office has active MSB7. When you have an active MSB7 with the required LPP for AIN Essentials, do not enter data in table C7LOCSSN. Remove the MSB7. When you do not remove the MSB7 and you enter data for AIN Essentials, the MSB7 can go system busy (SYSB). The MSB7 does not always recover.

Message Handler and Remote Database Interfaces (continued)

Datafilling table C7LOCSSN

Field	Subfield or refinement	Entry	Explanation and action
SSNAME		AIN01	Subsystem name. Enter the name of the local subsystem.
SSNUMBER		2 to 255	Subsystem number.

Datafill example for table C7LOCSSN

Sample datafill for table C7LOCSSN appears in the following example. In the example, the subsystem AIN01 is defined.

MAP example for table C7LOCSSN

SSNAME	SSNUMBER	MININST	REPLINFO	TFMI
				PCNAMES
AIN01	120	1	N	N
				\$

Datafillingtable C7GTTYPE

Datafill for Message Handler and Remote Database Interfaces for table C7GTTYPE appears in the following table. Table C7GTTYPE defines the GTT names. The AIN services require a new GTT name and GTT identifier.

Message Handler and Remote Database Interfaces (continued)

The fields that apply to Message Handler and Remote Database Interfaces appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table C7GTTYPE

Field	Subfield or refinement	Entry	Explanation and action
GTTNAME		alphanumeric (1 to 16 characters)	Global title translation name. Enter the GTT name.
GTTID		alphanumeric (1 to 16 characters)	Global title translation identifier. This field allows you to enter more than one entry for AIN. This field allows you to address an SCP or STP by global title digits.

Datafill example for table C7GTTYPE

Sample datafill for table C7GTTYPE appears in the following example. In the example, the GTT name AIN and GTT identifier CNAMDGT are created.

MAP example for table C7GTTYPE

GTTNAME	GTTYP	GTTID
AINGTT1	ANSI7 3	(CNAMDGT)\$

Datafillingtable TCAPTRID

Table TCAPTRID defines the number of transaction ID each network application requires. Enter data in this table to define the number of ID required to support AIN calls. The system requires a COLD or RELOAD restart to make a change in this table.

Datafill for Message Handler and Remote Database Interfaces for table TCAPTRID appears in the following table. The fields that apply to Message

Message Handler and Remote Database Interfaces (continued)

Handler and Remote Database Interfaces appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table TCAPTRID (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
TCAPAPPL		AIN	Transaction Capability Application Part application. Enter the name of the application that requires transaction ID.
NUMTRIDS		0 to 16000	<p>Number of transaction identifiers. The value must be equal to the value in field NUMCOMPS.</p> <p>The sum of all field NUMTRIDS values in table TCAPTRID cannot exceed 16000. For example, another application has a field NUMTRIDS value of 1000. The AIN Essentials can have a maximum of 15000.</p> <p>Use the following formula to calculate the entry value:</p> <p>Note: The peak rate values determine the rates in this formula.</p> <p>$(N(\text{AIN}) \times P1 \times R1) + (\text{AIN queries without Send_To_Resource message})$</p> <p>$(N(\text{AIN}) \times P2 \times R2) + (\text{AIN queries with Send_To_Resource message})$</p> <p>$(N(\text{MFC}) + (\text{Monitor_For_Change requests}))$</p> <p>11 + (Update_Request)</p> <p>50 (Errors and extra transaction IDs)</p>

Message Handler and Remote Database Interfaces (continued)

Datafilling table TCAPTRID (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
NUMTRIDS (continued)			<p>where:</p> <p>N(AIN) = number of AIN queries per second.</p> <p>N(MFC) = number of active Monitor_For_Change requests.</p> <p>P1 = percentage of AIN queries that do not receive a Send_To_Resource message with a collect digits option or an SCP routing response in the nominal response time.</p> <p>R1 = nominal SCP response time in seconds (response time is 3 s). This includes network delays, time spent at signaling transfer points and at the SCP. The nominal SSP time-out value is set in the AIN_T1_TIMER parameter in table OFCENG. The default value for this parameter is 3 s.</p>
NUMTRIDS (continued)			<p>P2 = percentage of AIN calls that receive a Send_To_Resource message with a collect digits option.</p> <p>R2 = average time to receive a Send_To_Resource message with a collect digits option from the SCP, play the announcement and collect the digits. The average time to receive the SCP response by the collected digits.</p> <p>11 = number of outstanding Update_Request messages. This is the value of the Update_Request mailbox size (10) + 1.</p> <p>50 = number of extra transaction IDs. This includes calls that do not receive a response in the nominal SCP response time. This includes calls the caller abandons before the response arrives. The extra transaction IDs include the IDs assigned for overhead. These IDs are unidirectional error messages, reject messages and abort messages.</p>
NUMCOMPS		0 to 16000	Number of component IDs. The value should be equal to the value in field NUMTRIDS.

Message Handler and Remote Database Interfaces (end)

Datafill example for table TCAPTRID

Sample datafill for table TCAPTRID appears in the following example. In the example, the entry of field NUMTRIDS and NUMCOMPS to allocate 410 transaction ID and component IDs occurs. The allocation occurs to the AIN subsystem for AIN calls.

MAP example for table TCAPTRID

TCAPAPPL	NUMTRIDS	NUMCOMPS
AIN	410	410

Tools for verifying translations

Message Handler and Remote Database Interfaces does not use tools for verifying translations.

SERVORD

Message Handler and Remote Database Interfaces does not use SERVORD.

6 How to enter data in AIN Essentials Trigger Processing

This chapter describes the datafill required to implement the AIN 0.1 trigger processing in the service switching point (SSP).

The module provides datafill procedures for the following capabilities:

- advanced intelligent network (AIN) SSP Base Trigger Tables
- Trigger Processing II
- AIN Essentials TRAVER.

AIN Essentials TRAVER

Ordering codes

SOC options: AIN00002, AIN00006, AIN00007, AIN00009, AIN00010, and AIN00015

Release applicability

NA008 and later versions

Requirements

The AIN Essentials TRAVER does not have requirements.

Description

The AIN Essentials TRAVER improves translation verification (TRAVER) to handle AIN-specified information in an AIN office.

The TRAVER is a low level diagnostics tool that simulates a call from a user-specific origination to a user-specified destination. The TRAVER examines and displays translation and routing data for a single call leg and verifies the translation table.

Enhancements to TRAVER in this activity apply to Translation Verification (TRNSLVF). Command TRNSLVF performs translation verification on an incoming or two-way trunk. The trunks are posted on the trunk test position (TTP) access level of the MAP display.

Operation

The AIN Essentials TRAVER enhances TRAVER output to display AIN-specific information. If the office is an AIN office, TRAVER displays AIN-specific translation, routing, and trigger subscription information. The activity of AIN in the office does not determine if TRAVER displays information. For an inactive AIN office, the information that appears allows the TRAVER to analyze the trigger detection point (TDP) flow. The TRAVER analyzes the TDP flow after data is entered in AIN tables. The TRAVER analyzes TDP flow before the office becomes an active AIN office. If the office is not an AIN office, TRAVER does not display AIN-specific information.

When each TDP is encountered, TRAVER determines if the important agent subscribes to the TDP. The important agent is the originating agent for every TDP except the Termination Attempt TDP. For the Termination Attempt TDP, the important agent is the terminating agent. One person, groups, or offices for an originating agent can subscribe to a TDP. Subscription is directory number (DN) based for a terminating agent.

AIN Essentials TRAVER (continued)

The following AIN-specified information appears for each TDP:

- If the important agent does not subscribe to the TDP, TRAVER displays a message and continues to process.
- If the important agent subscribes to the TDP, TRAVER attempts to display a tuple. The TRAVER attempts to display the tuple for each trigger for that TDP from table TRIGGRP.
- If a trigger is not active, TRAVER displays a message and continues to process for the next trigger.
- If trigger criteria are not met in a TDP, TRAVER displays a message and continues to normally process.
- If a trigger is active and the standards are met, TRAVER displays a message. This message indicates that a successful match is available and that a database query results. The TRAVER displays the associated tuple from table TRIGINFO and stops processing the simulated call.
- If AIN is not active for that office, TRAVER does not stop to process the simulated call when a trigger criterion is met. The TRAVER displays a message that indicates that the standard is not met because AIN is not active.
- For a TDP that has triggers assigned on different bases, the system handles trigger priority in the following order:
 - Individual-based trigger
 - Group-based trigger
 - Office-based trigger

The AIN Essentials TRAVER can simulate the processing of specified types of response messages that come from the SCP/adjunct. These responses are Forward_Call, Analyze_Route, Continue, and Authorize_Termination. The system adds the AIN response (AINRES) option to the TRAVER command line. The system adds this option to simulate the processing of these responses that the service control point (SCP) returns.

The responses and actions that TRAVER supports appear in the following list:

- In the Forward_Call response, the service switching point (SSP) resumes call processing. The SSP resumes call processing at the beginning of the analyzing information point in call. The SSP uses the data of the associated redirecting party to resume call processing. To simulate this process with TRAVER, the originating agent must be input through the DN of the redirecting party. The TRAVER does not display the Originated Attempt and Information Collected TDP. The TRAVER can display this

AIN Essentials TRAVER (continued)

TDP to reach the analyzing information point in call, and resume normal call processing.

- The Analyze_Route response simulates the Analyze_Route type of response. The TRAVER functions like the Forward Call option. These options do not display the Origination Attempt and Information Collected TDPs. The SSP routes a call when calls receive a response. The TRAVER command can use options N, CDN, NA, and TNS to simulate the correct response from the database.
- The Continue response instructs the SSP to process the next applicable trigger of the originating facility at the Information Analyzed TDP. The TRAVER skips the display of the Origination Attempt and Information Collected TDP to reach the Information Analyzed TDP. The TRAVER displays the triggers that associate with the originating facility if the trigger standards are met or not. The TRAVER resumes normal processing.
- The Authorize_Termination response instructs the SSP to continue processing at the Authorize_Termination point in call. The TRAVER continues after triggering at the Termination Attempt. The TRAVER displays tables that help the system route and bill calls that receive an Authorize_Termination response.

Translations table flow

The AIN Essentials TRAVER does not affect translations table flow.

Limits

The following limits apply to the AIN Essentials TRAVER:

- The TRAVER does not provide the ability to read a series of calling and called party number groups from a file.
- The TRAVER does not support the Network Busy TDP standard. When the standard is met, TRAVER displays a message. This message indicates that a trigger occurs if the network is busy.
- The TRAVER supports the Automatic Flexible Routing (AFR) trigger at the Network Busy TDP. The system must encounter this trigger in the route list to appear.
- The TRAVER does not support virtual DN as originating agents.
- The TRAVER does not check if a vertical service code (VSC) is used with the Continue response. The user must check for this problem.
- A user can examine the translations used to route after the calls receive an AIN response. The user must use options CDN and TNS for TRAVER to examine these translations. Options CDN and TNS are not available for

AIN Essentials TRAYER (continued)

TRNSLVF. The functionality of TRNSLVF is restricted. To examine these exceptions, the user must use the TRAYER command.

- A call can originate from a PRA trunk. The system routes this call over the public network the customer group. Information about the originator appears even if this information is not important to the call. This condition also occurs when a user dials 9+ from an integrated business network (IBN) agent.
- An AFR selector can be after a terminating selector like the T, DN, and CND selector. If this condition occurs, the TRAYER TRACE part displays the routes in the routelist. This part displays the routes even when the route after the terminating selector is never hit. For the AFR, TRAYER TRACE displays a message that the call triggers if the network is busy. The NOTRACE part does not display the message. This part displays the routes that the call attempts.
- A DISA DN is virtual and does not have associated line equipment. Translations verification with the TRAYER command that uses a DISA DN as the originator is not possible.
- The system does not support TRAYER from a PODP number to a destination. A physical line can simulate the TRAYER result from a PODP number to the terminator. This physical line shares the same line attributes as the PODP number.
- The TRAYER cannot determine if the system supports a trigger for a specified agent. The TRAYER can display a trunk that encounters a trigger that the system does not support. The trunk encounters this trigger even when the system does not support the trigger for that trunk.

Interactions

Refer to *Advanced Intelligent Network 0.1 Feature Interactions*, 297-5161-107.

Activation/deactivation by the end user

The AIN Essentials TRAYER does not require activation or deactivation by the end user.

Billing

The AIN Essentials TRAYER does not affect billing.

Station Message Detail Recording

The AIN Essentials TRAYER does not affect Station Message Detail Recording.

AIN Essentials TRAVER (continued)

Datafilling office parameters

The AIN Essentials TRAVER does not affect office parameters.

Tools for verifying translations

The TRNSLVF command at the MAP TTP level performs TRAVER on an incoming or two-way posted trunk.

The number services code (NSC) option is added to the TRAVER command line for E800 use. A user cannot use the AINRES and NSC options in the same TRAVER command line. The TRAVER displays a message which states that the two options are not compatible. The TRAVER bypasses the ORIGATT and INFOCOL TDP when a user uses the NSC option. The TRAVER processing bypasses the AFR trigger after E800 processing when a user uses the NSC option. The TRAVER does not process the trigger when the calling party specifies the OFFHKIMM trigger and a user uses the NSC option. The calling party specifies the trigger at the ORIGATT TDP. The calling party is specified on the TRAVER command line. The TRAVER displays a message for E800 when called digits are not specified. The TRAVER displays a message when a user must use a complete number in the command line.

The NSC option does not support trunk originations. Trunks can subscribe to AIN triggers at the Information Collected TDP. The TRAVER does not suppress the TDP during TRAVER processing for trunk originations. The TRAVER processing bypasses the AFR trigger when a user uses the NSC option.

The AINRES option is added to the TRAVER command line. This option simulates the processing of Forward_Call, Analyze_Route, Continue, and Authorize_Termination responses that the SCP returns. The AINRES option has two parameters: version and response type. Version must have a value of R01. The response types are FC, AR, CONT, and AT.

Translation verification of a call with AIN and E800 processing must occur in stages.

The TRAVER displays subscription messages for POTS, IBN, and RES lines. This action applies to originating triggers.

The TRAVER does not display a message when the originator is an AIN Essentials supported or an AIN Essentials TERMATT supported.

The TRAVER displays a message when the originator is an AIN Essentials TERMATT supported agent.

AIN Essentials TRAVER (continued)

The TRAVER displays a message when the TRAVER encounters triggers that do not apply to the subscriber. The user must choose the AINDN option for subscription to a trigger group that contains triggers that apply to DN. A user must choose the AIN option for subscription to a trigger group that contains triggers. These triggers apply to line agent, trunk agent, customer group, or office.

The TRAVER BILLNO option simulates the digits of the ChargeNumber parameter from the SCP if the AINRES option is present. The TRAVER BILLNO option simulates the digits if the response is AR (Analyze_Route) or FC (Forward_Call). These responses contain the ChargeNumber parameter, or the automatic number identification (ANI) digits for MF trunks. These responses also contain calling party number (CPN) digits for PRI trunks, and ISDNUP charge number digits for ISUP trunks. When the number in the BILLNO option is 12 or less digits, the system deletes one or two leading digits. The system deletes these digits to obtain a correct number. A message appears when the option has more than 13 digits and the system ignores the digits.

A coin originator can encounter the PODP trigger and the system can receive an Analyze_Route message from the SCP. Under these conditions, the system does not perform class of service and local area screening on the post-query leg of the call. The system can use the AINRES option to perform a TRAVER of the post-query leg. When the system performs this TRAVER, class of service and local area screening appear in the trace output and affect the TRAVER result. This information appears in the output even when the information does not affect call processing.

The system can apply equal access (EA) translation to AIN Essentials TRK-FGD Interworking call designs. Table TRKLATA is indexed with the originating trunk common language location identifier (CLLI) and the ChargeNumber parameter. The service control point (SCP) response or the automatic number identification (ANI) can provide the ChargeNumber parameter. When the system finds a tuple in table TRKLATA, the system uses the corresponding local access and transport area (LATA) to check tables LATA_XLA and OCCINFO.

Note: This TRAVER functionality works when the AINRES option is present on the command line.

The V selector or RTEVFG ALL option encounters and displays post virtual facility group (VFG) TDPs and associated triggers. The system can use the VFGs to change the line attribute of a call to provide a different way to route the call.

AIN Essentials TRAVER (continued)

The TRAVER supports SC LEAS with the AINCHG option for post-query processing. The TRAVER uses table TRKLATA, DNPIC, or DNLPIC and the billed DN to display post-query processing.

The TRAVER displays the translation as if the carrier portability code (CPC) escape criteria is always used in table TRIGGRP. The state of SOC option AIN00025 does not determine if the TRAVER displays the translation. New messages do not appear because of the ESCEA, ESCOP, and ESCDN CPC escape standards.

A single TRAVER command cannot simulate the two stages of translation at the same time for a call on an incoming MF IT trunk. The multifrequency (MF) intertoll (IT) trunk uses feature group D (FGD) signaling, and has an SSP selector specified in subtable STDPRT of table STDPRTCT. A TRAVER command must simulate each stage of translations separately through the TRAVER utility. The first stage of translations that translates the 0ZZXXX(X) digits requires a TRAVER command. The second stage of translations, where translations translates the dialed digits, requires a second TRAVER command.

The operating company can use the TRAVER utility for 0+ calls on incoming MF IT trunks. These trunks have FGD signaling and a service switching point (SSP) selector. The SSP is specified in subtable STDPRT of table STDPRTCT. The operating company can omit the 0 prefix and specify the 10-digit dialed number that remains. This method simulates an 0+ call when the appropriate datafill is present, and call processing includes this feature enhancement. With this feature enhancement, call processing removes the leading 0 from 0+ calls on incoming MF IT trunks. These MF IT trunks use FGD signaling and have an SSP selector that subtable STDPRT of table STDPRTCT specifies.

The TRAVER simulation omits the 0 prefix and specifies the 10-digit dialed number that remains. The datafill of table STDPRT must designate table HNPACONT for additional translation. The datafill are for the dialed numbering plan area (NPA) value from an MF IT trunk . This state is the default when datafill is not present for the dialed NPA.

Note: The table STDPRT for the dialed NPA value from an MF IT trunk must designate table HNPACONT for additional translation. If the table STDPRT does not designate table HNPACONT, the information from the TRAVER simulation is not correct.

The MF inter-toll trunk translation enhancement continues translation in table HNPACONT for 0+ calls on incoming MF IT trunks. These trunks use FGD signaling and have an SSP selector specified in subtable STDPRT of table

AIN Essentials TRAVER (continued)

STDPRTCT. Tables HNPACONT and HNPACODE must provide the appropriate translation results for the 10-digit dialed numbers that remain.

Two conditions are present for the system to translate for 10-digit dialed numbers calls. Tables HNPACONT and HNPACODE datafill determine how the system translates the calls. The conditions are:

- The dialed digits match the digit trigger criteria. Datafill for the dialed digits in tables HNPACONT and HNPACODE must be correct (no treatment) to reach the trigger processing. When the system sends a query to the SCP, the SCP response determines how the system translates the call.
- The dialed digits do not match the digit trigger criteria and call processing follows the switch translations. Tables HNPACONT and HNPACODE datafill determine how the system translates the call.

Refer to the following documents for examples of TRAVER on AIN calls:

- *Advanced Intelligent Network 0.1 Cookbook*, 297-5161-352
- *Advanced Intelligent Network 0.1 Response Translation Guide*, 297-5161-353

The output from TRAVER, that occur when the system uses the output to verify AIN Essentials TRAVER, appear in the following examples.

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER IBN voice line origination through the access code to public environment

```
>traver l 7224336 9411 b
TABLE KSETLINE
HOST 00 1 08 18 1 DN Y 7224336 COMKODAK 0 0 613 $
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE KSETFEAT
TUPLE NOT FOUND
TABLE CUSTSTN
TUPLE NOT FOUND
TABLE OFCVAR
AIN_OFFICE_TRIGGRP N11DATA
AIN Orig Attempt TDP: no subscribed trigger.
TABLE NCOS
COMKODAK 0 0 0 KDK0 ( OHQ 0 TONE_OHQ) ( CBQ 0 3 N 2)$
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND DIGCOL
COMKODAK PXDK CXDK FTCOMM 0 KDK
TABLE DIGCOL
KDK 9 POTS Y
NCOS PRELIM XLA name is NIL. Go to next XLA name.
TABLE IBNXLA: XLANAME PXDK
TUPLE NOT FOUND
Default is to go to next XLA name.
TABLE IBNXLA: XLANAME CXDK
CXDK 9 NET N Y N 1 Y POTS Y N DOD N 80 NONE $
TABLE DIGCOL
POTS specified: POTS digit collection
TABLE LINEATTR
80 IBN NONE NT FR01 0 613 PKDK L613 TSPS 0 NIL NILSFC NILLATA 0 NIL NIL
00 N $LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE STDPRTCT
PKDK ( 1) ( 0) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
. 411 411 T OA 0 OFRT 185 3 3 NONE
AIN Info Collected TDP: no subscribed trigger.
TABLE TRIGGRP
N11DATA INFOANAL
. N11 ( CT CMDATA) ( DG N11DIG)$ NIL
```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER IBN voice line origination through the access code to public environment

```
Trigger R01 N11 is applicable to office
. . TABLE TRIGDIG
. . N11DIG N11 411 N11 EVENT TCAP R01 SS7 AINJAZZ DFLT $
. . . TABLE C7GTTYTYPE
. . . AINJAZZ ANSI7 3 $
. . . TABLE C7GTT
. . . AINJAZZ 41110000000 4110000000 SSNONLY (AINTTEST) $
AIN Info Analyzed TDP: trigger criteria met, querying the database.
Use the AINRES option for further information

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++

AIN Info Analyzed TDP: trigger criteria met, querying the database.
Use the AINRES option for further information

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++
```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER IBN data line origination using the access code to public network

```
>traver I 7224336 9411 bc 64kdata b
Warning: Routing characteristics are present.
  Originator must be able to send in
  characteristics specified.
TABLE KSETLINE
HOST 00 1 08 18 1 DN Y 7224336 COMKODAK 0 0 613 $
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE KSETFEAT
TUPLE NOT FOUND
TABLE CUSTSTN
TUPLE NOT FOUND
TABLE OFCVAR
AIN_OFFICE_TRIGGRP N11DATA
AIN Orig Attempt TDP: no subscribed trigger.
TABLE NCOS
COMKODAK 0 0 0 KDK0 ( OHQ 0 TONE_OHQ) ( CBQ 0 3 N 2)$
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND DIGCOL
COMKODAK PXDK CXDK FTCOMM 0 KDK
TABLE DIGCOL
KDK 9 POTS Y
NCOS PRELIM XLA name is NIL. Go to next XLA name.
TABLE IBNXLA: XLANAME PXDK
TUPLE NOT FOUND
Default is to go to next XLA name.
TABLE IBNXLA: XLANAME
CXDKCXDK 9 NET N Y N 1 Y POTS Y N DOD N 80 NONE $
TABLE DIGCOL
POTS specified: POTS digit collection
TABLE LINEATTR
80 IBN NONE NT FR01 0 613 PKDK L613 TSPS 0 NIL NILSFC NILLATA 0 NIL NIL
00 N $
  LCABILL OFF - BILLING DONE ON BASIS OF CALL TYPE
TABLE STDPRTCTP
KDK ( 1) ( 0) 0
  . SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE BILLING. CALL TYPE
DEFAULT IS NP. PLEASE REFER TO DOCUMENTATION
```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER
IBN data line origination through the access code to public network

```
. . 411 411 T OA 0 OFRT 185 3 3 NONEAIN Info Collected TDP: no
subscribed trigger
.TABLE TRIGGRP
N11DATA INFOANAL
. N11 ( CT CMDATA) ( DG N11DIG)$ NIL
Trigger R01 N11 is applicable to office
. . TABLE TRIGDIG
. . N11DIG N11 411 N11 EVENT TCAP R01 SS7 AINJAZZ DFLT $
. . . TABLE C7GTTTYPE
. . . AINJAZZ ANSI7 3 $
. . . TABLE C7GTT
. . . AINJAZZ 41110000000 4110000000 SSNONLY (AINTEST) $
AIN Info Analyzed TDP: trigger criteria met, querying the database.
Use the AINRES option for further information

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++

AIN Info Analyzed TDP: trigger criteria met, querying the database.
Use the AINRES option for further information

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++
```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER

Off-Hook Immediate trigger originating from a POTS line. The actual assignment of an AIN trigger to a POTS line causes a POTS-to-RES conversion

```
>traver I 7224011 n b
TABLE LINEATTR
0 1FR NONE NT FR01 0 613 P621 NLCA TSPS 10 NIL NILSFC LATA1 0 NIL NIL
00 N $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE DNATTRS
613 621 0000
(PUBLIC ( NAME ZEUS) )$ $
TABLE DNGRPS
TUPLE NOT FOUND
TABLE LENFEAT
HOST 00 0 07 04 S AIN AIN OHITRIG
TABLE OFCVAR
AIN_OFFICE_TRIGGRP NIL
TABLE TRIGGRP
OHITRIG ORIGATT
. OFFHKIMM $ AINSIM
Trigger R01 OFFHKIMM is applicable to individual POTS line.
Trigger R01 OFFHKIMM: Trigger is active.
(Use AINCI CHANGESTATE command to alter activation state.)
. . TABLE TRIGINFO
. . AINSIM EVENT TCAP R01 SS7 AINJAZZ DFLT $
. . . TABLE C7GTTYPE
. . . AINJAZZ ANSI7 3 $
. . . TABLE IBNFEAT
. . . TUPLE NOT FOUND
. . . TABLE C7GTT
. . . AINJAZZ 6137224011 6137224011 SSNONLY (AINTTEST) $
AIN Orig Attempt TDP: trigger criteria met, querying the database.
Use the AINRES option for further information

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++

AIN Orig Attempt TDP: trigger criteria met, querying the database.

AIN Orig Attempt TDP: trigger criteria met, querying the database.
Use the AINRES option for further information

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++
```


AIN Essentials TRAVER (continued)**TRAVER output example for AINSSP: AIN TRAVER**
Off-Hook Immediate trigger originating from an MDC line

```
>traver l 7224011 n b
TABLE IBNLINES
HOST 00 0 02 18 0 DT STN IBN 7224011 COMKODAK 0 0 613 $
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE IBNFEAT
HOST 00 0 02 18 0 AIN AIN OHITRIG
TABLE CUSTSTN
TUPLE NOT FOUND
TABLE OFCVAR
AIN_OFFICE_TRIGGRP NIL
TABLE TRIGGRP
OHITRIG ORIGATT
. OFFHKIMM $ AINSIM
Trigger R01 OFFHKIMM is applicable to individual IBN line
Trigger R01 OFFHKIMM: Trigger is active.
(Use AINCI CHANGESTATE command to alter activation state.)
. . TABLE TRIGINFO
. . AINSIM EVENT TCAP R01 SS7 AINJAZZ DFLT $
. . . TABLE C7GTTYPE
. . . AINJAZZ ANSI7 3 $
. . . TABLE IBNFEAT
. . . TUPLE NOT FOUND
. . . TABLE C7GTT
. . . AINJAZZ 6137224011 6137224011 SSNONLY (AINTTEST) $
AIN Orig Attempt TDP: trigger criteria met, querying the database.
Use the AINRES option for further information

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++

AIN Orig Attempt TDP: trigger criteria met, querying the database.
Use the AINRES option for further information

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++
```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER

Off-Hook Delay trigger originating from a POTS line. The assignment of an AIN trigger to a POTS line will cause a POTS-to-RES conversion.

```
>traver l 6210000 7273409 n b
TABLE LINEATTR
0 1FR NONE NT FR01 0 613 P621 NLCA TSPS 10 NIL NILSFC LATA1 0 NIL NIL 00
N$
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE DNATTRS
613 621 0000
(PUBLIC ( NAME ZEUS) )$ $
TABLE DNGRPS
TUPLE NOT FOUND
TABLE LENFEAT
HOST 00 0 07 04 S AIN AIN OHDTRIG
TABLE OFCVAR
AIN_OFFICE_TRIGGRP NIL
AIN Orig Attempt TDP: no subscribed trigger.
TABLE STDPRTCT
P621 ( 1) ( 65021) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
. 281 281 T NP 0 OFR2 1 3 10 NONE
TABLE TRIGGRP
OHDTRIG INFOCOL
. OFFHKDEL (ESC )$ AINSIM
Trigger R01 OFFHKDEL is applicable to individual POTS line.
Trigger R01 OFFHKDEL: Trigger is active.
(Use AINCI CHANGESTATE command to alter activation state.)
. . TABLE TRIGESC
. . TUPLE NOT FOUND
. . TABLE TRIGINFO
. . AINSIM EVENT TCAP R01 SS7 AINJAZZ DFLT $
. . . TABLE CGTTYPE
. . . AINJAZZ ANSI7 3 $
. . . TABLE LENFEAT
. . . TUPLE NOT FOUND
. . . TABLE C7GTT
. . . AINJAZZ 6136210000 6136210000 SSNONLY (AINTTEST) $
AIN Info Collected TDP: trigger criteria met, querying the database.
Use the AINRES option for further information
```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER

Off-Hook Delay trigger originating from a POTS line. The assignment of an AIN trigger to a POTS line causes a POTS-to-RES conversion.

```
+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++
```

```
AIN Info Collected TDP: trigger criteria met, querying the database.  
Use the AINRES option for further information
```

```
+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++
```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER Off-Hook Delay trigger originateing from an MDC line

```
>traver I 7224011 92810000 b
TABLE IBNLINES
HOST 00 0 02 18 0 DT STN IBN 7224011 COMKODAK 0 0 613 $
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE IBNFEAT
HOST 00 0 02 18 0 AIN AIN OHDTRIG
TABLE CUSTSTN
COMKODAK AIN AIN CUSTTRIG
TABLE OFCVAR
AIN_OFFICE_TRIGGRP NIL
AIN Orig Attempt TDP: no subscribed trigger.
TABLE NCOS
COMKODAK 0 0 0 KDK0 ( OHQ 0 TONE_OHQ) ( CBQ 0 3 N 2)$
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND DIGCOL
COMKODAK PXDK CXDK FTCOMM 0 KDK
TABLE DIGCOL
KDK 9 POTS Y
NCOS PRELIM XLA name is NIL. Go to next XLA name.
TABLE IBNXLA: XLANAME PXDK
TUPLE NOT FOUND
Default is to go to next XLA name.
TABLE IBNXLA: XLANAME CXDK
CXDK 9 NET N Y N 1 Y POTS Y N DOD N 80 NONE $
TABLE DIGCOL
POTS specified: POTS digit collection
TABLE LINEATTR
80 IBN NONE NT FR01 0 613 PKDK L613 TSPTS 0 NIL NILSFC NILLATA 0 NIL NIL
  00 N $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE STDPRTCT
PKDK ( 1) ( 65021) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
. 28 310 N NP 0 NA
. SUBTABLE AMAPRT
. KEY NOT FOUND
. DEFAULT VALUE IS: NONE OVRNONE N
```

AIN Essentials TRAVER (continued)**TRAVER output example for AIN Essentials TRAVER
Off-Hook Delay trigger originating from an MDC line**

```

TABLE HNPACONT
613 802 1 ( 227) ( 1) ( 84) ( 0) 0
. SUBTABLE HNPACODE
. 281 284 LRTE 800
TABLE TRIGGRP
OHDTRIG INFOCOL
. OFFHKDEL (ESC )$ AINSIM
Trigger R01 OFFHKDEL is applicable to individual IBN line.
Trigger R01 OFFHKDEL: Trigger is active.
(Use AINCI CHANGESTATE command to alter activation state.)
. . TABLE TRIGESC
. . TUPLE NOT FOUND
. . TABLE TRIGINFO
. . AINSIM EVENT TCAP R01 SS7 AINJAZZ DFLT $
. . . TABLE C7GTTYTYPE
. . . AINJAZZ ANSI7 3 $
. . . TABLE IBNFEAT
. . . TUPLE NOT FOUND
. . . TABLE C7GTT
. . . AINJAZZ 6137224011 6137224011 SSNONLY (AINTTEST) $
AIN Info Collected TDP: trigger criteria met, querying the database.
Use the AINRES option for further information

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++

AIN Info Collected TDP: trigger criteria met, querying the database.
Use the AINRES option for further information

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++

```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER Shared Interoffice Trunk trigger

```
>traver tr isupiteaic 088110 b
TABLE TRKGRP
ISUPITEAIC IT 63 ITTD NCRT IC NIL MIDL 613 E800 NSCR 613 000 N Y$
. .TABLE TRKAIN
. .ISUPITEAIC INTERTRIG
TABLE OFCVAR
AIN_OFFICE_TRIGGRP NIL
TABLE STDPRTCT
E800 ( 1) ( 0) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
. 088110 088110 SSP NP 6 6 NA
TABLE TRIGGRP
INTERTRIG INFOCOL
. INTEROFF ( DG INTERDIG)$ NIL
. . TABLE TRIGDIG
. . INTERDIG INTEROFF 088110 INTEROFF EVENT TCAP R01 SS7 AINJAZZ DFLT $
AIN Info Collected TDP: trigger criteria met, querying the database.
Use the AINRES option for further information

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++

AIN Info Collected TDP: trigger criteria met, querying the database.
Use the AINRES option for further information

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++
```

AIN Essentials TRAVER (continued)**TRAVER output example for AIN Essentials TRAVER
Public Office Dialing Plan 3 to 10 trigger**

```

>traver I 7225028 92132850000 b
TABLE KSETLINE
HOST 00 1 10 24 1 DN Y 7225028 COMKODAK 0 0 613 (3WC) (RAG) (MSB) (CFX)
(MWT) $
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE KSETFEAT
TUPLE NOT FOUND
TABLE CUSTSTN
TUPLE NOT FOUND
TABLE OFCVAR
AIN_OFFICE_TRIGGRP PODPTRIG
AIN Orig Attempt TDP: no subscribed trigger.
TABLE NCOS
COMKODAK 0 0 0 KDK0 ( OHQ 0 TONE_OHQ) ( CBQ 0 3 N 2)$
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND DIGCOL
COMKODAK PXDK CXDK FTCOMM 0 KDK
TABLE DIGCOL
KDK 9 POTS Y
NCOS PRELIM XLA name is NIL. Go to next XLA name.
TABLE IBNXLA: XLANAME PXDK
TUPLE NOT FOUND
Default is to go to next XLA name.
TABLE IBNXLA: XLANAME CXDK
CXDK 9 NET N Y N 1 Y POTS Y N DOD N 80 NONE $
TABLE DIGCOL
POTS specified: POTS digit collection
TABLE LINEATTR
80 IBN NONE NT FR01 0 613 PKDK L613 TSPS 0 NIL NILSFC NILLATA 0 NIL NIL
00 N $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE STDPRTCT
PKDK ( 1) ( 65021) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.

```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER Public Office Dialing Plan 3 to 10 trigger

```
. 231 2210 N NP 0 NA
. SUBTABLE AMAPRT
. KEY NOT FOUND
. DEFAULT VALUE IS: NONE OVRNONE N
TABLE HNPACONT
613 802 1 ( 212) ( 1) ( 84) ( 0) 0
. SUBTABLE HNPACODE
. 213 213 HNPA
. 285 285 LRTE 802
AIN Info Collected TDP: no subscribed trigger
TABLE TRIGGRP
PODPTRIG INFOANAL
. PODP ( DG PODPDIG) $ NIL
Trigger R01 PODP is applicable to office.
. . TABLE TRIGDIG
. . PODPDIG PODP 2132850000 PODP EVENT TCAP R01 SS7 AINJAZZ DFLT $
. . . TABLE C7GTTYPE
. . . AINJAZZ ANSI7 3 $
. . . TABLE C7GTT
. . . AINJAZZ 2132850000 2132850000 SSNONLY (AINTTEST) $
AIN Info Collected TDP: trigger criteria met, querying the database.
Use the AINRES option for further information

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++

AIN Info Collected TDP: trigger criteria met, querying the database.
Use the AINRES option for further information

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++
```


AIN Essentials TRAYER (continued)**TRAYER output example for AIN Essentials TRAYER
N11 trigger originating from a POTS line**

```

>trayer I 6211235 411 b
TABLE LINEATTR
0 1FR NONE NT FR01 0 613 P621 NLCA TSPS 10 NIL NILSFC LATA1 0 NIL
  NIL 00 N $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE LENFEAT
TUPLE NOT FOUND
TABLE OFCVAR
AIN_OFFICE_TRIGGRP N11TRIG
AIN Orig Attempt TDP: no subscribed trigger.
TABLE STDPRTCT
P621 ( 1) ( 65021) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
. 411 411 T OA 3 OFRT 185 3 3 NONE
AIN Info Collected TDP: no subscribed trigger.
TABLE TRIGGRP
N11TRIG INFOANAL
. N11 ( DG N11DIG)$ NIL
. . TABLE TRIGDIG
. . N11DIG N11 411 N11 EVENT TCAP R01 SS7 AINJAZZ DFLT $
. . TABLE C7GTTYPE
. . AINJAZZ ANSI7 3 $
. . TABLE C7GTT
. . AINJAZZ 4110000000 4110000000 SSNONLY (AINTEST) $
AIN Info Analyzed TDP: trigger criteria met, querying the database.*
Use the AINRES option for further information

+++ AIN TRAYER: SUCCESSFUL CALL TRACE +++

AIN Info Collected TDP: trigger criteria met, querying the database.
Use the AINRES option for further information

+++ AIN TRAYER: SUCCESSFUL CALL TRACE +++

```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER N11 trigger originating from an MDC line

```
>traver I 7224011 9411 b
TABLE IBNLINES
HOST 00 0 02 18 0 DT STN IBN 7224011 COMKODAK 0 0 613 $
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE IBNFEAT
TUPLE NOT FOUND
TABLE CUSTSTN
TUPLE NOT FOUND
TABLE OFCVAR
AIN_OFFICE_TRIGGRP N11TRIG
AIN Orig Attempt TDP: no subscribed trigger.
TABLE NCOS
COMKODAK 0 0 0 KDK0 ( OHQ 0 TONE_OHQ) ( CBQ 0 3 N 2)$
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND DIGOL
COMKODAK PXDK CXDK FTCOMM 0 KDK
TABLE DIGCOL
KDK 9 POTS Y
NCOS PRELIM XLA name is NIL. Go to next XLA name.
TABLE IBNXLA: XLANAME PXDK
TUPLE NOT FOUND
Default is to go to next XLA name.
TABLE IBNXLA: XLANAME CXDK
CXDK 9 NET N Y N 1 Y POTS Y N DOD N 80 NONE $
TABLE DIGCOL
POTS specified: POTS digit collection
TABLE LINEATTR
80 IBN NONE NT FR01 0 613 PKDK L613 TSPTS 0 NIL NILSFC NILLATA 0
NIL NIL 00 N $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE STDPRTCT
PKDK ( 1) ( 65021) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
. 411 411 T OA 0 OFRT 44 3 3 NONE
AIN Info Collected TDP: no subscribed trigger.
TABLE TRIGGRP
N11TRIG INFOANAL
. N11 ( DG N11DIG) $ NIL
```

AIN Essentials TRAVER (continued)

**TRAVER output example for AIN Essentials TRAVER
N11 trigger originating from an MDC line (continued)**

```
Trigger R01 N11 is applicable to office.
. . TABLE TRIGDIG
. . N11DIG N11 411 N11 EVENT TCAP R01 SS7 AINJAZZ DFLT $
. . . TABLE C7GTTTYPE
. . . AINJAZZ ANSI7 3 $
. . . TABLE C7GTT
. . . AINJAZZ 4110000000 4110000000 SSNONLY (AINTEST) $
AIN Info Analyzed TDP: trigger criteria met, querying the database.

. +++ AIN TRAVER: SUCCESSFUL CALL TRACE +++

AIN Info Collected TDP: trigger criteria met, querying the database.
Use the AINRES option for further information

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++
```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER Automatic Flexible Routing trigger subscribed for individual lines (MDC)

```
>traver I 7224011 92870000 b
TABLE IBNLINES
HOST 00 0 03 03 0 DT STN IBN 7224011 COMKODAK 0 0 613 $
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE IBNFEAT
TUPLE NOT FOUND
TABLE CUSTSTN
COMKODAK AIN AIN AFRGROUP
TABLE OFCVAR
AIN_OFFICE_TRIGGRP AFROFFICE
AIN Orig Attempt TDP: no subscribed trigger.
TABLE NCOS
COMKODAK 0 0 0 KDK0 ( OHQ 0 TONE_OHQ) ( CBQ 0 3 N 2)$
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT,AND DIGCOL
COMKODAK PXDK CXDK FTCOMM 0 KDK
TABLE DIGCOL
KDK 9 POTS Y
NCOS PRELIM XLA name is NIL. Go to next XLA name.
TABLE IBNXLA: XLANAME PXDK
TUPLE NOT FOUND
Default is to go to next XLA name.
TABLE IBNXLA: XLANAME CXDK
CXDK 9 NET N Y N 1 Y POTS Y N DOD N 80 NONE $
TABLE DIGCOL
POTS specified: POTS digit collection
TABLE LINEATTR
80 IBN NONE NT FR01 0 613 PKDK L613 TSPTS 0 NIL NILSFC NILLATA 0
NIL NIL 00 N $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE STDPRTCT
PKDK ( 1) ( 65021) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
. 28 310 N NP 0 NA
. SUBTABLE AMAPRT
. KEY NOT FOUND
. DEFAULT VALUE IS: NONE OVRNONE N
613 802 1 ( 227) ( 1) ( 84) ( 0) 0
```

AIN Essentials TRAVER (continued)**TRAVER output example for AIN Essentials TRAVER**
Automatic Flexible Routing trigger subscribed for individual lines (MDC)

```

. SUBTABLE HNPACODE
. 287 287 LRTE 801
AIN Info Collected TDP: no subscribed trigger.
AIN Info Collected TDP: no subscribed trigger.
. SUBTABLE RTEREF
. 801 S D AIN_BUZY_TRK
. . AFT AINSIM
TABLE TRIGGRP
AFRLINE NETBUSY
. AFR ( CT VBINFO) $ NIL
. . TABLE TRIGINFO
. . AINSIM EVENT TCAP R01 SS7 AINJAZZ DFLT $
AIN Network Busy TDP: trigger criteria met, querying the database if
network is busy
. EXIT TABLE RTEREF
EXIT TABLE HNPACONT
TABLE LCASCRCN
613 L613 ( 11) MNDT N
. SUBTABLE LCASCR
. TUPLE NOT FOUND. DEFAULT IS NON-LOCAL
TABLE LCASCRCN
613 L613 ( 11) MNDT N
. SUBTABLE LCASCR
. TUPLE NOT FOUND. DEFAULT IS NON-LOCAL
TABLE PFXTREAT
TUPLE NOT FOUND. DEFAULT IS TO LEAVE XLA RESULT UNCHANGED
TABLE CLSVSCRC
KEY NOT FOUND
DEFAULT IS TO LEAVE XLA RESULT UNCHANGED

+++ TRAVER: SUCCESSFUL CALL TRACE +++

AIN Network Busy TDP: trigger criteria met, querying the database if
network is busy.

DIGIT TRANSLATION ROUTES

1 AIN_BUZY_TRK 287000000 ST

TREATMENT ROUTES. TREATMENT IS: GNCT
1 *OFLO
2 LKOUT

+++ TRAVER: SUCCESSFUL CALL TRACE +++

```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER Termination Attempt trigger originating from a POTS line

```
>traver I 6210000 6212502 b
TABLE LINEATTR
0 1FR NONE NT FR01 0 613 P621 NLCA TSPTS 10 NIL NILSFC LATA1 0 NIL NIL
00 N $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE DNATTRS
613 621 0000
(PUBLIC ( NAME ZEUS) $)$ $
TABLE DNGRPS
TUPLE NOT FOUND
TABLE LENFEAT
TUPLE NOT FOUND
TABLE OFCVAR
AIN_OFFICE_TRIGGRP NIL
AIN Orig Attempt TDP: no subscribed trigger.
TABLE STDPRTCT
P621 ( 1) ( 65021) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
. 621 632 N NP 0 NA
. SUBTABLE AMAPRT
. KEY NOT FOUND
. DEFAULT VALUE IS: NONE OVRNONE N
TABLE HNPACONT
613 694 1 ( 216) ( 1) ( 84) ( 0) 0
. SUBTABLE HNPACODE
. 621 621 DN 613 621
AIN Info Collected TDP: no subscribed trigger.
AIN Info Analyzed TDP: no subscribed trigger.
TABLE TOFCNAME
613 621
TABLE DNINV
613 621 2502 L HOST 00 1 17 13
TABLE DNFEAT
613 621 2502 (AINDN DNTRIG) $
TABLE TRIGGRP
DNTRIG TERMATT
. TERMATT $ AINSIM
```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER
Termination Attempt trigger originating from a POTS line

```
Trigger R01 TERMATT is applicable to directory number.  
Trigger R01 TERMATT: Trigger is active.  
  (Use AINCI CHANGESTATE command to alter activation state.)  
  . . TABLE TRIGINFO  
  . . AINSIM EVENT TCAP R01 SS7 AINJAZZ DFLT $  
  . . . TABLE C7GTTYPE  
  . . . AINJAZZ ANSI7 3 $  
  . . . TABLE C7GTT  
  . . . AINJAZZ 61362112502 6136212502 SSNONLY (AINTEST) $  
AIN Term Attempt TDP:trigger criteria met, querying the database.  
Use the AINRES option for further information.  
  
+++ TRAVER: SUCCESSFUL CALL TRACE +++  
  
AIN Term Attempt TDP: trigger criteria met, querying the database.  
Use the AINRES option for further information  
  
+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++
```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER POTS line to Public Office Dialing Plan 3 to 10 trigger with AR option (first part of call)

```
>traver l 6211239 2132556000 b
TABLE LINEATTR
852 1FR NONE NT FR01 0 613 EAP1 L613 TOPS 10 NIL NILSFC LATA1 0 NIL NIL
  00 N $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE LENFEAT
TUPLE NOT FOUND
TABLE OFCVAR
AIN_OFFICE_TRIGGRP OFCTRIGGRP_BILLY
AIN Orig Attempt TDP: no subscribed trigger.
TABLE STDPRTCT
EAP1 ( 1) ( 0) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
. KEY NOT FOUND
. DEFAULT VALUE IS: N NP 0 NA
. SUBTABLE AMAPRT
. KEY NOT FOUND
. DEFAULT VALUE IS: NONE OVRNONE N
TABLE HNPACONT
613 801 1 ( 176) ( 1) ( 84) ( 0) 0
. SUBTABLE HNPACODE
. 213 213 HNPA 0
. 255 256 LRTE 800
AIN Info Collected TDP: no subscribed trigger.
TABLE TRIGGRP
OFFICETRIG_BILLY INFOANAL
. PODP (DG 10DIG)$ NIL
. . TABLE TRIGGRP
. . 10DIG PODP 213255 PODP EVENT TCAP R01 SS7 AINJAZZ DFLT $
AIN Info Analysed TDP:trigger criteria met, querying the database.
Use the AINRES option for further information.

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++

AIN Info Analysed TDP:trigger criteria met, querying the database.
Use the AINRES option for further information.

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++
```

AIN Essentials TRAVER (continued)

**TRAVER output example for AIN Essentials TRAVER
POTS line to line with AR option (second part of call)**

```

>traver l 6211239 n cdn na 6706211235 tns na cic 488 aines r01 ar b
Warning: Routing characteristics are present.
      Originator must be able to send in
      characteristics specified.
TABLE RTECHAR
. TNSPUB (CDN NA (TNS NA)$) (CDN IN (TNS NA)$) (BC3_IKHZ (CDN NA)
  (TNS NA)$)
TABLE LINEATTR
852 1FR NONE NT FR01 0 613 EAP1 L613 TOPS 10 NIL NILSFC LATA1 0 NIL NIL
  00 N $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE LENFEAT
TUPLE NOT FOUND
TABLE OFCVAR
AIN_OFFICE_TRIGGRP NIL
TABLE PXLAMAP
. Tuple not found. Default to old pretranslator name.
TABLE STDPRTCT
EAP1 ( 1) ( 0) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
. 10488 10488 EA DD 5 P PEAL ITT Y OFRT 900 5 20 N
. . TABLE OFRTMAP
. . . Tuple not found. Default to old index.
. . TABLE OFRT
. . 900 CND EA INTNL SK 3
. . S D OGEAITT
. . N D ISUPOGITT 0 N N
. . CND ALWAYS SK 2
. . N D OGEAITT 15 D179 N
. . N D ISUPOGITT 0 D179 N
. . EXIT TABLE OFRT
TABLE PXLAMAP
. . Tuple not found. Default to old pretranslator name.
. TABLE STDPRTCT
. PEAL ( 1) ( 0) 0
. . SUBTABLE STDPRT

```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER POTS line to line with AR option (second part of call)

```
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
. . 6 9 EA DD 0 T NA ITT N
. SUBTABLE AMAPRT
. KEY NOT FOUND
. DEFAULT VALUE IS: NONE OVRNONE N
TABLE HNPACONT
613 801 1 ( 176) ( 1) ( 84) ( 0) 0
. SUBTABLE HNPACODE
. 670 670 HNPA 0
. 621 621 DN 613 621
AIN Info Analyzed TDP: no subscribed trigger.
TABLE TOFCNAME
613 621
TABLE DNINV
613 621 1235 L HOST 00 0 08 19
AIN Term Attempt TDP: no subscribed trigger.
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE LCASCRCN
613 L613 ( 13) OPTL N
. SUBTABLE LCASCR
. TABLE NOT FOUND. DEFAULT IS NON-LOCAL
TABLE PFXTREAT
OPTL DD N DD UNDT
TABLE CLSVSCRC
KEY NOT FOUND
DEFAULT IS TO LEAVE XLA RESULT UNCHANGED
OVERLAP CARRIER SELECTION (OCS) APPLIES
TABLE LATAXLA
LATA1 670 INTER INTER STD
TABLE OCCINFO
ITT 0488 EAP Y Y Y Y N N N N Y Y Y LONG 14 FGRPC N N N N N N N N N N N N
TABLE EASAC
TUPLE NOT FOUND
Using Equal Access (EA) route OFRT 900 from Pretranslation
TABLE OFRTMAP
. TUPLE NOT FOUND. DEFAULT TO OLD INDEX.
```

AIN Essentials TRAVER (continued)

**TRAVER output example for AIN Essentials TRAVER
POTS line to line with AR option (second part of call)**

```
TABLE OFRT
900 CND EA INTNL SK 3
  S D OGEAITT
  N D ISUPOGITT 0 N N
  CND ALWAYS SK 2
  N D OGEAITT 15 D179 N
  N D ISUPOGITT 0 D179 N
TABLE OFRTMAP
Tuple not found. Default to old index.
EXIT TABLE OFRT

+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

1 OGEAITT          6706211235  ST
2 ISUPOGITT       6706211235  ST

TREATMENT ROUTES TREATMENT IS: GNCT
1 *OFLO
2 LKOUT

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++
```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER

POTS trunk to Shared Interoffice Trunk trigger output with AR option (first part of call)

```
>traver tr isupiteaic 088110 b
TABLE TRKGRP
ISUPITEAIC IT 63 ITTD NCRT IC NIL MIDL 613 E800 NSCR 613 000 N Y $
. TABLE TRKAIN
. ISUPITEAIC INTERTRIG
TABLE OFCVAR
AIN_OFFICE_TRIGGRP OFCTRIGGRP_BILLY
TABLE STDPRTCT
E800 ( 1) ( 65021) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
088110 088110 SSP NP 6 6 NA
TABLE TRIGGRP
INTERTRIG INFOCOL
. INTEROFF ( DG INTERDIG)$ NIL
Trigger R01 INTEROFF is applicable to individual POTS trunk.
. . TABLE TRIGDIG
. . INTERDIG INTEROFF 088110 INTEROFF EVENT TCAP R01 SS7 AINJAZZ DFLT $
. . TABLE C7GTTYPE
. . AINJAZZ ANSI7 3 $
WARNING: AINCHG option is not specified for trunk on command line and GTV
could not be determined and defaults to 0.
. . . TABLE C7GTT
. . . AINJAZZ 000000000000 000000000000 SSNONLY (AINTEST) $
AIN Info Collected TDP: trigger criteria met, querying the database.
Use the AINRES option for further information.

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++

AIN Info Collected TDP: trigger criteria met, querying the database.
Use the AINRES option for further information.

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++
```

AIN Essentials TRAYER (continued)

TRAYER output example for AIN Essentials TRAYER

POTS trunk to Shared Interoffice Trunk trigger output with AR option (second part of call, call receives an AR with carrier number 488)

```
>trayer tr isupiteaic n cdn na 6706211235 tns na unk 488 ainres r01 ar b
```

```
Warning: Routing characteristics are present.
```

```
  Originator must be able to send in
  characteristics specified.
```

```
TABLE RTECHAR
```

```
. TNSPUB (CDN NA (TNS NA)$) (CDN IN (TNS NA)$) (BC3_IKHZ (CDN NA)
  (TNS NA)$)
```

```
TABLE TRKGRP
```

```
ISUPITEAIC IT 63 ITTD NCRT IC NIL MIDL 613 E800 NSCR 613 000 N Y $
```

```
Warning: Routing characteristics in TRAYER command
line will override any bearer capability datafilled
in table TRKGRP.
```

```
. TABLE TRKAIN
```

```
. ISUPITEAIC TRKTRIGGRP_SARA
```

```
TABLE OFCVAR
```

```
AIN_OFFICE_TRIGGRP OFCTTRIGGRP_BILLY
```

```
TABLE PXLAMAP
```

```
Tuple not found. Default to old pretranslator name.
```

```
TABLE STDPRTCT
```

```
E800 ( 1) ( 0) 0
```

```
. SUBTABLE STDPRT
```

```
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
```

```
. 488 488 T NP 3 OFRT 900 6 16 NONE
```

```
TABLE TRIGGRP
```

```
OFCTTRIGGRP_BILLY INFOANAL
```

```
. PODP ( DG 10DIG)$ NIL
```

```
AIN Info Analysed TDP: trigger criteria not met.
```

```
. . TABLE OFRTMAP
```

```
. . . Tuple not found. Default to old index.
```

```
. . TABLE OFRT
```

```
. . 900 CND EA INTNL SK 3
```

```
. . S D OGEAITT
```

```
. . N D ISUPOGITT 0 N N
```

```
. . CND ALWAYS SK 2
```

```
. . N D OGEAITT 15 D179 N
```

```
. . N D ISUPOGITT 0 D179 N
```

```
. . EXIT TABLE OFRT
```

```
. SUBTABLE AMAPRT
```

```
. KEY NOT FOUND
```

```
. DEFAULT VALUE IS: NONE OVRNONE N
```

AIN Essentials TRAVER (continued)

**TRAVER output example for AIN Essentials TRAVER
POTS trunk to Shared Interoffice Trunk trigger output with AR option (second part of call, call receives an AR with carrier number 488)**

```
+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

```
DIGIT TRANSLATION ROUTES
```

```
1 OGEAITT          6706211235  ST  
2 ISUPOGITT        6706211235  ST
```

```
TREATMENT ROUTES TREATMENT IS: GNCT
```

```
1 T120
```

```
+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++
```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER
IBN trunk to Off-Hook Delay trigger output (first part of call)

```

>traver tr isupiteaic 06211235 b
TABLE TRKGRP
IBNTIMF IBNTI 0 ELO NCRT COMKODAK 0 0 72241111 ANSDISC 0 N N N N N
Y N 0 0 N N N N N $ NATL $
. TABLE TRKAIN
. IBNTIMF LNTRIGGRP_FRED
TABLE CUSTSTN
TUPLE NOT FOUND
TABLE OFCVAR
AIN_OFFICE_TRIGGRP OFCTTRIGGRP_BILLY
TABLE NCOS
COMKODAK 0 0 0 KDK0 ( OHQ 0 TONE_OHQ) ( CBQ 0 3 N 2) ( ACR N)$
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND DIGCOL
COMKODAK PXDK CXDK CUSTFEAT 0 KDK
TABLE DIGCOL
KDK 6 COL L 1
NCOS PRELIM XLA name is NIL. Go to next XLA name.
TABLE IBNXLA: XLANAME PXDK
PXDK 621 NET N N N 0 N NDGT N N DOD N 0 NONE
TABLE DIGCOL
NDGT specified: digits collected individually
TABL0 1FR NONE NT FRO1 0 613 P621 L613 TSPS 10 NIL NILSFC NILLATA 0 NIL
NIL 00 N $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE STDPRTCT
P621 ( 1) ( 0) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
. 621 624 N NP 0 NA
. SUBTABLE AMAPRT
. KEY NOT FOUND
. DEFAULT VALUE IS: NONE OVRNONE N
TABLE HNPACONT
613 801 1 ( 176) ( 1) ( 84) ( 0) 0
. SUBTABLE HNPACODE
. 621 621 DN 613 621
TABLE TRIGGRP
LNTRIGGRP_FRED INFOCOL
. OFFHKDEL (ESC )$ JAZZINFO
. . TABLE TRIGESC
. . TUPLE NOT FOUND
. . TABLE TRIGINFO

```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER IBN trunk to Off-Hook Delay trigger output (first part of call) (continued)

```
. . JAZZINFO EVENT TCAP R01 SS7 AINJAZZ DFLT $  
AIN Info Collected TDP:trigger criteria met,querying the database.  
Use the AINRES option for further information
```

```
+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

```
AIN Info Collected TDP:trigger criteria met,querying the database.  
Use the AINRES option for further information
```

```
+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++
```


AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER

IBN trunk to Off-Hook Delay trigger output with AR option (second part of call, call receives an AR with carrier number 488)

```

>traver tr ibntimf n cdn na 6706211235 tns na cic 488 aires r01 ar b
Warning: Routing characteristics are present.
      Originator must be able to send in
      characteristics specified.
TABLE RTECHAR
TNSPUB (CDN NA (TNS NA)$) (CDN IN (TNS NA)$) (BC3_IKHZ (CDN NA)(TNS NA)$)
TABLE TRKGRP
IBNTIMF IBMTI 0 ELO NCRT COMKODAK 0 0 7224111 ANSDISC 0 N N N N N Y N 0 0
  N N N  N N $ NATL $
Warning: Routing characteristics in TRAVER command
line will override any bearer capability datafilled
in table TRKGRP.
. TABLE TRKAIN
. IBNTIMF LNTRIGGRP_FRED
TABLE CUSTSTN
TUPLE NOT FOUND
TABLE OFCVAR
AIN_OFFICE_TRIGGRP OFCTRIGGRP_BILLY
TABLE NCOS
COMKODAK 0 0 0 KDK ( OHQ 0 TONE_OHQ) ( CBQ 0 3 N 2) ( ACR N)$
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT,
  AND DIGCOL
COMKODAK PXDK CXDK CUSTFEAT 0 KDK
TABLE DIGCOL
KDK 1 RPT
TABLE XLAMAP
. Tuple not found. Default is use original XLANAME.
NCOS PRELIM XLA name is NIL. Go to next XLA name.
TABLE XLAMAP
. TNSPUB PXDK ( XLA AINPUB)$
TABLE IBNXLA: XLANAME AINPUB
TUPLE NOT FOUND
DEFAULT FROM TABLE XLANAME:
AINPUB
  (NET N N N 0 N NDGT N N GEN ( LATTR 0) $)$ 9
TABLE DIGCOL
NDGT specified: digits collected individually
TABLE LINEATTR
0 1FR NONE NT FR01 0 613 P621 L613 TSPS 10 NIL NILSFC NILLATA 0 NIL NIL ,
  00 N $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE PXLAMAP
. Tuple not found. Default to old pretranslator name.

```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER

IBN trunk to Off-Hook Delay trigger output with AR option (second part of call, call receives an AR with carrier number 488)

```
TABLE STDPRTCT
P621 ( 1) ( 0) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
. 10488 10488 EA DD 5 P PEAL ITT Y OFRT 900 5 20 N
. . TABLE OFRTMAP
. . . Tuple not found. Default to old index.
. . TABLE OFRT
. . 900 CND EA INTNL SK 3
. . S D OGEAITT
. . N D ISUPOGITT 0 N N
. . CND ALWAYS SK 2
. . N D OGEAITT 15 D179 N
. . N D ISUPOGITT 0 D179 N
. . EXIT TABLE OFRT
TABLE PXLAMAP
. . Tuple not found. Default to old pretranslator name.
. TABLE STDPRTCT
. PEAL ( 1) ( 0) 0
. . SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
. . 6 9 EA DD 0 T NA ITT N
. SUBTABLE AMAPRT
. KEY NOT FOUND
. DEFAULT VALUE IS: NONE OVRNONE N
TABLE HNPACONT
613 801 1 ( 176) ( 1) ( 84) ( 0) 0
. SUBTABLE HNPACODE
. 670 670 HNPA 0
. 621 621 DN 613 621
TABLE TRIGGRP
OFCTTRIGGRP_BILLY INFOANAL
. PODP ( DG 10DIGS)$ NIL
AIN Info analyzed TDP: trigger criteria not met.
TABLE TOFCNAME
613 621
TABLE DNINV
613 621 1235 L HOST 00 0 08 19
```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER**IBN trunk to Off-Hook Delay trigger output with AR option (second part of call, call receives an AR with carrier number 488)**

```
AIN Term Attempt: no subscribed trigger,
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE LCASCRCN
613 L613 ( 13) OPTL N
. SUBTABLE LCASCR
. TABLE NOT FOUND. DEFAULT IS NON-LOCAL
TABLE PFXTREAT
OPTL DD N DD UNDT
TABLE CLSVSCRC
KEY NOT FOUND
DEFAULT IS TO LEAVE XLA RESULT UNCHANGED
LATA IS NIL, THEREFORE NOT AN EQUAL ACCESS CALL
```

```
+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

DIGIT TRANSLATION ROUTES

```
1 OGEAITT          6706211235  ST
2 ISUPOGITT        6706211235  ST
```

TREATMENT ROUTES TREATMENT IS: GNCT

```
1 T120
```

```
+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++
```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER A RES line triggers at Public Office Dialing Plan Feature Code trigger

```
>traver I 6215324 b360 b
TABLE IBNLINES
HOST 00 1 03 20 0 DT STN RES 6215324 299 $
TABLE LINEATTR
299 1FR NONE NT FR01 99 613 P621 L613 TSPS 10 NIL NILSFC NILLATA 0 NIL
NIL 00 Y RESG299 0 0 $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE IBNFEAT
TUPLE NOT FOUND
TABLE CUSTSTN
TUPLE NOT FOUND
TABLE OFCVAR
AIN_OFFICE_TRIGGRP OFCTTRIGGRP_ALL
AIN Orig Attempt TDP: no subscribed trigger.
TABLE NCOS
RESG299 0 0 0 RNCOS $
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT,
AND DIGCOL
RESG299 NXLA RXCMN200 RXCFNXXX 0 RES
TABLE DIGCOL
RES specified: RES digit collection
NCOS FEAT XLA name is NIL. Go to next XLA name.
TABLE IBNXLA: XLANAME RXCFNXXX
RXCFNXXX 360 FTR 3 AIN IMMED
AIN Info Collected TDP: no subscribed trigger.
TABLE TRIGGRP
LNPODPFC INFOANAL
. PODPFEAT (DG PODPPFDIG)$ NIL
Trigger R01 PODPFEAT is applicable to individual RES lines
. . TABLE TRIGDIG
. . PODPFDIG PODPFEAT B360 PODPFEAT NOTRANS EVENT TCAP R01 SS7 AINJAZZ
DFLT $
. . . TABLE C7GTTYPE
. . . AINJAZZ ANSI7 3 $
. . . TABLE KSETFEAT
. . . TUPLE NOT FOUND
. . . TABLE C7GTT
. . . AINJAZZ 6136215324 6136215324 SSNONLY (AINTESAT) $
```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER A RES line triggers at Public Office Dialing Plan Feature Code trigger

```
AIN Info Collected TDP: trigger criteria met, querying the database.  
Use the AINRES option for further information
```

```
+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++
```

```
AIN Info Collected TDP: trigger criteria met, querying the database.  
Use the AINRES option for further information
```

```
+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++
```

AIN Essentials TRAVER (continued)

**TRAVER output example for AIN Essentials TRAVER
POTS line to line triggers, at Origination Attempt TDP; originating line does not have special
billing (SPB) option**

```
>traver l 6211179 6211171 b
TABLE LINEATTR
0 1FR NONE NT FR01 0 613 P621 NCLA TSPS 10 NIL NILSFC LATA1 0 NIL NIL 00 N $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE LENFEAT
HOST 02 0 00 01 S AIN AIN AINGRP1 $
TABLE OFCVAR
AIN_OFFICE_TRIGGRP NIL $
TABLE TRIGGRP
AINGRP1 ORIGATT
. OFFHKIMM (CT VBINFO)$ INFO1 $
. . TABLE TRIGINFO
. . INFO1 EVENT TCAP R0_1 SS7 AINJAZZ DFLT$
. . . TABLE C7GTTYPE
. . . AINJAZZ AIN7 3 $
. . . TABLE C7GTT
. . . AINJAZZ 6136211179 6136211179 SSONLY ( AINTEST)$
AIN Orig Attempt TDP: trigger criteria not met, querying the database.
Use AINRES option for further information.

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++

AIN orig Attempt TDP: querying the database.
Use AINRES option for further information.

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++
```

AIN Essentials TRAVER (continued)**TRAVER output example for AIN Essentials TRAVER**

AIN and E800 processing; calling party subscribes to the Off-Hook Immediate trigger (first part of call)

```
>traver l 6216051 6216052 b
```

```
TABLE IBNLINES
HOST 02 0 12 29 0 DT STN RES 6216051 200 $
TABLE LINEATTR
200 1FR NONE NT FR01 0 613 P621 L613 TSPS 10 NIL NILSFC NILLATA
  0 NIL NIL 00 Y RESG200 0 0 $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE IBNFEAT
HOST 02 0 12 29 0 AIN AIN OFFHKIMM
TABLE CUSTSTN
RESG200 AIN AIN CDPCODE
TABLE OFCVAR
AIN_OFFICE_TRIGGRP OFCTRIG
TABLE TRIGGRP
OFFHKIMM ORIGATT
. OFFHKIMM ( CT VBINFO)$ JAZZINFO
Trigger R01 OFFHKIMM is applicable to individual line.
Trigger R01 OFFHKIMM: Trigger is active.
(Use AINCI CHANGESTATE command to alter activation state.)
. . TABLE TRIGINFO
. . JAZZINFO EVENT TCAP R01 SS7 AINJAZZ DFLT $
. . . TABLE C7GTTYPE
. . . AINJAZZ ANSI7 3 $
. . . TABLE IBNFEAT
. . . TUPLE NOT FOUND
. . . TABLE C7GTT
. . .AINJAZZ 6136216051 6136216051 SSNOONLY (AINTEST) $
AIN Orig Attempt TDP: trigger criteria met, querying the database.
Use the AINRES option for further information

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++

AIN Orig Attempt TDP: trigger criteria met, querying the database
Use the AINRES option for further information

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++
```

AIN Essentials TRAVER (continued)

**TRAVER output example for AIN Essentials TRAVER
AIN and E800 processing; Off-Hook Immediate trigger, Analyze_Route message to an E800
number (second part of call)**

```
>traver l 6216051 n cdn na 8001882000 ainres r01 ar b
Warning: Routing characteristics are present.
        Originator must be able to send in
        Characteristics specified.
TABLE RTECHAR
. LECNA (CDN NA $) ( BC 3_1KHZ (CDN NA)$)$
TABLE IBNLINES
HOST 02 0 12 29 0 DT STN RES 7224011 6216051 200 $
TABLE LINEATTR
200 1FR NONE NT FR01 0 613 P621 L613 TSPS 10 NIL NILSFC NILLATA
  0 NIL NIL 00 Y RESG200 0 0 $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE IBNFEAT
HOST 02 0 12 29 0 AIN AIN OFFHKIMM
TABLE CUSTSTN
RESG200 AIN AIN CDPCODE
TABLE OFCVAR
AIN_OFFICE_TRIGGRP OFCTRIG
TABLE NCOS
RESG200 0 0 0 RNCOS $
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA,
  VACTRMT,AND DIGCOL
RESG200 NXLA RXCMN200 RESGSTAR 0 RES
TABLE DIGCOL
RES specified: RES digit collection
TABLE XLAMAP
. Tuple not found. Default is use original XLANAME
NCOS PRELIM XLA name is NIL. Go to next XLA name.
TABLE XLAMAP
Tuple not found. Default is use original XLANAME
CUST PRELIM XLA XLA name is NIL. Go to next XLA name.
TABLE XLAMAP
. Tuple not found. Default is use original XLANAME.
```


AIN Essentials TRAVER (continued)

**TRAVER output example for AIN Essentials TRAVER
AIN and E800 processing; Off-Hook Immediate trigger, Analyze_Route message to an E800
number (second part of call)**

```

TABLE IBNXLA: XLANAME RXCMN200
TUPLE NOT FOUND
Default from table XLANAME:
RXCMN200
(NET N N N 0 N NDGT N Y GEN (LATTR 262) (EA NILC Y 0)$ $)$ 9
TABLE DIGCOL
POTS specified: POTS digit collection
TABLE LINEATTR
262 1FR NONE NT FR01 0 613 EAP1 L613 TOPS 0 NIL NILSFC LATA1 0
NIL NIL 00 Y RESG200 0 0 $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE PXLAMAP
. Tuple not found. Default to old pretranslator name.
TABLE STDPRTCT
EAP1 ( 1) (65021) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
. 8 911 N NP 0 NA
. SUBTABLE AMAPRT
. KEY NOT FOUND
. DEFAULT VALUE IS: NONE OVRNONE N
TABLE HNPACONT
613 900 2 ( 371) ( 1) ( 84) ( 0) 0
. SUBTABLE HNPACODE
. 800 800 NSC E800
TABLE NSCSCRN
E800 TUPLE NOT FOUND
+++ E800 CALL WILL QUERY SCP DATABASE FOR TRANSLATION
INFORMATION
TRAVER NOT AVAILABLE

+++ TRAVER: SUCCESSFUL CALL TRACE +++

+++ TRAVER: SUCCESSFUL CALL TRACE +++

```

AIN Essentials TRAVER (continued)

**E800 verification output example for AIN Essentials TRAVER
AIN and E800 processing; E800 verification utility to obtain the E800 response (third part of call)**

```
>e800ver 6136216051 101 8008112000
```

```
THE RESPONSE FROM THE DATABASE TOOK  
0 MINUTES, 0 SECONDS, 9 MILLISECONDS
```

```
THE FOLLOWING NUMBER IS THE CARRIER NUMBER
```

```
THE NUMBER IS 488
```

```
THE FOLLOWING NUMBER IS THE ROUTING NUMBER
```

```
THE NUMBER IS 4166216068
```

```
BILLING INDICATOR CALL TYPE is 141C
```

```
BILLING INDICATOR SFI IS 555C
```

AIN Essentials TRAVER (continued)**TRAVER output example for AIN Essentials TRAVER**

AIN and E800 processing; Origination Attempt TDP bypassed when NSC option specified (fourth part of call)

```

>traver l 6216051 nsc 1048814166216068 b
TABLE IBNLINES
HOST 02 0 12 29 0 DT STN RES 6216051 200 $
TABLE LINEATTR
200 1FR NONE NT FR01 0 613 P621 L613 TSPS 10 NIL NILSFC NILLATA
  0 NIL NIL 00 Y RESG200 0 0 $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE IBNFEAT
HOST 02 0 12 29 0 AIN AIN OFFHKIMM
TABLE CUSTSTN
RESG200 AIN AIN CDPCODE
TABLE OFCVAR
AIN_OFFICE_TRIGGRP OFCTRIG
TABLE NCOS
RESG200 0 0 0 RNCOS $
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA,
  VACTRMT,AND DIGCOL
RESG200 NXLA RXCMN200 RESGSTAR 0 RES
TABLE DIGCOL
RES specified: RES digit collection
NCOS PRELIM XLA name is NIL. Go to next XLA name.
CUST PRELIM XLA name is NIL. Go to next XLA name.
TABLE IBNXLA: XLANAME RXCMN200
TUPLE NOT FOUND
Default from table XLANAME:
RXCMN200
  (NET N N N 0 N NDGT N Y GEN (LATTR 262) (EA NILC Y 0)$ $)$ 9
TABLE DIGCOL
ndgt specified: digits collected individually
TABLE LINEATTR
262 1FR NONE NT FR01 0 613 EAP1 L613 TOPS 0 NIL NILSFC LATA1 0
  NIL NIL 00 Y RESG200 0 0 $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE STDPRTCT
EAP1 ( 1) (65021) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.

```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER

AIN and E800 processing; Origination Attempt TDP bypassed when NSC option specified (fourth part of call)

```
. 10488 10488 EA DD 5 P PEAL ITT Y OFRT 900 5 20 N
. . TABLE OFRT
. . 900 CND EA INTNL SK 2
. .   N D ISUPOGITT 0 N N
. .   CND ALWAYS SK 1
. .   N D ISUPOGITT 15 D179 N
. . EXIT TABLE OFRT
. TABLE STDPRTCT
. EAP1 ( 1) (65021) 0
. . SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION
. . 1 9 EA DD 1 T NA ITT N
. SUBTABLE AMAPRT
. KEY NOT FOUND
. DEFAULT VALUE IS: NONE OVRNONE N
TABLE HNPACONT
613 900 2 ( 371) ( 1) ( 84) ( 0) 0
. SUBTABLE HNPACODE
. 416 416 HNPA 0
. 621 621 DN 613 621
TABLE TRIGGRP
CDPCODE INFOANAL
. CDPCODE ( DG CDPDIG)$ NIL
Trigger R01 CDPCODE is applicable to customer group
. CDPCODE ( DG CDPTRAF)$ NIL
Trigger R01 CDPCODE is applicable to customer group
TABLE TRIGGRP
OFCTRIG INFOANAL
. N11 ( DG N11DIG)$ NIL
Trigger R01 N11 is applicable to office.
. PODP ( DG PODPDIG)$ NIL
Trigger R01 PODP is applicable to office.
. N11 ( DG N11TRAF)$ NIL
Trigger R01 N11 is applicable to office.
. PODP ( DG PODPTRAF)$ NIL
Trigger R01 PODP is applicable to office.
AIN Info Analyzed TDP: trigger criteria not met.
TABLE TOFCNAME
613 621
TABLE DNINV
613 621 6068 L HOST 02 0 12 27
```

AIN Essentials TRAYER (continued)**TRAYER output example for AIN Essentials TRAYER**

AIN and E800 processing; Origination Attempt TDP bypassed when NSC option specified (fourth part of call)

```

TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE LCASCRCN
613 L613 ( 16) OPTL N
. SUBTABLE LCASCR
. TUPLE NOT FOUND. DEFAULT IS NON-LOCAL
TABLE PFXTREAT
OPTL DD N DD UNDT
TABLE CLSVSCRC
KEY NOT FOUND
DEFAULT IS TO LEAVE XLA RESULT UNCHANGED
OVERLAP CARRIER SELECTION (OCS) APPLIES
TABLE LATA XLA
LATA1 416 INTER INTER STD
TABLE OCCINFO
ITT 0488 EAP Y Y Y Y Y N N Y Y Y N LONG 14 FGRPC N N N N N N N
N N N N N
TABLE EASAC
TUPLE NOT FOUND
Using Equal Access (EA) route OFRT 900 from Pretranslation
TABLE OFRT
900 CND EA INTNL SK 2
N D ISUPOGITT 0 N N
CND ALWAYS SK 1
N D ISUPOGITT 15 D179 N
EXIT TABLE OFRT

+++ TRAYER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

1 ISUPOGITT      4166216068      ST

TREATMENT ROUTES. TREATMENT IS: GNCT
1*OFLO
2LKOUT

+++ TRAYER: SUCCESSFUL CALL TRACE +++

```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER

AIN and E800 processing; calling party subscribes to Off-Hook Delay trigger (first part of call)

```
>traver I 6216051 6216068 b
TABLE IBNLINES
HOST 02 0 12 29 0 DT STN RES 6216051 200 $
TABLE LINEATTR
200 1FR NONE NT FR01 0 613 P621 L613 TSPS 10 NIL NILSFC NILLATA
  0 NIL NIL 00 Y RESG200 0 0 $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE IBNFEAT
HOST 02 0 12 29 0 AIN AIN LNOFFHKDEL
TABLE CUSTSTN
RESG200 AIN AIN CDPCODE
TABLE OFCVAR
AIN_OFFICE_TRIGGRP OFCTRIG
AIN Orig Attempt TDP: no subscribed trigger.
TABLE NCOS
RESG200 0 0 0 RNCOS $
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA,
  VACTRMT,AND DIGCOL
RESG200 NXLA RXCMN200 RESGSTAR 0 RES
TABLE DIGCOL
RES specified: RES digit collection
NCOS PRELIM XLA name is NIL. Go to next XLA name.
CUST PRELIM XLA name is NIL. Go to next XLA name.
TABLE IBNXLA: XLANAME RXCMN200
TUPLE NOT FOUND
Default from table XLANAME:
RXCMN200
  (NET N N N 0 N NDGT N Y GEN (LATTR 262) (EA NILC Y 0)$ $)$ 9
TABLE DIGCOL
NDGT specified: POTS digit collection
TABLE LINEATTR
262 1FR NONE NT FR01 0 613 EAP1 L613 TOPS 0 NIL NILSFC LATA1 0
  NIL NIL 00 Y RESG200 0 0 $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE STDPRTCT
EAP1 ( 1) (65021) 0
```

AIN Essentials TRAVER (continued)**TRAVER output example for AIN Essentials TRAVER****AIN and E800 processing; calling party subscribes to Off-Hook Delay trigger (first part of call)**

```

. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
. 6 911 N NP 0 NA
. SUBTABLE AMAPRT
. KEY NOT FOUND
. DEFAULT VALUE IS: NONE OVRNONE N
TABLE HNPACONT
613 900 2 ( 371) ( 1) ( 84) ( 0) 0
. SUBTABLE HNPACODE
. 621 621 DN 613 621
TABLE TRIGGRP
LNOFFHKDEL INFOCOL
. OFFHKDEL ( ESC)$ JAZZINFO
Trigger R01 OFFHKDEL is applicable to individual line.
Trigger R01 OFFHKDEL: Trigger is active.
(Use AINCI CHANGESTATE command to alter activation state.)
. . TABLE TRIGESC
. . TUPLE NOT FOUND
. . TABLE TRIGINFO
. . JAZZINFO EVENT TCAP R01 SS7 AINJAZZ DFLT $
. . . TABLE C7GTTYPE
. . . AINJAZZ ANSI7 3 $
. . . TABLE IBNFEAT
. . . TUPLE NOT FOUND
. . . TABLE C7GTT
. . .AINJAZZ 6136216051 6136216051 SSNONLY (AINTTEST) $
AIN Info Collected TDP: trigger criteria met, querying the database.
Use the AINRES option for further information

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++

AIN Info Collected TDP: trigger criteria met, querying the database
Use the AINRES option for further information

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++

```

AIN Essentials TRAVER (continued)

**TRAVER output example for AIN Essentials TRAVER
AIN and E800 processing; Off-Hook Delay trigger, Analyze_Route message to an E800 number
(second part of call)**

```
>traver | 6216051 n cdn na 8001882000 aines r01 ar b
Warning: Routing characteristics are present.
        Originator must be able to send in
        Characteristics specified.

TABLE RTECHAR
. LECNA (CDN NA $) ( BC 3_1KHZ (CDN NA)$)$
TABLE IBNLINES
HOST 02 0 12 29 0 DT STN RES 6216051 200 $
TABLE LINEATTR
200 1FR NONE NT FR01 0 613 P621 L613 TSPS 10 NIL NILSFC NILLATA
  0 NIL NIL 00 Y RESG200 0 0 $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE IBNFEAT
HOST 02 0 12 29 0 AIN AIN LNOFFHKDEL
TABLE CUSTSTN
RESG200 AIN AIN CDPCODE
TABLE OFCVAR
AIN_OFFICE_TRIGGRP OFCTRIG
TABLE NCOS
RESG200 0 0 0 RNCOS $
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA,
  VACTRMT,AND DIGCOL
RESG200 NXLA RXCMN200 RESGSTAR 0 RES
TABLE DIGCOL
RES specified: RES digit collection
TABLE XLAMAP
. Tuple not found. Default is use original XLANAME
NCOS PRELIM XLA name is NIL. Go to next XLA name.
TABLE XLAMAP
Tuple not found. Default is use original XLANAME
CUST PRELIM XLA XLA name is NIL. Go to next XLA name.
TABLE XLAMAP
. Tuple not found. Default is use original XLANAME.
```


AIN Essentials TRAVER (continued)**TRAVER output example for AIN Essentials TRAVER**

AIN and E800 processing; Off-Hook Delay trigger, Analyze_Route message to an E800 number (second part of call)

```

TABLE IBNXLA: XLANAME RXCMN200
TUPLE NOT FOUND
Default from table XLANAME:
RXCMN200
  (NET N N N 0 N NDGT N Y GEN (LATTR 262) (EA NILC Y 0)$ )$ 9
TABLE DIGCOL
NDGT specified: digitS collected individually
TABLE LINEATTR
262 1FR NONE NT FR01 0 613 EAP1 L613 TOPS 0 NIL NILSFC LATA1 0
  NIL NIL 00 Y RESG200 0 0 $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE PXLAMAP
. Tuple not found. Default to old pretranslator name.
TABLE STDPRTCT
EAP1 ( 1) (65021) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
. 8 911 N NP 0 NA
. SUBTABLE AMAPRT
. KEY NOT FOUND
. DEFAULT VALUE IS: NONE OVRNONE N
TABLE HNPACONT
613 900 2 ( 371) ( 1) ( 84) ( 0) 0
. SUBTABLE HNPACODE
. 800 800 NSC E800
TABLE NSCSCRN
E800 TUPLE NOT FOUND
+++ E800 CALL WILL QUERY SCP DATABASE FOR TRANSLATION
INFORMATION
TRAVER NOT AVAILABLE

+++ TRAVER: SUCCESSFUL CALL TRACE +++

+++ TRAVER: SUCCESSFUL CALL TRACE +++

```

AIN Essentials TRAVER (continued)

**E800 verification output example for AIN Essentials TRAVER
AIN and E800 processing; E800 verification utility to obtain the E800 response (third part of call)**

```
>e800ver 6136211171 101 8008112000
```

```
THE RESPONSE FROM THE DATABASE TOOK  
0 MINUTES, 0 SECONDS, 29 MILLISECONDS
```

```
THE FOLLOWING NUMBER IS THE CARRIER NUMBER
```

```
THE NUMBER IS 488
```

```
THE FOLLOWING NUMBER IS THE ROUTING NUMBER
```

```
THE NUMBER IS 4166216068
```

```
BILLING INDICATOR CALL TYPE is 141C  
BILLING INDICATOR SFI IS 555C
```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER

AIN and E800 processing; Origination Attempt TDP bypassed when NSC option specified (fourth part of call)

```

>traver l 6216051 nsc 1048814166216068 b
TABLE IBNLINES
HOST 02 0 12 29 0 DT STN RES 6216051 200 $
TABLE LINEATTR
200 1FR NONE NT FR01 0 613 P621 L613 TSPTS 10 NIL NILSFC NILLATA
  0 NIL NIL 00 Y RESG200 0 0 $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE IBNFEAT
HOST 02 0 12 29 0 AIN AIN LNOFFHKDEL
TABLE CUSTSTN
RESG200 AIN AIN CDPCODE
TABLE OFCVAR
AIN_OFFICE_TRIGGRP OFCTRIG
TABLE NCOS
RESG200 0 0 0 RNCOS $
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA,
  VACTRMT,AND DIGCOL
RESG200 NXLA RXCMN200 RESGSTAR 0 RES
TABLE DIGCOL
RES specified: RES digit collection
NCOS PRELIM XLA name is NIL. Go to next XLA name.
CUST PRELIM XLA name is NIL. Go to next XLA name.
TABLE IBNXLA: XLANAME RXCMN200
TUPLE NOT FOUND
Default from table XLANAME:
RXCMN200
  (NET N N N 0 N NDGT N Y GEN (LATR 262) (EA NILC Y 0)$ $)$ 9
TABLE DIGCOL
NDGT specified: digits collected individually
TABLE LINEATTR
262 1FR NONE NT FR01 0 613 EAP1 L613 TOPS 0 NIL NILSFC LATA1 0
  NIL NIL 00 Y RESG200 0 0 $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE STDPRTCT
EAP1 ( 1) (65021) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.

```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER

AIN and E800 processing; Origination Attempt TDP bypassed when NSC option specified (fourth part of call)

```
. 10488 10488 EA DD 5 P PEAL ITT Y OFRT 900 5 20 N
. . TABLE OFRT
. . 900 CND EA INTNL SK 2
. .   N D ISUPOGITT 0 N N
. .   CND ALWAYS SK 1
. .   N D ISUPOGITT 15 D179 N
. . EXIT TABLE OFRT
. TABLE STDPRTCT
. EAP1 ( 1) (65021) 0
. . SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION
. . 1 9 EA DD 1 T NA ITT N
. SUBTABLE AMAPRT
. KEY NOT FOUND
. DEFAULT VALUE IS: NONE OVRNONE N
TABLE HNPACONT
613 900 2 ( 371) ( 1) ( 84) ( 0) 0
. SUBTABLE HNPACODE
. 416 416 HNPAC 0
. 621 621 DN 613 621
TABLE TRIGGRP
CDPCODE INFOANAL
. CDPCODE ( DG CDPDIG)$ NIL
Trigger R01 CDPCODE is applicable to customer group
. CDPCODE ( DG CDPTRAF)$ NIL
Trigger R01 CDPCODE is applicable to customer group
TABLE TRIGGRP
OFCTRIG INFOANAL
. N11 ( DG N11DIG)$ NIL
Trigger R01 N11 is applicable to office.
. PODP ( DG PODPDIG)$ NIL
Trigger R01 PODP is applicable to office.
. N11 ( DG N11TRAF)$ NIL
Trigger R01 N11 is applicable to office.
. PODP ( DG PODPTRAF)$ NIL
Trigger R01 PODP is applicable to office.
AIN Info Analyzed TDP: trigger criteria not met.
TABLE TOFCNAME
613 621
TABLE DNINV
613 621 6068 L HOST 02 0 12 27
```

AIN Essentials TRAYER (continued)**TRAYER output example for AIN Essentials TRAYER**

AIN and E800 processing; Origination Attempt TDP bypassed when NSC option specified (fourth part of call)

```

TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE LCASCRCN
613 L613 ( 16) OPTL N
. SUBTABLE LCASCR
. TUPLE NOT FOUND. DEFAULT IS NON-LOCAL
TABLE PFXTREAT
OPTL DD N DD UNDT
TABLE CLSVSCRC
KEY NOT FOUND
DEFAULT IS TO LEAVE XLA RESULT UNCHANGED
OVERLAP CARRIER SELECTION (OCS) APPLIES
TABLE LATAXLA
LATA1 416 INTER INTER STD
TABLE OCCINFO
ITT 0488 EAP Y Y Y Y Y N N Y Y Y N LONG 14 FGRPC N N N N N N N
N N N N N
TABLE EASAC
TUPLE NOT FOUND
Using Equal Access (EA) route OFRT 900 from Pretranslation
TABLE OFRT
900 CND EA INTNL SK 2
N D ISUPOGITT 0 N N
CND ALWAYS SK 1
N D ISUPOGITT 15 D179 N
EXIT TABLE OFRT

+++ TRAYER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

1 ISUPOGITT      4166216068      ST

TREATMENT ROUTES. TREATMENT IS: GNCT
1*OFLO
2LKOUT

+++ TRAYER: SUCCESSFUL CALL TRACE +++

```

AIN Essentials TRAVER (continued)

**TRAVER output example for AIN Essentials TRAVER
AIN and E800 processing; Automatic Flexible Routing trigger bypassed when NSC option
specified**

```
>traver | 6218915 nsc 6212000 b
TABLE LINEATTR
0 1FR NONE NT FR01 0 613 P621 L613 TSPS 10 NIL NILSFC LATA1 0
  NIL NIL 00 N $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE IBNFEAT
TUPLE NOT FOUND
TABLE OFCVAR
AIN_OFFICE_TRIGGRP OFCTRIG
TABLE STDPRTCT
EAP1 ( 1) (65021) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
. KEY NOT FOUND
. DEFAULT VALUE IS: N NP O NA
. SUBTABLE AMAPRT
. KEY NOT FOUND
. DEFAULT VALUE IS: NONE OVRNONE N
TABLE HNPACONT
613 900 2 ( 372) ( 1) ( 84) ( 0) 0
. SUBTABLE HNPACODE
. 821 821 LRTE 601
TABLE TRIGGRP
OFCTRIG INFOANAL
. N11 ( DG N11DIG)$ NIL
Trigger R01 N11 is applicable to office.
. PODP ( DG PODPDIG)$ NIL
Trigger R01 PODP is applicable to office.
. N11 ( DG N11TRAF)$ NIL
Trigger R01 N11 is applicable to office.
. PODP ( DG PODPTRAF)$ NIL
Trigger R01 PODP is applicable to office.
AIN Info Analyzed TDP: trigger criteria not met.
. SUBTABLE RTEREF
. 601 N D ISUPITOG 3 621 N
. AFR JAZZINFO
```

AIN Essentials TRAVER (continued)**TRAVER output example for AIN Essentials TRAVER
AIN and E800 processing; Automatic Flexible Routing trigger bypassed when NSC option
specified**

```

TABLE TRIGGRP
OFCTRIG NETBUSY
. AFR $ NIL
Trigger R01 AFR is applicable to office.
AIN Network Busy TDP: trigger criteria not met.
. EXIT TABLE RTEREF
EXIT TABLE HNPACONT
TABLE LCASCRCN
613 L613 ( 16) OPTL N
. SUBTABLE LCASCR
. TUPLE NOT FOUND. DEFAULT IS NON-LOCAL
TABLE PFXTREAT
OPTL NP N DD UNDT
TABLE CLSVSCRC
KEY NOT FOUND
DEFAULT IS TO LEAVE XLA RESULT UNCHANGED
OVERLAP CARRIER SELECTION (OCS) APPLIES
TABLE LATAXLA
TUPLE NOT FOUND
ASSUMED TO BE DEFAULT INTRALATA, INTRASTATE, STD
TABLE OCCINFO
ITT 0488 EAP Y Y Y Y Y N N Y Y Y N LONG 14 FGRPC N N N N N N N
N N N N N
TABLE EASAC
TUPLE NOT FOUND

+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

1 ISUPITOG          6212000      ST

TREATMENT ROUTES. TREATMENT IS: GNCT
1*OFLO
2LKOUT

+++ TRAVER: SUCCESSFUL CALL TRACE +++

```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER AIN and E800 processing; Shared Interoffice Trunk trigger escapes TRAVER processing

```
>traver tr ainisupiteaic3 07701106136213712 ainchg 6136211511 b
TABLE TRKGRP
AINISUPITEAIC3 IT 63 ITTD NCRT IC NIL MIDL 613 EAIN NSCR 613 000 N Y $
. TABLE TRKAIN
. AINISUPITEAIC3 TRKTRIGGRP_SHAIO
TABLE OFCVAR
AIN_OFFICE_TRIGGRP OFCTRIGGRP_ALL
TABLE STDPRTCT
EAIN ( 1) ( 65021) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
. 0770110 0770110 SSP NP 6 6 NA
TABLE TRIGGRP
TRKTRIGGRP_SHAIO INFOCOL
. INTEROFF ( DG SHAIODIG)(ESC )$ NIL
Trigger R01 INTEROFF is applicable to individual POTS trunk.
. . TABLE TRIGDIG
. . SHAIODIG INTEROFF 0770110 INTEROFF EVENT TCAP R01 SS7 AINJAZZ DFLT $
. . TABLE C7GTTTYPE
. . AINJAZZ ANSI7 3 $
. . TABLE C7GTT
. . AINJAZZ 6136211511 6136211511 SSNONLY (AINTEST) $
. . TABLE TRGSIESC
. . 6136213712
AIN Info Collected TDP: trigger criteria not met.
. SUBTABLE AMAPRT
. KEY NOT FOUND
. DEFAULT VALUE IS: NONE OVRNONE N

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++
```


AIN Essentials TRAVER (continued)**TRAVER output example for AIN Essentials TRAVER**

SCP returns a ten-digit local number while the SSP supports seven-digit routing; HNPA 1 selector in table HNPACONT subtable HNPACODE

```

>traver l 6211091 n cda na 6137239001 b
warning: Routing characteristics are present.
        Originator must be able to send in
        characteristics specified.

TABLE RTECHAR
. LECNA (CDN NA $) ( BC 3_1KHZ (CDN NA)$)$
TABLE LINEATTR
0 1FR NONE NT FR01 0 613 P621 L613 TSPTS 10 NIL NILSFC LATA1 0 NIL NIL
  00 N $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE LENFEAT
TUPLE NOT FOUND
TABLE OFCVAR
AIN_OFFICE_TRIGGRP OFCTRIG
AIN Orig Attempt TDP: no subscribed trigger.
TABLE PXLAMAP
. LECNA P621 ( XLA LECN)$
TABLE STDPRTCT
. Tuple not found. Default to old pretranslator name.
TABLE STDPRTCT
LECN ( 1) (65021) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
613 613 N NP 0 NA
TABLE HNPACONT
613 Y 932 2 ( 384) ( 1) ( 84) ( 0) 0
. SUBTABLE HNPACODE
. 613 613 HNPA 1
TABLE HNPACONT
613 Y 932 2 ( 384) ( 1) ( 84) ( 0) 0
. SUBTABLE HNPACODE
. 723 723 LRTE 433
AIN Info Collected TDP: no subscribed trigger
TABLE TRIGGRP

```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER

SCP returns a ten-digit local number while the SSP supports seven-digit routing; HNP 1 selector in table HNPACONT subtable HNPACODE

```
OFCTRIG INFOANAL
. PODP ( DG PODPDIG)$ NIL
Trigger R01 PODP is applicable to office.
AIN Info Analyzed TDP: trigger criteria not met.
. SUBTABLE RTEMAP
. . Tuple not found. Default to old index.
. SUBTABLE RTEREF
. 433 N D ISUPITOG 0 N N
. EXIT TABLE RTEREF
EXIT TABLE HNPACONT
TABLE LCASCRCN
613 L613 ( 18) OPTL Y
. SUBTABLE LCASCR
. 723 723
TABLE PFXTREAT
OPTL NP N NP UNDT
TABLE CLSVSCRC
KEY NOT FOUND
DEFAULT IS TO LEAVE XLA RESULT UNCHANGED
TABLE EASAC
TUPLE NOT FOUND
```

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

```
1 ISUPITOG          7239001          ST
```

TREATMENT ROUTES. TREATMENT IS: GNCT

```
1 *OFLO
2 LKOUT
```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER**ISUP IT FGD call; PODP triggering at the access tandem (first part of call)**

```
>traver tr ainisupiteaic 088110 b
TABLE TRKGRP
AINISUPITEAIC IT 63 ITTD NCRT IC NIL MIDL 613 EAIN NSCR 613 000 N Y $
TABLE OFCVAR
AIN_OFFICE_TRIGGRP OFCTRIG
TABLE STDPRTCT
EAIN ( 1) (65021) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAT ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
. 088110 088110 SSP NP 6 6 NA
AIN Info Collected TDP: no subscribed trigger.
DIALED EQUAL ACCESS CODE DID NOT TRIGGER
TRAVER STOPS PROCESSING THE CALL
. SUBTABLE AMAPRT
. KEY NOT FOUND
. DEFAULT VALUE IS: NONE OVRNONE N

+++ TRAVER: SUCCESSFUL CALL TRACE +++

+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER ISUP IT FGD call; PODP triggering at the access tandem (second part of call)

```
>traver tr ainisupiteaic 6706211500 b
TABLE TRKGRP
AINISUPITEAIC3 IT 63 ITTD NCRT IC NIL MIDL 613 EAIN NSCR 613 000 N Y $
. TABLE OFCVAR
. AIN_OFFICE_TRIGGRP OFCTRIG
TABLE STDPRTCT
EAIN ( 1 ) ( 65021 ) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
. KEY NOT FOUND
. DEFAULT VALUE IS: N NP 0 NA
. SUBTABLE AMAPRT
. KET NOT FOUND
. DEFAULT VALUE IS: NONE OVRNONE N
TABLE HNPACONT
613 Y 930 1 ( 74 ) ( 1 ) ( 0 ) ( 0 ) 0
. SUBTABLE HNPACODE
. 670 670 HNPA 0
. 621 621 DN 613 621
AIN Info Collected TDP: no subscribed trigger.
TABLE TRIGGRP
OFCTRIG INFOANAL
. N11 ( DG NIIDIG)$ NIL
Trigger R01 n11 is applicable to office.
. PODP ( DG PODPDIG) (ESCCN ALL)$ NIL
Trigger R01 PODP is applicable to office.
. . TABLE TRIGDIG
. . PODPDIG PODP 6706211500 PODP EVENT TACP R01 SS7 AINJAZZ DFLT $
. . . TABLE C7GTTYPE
. . . AINJAZZ ANSI7 3 $
. . . TABLE C7GTT
. . . AINJAZZ 6706211500 6706211500 SSNONLY (AINTTEST) $
AIN Info Analyzed TDP: trigger criteria met, querying the database.
Use the AINRES option for further information

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++

AIN Info Analyzed TDP: trigger criteria met, querying the database.
Use the AINRES option for further information

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++
```

AIN Essentials TRAVER (continued)**TRAVER output example for AIN Essentials TRAVER**

The RTEVFG ALL option is used to throttle a VFG to change the line attribute and routing of a call (first part of call)

```

>traver l 8631235 89491234 b rtevfg all
TABLE KSETLINE
HOST 16 0 09 23 1 MDN SCA Y Y 8631235 PENS 0 14 814 (3WC) (RAG) (PRK)
      (LNR) (ACRJ) (CFX) (MWT) $
TABLE DNATTRS
814 863 1235
      (PUBLIC (NONUNIQUE) $) $ $
TABLE DNGRPS
TUPLE NOT FOUND
TABLE KSETFEAT
TUPLE NOT FOUND
TABLE CUSTSTN
TUPLE NOT FOUND
TABLE OFCVAR
AIN_OFFICE_TRIGGRP NIL
AIN orig Attempt TDP: no subscribed trigger.
TABLE NCOS
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT AND DIGCOL
PENS NXLA PENSCX PENS 2 PENSDC
TABLE DIGCOL
PENSDC 8 POTS Y
TABLE IBNXLA: XLANAME NCOSVFG
TUPLE NOT FOUND
Default is to go to next XLA name.
CUST PRELIM XLA name is NIL. Go to next XLA name.
TABLE IBNXLA: XLANAME PENSCX
PENSCX 894 NET N Y N 1 Y POTS N N GEN (LATTR 34)$ $
TABLE DIGCOL
POTS specified: POTS digit collection
TABLE LINEATTR
34 IBN NONE NT NSCR 255 005 PSUA PSUA NONE 0 NIL NOLSFC NILLATA 0 NIL
NIL 00 N $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
. TABLE STDPRTCT
PSUA ( 1) (65021) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
. 9 9 N NP 0 NA
. SUBTABLE AMAPRT
. KEY NOT FOUND
. DEFAULT VALUE IS: NONE OVRNONE N
TABLE HNPACONT

```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER

The RTEVFG ALL option is used to throttle a VFG to change the line attribute and routing of a call (first part of call)

```
005 356 100 (8) (1) (0) (0) (0)
. SUBTABLE HNPACODE
. 949 949 HRTE 3
AIN Info Collected TDP: no subscribed trigger.
AIN Info Analyzed TDP: no subscribed trigger.
. SUBTABLE RTEREF
. 3 T IBNRTE 24
. . TABLE IBNRTE
. . 24 OW N N N 9 V PSOWT9 0
. . . N N N N N PSUACUS2W 33
. . . TABLE DIGMAN
. . . . 33 (INC814) (CL END)
. . . EXIT TABLE DIGMAN
. . VFG N N N ACUS1 0
. . EXIT TABLE IBNRTE
. EXIT TABLE RTEREF
EXIT TABLE HNPACONT
TABLE LCASCRCN
005 PSUA (1) OPTL Y
. SUBTABLE LCASCR
. TUPLE NOT FOUND. DEFAULT IS NON-LOCAL
TABLE PFXTREAT
OPTL NP N NP UNDT

+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

1 VFG: PSOWT9          9491234      ST
2 PSUACUS2W           8199491234
3 VFG: ACUS1          9491234      ST

TREATMENT ROUTES. TREATMENT IS: GNCT
1 NCA

+++ TRAVER: SUCCESSFUL CALL TRACE +++

---->
----> Resolving VFG: PSOWT9 Route with calling digits 9491234
---->
TABLE VIRTGRPS
PSOWT9 SIZE 11 POTS 8140150450 3 N $
```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER

The RTEVFG ALL option is used to throttle a VFG to change the line attribute and routing of a call (first part of call)

```

TABLE LINEATTR
3 DWT NONE NT OWTS 0 814 EOWT TOPS 0 NIL NILSFC ALNA 0 NIL NIL 00 N $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE STDPRTCT
EOWT (1) (65021) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
. 94 94 N NP 0 NA
. SUBTABLE AMAPRT
. KEY NOT FOUND
. DEFAULT VALUE IS: NONE OVRNONE N
TABLE HNPACONT
814 911 100 (26) (1) (0) (3) 0
. SUBTABLE HNPACODE
. 949 949 HRTE 1
. SUBTABLE RTEREF
. 1 S D ALWADS177TE
. S D ALNA71T77MDA
. EXIT TABLE RTEREF
EXIT TABLE HNPACONT
THIS IS A ZONE 9 OUTWATS LINE
TABLE OWATZONE
7 DIGITS: PREFIXING DIALLED NUMBER SNPA
814 9149491234 0
TABLE ZONEORDR
814 (098) (123456) (7) (A) (B) (C) $
VALID OUTWATS CALL
TABLE LCASCRCN
814 EOWT (1) INPA Y
. SUBTABLE LCASCR
. TUPLE NOT FOUND. DEFAULT IS NON-LOCAL
TABLE PFXTREAT
INPA NP N DD UNDT
TABLE CLSVSCRC
814 OWTS DD 2 N NONE (1)
. SUBTABLE CLSVSCR
KEY NOT FOUND
DEFAULT IS TO LEAVE XLA RESULT UNCHNGED
OVERLAP CARRIER SELECTION (OCS) APPLIES
TABLE LATAXLA
TUPLE NOT FOUND

```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER

The RTEVFG ALL option is used to throttle a VFG to change the line attribute and routing of a call (first part of call)

```
ASSUMED TO BE DEFAULT INTRALATA, INTRASTATE, STD  
TABLE EASAC  
TUPLE NOT FOUND
```

```
+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

DIGIT TRANSLATION ROUTES

```
1 ALNADS177TE      9491234      ST  
2 ALNA71T77MDA    9491234      ST
```

TREATMENT ROUTES TREATMENT IS: GNCT

```
1 NCA
```

```
+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++
```


AIN Essentials TRAVER (continued)**TRAVER output example for AIN Essentials TRAVER**
The V selector is used (second part of call)

```

>traver v acus1 9491234 b
TABLE VIRTGRPS
ACUS1 SIZE 2047 POTS N 0 N ( EA 732 N) $
TABLE LINEATTR
0 1FR NONE NT EAFR 0 814 EAFR POTS TOPS 0 NIL NILSFC ALNA 0 NIL NIL 00 Y
RESGRP0 0 0 $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE STDPRTCT
EOWT ( 1) (65021) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
. 94 94 N NP 0 NA
. SUBTABLE AMAPRT
. KEY NOT FOUND
. DEFAULT VALUE IS: NONE OVRNONE N
TABLE HNPACONT
814 911 100 (26) (1) (0) (3) 0
. SUBTABLE HNPACODE
. 949 949 HRTE 1
. SUBTABLE RTEREF
. 1 S D ALWADS177TE
. S D ALNA71T77MDA
. EXIT TABLE RTEREF
EXIT TABLE HNPACONT
TABLE LCASCRCN
814 EOWT (1) INPA Y
. SUBTABLE LCASCR
. TUPLE NOT FOUND. DEFAULT IS NON-LOCAL
TABLE PFXTREAT
INPA NP N DD UNDT
TABLE CLSVSCRC
KEY NOT FOUND
DEFAULT IS TO LEAVE XLA RESULT UNCHNGED
OVERLAP CARRIER SELECTION (OCS) APPLIES
TABLE LATAXLA
TUPLE NOT FOUND
ASSUMED TO BE DEFAULT INTRALATA, INTRASTATE, STD
TABLE EASAC
TUPLE NOT FOUND

```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER
The V selector is used (second part of call)

```
+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

```
DIGIT TRANSLATION ROUTES
```

```
1 ALNADS177TE      9491234      ST  
2 ALNA71T77MDA    9491234      ST
```

```
TREATMENT ROUTES TREATMENT IS: GNCT
```

```
1 NCA
```

```
+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++
```

AIN Essentials TRAVER (continued)**TRAVER output example for AIN Essentials TRAVER**
Line attributes and routing of call (first part of call)

```

>traver I 6210044 8352069 b
TABLE IBNLINES
HOST 01 0 00 26 0 DP STN RES 6210044 0 (ACB) $
TABLE LINEATTR
0 1FR NONE NT FR01 0 613 P621 L613 TSPS 10 NIL NILSFC LATA1 0 NIL NIL 00
Y RESGRP 0 2 $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE IBNFPEAT
TUPLE NOT FOUND
TABLE CUSTSTN
TUPLE NOT FOUND
TABLE OFCVAR
AIN_OFFICE_TRIGGRP TRIGGRP_PODP
AIN Orig Attempt TDP: no subscribed trigger.
TABLE NCOS
RESGRP 2 0 0 RNCOS2 ( XLAS RXCMN2 NXLA RES)$
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND DIGCOL
RESGRP NXLA RESXLA RXCFN 0 RES
TABLE DIGCOL
RES specified: RES digit collection
TABLE IBNXLA: XLANAME RXCMN2
TUPLE NOT FOUND
Default from table XLANAME:
RXCMN2
      (NET N N N 0 N NDGT N Y GEN ( LATTR 1) (EA MCI Y 0) $ $)$ 9
TABLE DIGCOL
NDGT specified: digits collected individually
TABLE LINEATTR
1 1MR NONE NT FR01 0 613 P621 L613 TSPS 10 NIL NILSFC LATA1 0 NIL NIL 00
N $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE STDPRTCT
P621 ( 1) (65021) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
. 835 835 T NP 0 IBNRTE 142 3 24 NONE
AIN Info Collected TDP: no subscribed trigger.

```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER Line attributes and routing of call (first part of call)

```
TABLE TRIGGRP
TRIGGRP_PODP INFOANAL
. PODP ( DG PODPDIG)$ NIL
Trigger R01 PODP is applicable to office.
AIN Info Analyzed TDP: trigger criteria not met.
. . TABLE IBNRTE
. . . 142 VFG N N N AINPOT 22
. . . . TABLE DIGMAN
. . . . . 22 (REM 3) (INC 919621)
. . . . . EXIT TABLE DIGMAN
. . . EXIT TABLE IBNRTE
. . SUBTABLE AMAPRT
. . KEY NOT FOUND
. . DEFAULT VALUE IS: NONE OVRNONE N
OVERLAP CARRIER SELECTION (OCS) APPLIES
TABLE LATA1A
TUPLE NOT FOUND
ASSUMED TO BE DEFAULT INTRALATA, INTRASTATE, STD
TABLE EASAC
TUPLE NOT FOUND

+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

1 VFG: AINPOT          9196212069    ST

TREATMENT ROUTES. TREATMENT IS: GNCT
1 T120

+++ TRAVER: SUCCESSFUL CALL TRACE +++

---->
----> Resolving VFG: AINPOT Route with calling digits 9196212069
---->
TABLE VIRTGRPS
AINPOT SIZE 20 POTS 9199917798 220 N (CUSTGRP IBNTST)$
TABLE LINEATTR
220 1FR NONE NT FR01 0 919 P621 L919 TSPS 10 NIL NILSFC LATA1 0 NIL NIL
00 Y RESGRP 0 8 $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE STDPRTCT
P621 (1) (65021) 0
. SUBTABLE STDPRT
```

AIN Essentials TRAVER (continued)**TRAVER output example for AIN Essentials TRAVER**
Line attributes and routing of call (first part of call)

```

WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
. 919 919 N DD 3 NA
. SUBTABLE AMAPRT
. KEY NOT FOUND
. DEFAULT VALUE IS: NONE OVRNONE N
TABLE HNPACONT
919 Y 950 8 ( 138) ( 1) ( 0) ( 0) 0
. SUBTABLE HNPACODE
. 621 622 DN 613 621
TABLE IBNFEAT
TUPLE NOT FOUND
TABLE CUSTSTN
TUPLE NOT FOUND
TABLE OFCVAR
AIN_OFFICE_TRIGGRP TRIGGRP_PODP
AIN Info Collected TDP: no subscribed trigger.
TABLE TRIGGRP
TRIGGRP_PODP INFOANAL
. PODP ( DG PODPDIG)$ NIL
Trigger R01 PODP is applicable to office.
. . TABLE TRIGDIG
. . PODPDIG PODP 6136212069 PODP EVENT TCAP R01 SS7 AINSIM DFLT $
. . . AINSIM ANS17 223 $
. . . TABLE C7GTT
. . . AINSIM 6136212069 6136212069 SSNOONLY (AINTTEST) $
AIN Info Analyzed TDP: trigger criteria met, querying the database.
Use the AINRES option for further information

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++

AIN Info Analyzed TDP: trigger criteria met, querying the database.
Use the AINRES option for further information

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++

```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER The V selector is used (second part of call)

```
>traver v ainpot 9196212069 b
TABLE VIRTGRPS
AINPOT SIZE 20 POTS 9199917798 220 N (CUSTGRP IBNTST)$
TABLE LINEATTR
220 1FR NONE NT FR01 0 919 P621 L919 TSPS 10 NIL NILSFC LATA1 0 NIL NIL
  00 Y RESGRP 0 8 $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE STDPRTCT
P621 ( 1) (65021) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
. 919 919 N DD 3 NA
. SUBTABLE AMAPRT
. KEY NOT FOUND
. DEFAULT VALUE IS: NONE OVRNONE N
TABLE HNPACONT
919 Y 950 8 ( 138) ( 1) ( 0) ( 0) 0
. SUBTABLE HNPACODE
. 621 622 DN 613 621
TABLE OFCVAR
AIN_OFFICE_TRIGGRP TRIGGRP_PODP
AIN Info Collected TDP: no subscribed trigger.
TABLE TRIGGRP
TRIGGRP_PODP INFOANAL
. PODP ( DG PODPDIG)$ NIL
Trigger R01 PODP is applicable to office.
. . TABLE TRIGDIG
. . PODPDIG PODP 6136212069 PODP EVENT TCAP R01 SS7 AINSIM DFLT $
. . . AINSIM ANS17 223 $
. . . TABLE C7GTT
. . . AINSIM 6136212069 6136212069 SSNONLY (AINTTEST) $
AIN Info Analyzed TDP: trigger criteria met, querying the database.
Use the AINRES option for further information

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++

AIN Info Analyzed TDP: trigger criteria met, querying the database.
Use the AINRES option for further information

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++
```

AIN Essentials TRAVER (continued)**TRAVER output example for AIN Essentials TRAVER**
Call incoming on OI trunk triggers at PODP

```

>traver tr oimfic 6706218917 b
TABLE TRKGRP
OIMFIC OI 56 TLD NCRT NIL VERI NSCR 613 NLCL CV Y 5 6 N $
TABLE OFCVAR
AIN_OFFICE_TRIGGRP OFCTRIG
TABLE STDPRTCT
VERI ( 1) (65021) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
. 670 670 N DD 0 NA
. SUBTABLE AMAPRT
. KEY NOT FOUND
. DEFAULT VALUE IS: NONE OVRNONE N
TABLE HNPACONT
613 Y 932 2 ( 384) ( 1) ( 84) ( 0) 0
. SUBTABLE HNPACODE
. 670 670 HNPA 0
. 6218 6219 DN 613 621
AIN Info Collected TDP: no subscribed trigger.
TABLE TRIGGRP
OFCTRIG INFOANAL
. N11 ( DG N11DIG)$ NIL
Trigger R01 N11 is applicable to office.
. PODP ( DG PODPDIG)$ NIL
Trigger R01 PODP is applicable to office.
. . TABLE TRIGDIG
. . PODPDIG PODP 6706218917 PODP EVENT TCAP R01 SS7 AINJAZZ DFLT (POTUSE
CPC)$
. . . TABLE C7GTTTYPE
. . . AINJAZZ ANSI7 3 $
. . . TABLE C7GTT
. . . AINJAZZ 6706218917 6706218917 SSNONLY (AINTTEST) $
AIN Info Analyzed TDP: trigger criteria met, querying the database.
Use the AINRES option for further information

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++

AIN Info Analyzed TDP: trigger criteria met, querying the database.
Use the AINRES option for further information

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++

```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER

Call incoming on OP trunk triggers at PODP; has NRMLTRAF option in table TRKGRP

```
>traver tr opscmf2wa 6706218917 b
TABLE TRKGRP
OPSCMF2WA OP 0 TLD NCRT NIL MIDL COMB MIX REV TERMHOLD N 2W P621 NSCR
 613 LCL VV Y 5 7 N (NRMLTRAF) $
TABLE OFCVAR
AIN_OFFICE_TRIGGRP OFCTRIG
TABLE STDPRTCT
P621 ( 1) (65021) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
. 670 670 N DD 0 NA
. SUBTABLE AMAPRT
. KEY NOT FOUND
. DEFAULT VALUE IS: NONE OVRNONE N
TABLE HNPACONT
613 Y 932 2 ( 384) ( 1) ( 84) ( 0) 0
. SUBTABLE HNPACODE
. 670 670 HNPA 0
. 6218 6219 DN 613 621
AIN Info Collected TDP: no subscribed trigger.
TABLE TRIGGRP
OFCTRIG INFOANAL
. N11 ( DG N11DIG)$ NIL
Trigger R01 N11 is applicable to office.
. PODP ( DG PODPDIG)$ NIL
Trigger R01 PODP is applicable to office.
. . TABLE TRIGDIG
. . PODPDIG PODP 6706218917 PODP EVENT TCAP R01 SS7 AINJAZZ DFLT (POTUSE
  CPC)$
. . . TABLE C7GTTYPE
. . . AINJAZZ ANSI7 3 $
. . . TABLE C7GTT
. . . AINJAZZ 6706218917 6706218917 SSNONLY (AINTEST) $
AIN Info Analyzed TDP: trigger criteria met, querying the database.
Use the AINRES option for further information

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++

AIN Info Analyzed TDP: trigger criteria met, querying the database.
Use the AINRES option for further information

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++
```


AIN Essentials TRAYER (continued)**TRAYER output example for AIN Essentials TRAYER****Call incoming on SC (LEAS or non-LEAS) trunk triggers at PODP (6132288917)**

```

>trayer tr sc2wb 2288917 b n st 06218918 st
TABLE TRKGRP
SC2WB SC 0 TLA NCRT NIL N 613 TCA3 NONE DD ONHOOK ONHOOK 5
  5 5 2W MIDL 0 BELL REGULAR CAMA NONE REV Y Y $
TABLE STDPRTCT
TCA3 ( 1) (65021) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
. 2 612 N DD 0 NA
. SUBTABLE AMAPRT
. KEY NOT FOUND
. DEFAULT VALUE IS: NONE OVRNONE N
TABLE HNPACONT
613 Y 932 2 ( 386) ( 1) ( 84) ( 0) 0
. SUBTABLE HNPACODE
. 228 228 HRTE 6
TABLE OFCVAR
AIN_OFFICE_TRIGGRP OFCTRIG
AIN Info Collected TDP: no subscribed trigger.
TABLE INFOANAL
. N11 ( DG N11DIG)$ NIL
Trigger R01 N11 is applicable to office.
. PODP ( DG PODPDIG)$ NIL
Trigger R01 PODP is applicable to office.
. N11 ( DG N11TRAF)$ NIL
Trigger R01 N11 is applicable to office.
. PODP ( DG PODPTRAF)$ NIL
Trigger R01 PODP is applicable to office.
. PODP ( DG SCPODP)$ NIL
Trigger R01 PODP is applicable to office.
. . TABLE TRIGDIG
. . SCPODP PODP 6132288917 PODP EVENT TCAP R01 SS7 AINJAZZ DFLT $
. . . TABLE C7GTTYPE
. . . AINJAZZ ANSI7 3 $
. . . TABLE C7GTT
. . . AINJAZZ 6132288917 6132288917 SSNONLY (AINTEST) $
AIN Info Analyzed TDP: trigger criteria met, querying the database.
Use the AINRES option for further information

```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER

Call incoming on SC (LEAS or non-LEAS) trunk triggers at PODP (6132288917)

```
+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

```
AIN Info Collected TDP:trigger criteria met,querying the database.  
Use the AINRES option for further information
```

```
+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++
```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER

SC LEAS post-query processing when the Analyse_Route response from the SCP contains the ChargeNumber and CalledPartyID

```

>traver tr sc2wb n cdn na 670218919 ainchg 6137221111 ainres r01 ar b n st 06136211234 st
Warning: Routing characteristics are present.
        Originator must be able to send in
        characteristics specified.
TABLE RTECHAR
. LECNA (CDN NA $) (BC 3_1KHZ (CDN NA)$)$
TABLE TRKGRP
SC2WB SC 0 TLA NCRT NIL N 613 TCA3 NONE DD ONHOOK ONHOOK 5
  5 5 2W MIDL 0 BELL REGULAR CAMA NONE REV Y N $
Warning: Routing characteristics in TRAVER command
line will override any bearer capability datafilled
in table TRKGRP.
TABLE PXLAMAP
. Tuple not found. Default to old pretranslator name.
TABLE STDPRTCT
TCA3 ( 1) (65021) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
. 67 819554 N DD 0 NA
. SUBTABLE AMAPRT
. KEY NOT FOUND
. DEFAULT VALUE IS: NONE OVRNONE N
TABLE HNPACONT
613 Y 932 2 ( 384) ( 1) ( 84) ( 0) 0
. SUBTABLE HNPACODE
. 670 670 HNPA 0
. 6218 6219 DN 613 621
TABLE OFCVAR
AIN_OFFICE_TRIGGRP OFCTRIG
TABLE TRIGGRP
OFCTRIG INFOANAL
. N11 ( DG N11DIG)$ NIL
Trigger R01 N11 is applicable to office.
. PODP ( DG PODPDIG)$ NIL
Trigger R01 PODP is applicable to office.
. N11 ( DG N11TRAF)$ NIL
Trigger R01 N11 is applicable to office.
. PODP ( DG PODPTRAF)$ NIL
Trigger R01 N11 is applicable to office.
. PODP ( DG PODPTRAF)$ NIL

```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER

SC LEAS post-query processing when the Analyse_Route response from the SCP contains the ChargeNumber and CalledPartyID

```
Trigger R01 PODP is applicable to office.
AIN Info Analyzed TDP: trigger criteria not met.
TABLE TOFCNAME
613 621
TABLE DNINV
613 621 8919 L HOST 05 1 12 11
AIN Term Attempt TDP: no subscribed trigger.
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
DETERMINE IF THE ROUTE SHOULD BE REPLACED WITH A NEW EQUAL ACCESS ROUTE
TABLE TRKLATA
SC2WB 6137221111 LATA1 Y T DACD
TABLE EASAC
TUPLE NOT FOUND
TABLE LATAXLA
LATA1 670 INTER INTER STD
TABLE DNPIC
613 722 11 11 ITT Y N
TABLE OCCINFO
ITT 0488 EAP Y Y Y Y N N Y Y Y N LONG 14 FGRPC N N N N N N N N N N N N
TABLE PXLAMAP
. Tuple not found. Default to old pretranslator name.
TABLE STDPRTCT
TCA3 (1) (65021) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
10488 10488 EA DD 5 P PEAL ITT Y OFRT 900 5 20 N
. . TABLE OFRTMAP
. . . Tuple not found. Default to old index.
. . TABLE OFRT
. . 900 CND EA INTNL SK 2
. . N D ISUPOGITT 0 N N
. . CND ALWAYS SK 1
. . N D ISUPOGITT 15 D179 N
. . EXIT TABLE OFRT
TABLE PXLAMAP
. . Tuple not found. Default to old pretranslator name.
TABLE STDPRTCT
. PEAL (1) (65021) 0
```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER**SC LEAS post-query processing when the Analyse_Route response from the SCP contains the ChargeNumber and CalledPartyID**

```
. . SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
. . 1 9 EA USING EQUAL ACCESS (EA) ROUTE OFRT 900 FROM PRETRANSLATION
TABLE OFRTMAP
. Tuple not found. Default to old index.
TABLE OFRT
900 CND EA INTNL SK 2
  N D ISUPOGITT 0 N N
. CND ALWAYS SK 1
. N D ISUPOGITT 15 D179 N
TABLE OFRTMAP
. Tuple not found. Default to old index.
EXIT TABLE OFRT

+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

ISUPOGITT      6706218919      ST

BILL           6136211234

  TREATMENT ROUTES. TREATMENT IS: GNCT
  1*OFLO

+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER

SC LEAS post-query processing when the Analyse_Route response from the SCP contains the ChargeNumber and CalledPartyID with a carrier

```
>traver tr sc2wb n cdn na 670218919 tns na cic 0777 ainchg 6137221111 ainres r01 ar b n st
06136211234 st
```

```
Warning: Routing characteristics are present.
```

```
Originator must be able to send in
characteristics specified.
```

```
TABLE RTECHAR
```

```
. ICXDNA (CDN NA (TNS NA)$) (BC 3_1KHZ (CDN NA) (TNS NA)$)$
```

```
TABLE TRKGRP
```

```
SC2WB SC 0 TLA NCRT NIL N 613 TCA3 NONE DD ONHOOK ONHOOK 5
```

```
5 5 2W MIDL 0 BELL REGULAR CAMA NONE REV Y N $
```

```
Warning: Routing characteristics in TRAVER command
line will override any bearer capability datafilled
in table TRKGRP.
```

```
TABLE PXLAMAP
```

```
. Tuple not found. Default to old pretranslator name.
```

```
TABLE STDPRTCT
```

```
TCA3 ( 1) (65021) 0
```

```
. SUBTABLE STDPRT
```

```
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
```

```
10777 10777 EA DD 5 P PEA2 GTE Y OFRT 896 5 20 N
```

```
. . TABLE OFRTMAP
```

```
. . . Tuple not found. Default to old index.
```

```
. . TABLE OFRT
```

```
. . 896 CND EA INTNL SK 2
```

```
. . N D ISUPOGGTE 0 N N
```

```
. . CND ALWAYS SK 1
```

```
. . N D ISUPOGGTE 15 D179 N
```

```
. . EXIT TABLE OFRT
```

```
TABLE PXLAMAP
```

```
. . Tuple not found. Default to old pretranslator name.
```

```
TABLE STDPRTCT
```

```
. PEA2 (1) (65021) 0
```

```
. SUBTABLE STDPRT
```

```
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
```

```
. . 6 9 EA DD 0 T NA GTE N
```

```
. SUBTABLE AMAPRT
```

```
. KEY NOT FOUND
```

```
. DEFAULT VALUE IS: NONE OVRNONE N
```

AIN Essentials TRAVER (continued)**TRAVER output example for AIN Essentials TRAVER**

SC LEAS post-query processing when the Analyse_Route response from the SCP contains the ChargeNumber and CalledPartyID with a carrier

```

TABLE HNPACONT
613 Y 932 2 ( 384) ( 1) ( 84) ( 0) 0
. SUBTABLE HNPACODE
. 670 670 HNPA 0
. 6218 6219 DN 613 621
TABLE OFCVAR
AIN_OFFICE_TRIGGRP OFCTRIG
TABLE TOFCNAME
613 621
TABLE DNINV
613 621 8919 L HOST 05 1 12 11
AIN Term Attempt TDP: no subscribed trigger.
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
DETERMINE IF THE ROUTE SHOULD BE REPLACED WITH A NEW EQUAL ACCESS ROUTE
TABLE TRKLATA
SC2WB 6137221111 LATA1 Y T DACD
TABLE EASAC
TUPLE NOT FOUND
TABLE OCCINFO
GTE 0777 EAP Y Y Y Y Y N N Y Y Y N LONG 14 FGRPC N N N N N N N N N N N N
TABLE LATA1
LATA1 670 INTER INTER STD
TABLE DNPIC
613 722 11 11 ITT Y N
using Equal Access (EA) route OFRT 896 from Pretranslation
TABLE OFRTMAP
. Tuple not found. Default to old index.
TABLE OFRT
896 CND EA INTNL SK 2
. N D ISUPOggte 0 N N
. CND ALWAYS SK 1
. N D ISUPOGGTE 15 D179 N
TABLE OFRTMAP
. Tuple not found. Default to old index.
EXIT TABLE OFRT

+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER

SC LEAS post-query processing when the Analyse_Route response from the SCP contains the ChargeNumber and CalledPartyID with a carrier

```
ISUPOGGTE      6706218919      ST
BILL           6136211234

TREATMENT ROUTES. TREATMENT IS: GNCT
1*OFLO

+++ TRAVER: SUCCESSFUL CALL TRACE +++
```


AIN Essentials TRAVER (continued)**TRAVER output example for AIN Essentials TRAVER****Call escaping PODP trigger that uses ESCDN criteria in table TRIGGRP**

```

>traver | 6211091 n cda na 6137239001 b
TABLE LINEATTR
0 1FR NONE NT FR01 0 613 P621 L613 TSPS 10 NIL NILSFC LATA1 0 NIL NIL
00 N $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE LENFEAT
TUPLE NOT FOUND
TABLE OFCVAR
AIN_OFFICE_TRIGGRP OFCTRIG
AIN Orig Attempt TDP: no subscribed trigger.
TABLE STDPRTCT
P621 ( 1) (65021) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
. 621 624 N NP 0 NA
. SUBTABLE AMAPRT
. KEY NOT FOUND
. DEFAULT VALUE IS: NONE OVRNONE N
TABLE HNPACONT
613 Y 932 2 ( 385) ( 1) ( 84) ( 0) 0
. SUBTABLE HNPACODE
. 6218 6219 DN 613 621
AIN Info Collected TDP: no subscribed trigger.
TABLE TRIGGRP
OFCTRIG INFOANAL
. N11 ( DG N11DIG)$ NIL
Trigger R01 N11 is applicable to office.
. PODP ( DG PODPDIG)$ NIL
Trigger R01 PODP is applicable to office.
. N11 ( DG N11TRAF)$ NIL
Trigger R01 N11 is applicable to office.
. PODP ( DG PODPTRAF)$ NIL
Trigger R01 N11 is applicable to office.
. PODP ( DG SOMDIG) (ESCDN ) (ESCOPE ) (ESCEA )$ NIL
Trigger R01 PODP is applicable to office.
. . TABLE TRIGDIG
. . SOMDIG PODP 6136218904 PODP EVENT TCAP R01 SS7 AINJAZZ DFLT (POTUSE
CPC) $

```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER Call escaping PODP trigger that uses ESCDN criteria in table TRIGGRP

```
. . . TABLE C7GTTYPE
. . . AINJAZZ ANSI7 3 $
. . . TABLE C7GTT
. . . AINJAZZ 6136218904 6136218904 SSNONLY (AINTTEST) $
AIN Info Analyzed TDP: trigger criteria not met.
TABLE TOFCNAME
613 621
TABLE DNINV
613 621 8904 L HOST 05 1 04 00
AIN Term Attempt TDP: no subscribed trigger.
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE LCASCRCN
613 L613 ( 17) OPTL N
. SUBTABLE LCASCR
. 621 621
TABLE PFXTREAT
OPTL NP Y NP UNDT
TABLE CLSVSCRC
KEY NOT FOUND
DEFAULT IS TO LEAVE XLA RESULT UNCHANGED

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

1 LINE                6136218904                ST

TREATMENT ROUTES.  TREATMENT IS: GNCT
1 *OFLO
2 LKOUT

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++
```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER Triggering at Termination_Attempt using the AINRES AT option

```

>traver | 6214141 6137226050 ainres r01 at b
TABLE LINEATTR
0 1FR NONE NT FR01 0 613 P621 L613 TSPS 10 NIL NILSFC LATA1 0 NIL NIL
00 N $
LCABILL OFF - BILLING DONE ON BASIS OF CALLTYPE
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE LENFEAT
TUPLE NOT FOUND
TABLE OFCVAR
AIN_OFFICE_TRIGGRP OFCTRIG
TABLE STDPRTCT
P621 ( 1) (65021) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO
DOCUMENTATION.
. KEY NOT FOUND
. DEFAULT VALUE IS:      N NP 0 NA
. SUBTABLE AMAPRT
. KEY NOT FOUND
. DEFAULT VALUE IS:      NONE OVRNONE N
TABLE HNPACONT
613 Y 932 2 ( 385) ( 1) ( 84) ( 0) 0
. SUBTABLE HNPACODE
. 6317 6139 HNPA 0
. 722 722 DN 613 722
TABLE TOFCNAME
613 6722
TABLE DNINV
613 722 6050 ILC REM1 00 0 09 31
TABLE DNFEAT
613 722 6050 (AINDN TERMATT)
TABLE TRIGGRP
TERMATT TERMATT
. TERMATT $ JAZZINFO
Trigger R01 TERMATT is applicable to directory number.
Trigger R01 TERMATT: Trigger is active.
(use AINCI CHANGESTATE command to alter activation state.)
. . TABLE TRIGINFO
. . JAZZINFO EVENT TCAP R01 SS7 AINJAZZ DFLT $

```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER Triggering at Termination_Attempt through the AINRES AT option (continued)

```
. . TABLE C7GTTYE
. . AINJAZZ ANSI7 3 $
. . TABLE C7GTT
. . AINJAZZ 6137226050 6137226050 SSNONLY (AINTTEST) $
AIN Term Attempt TDP: AINRES authorize termination option selected
TABLE DNATTRS
613 722 6050
(PUBLIC ( NAME TOP_CAT) $)
(PRIVATE ( NAME JERRY_MOUSE) $)$ $
TABLE DNGRPS
TUPLE NOT FOUND
TABLE LCASCRCN
613 L613 ( 18) OPTL N
. SUBTABLE LCASCR
. 613 613
TABLE PFXTREAT
OPTL NP Y NP UNDT
TABLE CLSVSCRC
KEY NOT FOUND
DEFAULT IS TO LEAVE XLA RESULT UNCHANGED

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

1 LINE                6137226050                ST

TREATMENT ROUTES.  TREATMENT IS: GNCT
1 *OFLO
2 LKOUT

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++
```

AIN Essentials TRAVER (continued)**TRAVER output example for AIN Essentials TRAVER****TRAVER output for MBG trunk-originated call with generic address parameter (GAP)**

```

>traver tr isupti mbg local 1 0 5118 7244118 b
MBG CALL:CUST xla on GAP
TABLE TRKGRP
ISUPTI TI 0 ELO NCRT NIL P625 NSCR 613 LCL N N $
TABLE CUSTSTN
COMKODAK AIN AIN CUSTTRIGGRPBGID
TABLE OFCVAR
AIN_OFFICE_TRIGGRP NIL
TABLE NCOS
COMKODAK 0 0 0 KDK0 $
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND
DIGCOL
COMKODAK PXDK CXDK CUSTFEAT 0 KDK
TABLE DIGCOL
KDK 5 COL L 1
NCOS PRELIM XLA name is NIL. Go to next XLA name.
TABLE IBNXLA: XLANAME PXDK
TUPLE NOT FOUND
Default is to go to next XLA name.
TABLE IBNXLA: XLANAME CXDK
CXDK 5118 EXTN N N Y 613 723 4 $
AIN Info Collected TDP: no subscribed trigger.
TABLE TRIGGRP
CUSTTRIGGRPBGID INFOANAL
. CDPCODE ( DG CDPBGID2)$ NIL
Trigger R01 CDPCODE is applicable to customer group.
. . TABLE TRIGDIG
. . CDPBGID2 CDPCODE 5118 CDPCODE NOTRANS EVENT TCAP R01 TCPIP 0 $
AIN Info Analyzed TDP: trigger criteria met, querying the database.
Use the AINRES option for further information

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++

AIN Info Analyzed TDP: trigger criteria met, querying the database.
Use the AINRES option for further information

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++

```

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER TRAVER output for MBG trunk-originated call without a GAP

```
>traver tr isupti mbg local 1 0 n 5118 b
MBG CALL:CUST xla on Cd_DN
TABLE TRKGRP
ISUPTI TI 0 ELO NCRT NIL P625 NSCR 613 LCL N N $
TABLE CUSTSTN
COMKODAK AIN AIN CUSTTRIGGRPBGID
TABLE OFCVAR
AIN_OFFICE_TRIGGRP NIL
TABLE NCOS
COMKODAK 0 0 0 KDK0 $
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND DIGCOL
COMKODAK PXDK CXDK CUSTFEAT 0 KDK
TABLE DIGCOL
KDK 5 COL L 1
NCOS PRELIM XLA name is NIL. Go to next XLA name.
TABLE IBNXLA: XLANAME PXDK
TUPLE NOT FOUND
Default is to go to next XLA name.
TABLE IBNXLA: XLANAME CXDK
CXDK 5118 EXTN N N Y 613 723 4 $
AIN Info Collected TDP: no subscribed trigger.
TABLE TRIGGRP
CUSTTRIGGRPBGID INFOANAL
. CDPCODE ( DG CDPBGID2)$ NIL
Trigger R01 CDPCODE is applicable to customer group.
. . TABLE TRIGDIG
. . CDPBGID2 CDPCODE 5118 CDPCODE NOTRANS EVENT TCAP R01 TCPIP 0 $
AIN Info Analyzed TDP: trigger criteria met, querying the database.
Use the AINRES option for further information

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++

AIN Info Analyzed TDP: trigger criteria met, querying the database.
Use the AINRES option for further information

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++
```

A TRAVER that simulates an incoming call on an MF IT appears in the following example. The example uses FGD signaling and has a SSP selector specified in table STDPRTCT. This table is the first stage of translations.

AIN Essentials TRAVER (continued)**TRAVER output example for AIN Essentials TRAVER**
Simulated TRAVER output for First Stage of Translations

```

>traver tr mfiteaic 088110 b
TABLE TRKGRP
MFITEAIC IT 63 ITTD NCTC IC NIL MIDL 613 E800 NSCR 613 000 N Y $
TABLE OFCVAR
AIN_OFFICE_TRIGGRP OFCTRIGGRP_ONE
TABLE STDPRTCT
E800 (1) (65021) 0
. SUBTABLE STDPRT

WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO DOCUMENTATION.

. 088110 088110 SSP NP 6 6 NA <----- (SSP selector is met)

AIN Info Collected TDP: no subscribed trigger.

DIALED EQUAL ACCESS CODE DID NOT TRIGGER
TRAVER STOPS PROCESSING THE CALL
. SUBTABLE AMAPRT
. KEY NOT FOUND
. DEFAULT VALUE IS: NONE OVRNONE N

+++ TRAVER: SUCCESSFUL CALL TRACE +++

```

A TRAVER that simulates the second stage of translations appears in the following example.

AIN Essentials TRAVER (continued)

TRAVER output example for AIN Essentials TRAVER Simulated TRAVER output for Second Stage of Translations

```
>traver tr mfiteaic 6007229876 b
TABLE TRKGRP
MFITEAIC IT 63 ITTD NCTC IC NIL MIDL 613 E800 NSCR 613 000 N Y $
TABLE OFCVAR
AIN_OFFICE_TRIGGRP OFCTRIGGRP_ONE
TABLE STDPRTCT
E800 (1) (65021) 0
. SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING. CALL TYPE DEFAULT IS NP. PLEASE REFER TO DOCUMENTATION.
. KEY NOT FOUND
. DEFAULT VALUE IS:    N NP 0 NA
. SUBTABLE AMAPRT
. KEY NOT FOUND
. DEFAULT VALUE IS:    NONE OVRNONE N
TABLE HNPACONT
613 873 2 (61) (1) (94) (0) 0
. SUBTABLE HNPACODE
. 600 600 FRTE 600
AIN Info Collected TDP: no subscribed trigger.
TABLE TRIGGRP
OFCTRIGGRP_ONE INFOANAL
. N11 (DG N11DIG)$NIL
Trigger R01 N11 is applicable to office.
. PODP (DG PODPDIG)$NIL
Trigger R01 PODP is applicable to office.
. TABLE TRIGDIG
. PODPDIG PODP 6007229876 PODP EVENT TCAP R01 SS7 AINJAZZ DFLT $
... TABLE C7GTTYPE
... AINJAZZ ANS17 3 $
... TABLE C7GTT
... AINJAZZ 6007229876 6007229876 SSNONLY (AINTTEST) $

AIN Info Analyzed TDP: trigger criteria met, querying the database.
Use the AINRES option for further information

+++ AIN TRAVER: SUCCESSFUL CALL TRACE +++
```

The carrier ID must follow the unknown (UNK) value. The carrier ID must not follow the carrier ID code (CIC). When the carrier ID follows the CIC, the call acts like the call originates from an AIN access tandem (AT) switch and not an end office (EO) switch.

AIN Essentials TRAVER (continued)**TRAVER output example for AIN Essentials TRAVER****AR TRAVER output for local trunk calls that receive an FGD carrier**

```
> traver tr l613mfti n cdn na 8196261506 tns na unk 205 ainchg 6136211088 +ainres r01 ar b
```

```
Warning: Routing characteristics are present.
```

```
Originator must be able to send in characteristics specified.
```

```
TABLE RTECHAR . NACAR (CDN NA (TNS NA)$)$
```

```
TABLE TRKGRP
```

```
L613MFTI TI 0 ELO NCRT NIL P613 NSCR 613 LCL N N (LNP 1NNNC62NN3) $
```

```
Warning: Routing characteristics in TRAVER command line will override any bearer capability datafilled in table TRKGRP.
```

```
TABLE OFCVAR
```

```
AIN_OFFICE_TRIGGRP PODPTRIG
```

```
TABLE PXLAMAP . NACAR P613 ( XLA NAPC)$
```

```
TABLE STDPRTCT NAPC ( 1) ( 0) 0
```

```
. SUBTABLE STDPRT
```

```
WARNING: Changes in table STDPRT can alter office billing. Call type default is NP. Please refer to documentation.
```

```
. 205 205 ET DD 3 UNT5 Y OFRT 129 3 24
```

```
. . TABLE OFRTMAP
```

```
. . . Tuple not found. Default to old index.
```

```
. . TABLE OFRT
```

```
. . 129 CND EA INTNL SK 2 N D MFIT_613_A 15 D081 N CND ALWAYS SK 1
```

```
. . N D MFIT_613_A 15 D138 N
```

```
. . EXIT TABLE OFRT
```

```
. SUBTABLE AMAPRT
```

```
. KEY NOT FOUND
```

```
. DEFAULT VALUE IS: NONE OVRNONE N
```

```
TABLE TRKLATA L613MFTI 6136211088 USEA1 N
```

```
TABLE LATA XLA
```

```
USEA1 819626 INTER INTER STD
```

```
. Not checked for AIN 0.1 TNS response processing
```

```
TABLE OCCINFO
```

AIN Essentials TRAVER (end)

TRAVER output example for AIN Essentials TRAVER

AR TRAVER output for local trunk calls that receive an FGD carrier (continued)

```
UNT5 0205 EAP Y Y Y N Y N N Y Y Y N LONG 61 FGRPD N N Y N N N N N N
N N N N N Y
Using Equal Access (EA) route   OFRT  129 from Pretranslation
TABLE OFRTMAP
.      Tuple not found. Default to old index.
TABLE OFRT
129 CND EA INTNL SK 2 N D MFIT_613_A 15 D081 N CND ALWAYS SK 1
N D MFIT_613_A 15 D138 N
TABLE OFRTMAP
.      Tuple not found. Default to old index.
EXIT TABLE OFRT

          +++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES  1 MFIT_613_A    D081    ST
TREATMENT ROUTES.  TREATMENT IS: GNCT  1 T120

          +++ TRAVER: SUCCESSFUL CALL TRACE +++
```

SERVORD

The AIN Essentials TRAVER does not use SERVORD.

AIN SSP Base Trigger Tables

Ordering codes

SOC options: AIN00002, AIN00006, AIN00007, AIN00009, AIN00010, AIN00015, and AIN00025

Release applicability

NA008 and later versions

Requirements

The AIN SSP Base Trigger Tables does not have requirements.

Description

This feature forms part of the base framework for the advanced intelligent network AIN Essentials architecture. This feature provides the table control capability for provisioning triggers and trigger criteria. This feature implements datafill and data query enhancements. Individual, group, and office-wide support for AIN services requires the datafill and data query enhancements that this feature provides.

Operation

The AIN is an evolving, service-independent architecture that allows the operating company to create and modify telecommunications services to subscribers. The AIN has two components. The first component is service switching points (SSP) to which end user premises connect by current telephone lines. The second is service control points (SCP) or adjunct. The SCP is programmable to create new services and tailor services to meet end user needs.

The SSP attempts the pre-specified triggers at the trigger detection points (TDP) to recognize calls that require AIN handling. A trigger occurs when the SSP determines that the SSP must query the SCP to continue processing a call.

Three types of information associated with each trigger are:

- types of triggers
- trigger assignments
- trigger criteria

Applications define trigger types. Trigger assignments specify the triggers assigned to a trigger group. The subscribers can subscribe to this trigger group. Trigger criteria describe the conditions needed to trigger.

AIN SSP Base Trigger Tables (continued)

If the conditions meet trigger criteria, the SSP launches a query to the SCP for additional instructions. These instructions specify how the call proceeds. To establish the relationship between AIN and trigger tables perform the following procedure. Select the option AIN. Specify the trigger group for the group subscription of an agent, a directory number (DN), a group, or an office.

Trigger tables provide AIN data and actions. Table TRIGDIG provides digit related trigger criteria and the address of the SCP. Table TRIGGRP is the table that provisions triggers and trigger criteria during subscription to AIN. Table TRIGINFO specifies the address of the SCP only.

To establish the relationship between AIN and the trigger tables subscribe to AIN for the following:

- an agent
- a directory number (DN)
- a call type (CT)
- a group or office.

Indicate the desired AIN functions in the trigger tables.

Table TRIGINFO

Table TRIGINFO provides information to the SCP used when table TRIGGRP does not provide references to table TRIGDIG. Field INFONAME is the field that specifies the trigger information identifier to which table TRIGGRP refers. Field ACTION contains a selector that specifies the action the SSP must take. This selector specifies when the conditions meet the trigger criteria. The correct entry is EVENT. This entry launches a query to the SCP if the SSP determines that conditions meet the trigger criteria.

Enter subfields PROTOCOL, MSGSET, and TRANSPRT when field ACTION has the value, EVENT. Subfield PROTOCOL specifies the protocol that communicates with the SCP. Subfield MSGSET specifies the protocol version to communicate with the SCP. Subfield TRANSPRT indicates the transport medium for communication with the SCP.

The correct data entry for subfield TRANSPRT is SS7. When you enter SS7, subfields GTT and GTSOURCE require datafill. Use datafill in subfield GTT to index into table C7GTTTYPE. Subfield GTSOURCE indicates the source of the global title digits the user uses in the signaling connection control part (SCCP) called party address. This subfield allows selection of the charge number of the called ID for use in the SCCP called party address. You can determine if that decision occurs according to the default for the trigger. The correct data entry for subfield GTSOURCE is DFLT.

AIN SSP Base Trigger Tables (continued)

Table TRIGDIG

Table TRIGDIG allows the user to specify the trigger criteria and trigger data based on the trigger dialed digits. Table TRIGDIG indicates the action to perform when a match occurs between the dialed digits and digits in the tuple that corresponds. A match is the most specific match. Dialed digits can be 919555998 and entered digits in table TRIGDIG can be 919, 919555, and 919555998. If this event occurs, the most specific digit, 919555998, matches. If the SCP requests the SSP to continue processing, the next most specific digits (the 919555) match.

The key field of this table has subfields DIGNAME, TRIGGER, and DIGITS. Subfield DIGNAME specifies the digit group identifier table TRIGGRP references. Subfields TRIGGER and DIGITS specify the digits to match.

Note: Enter field DIGNAME in table TRIGDIG before table TRIGGRP references the field.

Field TRIGGER functions as a selector in the data area. The data area is where additional fields appear for data entry. This action depends on trigger input.

Field ACTION specifies the action the SSP takes. The correct entry is EVENT. This entry launches a query to the SCP if the SSP determines that the conditions meet the trigger criteria.

Enter subfields PROTOCOL, MSGSET, and TRANSPRT when field ACTION has the value EVENT. Subfield PROTOCOL specifies the protocol to communicate with the SCP. Subfield MSGSET specifies the protocol version to communicate with the SCP. Subfield TRANSPRT indicates the transport medium for communication with the SCP.

The correct data entry for subfield TRANSPRT is Signaling System 7 (SS7). When the user enters SS7, subfields GTT and GTSOURCE require datafill. Use datafill in subfield GTT to index to table C7GTTTYPE. Subfield GTSOURCE indicates the source of the global title digits used in the SCCP called party address. This subfield allows the end user to select the charge number of the called party identification (ID) for the SCCP called party address. You can determine if the decision occurs according to the default for the trigger. The correct data entries for subfield GTSOURCE is DFLT.

The POTUSE option indicates that the PODP trigger is for a specific service or possible use. The CPC entry in subfield POTUSE marks the call as a carrier portability call.

AIN SSP Base Trigger Tables (continued)

Table TRIGGRP

Use table TRIGGRP to define AIN actions. A two-part key indexes table TRIGGRP. The key contains TRIGNAME and TDP. Field TRIGNAME associates a name to a group of subscribed TDP and their triggers. Field TDP is a name that represents a type of TDP defined by applications. The key field of TRIGNAME and TDP, a minimum of one possible assigned trigger with trigger criteria. If the conditions meet the requirements, the system arms the trigger and actions occur based on specified AIN behavior.

Field TRIGDATA provides the AIN action associated with each trigger group and TDP. Field TRIGDATA contains subfields TRIGGER, CRITERIA, and INFONAME. Subfield TRIGGER represents a subscribed trigger type that applications define. Subfield INFONAME has the value NIL or indexes to table TRIGINFO.

Subfield CRITERIA specifies the requirements to meet before triggering can occur. A trigger instance can contain the following criteria:

- call type (CT)
- digits (DG)
- escape code (ESC)
- escape coin (ESCCN)
- escape equal access (ESCEA)
- escape operator (ESPOP)
- escape directory number (ESCDN)

The DG criteria must be present. The criteria indicates the digits to dial for a call to trigger. The criteria applies to the following triggers:

- Shared Interoffice Trunk
- Public Office Dialing Plan 3 to 10
- N11
- Customized Dialing Plan
- PODPFEAT

The CT criteria is optional. The criteria specifies the types of calls, voice or data, that can trigger. Correct entries are voice band information (VBINFO) for voice call or circuit mode data (CMDATA) for data call. With CT specified, the user must enter the CT before the DG or ESC.

AIN SSP Base Trigger Tables (continued)

The ESC criteria must be present for the OFFHKDEL trigger and optional for the INTEROFF trigger. The criteria specifies that calls without a dialed escape code can trigger. Table TRIGESC stores escape codes for the OFFHKDEL trigger. Table TRGSIESC stores escape codes for the INTEROFF trigger.

The ESCCN criteria is optional. The criteria prevents coin originated direct dialed calls from triggering at the PODP trigger for a trigger group. These calls can result in an AIN redirection. The calls can route to a coin collection service before triggering at the PODP trigger.

The ESCCN criteria affects the CDF, CCF, and CSP coin agent types. The following condition can occur to calls that the agents originate, which a TERMATT trigger or switch-based Call Forwarding can forward. These calls can encounter the PODP trigger on the second leg of the call.

Note: The ESCCN criteria applies on the originating switch. Coin originations trunked to another switch can encounter the PODP trigger on the switch.

The PODP trigger in AIN Essentials implements the CPC. The following three criteria provide carrier portability (CPC) criteria checking.

- The ESCEA criteria is optional. The criteria allows a call to escape PODP triggering when the call is an equal access call. All calls that find a carrier through the LATA and OCC tables are equal access calls.
- The ESCOP criteria is optional. The criteria allows a call to escape the PODP trigger when the call goes to an operator. An operator call must have a call type entered as OA, or the call reaches an operator through table POSITION.
- The ESCDN criteria is optional. The criteria allows a call to escape the PODP trigger when the DN dialed is resident on the switch. A DN resident on the switch can be software or hardware equipped. Only DNs with intercepts or treatments in tables DNINV and DNROUTE of BLDN, UNDN, VACT, and UNDT are non-resident.

AIN SSP Base Trigger Tables (continued)

The table syntax of the TDP and the associated trigger types appears in the following table.

TDP and trigger syntax in table TRIGGRP

TDP		Trigger	
Name	Table syntax	Name	Table syntax
Origination Attempt	ORIGATT	Off-Hook Immediate	OFFHKIMM
Information Collected	INFOCOL	Off-Hook Delay	OFFHKDEL
		Shared Interoffice Trunk	INTEROFF
Information Analyzed	INFOANAL	Digit Public Office Dialing Plan 3 to 10	PODP
		N11	N11
		Customized Dialing Plan Code	CDPCODE
		Public Office Dialing Plan Feature Code	PODPFEAT
Network Busy	NETBUSY	AFR	AFR
Termination Attempt	TERMATT	Termination Attempt	TERMATT

Subscription to trigger group

The field TRIGNAME in table TRIGGRP specifies the trigger group. Specify the AIN option and the desired AIN group for subscription to a trigger group. This procedure causes mapping to table TRIGGRP. The following paragraphs describe the AIN option for each type of subscribing agent.

Option AIN for POTS lines

Use SERVORD for subscribing AIN to plain ordinary telephone service (POTS) lines. This procedure applies to table LENFEAT. In table LENFEAT, the datafill for subfield AINGRP specifies the trigger group mapped into table TRIGGRP.

Option AIN for MDC and RES lines

To subscribe AIN to meridian digital centrex (MDC) and residential enhanced services (RES) lines, use the service order system (SERVORD) and apply to table IBNFEAT. In table IBNFEAT, the datafill for subfield AINGRP specifies the trigger group name mapped into table TRIGGRP.

AIN SSP Base Trigger Tables (continued)

Option AIN for trunk groups

Use table editor to subscribe AIN to a trunk group. This procedure applies to table TRKAIN. Datafill for AINGRP specifies the trigger group name mapped in table TRIGGRP. With AIN assigned to a trunk group, AIN applies to each member in the trunk group.

Option AIN for customer groups

Use table editor to subscribe AIN to a customer group. This procedure applies to table CUSTSTN. The user uses the table editor to assign a customer group AIN. The customer group receives an AINGRP name that specifies the trigger group name mapped in table TRIGGRP. With AIN assigned to a customer group, AIN applies to each member in the customer group.

Option AIN on an office basis

The AIN can be subscribed by office. Use the office parameter AIN_OFFICE_TRIGGRP in table OFCVAR to subscribe to AIN option. See datafilling office parameters in this feature description.

Option AIN for EBS and MFT lines

To subscribe AIN to electronic business set (EBS) and Meridian feature transparency (MFT) lines, use SERVORD and apply to table KSETFEAT. The key value in field KEY of table KSETFEAT is the primary directory number (PDN) key, for example, key 1. Use subfield FEAT to indicate the DN keys on the set that subscribe to AIN. Subfield FEAT corresponds to subfield KEY to define the key that has AIN assigned. Datafill for subfield AINGRP specifies the trigger group name mapped in table TRIGGRP.

Option AINDN for DN or on DN/CT basis

Assignment of trigger behavior occurs by DN and not by agent or group. To provide this function, use table DNFEAT. To assign a DN in this table, the DN must be correct in the office, and used as follows. The DN must function as an individual line, hunt group, secondary directory number (SDN), or an AIN virtual DN. Enter data through SERVORD for DN used as individual lines, hunt groups, or enhanced SDN. Normal SDN or AIN virtual directory numbers do not support SERVORD access. Enter data through table DNFEAT.

To apply option AINDN by DN/CT, assign AINDN option and a trigger name by DN in table DNFEAT. Enter the CT in table TRIGGRP. The CT specifies which trigger behaviors correspond to voice calls which correspond to data calls.

AIN SSP Base Trigger Tables (continued)

AIN-specific directory numbers

The user can assign AIN to a virtual DN. Enhanced subfield FTRDN_CODE in table DNROUTE provides option AIN and the corresponding AINOPT subfields. For a virtual AIN DN to subscribe to a trigger group, the DN must appear in table DNFEAT with option AINDN. If a call to this DN occurs without the associated triggers and TDP entered, the call routes to a treatment.

If the virtual DN is part of the MDC environment, table DNROUTE prompts the end user for customer group and subgroup information. The user can specify network class of service (NCOS) as an option. If the virtual AIN DN is in the public environment, the system prompts the user for a line attribute.

Note: The MDC base package must be present in the office for the DN line class code type of IBN to be available.

Translations table flow

The AIN SSP Base Trigger Tables translations tables appear in the following list:

- Table LENFEAT (Line Feature) lists the features assigned to a specified line. Subfield AINGRP specifies the AIN group name in table TRIGGRP.
- Table IBNFEAT (IBN Line Feature) lists the software features MDC station number and MADN that the switch supports. Subfield AINGRP specifies the AIN group name entered in table TRIGGRP.
- Table KSETFEAT (Business Set and Data Unit Feature) lists the line features assigned to the Meridian business sets (MBS) listed in table KSETLINE. Each feature requires one entry for each feature assigned to an MBS line. Subfield AINGRP specifies the AIN group name entered in table TRIGGRP.
- Table DNFEAT (Directory Number Feature) allows subscription to AIN for a number of types of DN. To enter a DN in this table, the DN must be a correct DN in the office.
- Table CUSTSTN (Customer Group Station Option) is necessary for an office to support MDC and RES lines. Table CUSTSTN lists the station options assigned to each of the customer groups. Subfield AINGRP specifies the AIN group name entered in table TRIGGRP. Use the table for LATA parameter population for AIN Essentials query for Centrex agents triggering in the private environment.
- Table OFCVAR (Office Variable) lists the values of the office parameters that the operating company defines. Subfield PARMVAL specifies the AIN trigger group name mapped into table TRIGGRP.

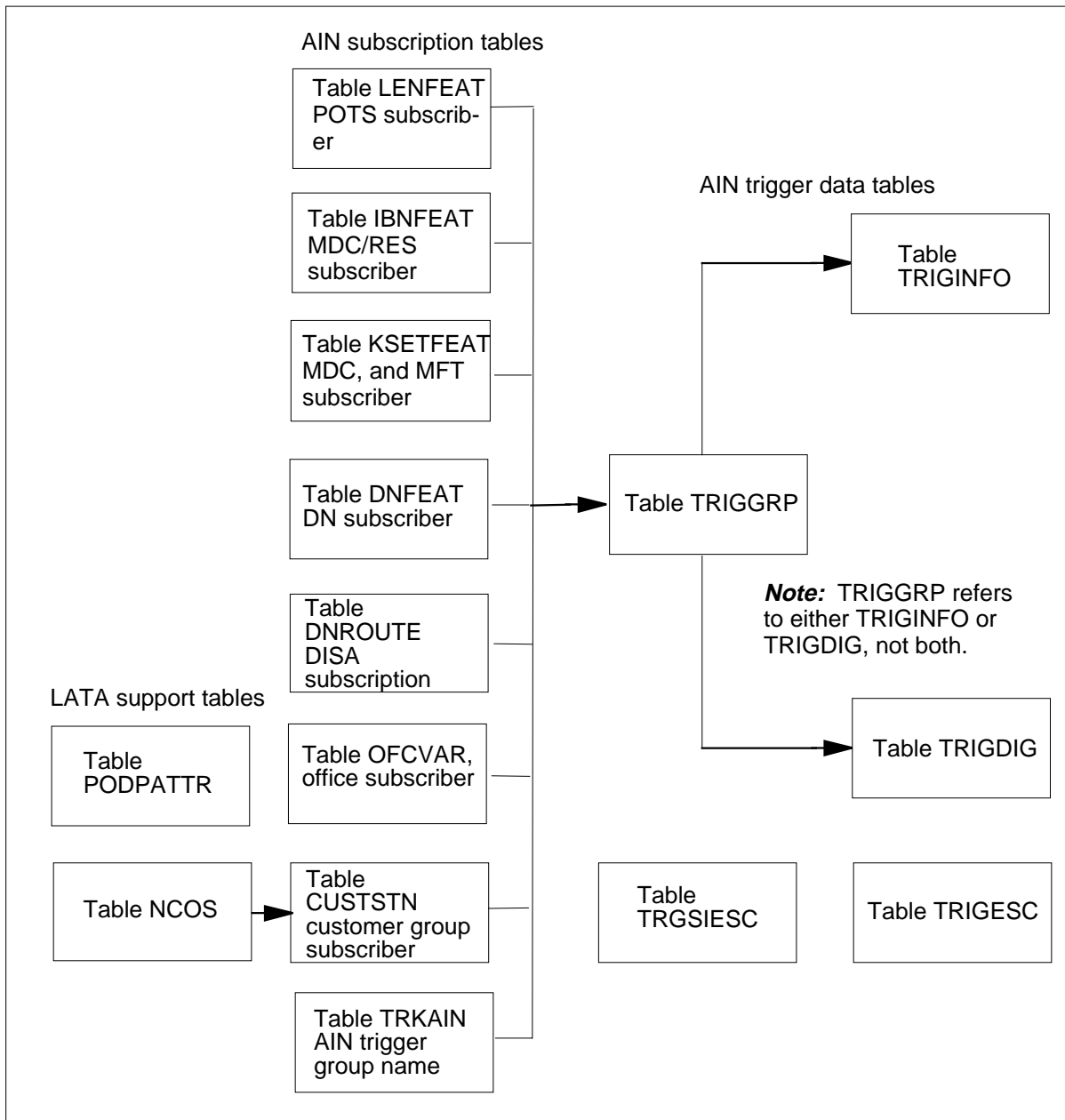
AIN SSP Base Trigger Tables (continued)

- Table TRKAIN (Trunk AIN) allows assignment of AIN to a trunk group. Subfield AINGRP specifies the AIN group name entered in table TRIGGRP. You cannot delete a tuple in table TRKGRP if the tuple references a tuple in table TRKAIN. You must delete the tuple from TRKAIN before you delete the tuple in table TRKGRP.
- Table TRIGGRP (Trigger Group) defines AIN actions. A two-part key that has the fields TRIGNAME and TDP indexes table TRIGGRP.
- Table TRIGINFO (Trigger Information) provides information to the SCP used when TRIGGRP does not provide references to TRIGDIG.
- Table TRIGDIG (Trigger Digits) allows the user to specify the trigger criteria and trigger data based on the trigger dialed digits.
- Table TRGSIESC (Trigger Shared Interoffice Escape) does not have datafill requirements. Each entry corresponds to a digit pattern that must escape processing the INTEROFF trigger.
- Table TRIGESC (Trigger Escape Code) does not have datafill requirements. Each entry are public office dialing plan digits that correspond to escape codes used at the OFFHKDEL trigger.
- Table PODPATTR (Public Office Dial Plan Attributes) must have tables LINEATTR, OCCNAME, and OCCINFO entered before. A PODP directory number associates with a line attribute index. Table PODPATTR allows subscription to line attribute indexes for the PODP trigger.
- Use table NCOS (Network Class of Service) for LATA parameter population for the AIN Essentials query for Centrex agents triggering in the private environment.
- Use table DNROUTE (Directory Number Route) to define information for writeable DNs. Table DNROUTE defines virtual DNs. The DISA AIN Essentials trigger subscription is present.

The AIN SSP Base Trigger Tables translation process appears in the following flowchart.

AIN SSP Base Trigger Tables (continued)

Table flow for AIN SSP Base Trigger Tables and AIN subscription tables



AIN SSP Base Trigger Tables (continued)

The datafill content in the flowchart appears in the following table.

Datafill example for AIN SSP Base Trigger Tables and AIN subscription tables

Datafill table	Example data
LENFEAT	HOST 01 0 00 01 S AIN AIN LINETRIGGRP
IBNFEAT	HOST 02 0 00 01 0 AIN AIN LINETRIGGRP
KSETFEAT	HOST 03 0 00 01 1 AIN AIN LINETRIGGRP (1) (5) \$
DNFEAT	919 555 5234 (AINDN DNTRIGGRP) \$
TRKAIN	AINTRK1 LINETRIGGRP
CUSTSTN	ABCCO AIN AIN CUSTTRIGGRP
OFCVAR	AIN_OFFICE_TRIGGRP OFFICETRIGGRP
TRIGGRP	LINETRIGGRP ORIGATT (OFFHKIMM (CT CMDATA) \$ INFO1) \$
TRIGINFO	AINSCP1 EVENT TCAP R01 SS7 AINJAZZ DFLT \$
TRIGDIG	PODPDIG PODP 66 PODP EVENT TCAP R01 SS7 AINJAZZ DFLT \$
TRGSIESC	888375
TRIGESC	911
PODPATTR	613 80 MCI NILC
NCOS	DEFCO 0 LDATA 0 (AINLATA LATA1) \$
DNROUTE	919 555 0540 FEAT AIN IBN ABCCO 0 (NCOS 0) \$

Tables LENFEAT, IBNFEAT, KSETFEAT, DNFEAT, TRKAIN, CUSTSTN, and OFCVAR refer to table TRIGGRP. The use of these tables depends on subscriber assigned the service. Each trigger in table TRIGGRP refers to table TRIGDIG or TRIGINFO.

Limits

The following limits apply to AIN SSP Base Trigger Tables:

- The order of triggers in the tables is the order in which they are encountered. Trigger order can change.
- The system checks each application of table TRIGGRP for triggers that are not correct at a TDP. The system checks for criteria that is not correct at a TDP and trigger group.

AIN SSP Base Trigger Tables (continued)

- For the TDP with more than one trigger, the trigger order occurs as follows during an AIN call:
 - triggers assigned on an separately
 - triggers assigned by group
 - triggers assigned by office
- Table TRKAIN replaces the method of subscribing to AIN with field OPTION in table TRKGRP. The AIN option appears as an option in table TRKGRP. When you assign the option, the system rejects the DMO.
- Trunks added to table TRKAIN must be two-way or incoming, not outgoing. Subscription can occur to any acceptable trigger group.
- An entry in table TRIGDIG can be the last instance of a DIGNAME in table TRIGGRP. If this event occurs deletion of the entry can not occur.
- During a software upgrade to NA006, the ESCCN criteria in table TRIGGRP default to not present. Coin calls are not affected until entry of the ESCCN criteria.
- During a dump and restore, addition of the ESCCN criteria to tuples in table TRIGGRP does not occur. Manually enter these criteria.
- Calls that use the ESCCN criteria in table TRIGGRP can encounter the PODP trigger on the second leg of the call. These calls are calls that the TERMATT trigger or switch-based Call Forwarding forward. Coin originations that use the ESCCN criteria trunked to another switch encounter the PODP trigger on that switch.

The following line class codes (LCC) cannot associate with the PODP number because special hardware is necessary. The LCCs are CCF, CDF, CSP, CMR, TFR, FFR, EFR, TNFR, INW, OWT, TWW, EOW, and ETW. Support is not present for line attributes that use one of these LCCs.

Use SERVORD for subscription to supported triggers and the blocking of subscription to not supported triggers. You can use table control to subscribe to supported triggers and allow subscription to not supported triggers. This action can break datafill integrity and cause problems. Do not use table control.

Certain agents can not encounter E800 directly. Some of these agents can encounter E800 through call forwarding. The agents that remain are not supported. The agents that can encounter E800 through forwarding can encounter E800 through a PODP trigger with AnalyzeRoute response. The AnalyzeRoute response is when the trigger has the attributes of a complete E800 supported agent. The agents that cannot encounter E800 through call forwarding cannot encounter E800 through PODP.

AIN SSP Base Trigger Tables (continued)

Interactions

Refer to *Advanced Intelligent Network 0.1 Feature Interactions*, 297-5161-107.

Activation/deactivation by the end user

The AIN SSP Base Trigger Tables does not require activation or deactivation by the end user.

Billing

Normal switch-based AMA recording applies to calls that use default routing. A call can trigger at the Public Office Dialing Plan 3 to 10 trigger. If this event occurs the system can generate two billing records.

The AMA provides two separate records for E800 and AIN processing on a call with common values for several timing fields.

The Direct Inward System Access (DISA) DN populates the ChargeNumber parameter for AIN query messages. The system sends the messages at originating call model TDPs. The system sends query messages at a Termination Attempt TDP encountered immediately after DISA.

The PODP number is the originating number for the post-query billing record. This condition applies even if line attributes associate with the PODP number. The fields that remain of the billing record can be different. This condition depends on if line attributes associate with the PODP number.

If the translator associated with the PODP number is different from that associated with the triggering agent, the following condition occurs. Translations can affect some fields like Structure Code and Call Type Code. The Service Feature Code setting is based on the line attributes associated with the PODP number. If a line attribute is not associated with the PODP number, the Service Feature Code has the AIN Essentials service code 027.

Station Message Detail Recording

In PODP response processing, when line attributes associate with the PODP number, the system does not generate a SMDR record for the post-query leg of the call. This condition occurs because the PODP number has the property of a POTS number. Line attributes do not always associate with the PODP number. If this event occurs the system generates a SMDR record if the triggering agent is a Centrex agent.

If a SMDR DF04 record associates with AIN triggering immediately after DISA, the following occurs. A DISA OFFHKDEL trigger, field ORIGID, contains the DN of the call originator.

AIN SSP Base Trigger Tables (continued)

Datafilling office parameters

The office parameters that AIN SSP Base Trigger Tables use appear in the following table. For additional information about office parameters, refer to *Office Parameters Reference Manual*.

Office parameters by AIN SSP Base Trigger Tables (Sheet 1 of 2)

Table name	Parameter name	Explanation and action
OFCENG	AIN_NUM_EXT_BLKs	This parameter controls the number of extension blocks available for the AIN feature to use. A COLD restart is necessary to decrease the value of this parameter. A cold restart is not necessary to increase the value. Correct entries can be from 0 to 32767.
OFCENG	AIN_MAX_SERIAL_TRIGGERS	<p>This parameter controls the number of triggers allowed for each call leg, without a call route out of the SSP. The system resets the parameter when the system redirects the call because of a Forward_Call or Analyze_Route response. This parameter activates immediately. Correct entries can be from 1 to 25.</p> <p>Note 1: The Analyze_Route response counts as a change in direction when the response contains the RedirectingPartyID parameter.</p> <p>Note 2: The total number of redirections allowed for each call that a Forward_Call or Analyze_Route response causes is six.</p>
OFCENG	AIN_T1_TIMER	This parameter specifies the time, in seconds, the SSP waits for a response from the SCP after the SSP launches a query. If a response does not occur before the timer expires, the call routes to a treatment. This parameter activates immediately. Correct entries can be from 1 to 99.

AIN SSP Base Trigger Tables (continued)

Office parameters by AIN SSP Base Trigger Tables (Sheet 2 of 2)

Table name	Parameter name	Explanation and action
OFCENG	TRIGDIG_NUM_ DGLTR_POOLS	Use this parameter to provision the number of digilator pools that table TRIGDIG allocates for use. This parameter activates immediately. The maximum number of tuples allowed in table TRIGDIG increases as this parameter increases. This parameter decrease. Correct entries can be from 1 to 6.
OFCVAR	AIN_OFFICE_ TRIGGRP	<p>Use this parameter to subscribe to TDP and trigger behaviors that affect the office. The datafill required is AIN group ID (AINGRPID). The datafill AINGRPID provides the reference to table TRIGGRP. The default value is NIL and triggers are not subscribed to on by office. Correct entry is the alphanumeric value of field TRIGNAME in table TRIGGRP.</p> <p>The SOC option can be enabled, and AIN_OFFICE_TRIGGRP can be AINGRPID. If this event occurs calls that originate in that office from an agent that AIN supports follow the behavior table TRIGGRP indicates for AINGRPID.</p>

Datfill sequence

The tables that require datafill to activate AIN SSP Base Trigger Tables appear in the following table. The tables appear in the correct data entry order.

Datfill requirements for AIN SSP Base Trigger Tables (Sheet 1 of 3)

Table	Purpose of table
TRIGINFO	Table Trigger Information stores information about the type of protocol and messaging used to send queries to the SCP.
TRIGDIG	Table Trigger Digits allows the end user to specify the trigger criteria and trigger data based on the trigger dialed digits. Table Trigger Digits indicates addressing information based on dialed digits and the SSP action performed when the condition meets digits criteria. Table Trigger Digits specifies the information about the type of protocol and messaging used to send queries to the SCP.
TRIGGRP	Table Trigger Group defines the grouping of TDP and the triggers. Lines, trunks, customer groups, office, or DN can subscribe the trigger group name. This table queries table TRIGESC to determine the escape codes when you enter the ESC criteria for the OFFHKDEL trigger. The system queries table TRGSIESC when specified escape codes for the INTEROFF trigger are present.

AIN SSP Base Trigger Tables (continued)

Datafill requirements for AIN SSP Base Trigger Tables (Sheet 2 of 3)

Table	Purpose of table
TRGSIESC	Table Trigger Shared Interoffice Escape allows the system to pass INTEROFF trigger subscribed against a pretranslation code. This event occurs if the called digits impulsed match the digit pattern in table TRGSIESC. Digit pattern entries become a list of escape codes that must bypass INTEROFF processing.
TRIGESC	Table Trigger Escape Codes stores public office dialing plan digits. These digits correspond to escape codes used at the Off-Hook Delay trigger for AIN. If the received digits match the digits stored in table TRIGESC, the call proceeds with normal call processing. If the received digits do not match the digits stored in table TRIGESC, the following occurs. The call acts on the trigger and the system sends a query to the SCP.
LENFEAT	Table Line Feature lists features assigned to a specified line. Enter this table through SERVORD, except virtual DN. The "Datafilling Office Parameters" section contains this table to provide additional information for the user. In table LENFEAT an automatic conversion to RES occurs.
IBNFEAT	Table IBN Line Feature lists the software features assigned to each MDC station number and MADN. Enter this table through SERVORD, except virtual DN. This table is in the "Datafilling" section to provide additional user information.
KSETFEAT	Table Business Set and Data Unit Feature lists the line features assigned to the correct MBS for the switch. Enter this table through SERVORD, except virtual DN. This table is in the "Datafilling" section to provide additional user information.
DNFEAT	Table Directory Number Feature allows subscription to AIN for different types of DN. Enter this table through SERVORD, except virtual DN. This table is in the "Datafilling" section to provide additional user information.
DNROUTE	This table lists information for writeable DNs in the switch. An example is a DN that identifies a route and not a line equipment number (LEN). For example, the table defines a virtual DN used for AIN applications. The table allows a DISA DN to subscribe to agent-based OFFHKDEL and AFR triggers.
TRKAIN	Table Trunk AIN allows subscription to AIN trigger processing by trunk group.
PODPATTR	Table PODP Attributes allows subscription to line attribute indexes for the PODP trigger. This table associates a PODP number with a line attribute index. Translation (Analyze_Route response) and normal digit collection (Send_To_Resource response) are based on the line attributes of the PODP number. Any toll screening or LATA screening during post-query processing is based on the line attributes of the PODP number.

AIN SSP Base Trigger Tables (continued)

Datafill requirements for AIN SSP Base Trigger Tables (Sheet 3 of 3)

Table	Purpose of table
NCOS	Table Network Class of Service permits LATA parameter population for AIN Essentials query when a Centrex agent is triggering in the private environment. Use this table for customer groups that span over a number of LATA.
CUSTSTN	Table Customer Group Station Option lists the station options assigned to each of the customer groups defined in the switch. The table permits LATA parameter population for AIN Essentials query when a Centrex agent is triggering in the private environment.

Datafilling table TRIGINFO

The datafill for AIN SSP Base Trigger Tables for table TRIGINFO appears in the following table. The fields that apply directly to AIN SSP Base Trigger Tables appear. See the data schema section of this document for a description of the other fields.

Datafilling table TRIGINFO (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
KEY		alphanumeric (1 to 8 characters)	Key. This field represents the identifier that table TRIGGRP uses and the AFR routing tables to reference protocol and messaging information.
ACTION		EVENT	AIN action type. This field specifies the action that the SSP takes if triggering occurs. Enter EVENT to instruct the SSP to query and wait for a response. Enter data in refinements PROTOCOL, MSGSET, and TRANSPRT.
	PROTOCOL	TCAP	AIN protocol. This subfield specifies the transport protocol for sending query messages. Enter TCAP.
	MSGSET	R01	Message set. This subfield indicates the protocol used to communicate with the SCP.
	TRANSPRT	SS7	Transport. This subfield specifies the transport medium used to communicate with the SCP. Datafill refinements GTT and GTSOURCE.
	GTT	alphanumeric (1 to 16 characters)	Global title translation name. This subfield specifies the global title translations name which is an index in table C7GTTTYPE.

AIN SSP Base Trigger Tables (continued)

Datafilling table TRIGINFO (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
OPTIONS	GTSOURCE	DFLT	Global title source. This subfield indicates the source of the global title digits used in the called party address in the query message. The default source for trigger type PODP and TERMATT is the contents of the digits field in the CalledPartyID parameter. For trigger type N11, the content is N11 + 7 digits. For all others, the default source is the contents of the digits field in the ChargeNumber parameter.
	OPTION	DFLTRT	Options. This field allows you to enter options. Option. Enter DFLTRT for default routing. Enter \$ for no options. Note 1: This option only applies when the Default Routing SOC option is ON. Note 2: Table TRIGINFO does not support the POTUSE option because the PODP trigger is in table TRIGDIG.
	SELECTOR	ANN, ANNDN, or DN	Selector. This subfield is for voice announcement and directory number selection. Enter ANN for announcement. Enter data in refinement ANNIDX. Enter ANNDN for announcement and directory number. Enter data in refinements ANNIDX and DN. Enter DN for directory number. Enter data in refinement DN.
	ANNIDX	1 to 32767	Announcement index. This subfield is the voice announcement identifier from table AINANNS to play.
	DN	numeric (1 to 15 digits)	Directory number. This subfield is the directory number to route the call. Note: Call processing continues to the next point in the call when the DN is nil.

AIN SSP Base Trigger Tables (continued)

Datafill example for table TRIGINFO

Sample datafill for table TRIGINFO appears in the following example.

MAP example for table TRIGINFO

```

KEY                                ACTION                                OPTIONS
-----
INFO1  EVENT TCAP  R01  SS7  GTT2 DFLT
                                (DFLTRT  ANN 34  )$
    
```

Datafilling table TRIGDIG

The datafill for AIN SSP Base Trigger Tables for table TRIGDIG appears in the following table. The fields that apply directly to AIN SSP Base Trigger Tables appear. See the data schema section of this document for a description of the other fields.

Datafilling table TRIGDIG (Sheet 1 of 4)

Field	Subfield or refinement	Entry	Explanation and action
KEY		see subfields	Key. This field contains subfields DIGNAME, TRIGGER, and DIGITS.
	DIGNAME	alphanumeric (1 to 8 characters)	Digit name. This subfield specifies the digit group identifier that table TRIGGRP uses.
	TRIGGER	AFR, CDPCODE, INTEROFF, OFFHKDEL, OFFHKIMM, N11, PODP, PODPFEAT, or TERMATT	Trigger. This subfield identifies the trigger type to which the digits criteria applies. Note: For PODPFEAT that require normal, variable, or fixed digit collection, report digits to the CC separately. Table DIGCOL requires RPT selector when the first digit dialed is the first digit in the CDP FTR AIN access code.
	DIGITS	alphanumeric (0 to 9, B, or C) (up to 18 digits)	Digits. This subfield specifies the digits matched against digits specified for the trigger.

AIN SSP Base Trigger Tables (continued)

Datafilling table TRIGDIG (Sheet 2 of 4)

Field	Subfield or refinement	Entry	Explanation and action
TRIGGER		AFR, CDPCODE, INTEROFF, OFFHKDEL, OFFHKIMM, N11, PODP, PODPFEAT, or TERMATT	<p>Trigger. This field represents a subscribed trigger type.</p> <p>Note: The trigger value of this field is the same as the trigger value in the field KEY.</p> <p>If TRIGGER is CDPCODE, enter subfield RPRTDIGS.</p>
	RPRTDIGS	TRANS or NOTRANS	<p>AIN report digits. This subfield indicates if the SSP must perform digit translation on the extension number before a query message.</p> <p>Enter TRANS to indicate that the SSP must perform digit manipulation.</p> <p>Enter NOTRANS to indicate that the SSP must query with the digits as dialed.</p>
ACTION		EVENT	<p>AIN action type. This field specifies the action that the SSP takes if triggering occurs.</p> <p>Enter EVENT to instruct the SSP to query and wait for a response. Enter data in refinements PROTOCOL, MSGSET, and TRANSPRT.</p>
	PROTOCOL	TCAP	AIN protocol. This subfield specifies the transport protocol used send query messages.
	MSGSET	R01	Message set. This subfield indicates the protocol used to communicate with the SCP.
	TRANSPRT	SS7	AIN transport. This subfield specifies the transport medium used to communicate with the SCP. Enter data in refinements GTT and GTSOURCE.
	GTT	alphanumeric (1 to 16 characters)	Global title translation name. This subfield specifies the global title translations name that is an index to table C7GTTYPE.

AIN SSP Base Trigger Tables (continued)**Datafilling table TRIGDIG (Sheet 3 of 4)**

Field	Subfield or refinement	Entry	Explanation and action
	GTSOURCE	DFLT	Global title source. This subfield indicates the source of the global title digits that occurs in the called party address in the query message. The default source for trigger type PODP and TERMATT is the content of the digits field in the CalledPartyID parameter. For trigger type N11, the content is N11 + 7 digits. For all others, the default source is the contents of the digits field in the ChargeNumber parameter.
OPTIONS		see subfields	Options. This field allows the user to enter options.
	OPTION	DFLTRT or POTUSE	Option. Enter DFLTRT for default routing. Note: This option applies when the Default Routing SOC option is ON. Enter POTUSE to specify the PODP trigger for a specified service or possible use. Enter \$ for no options.
	SELECTOR	ANN, ANNDN, or DN	Selector. This subfield is for voice announcement and directory number selection. Enter ANN for announcement. Enter data in refinement ANNIDX. Enter ANNDN for announcement and directory number. Enter data in refinements ANNIDX and DN. Enter DN for directory number. Enter data in refinement DN. Note: This subfield is for the DFLTRT option.
	ANNIDX	1 to 32767	Announcement index. This subfield is the voice announcement identifier from table AINANNS to play. Note: Use this subfield for the DFLTRT option.

AIN SSP Base Trigger Tables (continued)

Datafilling table TRIGDIG (Sheet 4 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	DN	numeric (1 to 15 digits)	<p>Directory number. This subfield is the directory number to route the call.</p> <p>Note 1: Call processing continues to the next point in the call when the DN is nil.</p> <p>Note 2: Use this subfield for the DFLTRT option.</p>
	POTUSE	CPC	<p>Potential use indicator. Enter CPC for carrier portability code.</p> <p>Note: Use this subfield for the POTUSE option.</p>

Datafill example for table TRIGDIG

Sample datafill for table TRIGDIG appears in the following example.

MAP example for table TRIGDIG

```

                                KEY      TRIGGER
                                ACTION
                                OPTIONS
-----
DIG1      PODP 613      PODP
EVENT TCAP R01 SS7 GTT2 DFLT
                                ( DFLTRT ANN 34 )$

CPCDIG    PODP 613 621  PODP
EVENT TCAP R01 SS7 GTT3 POTUSE
                                ( POTUSE CPC)$

PODPNOCN  PODP 2132556000 PODP
EVENT TCAP R01 SS7 AINJAZZ DFLT $
PODPDIG   PODP 6136211000 PODP
EVENT TCAP R01 SS7 AINJAZZ DFLT $
    
```

Datafilling table TRIGGRP

The datafill for AIN SSP Base Trigger Tables for table TRIGGRP appears in the following table. The fields that apply directly to AIN SSP Base Trigger

AIN SSP Base Trigger Tables (continued)

Tables appear. See the data schema section of this document for a description of the other fields.

Datafilling table TRIGGRP (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
KEY		see subfields	Key. This field contains subfields TRIGNAME and TDP. Note: Each entry in table TRIGGRP defines one or more possible trigger instances to a maximum of 16. Each entry defines the criteria, index to protocol, and messaging information for querying the SCP.
	TRIGNAME	alphanumeric (1 to 16 characters)	The AIN trigger name. This subfield defines the AIN trigger group name.
	TDP	ORIGATT, INFOCOL, INFOANAL, NETBUSY, or TERMATT	Trigger detection point. This subfield defines the TDP that the particular AIN group subscribes.
TRIGDATA		see subfields	Trigger data. This field contains subfields TRIGGER, CRITERIA, and INFONAME. The maximum number of entries is 16.
	TRIGGER	AFR, CDPCODE, INTEROFF, OFFHKDEL, OFFHKIMM, N11, PODP, PODPFEAT, or TERMATT	Trigger. This subfield specifies the trigger type that associates with the TDP of the key. See table TDP and trigger syntax in table TRIGGRP on page six for an explanation of the datafill choices.

AIN SSP Base Trigger Tables (continued)

Datafilling table TRIGGRP (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	CRITERIA	CT, DG, ESC, ESCCN, ESCEA, ESCOP, or ESCDN	<p>Criteria. This subfield specifies the type of criteria met before triggering occurs. Enter a maximum of four selectors, as required. Enter a \$ to end criteria datafill.</p> <p>Enter data in refinement CALLTYPE with the entered CT. Enter CT before DG or ESC.</p> <p>Enter data in refinement DIGNAME with the entered DG.</p> <p>Enter ESC if calls with a not dialed escape code trigger. Enter escape codes in table TRIGESC for the Off-Hook Delay trigger and in table TRGSIESC for the Shared Interoffice trigger. Escape code criteria is necessary for the Off-Hook Delay trigger and optional for the Shared Interoffice trigger.</p> <p>Enter ESCCN to prevent coin dialtone first (CDF), coin coin-first (CCF), and coin semi-postpay (CSP) agent calls (POTS and RES) from triggering at the PODP trigger. The option only applies on the originating switch. Enter data in refinement TYPECALL.</p> <p>Enter ESCEA to escape the PODP trigger when the call is an equal access call.</p> <p>Enter ESCOP to escape the PODP trigger when the call is an operator call.</p> <p>Enter ESCDN to escape the PODP trigger when the dialed DN is resident on the switch.</p>
	DIGNAME	alphanumeric (1 to 8 characters)	Digit name. This subfield specifies the digit translator name used to index table TRIGDIG.
	CALLTYPE	VBINFO or CMDATA	<p>The AIN call type. This subfield specifies the call type.</p> <p>Enter VBINFO for voice-band information.</p> <p>Enter CMDATA for circuit mode data.</p>

AIN SSP Base Trigger Tables (continued)**Datafilling table TRIGGRP (Sheet 3 of 3)**

Field	Subfield or refinement	Entry	Explanation and action
	TYPECALL	DD, NP, OA, DD_NP, DD_OA, OA_NP, or ALL	Type of call. Type of coin call for the ESCCN criteria. Enter DD for direct dialed. Enter NP for no prefix local. Enter OA for operator assisted. Enter DD_NP for direct dialed and no prefix local. Enter DD_OA for direct dialed and operator assisted. Enter OA_NP for operator assisted and no prefix local. Enter ALL for direct dialed, no prefix local, and operator assisted.
	INFONAME	alphanumeric (1 to 8 characters)	The AIN trigger information identifier. This subfield specifies message routing information that the SSP uses to send a query to the database. This field is the key to table TRIGINFO. Correct entries are information names that appear in table TRIGINFO or NIL. If CRITERIA is DG, or the trigger is AFR, enter NIL.

Datafill example for table TRIGGRP

Sample datafill for table TRIGGRP appears in the following example. In the example, AIN group AINGRP1 contains three triggers. These triggers are Off-Hook Immediate, Off-Hook Delay, and Information Analyzed. In the first tuple, when a subscriber makes a data call, the following events occur. The call triggers at the Origination Attempt TDP. The call sends a query message that uses the information that INFO1 specifies in table TRIGINFO.

AIN SSP Base Trigger Tables (continued)

MAP example for table TRIGGRP

KEY	TRIGDATA
AINGRP1 ORIGATT	
(OFFHKIMM (CT CMDATA) \$ INFO1)\$	
AINGRP1 INFOCOL	
(OFFHKDEL (ESC) \$ INFO2)\$	
AINGRP1 INFOANAL	
(PODP (ESCCN DD) \$ INFO3)\$	
AINGRP1 INFOANAL	
(PODP (DG CPCDIG) (ESCEA) (ESCOB) (ESCDN)\$ NIL \$	
OFCTRIG INFOANAL	
(PODP (DG PODPDIG) \$ NIL)	
(PODP (DG PODPNOCN) (ESCCN DD) \$ NIL) \$	

Datafilling table TRGSIESC

The datafill for AIN SSP Base Trigger Tables for table TRGSIESC appears in the following table. The fields that apply directly to AIN SSP Base Trigger

AIN SSP Base Trigger Tables (continued)

Tables appear. See the data schema section of this document for a description of the table.

Datafilling table TRGSIESC

Field	Subfield or refinement	Entry	Explanation and action
ESCAPECD		numeric	<p>Escape code. Enter any number of tuples that contain digit patterns, one to ten digits each. The tuples must escape processing the INTEROFF trigger and continue through normal translations. At the Information Collected TDP, after translation to Shared Interoffice digits occurs, for example, the 0ZZXX(X) the system removes digits. The system compares impulsed digits with digits in this field to determine if the current condition meets the optional escape criteria.</p> <p>One of the first ten digits impulsed can match the digit pattern of an entered escape code. If this event occurs the call bypasses the INTEROFF trigger and continues through normal translations. A toll-free call encounters AIN processing when the escape code corresponds to a toll-free digit pattern. An example of this condition is 800, 888, 500.</p> <p>Note: The generic format for the digit pattern is from N to NPA-NXX-XXXX. The NPA or NPA-NXX values are not necessary in switch-based datafill. This condition occurs because the values can correspond to SCP-based service dial patterns.</p>

Datafill example for table TRGSIESC

Sample datafill for table TRGSIESC appears in the following example. In the example, the entry 888 is an alternate toll-free NPA.

AIN SSP Base Trigger Tables (continued)

MAP example for table TRGSIESC

ESCAPECD
800
888641
888723

Datafilling table TRIGESC

The datafill for AIN SSP Base Trigger Tables for table TRIGESC appears in the following table. The fields that apply directly to AIN SSP Base Trigger Tables appear. See the data schema section of this document for a description of the other fields.

Datafilling table TRIGESC

Field	Subfield or refinement	Entry	Explanation and action
KEY		see subfield	Digilator table key.
	DIGILATOR_KEY	1 to 18 digits (0 to 9)	Digilator key. Enter the escape code. The system compares digits received at the Information Collected TDP, after translation to public office dialing plan digits. The system compares the digits with the digits entered in this subfield. The system compares digits to determine if the escape criteria is present. This subfield does not have a default value.

Datafill example for table TRIGESC

Sample datafill for table TRIGESC appears in the following example.

AIN SSP Base Trigger Tables (continued)

MAP example for table TRIGESC

KEY

411
911

Datafilling table LENFEAT

The datafill for AIN SSP Base Trigger Tables for table LENFEAT appears in the following table. The fields that apply directly to AIN SSP Base Trigger Tables appear. See the data schema section of this document for a description of the other fields.

Datafilling table LENFEAT

Field	Subfield or refinement	Entry	Explanation and action
DF		AIN	Data feature. This field specifies the features assigned to a line equipment number. Enter AIN using SERVORD.
FEATURE		AIN	Feature name.
DATA		see subfield	Data.
	AINGRP	alphanumeric (1 to 16 characters)	The AIN group name. This subfield specifies the AIN group name that associates with field LEN and maps to field TRIGNAME in table TRIGGRP. With SERVORD, datafill is a correct AIN group name.

Datafill example for table LENFEAT

Sample datafill for table LENFEAT appears in the following example.

AIN SSP Base Trigger Tables (continued)

MAP example for table LENFEAT

LEN	PTY	DF	FEATURE	DATA

HOST 01 0 00 01				
	S	AIN	AIN	AINGRP1

Datafilling table IBNFEAT

The datafill for AIN SSP Base Trigger Tables for table IBNFEAT appears in the following table. The fields that apply directly to AIN SSP Base Trigger Tables appear. See the data schema section of this document for a description of the other fields.

Datafilling table IBNFEAT

Field	Subfield or refinement	Entry	Explanation and action
DF		AIN	Data feature. This field specifies the features assigned to a line equipment number. Enter AIN using SERVORD.
FEATURE		AIN	Feature name.
DATA		see subfields	Data.
	AINGRP	alphanumeric (1 to 16 characters)	The AIN group name. This subfield specifies the AIN group name that associates with the LEN and maps to field TRIGNAME in table TRIGGRP. Use SERVORD to enter a correct AIN group name.

Datafill example for table IBNFEAT

Sample datafill for table IBNFEAT appears in the following example.

AIN SSP Base Trigger Tables (continued)

MAP example for table IBNFTEAT

LEN	DNNO	DF	FEATURE	DATA

HOST 02 0 00 01	0	AIN	AIN	AINGRP1

Datafilling table KSETFEAT

Datafill for AIN SSP Base Trigger Tables for table KSETFEAT appears in the following table. The fields that apply directly to AIN SSP Base Trigger Tables appear. See the data schema section of this document for a description of the other fields.

Note: OPTKEY 1 must have AIN assigned. Specify the key through subfield KEYLIST.

Datafilling table KSETFEAT

Field	Subfield or refinement	Entry	Explanation and action
FEATKEY		see subfields	The KSET feature key.
	FEAT	AIN	Feature. This subfield specifies the feature assigned to the LEN and is part of the key field. Using SERVORD, enter AIN.
FEATURE		AIN	Feature. This field specifies the features assigned to a LEN. Use SERVORD to enter AIN.
KVAR		AIN	Key set variable. This field specifies the feature assigned to the key list.
	AINGRP	alphanumeric (1 to 16 characters)	The AIN group name. This subfield specifies the AIN group name that associates with the key list and functions for mapping in table TRIGGRP. Using SERVORD, datafill is a correct AIN group name.
	KEYLIST	1 to 69	Key list. This subfield specifies the keys subscribing to AIN. Enter a maximum of 24 key numbers.

AIN SSP Base Trigger Tables (continued)

Datafill example for table KSETFEAT

Sample datafill for table KSETFEAT appears in the following example.

MAP example for table KSETFEAT

	FATKEY	FEATURE	KVAR

HOST 02 0 00 01 1	AIN	AIN	
		AINGRP1 (1) (5) \$	

Datafilling table DNFEAT

Datafill for AIN SSP Base Trigger Tables for table DNFEAT appears in the following table. The fields that apply directly to AIN SSP Base Trigger Tables appear. See the data schema section of this document for a description of the other fields.

Datafilling table DNFEAT (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
AREACODE		3 digits (0 to 9)	Area code. This subfield specifies the serving numbering plan area that associates with the DN. Correct entry must correspond to an area code entered in table SNPANAME.
OFCCODE		1 to 7 digits (0 to 9)	Office code. This subfield specifies the office code that associates with the DN. Correct entry is three digits for North America. Datafill must correspond to datafill in table TOFCNAME.
STNCODE		1 to 8 digits (0 to 9)	Station code. This subfield specifies the station code that associates with the DN. Correct entry for North America is four digits.
OPTLIST		see subfields	Option list.

AIN SSP Base Trigger Tables (continued)

Datafilling table DNFEAT (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	DNOPT	AINDN	Directory feature option. This subfield specifies features assigned to the DN.
	AINGRP	alphanumeric (1 to 16 characters)	The AIN group name. This subfield specifies the AIN group name for mapping in table TRIGGRP.

Datafill example for table DNFEAT

Sample datafill for table DNFEAT appears in the following example.

MAP example for table DNFEAT

```

AREACODE OFCCODE STNCODE                OPTLIST
-----
      613      722      5234  (AINDN  AINGRP1)$
    
```

AIN SSP Base Trigger Tables (continued)

Datafilling table DNROUTE

Datafill for AIN SSP Base Trigger Tables for table DNROUTE appears in the following table. The fields that apply directly to AIN SSP Base Trigger Tables appear. See the data schema section of this document for a description of the other fields.

Datafilling table DNROUTE (Sheet 1 of 5)

Field	Subfield or refinement	Entry	Explanation and action
AREACODE		3 digits (0 to 9)	Area code. This subfield specifies the serving numbering plan area that associates with the DN. Correct entry must correspond to an area code already entered in table SNPANAME.
OFCCODE		1 to 7 digits (0 to 9)	Office code. This subfield specifies the office code that associates with the DN. Correct entry is three digits for North America. Datafill must correspond to datafill in table TOFCNAME.
STNCODE		1 to 8 digits (0 to 9)	Station code. This subfield specifies the station code associated with the DN. Correct entry for North America is four digits.
DNRESULT		see subfields	Directory number result. This field contains subfields FEATURE and DNTYPE.
	DN_SEL	FEAT	Directory number selector.

AIN SSP Base Trigger Tables (continued)**Datafilling table DNROUTE (Sheet 2 of 5)**

Field	Subfield or refinement	Entry	Explanation and action
	FEATURE	AIN, DISA, ACD, ASR, DNTRIG, MCDN, MEETME, PC, RCTL, SRA, or UCD	<p>Feature. This subfield specifies the associated feature.</p> <p>Enter AIN with SERVORD. This procedure indicates that the DN does not correspond to an agent or feature the SSP can recognize. This procedure indicates that the SCP recognizes the DN.</p> <p>Enter DISA for Direct Inward System Access. With DISA, authorized outside callers can access special features.</p> <p>Enter ACD for Automatic Call Distribution.</p> <p>Enter ASR for Automatic Set Relocation.</p> <p>Enter DNTRIG for directory number trigger.</p> <p>Enter MCDN for message center directory number.</p> <p>Enter MEETME for Meet-me Conference.</p> <p>Enter PC for Preset Conference.</p> <p>Enter RCTL for subscriber programmable ringing for CFDA (SPRING) ring control.</p> <p>Enter SRA for Suppressed Ringing Access.</p> <p>Enter UCD for Uniform Call Distribution.</p> <p>Only the AIN and DISA entries contain any AIN-specific subfields and appear here. Refer to the data schema section of this document for the subfields that associates with the other entries.</p>
	DNTYPE	IBN or NONIBN	<p>Directory number type. This subfield specifies the type of DN.</p> <p>Enter IBN for a private DN.</p> <p>Enter NONIBN for a public DN.</p> <p>Note: Used when subfield FEATURE is AIN.</p>

AIN SSP Base Trigger Tables (continued)

Datafilling table DNROUTE (Sheet 3 of 5)

Field	Subfield or refinement	Entry	Explanation and action
	CUSTGRP	alphanumeric (1 to 16 characters)	Customer group name. This subfield specifies the name of the customer group assigned to AIN. Note: Used when refinement DNTYPE is IBN. Used when subfield FEATURE is DISA.
	SUBGRP	0 to 7	Sub group. This subfield specifies the subgroup number to which the customer group belongs. Note: Used when refinement DNTYPE is IBN. Used when subfield FEATURE is DISA.
	LINEATTR	0 to 2047	Line attribute number. This subfield specifies the line attribute number that associates with the DN and provides an index in table LINEATTR. Note: Used when refinement DNTYPE is NONIBN.
	OPTION	NCOS	AIN options. This field specifies the option or options required. Enter a \$ to end option entry. Note: Used when subfield FEATURE is AIN.
	NCOS	0 to 511	Network class of service. This subfield specifies the NCOS to apply to the call if the SCP instructs the SSP to route the call to a private destination. Entries must be correct in table NCOS. Note: Used when refinement OPTION is NCOS.
	AUTHREQ	Y or N	Authorization required. Enter Y to indicate that the authorization code is necessary for users of this DN. If the authorization code is not necessary, enter N. Note: Used when subfield FEATURE is DISA.

AIN SSP Base Trigger Tables (continued)

Datafilling table DNROUTE (Sheet 4 of 5)

Field	Subfield or refinement	Entry	Explanation and action
	SMDRTO	Y or N	<p>Originating station message detail recording. Enter Y to indicate that station message detail recording (SMDR) is necessary on the leg of the call where the originator accesses DISA. If SMDR is not necessary, enter N.</p> <p>Note: Used when subfield FEATURE is DISA.</p>
	SMDRFROM	Y or N	<p>Terminating station message detail recording. Enter Y to indicate that the call requires SMDR on the leg from DISA to the final IBN destination. If the call does not require SMDR, enter N.</p> <p>Note: Used when subfield FEATURE is DISA.</p>
	INTRAGRP	Y or N	<p>Intragroup. Enter Y to indicate intragroup calls. Enter N to indicate non-intragroup calls.</p> <p>Note: Used when subfield FEATURE is DISA.</p>
	OPTIONS	refer to subtable	<p>Options. Composed of the DISAOPT refinement.</p> <p>Note: Used when subfield FEATURE is DISA.</p>
	DISAOPT	AIN01OPT	<p>DISA options. Enter a \$ to end DISA option entry. Enter AIN01OPT to allow subscription by a DISA to agent-based AIN Essentials OFFHKDEL and AFR triggers.</p> <p>Note: Used when subfield FEATURE is DISA.</p>
	AGENTIDX	refer to subfields	<p>Agent index. Use this refinement in the trigger activation and deactivation process.</p> <p>Note 1: Used when refinement DISAOPT is AIN01OPT.</p> <p>Note 2: This refinement is the key to table TRIGASGN.</p>

AIN SSP Base Trigger Tables (continued)

Datafilling table DNROUTE (Sheet 5 of 5)

Field	Subfield or refinement	Entry	Explanation and action
	AIN01_AGTI DX1	0 to 3	AIN agent index 1. A default value of 0 is present for a new tuple. Note: This subfield appears during a list of a tuple and table editing. You can not enter or change this subfield with the table editor. You can enter data but, the value entered does not affect operation.
	AIN01_AGTI DX2	0 to 32767	The AIN agent index 2. A default value of 0 is present for a new tuple. Note: This subfield appears during a list of a tuple and table editing. You cannot enter or change the tuple with the table editor. You can enter data, but the value entered does not affect operation.
	AIN01_TRIG GRP	alphanumeric (1 to 16 characters)	The AIN Essentials trigger group. Enter a correct AIN Essentials trigger group name as entered in subfield TRIGNAME in table TRIGGRP. This entry specifies the triggers that subscribe to the DISA DN.

Datafill example for table DNROUTE

Sample datafill for table DNROUTE appears in the following example.

MAP example for table DNROUTE

AREACODE	OFCCODE	STNCODE	DNRESULT
919	555	0540	FEAT AIN IBN ABCCO 0 (NCOS 0) \$
819	622	1249	FEAT DISA DEFCCO 0 Y Y Y N (AIN01OPT 0 0 TRGGRP1) \$

Datafilling table TRKAIN

Datafill for AIN SSP Base Trigger Tables for table TRKAIN appears in the following table. The fields that apply directly to AIN SSP Base Trigger Tables

AIN SSP Base Trigger Tables (continued)

appear. See the data schema section of this document for a description of the other fields.

Datafilling table TRKAIN

Field	Subfield or refinement	Entry	Explanation and action
GRPKEY		alphanumeric (1 to 16 characters)	Group key. This field is the CLLI of the trunk group that subscribes to an AIN trigger group. Note: The used CLLI must be present in table TRKGRP.
AINGRP		alphanumeric (1 to 16 characters)	The AIN group name. This field is the name of an AIN trigger group. Note: The AIN group name used must be present in table TRIGGRP.

Datafill example for table TRKAIN

Sample datafill for table TRKAIN appears in the following example.

MAP example for table TRKAIN

GRPKEY	AINGRP

AINTRK1	AINGRP1

Datafilling table PODPATTR

The datafill for AIN SSP Base Trigger Tables for table PODPATTR appears in the following table. Only the fields that apply directly to AIN SSP Base Trigger Tables appear. For a description of the other fields, refer to the data schema section of this document.

When a line attribute associates with a PODP number, post-query translation is based on this line attribute. When entry does not occur in table PODPATTR for the PODP number, perform the following action. Use the line attribute of the originator for normal digit collection.

AIN SSP Base Trigger Tables (continued)

Table PODPATTR digit pattern matching is most specific to least specific. Fields PIC and LPIC subscription are necessary fields for the PODP number. Use the fields when the Analyze_Route response does not include carrier or trunk group identification.

Digit matching for this table is based on the number dialed that caused the triggering. Digit matching is not based on the digit pattern of the PODP number. If the user dials 6137220000 and encounters a three-digit PODP trigger (613), the digit pattern matched is 6137220000, not 613.

The order of priority of the source of LATA information is the line attribute, table NCOS, then table CUSTSTN.

When a line attribute associates with a PODP number, the system applies toll limits and call screening based on this line attribute. A line attribute does not always associate with the PODP number. If this event occurs the system applies toll limits and call screening based on the attribute of the triggering agent.

You can enter fields PIC and LPIC optionally against a PODP number to handle inter-LATA and intra-LATA toll traffic. You can enter fields PIC and LPIC optionally during post-query processing. This condition is present when the SCP does not specify any Carrier or TrunkGroupID in the Analyze_Route response message.

Note: If a line attribute associates with a PODP number, the following occurs. The PIC and LPIC of the triggering agent is not used for post-query processing for the Analyze_Route response. The PIC and LPIC are not for use when the PIC and LPIC are subscribed against the PODP number. The

AIN SSP Base Trigger Tables (continued)

office default carrier handles inter-LATA traffic and the local exchange carrier (LEC) handles intra-LATA traffic.

Datafilling table PODPATTR

Field	Subfield or refinement	Entry	Explanation and action
KEY		alphanumeric (N, 0 to 9, B, C, D, E, or F) (up to 18 digits)	Key. Enter a digit string for the most-specific to least-specific digit pattern matching for the PODP DN. Note: A cross reference from table PODPATTR to table TRIGGRP is not present. Make sure the PODP DN occurs in table TRIGGRP.
LINEATTR		0 to 2047	Line attribute. Enter a line attribute index number that corresponds to a correct entry in field LNATTIDX in table LINEATTR.
PIC		alphanumeric (1 to 16 characters)	Primary inter-LATA carrier. Enter the carrier name or abbreviation for the carrier name that corresponds to a correct entry in field OCCNAME. Field OCCNAME is in table OCCNAME. This entry subscribes the PODP DN to a PIC. Enter NILC when a carrier is not selected.
LPIC		alphanumeric (1 to 16 characters)	Intra-LATA PIC. Enter the carrier name or abbreviation for the carrier name that corresponds to a correct entry in field OCCNAME. Field OCCNAME is in table OCCNAME. This subscribes the PODP DN to an LPIC. Enter NILC for the PODP DN when a carrier is not selected.

Datafill example for table PODPATTR

Sample datafill for table PODPATTR appears in the following example.

AIN SSP Base Trigger Tables (continued)

MAP example for table PODPATR

KEY	LINEATTR	PIC	LPIC
613	80	MCI	NILC
613722	55	ATT	GTE
5146211234	10	NILC	NILC

Datafilling table NCOS

Datafill for AIN SSP Base Trigger Tables for table NCOS appears in the following table. The fields that apply directly to AIN SSP Base Trigger Tables appear. See the data schema section of this document for a description of the other fields.

Datafilling table NCOS (Sheet 1 of 4)

Field	Subfield or refinement	Entry	Explanation and action
CUSTGRP		alphanumeric (1 to 16 characters)	Customer group name. Enter the code assigned to the customer group. This field is the key field to table NCOS.
NCOS		0 to 511	Network class of service number. Enter the network class of service (NCOS) number. Numbering plan areas (NPA) entered in table CODEBLK does not allow table NCOS to access to NPAs entered with an NCOS number.
NCOSNAME		A to Z 0 to 9 (1 to 6 characters) or \$	Network class of service name. Enter the name assigned to the NCOS number for the key and lamp display. The \$ appears as a field of blanks on the display and the MAP terminal.

AIN SSP Base Trigger Tables (continued)**Datafilling table NCOS (Sheet 2 of 4)**

Field	Subfield or refinement	Entry	Explanation and action
LSC		0 to 31	<p>Line screening code. Enter the line screening code assigned to the NCOS number. Field LSCFLAGL in table LSCFLAGS associates with field ALTLSCFN in table TRKGRP of the trunk. For the test access controller (TAC) to block access to the outgoing trunk preform the following action. Make sure this field does not include the Line Screening Card (LSC) defined by the NCOS of the originator.</p> <p>The LSCs define outgoing or outgoing side of two-way trunk IBN trunk groups that the NCOS number can access.</p>
TRAFSNO		10 to 127	<p>Traffic separation number. Enter the traffic separation number assigned to the NCOS number in table TFANINT. If a traffic separation number is not necessary, enter 0 (zero).</p> <p>The switching unit can have software package NTX085AA (Traffic Separation Peg Count). If this event occurs the range of values for the incoming and outgoing traffic separation numbers depends on the following values:</p> <ul style="list-style-type: none"> • TFAN_IN_MAX_NUMBER • TFAN_OUT_MAX_NUMBER <p>These parameter values are in table OFCENG.</p> <p>For switching units without software package NTX085AA, the range of values for the traffic separation numbers is 0 to 15.</p>

AIN SSP Base Trigger Tables (continued)

Datafilling table NCOS (Sheet 3 of 4)

Field	Subfield or refinement	Entry	Explanation and action
			<p>Reserve incoming and outgoing traffic separation numbers 1 to 9 for generic traffic separation numbers.</p> <p>Refer to table TFANINT for the assignment of incoming to outgoing traffic separation numbers.</p> <p>With the Traffic Separation feature, a peg counts of calls arranged by type of call-direct dial (DD), operator assisted (OA), or no prefix (NP) can accumulate. The peg count is between an originating source and a terminating destination. The originating source is the incoming or incoming side of two-way trunk, or an originating line attribute, or NCOS number. The terminating destination is one of the following.</p> <ul style="list-style-type: none"> • outgoing trunk • outgoing side of a two-way trunk • a terminating line attribute • NCOS number • tone • announcement
CONTMARK		+ or \$	Continuation mark. If the NCOS number requires options, enter +. If the NCOS number does not require options, enter \$ to indicate the last record for the NCOS number.
OPTIONS		refer subfield	Options. This field is a vector list and can receive a maximum of 17 multiple entries. This field contains subfield NCOSOPTN and refinements.

AIN SSP Base Trigger Tables (continued)

Datafilling table NCOS (Sheet 4 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	NCOSOPTN	AINLATA	<p>Network class of service options. Enter a vector of a maximum of 17 option entries for the network class of service (NCOS) number. Use one record for each option entry. If an option contains refinements, leave a blank space between each refinement entry in the record.</p> <p>Enter AINLATA to support LATA parameter population for an AIN Essentials query when a Centrex agent triggers in the private environment. Use for customer groups that span over a number of LATA.</p> <p>Note 1: The AINLATA is for parameter population only and is not u for LATA screening during call processing. Make sure that the setting of this option and the LATA value used to AIN response processing are the same.</p> <p>Note 2: Table TRKLATA allows local trunks (IT, TI, T2, and ATC) associate with LATA information for AIN purposes.</p> <p>Use a continuation mark (CONTMARK) to indicate the end of a record. Enter + CONTMARK between each record in the vector. Enter \$ CONTMARK following the last record for the vector.</p>
	LATANAME	alphanumeric (1 to 16 characters)	<p>The LATA name. Enter a LATA name entered in table LATANAME.</p> <p>Note: This option value overrides the LATA value entered in table CUSTSTN under option AINLATA.</p>

Datafill example for table NCOS

Sample datafill for table NCOS appears in the following example.

AIN SSP Base Trigger Tables (continued)

MAP example for table NCOS

CUSTGRP	NCOS	NCOSNAME	LSC	TRAFSNO	OPTIONS
DEFECO	0	LDATA	0	0	(AINLATA LATA1)\$

Datafilling table CUSTSTN

Datafill for AIN SSP Base Trigger Tables for table CUSTSTN appears in the following table. The fields that apply directly to AIN SSP Base Trigger Tables appear. See the data schema section of this document for a description of the other fields.

Datafilling table CUSTSTN (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
CUSTNAME		alphanumeric (1 to 16 characters)	Customer group name. Enter the name.
OPTNAME		AIN or AINLATA	Option name. This subfield specifies the option assigned to the customer group. Enter AIN to support AIN Essentials. Enter AINLATA to support LATA parameter population for the AIN Essentials query when a Centrex agent triggers in the private environment. Note: Option AINLATA is for parameter population only and is not to LATA screen during call processing. Make sure the setting of this option and the LATA value for AIN response processing are the same.
OPTION		see subfields	Option. This field has subfields.

AIN SSP Base Trigger Tables (continued)

Datafilling table CUSTSTN (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	AIN or AINLATA	Option. Enter the same value as used in field OPTNAME. Note: Table TRKLATA allows local trunks (IT, T1, T2, and ATC) to associate with LATA information for AIN purposes.
	AINGRP	alphanumeric (1 to 16 characters)	The AIN group name. This subfield specifies the AIN group name that associates with the customer group and functions for mapping in table TRIGGRP. Note: Used when subfield OPTION is AIN.
	LATANAME	alphanumeric (1 to 16 characters)	LATA name. Enter a LATA name entered in table LATANAME. Note 1: Used when subfield OPTION is AINLATA. Note 2: An The value when a LATA value occurs in table NCOS under option AINLATA.

Datafill example for table CUSTSTN

Sample datafill for table CUSTSTN appears in the following example.

MAP example for table CUSTSTN

CUSTNAME	OPTNAME	OPTION
ABCCO	AIN	AIN AINGRP1
DEFCCO	AINLATA	AINLATA LATA1

Tools for verifying translations

See the AIN Essentials TRAVER module for information and examples of TRAVER.

AIN SSP Base Trigger Tables (continued)

SERVORD

You can add option AIN to POTS lines, MDC and RES lines, MBS, or virtual DN. If option AIN is present, the system prompts the end user for AINGRP. The AINGRP maps into table TRIGGRP where trigger behavior setting occurs.

SERVORD limits

The following SERVORD limits apply to AIN SSP Base Trigger Tables:

- Multiple appearance directory number (MADN) is compatible with option AIN.
- The MADN is compatible with option AINDN.
- The AIN assignment to 1FR or 1MR POTS lines by SERVORD can fail. The assignment fails if the system does not find a correct line attribute index (LAI) for the conversion. To perform the POTS-to-RES conversion a LAI with the RES information must occur. Field RESINF represents this value in table LINEATTR. The AIN POTS-to-RES conversion uses the same mechanism as the POTS-to-RES conversion. The AIN POTS-to-RES conversion uses this mechanism when a RES feature assignment uses SERVORD.
- The AIN POTS to RES conversion and the AIN assignment to POTS line by SERVORD can fail. This failure can occur because of the limits by the office resource and the compatibility of line attributes. The RES conversion receives limits when the conversion assigns a CLASS feature to a POTS line. These limits apply to the AIN POTS to RES conversion.

SERVORD prompts

The service order prompts for assigning AIN SSP Base Trigger Tables to POTS, MDC, and RES lines appear in the following table.

SERVORD prompts for assigning AIN SSP Base Trigger Tables

Prompt	Correct input	Explanation
OPTION	AIN	You assign option AIN to the line.
AINGRP	Correct AIN group name	The AIN group name assigned determines the behavior of the AIN for the line.

SERVORD example for implementing AIN SSP Base Trigger Tables

The AIN SSP Base Trigger Tables uses the add option (ADO) command to add to POTS, MDC, or RES lines. The use of the ADO command appears in the following service order example.

AIN SSP Base Trigger Tables (continued)

Setting AIN SSP Base Trigger Tables using ADO

```

>SERVORD
SO:
> ADO
SONUMBER:    NOW 93 10 24 PM
> $
DN_OR_LEN:
> 5550000
OPTION:
> AIN
AINGRP:
> AINGRP1
OPTION:
> $

```

SERVORD example for AIN SSP Base Trigger Tables in no-prompt mode

```

> SERVORD ADO $ 5550000 AIN AINGRP1 $

```

Note: The AIN option is RES specified. An auto-conversion from POTS to a compatible RES line occurs when the following condition is present. An auto-conversion occurs if the line class code (LCC) of the assigned POTS is RES compatible and the office allows RES conversion. An example of RES conversion is when you must RES_SO_SIMPLIFICATION office variable correctly with the RES_AS_POTS field set to Y. To achieve the POTS to RES conversion, assign the AIN option to the line and use the ADO or NEW command.

SERVORD example for implementing AIN SSP Base Trigger Tables

How to add AIN SSP Base Trigger Tables to MSB with the ADO command appears in the following service order example.

AIN SSP Base Trigger Tables (continued)

Setting up AIN SSP Base Trigger Tables using ADO

```

>SERVORD
SO:
> ADO
SONUMBER:    NOW 93 10 24 PM
> $
DN_OR_LEN:
> 5557020
OPTKEY:
> 1
OPTION
> AIN
AINGRP:
> AINGRP1
KEYLIST
> 1
KEYLIST
> 5
KEYLIST
> $
OPTKEY
> $
    
```

SERVORD example for AIN SSP Base Trigger Tables in no-prompt mode

```
> SERVORD ADO $ 5557020 1 AIN AINGRP1 1 5 $ $
```

The service order prompts used to assign AIN SSP Base Trigger Tables to DN appear in the following table.

Service order prompts for assigning AIN SSP Base Trigger Tables to DN

Prompt	Valid input	Explanation
OPTION	AINDN	Option AINDN is assigned to the DN.
AINGRP	Valid AIN group name	AIN group name assigned determines the behavior of the AIN for the line.

SERVORD example for implementing AIN SSP Base Trigger Tables

You can use the ADO command to add AIN SSP Base Trigger Tables to a DN that corresponds to a POTS line. The use of the ADO command appears in the following service order example.

AIN SSP Base Trigger Tables (continued)

Setting up AIN SSP Base Trigger Tables using ADO

```

>SERVORD
SO:
> ADO
SONUMBER:    NOW 93 10 24 PM
> $
DN_OR_LEN:
> 5550501
OPTION
> AINDN
AINGRP
> GRP23
OPTION
> $

```

SERVORD example for AIN SSP Base Trigger Tables in no-prompt mode

```
> SERVORD ADO $ 5550501 AINDN GRP23 $
```

SERVORD example for implementing AIN SSP Base Trigger Tables

You can use the ADO command to add AIN SSP Base Trigger Tables to a DN that corresponds to an MBS. The use of the ADO command appears in the following example.

Setting up AIN SSP Base Trigger Tables using ADO

```

>SERVORD
SO:
> ADO
SONUMBER:    NOW 93 10 24 PM
> $
DN_OR_LEN:
> 5557021
OPTKEY
> 2
OPTION
> AINDN
AINGRP
> GRP1
OPTKEY
> $

```

AIN SSP Base Trigger Tables (end)

SERVORD example for AIN SSP Base Trigger Tables in no-prompt mode

>SERVORD ADO \$ 5557021 2 AINDN GRP1 \$

Trigger Processing II

Ordering codes

SOC options: AIN00002, AIN00006, AIN00007, AIN00008, AIN00009, AIN00011, and AIN00015

Release applicability

NA008 and later versions

Requirements

The Trigger Processing II feature requires the SOC option AIN00006.

Description

Trigger processing accumulates information to communicate with the SCP/Adjunct and query the SCP/Adjunct. Trigger processing also understands messages from the SCP/Adjunct and takes the requested call processing actions.

Trigger detection points (TDP) are stages in the call. In these stages, the SSP determines if a call must send a query to the SCP/Adjunct. Triggers define the conditions that must occur before the system sends a query to the SCP. The following conditions prompt a call to trigger and send a query to the SCP:

- The call reaches the TDP.
- The trigger subscription is by individual line or trunk group, customer group, or office.
- The trigger requirements are met.

A trigger contains one or more types of trigger requirements. The specified requirements are met before a call triggers. The specified requirement types are:

- Call type specifies the type of call (voice or data) that trigger and send a query message.
- Digits dialed specifies the digits the system dials to trigger and send a query message.
- Escape code requirements specify if a caller dials calls other than an escape code to trigger and send a query message.

Operation

The AIN service provides operating companies with the ability to manipulate call-processing based on a switch from an SCP/Adjunct. During an AIN call, the SCP/Adjunct assumes call flow control from the SSP through different trigger-detection points. When an AIN agent encounters a trigger-detection

Trigger Processing II (continued)

point, the SSP examines the attributes of the agent. The AIN determines if the SSP must send a Transaction Capability Application Part (TCAP) query or conversation package to the SCP/Adjunct. If the SSP sends the query, the SSP waits for instructions from the SCP/Adjunct. These instructions indicate how to continue the call.

The system places trigger-detection points at the end of points in call. Points in call represent logically distinct stages in the originating and terminating models that are basic call models. These stages include the analyzing information and authorizing termination stages. The system can inform the SCP/Adjunct after each major stage in a call. The SCP/Adjunct can drive many customized services.

Trigger processing fills and supports the parameters the system uses in the SSP to SCP query messages.

15-Digit International Direct Digit Dialing

The number of dialable international digits is 15 to accommodate the new CCITT International Numbering Plan. The new CCITT International Numbering Plan was in effect at the start of 1997.

The system supports 15-digit international numbers during AIN digit collection. The AIN collects digits after the system sends the AIN query to an off-board processor. An off-board processor receives Send_To_Resource with normal digit collection. The AIN collects the digits that a caller dials for additional processing.

Note: You can dial a maximum of 32 digits during a Send_To_Resource with variable and fixed digit collection.

Trigger Processing II (continued)**Message parameter population**

Important query parameters, and the messages to which the parameters apply, appear in the following table. The number of digits that the SSP can fill in each parameter appear in the following table.

SSP to offboard processor message parameter population

Query message parameter	Applicable message/query	Number of digits
UserID	Origination Attempt Information Collected Information Analyzed Network Busy Termination Attempt	10 digits
CalledPartyID	Information Analyzed Network Busy Termination Attempt	15 digits
CollectedAddrInfo	Information Collected Information Analyzed Resource Clear	15 digits
CollectedDigits	Resource Clear	a maximum of 32 digits
CallingPartyID	Origination Attempt Information Collected Information Analyzed Network Busy Termination Attempt	15 digits
ChargeNumber	Origination Attempt Information Collected Information Analyzed Network Busy Termination Attempt	10 digits. When ChargeNumber is greater than 10 digits, additional digits do not fill this parameter.
OriginalCalledPartyID	Information Collected Information Analyzed Network Busy Termination Attempt	10 digits
RedirectingPartyID	Information Collected Information Analyzed Network Busy Termination Attempt	10 digits

Trigger Processing II (continued)

Important response parameters and the number of digits that the SSP can fill in each parameter appear in the following table.

Offboard processor to SSP message parameter population

Response parameter	Applicable response	Number of digits
CalledPartyID	Analyze Route Forward Call	15 digits
Calling PartyID	Analyze Route Forward Call Authorize Termination	15 digits
ChargeNumber	Analyze Route Forward Call	10 digits
OutpulseNumber	Analyze Route Forward Call	15 digits
RedirectingPartyID	Analyze Route	15 digits

Note: You can receive a 15-digit RedirectingPartyID in an AIN response. The system fills 10-digit RedirectingPartyID and original CalledPartyID in following queries. If the RedirectingPartyID is greater than 10 digits, the SSP does not fill the original CalledPartyID in the following query.

Query package contents

The query contents assemble in TDP and parameters.

Origination Attempt

This TDP is in the originating basic call model (BCM). The BCM describes the stages in call processing for AIN Essentials and the TDP. The trigger is Off-Hook Immediate. The trigger sends a query to the SCP when the line goes off-hook. The assignment for this trigger for individual lines is in tables IBNFEAT, KSETFEAT, LENFEAT. The assignment for this trigger is in table TRIGGRP for assigning AIN groups. The requirement for Off-Hook Immediate trigger is an optional call type. The call triggers for every call type if the required call type is not specified.

Information Collected

The TDP is in the originating BCM between the collecting information and analyzing information points in call. The TDP contains the following triggers:

- Off-Hook Delay trigger sends a query to the SCP after the system dials and collects digits. These digits are digits from subscribing lines or private facility trunk groups. Some trunk groups are Integrated Business Network

Trigger Processing II (continued)

Incoming (IBNTI), Integrated Business Network two-way (IBNT2) or primary rate access (PRA) trunks. The feature does not apply to calls where you dial an escape code. This feature does not apply to calls where the digits represent a feature activation or deactivation code. The correct requirements types for this TDP are call type and escape code. The call type requirements are optional. The escape code is not optional.

- Shared Interoffice Trunk trigger can have assignment to separate public trunk groups for some calls. These calls are calls that the system routes to an AIN Essentials SSP from an equal access end office (EAEO). The OZZXXX digits that the system sends from the EAEO to the SSP determine the identification of an AIN call. This trigger supports public trunks that use the equal access multi-frequency (EAMF) and CCS7 facilities. The correct requirement types for this trigger are call type and digits. The call type requirement is optional. The digits requirement is not optional.

The trigger assignment for Off-Hook delay for a line is in the following tables:

- Integrated Business Network Features (IBNFEAT)
- Business Set and Data Unit Feature (KSETFEAT)
- Line Feature (LENFEAT)
- For each trunk group in table Trunk AIN (TRKAIN)

Information Analyzed

This TDP contains the following triggers:

- Customized Dialing Plan (CDPCODE) trigger. The system makes the CDPCODE trigger assignment for each customer group through table CUSTSTN. Variants of the trigger appear in the following description:
 - Variants of the trigger occur when you dial a Feature Access Code for an SCP-defined feature. Use the FTR AIN selector in table IBNXLA or XLANAME to enter data in an SCP-defined feature. Variants of this feature also occur when you dial an Access Code (9+ to access the public environment). The TriggerCriteriaType parameter is set to CustomizedAccess. The AccessCode parameter contains the access code on which the call triggers.
 - The Customized Intercom variant occurs when you dial an extension and enter digits in table TRIGDIG. The extension corresponds to the digits that associate with the extension (EXTN) selector in table

Trigger Processing II (continued)

IBNXLA. The TriggerCriteriaType is Customized Intercom. The digits that you dial are in the CollectedAddressInfo.

- Public Office Dialing Plan 3 to 10 (PODP) trigger. Specification of the PODP assignment occurs for an office through table OFCVAR (Office Variable). The following differences apply to PODP:
 - A PODP trigger occurs if the system matches three, six, or ten digits during the checking requirements. The TriggerCriteriaType is set to NPA, NPANXX, and NPANXXXXXX in that order.
 - The TriggerCriteriaType contains the correct NPA + digits if a number other than 3 to 10 digits detects the PODP trigger.
- N11 trigger. The trigger assignment occurs for the office through table OFCVAR. The N11 trigger occurs if you dial N11 and you enter the digits in table TRIGDIG. The TriggerCriteriaType is set to N11 also.

Note 1: The PODP triggers support national numbers.

Note 2: The requirement type is set to NPA if the N11 digits satisfy the requirement checking for PODP 3. Do not provision this process.

- Public Office Dialing Plan Feature Code (PODPFEAT). The trigger supports each RES line that the current AIN Essentials originating triggers support. The PODP specifies feature codes for the PODPFEAT trigger. Examples of feature codes are vertical service codes. At the Information_Analyzed TDP, the system can detect feature codes when you dial. The call triggers and launches a query to an SCP. The subscription control for the PODPFEAT trigger executes at the run time of PODPFEATs call processing.

Network Busy

The Network Busy TDP is in the Originating BCM after the Selecting Route point in call. The system accesses the TDP when the routes are busy. The trigger that applies to Network Busy TDP is Automatic Flexible Routing (AFR). The AFR subscription occurs for each person, group, or office. The AFR trigger occurs when the system busy lists every route in the automatic route selection (ARS) pattern. The correct requirement type for the Network Busy trigger is Call Type.

Termination Attempt

The termination attempt TDP is in the Terminating BCM between the null point in call and Authorizing Termination point in call. The trigger that applies to this TDP is Termination Attempt. The system subscribes the trigger for each DN. A call can attempt to terminate on a DN the system subscribes to this trigger. When this attempt occurs, a call sends a query to the SCP/Adjunct.

Trigger Processing II (continued)

The correct requirement type for the Termination Attempt trigger is call type. The requirement type is optional.

An originating agent can terminate on a DN the system subscribes to TERMATT. The originating agent must be an AIN Essentials supported agent or an AIN Essentials TERMATT supported agent to trigger TERMATT. The AIN Essentials TERMATT supported agents cannot subscribe to the Termination Attempt trigger. The AIN Essentials TERMATT supported agents can encounter the Termination Attempt trigger. A call that originates from some agents can trigger at the Termination Attempt TDP when the necessary trigger requirements are met.

Note 1: The ISUP VAPN originating calls that trigger at TERMATT can encounter the AFR trigger at the Network Busy TDP. This encounter can occur on the second leg of a call. The Call Forwarding based on a switch routes the call. The position of the AFR trigger in the route list does not determine if this function routes the call. The ISUP VAPN originating calls that trigger at TERMATT can use several routes. These routes include Primary, Alternate, and SecondAlternate Carrier or TrunkGroup that return from Forward_Call response.

Note 2: The ISUP VAPN originating calls that trigger at TERMATT can trigger at AFR. This event occurs on the second leg of a call AIN Forward Call forwards.

The trunk agents that are not AIN Essentials trunk agents that can encounter the TERMATT trigger appear in the following table. These trunk agents cannot subscribe to the TERMATT trigger

AIN Essentials TERMATT supported trunk agents (Sheet 1 of 2)

Trunk group type	Definition
E911	Dedicated trunks of type 911 incoming to an E911 tandem office.
SC	SuperCAMA. Incoming or two-way SC trunk group in a DMS toll or DMS TOPS office that connects to an end office. Connection carries some calls that the CAMA records in the toll office. These calls are calls that are not coin, that a subscriber dials, and that the system can charge.
OC	Outgoing CAMA trunks. An OC trunk is a toll or end-office CAMA trunk. You can configure the OC trunk as an outgoing or two-way trunk.

Trigger Processing II (continued)

AIN Essentials TERMATT supported trunk agents (Sheet 2 of 2)

Trunk group type	Definition
P2	Two-way trunks which interface with analog PBX for Direct Inward Dialing and Direct Outward Dialing. See previous notes.
PX	Two-way trunks which interface with a digital PBX for Direct Inward Dialing and Direct Outward Dialing. See previous notes.
CELL	Cell trunks that allow interconnection between an Access Tandem and a Cellular Mobile Carrier switch. See previous notes.
VAPN	Virtual Access to Private Networks trunks. Calls that originate from these trunks can trigger at TERMATT.
ATC	Access to Carrier trunks. An ATC trunk is a type of Equal Access trunk. This trunk normally connects an Access Tandem (AT) switch or an Equal Access End Office (EAEO) to an Inter-LATA Exchange Carrier (IXC) switch. An ATC trunk can be incoming, outgoing, or two-way.
OI	Operator incoming trunks. An OI trunk connects to an operator switchboard or a TOPS office.
OP	Operator trunks. An OP trunk can be an outgoing trunk group that connects to a TOPS or TSPS office. This trunk group can connect to a two-way trunk group in a DMS end office. An OP trunk must have the NRMLTRAF option assigned to the OP in table TRKGRP.

The non-AIN Essentials line agents that can encounter, but do not subscribe to the TERMATT trigger, appear in the following table.

AIN Essentials TERMATT supported line agents (Sheet 1 of 2)

Line class code	Definition
CCF	Coin Coin-First, insert coin to get dial tone, prepay, (POTS, RES)
CDF	Coin Dialtone First, hear dial tone and insert coin, prepay, (POTS, RES)

Trigger Processing II (continued)**AIN Essentials TERMATT supported line agents (Sheet 2 of 2)**

Line class code	Definition
CSP	Coin Semi-Postpay, coin not required for operator or free numbers, postpay, (POTS, RES)
CFD	Coin-Free Dialing , coinless pay station, (POTS, RES)
ZMD	Zero-Minus Denied, 0+ allowed, 011 blocked, without coins, (POTS, RES)
ZMZPA	Zero-Minus Zero-Plus Allowed, 0- and 0+ allowed, 011 blocked, without coins, (POTS, RES)
DATA	Interface to data terminal equipment from DMS
PDATA	DATA terminal for POTS lines
TFR	2FR Party Line
FFR	4FR Party Line
EFR	8FR Party Line
TNFR	10FR Party Line
INW	Inward Wide Area Telephone Service, 800 Service, (WATS, RES)
OWT	Outward Wide Area Telephone Service (WATS, RES)
TWW	Two-Way Wide Area Telephone Service (WATS, RES)
ETW	Enhanced Two-Way Wide Area Telephone Service (WATS, RES)
EOW	Enhanced Outward Wide Area Telephone Service (WATS, RES)
TWX	Teletypewriter Exchange Service

Note: Party lines do not provide a charge party number. An AIN query to the off-board processor does not contain a ChargePartyStation type parameter. The TWX lines are for translations. The E911 does not generate billing records. The AIN Essentials does not support the QCK keys feature.

Trigger Processing II (continued)

The DMS-100 does not send Q.931-call processing message to BRI before the switch launches the TERMATT query to the database.

BRI lines

Office-wide and customer group AIN trigger support for ISDN BRI agents is available. Calls that originate from an ISDN BRI agent can trigger on TERMATT and other triggers. These other triggers are CDPCODE, PODP, N11, and AFR. The trigger must subscribe and meet the necessary requirements. When the call triggers, the call sends an AIN query to the SCP/Adjunct. The SCP/Adjunct receives and processes the AIN response according to TR-1284 and TR-1285. The ISDN BRI agents belong to a specified customer group or office. These agents inherit the services to which customer group or office subscribes.

An ISDN BRI agent can subscribe to AIN Essentials services directly without subscription through an office or customer group. A call that originates from an ISDN BRI agent can trigger on the OFFHKIMM, OFFHKDEL, and PODPFEAT triggers. The trigger must subscribe and meet the necessary requirements. A call that originates from another agent can terminate on an ISDN BRI agent. The call can trigger on the TERMATT trigger. The trigger must subscribe and meet the necessary requirements.

You can subscribe to the OFFHKIMM, OFFHKDEL, and PODPFEAT triggers for each ISDN BRI terminal service profile (TSP) or ISDN BRI line. The TR-1284 determines subscription to these triggers. The subscription is for each LTID. You can subscribe to a TERMATT trigger for each DN.

A call that originates from the agent triggers under three conditions. The first condition is that an ISDN BRI agent must subscribe to a customer group that can access public translations. The second condition is that the PODPFEAT trigger is subscribed. The third condition is that the necessary requirements are met.

A BRI agent sends a Q.931 SETUP message to the SSP to originate a call. The SETUP message contains information to fill parameters in query processing.

Trigger Processing II (continued)

In addition to the required Bearer Capability information element (IE), the SETUP message can contain the following data:

- Calling Number that includes:
 - Digits
 - Number
 - Numbering Plan
 - Origin of Number
 - Presentation Status

For EKTS BRI agents with the call appearance call handling (CACH) option, the SETUP message can contain the Call Appearance IE. The system can use the Call Appearance IE and not the Calling Number IE. If the Calling Number is also present in the SETUP message, the system ignores the Call Appearance IE.

For digit collection during Send_to_Resource, a BRI agent consists of two B-channels for voice and one D-channel for data. The system can collect digits from a BRI interface inband through the B-channel with specified techniques. These techniques are like the techniques that the system uses for a POTS line. Digit collection over the B-channel uses a DTMF receiver, RCVRDGT (Digital_Digitone_RCVR_Circuits). The system does not support digit collection through a Universal Tone Receiver. To be consistent with current functionality for other agents, the asterisk * is a restart indication for fixed and variable digit collection. The * is a restart indication if the system receives the * as the first digit or not. These agents include POTS and IBN. For normal digit collection, the * can be a correct digit if the system receives the * as the first digit because of translation.

2FR and 4FR party lines

In addition to TERMATT, 2FR and 4FR party lines can encounter and react to the PODP, N11, and AFR triggers from offices. The 2FR and 4FR party lines can encounter and react to the OFFHKIMM, OFFHKDEL, and AFR triggers. These triggers are from individual lines in the originating BCM. A call that originates from 2FR and 4FR party agents can trigger at these triggers. These party agents can trigger these triggers when the call subscribes to AIN triggers and the necessary trigger requirements are met. On triggering, the calls send an AIN query to the SCP/Adjunct. The SCP/Adjunct receives and processes the AIN response according to TR-1284 and TR-1285.

Note: Party lines can be POTS lines. The RES party lines are not present. The CDPCODE and PODPFEAT triggers do not apply.

Trigger Processing II (continued)

Wide Area Telephone Service lines

The WATS agents can encounter the TERMATT trigger. The TERMATT trigger can have WATS agents assigned. The WATS agents can encounter the AIN Essentials office triggers PODPFEAT, OFFHKDEL, N11, and AFR. The WATS agents can encounter the group triggers CDPCODE and AFR. The WATS agents are INW, OWT, TWW, EOW, and ETW. A call that originates from a WATS agent can trigger at these triggers. This condition occurs when the call is subscribed to AIN triggers and the necessary trigger requirements are met. On triggering, the call sends an AIN query to the SCP/Adjunct. The SCP/Adjunct receives and processes the AIN response according to TR-1284 and TR-1285. The triggers that the office supports for POTS WATS lines are PODP, N11, and AFR subscribed by office. The triggers that the system supports for RES WATS lines are CDPCODE, PODP, N11, and AFR. These triggers are subscribed by office or customer group.

The WATS line inherits office-wide triggers PODP, N11, and AFR from the associated office. The customer group triggers CDPCODE and AFR can be subscribed through subscription of the customer group of the line for these triggers.

Coin lines

In addition to TERMATT, POTS and RES coin lines can encounter the CDPCODE, N11, OFFHKDEL, PODPFEAT and AFR office triggers directly. The POTS and RES coin lines can encounter these triggers without the requirement of PRI looparound trunks. The following telephones are the POTS and RES coin line agent telephones:

- prepay coin coin-first (CCF)
- prepay dialtone-first (CDF)
- postpay semi-postpay (CSP)
- coinless coin-free dialing (CFD)
- coinless zero-minus denied (ZMD)
- coinless zero-minus zero-plus allowed (ZMZPA)

Note: The PBX line class codes support millenium coin telephones.

When a coin originator encounters the PODP trigger, the trigger does not normally affect coin collection. The exception is when the SCP returns an Analyze_Route message with a zero-minus called DN. In this occurrence, the coins return to the caller when the system sends the call to a TOPS position.

Note: The table OFCVAR office parameters
COIN_OPERATOR_RELEASED_ON_OA and COIN_RETAIN_ON_OA

Trigger Processing II (continued)

require a value of CCF or CCFCDF. The value enables a CCF agent to encounter the N11 trigger when the system marks a call as operator assisted (OA). To use the N11 trigger with CCF lines, the call must be local. Put the N11 digits in subtable LCASCR of table LCASRCN.

DATA and PDATA lines

The DATA and PDATA are line class codes (LCC) on the DMS-100 switch. The attributes are the same for the two line types. The switch uses DATA LCC for MDC that uses DATAPATH. The switch uses PDATA LCC for residential POTS that uses DATAPATH. The two LCCs use the same data unit hardware. The two LCCs connect to the DMS switch on the same line card type (NT6X71AA or NT6X71AB). The DATA and PDATA line agents encounter the TERMATT and PODPFEAT triggers. These line agents can be assigned to the individual line triggers OFFHKIMM and OFFHKDEL, and the group trigger CDPCODE. These line agents can be assigned also to office triggers PODP, N11, and AFR. The translation for POTS DATAPATH lines is like the translation of the MDC (IBN DATAPATH). The system supports service orders for POTS data units with the same method as the service orders for IBN data units.

Virtual directory numbers for AIN applications

The virtual DN can be an AIN specified directory number without associated hardware. This DN can correspond to a feature DN in the SCP or Adjunct. Table DNROUTE (Directory Number Route) identifies the DN with the feature AIN. This DN also appears in table DNFEAT (Directory Number Feature) with option AINDN. This condition enables this virtual DN to subscribe to AIN triggers. Additional information about virtual DN appears in the description of the parameters in this feature.

Update_Request message

The SCP uses the AIN Essentials Update_Request message that does not relate to calls. The SCP uses this message to request the SSP to activate or deactivate an OFFHKIMM, OFFHKDEL, or TERMATT trigger. The SCP activates or deactivates the triggers for a subscribed user on a specified AIN Essentials Bearer Capability. The user can be a DN, trunk group identifier, or private facility group identifier. The system supports this message from a query package. This message contains three parameters: UserID, TriggerCriteriaFlag (activated or not), and optional BearerCapability. The following condition applies for each AIN subscribed agent (UserID). An activation state code associates with each of the supported AIN trigger and AIN Bearer Capability groups. If the activation status is ON, AIN call processing proceeds with the requirement checking to determine if the call must trigger. This message can encounter and application errors that are fatal and not fatal. This message also can encounter resource failures.

Trigger Processing II (continued)

Post virtual facility group triggering

Virtual facility groups (VFG) limit the number of active calls that the system routes. The VFGs limit the number of calls to the number of hardware resources available. These VFGs can change the line attribute of a call. This change can provide a way to route the call. The IBN and POTS VFGs can encounter post AIN Essentials triggering.

The AIN Essentials supported agents can encounter the customer group and office-based triggers of the Information Analyzed and Network Busy TDPs. This encounter occurs after VFG call limiting. The post VFG triggers that agents can encounter are PODP, N11, CDPCODE, and AFR. The customer group of the VFG determines the customer group trigger. The VFG customer group determines the post VFG customer group triggers. You cannot guarantee that the VFG and the originator are from the same customer group.

The system supports the following VFG options:

- The customer group (CUSTGRP) option, specifies the customer group that has the VFG assigned. This option determines VFG access control and VFG group busy by an attendant. The customer group determines the triggers that apply to the group. The customer group overrides the customer group trigger subscriptions of the originator.
- The Equal Access (EA) option provides EA capabilities to IBN stations and incoming trunks.
- The VFG line screening code (VFGLSC) provides additional line screening based on the VFG with a line screening code flag. Table LSCFLAGS defines the screening code flag.
- The intra-LATA PIC (LPIC) option, provides a carrier for intra-LATA calls. This option is available when the assignment of the equal access (EA) option occurs.
- The VFG alternate line screening code (VFGALSC) option provides an alternate line screening code. Additional requirements of the VFG screening process determine this line screening code.
- The VFG automatic message accounting (VFGAMA) option designates a standard call code for the generated AMA record for each BellCore requirement.
- The toll restriction (TOLLRST) option allows a toll restriction from the originator to the VFG leg of the call. Toll restriction does not apply on the post-VFG triggering leg of the call.
- When AIN response routes a call to VFG, the system does not generate DF04 records on the post-VFG call leg. The system does not generate DF04 records because the system treats the VFG as a change in direction.

Trigger Processing II (continued)

- The IBNPIC option allows the PIC to carry over to a second leg of translations and overrides the VFG PIC option.
- The terminating billing option (TBO) provides a billable method with which to charge the terminator for a call, and not charge the caller. The TBO assigned to a VFG produces a billing record from the originator to VFG leg of the call. The TBO does not apply on the post-VFG triggering leg of the call.
- The routing characteristic name (RCNAME) option provides ISDN translations with an optional new RCNAME for retranslations of an ISDN originated VFG call.

Note 1: Agents can encounter OCM and TCM triggers before VFG call limiting.

Note 2: The VFG maximum size and the AIN-Essentials serial trigger count send a call to treatment. The serial trigger count routes a call to treatment if agents encounter the same TDPs before and after, VFG call limiting. A badly designed call can get into a round loop problem. The serial trigger count can stop the call and send the call to treatment. The following condition applies to VFGs. If the VFG size is smaller than the serial triggering count, the count can bring a runaway call to treatment. The serial trigger count brings the runaway call to treatment because of the VFG size and not the serial trigger count.

Query parameters

The parameters associated with specified triggers appear in the following table.

Parameters associated with triggers (Sheet 1 of 3)

Trigger Parameter	Ofhk	Ofhk Del	Inter Ofc	CDP Acc	CDPI nter	PODP	N11	PODP FEAT	AFR	Trm Att
AccessCode		OP		OP	OP					
ACGEncountered	OP	OP	OP	OP	OP	OP	OP	OP	OP	OP
Bearer Capability	P	P	P	P	P	P	P	P	P	P
CalledParty ID						P	P		OP	OP
Note: P = present OP = optionally present										

Trigger Processing II (continued)

Parameters associated with triggers (Sheet 2 of 3)

Trigger Parameter	Ofhk	Ofhk Del	Inter Ofc	CDP Acc	CDPI nter	PODP	N11	PODP FEAT	AFR	Trm Att
CalledParty StationType										OP
CallingParty BGID				P	P					
CallingParty ID	P	OP	OP	OP	OP	OP	OP	OP	OP	OP
Charge Number	OP	OP	OP	OP	OP	OP	OP	OP	OP	OP
ChargeParty Station Type	OP	OP	OP	OP	OP	OP	OP	OP	OP	OP
CollectedAddressInfo		OP	OP	OP	OP			OP		
Collected Digits		OP	OP	OP				OP		
Generic Name										OP
Lata	OP	OP	OP	OP	OP	OP	OP	OP	OP	OP
Original CalledParty ID		OP	OP	OP	OP	OP	OP	OP	OP	OP
Primary Carrier	OP	OP	OP	OP	OP	OP	OP	OP	OP	
Redirecting PartyID		OP	OP	OP	OP	OP	OP	OP	OP	OP
RedirectionInformation		OP	OP	OP	OP	OP	OP	OP	OP	OP
Tcm		OP	OP	OP	OP	OP	OP	OP	OP	
Trigger CriteriaType	P	P	P	P	P	P	P	OP	P	OP

Note: P = present OP = optionally present

Trigger Processing II (continued)**Parameters associated with triggers (Sheet 3 of 3)**

Trigger Parameter	Ofhk	Ofhk Del	Inter Ofc	CDP Acc	CDPI nter	PODP	N11	PODP FEAT	AFR	Trm Att
UserID	P	P	P	P	P	P	P	P	P	P
Vertical ServiceCode		OP						OP		
Note: P = present OP = optionally present										

Descriptions of the parameters in the SSP-to-SCP query messages appear in the following sections.

AccessCode

This parameter is an access code to the public network or to a trunk group. An example is the electronic switched network (ESN) access code. The system does not support this parameter for feature access code, other than SCP-defined feature access code. The system sends this parameter in the following SSP-to-SCP messages:

- Info_Collected message, if SSP detects an access code
- Info_Analyzed message, if the trigger is the CDPCODE trigger and the access code prompts the SSP to trigger

Use of the AINDigits format occurs with the following fields:

- Nature of Number is set to not applicable
- Numbering Plan is set to unknown or not applicable
- Digits contains an access code of 1 to 5 digits

ACGEncountered

This parameter indicates the number of digits under automatic code gapping (ACG) control. This parameter also indicates if the SCP or Service Management System (SMS) determine the control. The system uses the ACGEncountered parameter when the SSP encounters an ACG control. The system uses this parameter when the gap interval expires or the control has a gap interval of zero. A gap interval of zero means that control is not included.

BearerCapability

This parameter specifies the bearer capability (BC) of the call that encounters the trigger. This parameter is a requirement in outgoing messages. The BC defines the type of call an ISDN terminal receives. The BC allows BC routing for calls that involve more than one leg. Office packages assign the BC to each

Trigger Processing II (continued)

call through different access codes. These packages are the TR-448 ISDN Routing and Digit Analysis-End Office, and TR-448 ISDN Routing and Digit Analysis-Tandem Office packages. These packages also assign a BC to an incoming trunk. The feature translation result (FTR) selector, with the feature result translations type (FTRTYPE) of BC in table IBNXLA (IBN translations), allows an assignment. These features allow the assignment of the BC on each call. Dial the access code from table IBNXLA before you dial address information. If a call originates from a POTS line or the BC is not assigned, the system uses the default BC. The office parameter in table OFCENG (office engineer), Default_Bearer_Capability specifies the default BC. The default value is set to 3.1 kHz or Speech.

The mapping of the incoming BC to the correct AIN BC appears in the following table.

Mapping incoming bearer capability to AIN bearer capability

Incoming Bearer Capability	AIN Bearer Capability
Speech	Speech
3.1kHz	f31kHzaudio
7kHz	f7kHzaudio
unrestricted digital information and rate adaption	b56kbps circuit mode data
unrestricted digital information without rate adaption	b64kbps circuit mode data

The BC assignment to the trunk is through the BCNAME (bearer capability name) option in table TRKGRP (Trunk Group) for trunks that are not CCS7 trunks. The office parameter in table OFCENG, Default_Bearer_Capability specifies the default BC if the assignment in the trunk group is not available.

The BC is a required parameter in the incoming SETUP message for integrated services digital network user part (ISUP) and PRI trunks. The information transfer capability received maps to the AIN BC.

Note 1: A trigger sends a call to a treatment if the BC of the call does not map to the AIN BC.

Note 2: This feature does not support digital service calls that are public switched. The future BC mapping for these calls is b56kbps.

Trigger Processing II (continued)

For BRI, the BC that the user supplies in the SETUP message determines the BearerCapability parameter. The default values that the DMS supplies for lines that are not BRI do not determine the BearerCapability parameter. The BRI does not support 7kHz audio.

CalledPartyID

This parameter contains the address of the called party when the SSP detects the PODP, N11, AFR, or Termination Attempt trigger. The parameter contains the following information:

Note: The system can fill the CalledPartyID with 15 digits if the system passes the parameter on from a previous response message.

Trigger Processing II (continued)

The parameter contains the following information:

- Nature of Number
The following data determines the entry in the Nature of Number field:
 - the dialing plan at the time of triggering
 - the translation system, national or international
 - the number of digits that the system sends to the SCP/Adjunct
 - the type of call, operator assist or direct dial
 - The dialing plan in use for PODP or N11 trigger is public dialing plan.
 - The translation system determines the type of call, national or international. The translation system is in field TRANSYS in table STDPRTCT.
 - The type of call identifies if the call is direct dial or operator assist. The type of call is in field TYPCALL, in table STDPRTCT.
 - The SSP uses the number of digits that you dial to distinguish between the following calls:
 - subscriber number (seven digits)
 - national number (ten digits)
 - no address present
 - cut-through call to carrier or unknown for domestic calls that do not involve operators
 - The SSP uses the number of digits that you dial to distinguish between the following calls:
 - subscriber number operator assisted (seven digits)
 - national number operator assisted (ten digits)
 - no address present
 - operator requested
 - unknown for national-operator assisted calls
 - The Nature of Number field specifies international number and international-number-operator requested which is for operator assisted calls.
 - The dialing plan in use is the public or private dialing plan for the AFR trigger.
 - The Nature of Number field for calls in the public dialing plan is the same as the PODP trigger.

Trigger Processing II (continued)

- The Nature of Number field specifies network specified for calls in the private dialing plan.
- If serial triggering applies and the previous SCP response contains a busy route with AFR, the following condition occurs. The called number field specifies CalledPartyID or OutpulseNumber.

The Nature of Number field specifies subscriber number for the TERMATT trigger.

- Numbering Plan

The ISDN Numbering Plan fills this field for the PODP trigger, the N11 trigger, and the Termination Attempt trigger. The AFR trigger with the private dialing plan fills this field with private.

- Digits

The 10-digit called public numbers fills this field for domestic and international numbers. The system codes this field in binary coded decimal (BCD).

The following condition applies to BRI. When the originating access is an ISDN interface that uses a keypad with a PODP trigger, the DMS fills the CalledPartyID. The DMS fills the CalledPartyID according to TR-1284, (R)-2.6-81.

The BRI can send a Called Party Number information element with Type of Number (TON). Numbering Plan Indicator (NPI) can indicate unknown. If these two events occur, TR-1284 (R)-2.6-83 states that the SSP provide the same treatment to this element as an element provided in the Keypad information element. In other occurrences, the SSP maps the information from the Called Party Number information element to the AIN CalledPartyID parameter. The DMS switch complies in part to this requirement. The switch always fills CalledPartyID according to the translation result.

CalledPartyStationType

This parameter uses the same format as the ChargePartyStationType. The originating line information for CalledPartyStationType is obtained in the same way as the Origination_Attempt_TDP ChargePartyStationType. The only difference is that use of the information of the called party occurs for CalledPartyStationType.

Note 1: If the call triggers at an AIN virtual DN, the system does not send this parameter.

Note 2: The switch does not fill this parameter in the outgoing query message for MF or ISUP version of a VAPN trunk.

Trigger Processing II (continued)

CalledPartyBGID

When a BBG encounters a CDP trigger, a BBG call can be line-originated or trunk-originated. This condition means that a line can initiate the call and encounter the CDP trigger on the same switch. A call also can go through an MF/ISUP IBN trunk and encounter the CDP trigger on the terminating switch.

When an MBG call encounters a CDP trigger, an MBG call can be line-originated or trunk-originated. A line can initiate the call and encounter the CDP trigger on the same switch. A line also can go through an ISUP POTS trunk and encounter the CDP trigger on the terminating switch. The MBG calls can include a generic address parameter (GAP) or without a GAP. Calls encounter the CDP trigger when the system uses IBN translations. The MBG calls with a GAP do not encounter the CDP trigger on a tandem switch. The system uses POTS translation for MBG calls at the tandem switch.

The following table summarizes how the switch fills the ISUP MBG parameter in NA007.

CallingPartyBGID parameter population

Field	Value
Party Selector	Calling Party Number when call forwarding is not available. In other occurrences, Redirection Number.
LPII	Fixed Line Privileges
BGID tp	BG Identifier
AttSt	when call originates from Attendant Line, else No Indication
Spare	0
Business Group ID	BGID obtained from Business Group data
Sub-group ID	No Indication
Line Privileges	Unrestricted

Note: The Attendant line does not encounter the customized dialing plan (CDP) trigger for intraswitch calls because AIN Essentials does not support Attendant consoles. The AttSt field is set to No Indication for these intraswitch calls. The AttSt field is always set to No Indication for basic business group (BBG) interswitch calls like ISDN user part (ISUP) and multi-frequency (MF).

Trigger Processing II (continued)

CallingPartyID

When a call experiences a previous trigger, and receives a CallingPartyID in a previous message, the following event occurs. The system sends the latest CallingPartyID back in the next query. If a CallingPartyID is available from a previous query, the system does not use this information for the following query.

The rules used to fill the fields of the CallingPartyID parameter appear in the following table.

Population of CallingPartyID parameter by call type

CallingPartyID field	ISUP Q.764 originator (calling party number present)	PRI Q.931 originator (calling party number present)	PRI Q.931 originator (calling party number not present)	Line originator
Nature of Number	Nature Of Address	Type Of Number and Numbering Plan Identification	unknown or not applicable	unique national number or non-unique national number. See note.
Numbering Plan	Numbering Plan Indication	Numbering Plan Identification	ISDN	ISDN
Presentation Restriction Indicator (see note)	Address Presentation Restriction Indicator	Origin Of Number and Presentation Status	presentation allowed	presentation allowed or presentation restricted. See note.
Screening Indicator	Address Screening Indicator	Origin Of Number and Presentation Status	network provided	network provided
Digits	Digits	translate Digits from IA5 to BCD	specified in table LTDATA, field LTDRSLT, subfield DATATYPE = DN	DN of the originating line (NANP number) in BCD format

Note: Datafill in table DNATTRS or DNGRPS determines the uniqueness or non-uniqueness. Datafill in table DNATTRS or DNGRPS determines the presentation allowed or presentation restricted. The value in field Presentation Restriction Indicator does not reflect per call blocking in Calling Number Delivery Blocking (CNDB).

Trigger Processing II (continued)

Note: The switch can fill the CallingPartyID with 15 digits if the system passes the parameter on from a previous response message.

This parameter contains one of the following elements:

- the DN of the originating line
- the Q.931 Calling Party Number information element, if information is available and passes screening
- the ISUP Calling Party Number parameter

Note: If the SCP provides the SSP with a new CallingPartyID, this value occupies following queries.

The format of the CallingPartyID parameter uses the AINDigits parameter in the following way:

- The contents of the Type of Number and Numbering Plan Identification field maps to the corresponding Nature of Number and Numbering Plan fields. The contents of this field map to the corresponding fields when the Q.931 Calling Party Number information element is present.
- The Origin of Number and Presentation Status field maps to the Presentation Restriction Indicator and Screening Indicator fields when the Q.931 Calling Party Number information element is present. The digits translate from international alphabet 5 (IA5) to BCD.
- The default CallingPartyID parameter for the trunk group comes from table LTDATA (field LTDRSLT, subfield DATATYPE entry DN) when the Q.931 Calling Party Number information element is not present. The CallingPartyID parameter is set in the following way:
 - Nature Of Number is set to unknown or does not apply
 - Screening Indicator is set to network provided
 - Presentation Restriction Indicator is set to presentation allowed
 - Numbering Plan is set to ISDN
- The Nature of Address maps to the Nature Of Number field when the ISUP Calling Party Number parameter is present. The Numbering Plan Identification maps to the Numbering Plan field. The Address Presentation Restriction Indicator, the Address Screening Indicator, and the digits map to the corresponding fields.
- A 10-digit North American numbering plan (NANP) number in BCD form is in the Digits field if the calling party is a DN. The calling party must be the DN of the originating line. The Numbering Plan field contains the ISDN numbering plan. The Screening Indicator field always contains the

Trigger Processing II (continued)

network provided. The system codes the Nature of Number field as a unique or a non-unique national number. The determination of uniqueness or non-uniqueness is through entry of data in tables DNGRPS (directory number groups) and DNATTRS (directory number attributes).

- The assignment of options suppression and uniqueness in table DNATTRS field NETOPT, which occurs for each DN or network. The public network is referenced for AIN calls that query to the database. The network option that corresponds can contain the non-unique option. If this condition occurs, the system codes the Nature of Number field as a unique national number.
- The suppress network option in table DNATTRS affects the CallingPartyID. This action occurs through suppression of the DN, the name, or the DN and the name. The system codes the presentation restriction indicator field to presentation restricted. In other occurrences, the system codes the presentation restriction indicator to presentation allowed.
- In table DNGRPS, the user can specify the address option for a group of directory numbers. The user specifies a 10-digit public address in table DNGRPS for the calling party. When this event occurs, the system sends the 10-digit public address number. The system sends the number in the query message in the CalledPartyID parameter.
- Table DNGRPS also can specify the suppress option for a group of DN. The suppress option in table DNATTRS has priority over the suppress option in table DNGRPS. If entry of a public suppress option does not occur in table DNATTRS for the calling party, the following events occur. The value of the public suppress option fills the Presentation Restriction Indicator field in the CallingPartyID. Entry of the public suppress option occurs for the calling party in table DNGRPS.

For BRI, the calling number includes digits, Type of Number, Numbering Plan, Origin Of Number, and Presentation Status. The DMS fills the CalledPartyID for BRI the same as for lines that are not BRI in one of two conditions. The first condition is when the BRI originator does not supply a calling number, like EKTS, through call appearance. The second condition is if the calling number does not pass screening. The DN that the network provides for each TR-1284, (R)-2.6-23 fills the parameter. The digits, Nature Of Number, and Presentation Restriction Indicator of the CallingPartyID map from the correct fields in the SETUP message. This process occurs if the BRI originator supplies a calling number in the SETUP message. This calling number passes screening in the SSP. The TR-1284 specifies this process in (R)-2.6-24. If the calling number passes screening, the following actions occur. The DMS maps digits to the digits of CallingPartyID and prefixes with NPA for a 7-digit number. The DMS fills the Nature Of Number as national,

Trigger Processing II (continued)

unique or non-unique, Numbering Plan as ISDN. The DMS fills screening as network provided. The setting in the DMS determines how the DMS fills the Presentation Restriction Indicator.

The DN of the originator fills this parameter for the AIN Essentials TDPs that DISA supports, and for post-VFG triggering. The DISA is Information Collected, Information Analyzed, Network Busy, and Termination Attempt. The VFGs do not support the Information Collected TDP.

ChargeNumber

This parameter is the automatic number identification (ANI) of the calling party. The ChargeNumber parameter uses the AINDigits parameter format. The entry process of the ChargeNumber parameter depends on the following types of originating agents:

- lines
- multi-frequency (MF) trunks
- PRI trunks
- ISUP trunks
- P2 and PX trunks

For lines, the special billing number (SPB) option entered against the line fills the ChargeNumber parameter. The NPA of the originating facility forms a 10-digit charge number. The calling number fills the ChargeNumber if the SPB option is not present.

For MF trunks, the switch fills the ChargeNumber with the ANI for PTS trunks if the system receives the ANI. The switch uses the BILLDN to fill the ChargeNumber under two conditions. The first condition is if the system does not receive the ANI. The second condition is that the trunk has the Bill Directory Number (BILLDN) entered in table TRKGRP.

For PRI calls (IBN PRI and PRA trunk types), the switch fills the ChargeNumber in the following way:

- ChargeNumber from the last SCP response of the same call leg
- DN of last forwarding station, through Call Forwarding or Forward Call
- Table LTDATA DN
- OriginalCalledPartyID from IAM
- CallingPartyID if OLI is not present in IAM

Trigger Processing II (continued)

For ISUP calls, the switch fills the ChargeNumber in the following way:

- ChargeNumber from the last SCP response of the same call leg
- DN of last forwarding station, through Call Forwarding or Forward Call
- ChargeNumber from IAM
- CallingPartyID if OLI present in IAM
- Table TRKGRP Special Billing Number
- RedirectingPartyID from IAM
- OriginalCalledPartyID from IAM
- CallingPartyID if OLI is not present in IAM

For P2 and PX trunks, the switch fills the ChargeNumber with the Special Billing Number option. A user enters this option against the customer group index in table CXGRP. If the user does not enter the option, the switch uses the Special Billing Number to fill the ChargeNumber. Table TRKGRP specifies this ChargeNumber.

Note 1: The system uses PRI and ISUP sources for ChargeNumber if the sources are present with a correct numbering plan and length. In other occurrences, the system uses the next item in the list.

Note 2: For calls that originate on a trunk when a user gives a 7-digit BILLDN, the system can retrieve the NPA of the ChargeNumber parameter in different ways. To maintain conditions that you can predict, the user must give a 10-digit BILLDN when the BILLDN is in use.

Note 3: When a call triggers on the new leg after a Forward_Call response, the switch uses the ANI of the station. The ANI causes the TERMATT trigger to fill the ChargeNumber. The TERMATT fills the ChargeNumber if the SCP does not specify the ChargeNumber in the Forward Call response. The switch fills the last forwarding station as the ChargeNumber when a call triggers. The last forwarding station occurs last in the call. The last forwarding can be the station that uses the Call Forwarding from the switch to forward the call. The last forwarding station also can be the station that triggers at TERMATT and receives a response. This response is a Forward Call response from the SCP.

Note 4: The data entry of the ChargeNumber has important effects on the global title value (GTV). The GTV determines where the system routes the corresponding query message. To guarantee a correct ChargeNumber for the system to route the query message, a user must enter BILLDN. The user must enter BILLDN in table TRKGRP when the other candidates are not present. For example, the system cannot pass the ANI information for MF IBNTI and IBNT2 trunks.

Trigger Processing II (continued)

The switch fills this parameter with the DISA DN for the AIN Essentials TDPs that DISA supports. The DISA is Information Collected, Information Analyzed, Network Busy, and Termination Attempt.

For post-VFG triggering, the switch fills this parameter with the special billing number of the VFG. When the special billing number is not present, the switch uses the DN of the originator. A call from the originator can encounter the PODP trigger. The response can proceed to a VFG that does not have a special billing number. In this event, queries that occur after the VFG uses the ChargeNumber from the PODP response. These queries do not use the DN of the originator.

ChargePartyStationType

The ChargePartyStationType is the ANI II digits that associates with the ChargeNumber. The ANI II information for POTS or IBN lines associates with the line options and/or line attributes. For IBN, the line attribute comes from the definition of the Network Access Code when a caller makes a public call.

For AIN virtual directory numbers, the AINDN type can be IBN or NONIBN. For the NONIBN type, definition of the ANI II of the AINDN occurs in the associated line attribute. The system supports the identified line, hotel line without room identification, and coin call.

For coin line agents, the type of coin line affects the ChargePartyStationType parameter. If the line is a coin-free coin telephone, the value of this parameter is Coinless or Identified Line . Coinless is for CFD and Identified Line is for ZMD or ZMZPA. The other coin telephones, CCF, CDF, and CSP, have a value of Coin Call.

Flexible Automatic Number Identification (FANI) allows a subscriber to define the ANI II digits that identify a specified type of station. The standard ANI II definition does not cover this type of station. The switch can use the FANI model to fill ChargePartyStationType or CalledPartyStationType when a caller subscribes the FANI option.

Note: The switch does not fill the ChargePartyStationType parameter in the outgoing query message for MF and ISUP types of VAPN trunk.

Trigger Processing II (continued)

A summary of the coding of ChargePartyStationType for line originating calls without feature interactions appears in the following table.

ChargePartyStationType

ANI II	Definition	FANIDIGS	ChargeParty StationType
not available	not available	not available	identified line (00)
06	hotel number room identification	not available	hotel number room identification
not available	not available	48	48
27	coin telephone	48	48
Note: Table LINEATTR defines FANIDIGS.			

The switch fills the ChargePartyStationType parameter for the AIN Essentials TDPs that DISA supports. The identified line fills the ChargePartyStationType parameter at the Information Collected TDP. The parameter comes from DISA translations at the Information Analyzed, Network Busy, and Termination Attempt TDPs.

For post-VFG triggering, the switch fills the ChargePartyStationType in the following way:

- For POTS VFG, the line attribute from table VIRTGRPS determines the ANI information. For example, FANI and HOT. If the ANI information is not specified, the system sets the default to the identified line of the originator.
- For IBN VFG, the result of IBN translations determines the line attribute. For example, the system uses field LATTR from NET-GEN or NET-DOD from table IBNXLA. If the ANI information is not specified, the system sets the default to the identified line of the originator.

For P2 and PX trunks, the switch fills the ChargePartyStationType parameter with ANI II options. The customer group index in table CXGRP specifies these options.

CollectedAddressInfo

This parameter contains the address digits that the system collects from the end user. The CollectedAddressInfo parameter differs from the CalledPartyID. The system collected the digits according to the dialing plan but did not completely translate the digits. Complete translation implies the system must screen digits to verify that digits are correct for the user dialing plan.

Trigger Processing II (continued)

The system sends this parameter when address digits are present and the system detects specified triggers. These triggers are the Offhook Delay trigger, the Shared Interoffice trigger, or the CDPCODE trigger. The system also sends this parameter when additional digit collection must occur and the specified digit collection algorithm is normal. The system can perform additional digit collection before the system sends a query. The system can perform digit collection after the system receives a conversation package. The system receives a conversation package as a result of a Send_To_Resource request.

The values that the switch uses to fill the CollectedAddressInfo parameter are the same as the values specified in the CalledPartyID parameter. The exceptions appear in the following list:

- The Digits field is for domestic calls. The Digits field fills with the digits dialed (7 digits) and not with the NANP number (10 digits).
- The following condition applies to the CDPCODE intercom trigger criteria type. The population of the collected address parameter depends on the value in field Report Digits (RPRTDIGS). This field is in table TRIGDIG. If field RPRTDIGS contains value TRANS, the collected address parameter contains the NANP number. In other occurrences, the collected address parameter contains the dialed digits.

CollectedDigits

This parameter contains the digits that the system collects from the end user.

The system sends the CollectedDigits parameter under two conditions. The first condition is when the end user dials an access code or a vertical service code. The second condition is when the system uses a fixed or variable digit collection algorithm to collect additional digits. The system can send a CollectedDigits parameter in a query package. The system can send this parameter when the system encounters an Offhook Delay trigger or CDPCODE trigger. The system also sends this parameter in a conversation package. This package contains a Resource_Clear message when the SCP/Adjunct has previously requested fixed or variable digit collection.

The CollectedDigits parameter uses the AINDigits parameter format. The system sets the Nature of Number field to not applicable. The system sets the Numbering Plan field to not applicable or unknown. The switch fills the Digits field with 0 to 32 digits in BCD form.

GenericName

The system fills this parameter when a call trigger at a Termination Attempt TDP. The Termination Attempt query that the system sends to the SCP

Trigger Processing II (continued)

includes this parameter. The presentation field of this parameter represents the vertical service code (VSC) that the originator activates for each call.

For line originated calls, the system includes the GenericName parameter with the Termination Attempt query when the originator activates a VSC. When the system includes this parameter, the system codes the parameter according to the activated VSC. See the following table for this coding. When the originator does not activate a VSC, the system does not include the GenericName parameter with the Termination Attempt query.

GenericName encoding by VSC

Vertical Service Call	GenericName presentation
CNND	Presentation Allowed
CNNB	Presentation Restricted
CNAB	Toggle Blocking

For trunk originated calls, the system includes the GenericName parameter with the Termination Attempt query. The system includes the parameter if the agent is an ISUP trunk. The system includes the parameter if the ISUP GenericName and calling party number parameters are in the incoming IAM. When the agent is not an ISUP trunk, the system does not include the GenericName parameter. Calls that use a DMS PRI trunk do not support the GenericName parameter.

LATA

The SSP sends this parameter to the SCP/Adjunct. For local access and transport area (LATA) determination, the customer must have equal access software. Enter data in the correct equal access tables. These tables include LATA_XLA, LATANAME, LINEATTR, and several other tables.

Use of the AINDigits format occurs with the following fields:

- Nature of Number is set to not applicable
- Numbering Plan is set to unknown or not applicable
- the digits field contains a LATA of three digits

The system sends the LATA parameter in the following SSP-to-SCP messages:

- Origination_Attempt, Info_Collected, Info_Analyzed, and Network_Busy messages: the system sends the LATA of the originating facility if the

Trigger Processing II (continued)

LATA can be determined. Entry of the LATA must occur on the DMS for a LATA to be determined.

- Termination_Attempt message: the system sends the LATA of the terminating facility if the LATA can be determined.

The LATA does not have support for the following facilities:

- non-equal access end offices: LATA is available if the customer has Equal Access software.
- private facilities that make private calls because an open issue to Bellcore is present. This issue questions if the system must send LATA for private facilities that remain in the private environment.
- incoming calls on local trunks do not have a LATA. The calls have a LATA if a user enters data in table TRKLATA.

Note: The system propagates the query when the trunk type is T2, TI, IT, ATC, or SC. The system propagates the query when the trunk type is in table TRKLATA with a LATA. The system propagates that LATA in the query.

The switch fills the LATA parameter for the supported DISA and VFG AIN Essentials TDPs. The LATA population for the Information Analyzed and Network Busy TDPs comes from the DISA and VFG translator. The translator contains PODP, N11, and public AFR. Post-VFG LATA population comes from translation according to the VFG.

Note: In table VIRTGRPS where the creation of the VFG occurs, the system fills in the LINEATTR parameter for translations to use. The LINEATTR consists of the pretranslator or screening, and the LATA that includes the call. The VFG translation changes the LATA parameter that the system uses to enter data in post VFG AIN queries. This change is not direct.

OriginalCalledPartyID

This parameter is the first called party number. This parameter contains a 10-digit NANP number. For an originating access that is not SS7, the system codes this parameter to the original called party number. The system codes this number if the switch redirects the AIN a minimum of two times. For an analyze route with change in direction information, the original called party number can contain the redirecting party ID. The database returns the redirecting party ID when the switch redirects a call a minimum of two times.

If a Forward Call causes the first change in direction, the original called party number can contain the DN assigned with the Termination Attempt trigger.

Trigger Processing II (continued)

Tables DNATTRS and DNGRPS affect the population of the OriginalCalledPartyID and RedirectingPartyID in query messages for intra-switch calls. The switch uses the public suppress option in table DNATTRS or DNGRPS to fill the Presentation Restriction Indicator field. The switch uses the public address option in table DNGRPS to fill the Digit field.

The originating access can be an SS7 or PRI trunk. The first setup message can contain an original called number parameter. In this event, the switch uses this information to fill this parameter.

PrimaryCarrier

This parameter contains the carrier selection information and the carrier identification to which the system must route a call. The PrimaryCarrier parameter applies if the office is an EAEO. This parameter contains the carrier selection information and the carrier identification to which the system must route a call. The PrimaryCarrier parameter applies if the office is an EAEO.

- The point in the call for origination attempt message, or the dialing sequence for other messages determines the carrier selection field.
- The carrier ID field contains the four digit primary identification. If a 3-digit code is available the digit zero prefixes to the carrier ID.

The system sends the PrimaryCarrier parameter in the following SSP-to-SCP messages:

- **Origination_Attempt** message
The carrier selection field is the carrier identification code that the calling party subscribes earlier and does not input. This value is appropriate because the system does not collect digits when the system encounters the origination TDP. The correct provisioning of the PrimaryCarrier on the DMS switch determines the population of the PrimaryCarrier parameter.
- **Info_Collected**, **Info_Analyzed**, and **Network_Busy** messages
The population of the fields uses the presubscription indication to determine the population of the carrier selection field.

For BRI, the system sends this parameter in Resource_Clear. The system sends this parameter under two conditions. The first condition is that the system collect normal number of digits during Send_To_Resource operation. The second condition is that the user dial an equal access number. The PrimaryCarrier in Resource_Clear is built if the user dialed carrier access code. The subscribed primary interchange carrier of the line is not considered.

RedirectingPartyID

This parameter is the last redirecting party and contains a ten-digit NANP number. If change in direction of the call occurs by way of AIN in the local

Trigger Processing II (continued)

office, the following action occurs. The system codes this parameter to the last redirecting party that AIN supplies. For change in direction by way of analyze route, the following action occurs. The switch uses the redirecting party ID that the database returns to fill this parameter. Use of the DN of the Termination Attempt trigger occurs for AIN change in direction by way of a forward call response. This parameter maps to the redirecting party ID under two conditions. The first condition is that reception of the Redirecting Number parameter occurs in the setup message of an SS7 trunk. The second condition is that the system does not forward the call at the local office. This parameter is mapped to the redirecting party ID.

Tables DNATTRS and DNGRPS affect the population of the OriginalCalledPartyID and RedirectingPartyID in query messages for intra-switch calls. The switch uses the public suppress option in table DNATTRS or DNGRPS to fill the Presentation Restriction Indicator field. The switch uses the public address option in table DNGRPS to fill the Digit field.

RedirectionInformation

This parameter contains the original and redirecting reasons. The possible reasons appear in the following list:

- unknown
- User busy - Call Forward Busy (CFB), every type
- No reply - Call Forward Don't Answer (CFDA), every type
- Unconditional
 - Remote Call Forwarding (RCF)
 - POTS
 - Call Forwarding
 - Meridian Digital Centrex (MDC)
 - Call Forwarding Universal (CFU)
 - Selective Call Forwarding (SCF)
 - Call Forward Intragroup (CFI)
 - AIN Call Forward

Redirecting information also contains subfield REDIRECTION COUNTER. Subfield REDIRECTION COUNTER has an integer value with a range of 1 to 10. This value includes the SS7 redirection count and the redirection count from the local switch.

Trigger Processing II (continued)

TravellingClassMark

The TCM parameter contains the traveling class mark for the user. The system sends the TCM parameter if the SSP receives a TCM (for trunks).

Use of the AINDigits format occurs with the following fields:

- Field NATURE Of NUMBER is set to not applicable.
- Field NUMBERING PLAN is set to unknown or not applicable.
- Field DIGITS contains a TCM of a maximum of two digits included.

The system sends the TCM parameter in the Info_Collected, Info_Analyzed, and Network_Busy SSP-to-SCP messages for private facilities. The system sends the TCM parameter when the originating facility receives a TCM.

Note: If the SCP returns a TCM to the SSP, the system uses this value in following queries.

TriggerCriteriaType

This parameter indicates the type of event that causes a trigger. For triggers that involve digit criteria the individual, group and office subscription data determine the trigger that the system encounters.

This parameter is optional in every query message to the SCP/Adjunct. The system codes this parameter as the following table describes. This feature does not support the PRI Channel Setup, BRI Feature Activator, and PODP Feature Code triggers.

Trigger to TriggerCriteriaType mapping (Sheet 1 of 2)

Trigger encountered	TriggerCriteriaType
Off-Hook Immediate	Offhook Immediate
Offhook Delay	Offhook Delay
Shared Interoffice Trunk	Offhook Delay
three-digit PODP	NPA
four-digit PODP	NPAN
five-digit PODP	NPANX
six-digit PODP	NPANXX
seven-digit PODP	NPANXXX

Trigger Processing II (continued)

Trigger to TriggerCriteriaType mapping (Sheet 2 of 2)

Trigger encountered	TriggerCriteriaType
eight-digit PODP	NPANXXXX
nine-digit PODP	NPANXXXXX
ten-digit PODP	NPANXXXXXX
N11	N11
CDP Access Code	Customized Access
CDP Intercom Code	Customized Intercom
AFR	AFR
Termination Attempt	Termination Attempt
PODPFEAT	PODPFEAT

UserID

This parameter contains the identity of the originating facility. When triggers occurs at, or after, the termination attempt trigger, the originating facility is the subscriber of the termination attempt trigger. A termination attempt trigger can refer to a Forward_Call response message.

The following values or tags have support for the UserID:

- IMPLICIT DN
- IMPLICIT TrunkGroupID
- IMPLICIT PrivateFacilityGID

Other values do not have support. The DMS classifies the user as one of the values in the previous list. The user can have characteristics that differentiate the user from other facilities. These user differences do not affect how the DMS classifies the user. The UserID for a line in a hunt group is IMPLICIT DN and not IMPLICIT multi-line hunt group (Mlhg).

The value of the user determines the data that the system must send to the SCP/Adjunct.

The UserID contains the DN of the originating line or PRI for originating triggers. The switch uses the termination DN to fill the UserID where the system encounters a terminating trigger. This parameter always contains the

Trigger Processing II (continued)

calling party number of the facility and not the billing number. The DN is 10 digits that the system codes in BCD.

For PRI trunks the switch derives the DN from the calling party number. The switch derives the calling party number in the following way:

- If the received-calling party number Numbering Plan Indicator (NPI) is PUBLIC and 10 digits in length, the following action occurs. The switch uses the NPI to fill the UserID parameter.
- In other occurrences, the switch takes the default calling party number, that associates with the trunk group, from the table LTDATA (DN option). The switch uses this number to build the UserID.
- UserID is a required query parameter. Failure to derive a calling party number to build the UserID parameter causes the following action. The system sends the call to AINF treatment.

For BRI, the switch fills the UserID as IMPLICIT DN. At TDP 5 for the Termination Attempt message, the UserID is the DN that has the TERMATT trigger assigned.

The switch fills the TrunkGroupID with the contents of field ADNUM in table CLLI. The contents correspond to the name of the public trunk.

The switch fills the PrivateFacilityGID with the contents of field ADNUM in table CLLI. The contents correspond to the name of the private trunk

The DMS does not support the following values for query population:

- IMPLICIT SEQUENCE {IsdnInterfaceID,Spid,DN} for BRI (ISDNI)
- IMPLICIT IsdnInterfaceID for PRI (ISDNII)
- IMPLICIT CallingPartyBGID
- IMPLICIT Mlhg
- IMPLICIT RouteIndex
- IMPLICIT PrimaryTrunkGroup

The switch fills the UserID parameter for the AIN Essentials TDPs that DISA supports. The switch uses the DISA DN to fill UserID for the Information Collected, Information Analyzed, and Network Busy TDPs. The switch uses the DN of the trigger subscriber to fill UserID for the Termination Attempt TDP.

Trigger Processing II (continued)

VerticalServiceCode

The VerticalServiceCode parameter contains the SCP vertical service code that the system collects from the SSP (form *XX). The system supports the SCP VSC parameter for RES lines at the PODPFEAT trigger.

Use of the AINDigits format occurs with the following fields:

- Nature of Number is set to not applicable.
- Numbering Plan is set to unknown or not applicable.
- the digits field contains a VSC of 1 to 10 digits included, but the first digit can be an asterisk (*) or octothorpe (#). The octothorpe access codes match a C + digits in table TRIGDIG and send up the octothorpe + access code digits in AccessCode parameter. The system must send the asterisk or octothorpe with the digits in a query message. For example, *123, #123, and 123 are three different queries.

Note: The VSC of the PODPFEAT trigger can start with * or # or a digit. These values precede a minimum of one and a maximum of 6 digits with a total length of a maximum of 7 digits. For example, *23, #345, and 1134 can serve as the service code of the trigger. These VSCs can be entered. Table IBNXL A specifies the VSCs. This process is the same for definition of the feature codes from the switch, for RES lines.

The system sends the VerticalServiceCode parameter in the following SSP-to-SCP message: Info_Collected message. The system sends this message if the following conditions occur. The SSP detects an SCP VSC at the OffHookDelay trigger and the triggering agent is an RES line.

The system does not support the VerticalServiceCode parameter for SSP vertical service codes. The system does not support the feature interactions with public features. The system only supports the vertical service codes that the previous lists document.

Conversation package processing

The SCP/Adjunct can send a conversation package to the SSP. This type of conversation package must contain a Send_To_Resource operation, or a Cancel_Resource_Event operation. The other operations that the conversation package specifies are not correct. The SSP treats the conversation package as fatal, not recognized, operation code errors.

Send_To_Resource operation in conversation package

The SCP/Adjunct can respond to a query or conversation package from the SSP with a Send_To_Resource operation in a conversation package. The Send_To_Resource operation directs the SSP to connect an incoming AIN

Trigger Processing II (continued)

agent to an announcement. The Send_To_Resource operation can instruct the SSP to initiate digit collection on the AIN agent.

In a conversation package, the required ResourceType parameter in the Send_To_Resource operation must be set to play announcements and collect digits.

The required StrParameterBlock parameter in the Send_To_Resource operation identifies the single announcement that the SSP must play to the AIN agent. The StrParameterBlock also directs the SSP to initiate normal, fixed or variable digit collection. The system uses normal to collect digits according to the dial plan of the AIN agent. The system uses fixed to collect a preset number of digits. The system uses variable to collect digits until the system encounters a stop digit or a time out. For every type of digit collection, the calling-party can dial an octothorpe (#) to terminate digit collection. The calling party can also dial an asterisk (*) to restart the announcement and begin digit collection again. If the SCP/Adjunct does not want to collect digits from the AIN agent, the SCP/Adjunct must encode the StrParameterBlock. The SCP/Adjunct must encode the StrParameterBlock to specify fixed digit collection, and request that the system collect 0 digits.

The announcement in the StrParameterBlock is interruptible, or non-interruptible. In the first condition, digit collection and the announcement start at the same time. In the second condition, the system initiates digit collection on completion of the announcement.

When the AIN agent connects to an interruptible announcement, the AIN agent receives silent-tone after the agent dials a first digit. The StrParameterBlock cannot specify an interruptible announcement and not request digit collection.

In a conversation package, the optional DisconnectFlag causes a communication error that is not fatal and not expected.

Completing the Send_To_Resource operation

The following event occurs during normal digit collection. An interdigit-time-out, an octothorpe, an invalid set of digits, or a complete set of digits causes end-of-dialing. The system treats a feature code that a subscriber dials during normal digit collection as invalid digits. The following event occurs during the fixed digit collection. An interdigit-time-out, an octothorpe, or the reception of the requested number of digits causes end-of-dialing. The following event occurs during variable digit collection. An interdigit-time-out, or an octothorpe causes end-of-dialing.

Trigger Processing II (continued)

A Send_To_Resource operation that requests digit collection is complete when the SSP detects end-of-dialing. A Send_To_Resource operation that does not request digit collection is complete. The operation is complete when the SSP plays the specified non-interruptible announcement from start to finish.

On completion of the Send_To_Resource operation, the SSP sends the SCP/Adjunct a conversation package that contains the Resource_Clear operation. The required ClearCause parameter in the Resource_Clear operation is set to *normal* when the following conditions occur:

- the Send_To_Resource operation does not request digit collection
- the Send_To_Resource operation requests variable digit collection
- the Send_To_Resource operation requests fixed digit collection, and the caller dials the specified number of digits
- the Send_To_Resource operation requests normal digit collection, and the caller dials correct digits

In other occurrences, the ClearCause parameter is set to InvalidCode.

The Resource_Clear operation can include the optional CollectedDigits parameter. This inclusion occurs if the Send_To_Resource operation requests fixed or variable digit collection.

The Resource_Clear operation can include the optional CollectedAddressInfo parameter. This inclusion occurs if the Send_To_Resource operation requests normal digit collection.

The Resource_Clear operation can include the optional PrimaryCarrier parameter. This inclusion occurs if the Send_To_Resource operation requests normal digit collection, and the caller dials an inter-lata carrier code.

Aborting the Send_To_Resource operation

The SSP cannot initiate the Send_To_Resource operation when the announcement or the digit collection resource is not available. In this occurrence, the SSP returns to the SCP/Adjunct a response package that contains a Resource_Clear operation. In this operation, the ClearCause is set to Failure, and the FailureCause is set to UnavailableResource. If the requested resource is not implement or installed, the system treats the message as an application error. A wrong data value error causes this application error.

If the caller abandons before the Send_To_Resource operation is complete, the SSP returns to the SCP/Adjunct a response package. This package contains a Resource_Clear operation with the ClearCause parameter set to UserAbandon.

Trigger Processing II (continued)

ISUP messaging during a Send_To_Resource operation

Before the SSP performs a Send_To_Resource operation on an incoming ISUP trunk, the SSP can send a message along the trunk. The SSP sends the message along the trunk to make sure the speech path experiences cut-through in two directions.

The system can send an address complete message (ACM) along the trunk. The system can include a backward call indicator (BCI) coded to No Indication as Section 3.1.4.2.A.2. of TR-NWT-000317 describes. The system performs these two actions when the following conditions occur:

- the system did not send a previous ACM
- the system did not send an ANM

The system sends an ANM if the system did not send a previous ANM and one of the following conditions occur:

- the AnswerIndicator is present
- digit collection is a requirement and the call is not end-to-end SS7

PRI messaging during a Send_To_Resource operation

As with ISUP, the system must send a message over the incoming trunk to cut-through speech path. The following action occurs for PRI. The system sends a Call Proceeding message if the system did not send previous message in response to the SETUP message.

The system sends a program message in the following conditions:

- The AnswerIndicator is not available.
- The system does not send connect messages.

The system sends a connect message in the following conditions:

- The AnswerIndicator is present.
- The system does not send a connect message.
- the system does not send program messages as a result of AIN interaction

PTS hook-state manipulation during a Send_To_Resource operation

The PTS hook-state changes to offhook results for the first Send-to-Resource operation. This operation requires collection or contains the AnswerIndicator parameter.

Trigger Processing II (continued)

Cancel_Resource_Event operation in a conversation package

The SCP/Adjunct can send the SSP a conversation package that contains a Send_To_Resource operation. The Send_To_Resource operation does not always request digit collection. In this occurrence, the SCP/Adjunct can follow through with a Cancel_Resource_Event operation in a conversation package.

The Cancel_Resource_Event directs the SSP to perform two actions. The SSP must stop the non-interruptible announcement. The SSP must return a Resource_Clear operation in a conversation package to the SCP/Adjunct. The required ClearCause parameter in the Resource_Clear operation is set to ResourceCancelled.

A condition that is not common is present when the SSP sends a Resource_Clear operation to the SCP/Adjunct. The SSP sends this operation on completion of a Send_To_Resource operation. This condition includes when the SSP receives a Cancel_Resource_Event for that same Send_To_Resource operation. In this event, the SSP discards the Cancel_Resource_Event. In other occurrences, the system treats the Cancel_Resource_Event as a fatal message error that is not expected.

Conversation parameter handling

The system handles StrParameterBlock, AnswerIndicator, ResourceType, and DisconnectFlag parameters incoming in a conversation message. The system handles these parameters in a different way than the system handles these parameters in a response message.

Subsequent digit collection

The CDPCODE and PODPFEAT access code triggers can require additional digit collection after the user enters the AIN access code. The user enters the AIN access code in table IBNXLA as the AIN FTR selector.

Each AIN access code performs the following actions by means of field QUERYAFT in table IBNXLA. The AIN access codes:

- query immediately (IMMED)
- collect additional digits according to the normal dialing plan of the agent. The system applies a second dial tone after the user dials the access code. An asterisk (*) restarts the digit collection. If the user dials invalid digits, the system does not send a query to the SCP/Adjunct. The system applies the final treatment to the call (NORM).

Trigger Processing II (continued)

- collects a variable number of digits (0 to 32). Normal interdigit-time-out or an octothorpe indicates the end of dialing (VAR).
- collect a fixed number of digits (zero to 32). Normal interdigit timing or an octothorpe indicates the end of dialing (FIX).

The system treats Subsequent Digit Collection like a Send_To_Resource response message without the answer indicator.

The following events occur for CDPCODE and PODPFEAT. When the system collects the digits from the user, the system formulates a query package with an operation code of Info_Analyzed. The system sends the package to the database. The digits that CDPCODE or PODPFEAT dial do not encounter another trigger before the system receives an Info_Analyzed response. The switch uses CollectedDigits or CollectedAddressInfo parameter to fill the digits as in conversation processing. The switch fills the CDP access code that triggers. The switch fills the CDP access code in the AccessCode parameter.

The digits that a subscriber dials and the NO_ACCESS_CODE digits determine the CDP access code. The AIN FTR entry in table IBNXLA specifies the NO_ACCESS_CODE digits. If the number of digits in IBNXLA is less than the NO_ACCESS_CODE digits, the switch fills the access code parameter. The switch uses the digits in IBNXLA to fill the access code. If the number of digits in IBNXLA is greater than the NO_ACCESS_CODE (N), the following event occurs. The switch uses the first N digits to fill the access code.

Response package contents

The response processing groups by type of response.

Authorize_Termination response

The AUTHTERM message instructs the SSP to continue to process at the Authorize_Termination point in the call. If the DN/CT that the system encounters is an AIN virtual DN, the system gives a feature not allowed (FNAL) treatment. The system gives this treatment because terminating access of SSP feature does not associate with the specified DN.

The CallingPartyID in the message has several uses. This CallingPartyID can have use as the ISDNUP and/or ISDN calling party number for following signaling for BRI. The CallingPartyID in the message can have use as the calling party number that a CLASS feature uses. The system applies a different alerting pattern to the called party when the ControllingLegTreatment is present.

Trigger Processing II (continued)

Analyze_Route response

The AR message instructs the SSP to process the call and consider the routing, carrier, and call party information. The method by which the SSP processes the call depends on some conditions. These conditions include the available parameters and the status of the resources the parameters reference.

The following algorithm determines the call procedure:

1. If the Analyze_Route message does not contain a PrimaryTrunkGroup parameter, advance to step 6.
2. The Analyze_Route message contains a trunk group. Resume call processing at the Selecting Route point in call.
3. At the Selecting Route point in call, the SSP attempts to route the call on the trunking facilities that the route list specifies. If the trunking facilities are available, advance to step 22.
4. The route list specified does not contain available facilities. If the requirements for triggering at AFR are met, advance to step 20.
5. The requirements for AFR are not met. Is another trunk group parameter (AlternateTrunkGroup or SecondaryAlternateTrunkGroup) available in the Analyze_Route message? The SSP executes the algorithm again to process each parameter. The previous parameter has priority. The SSP starts at step 2.
6. The Analyze_Route message does not contain a trunk group parameter with available resources. If the Analyze_Route message does not contain a PrimaryCarrier parameter, advance to step 13.
7. If the carrier parameter contains a local exchange carrier (LEC), advance to step 14.
8. The Analyze_Route message contains an interexchange carrier (IC). Resume call processing at the Analyzing Information point in call.
9. At the Analyzing Information point in call, the SSP tries to translate the information that the database receives. If the system detects an error during translations, the call advances to step 24.
10. The call proceeds to the Select Routing point in call with a route that analyzing information received in the database determines. If the trunking facilities that the route specifies are available, advance to step 22.
11. The specified route list does not contain available facilities. If the requirements for triggering at AFR are met, advance to step 20.
12. The requirements for AFR are not met. Is another carrier parameter (AlternateCarrier or SecondaryAlternateCarrier) available in the Analyze_Route message? The previous parameter has priority. The SSP

Trigger Processing II (continued)

executes the algorithm again to process each parameter. The SSP begins at step 7.

13. If the Analyze_Route message contains trunk group or carrier parameters, advance to step 23.
14. The Analyze_Route message contains a CalledPartyID parameter or the system receives an LEC. Resume call processing at the Analyzing Information point in call.
15. At the Analyzing Information point in call, the SSP tries to translate the information that the database receives. The switch uses the carrier that the 10XXX designates or 101XXXX carrier access code (CAC) that the user dials. The switch also can use user carrier printed before when the user does not dial a CAC. If the system detects an error during translations, the call advances to step 24.
16. The call proceeds to the Analyzed Information TDP. If a trigger requirements are met, the call advances to 21.
17. The call proceeds to the select routing point in call. If the route is a DN or contains available trunking facilities, advance to step 22.
18. The specified route list does not contain available facilities. If the requirements for triggering at AFR are met, advance to step 20.
19. The requirements for AFR are not met. Advance to step 23.
20. The call triggers at AFR.
21. The call triggers at Analyze Information TDP.
22. The call advances to the Authorizing Call Setup point in call.
23. The call routes to General_No_Circuit treatment.
24. The call proceeds to the treatment that translations specifies.

The completion of processing of analyze route message occurs when the call progresses to one of the following procedures:

1. The call triggers at AFR.
2. The call triggers at Analyzed Information TDP.
3. The call advances to the Authorizing Call Setup point in call.
4. The call routes to General_No_Circuit treatment.
5. The call proceeds to the treatment that translations specifies.

The system resets the serial trigger count to zero when the system receives an Analyze_Route response. This response can contain a RedirectingPartyID

Trigger Processing II (continued)

parameter or Forward_Call response. The number of redirections allowed for each call is six.

For parameter population, triggering after the PODP trigger treats the Analyze_Route response as a Forward_Call message from the PODP number. This process applies to parameter population that occurs when a line attribute assignment to a PODP number occurs. The attributes of the PODP number determine translation, screening, routing, and toll restriction.

Analyze information point in call—determination of the dialing plan

When the system processes the Analyze_Route message, the SSP can encounter the Analyzing Information point in call. The previous section specifies this point. After the SSP encounters the analyze information point in call, the SSP determines the correct dialing plan.

The dialing plan depends on the originating agents that appear in the following descriptions:

- For POTS lines, the enforced dialing plan is the PODP dialing plan. The line attribute entered against the line equipment number specifies this dialing plan.
- For POTS trunks, the enforced dialing plan is the PODP dialing plan. Attributes that associate with the trunk group specify this dialing plan.

Note: For an analyze route that contains a primary carrier parameter other than 0110, the originating POTS trunk must have the correct attributes. The originating POTS trunk requires the correct attributes to complete equal access calls to that carrier. The same limit applies in the absence of AIN. The limit applies to the POTS trunk that initiates a FGD equal access call to the same carrier.

- For IBN lines or IBN trunks, the enforced dialing plan is a private dialing plan. The customer group of the line or trunk specifies this dialing plan. To use public numbers, escape to the PODP dialing plan. The following sections elaborate on the method by which the call escapes to the PODP dialing plan.
- For PRI trunks, the dialing plan in use is not a plan that you can determine easily through datafill. The PRI trunks rely on the incoming Q.931 setup message for data like the NPI and the call type. The trunks rely on this data to determine the dialing plan. The system does not receive the call type in a response from the SCP. The DMS determines the call type, private (PVT)

Trigger Processing II (continued)

or public (PUB). The DMS determines the call type according to the NPI received in the PRI Q.931 setup message.

- The dialing plan in use can depend on the forwarding base station. This condition is present when serial triggering applies and the call sustained a forward call.

Analyze information point in call—interpretation of translation information

After the system selects the translation algorithm, the DMS switch references information. The DMS switch references information in the carrier or CalledPartyID parameters required for translation.

Factors that affect the translations of a call appear in the following sections:

- **Digits**
The digits that the switch uses in translations depend on the values of the carrier and CalledPartyID parameters. If a carrier parameter contains digits 0110, these digits do not join together with the CalledPartyID. Digits 0110 imply an LEC carrier. The system treats an LEC code as an absence of the carrier parameter. The DMS switch determines if the call is in an access tandem or end office (EO). In the first office, the carrier digits prefix the CalledPartyID digits. In the second office, the digits 10 or 101 prefix the joined carrier and CalledPartyID digits.
- **Type of Number of Called Party (CDN)**
If the CalledPartyID parameter is present, use the NATURE OF NUMBER field to derive the type of number of the called party. The address information that this parameter contains must conform to the public network. Refer to TR-NWT-001284 for the address information. The system supports a national public number if the number is a 10-digit, N11, or 950-XXXX number. The system does not support private dialing plan numbers and feature codes. If the database returns a CalledPartyID parameter that the system does not support, the system returns an wrong data value error.
- **Type of Transit Network Selection**
If the PrimaryCarrier, AlternateCarrier, or SecondaryAlternateCarrier is present, the type of transit network selection (TNS) is set to NA.
- **Type of Operator System Access**
You can determine the type of operator system access (OSA) through the Nature Of Number with the carrier information. If an interexchange carrier (IEC) is present and the Nature of Number indicates an operator request, the following event occurred. The SCP requested a public-alternate (PUBA) operator. If carrier information is not present, or LEC, and the Nature of Number indicates an operator request, the

Trigger Processing II (continued)

following event occurred. The SCP requested a public-principle (PUBP) operator. The system assumes that the SCP requests these operators. The CalledPartyID can have a Nature of Number of No Address Present Operator Requested. When this event occurs, the switch uses the digit 0 in translations. In other occurrences, the switch uses CalledPartyID digits in translations, without a zero prefix.

The SCP sends a 4-digit carrier. The DMS switch can translate the digits as a 3-digit code. The following algorithm assists in the explanation of the tables “Mapping of translatable elements for an end office”.

Digit algorithm

Office parameter	Carrier Received	Result	
EAO_FOUR_DIGIT_CIC_STATUS	THREEDIG	0XXX	Use as XXX or 10XXX
		NXXX; N = 0	Disregard carrier parameter
	PERMISSIVE	0XXX	Use as XXX or 10XXX
FOURDIG		5XXX or 6XXX	Use as XXXX or 101XXXX
		YXXX; Y = 0, 5, 6	Disregard carrier
		XXXX	Use as XXX or 101XXXX

The mapping of end office translatable elements appears in the following table.

Mapping of translatable elements for an end office (Sheet 1 of 2)

Nature of Number in CalledPartyID	Digits (CDN)	Carrier ID	Digits used in translations	CDN	OSA	TNS
National Number	10D	XXX	10XXX-(10)D	NA	NIL	NA
International Number	7-15D	XXX	10XXX-(7-15)D	IN	NIL	NA
<p>Note 1: When one of the carrier parameters contains an LEC, the DMS switch translates as if the carrier was not present. Number 110 identifies the LEC.</p> <p>Note 2: When the DMS-100 switch has the correct features, the switch uses the bearer capability of the call as a routing characteristic.</p>						

Trigger Processing II (continued)**Mapping of translatable elements for an end office (Sheet 2 of 2)**

Nature of Number in CalledPartyID	Digits (CDN)	Carrier ID	Digits used in translations	CDN	OSA	TNS
No Address Present, Operator Requested	0D	XXX	10XXX-	UNK	PUBA	NA
National Number, Operator Requested	10D	XXX	10XXX-(10)D	NA	PUBA	NA
International Number, Operator Requested	7-15D	XXX	10XXX-(7-15)D	IN	PUBA	NA
National Number	10D	XXXX	101XXXX-(10)D	NA	NIL	NA
International Number	7-15D	XXXX	101XXXX-(7-15)D	IN	NIL	NA
No Address Present, Operator Requested	0D	XXXX	101XXXX-	UNK	PUBA	NA
National Number, Operator Requested	10D	XXXX	101XXXX-(10)D	NA	PUBA	NA
International Number, Operator Requested	7-15D	XXXX	101XXXX-(7-15)D	IN	PUBA	NA
National Number	10D	Not Present	(10)D	NA	NIL	NIL
International Number	7-15D	Not Present	(7-15)D	IN	NIL	NIL
No Address Present, Operator Requested	0D	Not Present	0-	UNK	PUBP	NIL
National Number, Operator Requested	10D	Not Present	(10)D	NA	PUBP	NIL
International Number, Operator Requested	7-15D	Not Present	(7-15)D	IN	PUBP	NIL

Note 1: When one of the carrier parameters contains an LEC, the DMS switch translates as if the carrier was not present. Number 110 identifies the LEC.

Note 2: When the DMS-100 switch has the correct features, the switch uses the bearer capability of the call as a routing characteristic.

Trigger Processing II (continued)

The mapping of access tandem translatable elements appears in the following table.

Mapping of translatable elements for an access tandem (Sheet 1 of 2)

Nature of Number in CalledPartyID	Digits (CDN)	Carrier ID	Digits used in translations	CDN	OSA
National Number	10D	XXX	XXX-(10)D	NA	NIL
International Number	7-15D	XXX	XXX-(7-15)D	IN	NIL
No Address Present, Operator Requested	0D	XXX	XXX-	UNK	PUBA
National Number, Operator Requested	10D	XXX	XXX-(10)D	NA	PUBA
International Number, Operator Requested	7-15D	XXX	XXX-(7-15)D	IN	PUBA
National Number	10D	XXXX	XXXX-(10)D	NA	NIL
International Number	7-15D	XXXX	XXXX-(7-15)D	IN	NIL
No Address Present, Operator Requested	0D	XXXX	XXXX-	UNK	PUBA
National Number, Operator Requested	10D	XXXX	XXXX-(10)D	NA	PUBA
International Number, Operator Requested	7-15D	XXXX	XXXX-(7-15)D	IN	PUBA
National Number	10D	Not Present	(10)D	NA	NIL
International Number	7-15D	Not Present	(7-15)D	IN	NIL
No Address Present, Operator Requested	0D	Not Present	0-	UNK	PUBP

Note 1: When one of the carrier parameters contains a LEC, the DMS switch translates as if the carrier was not present. Number 110 identifies the LEC.

Note 2: When the DMS-100 switch has the correct features, the switch uses the bearer capability of the call as a routing characteristic.

Trigger Processing II (continued)**Mapping of translatable elements for an access tandem (Sheet 2 of 2)**

Nature of Number in CalledPartyID	Digits (CDN)	Carrier ID	Digits used in translations	CDN	OSA
National Number, Operator Requested	10D	Not Present	(10)D	NA	PUBP
International Number, Operator Requested	7-15D	Not Present	(7-15)D	IN	PUBP
Note 1: When one of the carrier parameters contains a LEC, the DMS switch translates as if the carrier was not present. Number 110 identifies the LEC.					
Note 2: When the DMS-100 switch has the correct features, the switch uses the bearer capability of the call as a routing characteristic.					

After the system determines routing characteristics, the system uses the routing characteristics in table ISDN, Routing Characteristic (RTECHAR). The system uses these routing characteristics to find a routing characteristic name (RCNAME). An RCNAME is a string that the system uses in other tables to represent the routing characteristics. This string can be a maximum eight characters in length.

In the following example, the RCNAME of TNSPUBNA is assigned to the call. The RCNAME of TNSPUBNA is assigned if three of the following conditions apply:

- The system receives the CalledPartyID parameter with a national number, and the call does not require an operator.
- The system receives the carrier ID.
- The bearer capability of the call is Speech or 3.1 kHz.

Datafill example for table RTECHAR

Table	Example data
RTECHAR	TNSPUBNA (CDN NA(TNS NA\$)(CDN NA(TNS NA)(BC3_1KHZ)\$)\$

If the routing characteristics do not correspond to a RCNAME, MDC or POTS translations. The dialing plan determines which translations apply.

If a RCNAME is present, the switch can alter the call translations according to the RCNAME. For calls that a POTS line or trunk originates, the RCNAME indexes table PXLAMAP. For calls that an IBN line or trunk originates, the RCNAME indexes table XLAMAP.

Trigger Processing II (continued)

The following event occurs on a call that an IBN line or trunk originates. Table ISDN Translations Map (XLAMAP) allows the operating company to enter a new XLANAME. The system can use this new XLANAME to route the call directly to the POTS environment. The digits that the subscriber dials do not determine if the XLANAME routes the call. When the SCP returns a public number, the SSP does not need to prefix an access code to the public environment. An example is 9.

On a call that a POTS line or trunk originates, table PXLAMAP allows the operating company to enter a new pretranslator name.

Forward_Call

The FC message instructs the SSP to attempt to forward the call, and considers the routing, carrier, and called party information.

The processing of the Forward_Call message is like the processing of Analyze_Route. The processing of the Forward_Call message has the following exceptions:

- At the analyzing information point in the call, the terminator can determine the dialing plan. The DN that subscribes to the TERMATT trigger also can determine the dialing plan. The terminator is the TERMATT subscriber. Details appear in the next section.
- The system processes the parameters the same as the system processes Analyze_Route. The difference is that the system references a Forward_Call message and not an Analyze_route message.
- The system understands the translation information the same as the system understands the Analyze_Route. The system receives Forward_Call in a response to the Termination_Attempt message. Only the mapping of translatable elements for an EO applies.
- If the call encounters another trigger, the UserID, LATA, and RedirectingPartyID parameters are built. These parameters are built according to the DN that subscribes to Termination Attempt trigger.
- If in response to a trigger that follows, the following actions occur. The system receives a Send_To_Resource in conversation, and the SSP collects digits from the originator. If you request normal digit collection, the SSP collects digits from the originator. The SSP collects digits according to the dialing plan of the DN that subscribes to the Termination Attempt trigger.

The system can reset the serial trigger count to zero. This event occurs when the system receives an Analyze_Route response with a RedirectingPartyID parameter or Forward_Call response. The number of call redirections allowed for each call is six.

Trigger Processing II (continued)

A Forward_Call message can route the ISUP VAPN originating calls that trigger at TERMATT. The message can route the calls by way of the Primary, Alternate, and SecondAlternate Carrier or TrunkGroup parameters. The ISUP VAPN calls that trigger at TERMATT can encounter the AFR trigger at the Network Busy TDP. The calls can encounter the trigger on the second leg of a call that a Forward_Call message routes.

The DMS merges the originating call and the current terminating call for BRI. The system begins to process the new leg at the Selected_Route point in call when a routing list is specified. In other occurrences, processing begins at the Analyzing_Information point in call. If a call encounters the Information_Analyzed TDP, triggers occur against the terminating DN. An example is the DN that has TERMATT. For additional signaling, the DMS fills the redirecting numbers as the DN that has the TERMATT assigned. The DMS fills the redirecting reason as unconditional, and the redirecting must increase. The ISDNUP Redirection_Information parameter contains the change in direction reason and counter.

Analyze information point in call—determination of the dialing plan

In processing the Forward_Call message, the SSP can encounter the analyze information point in call. After the SSP encounters the analyze information point in call, the SSP determines the dialing plan to use. The dialing plan depends on the DN that has the Termination Attempt trigger assigned.

- For POTS terminating lines, the enforced dialing plan is a specified PODP dialing plan. The line attribute that the user enters against the line equipment number that corresponds to the DN specifies the PODP dialing plan.
- For IBN terminating lines, the enforced dialing plan is the private dialing plan that the customer group of the line specifies. To use public numbers, escape to the PODP dialing plan.
- For AIN virtual DN, entry of the dialing plan occurs against the DN.
 - The user can enter IBN and mandate that the SSP use the private dialing plan that the DN customer group specifies. After the user enters IBN, the user must enter the customer group.
 - The user can enter NONIBN and dictate that the SSP use the public dialing plan. The line attribute that the user enters against the DN specifies this dialing plan.

Disconnect

The DISC message instructs the SSP to disconnect the call. For user interface purposes, the system routes the call to AIN disconnect call treatment.

Trigger Processing II (continued)

The SSP applies normal clearing procedures with cause number 16 Normal Clearing and returns the channel to an idle state. When the response occurs, the switch applies the AIN Disconnect Call (AIND) treatment. The response maps to cause number 16 for a BRI agent. The system sends the disconnect to the BRI interface and clears the call.

Continue

The CONT message is an SCP-to-SSP message. The system can send this message as a response to an Info_Analyzed query message. After the system receives a continue message, the SSP continues the call. If the current trigger is not a feature code (VSC) trigger, the following action occurs. The SSP continues the call the same as the SSP continues the call when a query does not take place. An example of a VSC trigger is CDPCODE.

The following two events can occur:

- After the system receives a continue message, call processing returns to the Info_Analyzed TDP. Call processing looks for more triggers after the last trigger. Following queries can occur. An example of these triggers is PODP, N11 triggers.
- After the system receives a continue message and more triggers are not available at the Info_Analyzed TDP, the call continues to route. If the system does not have enough information to continue normal routing, the switch sends the call to treatment.

For a VSC trigger, the system sends the call to AIN final (AINF) treatment. The availability of other triggers does not affect this transmission. The requirement of digit collection pattern that follows the VSC does not affect this transmission. An example of another trigger is PODP, N11.

The system can send the following parameters in the Continue response:

- PrimaryBillingIndicator
- AMAAlternateBillingNumber
- AMABusinessCustomerID
- AMALineNumber
- AMAslpID
- AMADigitsDialedWC
- AMP

Each of these parameters associate with billing. The AIN Essentials AMA module handles these parameters.

Trigger Processing II (continued)

Send_To_Resource

The SCP/Adjunct can respond to query or conversation packages with an STR operation in a response package. This response is a terminating announcement. The answer indicator parameter is not always present.

The system handles this response and the Send_To_Resource message in the same way with some exceptions. The Send_To_Resource message is in the section "Send_To_Resource operation in conversation package". The exceptions follow:

- After the SSP verifies the message, the SSP cancels the T1 timer and plays the designated announcement to the calling party.

Note: You can enter this treatment to idle the call immediately or route to an announcement or tone. If disconnect is set to idle the call immediately, the call encounters anOrigination_Attempt TDP. This TDP can cause problems if subscribers to the OFFHKIMM trigger receive a terminating announcement.

- When the system receives the answer indicator parameter in a TCAP response package, the system starts AMA timing. The system starts this timing local in the SS. The system starts AMA timing if the call is billable.

Note: This AMA timing functionality of the answer indicator parameter applies in a response package. This functionality is in addition to the other functionality, like answer supervision, of the answer indicator parameter. The other functionality is the same for response and conversation packages.

- After the announcement completes, the system routes the call to AIND treatment.

For BRI, two types of Send_To_Resource messages can occur: response package from TR-NWT-001284, and conversation package from GR-1298-CORE. The following processes occur when the system receives the message:

- The system can send a call proceeding, progress, or connect message to the BRI agent in response to SETUP message. If the system did not already send one of these messages, the system sends a call proceeding message.
- If the system sent a CONNECT message to the BRI agent earlier, the system does not send another message.

Trigger Processing II (continued)

- If the system did not send a CONNECT message, the system sends a CONNECT message if the AnswerIndicator parameter is present.
- If the system did not send a CONNECT message and the AnswerIndicator parameter is not present, the system sends a PROGRESS message. This message has the progress indicator information set to inband information or appropriate pattern now available.

Note: The system does not support buffered digits.

The BRI response package is another name for terminating announcement. This package is a Send_To_Resource in a response package with DisconnectFlag parameter. The system disconnects the call after the system plays the announcement. If the AnswerIndicator parameter is present, the DMS starts the AMA timer when the call connects to the announcement. When the announcement completes, the system routes the call to DISC treatment. You can enter this treatment to idle the call immediately or route the call to an announcement or tone.

The BRI conversation package consists of the following two groups.

- Send_To_Resource without digit collection where the announcement plays inband. After the announcement plays inband, the DMS sends a Resource_Clear message to the SCP/Adjunct.
- Send_To_Resource with digit collection where the announcement plays inband. After the announcement plays inband, the DMS collects digits over B- or D-channels and applies interdigit timing. The DMS returns a Resource_Clear message to the SCP/Adjunct.

When assignment of a set of attributes occurs against a PODP number, the system performs normal digit collection. The system performs normal digit collection according to these attributes for triggering after the PODP trigger. A call can trigger at the PODP trigger and receive a Send_to_Resource message with normal digit collection request. In this event, the last PODP attributes or the attributes of the triggering agent determine digit collection. These attributes determine digit collection if the call never hits a PODP trigger with associated attributes at a previous trigger.

ISUP messaging during a Send_To_Resource

The SSP must send messages to the incoming trunk to make sure that the speech path experiences cut-through in the backward direction.

The system sends an address complete message (ACM) along the trunk. This message includes a backward call indicator (BCI) coded to No Indication, as

Trigger Processing II (continued)

Section 3.1.4.2.A.2. of TR-NWT-000317 describes, in the following conditions:

- The system did not send a previous ACM.
- The system did not send an ISUP answer message (ANM).

See "ISUP messaging during a Send_To_Resource operation" in "Conversation package processing" on page 46 for more details.

PRI messaging during a Send_To_Resource operation

The messaging required for the Send_To_Resource operation in a response package and the Send_To_Resource operation in the conversation package is the same. See "PRI messaging during a Send_To_Resource operation" in "Conversation package processing" on page 47 for more details.

For each facility, the SSP plays the designated announcement to the calling party when the system sends the required signaling. The system ignores digits that the caller dials. If the SSP cannot play the announcement because the requested resource is busy or not available, the following action occurs. The switch applies reorder treatment to the calling user. If the caller abandons while the announcement plays, the SSP clears the call.

PTS hook-state manipulation during a Send_To_Resource operation

See "PTS hook-state manipulation during a Send_To_Resource operation" in "Conversation package processing" on page 47 for more details.

Send_Notification

This message requests the SSP to notify the SCP when the system disconnects an AIN call. Send_Notification instructs the SSP to monitor the call associated with the call-related SCP response message. When this call reaches the NULL point in call, the SSP sends a Termination Notification response message. The SSP sends this message to the SCP in a unidirectional package.

The SSP receives a Send_Notification after a component related to a call in the same response package from the SCP. The Analyze_Route, Authorize_Termination, Continue, Forward_Call, and Send_To_Resource are components related to a call. An automatic code gapping (ACG) component that is not call related also can be present. The system can process Multiple Send_Notification requests in a call.

Update_Data

In response to the Update_Request message that is not call related, the SSP sends an Update_Data message in a response package. This message does not contain parameters when the update completes. The system reports updates

Trigger Processing II (continued)

that do not complete in an Update_Data message. This message has the Failure Cause parameter set to the correct resource failure. The system also can report updates that do not complete in a Return Error message. This message contains the correct Application Error string as the parameter.

Note: Activation of an already active trigger or deactivation of an already not active trigger are regarded as successes.

Response parameters

When the system sends a response message to the SSP, the SSP takes action. The type of response message and the parameter contents determine the action. The parameters in the response messages appear in the following table.

Parameters in response messages (Sheet 1 of 2)

Response Parameter	Analyze Route	Auth Termin	Cancel Res Event / Cont	Dis connect	Forward Call	Send to Resource	Send Notif
AlternateCarrier	OP				OP		
AlternateTrunkGroup	OP				OP		
AnswerIndicator						OP	
CallingPartyID	OP	OP			OP		
ChargeNumber	OP	OP			OP		
ChargePartyStationType	OP	OP			OP		
CalledPartyID	OP				OP		
ControllingLeg Treatment				OP			
DisconnectFlag						OP	
DisplayText		OP					
EchoData							P
OutpulseNumber	OP				OP		
PrimaryCarrier	OP				OP		
PrimaryTrunkGroup	OP				OP		
Note: P = present OP = optionally present IP = implicitly present							

Trigger Processing II (continued)**Parameters in response messages (Sheet 2 of 2)**

Response Parameter	Analyze Route	Auth Termin	Cancel Res Event / Cont	Disconnect	Forward Call	Send to Resource	Send Notif
RedirectingPartyID	OP				IP		
ResourceType						P	
SecondAlternateCarrier	OP				OP		
SecondAlternateTrunk Group	OP				OP		
StrParameterBlock							
Tcm	OP	OP				OP	
Note: P = present OP = optionally present IP = implicitly present							

Note: The system sends Analyze_Route, Continue, Disconnect, and Send_To_Resource responses for the following triggers. The triggers are the PODP, N11, CDPCODE, and AFR triggers supported by coin. The system does not send Continue for AFR.

Descriptions of how each response parameter affects SSP call processing appear in the following sections.

AnswerIndicator

This parameter serves two purposes:

- to specify if the SSP sends an answer indication to the calling party
- to specify if AMA timing must start when the call connects to an announcement

The status details of the parameter appear in the following list:

- For PRI trunk originators, an SCP/Adjunct must be present to control if the system reports an answer through use of AnswerIndicator.
- For PTS and ISUP trunk originators, the system sends an answer indication when an AnswerIndicator is present in a Send_To_Resource message. This action occurs if the system did not send an answer indication for the call earlier.

Trigger Processing II (continued)

- The system sends answer indication to the originating agent, without regard to the presence or absence of AnswerIndicator. The system sends the indication in the following conditions:
 - The originating agent is a PTS trunk and the system must collect a number of digits that is not zero.
 - The originating agent is an ISUP trunk, and the call is not end-to-end SS7. The system also must collect a number of digits that are not zero.
- The originating agent is a PTS, PRI, or ISUP trunk. Also, AMA timing starts when the system receives AnswerIndicator in a conversation package.

ChargeNumber

The ChargeNumber parameter contains the ANI used for signaling that follows. The ChargeNumber parameter does not affect billing on the SSP. The ChargePartyStationType parameter must accompany this parameter. In other occurrences, the system discards the ChargeNumber.

The system sends the contents of the ChargeNumber in the following way:

- MF trunks that support ANIThe system receives digits. The system sends these digits in the ChargeNumber as MF ANI digits over the trunking facility.
- ISUP trunksThe switch uses the contents of the ChargeNumber to fill the ISUP charge number. The switch always fills the ISUP charge number if the system receives the ChargeNumber parameter. The switch fills the ISUP charge number if the call is interLATA or not interLATA. The SSP that connects must be able to discard the ChargeNumber parameter if the parameter is not required.
- PRI trunksThe switch does not propagate the ChargeNumber.
- If the call triggers during call forwarding, the switch fills the charge number according to the Last Forwarding Station.

If the call terminates to one of the following parts, the system discards the ChargeNumber parameter. The call can terminate to a line, a trunk, or a simulated facility group. These groups are virtual groups (VIRTGRPS). The important trunks appear in the previous description.

CallingPartyID

The system can include the CallingParty ID parameter. In this occurrence, each supported feature that acts after on this information for the call uses this parameter. These features include AIN.

Trigger Processing II (continued)

The system also uses this feature in signaling that follows for trunks. The system uses this feature in the following ways:

- **Q764 ISUP Trunks**
The switch propagates the CallingPartyID parameter to the ISUP Calling Party Address (CGPA) parameter. The switch uses a direct mapping.
- **Q.931 PRI Trunks**
The switch propagates the CallingPartyID parameter to the calling party number information element in the Q.931 SETUP message. The system sends this message over the PRI trunking facility. The Q.931 SETUP message does not include a calling party subaddress information element if the switch propagates the CallingPartyID parameter.

The format of the CallingPartyID parameter appears in the following table.

CallingPartyID parameter

H	G	F	E	D	C	B	A
ODD/ EVEN							
Spare		Numbering Plan		Pres Restriction		Scrn Restriction	
2nd digit				1st digit			
*				*			
*				*			
*				*			
Nth digit				N 1st digit			

The format of the calling party number IE appears in the following table.

Calling Party Number information element (Sheet 1 of 2)

H	G	F	E	D	C	B	A
0	1	1	0	1	1	0	0
Length of Information Element (octets)							
0/1 Ext	Type of Number			Number Plan ID			

Trigger Processing II (continued)

Calling Party Number information element (Sheet 2 of 2)

H	G	F	E	D	C	B	A
1	Ext	Pres Restriction	0	Spare	Reserved	Scrn Restriction	
Spare				Digits (1A5 Characters)			

The mapping from the CallingPartyID parameter to IE appears in the following table.

Parameter to information element mapping

CallingPartyID parameter	Calling party number information element	Mapping
Nature of Number	Type of Number	DMS Generated
Numbering Plan	Numbering Plan ID	DMS Generated
Pres Restriction	Pres Restriction	Direct Mapping
Scrn Restriction	Scrn Restriction	Direct Mapping
Address Digits	Digits	Direct Mapping

The mapping from the numbering plan to numbering plan ID appears in the following table.

Numbering plan to number plan ID mapping

Numbering plan	Numbering plan ID	
ISDN Numbering Plan	0001	ISDN Numbering Plan (Rec. E.164) 001
Private	0101	Private 0101
Otherwise		Unknown 000

Trigger Processing II (continued)

The mapping from the numbering plan to numbering plan ID appears in the following table.

Nature of number to type of number mapping

Numbering plan	Numbering plan ID
Non-unique International Number 1110100	International Number
Unique International Number 00001000	001
Non-unique National Number 1110011	National Number
Unique National Number 00000011	010
Non-unique Subscriber Number 1110001	Local Number
Unique Subscriber Number 00000001	100
Otherwise	Unknown 000

Note: The switch does not propagate the CallingPartyID parameter over PTS trunks. The switch only spills the ChargeNumber.

ChargePartyStationType

The ChargePartyStationType indicates the calling station type. This parameter contains the OLI of the originating party. The ChargePartyStationType uses a format that consists of two BCD digits. Section 6.1.24 of TR-NWT-001285, AIN 0.1 Switch Service Control Point Application Protocol Interface Generic Requirements, Issue 1, January 1992 documents the values that the system supports.

Transmission of the ChargePartyStationType parameter occurs as an option in the following SCP-to-SSP messages:

- Analyze_Route, Authorize_Termination, and Forward_Call messages if the system includes the parameter. The system uses the

Trigger Processing II (continued)

ChargePartyStationType as the ANI II digits for MF. The system uses the OLI parameter for ISUP trunks.

The switch propagates the ChargePartyStation Type parameter over the supported trunking facilities if the ChargeNumber parameter accompanies this parameter.

The following points detail how the switch uses the ChargePartyStationType parameter for different facility types:

- **Q.764 ISUP Trunks**
The switch propagates the ChargePartyStationType parameter to the ISUP OLI if the system also provides the ChargeNumber parameter. The system includes the OLI parameter in the outgoing initial address message (IAM) even if
 - the call is equal access
 - any datafill from a base of SSP is present, table OCCINFO for example
- The system maps the OLI parameter directly from the ChargePartyStationType parameter.
- **Q.931 PRI Trunks**
The switch does not propagate the ChargePartyStationType parameter over PRI trunk facilities.
- **PTS Trunks**
The system transmits the ChargePartyStationType parameter over the following trunk group types:
 - CAMA trunks that support ANI II digits
 - TSPS/TOPS trunks that support ANI II digits
 - ATC OP Service trunks that support ANI II digits
 - InterToll trunks during equal access call conditions.

CalledPartyID

The CalledPartyID parameter contains the directory number of the called party. This parameter is present as an option in the following SCP-to-SSP messages:

- The CalledPartyID parameter contains the DN of the called party. This parameter is present as an option in the following SCP-to-SSP messages:
- **Analyze_Route:** the system uses the CalledPartyID in the following two ways:
 - If the system cannot achieve termination through the following groups or carriers, the system sends the call to treatment. The groups are the

Trigger Processing II (continued)

Primary, Alternate, or SecondAlternate trunk groups. The carriers are the Primary, Alternate, or SecondAlternate carriers.

- If a trunk group or a carrier that is not local is not present in the response message, the system translates the call again. The system uses the directory number in the CalledPartyID parameter to translate the call.
- Forward_Call: the system uses the CalledPartyID for the Analyze_Route.

The following trunks contain details for facilities:

- Q.764 ISUP trunks
The switch propagates the CalledPartyID parameter to the ISUP. Another name for the CalledPartyID parameter is party address (CDPA) parameter. The system uses a direct mapping.
- Q.931 PRI trunks
The rules to propagate the CalledPartyID parameter are the same as the rules for the outpulse number parameter.
- PTS trunks
The called digits outpulsed over the trunk are the contents of the CalledPartyID parameter.

ControllingLegTreatment

ControllingLegTreatment parameter specifies the designated different alerting pattern that the system must apply to the called party. The ADSI sets support call waiting ring and tone patterns.

The ControllingLegTreatment parameter has the following limits:

- The system ignores this parameter when the local SSP does not serve the called party.
- The system ignores this parameter if the system receives this parameter in a response on CWT for EBS sets.
- The system does not apply this parameter on the second leg of a three-way call in the following condition. This condition is when the conference occurs while the terminator is ringing.
- The system does not apply this parameter after the party call waited on disconnects.

Trigger Processing II (continued)

DisconnectFlag

DisconnectFlag parameter indicates if the system must disconnect a call after a Send_To_Resource operation. When the call includes this parameter, the SSP disconnects the call after a Send_To_Resource operation.

Note: The system can receive this parameter in a conversation TCAP package type. The system also can receive a response package with a Send_To_Resource operation without this parameter. In each occurrence, the SSP treats this message as the SSP treats a message that contains a data value error that is fatal and wrong. The SSP provides final treatment.

DisplayText

The DisplayText parameter contains information that must appear on the customer premises equipment of the called party. The system can receive the parameter in the Authorize_Termination response at the Termination_Attempt TDP. The system can support DisplayText for terminating 1FR and 1MR RES agents that can trigger at the Termination Attempt trigger.

The following table specifies the fields that apply to RES agents.

DisplayText fields

Field	Contents (ASCII)	Size	Error value
callingAddress	0 to 9	10 characters	reason for absence O that indicates number is not available
CallingPartyName	hex 20 to hex 7E	1 to 15 characters	reason for absence O that indicates name is not available
reason	O or P	1 characters	reason for absence O that indicates associated calling information, name or number, is not available
dateTimeOfDay	mm/dd/hh/mm	8 characters	switch-based provided
Note: Error value indicates the value to return to if the field does not meet the requirements. The Contents for dateTimeOfDay complies with TR-31.			

Trigger Processing II (continued)

The movement of the call starts when a line or trunk originating call encounters the Termination Attempt TDP at the SSP. The Termination_Attempt query to SCP contains the optional CallingPartyID and GenericName parameters. The Authorize_Termination response from the SCP contains the DisplayText parameter. This parameter contains the callingAddress (DN), callingPartyName, reason, and dateTimeOfDay fields. The reason can be O (out-of-area) or P, where O indicates that name or number are not available.

The generic specifications for the DisplayText parameter as received at the SSP appear in the following list. The terminating agent type does not affect the specifications.

- The system can receive the parameter in the Authorize_Termination response at the Termination Attempt TDP. The system ignores the parameter if the system receives the parameter in other response types.
- Display information received with tag not allowed for AIN Essentials, as defined in TR-NWT-001285.
- The system can send a maximum of 15 fields in the DisplayText parameter. The system ignores fields in excess (GR-1299).
- The system extracts fields in the order the system receives the fields. If the system receives fields that are duplicates, same tags, and must extract one field, the system extracts the first field. The system ignores fields that follow.

Note: The system can receive fields in the parameter in any order.

As with GR-1298, if the SCP sends calling number information, inclusion in the parameter of the callingAddress field is not optional. Calling number information can be an accurate number or a reason for absence. A reason field must follow the callingAddress field if a reason for absence associates with the calling number. This action must be immediate. At the SSP, the presence of the callingAddress field in the parameter indicates that the SCP provides calling number information. If a reason field follows the callingAddress field, the following action occurs. The system uses the reason field contents as the reason for absence for the calling number. The system ignores the callingAddress field contents. In other occurrences, the system uses the callingAddress field contents as the accurate calling number.

As with GR-1298, if the SCP sends calling name information, inclusion in the parameter of the callingPartyName field is not optional. A reason field must follow the callingPartyName field if a reason for absence associates with the calling name. This action must be immediate. Calling name information can be an accurate name or reason for absence. At the SSP, the presence of the

Trigger Processing II (continued)

callingPartyName field in the parameter indicates that the SCP provides calling name information. If the callingPartyName field precedes a reason field, the following action occurs. The system uses the reason field contents as the reason for absence for the calling name. The system ignores the callingPartyName field contents. In other occurrences, the system uses the callingPartyName field contents as the accurate calling name.

Note: For NA007, removal of the dependency that parameter DisplayText had on the options calling name delivery (CNAMD) and calling number delivery (CND) occurs. This change applies to residential enhanced services (RES) and integrated business network (IBN) agents. The removal of this dependency reduces the required service provisioning and increases the functional efficiency of the DisplayText parameter.

As with TR-1298, the system uses the dateTimeOfDay field when the DisplayText parameter includes this field. The system uses this field if the parameter contains a minimum of one of the calling number or calling name information. This field contains the date and time of day. In other occurrences, the system ignores this field.

For DisplayText information that the system must deliver, the terminating RES agent requires the AINDN line option (Termination Attempt trigger subscription). When you trigger the AINDN line option, the following condition applies. The system must return an Authorize_Termination response from the database that contains the DisplayText parameter.

Note: The dialable number delivery (DDN) is required when a reverse translated directory number (DN) must appear on the MAP display.

When the SSP terminates to an RES agent, the SSP extracts the fields that apply to RES agents. The SSP maps the fields to corresponding multiple data message (MDM) parameters. The SSP sends these parameters to the RES CPE through the MDM format. See TR-NWT-000030.

The DisplayText fields that apply to RES agents and MDM equivalents appear in the following table.

DisplayText fields applicable to RES agents and MDM equivalents (Sheet 1 of

DisplayText field	MDM parameter
callingAddress	Calling line ID (CLID)
callingPartyName	Name

Trigger Processing II (continued)

DisplayText fields applicable to RES agents and MDM equivalents (Sheet 2 of

DisplayText field	MDM parameter
reason	Reason for absence for CLID/Name
dateTimeOfDay	Time

Note: Delivery to RES agents occurs between the first and second ring. If the terminating agent answers the call before delivery is complete, information does not appear. The CLASS display option restrictions do not normally affect the DisplayText information delivery to RES agents.

The AIN Essentials DisplayText feature support includes Meridian Digital Centrex (MDC) agents, which are line types:

- integrated business network (IBN)
- line class code (LCC) of IBN
- meridian business set (MBS)
- LCC series M5 excluding ISDN
- electronic business set (EBS)
- LCC of PSET

The system supports the DisplayText name, number, and reason fields for MBS and EBS lines.

The DisplayText fields that apply to MDC agents.

DisplayText fields applicable to MDC agents

DisplayText Field	Description	Size (type ASCII)
callingAddress	Number of calling party	ten characters
callingPartyName	Name of calling party	1 to 15 characters
reason	Reason for absence (for name or number of calling party)	one character (O or P)
dateTimeOfDay	Date and time	eight characters

Trigger Processing II (continued)

The DisplayText field support for specified line types appears in the following table.

AIN0.1 DisplayText field support for specific line types

MDC Agent Support		DisplayText Parameter	Field Support
Line type	LCC		
IBN	IBN	callingPartyName, callingAddress, reason, datetimeOfDay	
MBS	M5009	callingPartyName, callingAddress, reason	
	M5112		
	M5209		
	M5212		
MBS	M5312		
EBS	PSET	callingPartyName, callingAddress, reason	

Note: For calls that terminate on RES/IBN subscribers, the reason indication is out of area /unavailable or private. For calls that terminate on MBS/EBS subscribers, a blank indicates this reason field as though the calling name/number is not available.

EchoData

The EchoData parameter provides the transaction level correlation. The following events cause this required parameter requirement to occur. Reception of the Send_Notification is in a response package. The transaction is already closed by the time the SSP must reply. The SSP must reply with a Termination Notification message.

OutpulseNumber

OutpulseNumber parameter contains the outpulse number for routing over private facilities. The system uses the OutpulseNumber parameter when the SSP receives a trunk group parameter with field number to transmit. This field number contains a value of outpulse number.

If the terminating agent is ISUP, the contents of the OutpulseNumber parameter map to the ISUP called party number parameter. The Nature of Number field maps to the Nature of Address field. The Numbering Plan field maps to the Numbering Plan Indication field.

Trigger Processing II (continued)

If the terminating agent is a PRI trunk, the OutpulseNumber parameter maps to the Q.931-called party number parameter.

If the terminating agent is a trunk that cannot send Q.931 or ISUP messages, the system discards the contents of the Nature of Number field. The system also discards the Numbering Plan Indication field.

The system can modify the digits through routing selectors. If modifications occur before transmission of the digits, the system discards the contents of the Nature of Number field. The system also discards the contents of the Numbering Plan Indication field.

The following descriptions contain more details on the OutPulseNumber for specified trunks:

- **Q.764 ISUP trunks**
The switch propagates the OutpulseNumber parameter to the ISUP called party address (CDPA) parameter. The switch uses direct mapping.
- **Q.931 PRI trunks**
The switch propagates the OutpulseNumber parameter to the information element of the called part number in the Q.931 SETUP message. The system sends this message over the PRI trunking facility. The Q.931 SETUP message does not include a called party subaddress Information Element if the switch must propagate the OutpulseNumber parameter.
- The format of the OutpulseNumber parameter is the same as the CallingPartyID parameter format that appears in CallingPartyID parameter. The Presentation and Screening Restriction Indicator fields are spare fields.

The format of the called party number information element appears in the following table.

Calling Party Number information element

H	G	F	E	D	C	B	A
0	1	1	0	1	1	0	0
Length of Information Element (octets)							
1	Ext	Type of Number			Number Plan ID		
Spare				Digits (1A5 Characters)			

Trigger Processing II (continued)

The mapping of the OutpulseNumber parameter appears in the following table.

Parameter to information element mapping

CallingPartyID parameter	Calling party number information element	Mapping
Nature of Number	Type of Number	DMS Generated
Numbering Plan	Numbering Plan ID	DMS Generated
Address Digits	Digits	Direct Mapping

The mapping of the numbering plan appears in the following table.

Nature of number to type of number mapping

Numbering plan	Numbering plan ID
International Number 0000100	International Number 0001
National Number 00000011	National Number 0010
Subscriber Number 0000001	Local Number 0100
Other	Unknown 0000

PassiveLegTreatment

PassiveLegTreatment is a parameter in the AIN originating call model. This parameter controls ringing tones of the following terminating agents: IBN lines/MDC business sets, POTS, RES, data, and coin lines. The sets of ADSI conform to call waiting tones and ringing patterns.

The system sends this parameter in the Analyze_Route or Forward_Call responses message. This parameter determines the ringing and the call waiting pattern that the system must apply at the called party. The equivalent parameter in the AIN terminating call model is ControllingLegTreatment.

Trigger Processing II (continued)

The PassiveLegTreatment parameter has the following limits:

- The system ignores this parameter when the following conditions occur:
 - The parameter terminates to a line that a peripheral that cannot support coded ringing serves.
 - The local SSP serves the called party.
- The system ignores this parameter if the system receives the parameter in a response on CWT for EBS sets.
- The system does not apply this parameter on the second leg of a three-way call in the following condition. This condition is when the conference occurs while the terminator rings.
- The system does not apply this parameter after the party call waited on disconnects.
- When the system receives a Forward_Call response, the system ignores a parameter from an earlier response. The PassiveLegTreatment in that Forward_Call response does not affect this state.

PrimaryCarrier, AlternateCarrier, and SecondAlternateCarrier

The PrimaryCarrier, AlternateCarrier, and SecondAlternateCarrier parameters contain the carrier selection information and the carrier identification to which the system routes a call. These parameters are correct for an EAEO.

The following SCP-to-SSP messages can contain the carrier parameters:

- Analyze_Route
The system does not always complete routing through the Primary, Alternate or SecondAlternate trunk group information. In this occurrence, the system tries the information in the Primary, Alternate and SecondAlternate Carrier parameters. The switch uses the carrier information and the CalledPartyID to translate again. If the SSP translates to a correct route, the system uses that route.
- Forward_Call
The system uses the carrier parameters in the same way as in the Analyze_Route response. The difference is that the carrier information applies to the called party information.

Trigger Processing II (continued)

The following is information for facilities:

- Q.764 ISUP trunks:
The switch propagates the carrier parameters to the ISUP Carrier Selection parameter for the two following occurrences:
 - The call receives a response of Analyze_Route.
 - The route is a result of one of the three carriers that Analyze_Route provides.
- Q.931 PRI trunks:
The switch does not propagate carrier parameters over PRI trunk facilities.
- PTS trunks:
The switch does not propagate carrier parameters over these trunking facilities.

PrimaryTrunkGroup, AlternateTrunkGroup, and SecondAlternateTrunkGroup

The PrimaryTrunkGroup, AlternateTrunkGroup, and the SecondAlternateTrunkGroup parameters are the trunk group parameters that specify a SSP route list. The system can terminate calls on an SSP route list.

The TrunkGroup parameters contain the following fields:

- Number To Output
 - Field Number of Output directs the call to output the information in the output parameter or the CalledPartyID parameter. The system uses the CalledPartyId parameter if the field *number to output* contains a value of *normal routing number*. In other occurrences, the system uses the output parameter.
 - If field Number of Output directs software to output information, the SSP discards the trunk group parameter. The output information is from a parameter that the system does not receive. The system discards the address parameters that follow.
- Wide Area Telephone Service (WATS) Indicator
 - The WATS indicator when set to a value of 1, must map to a WATS route list. The WATS route lists can contain the T selector in addition to OW. The T selector must contain OW and/or T selectors. The SSP does not perform WATS screening if this indicator is set to WATS. The SSP assumes that the SCP/Adjunct performs the screening. The system can block the call from termination and send the call to AINF treatment. The system performs these actions if the originator is a POTS agent and the following use of the WATS indicator occurs. The system uses the WATS indicator to route a call while the system

Trigger Processing II (continued)

processes an Analyze_Route. The system can send the call to AINF treatment. This action occurs if the AINDN is a POTS agent and the system uses the WATS indicator to route on Forward_Call.

- Call Treatment Indicator
 - The call treatment indicator (CTI) directs the call if the route list is busy. The DMS switch supports the following values:
 - Overflow
This CTI value directs the call to attempt to terminate on the next address. For additional details, refer to the section on Analyze_Route message.
 - The system does not support other CTI values. If a CTI value that is not acceptable is present, the following action occurs. The SSP treats the call the same way as the SSP treats a call when the CTI value is Overflow.
- Route Index
 - Field ROUTE INDEX contains eight digits that the system codes in BCD. On the DMS switch, the digits identify the routing table and the routing index. The SSP verifies that the content in the digit field is a value from 0 to 9 included. The SSP converts the digits to an integer. The SSP joins together the digits. The derived integer value can be 0. This value occurs if the content of the first digit field is 0 and the second digit field is 2. The other digits fields are 0. The integer value derives the DMS switch routing table and index.

An explanation of the mapping algorithm in use appears in the following table.

Trunk group routing index to routing tables and index (Sheet 1 of 2)

DMS routing table	DMS routing index	Trunk group routing index
OFRT	1 to 1023	1 to 1023
OFR2	1025 to 2047	1 to 1023
OFR3	2049 to 3071	1 to 1023
OFR4	3073 to 4096	1 to 1023
IBNRTE	10241 to 11236	1 to 1023
IBNRTE2	11265 to 12287	1 to 1023

Trigger Processing II (continued)

Trunk group routing index to routing tables and index (Sheet 2 of 2)

DMS routing table	DMS routing index	Trunk group routing index
IBNRT3	12289 to 13311	1 to 1023
IBNRT4	13313 to 14335	1 to 1023

When the system derives the routing table and index, the specified index references the routing table. The DMS switch verifies that the system allows the routing selectors for the AIN call.

The routing selectors that the system supports for the OFRT tables appear in the following table.

Selectors supported for tables OFRT, OFRT2, OFRT3, and OFRT4

Routing selector name	Routing selector
Integrated Service Access	ISA
Two stage outpulsing	TS
Standard digit manipulation	S
No position for AIN failure or ONI	NPOS
Normal outpulsing	N
AFR trigger	AFR
Table	T
Same Table	ST
Directory number	DN

Note: The T selector must reference an index in OFRT, OFR2, OFR3, OFR4, IBNRTE, IBNRT2, IBNRT3, and IBNRT4. The system does not support references to TOPSAMA, TOPS, TTL4, and RRTE. The system treats these routes as routes that are not correct.

Trigger Processing II (continued)

The following table specifies the routing selectors that the system supports for the IBNRTE tables.

Selectors supported for tables IBNRTE, IBNRT2, IBNRT3, and IBNRTE4

Routing selector name	Routing selector
Integrated Service Access	ISA
Standard digit manipulation	S
Normal outpulsing	N
Virtual Facility Group	VFG
Outwats	OW
AFR trigger	AFR
Table	T
Directory number	DN

Note: The number of selectors that the system can encounter while routing through a TrunkGroup parameter is 24.

The DMS switch can determine that the routing index that the SCP/Adjunct specifies is not acceptable. The switch determines this state when the DMS switch converts the digits and verifies the routing selectors. A route list is not acceptable if the list contains selectors that the system does not support. A route list is acceptable when the user enters data in the route list on the switch.

The call can receive AINF treatment. The system can send a Report_Error to the off-board processor that indicates PrimaryTrunkGroup as the wrong data value. These two actions occur if the PrimaryTrunkGroup contains a selector that the system does not support. These two actions also can occur in the following condition. A route list that the T or ST selectors reference contains a selector that the system does not support.

If the call attempts to route through the AlternateTrunkGroup, the call receives GNCT treatment. The T or ST selectors can reference a list or route list. This list or route list can contain SecondAlternateTrunkGroup and a selector that the system does not support. In this occurrence, the call receives GNCT treatment.

An IBN line can trigger in the private dial plan. The system can receive an Analyze_Route or Forward_Call with a TrunkGroup parameter. This

Trigger Processing II (continued)

parameter instructs the call to route to a DN outside the customer group through the DN selector. In these events, the system sends the call to treatment. Examples of private dial plans are Customized Dial Plan, Off-Hook Delay, and Termination. Centrex functionality determines this state. The system must route intragroup calls in the Centrex environment.

RedirectingPartyID

The system receives this parameter in the Analyze_Route message. This parameter is also an implied parameter when the system receives and fills the Forward_Call response. The system fills this response with the redirecting number of the DN that has the Termination Attempt trigger assigned.

In these occurrences, an implied redirection information parameter is present. The system must include this parameter according to the outgoing access. The redirection reason is Unconditional and the redirection counter increases.

Note: The switch does not propagate this parameter when the call terminates to Q.764 ISUP or Q.931 PRI trunks. This parameter does not affect the redirection counter that the system sends over ISUP or PRI facilities. The system uses this parameter when a call terminates to an SMDI interface.

If the call triggers call forwarding from the switch during the call, the system fills the RedirectingPartyID. The system fills the RedirectingPartyID according to the Last Forwarding Station.

ResourceType

This parameter indicates the type of resource to which the user connects. The values that apply are play announcement and collect digits for Release 0.1.

This parameter coded to play announcement must be present in a response package with a Send_To_Resource operation. In other occurrences, the system treats this parameter as a data value error that is fatal and wrong. In a conversation package, this parameter must be coded to play announcement and collect digits.

StrParameterBlock

The StrParameterBlock contains the announcement and digit collection information for the Send_To_Resource operation.

Tcm

The Tcm parameter contains the traveling class mark for the user. The SCP/Adjunct can send this parameter.

Trigger Processing II (continued)

Use of the AINDigits format occurs with the following fields:

- Nature Of Number is set to does not apply
- Numbering Plan is set to not known or does not apply
- Digits contains a Tcm of a maximum of two digits

The system can receive the Tcm in the following SCP-to-SSP response messages:

- If the system returns a Tcm value in Analyze_Route, Forward_Call, and Authorize_Termination messages, the following action occurs. The system uses this value to fill Tcm in outgoing queries that follow.

The system does not use a value that the system receives from the SCP for outpulsing that follows.

Unidirectional package contents

The system sends this message one-way from the SSP to the SCP.

Termination_Notification

The SSP reports Termination_Notification to the SCP when the system receives a Send_Notification request. The Termination_Notification message contains termination information about an AIN call after the call reaches a NULL point in call state. The call can reach this state after one of the following conditions occurs:

- The called party answers the call.
- The system clears the call.
- The call is busy.
- The call does not complete.

The system sends one Termination_Notification message for each request. Call termination types are:

- call answered
- call answered
- call busy
- caller abandon
- basic call exception
- AIN related error condition

Trigger Processing II (continued)

When the called party answers the call, the Termination Notification message provides the connect time period of the call with an answer indication. This message provides a termination reason indicator for a call that does not complete.

The message consists of the EchoData and TerminationIndication required parameters, and the ConnectTime and BusyCause optional parameters.

The EchoData parameter contains the same value that the system receives in the Send_Notification message.

The TerminationIndication parameter indicates how the call reaches the NULL point in call. A bit can be set for answer, busy cause, unrelated error condition, exception, or Network Management control list overflow indication. The default value is 0. Except for Network Management control, one bit is set for a call. Answer indication activates the ConnectTime parameter. Busy cause indication activates the BusyCause parameter.

Note: The system can receive an automatic code gapping (ACG) component in the same package as a Send_Notification request. The ACG control list can overflow. In these occurrences, the Network Management control list overflow indication does not reflect this overflow occurrence.

The ConnectTime parameter contains the elapsed time of a completed call. This parameter contains the same value as in the Elapsed Time field of a generated AMA record. The time values are minutes, seconds, and tenths of seconds.

The BusyCause parameter specifies the reason for a call that does not complete when the system encounters a busy event. This parameter can specify the reason for a call that does not complete when the caller abandons the call. The caller can abandon the call after the system sends a query package. The caller must abandon the call before the system receives the response and the T1 timer expires. This parameter contains the following data:

- a cause value that indicates the reason for the busy call
- a cause class that categorizes the cause values
- a general location that indicates the call type
- the coding standard that the switch fills as CCITT

Note 1: An INTERswitch call with an SSP can receive an SS7 Release message with an ISDNUP Cause Indicators parameter. In this occurrence, the system fills BusyCause with the contents of Cause Indicators.

Trigger Processing II (continued)

Note 2: Some ISUP calls do not generate an SS7 Release message. The calls do not generate this message because the treatment procedure selector at the terminating office for the call is LOCAL. For these calls, the system does not fill a BusyCause at the originating office. The system plays the treatment announcement local at the remote office. An Exception Indication is set for the busy calls. The system receives BusyCause indication at the terminating office.

Note 3: Some ISUP calls generate the SS7 Release message. The calls generate this message because the treatment procedure selector at the terminating office for the call is NOLOCAL. For these calls, the system fills the BusyCause indication at the originating office for a busy call. A busy treatment does not apply at the terminating office. The system does not fill BusyCause. An Exception indication is set at the terminating office for the busy calls.

Note 4: The system routes some calls over PRI and PTS trunks. Some of these calls cannot complete at the terminating office. For these calls, the system does not fill the BusyCause parameter at the originating office. An Exception indication is set at the originating office for a busy call. The system supports the BusyCause indication at the terminating office.

Note 5: For an INTRAswitch call, the system fills the BusyCause parameter according to the procedures for the ISDNUP Cause Indicators parameter. The TR-NWT-000317, TR-NWT-000394, and TR-NWT-000444 define these procedures.

Error processing

Descriptions of the error processing sequences for AIN Essentials appear in the following sections.

Treatments

Two types of treatments appear in the following descriptions:

- The system applies the AIN Disconnect Call (AIND) treatment when the SCP/Adjunct sends the message to the SSP to disconnect the call. For a leg that is end-to-end ISDN, or for an SS7 trunk, the treatment maps to cause #16, *normal clearing*. An end-to-end ISDN is a leg from the SSP to the end user. The system clears the call as normal. For the non-ISDN users, the system routes the call to the entered treatment.
- The system applies the AIN Final (AINF) treatment when a call-related fatal error occurs. This error can be a protocol or an application error. The system sends the calls that automatic code gapping (ACG) gaps, to AINF.

Trigger Processing II (continued)

Protocol errors

Descriptions of TCAP protocol errors that are fatal appear in the following section:

- The SSP can detect a TCAP protocol error that is fatal in a message from the SCP/Adjunct. In this occurrence, the SSP discards the received message and provides final treatment.
- The SSP can receive a TCAP package from the SCP/Adjunct that reports a TCAP protocol error that is fatal. The TCAP package is not always a unidirectional package. In this occurrence, the SSP provides the final treatment.

A description of TCAP protocol errors that are not fatal appears in the following section:

- The system discards optional parameters that are not correct from a TCAP message. These errors are TCAP protocol errors that are not fatal. The SSP continues normal call processing.

Application errors

The SSP handles fatal application errors in the following way:

- The SSP applies AIN final treatment to fatal application errors.
- The SSP provides final treatment when the SSP detects a fatal-response message timer expired error. The SSP provides this treatment while the SSP waits for a response message from the SCP/Adjunct.

Examples of fatal application errors appear in the following section:

- An SS7 outage manifests as a fatal-response message timer expired application error. The SSP provides final treatment. The type of trigger does not determine application of the final treatment.

Note: This event can have an important effect on the ability to place 911 calls. This event can affect the N11 type triggers and the off-hook immediate trigger.

- The SSP can receive a Cancel_Resource_Event message that is not expected. In this occurrence, the SSP treats the message as a fatal message error that is not expected and provides final treatment.

Trigger Processing II (continued)

- The SCP can send a Request_Report_BCM_Event message along with the call-related message in response to an R01 query. A protocol error can occur. In this event, the system routes the call to final treatment.
- When the SSP receives a Send_To_Resource reply message that contains a DestinationAddress parameter in response to an R01 query,
 - the connection to an external intelligent peripheral (IP) does not occur
 - a protocol error occurs
 - the SSP routes the call to final treatment

Note: The SSP processes Service Enablers next event list (NEL) functionality and connections to an external IP. Enter triggers as R02 and enable AIN Service Enablers SOC option AIN00210.

The SSP handles fatal application errors that are not fatal in the following way:

- If the SSP receives an SCP message that contains a parameter that is not correct, the following condition applies. The operation can occur if the system drops the parameter.
- If the SSP receives a message that does not have a conditional parameter, the operation can occur. One of the following conditions enables the operation to occur. The missing conditional parameter is not required. The SSP can provide a default value.
- The following condition applies for Send_To_Resource. The SSP can receive a message in a conversation TCAP package type while the SSP expects a response TCAP package type.

The SSP continues normal call processing in the presence of application errors that are not fatal.

Resource failures

A resource failure can occur if the SSP receives a message that the SSP cannot process. The SSP cannot process the message because switch hardware or software resources are not available, or fail. The SSP cannot process the message because the failure is not one of the more specified failure causes.

Examples of resource failures appear in the following section:

- A failure to allocate enough large feature data blocks (FDB) can occur. Queries or response processing do not always require the AIN extension

Trigger Processing II (continued)

blocks. In this event, the SSP routes the call to No Software Resource treatment.

- The number of attempts to trigger during a call can be greater than the office parameter `AIN_MAX_SERIAL_TRIGGERS` entered in table `OFCENG`. In this occurrence, the SSP routes the call to final treatment.
- The SSP attempts to fill the required parameters to formulate the query or response message. If the SSP cannot fill these parameters, the SSP routes the call to final treatment.
- The SSP routes the call to treatment if one of the following events occurs:
 - The `Analyze_Route` or the `Forward_Call` messages does not contain parameters.
 - The parameters in these messages contain data that is not correct.
- During the `Analyze_Route` operation:
 - If the call cannot get the routing characteristic extension block, the SSP routes the call to No Software Resource treatment.
 - If the system encounters an error during translations, the SSP routes the call to the correct treatment.
 - If every possible route is busy, the SSP routes the call to the generalized no circuit (GNCT) treatment.
- The SSP routes the call to the final treatment if
 - the system returns a continue message at the info analyzed TDP
 - the call does not have enough information to terminate

Final treatment

To provide final treatment for a call, the SSP performs the following actions:

- The SSP closes the transaction, if transaction was not closed earlier.
- The SSP cancels the remaining T1 timers, if timers were not cancelled earlier.
- The SSP determines the type of error notification. The error notification can be reorder tone or announcement. The operating company administers notification for each office.
- For ISDN users or PRI trunks, this treatment maps to cause #41, *temporary failure*.

Trigger Processing II (continued)

T1 timer expiry

If the T1 timer expires, the SSP did not receive a message from the SCP/Adjunct in an acceptable time. The SSP treats this error as a fatal application error.

DISC treatment

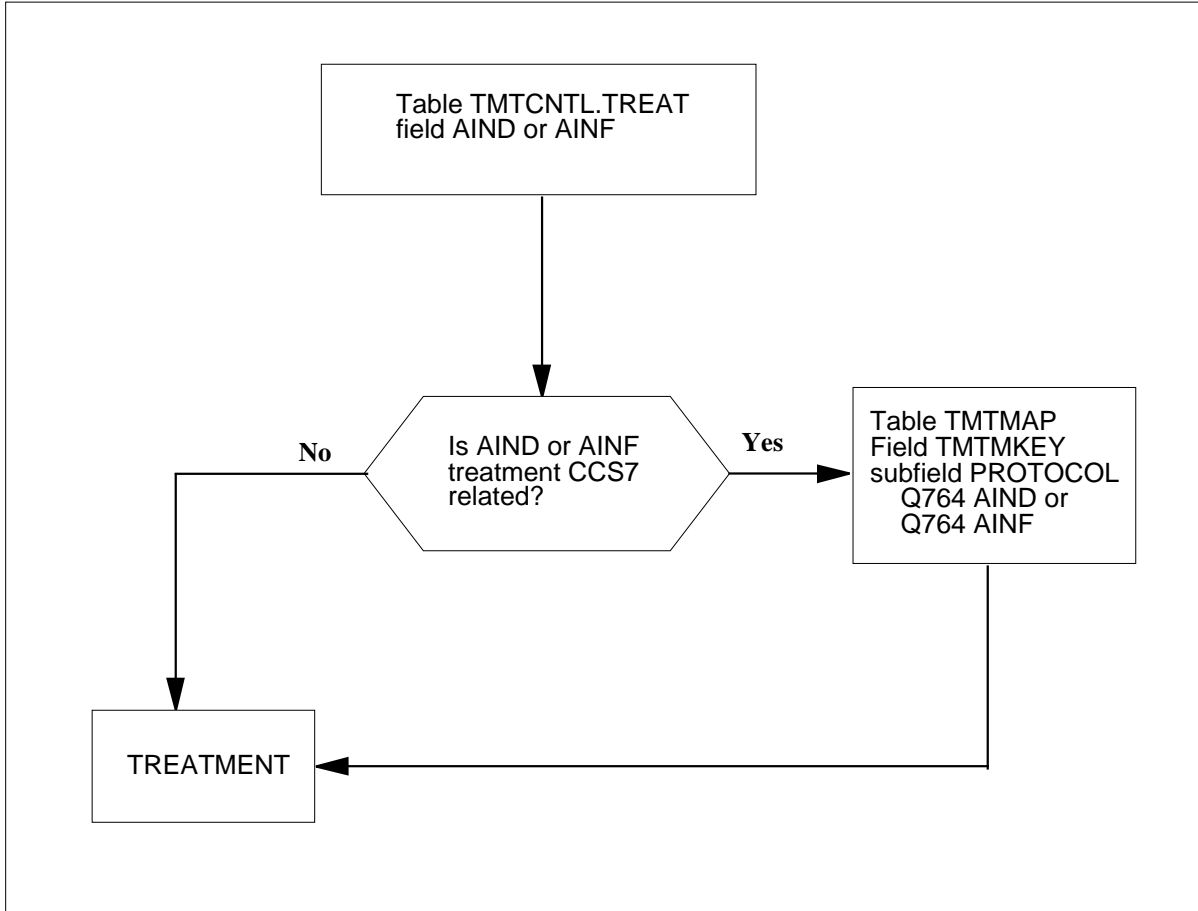
The SSP applies this treatment when a terminating announcement is complete and the user remains offhook. A service can provide a terminating announcement after an OFFHKIMM trigger. If the operating company wants this service, personnel must not enter this treatment to idle the call immediately. This action can cause query loops if the user remains offhook after the announcement plays. Personnel must enter this treatment to route to lockout. If this action is not possible, personnel must record the announcement with a silence period at the end.

Translations table flow

The Trigger Processing II translation process appears in the following flowchart.

Trigger Processing II (continued)

Table flow for Trigger Processing II



The datafill content used in the flowchart appears in the following table.

Datafill example for Trigger Processing II (Sheet 1 of 2)

Datafill table	Example data			
TMTCNTL.TREAT	TREATMT	LOG		FSTRTE
	AIND	N	S	T120
	AINF	Y	S	T120
TMTMAP	TMTMPKEY			TMTMPVAR

Trigger Processing II (continued)**Datafill example for Trigger Processing II (Sheet 2 of 2)**

Datafill table	Example data						
	Q764	AIND	ALLBC	ISUP	NOLOCA L	NORMCLR	LOCNET N
	Q764	AINF	ALLBC	ISUP	NOLOCA L	TEMPFAIL	LOCNET N

Limits

The following limits apply to the Trigger Processing II feature:

- The DMS switch does not support the following values for the UserID parameter query population:
 - [2] IMPLICIT SEQUENCE (IsdnInterfaceID, SPID, DN) BRI (ISDN)
 - [3] IMPLICIT IsdnInterfaceID - PRI (ISDNII)
 - [4] IMPLICIT CallingPartyBGID
 - [7] IMPLICIT Mlhg
 - [8] IMPLICIT RouteIndex
 - [9] IMPLICIT PrimaryTrunkGroup
- The switch does not support local access and transport area (LATA) for the following states:
 - states that are not equal access end office (EAEO). The LATA is available when the customer has equal access software.
 - states of private facilities that make private calls because an open issue to Bellcore is present. This issue questions if the SSP must send LATA for private facilities that remain in the private environment.
 - states of incoming trunks that have a LATA for LATA screening only at times when table TRKLATA contains entries
- The DMS switch does not support the following values for the NATURE OF NUMBER field for CollectedAddressInfo and CalledPartyID:
 - 950+ call from local exchange carrier public station or hotel/motel line or non EAEO.
 - test line test code

Note: The switch does not support these values because a means of triggering is not available.

Trigger Processing II (continued)

The switch does not support the AccessCode parameter for the following codes:

- attendant access code
- feature access code, other than SCP-defined feature access code. The switch does not support the parameter for this code because a requirement is not present in a specified section. This section is TA-NWT-001284, *AIN 0.1 Switching Systems Generic Requirements, Issue 1, January 1992*. One exception is an SCP-defined feature code access.

Note: Requirement (R) 2.6-30 indicates that the switch must not fill access codes that escape to the public office dial plan. The switch must not fill these codes in the Info_Collected query to the off-board processor. The switch does not fill the POTS escape codes as the AccessCode parameter in the query.

- the SCP-defined feature access code at the OFFHKDEL trigger when the triggering agent is an RES line. In this occurrence, the switch uses the VerticalServiceCode to fill the access code in the query message.

The switch supports the CallingPartBGID parameter population for the CDP trigger.

The AIN Essentials does not support the following MBG network features:

- Network Wide Ring Again
- Network Attendant Console
- Network Name and Number Display
- Network Message Service

Note: The switch uses a common procedure to fill the ISDN user part (ISUP) multibusiness group (MBG) and CallingPartyBGID parameters. The switch fills fields that Bellcore requires to be hard-coded for the CallingPartyBGID parameter. The switch fills these fields separately from the ISUP MBG parameter fields. Now (NA007) the ISUP MBG parameter supports the No Indication value as the value for the subgroup ID field. The ISUP MBG parameter population can evolve to Bellcore compliance for the subgroup ID field. In this occurrence, the CallingParty BGID parameter supports the subgroup ID population.

Trigger Processing II (continued)

The switch supports ChargePartyStationType with the following limits:

- The appropriate DMS packages must be available. For example, the switch supports interLataRestHotel if the office of the customer is an EAEO.
- The switch supports values that the DMS MF supports and ISUP protocols for ISUP and MF trunks as appropriate.
- The switch does not support AIN Essentials value for originating line facilities. The value does not have support because TR-NWT-001284 does not describe when to use AIN Essentials to fill the parameter. The AIN 0.1 Switching Systems Generic Requirements, Issue 1, January 1992 contains TR-NWT-001284.

The switch support of PrimaryCarrier has the following limits:

- The switch does not fill primary carrier for non-EAEO. Point in call is available if the customer has equal access software.
- The switch only fills the primary carrier in the Resource_Clear message if the subscriber dials carrier access code.
- The switch fills the primary carrier as LEC if the call is operator assisted.
- The switch does not fill the primary carrier after a forward_call response and the forwarding agent is a virtual DN.
- The switch does not fill the primary carrier for an equal access tandem office in send-to-resource normal digit collection.

The switch does not support the VerticalServiceCode parameter for the following codes:

- SSP vertical service codes. The switch does not support this parameter for these codes because the switch does not support feature interactions with public features.

The switch supports the TCM parameter with the following limits:

- The TCM parameter is not part of the termination attempt query message.
- The switch does not fill the TCM parameter when the two conditions that follow are present. The originating access is an SS7 trunk. The received IAM contains the generic digits parameter with the type of digits specified as *private network travelling class mark*.

Do not use the table control to enable coin subscription to triggers that the switch cannot support.

Trigger Processing II (continued)

The DisplayText parameter applies to RES and MDC agents. The switch supports these agents with the following limits:

- The system cannot perform the delivery of the calling information to offhook sets.
- The parameter does not support delivery through single data message (SDM) format. The office can use SDM format for CND in table RESOFC. The SSP can receive DisplayText number information from the SCP. In this occurrence, the system performs delivery through the MDM format.
- The SSP can receive the DisplayText calling name information on a trunk-originating call that is not ISUP. In this occurrence, the system delivers a reason for absence of out-of-area (O) to the terminating agent for the name. The ISUP supports the GenericName parameter in the DMS switch. The GenericName parameter carries the blocking code that the originator activates.
- The switch does not support ISDN lines as AIN0.1 DisplayText subscribers.
- Terminating MDC agents with DisplayText functionality can obtain the calling name, number, dateTimeOfDay, IBN only, from the AIN0.1 SCP. The agent obtains the called name, number, and redirecting name or number from the local database. The agent can obtain this data when the data is in the Reason display at the terminating party.
- For Network Name Display with AIN0.1 DisplayText for MDC Agents feature, the terminating MDC agent with display functionality can obtain data. The agents obtain the the calling name, number and dateTimeOfDay, IBN only, from the AIN0.1 SCP. The agents obtain the called name, number, and redirecting name or number from the local database. The agent can obtain this data when the data is in the Reason display at the terminating party.
- The number of characters in the Name field must not exceed 15. The number of digits in the Number field must not exceed 10. When the SCP sends more than 15 characters in the callingPartyName field, the SSP reduces the name to 15 characters. The SSP sends the name to the display of the terminator. When the SSP receives more than 10 digits in the CallingAddress field, the SSP reduces the number to 10 digits. The SSP sends the number to the display of the terminator.
- The switch does not support the DateTimeOfDay field in the DisplayText parameter for MBS and EBS lines.
- The ISUP supports the GN parameter. This parameter carries the blocking code for name display that the originator activates. The SSP can receive and trigger AIN0.1 DisplayText calling name information because of a

Trigger Processing II (continued)

trunk-originated call that is not ISUP. In this occurrence, the terminating agent receives a reason for the absence of O.

The switch does not support BRI buffered digits during a Send_To_Resource conversation response. The DMS switch does not accept the following digits for Send_To_Resource digit collection as a part of a digit stream. The digit stream is in the CDN or KP information element in a SETUP or INFO message for the DMS.

The DATA and PDATA lines require line card NT6X71AA or NT6X71AB.

The switch does not support E911 VFGs.

The system blocks OFFHKIMM and AFR triggers. The SERVORD denies the assignment of these triggers to Coin or WATS agents.

Interactions

Refer to *Advanced Intelligent Network 0.1 Feature Interactions*, 297-5161-107.

Activation/deactivation by the end user

The Trigger Processing II feature does not require activation or deactivation by the end user.

Billing

The 15-Digit IDDD feature changes AMA to append a new module E.164 to a billing record. This billing record requires that the system record an international number that a caller dials with more than 12 digits. The E.164 is not only for AIN.

The AIN Essentials billing for a trigger applies when the system encounters an AIN TDP on a Group Intercom (GIC) call. The trigger requirements must be met. This condition can occur at the following TDPs:

- Origination Attempt when the originating GIC call is from a 2500 set
- Termination Attempt when the system terminates a GIC originated call to a 2500 set. In this set, the GICNOCFW option is not assigned to the customer group of the terminator.

The system generates the ISDN Core module code 070/071 when the following conditions occur:

- the originating BRI line subscribes to ISDNAMA option
- the ISDNCIRCUIT is in field OPTION in table AMAOPTS

Trigger Processing II (continued)

For calls that originate from BRI, module 070/071 can append to the AIN AMA structure.

The AIN 0.0 to AIN 0.1 interworking does not affect billing. The SSP handles billing in each application without interworking.

The VFG terminating billing option (TBO) provides a billable method with which to charge the terminator for a call. This method provides an option other than caller pay. The TBO creates a billing record when a caller terminates to a line that has TBO assigned.

Station Message Detail Recording

Station Message Detail Recording supports AIN Essentials calls. Enter the AIN01 entry in field OPTIONS in table CUSTSMR. Addition of the AIN01 option to a customer group causes an extension record to append to SMDR billing records (DF04). These billing records are for AIN Essentials calls for which the SCP returns correct billing information.

The SCP response returns a 10-digit number. This number overwrites the Called Number (CLD NO) field of the SMDR record. The SCP responses are Off-Hook Immediate, Off-Hook Delay, and CDP Feature Access Code triggers.

The following condition applies for the virtual DN Termination Attempt trigger. The Called Number field of the SMDR records of the first leg contains the 10 digits of the virtual DN. For the physical DN, the Called Number field contains the dialed digits.

You can enter the SMDR option on the originating agent of an Off-Hook Immediate or an Off-Hook Delay trigger. When you do not enter this option, the AIN response translation controls the SMDR record generation. The SCP overwrites the request that the originating translation issues.

An Off-Hook Delay (OFFHKDEL) subscriber can make a call with AUTH (or ACCT) optional feature. The call hit can trigger OFFHDKEL with an Analyze_Route response that the SCP returns. In this occurrence, the called number (CLD NO) field in the SMDR record has the digits that the CalledPartyID response parameter contains. When the system uses the AUTH or ACCT Last feature in the same state, the CLD NO field contains the dialed digits.

The DATA and PDATA line agents use Bellcore AMA Format (BAF) recording for AIN Essentials.

Trigger Processing II (continued)**Datafilling office parameters**

The Trigger Processing II feature uses office parameters. These office parameters appear in the following table. Refer to *Office Parameters Reference Manual* for additional information about office parameters,

Office parameters by Trigger Processing II (Sheet 1 of 5)

Table name	Parameter name	Description
OFCENG	AIN_NUM_EXT_BLKs	<p>This parameter determines the number of AIN feature extension blocks allowed in the office.</p> <p>The SSP uses the AIN feature extension block to query the SCP. If under provisioned, the SSP routes AIN calls to no software resource (NOSR) treatment. If over provisioned, impact of data store that is not used is present.</p> <p>Enter a value from 0 to 32767. The default value is 0.</p>
OFCENG	AIN_NUM_PROCESSING_EXT_BLKs	<p>This parameter determines the number of AIN processing extension blocks allowed in the office.</p> <p>The SSP uses the AIN processing extension block to query the SCP and process the response. If under provisioned, the SSP routes AIN calls to NOSR treatment. If over provisioned, impact of data store that is not used is present.</p> <p>Enter a value from 0 to 32767. The default value is 0.</p>

Trigger Processing II (continued)

Office parameters by Trigger Processing II (Sheet 2 of 5)

Table name	Parameter name	Description
OFCENG	AIN_NUM_TERM_NOTIF_EXT_BLKs	<p>This parameter determines the number of extension blocks of AIN termination notification allowed in the office. The system uses these extension blocks to process the AIN response with Send_Notification request.</p> <p>The calculation starts with the average number of AIN calls that occur at the same time. The calculation process multiplies this number by the average number of Send_Notification requests for each AIN call.</p> <p>Enter a value from 0 to 32767. The default value is 200.</p>
OFCENG	AIN_NUM_00_PARA_EXT_BLKs	<p>This parameter defines the size of the pool of AIN_00_PARA_EXT_BLK available for AIN 0.0 calls that can encounter AIN Essentials. This extension block maintains call information that the AIN 0.0 SCP provides. The system can require this information to fill an AIN Essentials query that follows.</p> <p>The value of this parameter must be set to the following result. This result is the number of CCB multiplied by the fraction of calls that can encounter AIN 0.0 triggers. The value always must be less than the number of CCB, NCCBS in table OFCENG.</p> <p>Enter a value from 0 to 32767. The default value is 300.</p>

Trigger Processing II (continued)**Office parameters by Trigger Processing II (Sheet 3 of 5)**

Table name	Parameter name	Description
OFCENG	AIN_NUM_01_00_EXT_BLK	<p>This parameter defines the size of the pool of AIN_01_00_EXT_BLK available for calls that involve triggers to AIN Essentials and AIN 0.0. This extension block tracks which AIN applications last altered common data for calls that involved AIN Essentials and AIN 0.0 triggers.</p> <p>The value of this parameter must be less than or equal to the value of AIN_NUM_00_PARA_EXT_BLK. The system uses this extension for calls that encounter triggers in AIN 0.0 and AIN Essentials.</p> <p>Enter a value from 0 to 32767. The default value is 150.</p>
OFCENG	NO_OF_HIS_CONTROL_BLK	<p>This system uses this parameter for AIN through the call, from call setup to call takedown. The parameter determines the number of history control blocks for the office.</p> <p>The value for the parameter must increase in offices where AIN is active, and AIN subscribers are present. The value must be set to the total number of AIN subscribers in the office. The subscribers can be an individual, group or office. The AIN traffic does not affect the setting. If the history control blocks are under provisioned, the SSP blocks every call that can trigger. The SSP sends these calls to NOSR treatment. If over provisioned, impact of a data store that is not used occurs.</p> <p>Enter a value from 0 to 32767.</p>

Trigger Processing II (continued)

Office parameters by Trigger Processing II (Sheet 4 of 5)

Table name	Parameter name	Description
OFCENG	NUM_RC_EXT_BLKs	<p>This system uses this parameter for AIN to determine the number of routing characteristic extension blocks at a specified time. This time is when the system translates AIN Analyze_Route or Forward_Call responses.</p> <p>The value for the parameter must increase in offices where AIN is active, and AIN subscribers are present. Calls that receive Analyze_Route or AIN Forward_Call responses use routing characteristics to translate and route the response. Review of the parameter must occur to make sure the parameter can account for these additional users.</p> <p>Enter a value from 0 to 32767.</p>

Trigger Processing II (continued)**Office parameters by Trigger Processing II (Sheet 5 of 5)**

Table name	Parameter name	Description
OFCENG	NO_OF_FTR_XLA_DATA_BLKs	<p>The system uses this parameter for AIN to determine the number of extension blocks for data feature translation. If the parameter is set too low, the setting affects AIN, and other features.</p> <p>If not enough extension blocks are available, the AIN feature cannot collect digits that follow that an AIN Send_To_Resource response message requests. The AIN feature cannot collect digits when normal digit collection that follows must occur. The requirement of this digit collection occurs when the system encounters the AIN Customized Dial Plan Vertical Service Code trigger. The system can encounter this trigger in table IBNXLA or table XLANAME. The message requests normal digit collection.</p> <p>Enter a value from 0 to 32767.</p>
OFCENG	NO_OF_HIS_DATA_BLKs	<p>The system uses this parameter for AIN to determine the number of extra large history data blocks (XLarge HDB). Size must increase to accommodate DisplayText functionality. Set this parameter before you turn on DisplayText functionality through SOC.</p> <p>Calls can receive the DisplayText parameter and terminate on a DisplayText supported agent. Each of these calls requires an XLarge HDB. The system keeps the HDB for the complete period of the call.</p> <p>Enter a value from 0 to 32767.</p>

Trigger Processing II (continued)

Datafill sequence

The tables that require datafill to implement the Trigger Processing II feature appear in the following tables. The tables appear in the correct entry order.

Datafill requirements for Trigger Processing II

Table	Purpose of table
TMTCNTL.TREAT	The Treatments Control Subtable contains information that defines tones, announcements, states or mixed groups of these indicators. These indicators return to the originator of a call if the system encounters a specified treatment code during call translations.
TMTMAP	The Treatment Map table provides mapping of DMS treatments to call failure messages that some CCS7 protocols support.

Datafilling table TMTCNTL.TREAT

The datafill for Trigger Processing II for table TMTCNTL.TREAT appears in the following table. Fields that apply to the Trigger Processing II feature appear in the table. See the data schema section of this document for a description of the other fields.

Datafilling table TMTCNTL.TREAT

Field	Subfield or refinement	Entry	Description
TREATMT		AIND or AINF	Treatment. Enter AIND for AIN Disconnect treatment to apply when a call disconnects because of the request from the SCP/Adjunct. Enter AINF for AIN Final treatment to apply when a fatal error that relates to a call occurs.
LOG		Y or N	Log. Enter Y to have trunk or line message 138 printout each time the SSP routes translations to a treatment. In other occurrences, enter N.
FSTRTE		see subfields	First route.
	FSTRTSEL	S	First route selector.
	CLLI	alphanumeric (1 to 16 characters)	Common language location identifier. Enter the CLLI of the tone to which translation routes.

Datafill example for table TMTCNTL.TREAT

Sample datafill for table TMTCNTL.TREAT appears in the following example.

Trigger Processing II (continued)

MAP example for table TMTCNTL.TREAT

TREATMT	LOG	FSTRTE
AIND	N	S T120
AINF	Y	S T120

Datafilling table TMTMAP

The datafill for the Trigger Processing II feature for table TMTMAP appears in the following table. Fields that apply to the Trigger Processing II feature appear in the table. See the data schema section of this document for a description of the other fields.

Datafilling table TMTMAP (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Description
TMTMPKEY		see subfields	Key to table TMTMP. This field contains subfields PROTOCOL, TMT, and BC_CT.
	PROTOCOL	Q764	Protocol. Protocol to use.
	TMT	AIND or AINF	Treatment Code. Enter a treatment that table TMTCNTL defines.
	BC_CT	ALLBC	Bearer capability call type. Enter the specified Bearer Capability type that must map in a different way from other Bearer Capability call types.
TMTMPVAR		see subfield	Treatment map variable. This field contains subfield FORMAT.
	FORMAT	ISUP	Protocol format. Enter protocol format to use. Enter data for refinement ISUPPROC.
	ISUPPROC	see subfields	ISUP procedure. This subfield contains selector TMTPROC and subfields CAUSE, LOCATION, and LOG.

Trigger Processing II (continued)

Datafilling table TMTMAP (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Description
	TMTPROC	INTLOCAL, ISDNLCL, ISDNRTE, ISLOCAL, LOCAL, or NOLOCAL	Treatment procedure selector. Entry LOCAL does not have subfields. Entries ISDNRTE and IADNLCL have the subfields CAUSE and LOCATION. Entries INTLOCAL, ISLOCAL, and NOLOCAL have the CAUSE, LOCATION, and LOG subfields.
	CAUSE	ADDINCOM, CSE_30, CALLREJ, DOOSRVC, FACREJ, MISDTRPR, NOANSWER, NORMCLR, NRTODEST, NOUSRESP, NORMUNSP, NUMCHANG, NRTOTN, SSINFTN, UNALLOC, USERBUSY, CHANUNAV, NOCIRCAV, NPMPTCKT, NTWKOOO, PREEMPT, RESUNAV, SWEQCONG, TEMPFAIL, UINFDISC, BCNAUTH, BCNAVAIL, SONAVAIL, or BCNIMPL	ISUP cause.

Trigger Processing II (continued)

Datafilling table TMTMAP (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Description
	LOCATION	USER, PRIVNET, LOCLNET, TRANSNET, RLOCLNET, RPRIVNET, LICBS, INTLNET, SP1, SP2, UNKNOWN.	Cause indicator location.
	LOG	Y or N	Log. Enter Y to generate TRK138. In other occurrences, enter N.

Datafill example for table TMTMAP

Sample datafill for table TMTMAP appears in the following example.

MAP example for table TMTMAP

TMTMPKEY				TMTMPVAR		
Q764	AIND	ALLBC	ISUP	NOLOCAL	NORMCLR	LOCNET N
Q764	AINF	ALLBC	ISUP	NOLOCAL	TEMPFAIL	LOCNET N

The assignment of a BGID to a customer group occurs through table BGDATA. The subfield MBG in table BGDATA specifies if the BG-to-customer-group link is for MBG services or other services. An example of a service is basic business group (BBG). These services can require a BGID. Correct entries are Y and N.

The BG (COMKODAK1) that appears in the following example is not an MBG.

Trigger Processing II (continued)

Datafill in Table BGDATA for a BBG

BGID	BGXLA OPTIONS
-----	-----
LOCAL 2	
	\$
	(CUSTGRP COMKODAK1 N 22 Y 0 0) \$

The TRAVER command line accepts an MBG optional parameter. This parameter is only available when the originating agent is a trunk. Enter standard TRAVER command line parts. After you enter the TRAVER command and the data for the MBG, specify the keyword MBG. Specify the BGID, the line privilege (LP), and the generic address parameter (GAP). The system uses the GAP to transport private numbers. Entry of N for the GAP implies that a GAP does not associate with the incoming call.

To make an MBG call with a GAP, enter data in table BGLOCN. Enter the data in the following way:

Datafill in Table BGLOCN

BGLOCNKY	ROUTEDN	REPDIGS
-----	-----	-----
COMKODAK 22	3022000	3
	\$	

Possible TRAVER command line sequences include:

- TRAVER TR ISUPTI 7234071 B for a standard call
- TRAVER TR ISUPTI MBG LOCAL 2 0 N 7234071 B for an MBG call without a GAP
- TRAVER TR ISUPTI MBG LOCAL 2 0 34071 7244118 B for an MBG call with a GAP

Tools for verifying translations

The Trigger Processing II feature does not use tools for verifying translations.

Trigger Processing II (end)

SERVORD

The Trigger Processing II feature does not use SERVORD.

7 Introduction to AIN Service Enablers

AIN Service Enablers

The advanced intelligent network (AIN) Service Enablers-Phase 1 (NA007) provides the first AIN Service Enablers (SE) product with building blocks for key services.

The table that follows lists AIN Service Enablers functionality for each release.

Table 7-1 AIN SE release functionality (Sheet 1 of 6)

Release	Functionality
NA015	adds Extended Ringing to External IP functionality enhances Extended Ringing with internal resource functionality adds SFC/PFC customer group subscription functionality adds line option AINDENY adds DP-to-DTMF Conversion functionality enhances trigger Line Attributes Response Processing (LARP) functionality adds LARP support for N11 functionality adds LARP support for PFC trigger functionality supports SOC for NA015 functionality upgrades tools: <ul style="list-style-type: none"> • AINTrace • TSTQUERY • TRAVER

Table 7-1 AIN SE release functionality (Sheet 2 of 6)

Release	Functionality
NA014	<p>adds Carrier Usage Parameter Processing functionality</p> <p>adds register TSTRSA to OM group AINOGSUB</p> <p>adds Term Resource Available (TRA) trigger processing functionality</p> <p>adds entry 22 (for trigger TRA0 to suboption TDP of tables DNFEAT and TRIGITM)</p> <p>supports SOC for NA014 functionality</p> <p>upgrades tools:</p> <ul style="list-style-type: none"> • AINTrace • TstQuery • TRAVER • AINMQG • DISPCALL • CCBDUMP
NA013	<p>provides Multiple Extended TCAP Transactions (METT) in OCM functionality</p> <p>provides Create_Call functionality</p> <p>supports SOC for NA013 functionality</p> <p>upgrades tools:</p> <ul style="list-style-type: none"> • AINTrace • TRAVER <p>provides AIN-DCR Interworking (Canadian market only):</p> <ul style="list-style-type: none"> • DCR handicap removal • TRAVER support for AIN-DCR Interworking • AFR trigger and Netbusy EDP-R interworking with DCR • DCR route selector for AIN response processing <p>supports the triggers listed in the "Agent support" chapter of the Advanced Intelligent Networks Service Implementation Guide.</p> <p>Note: Feature Off-Hook Delay (OHD) Trigger on PX Trunks uses software optionality control AIN00061. The DMS-100 product does not support this feature.</p>

Table 7-1 AIN SE release functionality (Sheet 3 of 6)

Release	Functionality
NA012	<p>supports AIN trigger and NEL after redirections take place</p> <p>removes code for table control, SERVORD, and TRAVER</p> <p>enhances SSP processing of AIN SCP originated Monitor_For_Change</p> <p>allows the service provider to continue to provide ringing to the called party while the caller is played an announcement and prompted for digit collection.</p> <p>allows AIN DisplayText to work with ISDN BRI agents</p> <p>allows line attributes to be assigned against individual SDS trigger items in table TRIGITM</p> <p>stores routing information for each leg of the call</p> <p>introduces log DFIL320 (generated when the system cannot derive an RCNAME while performing ISDN translations the SCP sends an AIN AnalyzeRoute, or ForwardCall, or SendtoResource to IP response.)</p> <p>introduces log AIN304</p> <p>provides MADN support for DisplayText</p> <p>supports SOC for NA012 functionality</p>
NA011	<p>AIN prefix triggers: Specified_Carrier, One_Plus_Prefix, International, Operator_Services</p> <p>Offer_Call response message</p> <p>expansion of table DNFEAT</p> <p>secondary directory number subscription enhancement</p> <p>AIN on attendant console Send_To_Resource (STR) basic</p> <p>enhancements to network tools AINTrace TSTQuery TRAVER, AINMQG option</p> <p>enhancements to TCAP TRID management</p> <p>AIN Primer (AIN 0.0) retirement</p> <p>SOC support for NA011 functionality</p> <p>enhancements to automatic message accounting (AMA)</p>

Table 7-1 AIN SE release functionality (Sheet 4 of 6)

Release	Functionality
NA010	originating call model trigger: Channel_Setup_PRI terminating call model triggers: T_Busy and T_No_Answer terminating call model event: T_Answer/BCM a control message: Collect_Information enhancements to several AIN network tools AINTRACE TRAVER, and its AINMQG option TSTQuery extensions to the trigger item provisioning interface to allow provisioning of triggers that apply to groups and lines enhancements to the Update, and Update_Success messages enhancements to Automatic Message Accounting (AMA) expanded SOC options AIN message processing upgrades Escape OHD intercom for CENTREX Service Administration PRI FIE Expansion ACR trunk group/carrier routing control enhancements

Table 7-1 AIN SE release functionality (Sheet 5 of 6)

Release	Functionality
NA009	<p>attendant console support for office-wide triggers</p> <p>VAPN support for triggers Off_Hook_Delay and Customized_Dialing_Plan</p> <p>messaging enhancements to support the introduction of additional messages and the upgrade of current message parameters</p> <p>upgrades to the processing of the Send_Notification message</p> <p>trigger upgrades, including support for the following response message parameters: CalledPartyID RedirectingPartyID and RedirectionInformation. ForwardCallIndicator CallingPartyBGID NetworkSpecificFacility</p> <p>enhancements to the O_No_Answer trigger and event interaction with 3WC trunks 3WC</p> <p>AIN-VFG interaction enhancements</p> <p>alternate carrier routing enhancements</p> <p>billing enhancements to improve real time performance and to prepare for future functionality</p> <p>network tools upgrades to permit easier exchange of data between TRAVER and TSTQuery</p> <p>additional operational measurements (OM)</p> <p>toll-free service support for TOPS mixed trunks and 00Y codes</p> <p>product control extensions</p> <p>provisioning of office-wide triggers as trigger items</p> <p>SERVORD support for virtual DNs</p> <p>HUGE history data block (HDB)</p>

Table 7-1 AIN SE release functionality (Sheet 6 of 6)

Release	Functionality
NA008	<p>Specific Feature Code (SFC) trigger module, support for AMA codes, parameters, and completion indicator values</p> <p>support for triggers T_Busy and T_No_Answer, module codes, support for AMA</p> <p>support for T_No_Answer, T_Busy, and Network_Busy events</p> <p>support for the ISUP facility message for STR to IP</p> <p>increases the FIE parameter size in PRI messages</p> <p>adds an option to the PRI links that determines when a link can terminate on an intelligent peripheral</p> <p>extends the functionality of STR to intelligent peripherals</p> <p>support for triggers O_Called_Party_Busy and O_No_Answer</p> <p>support for toll-free service on AIN, as specified by GR-2892</p> <p>support GR1298-based AIN query and response messages</p> <p>support for usage-based pricing of AIN Service Enablers</p> <p>provides additional operational measurements</p> <p>support for AIN trace tool to display the AIN Service Enablers messages to and from the SSP</p> <p>increases support for Automatic Code Gapping</p> <p>provides Specific Digit String trigger escape list</p> <p>enhances the QLEN, QDN and QLT functions to display AIN subscription information</p>
NA007	<p>functionality to support provisioning, subscription, triggering, sending a query, receiving a response, feature interactions, SOC and a stable base for the AIN Service Enablers application</p> <p>functionality to process an STR message that requires connecting to intelligent peripheral resources</p> <p>support for the O_Called_Party_Busy and O_No_Answer, and O_No_Answer events as part of AIN Service Enablers call processing</p> <p>support for TCAP-based encoding, decoding and communication with an SCP using the GR-1299</p> <p>PRI enhancements to support FIE for AIN Service Enablers intelligent peripheral connections</p>

Functional groups for AIN Service Enablers

The table that follows lists the AIN Service Enablers ordering codes, functional group names, a description of the ordering code, and requirements.

Table 7-2 (Sheet 1 of 4)

Ordering code	Functional group name	Description	Requirements
AIN00210	Service Enablers Release 1 (NA007) Base	consists of optional state order codes AIN00211, AIN00212, and AIN00213	AIN Services Supporting (AIN00009)
AIN00211	Service Enablers	contains the office-based counts for all office-based messaging	AIN Service Enablers Release 2 (NA008)
AIN00212	Service Enablers	contains the subscription-based counts for all subscription-based messaging	AIN Service Enablers Release 2 (NA008)
AIN00213	Service Enablers	contains the non call-related (NCR) based counts for all NCR-based messaging	AIN Service Enablers Release 2 (NA008)
AIN00220	AIN Service Enablers Release 2 (NA008) Base	controls alternate carrier routing (ACR)	Service Enablers (AIN00220)
AIN00230	AIN Service Enablers Release 3 (NA009) Base	consists of optional state order code AIN00231	Service Enablers (AIN00230)
AIN00231	AIN Service Enablers (NA009)	controls alternate carrier routing (ACR)	Service Enablers (AIN00231)
AIN00240	AIN Service Enablers Release 4 (NA010) Base	controls AIN SE network tools enhancements AIN SE trigger items, phase 2, and AIN SE Update message waiting indicators consists of optional state order codes AIN00241, AIN00242, AIN00243, AIN00244, and AIN00245	Service Enablers (AIN00240)

Table 7-2 (Sheet 2 of 4)

Ordering code	Functional group name	Description	Requirements
AIN00241	AIN Service Enablers (NA010)	controls the AIN SE PRI Channel Setup trigger	Service Enablers (AIN00241)
AIN00242	AIN SE R4 - OTS	controls the NA010 AIN Service Enablers O_NOA and O_CPB trigger screening and customer group subscription to O_NOA and O_CPB functionality	Service Enablers (AIN00242)
AIN00243	AIN Service Enablers Option (NA010)	controls AIN SE T_Answer Event, AIN SE T_Busy, AIN SE T_NoAnswer	Service Enablers (AIN00243)
AIN00244	AIN SE R4 - Collect Info	controls the NA010 AIN Service Enablers Collect_Information message processing functionality	Service Enablers (AIN00244)
AIN00245	AIN SE R4 - OHD Esc ICM	controls the NA010 AIN Service Enablers Escape OHD Intercom for Intercom Calls functionality	Service Enablers (AIN00245)
AIN00250	AIN SE R5 - Base	consists of optional state order codes AIN00251, AIN00252, AIN00253, AIN00254, and AIN00255	Service Enablers (AIN00250)
AIN00251	AIN SE R5 - OnePlus Pfx	controls the One_Plus_Prefix trigger functionality	Service Enablers (AIN00251)
AIN00252	AIN SE R5 - Spfd Cxr Pfx	controls the NA011 AIN SE Specified_Carrier Trigger functionality of the Prefix family of triggers	Service Enablers (AIN00252)
AIN00253	AIN SE R5 - Intl Pfx	controls the NA011 AIN SE International trigger functionality of the Prefix family of triggers	Service Enablers (AIN00253)

Table 7-2 (Sheet 3 of 4)

Ordering code	Functional group name	Description	Requirements
AIN00254	AIN SE R5 - OperSvcs Pfx	controls the NA011 AIN SE Operator_Services trigger functionality of the Prefix family of triggers	Service Enablers (AIN00254)
AIN00255	AIN SE R5 - Offer Call	controls the NA011 AIN SE Offer Call message processing functionality	Service Enablers (AIN00255)
AIN00260	AIN SE R6 - Base	consists of optional state order codes AIN00261 and AIN00263	Service Enablers (AIN00260)
AIN00261	AIN SE R6 - BRI DisplayText	controls the delivery of DisplayText information to terminating BRI agents functionality	Service Enablers (AIN00261)
AIN00262	AIN SE R6 - MonChng HuntGr	controls the delivery of Monitor for Change for hunt groups functionality	Service Enablers (AIN00262)
AIN00263	AIN SE R6 - Extended ringing	controls the delivery of extended ringing functionality	Service Enablers (AIN00263)
AIN00270	NA013 Base and AIN Network tools support for NA013	controls AIN Nettools support for NA013 functionality consists of optional state order codes AIN00271 and AIN00272	Service Enablers (AIN00270)
AIN00271	AIN SE R7 - Create_Call	controls Create_Call functionality	Service Enablers (AIN00271)
AIN00272	AIN SE R7 - OCM METT	controls Multiple extended TCAP transactions (METT) in the OCM functionality	Service Enablers (AIN00272)
AIN00280	AIN SE R8 - BASE	consists of optional state order codes AIN00281 and AIN00282	Service Enablers (AIN00280)

Table 7-2 (Sheet 4 of 4)

Ordering code	Functional group name	Description	Requirements
AIN00281	AIN SE R8 - Term Resource	controls Term Resource Available Trigger functionality	Service Enablers (AIN00281)
AIN00282	AIN SE R8 - Carrier Usage	controls Carrier Usage functionality	Service Enablers (AIN00282)
AIN00291	AIN SE R9 - External STR-ER	controls Extended Ringing functionality	Service Enablers (AIN00291)
AIN00292	AIN SE R9 - DP Converter	controls DP to DTMF conversion functionality	Service Enablers (AIN00292)
AIN00293	AIN SE R9 - N11 LARP	controls N11 LARP functionality	Service Enablers (AIN00293)
AIN00294	AIN SE R9 - PFC Trig Admin	controls PFC Trig and PFC LARP functionality	Service Enablers (AIN00294)

Note 1: Feature Off-Hook Delay (OHD) Trigger on PX Trunks uses software optionality control AIN00061. The DMS-100 product does not support this feature.

Note 2: Software optionality control AIN00060: AIN DCR Interworking (Canadian market only) is part of the Advanced Intelligent Network Essentials product.

AIN Service Enablers

Ordering codes

Functional group ordering codes for AIN Service Enablers follow.

- AIN00210 (release 1)
- AIN00220 (release 2)
- AIN00230 (release 3)
- AIN00240 (release 4)
- AIN00250 (release 5)
- AIN00260 (release 6)
- AIN00270 (release 7)
- AIN00280 (release 8)
- AIN00290 (release 9)

Release applicability

NA0015 and later versions

Prerequisites

The table that follows lists requirements necessary to operate AIN Service Enablers.

AIN operation requirements (Sheet 1 of 2)

AIN Service Enablers order code	Requirements
AIN00210 (release 1)	AIN Service Support AIN00009
AIN00220 (release 2)	AIN Service Enablers (release 1) Functional group order code AIN00210
AIN00230 (release 3)	AIN00210 (release 1) AIN00220 (release 2)
AIN00231 (option to control alternate carrier routing (ACR))	AIN00210 (release 1) AIN00220 (release 2) AIN00230 (release 3) AIN00231 (option for control of ACR)
AIN00240 (release 4)	AIN00210 (release 1) AIN00220 (release 2) AIN00230 (release 3)

AIN Service Enablers (continued)

AIN operation requirements (Sheet 2 of 2)

AIN Service Enablers order code	Requirements
AIN00250 (release 5)	AIN00210 (release 1) AIN00220 (release 2) AIN00230 (release 3) AIN00240 (release 4)
AIN00260 (release 6)	AIN00210 (release 1) AIN00220 (release 2) AIN00230 (release 3) AIN00240 (release 4) AIN00250 (release 5)
AIN00270 (release 7)	AIN00210 (release 1) AIN00220 (release 2) AIN00230 (release 3) AIN00240 (release 4) AIN00250 (release 5) AIN00260 (release 6)
AIN00280 (release 8)	AIN00210 (release 1) AIN00220 (release 2) AIN00230 (release 3) AIN00240 (release 4) AIN00250 (release 5) AIN00260 (release 6) AIN00270 (release 7)
AIN00290 (release 9)	AIN00210 (release 1) AIN00220 (release 2) AIN00230 (release 3) AIN00240 (release 4) AIN00250 (release 5) AIN00260 (release 6) AIN00270 (release 7) AIN00280 (release 8)

Note: Software optionality control AIN00060: AIN DCR Interworking (Canadian market only) is part of the Advanced Intelligent Network Essentials product.

AIN Service Enablers (continued)

Reference information

The table that follows lists reference information found in the *Advanced Intelligent Network Service Enablers: Service Implementation Guide*.

Reference information

Description	Service Implementation Guide chapter
Description of AIN	Product overview, Development summary
Operation	Functional overview
Translations table flow	Provisioning, Provisioning overview (Datafilling hierarchy)
Limitations and restrictions	Limitations
Interactions	AIN interactions introduction AIN/DMS-100 interactions (A and B) AIN/DMS-100 interactions (C) AIN/DMS-100 interactions (D to H) AIN/DMS-100 interactions (I to R) AIN/DMS-100 interactions (S to Z) Attendant console interactions Other interactions
Billing	Billing
Translation verification tools	Translation verification tool for AIN
Test Query (TSTQuery) utility	TSTQuery tool
AINTrace tool	AIN message tracing tool
SERVORD	SERVORD guidelines (AIN does not have SERVORD limits.)

Activation/deactivation by the end user

AIN Service Enablers requires no activation or deactivation by the end user.

Station message detail recording

AIN Service Enablers does not change Station Message Detail Recording.

AIN Service Enablers (continued)

Datafilling office parameters

The table that follows shows office parameters used by AIN Service Enablers. For more information about office parameters, see the *Office Parameters Reference Manual*.

Office parameters used by AIN Service Enablers (Sheet 1 of 2)

Table name	Parameter name	Explanation and action
OFCENG	AIN_ALT_ROUTE_SEL	This parameter controls the route advance capability over trunk groups or carrier parameters when the switch receives an Analyze_Route or Forward_Call response.
OFCENG	AIN_MAX_SERIAL_TRIGGERS	This parameter determines the number of times that a call can trigger serially without routing out of an SSP. The number ranges from 1 to 8, with a default value of 6.
OFCENG	AIN_O_NO_ANSWER_EVENT_TIMER	This value of this parameter specifies the number of seconds before the timer expires. When the O_No_Answer timer parameter is absent from the Request_Report_BCM_Event message, the value of this parameter determines the expiration of the timer.
OFCENG	AIN_O_NO_ANSWER_TRIGGER_TIMER	This parameter specifies the office default for the period of the O_No_Answer trigger timer. The timer must run for this length of time before the timer detects the O_NOA trigger. The value of the parameter specifies the number of seconds before the timer expires.
<p>Note: Bellcore document GR-1298-CORE requires that a value for the expiration timers be available on an office-wide base. Use table OFCENG to provision this value.</p>		

AIN Service Enablers (continued)**Office parameters used by AIN Service Enablers (Sheet 2 of 2)**

Table name	Parameter name	Explanation and action
OFCENG	AIN_T_NO_ANSWER_EVENT_TIMER	This parameter specifies the office default for the period of the T_No_Answer event timer. The timer must run for this length of time before the timer detects the T_NOA event. The value of the parameter specifies the number of seconds before the timer expires.
OFCENG	AIN_TDISC_TIMER	The SSP initiates the IP disconnect timer (TDISC) for an IP, after the SSP sends a facility message with a cancelIPResource operation. The message requests the IP to disconnect. When this timer expires, the SSP clears the connection to the IP. The SSP notifies the service control point (SCP) or adjunct.
OFCENG	AIN_TSTRC_TIMER	<p>The SSP initiates the send to resource-connection timer (TSTRC) for an STR connection. This event occurs after the SSP receives a connect message from an IP. This timer can expire before the SSP receives a disconnect or release complete message from the IP. When this condition occurs, the SSP clears the connection to the IP and notifies the SCP or adjunct.</p> <p>The TSTRC timer stops when the system receives a facility message from the IP. The timer starts again when the SCP sends a call info to resource (CITR) message to the IP from the SCP. When the SSP receives a disconnect or release complete message from the IP, the timer stops.</p>
<p>Note: Bellcore document GR-1298-CORE requires that a value for the expiration timers be available on an office-wide base. Use table OFCENG to provision this value.</p>		

AIN Service Enablers (continued)

Datavfill sequence

The table that follows lists the datavfill tables required to implement AIN Service Enablers. The tables are listed in the order in which they are to be datavfilled.

Datavfill tables required for AIN Service Enablers (Sheet 1 of 2)

Table	Purpose of table
TRIGDIG	Table TRIGDIG contains addressing information based on dialed digits. This table indicates the action that the SSP performs when the digit information matches the trigger criteria.
TRIGINFO	Table TRIGINFO contains information about the type of protocol and messaging that sends queries to off-board processors.
TFSSCRN	Table TFSSCRN lists the toll-free numbers subject to GR-2892 processing. When a number encounters the number service code (NSC) selector, a check determines if the number is on the list. When the number is on the list, the number bypasses TR-533 processing and proceeds as a normal AIN call.
TRIGGRP	Table TRIGGRP is the main table that defines AIN behavior. A two-part key indexes the table: the AIN group (field TRIGNAME) and trigger detection points (TDP). The AIN group associates a symbolic name to a group of subscribed trigger detection points (TDP) and the triggers. A TDP is a symbolic name that represents a TDP that applications define.
LTDATA	Table LTTDATA stores service-related data with the logical terminal identifier (LTID) (field LTDKEY). The LTID is the key to this table. Field LTDKEY contains the following three parts: <ul style="list-style-type: none"> • the logical terminal group (subfield LTGRP) • logical terminal number (subfield LTNUM) • logical terminal data type (subfield DATATYPE)
TCAPTRID	Table TCAPTRID defines the number of transaction identifiers that each network application requires. The NA011 release no longer requires you to datavfill AIN. These applications use the identification pooling (IDPL) transaction management system. This system automatically allocates storage.
TIESCDIG	Table TIESCDIG administers the digit-based escape criteria for AIN trigger items in table TRIGITM.
TRIGITM	Table TRIGITM stores trigger items according to Bellcore GR-1298.

AIN Service Enablers (continued)**Datafill tables required for AIN Service Enablers (Sheet 2 of 2)**

Table	Purpose of table
TRKAIN	Table TRKAIN allows operating company personnel to enter a common language location identifier (CLLI) of the trunk group that subscribes to AIN. Users can datafill this table with a trigger group from table TRIGGRP or TRIGITM. The AIN behavior applies to every member of the trunk group. The trigger group to which the trunk group subscribes specifies the activity.
DNROUTE	Table DNROUTE lists information for programmable directory numbers (DN) in the switch (such as a DN that identifies a route).
DNFEAT	Table DNFEAT allows the datafill of certain triggers on a directory number basis.
CUSTTIID	Table CUSTTIID administers the subscription links to customer group subscription to trigger items in table TRIGITM. The trigger items subscribed in this table are only applicable if operating company personnel assign the reserved trigger group TIID to the customer group in table CUSTSTN.
AINPRI	Table ANIPRI supports subscription to an AIN PRIB trigger on a PRI B-channel.
OFCTIID	Table OFCTIID administers the subscription links to the office-wide trigger items that table TRIGITM defines.
MSRTAB	Table MSRTAB supports feature Update Message Support for MWI. The system uses table MSRTAB as a database to store valid message storage and retrieval system identification (MSRID). The system requires validation of the MSRID in the update message.
REASONS	Table REASONS displays various feature and call progress information messages on display electronic telephone sets.

AIN Service Enablers (continued)

Datafilling table TRIGDIG

The table that follows shows the datafill specific to AIN Service Enablers for table TRIGDIG. Only those fields that apply directly to AIN Service Enablers are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table TRIGDIG (Sheet 1 of 5)

Field	Subfield	Entry	Explanation and action
KEY		see subfields	<i>Key</i> This field is the key to table TRIGDIG and contains subfields DIGNAME, TRIGGER, and DIGITS.
	DIGNAME	alphanumeric (up to 8 characters)	<i>Digit name</i> Enter the digit translator. The entry in this subfield is the index from table TRIGGRP, subfield DIGNAME. A maximum of 2048 translator names can be entered.
	TRIGGER	alphanumeric (up to 8 characters)	<i>Trigger</i> Enter a symbolic name representing a subscribed trigger. Valid entries are CDPCODE, INTEROFF, PODP, PODPFEAT and SFC.
	DIGITS	0 to 9, B or C (up to 18 characters)	<i>Digits</i> Enter the digits to be matched against the digits specified for the trigger. Use B to represent an asterisk (*) and C to represent an octothorpe (#).
TRIGGER		alphanumeric (up to 8 characters)	<i>Trigger</i> Enter the name of a subscribed trigger type. The name can be a selector. Additional datafill fields can be required, as defined by applications. The entry must match the entry in subfield TRIGGER. If the trigger is CDPCODE, datafill subfield RPRTDIGS.

AIN Service Enablers (continued)

Datafilling table TRIGDIG (Sheet 2 of 5)

Field	Subfield	Entry	Explanation and action
ACTION	RPRTDIGS	TRANS, NOTRANS	<p><i>AIN report digits</i></p> <p>This subfield indicates whether the SSP should perform digit translation on the extension number before it sends a query message.</p> <p>Enter TRANS if the SSP should perform digit manipulation.</p> <p>Enter NOTRANS if the SSP should query using exact digits dialed.</p>
	ACTION	EVENT, ESCAPE	<p><i>Action</i></p> <p>This field consists of subfield ACTION.</p> <p><i>AIN action type</i></p> <p>Enter the action to be taken by the SSP if the dialed digits match the value in subfield DIGITS.</p> <p>Enter EVENT to launch a query to the SCP or adjunct if the SSP determines that the trigger criteria of are met. Datafill subfields PROTOCOL, MSGSET, and TRANSPRT.</p> <p>Enter ESCAPE to allow the dialed number to escape the trigger when the dialed number matches the specified escape criteria.</p> <p>Note: When field ACTION is set to ESCAPE, there are no further subfields (PROTOCOL, MSGSET, and TRANSPRT are not datafilled).</p>
	PROTOCOL	TCAP	<p><i>AIN protocol</i></p> <p>Enter the protocol to be used to communicate with the SCP or adjunct. Enter TCAP for the transaction capabilities application part.</p>
	MSGSET	alphanumeric	<p><i>Message set</i></p> <p>Enter the protocol version to be used to communicate with the SCP or adjunct, for example, R01 or R02. The range for this field is symbolic; each application binds in its own symbol.</p>

AIN Service Enablers (continued)**Datafilling table TRIGDIG (Sheet 3 of 5)**

Field	Subfield	Entry	Explanation and action
	TRANSPRT	SS7	<p><i>AIN transport</i></p> <p>Enter SS7, the transport medium used to communicate with the SCP or adjunct. Datafill subfields GTT and GTSOURCE.</p>
	GTT	alphanumeric (up to 16 characters)	<p><i>Global title translator</i></p> <p>If the entry in subfield TRANSPRT is SS7, datafill this subfield. This field is an index into table C7GTTYPE. Enter a global title translation (GTT) name previously datafilled in table C7GTTYPE.</p>
	GTSOURCE	CALLED, CHARGE, or DFLT	<p><i>Global title source</i></p> <p>If the entry in subfield TRANSPRT is SS7, datafill this subfield. This subfield indicates whether the global title value in the SCCP called party address is taken from the charge number, the called party number, or the service key.</p> <p>Enter CALLED if the global title value in the SCCP called party address is taken from the called party number. The CALLED value is valid only for the Called Party Number or the SPC criteria.</p> <p>Enter CHARGE if the global title value is taken from the charge number.</p> <p>Enter DFLT if the service key value is to be used as the index into table C7GTT. Datafill subfield SERVICE_KEY.</p>
OPTIONS		see subfield	<p><i>Options</i></p> <p>This field contains subfield OPTION.</p>

AIN Service Enablers (continued)

Datafilling table TRIGDIG (Sheet 4 of 5)

Field	Subfield	Entry	Explanation and action
	OPTION	DFLTRT, POTUSE, or SERVKEY	<p><i>Option</i></p> <p>Specifies information required when the InitialDP is built.</p> <p>Enter DFLTRT for default routing. This option applies only to triggers N11 and PODP, and occurs if the call encounters an error condition. Datafill the SELECTOR, ANNIDX, and DN subfields.</p> <p>Enter POTUSE to specify the AIN 0.1 PODP trigger for a specific service or potential use. Datafill the POTUSE subfield.</p> <p>Enter SERVKEY to specify the intelligent network application part (INAP) service key. Datafill subfield SERVICE_KEY.</p> <p>Enter \$ (dollar sign) for no options.</p>
	SELECTOR	ANN, ANNDN, or DN	<p><i>Selector</i></p> <p>This subfield specifies the voice announcement and directory number selection. Enter ANN for announcement, ANNDN for announcement and directory number, or DN for directory number.</p> <p>Complete subfield ANNIDX for selectors ANN and ANNDN. Complete subfield DN for selectors ANNDN and DN.</p>
	ANNIDX	1 to 65535	<p><i>Announcement index</i></p> <p>Enter the voice announcement index (from table AINANNS) of the announcement to be played.</p>
	DN	numeric (up to 15 digits)	<p><i>Directory number</i></p> <p>Enter the directory number used to route the call. If the DN is nil, call processing continues to the next point in call.</p>

AIN Service Enablers (continued)

Datafilling table TRIGDIG (Sheet 5 of 5)

Field	Subfield	Entry	Explanation and action
	POTUSE	CPC, TFS	<p><i>Potential use indicator</i></p> <p>Enter CPC for carrier portability code. TFS identifies Toll-Free service on AIN Service Enablers calls. CPC and TFS attributes are mutually exclusive: only one attribute can be used. The TFS attribute can be datafilled for MSGSET=R02 only.</p>
	SERVICE_KEY	numeric (0 to 2147483647)	<p><i>Service key</i></p> <p>This field is a mandatory parameter of the InitialDP operation.</p> <p>Enter the value of the service key for the required service to be sent from the SSP to the SCP in an InitialDP operation.</p>
	SERVIDX	numeric (0 to 9999)	<p><i>Service index</i></p> <p>This field is the key to table SERVINFORM.</p> <p>Enter the value of the service index. This field permits multiple service profiles against a single service key, and multiple service keys with identical service profiles in a single SERVINFORM tuple.</p>

Datafill example for table TRIGDIG

The following example shows sample datafill for table TRIGDIG.

MAP display example for table TRIGDIG

KEY	TRIGGER ACTION			OPTIONS
DIG0	N11	411	N11	
EVENT	TCAP	R01	SS7	DFLT
				(DFLTRT ANN 34) \$

AIN Service Enablers (continued)**Datafilling table TRIGINFO**

The table that follows shows the datafill specific to AIN Service Enablers for table TRIGINFO. Only those fields that apply directly to AIN Service Enablers are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table TRIGINFO (Sheet 1 of 3)

Field	Subfield	Entry	Explanation and action
KEY		alphanumeric (up to 8 characters)	<i>AIN trigger information identifier</i> This field is the key to the table. Enter the trigger information identifier. This identifier is referred to by table TRIGGRP and the AFR trigger routing tables.
ACTION		EVENT	<i>AIN action type</i> Enter the action to be taken by the SSP if triggering takes place. Enter EVENT to launch a query to the SCP or adjunct. Datafill subfields PROTOCOL, MSGSET, and TRANSPRT.
	PROTOCOL	TCAP	<i>AIN protocol</i> Enter the transport protocol used to communicate with the SCP or adjunct. Enter TCAP for the transaction capabilities application part.
	MSGSET	alphanumeric (3 characters)	<i>Message set</i> Enter the protocol version, such as R01, or R02 are used to communicate with the SCP or adjunct. The range for this field is symbolic. Each application binds in its own symbol.
	TRANSPRT	SS7 or TCPIP	<i>Transport</i> Enter the transport medium used to communicate with the SCP or adjunct. Enter SS7 for signaling system 7 and datafill subfields GTT and GTSOURCE. Enter TCPIP for the transmission protocol (TCP) and Internet protocol (IP) (TCP/IP) and datafill subfield INSTANCE. The default is SS7.

AIN Service Enablers (continued)

Datafilling table TRIGINFO (Sheet 2 of 3)

Field	Subfield	Entry	Explanation and action
	GTT	alphanumeric (up to 16 characters)	<p><i>Global title translation</i></p> <p>If the entry in subfield TRANSPRT is SS7, datafill this subfield. This field is an index into table C7GTTYPE. Enter a global title translation (GTT) name previously datafilled in table C7GTTYPE.</p>
	GTSOURCE	CALLED, CHARGE, or DFLT	<p><i>Global title source</i></p> <p>If the entry in field TRANSPRT is SS7, datafill this subfield. Enter CALLED if the global title value in the SCCP called party address is taken from the called party identification. Enter CHARGE if the global title value is taken from the charge number. Enter DFLT for the default normally used according to the specifications for a given trigger. For NA003 and up, DFLT is the only valid entry.</p>
	INSTANCE	0 to 3	<p><i>Instance</i></p> <p>If the entry in field TRANSPRT is TCPIP, datafill this subfield. Enter the instance number of the TCP application.</p> <p>The application name and instance number are mapped internally to the TCP/IP socket address of an application service provider (ASP) in an off-board processor.</p>
OPTIONS		see subfield	<p><i>Options</i></p> <p>This field consists of subfield OPTION.</p>
	OPTION	DFLTRT or \$	<p><i>Option</i></p> <p>Enter DFLTRT for default routing. This option applies to the Terminating Attempt trigger and occurs if the call encounters an error condition.</p> <p>Enter \$ (dollar sign) for no options.</p>

AIN Service Enablers (continued)**Datafilling table TRIGINFO (Sheet 3 of 3)**

Field	Subfield	Entry	Explanation and action
	SELECTOR	ANN, ANNDN, DN, or E911ESN	<p><i>Selector</i></p> <p>This field is used for voice announcement, directory number, and ESN default routing selection. Enter ANN for announcement, ANNDN for announcement and directory number, DN for directory number, or E911ESN for ESN default.</p> <p>Complete subfield ANNIDX for selectors ANN and ANNDN. Complete subfield DN for selectors ANNDN and DN. Complete subfield ESN for selector E911ESN.</p>
	ANNIDX	1 to 65535	<p><i>Announcement index</i></p> <p>Enter the voice announcement index from table AINANNS to be played.</p>
	DN	numeric (up to 15 digits)	<p><i>Directory number</i></p> <p>Enter the directory number used to route the call. If the DN is nil, call processing continues to the next point in call.</p>
	ESN	0 to 15999	<p><i>Emergency Service Number</i></p> <p>Enter the tertiary default ESN used to route the call.</p>
	SERVICE_ KEY	0 to 2147483647	<p><i>Service Key</i></p> <p>This field specifies the Service Key used if a call triggers at TDP-2 with the Minimum Digits Criterion (MDC).</p>
	SERVIDX	0 to 9999	<p><i>Service Index</i></p> <p>This field is the index to table SERVINFO.</p>

Datafill example for table TRIGINFO

The following example shows sample datafill for table TRIGINFO.

AIN Service Enablers (continued)

MAP example for table TRIGINFO

KEY	ACTION						OPTIONS
INFO1	EVENT	TCAP	R02	SS7	AINJAZZ	DFLT	\$
INFO2	EVENT	TCAP	R02	SS7	AINJAZZ	DFLT	
						(DFLTRT DN	
						7221234)	\$

Datafilling table TFSSCRN

The table that follows shows the datafill specific to AIN Service Enablers for table TFSSCRN. Only those fields that apply directly to AIN Service Enablers are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table TFSSCRN

Field	Subfield	Entry	Explanation and action
TFSCODE		800,888,877, 866,855,844, 833,822	Toll-free Service CodeField TFSCODE describes the toll-free code in use.
FROMNXX		000 to 999	From NumberField FROMNXX describes the lower bound of the range of the numbers that belong to GR-2892.
TONXX		000 to 999	To NumberField TONXX describes the upper bound of the range of the numbers that belong to GR-2892.

Datafill example for table TFSSCRN

The following example shows sample datafill for table TFSSCRN.

AIN Service Enablers (continued)

MAP display example for table TFSSCRN

TFSCODE	FROMNXX	TONXX
800	622	733

Datafilling table TRIGGRP

The table that follows shows the datafill specific to AIN Service Enablers for table TRIGGRP. Only those fields that apply directly to AIN Service Enablers are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table TRIGGRP (Sheet 1 of 4)

Field	Subfield	Entry	Explanation and action
KEY		see subfield	<p><i>Key</i></p> <p>This field is the key to the table and consists of subfields TRIGNAME and TDP.</p>
	TRIGNAME	alphanumeric (up to 16 characters)	<p><i>AIN trigger name</i></p> <p>Enter the trigger name that is used to define a group of triggers. Table DNFEAT associates a symbolic name to a grouping of subscribed trigger detection points (TDP) and their triggers. The symbolic name is bound against a type, an AIN group identifier, to be used in subscription tables.</p>
	TDP	alphanumeric (up to 8 characters)	<p><i>Trigger detection points</i></p> <p>Enter a symbolic name representing a certain TDP that is subscribed to. The range of values for this field is AIN_TDP_TYPE, which is a symbolic range defined by applications.</p> <p>The range of values that can be datafilled is expanded to include OCPB, ONOA, INFOCOL, and INFOANAL.</p>

AIN Service Enablers (continued)

Datafilling table TRIGGRP (Sheet 2 of 4)

Field	Subfield	Entry	Explanation and action
TRIGDATA		see subfields	<p><i>Trigger data</i></p> <p>This field consists of up to 16 multiples of subfields TRIGGER, CRITERIA, and INFONAME. If less than 16 multiples are required, end the list with a \$ (dollar sign).</p>
	TRIGGER	alphanumeric (up to 8 characters)	<p><i>Trigger</i></p> <p>Enter a symbolic name representing a subscribed trigger. During call processing, the triggers are checked in the order that they are datafilled in this table</p>
	CRITERIA	CT, DG, ESC, ESCCN, ESCEA, ESCGP, ESCMDC, ESCOP, ESCDN,	<p><i>Criteria types</i></p> <p>Enter up to four criteria selectors. If fewer than four selectors are required, end the list with a \$ (dollar sign).</p> <p>Enter DG for digit and datafill DIGNAME.</p> <p>Enter CT for call type and datafill subfield CALLTYPE.</p> <p>Enter ESC if calls in which an escape code has not been dialed should trigger. Escape codes for the off-hook delay trigger are datafilled in table TRIGESC. Escape codes for the Shared Interoffice trigger are datafilled in table TRGSIESC. Escape code criteria is mandatory for the Off-Hook Delay trigger and optional for the Shared Interoffice trigger.</p> <p>Enter ESCCN to prevent coin dial tone first (CDF), coin coin-first (CCF), and coin semi-postpay (CSP) agent calls (both POTS and RES) from triggering. The option only applies on the originating switch. Datafill subfield TYPECALL.</p> <p>For Local Number Portability (LNP), the following ESCCN options apply: DD, OA, DD_OA, NP, DD_NP, OA_NP, ALL</p> <p>Enter ESCEA to escape a trigger when the call is an equal access call.</p>

AIN Service Enablers (continued)

Datafilling table TRIGGRP (Sheet 3 of 4)

Field	Subfield	Entry	Explanation and action
			<p>Enter ESCGP to escape the PODP trigger when the GAP is present (applied to PODP trigger type).</p> <p>Enter ESCOP to escape a trigger when the call is an operator call.</p> <p>Enter ESCDN to escape a trigger when the dialed DN is resident on the switch.</p> <p>Enter ESCMDC to escape the Off-Hook_Delay trigger if the call is placed in the Intercom Range</p>
	DIGNAME	alphanumeric (up to 8 characters)	<p><i>Digit name</i></p> <p>Enter the digit translator used to index into table TRIGDIG. The digit name must be previously datafilled in table TRIGDIG.</p> <p>If this field contains datafill, subfield INFONAME must be set to NIL.</p>
	CALLTYPE	VBINFO or CMDATA	<p><i>AIN call type</i></p> <p>Enter VBINFO for voice-band information.</p> <p>Enter CMDATA for circuit mode data.</p>

AIN Service Enablers (continued)

Datafilling table TRIGGRP (Sheet 4 of 4)

Field	Subfield	Entry	Explanation and action
	TYPECALL	DD, NP, OA, DD_NP, DD_OA, OA_NP, or ALL	<p><i>Type of call</i></p> <p>Type of coin call for the ESCCN criteria.</p> <p>Enter DD for direct dialed.</p> <p>Enter NP for no prefix local.</p> <p>Enter OA for operator assisted.</p> <p>Enter DD_NP for direct dialed and no prefix local.</p> <p>Enter DD_OA for direct dialed and operator assisted.</p> <p>Enter OA_NP for operator assisted and no prefix local.</p> <p>Enter ALL for direct dialed, no prefix local, and operator assisted.</p>
	INFONAME	alphanumeric (up to 8 characters) or NIL	<p><i>AIN trigger information identifier</i></p> <p>Enter the trigger information identifier. The entry is either NIL or an index into table TRIGINFO where the SCP or adjunct information is provided.</p> <p>If field DIGNAME contains datafill, the entry in subfield INFONAME must be NIL.</p> <p>If trigger AFR is used, the entry in subfield INFONAME must be NIL.</p> <p>If trigger ESCMDC is datafilled in the CRITERIA field, then the entry in subfield INFONAME must be datafilled with an index into a tuple in table TRIGINFO. The TRIGINFO entry specifies which service key to use if the call triggers at TDP-2 with the ESCMDC criterion.</p>

Datafill example for table TRIGGRP

The following example shows sample datafill for table TRIGGRP.

AIN Service Enablers (continued)

MAP example for table TRIGGRP

KEY	TRIGDATA					
AINGRP1	ORIGATT	(OFFHKIMM	(CT	VBINFO)	\$
JAZZINFO)	\$					

AIN Service Enablers (continued)

Datafilling table TRKAIN

The table that follows shows the datafill specific to AIN Service Enablers for table TRKAIN. Only those fields that apply directly to AIN Service Enablers are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table TRKAIN (Sheet 1 of 2)

Field	Subfield	Entry	Explanation and action
GRPKEY		alphanumeric	<p>Trunk group key. Enter the CLLI of a trunk group that subscribes to AIN. The trunk group must already exist in table TRKGRP and must represent one of the following trunk group types:</p> <ul style="list-style-type: none"> • IBNT1 • IBNT2 • PRA • TI • IT • P2 (analog) • PX (digital) • T2 <p>Note 1: The trunk types in all groups must be incoming or two-way.</p> <p>Note 2: P2 (analog) and PX (digital) trunks and trunk groups with GRPTYP=CELL in table TRKGRP can be added to table TRKAIN (NA008).</p>
AINGRP		alphanumeric (1 to 16 characters), or TIID	<p>AIN group. Enter the AIN group name to use datafill in table TRIGGRP. Enter TIID to datafill the trigger item provisioning model subfields that follow.</p>
	TDP	1, 3, 4, 17, 19, 20, 30, 32, 33	<p>Trigger detection point. Datafill the appropriate TDP.</p> <p>The TDP subfield includes: Origination _Attempt (1) Info_Collected (3) Info_Analyzed (4) Network_Busy (17) O_Called_Party_Busy (19) Termination_Attempt (20) T_Busy (30) T_No_Answer (32) O_No_Answer (33)</p>

AIN Service Enablers (continued)**Datafilling table TRKAIN (Sheet 2 of 2)**

Field	Subfield	Entry	Explanation and action
	TINAME	alphanumeric vector (1 to 8 characters)	Trigger item name. Datafill the trigger items defined in table TRIGITM at the specified TDP.
	TRIGACT	ON, OFF	Trigger item assignment activation state code. Datafill the value ON to activate the trigger item identified by the TIID. Datafill the value OFF to deactivate the trigger item identified by the TIID.

Datafill example for table TRKAIN

The following example shows sample datafill for table TRKAIN with trigger group provisioning.

MAP display example for table TRKAIN

GRPKEY	AINGRP	AININFO
ISUPICITT	INDTRIG01	

The following example shows sample datafill for table TRKAIN with trigger item provisioning.

MAP display example for table TRKAIN, trigger item data model

GRPKEY	AINGRP	AININFO
ISUPITIC	TIID	(3 TRKOH D ON) \$

Datafilling table DNROUTE

The table that follows shows the datafill specific to AIN Service Enablers for table DNROUTE. Only those fields that apply directly to AIN Service

AIN Service Enablers (continued)

Enablers are shown. For a description of the other fields, refer to the data schema section of this document.

Field descriptions (Sheet 1 of 5)

Field	Subfield	Entry	Explanation and action
AREACODE		0 to 9999999 (1 to 7 digits)	<p><i>Area code</i></p> <p>The area code identifies a major geographical area served by the switch. If office parameter ACTIVE_DN_SYSTEM in table OFCENG is set to North American, the area code must be three digits long.</p>
OFCCODE		0 to 9999999 (0 to 7 digits)	<p><i>Office code digit register</i></p> <p>The office code is a subregion of the area code. If office parameter ACTIVE_DN_SYSTEM in table OFCENG is set to North American, the area code must be three digits long.</p> <p>The office code must be specified in table TOFCNAME.</p> <p>Tuples can be added if the value of field OFCCODE is \$ as specified in table TOFCNAME. They cannot contain STNCODEs whose leading digits are an OFCCODE in the same area code.</p>

AIN Service Enablers (continued)**Field descriptions (Sheet 2 of 5)**

Field	Subfield	Entry	Explanation and action
STNCODE		0 to 99999999 (up to 8 digits)	<p><i>Station code</i></p> <p>The station code identifies a unique station within the terminating office (TOFC). If office parameter ACTIVE_DN_SYSTEM in table OFCENG is set to North American, the area code must be one or four digits in length. If one digit is entered, it is treated as a D-digit, where the D-digit represents the fourth digit in the format ABC-DEFG.</p> <p>A D-digit is then given the appropriate DN result. For example, if area code 613 and office code 226 are entered, and if 5 is entered as the station code, any calls to a number beginning with 6132265 are automatically routed to the specified treatment. If 5 is the D-digit, and DNROUTE is datafilled as 613 226 5 D OPRT, any numbers for 6132265 are routed to the operator treatment as set in table TMTCNL.</p> <p>Ambiguity within the STNCODEs of one TOFC is not permitted. For example, 8594 and 859 cannot be specified as STNCODEs within one TOFC.</p> <p>Note: The STNCODE is in DEFG format.</p>
DNRESULT		see subfields	<p><i>Directory number result</i></p> <p>This field contains subfields FEATURE and DNTYPE.</p> <p>Note: Only the AIN and DISA entries contain any AIN-specific subfields and appear here. The AIN01OPT option for DISA is no longer valid. Use SERVORD or table DNFEAT to subscribe AIN to a DISA agent. Refer to the data schema section of this document for the subfields that relate to other entries.</p>
	DN_SEL	FEAT	<p><i>Directory number selector</i></p> <p>For AIN, enter FEAT.</p>

AIN Service Enablers (continued)

Field descriptions (Sheet 3 of 5)

Field	Subfield	Entry	Explanation and action
	FEATURE	AIN	<p><i>Feature</i></p> <p>This field specifies the related feature. To get an AIN virtual directory number (VDN), enter AIN.</p>
	DNTYPE	IBN, NONIBN	<p>Enter IBN for a private environment VDN. When the entry is IBN, datafill a customer group. When the entry is NONIBN, datafill a subgroup.</p>
	CUSTGRP	alphanumeric (1 to 16 characters)	<p><i>Customer group name</i></p> <p>This subfield specifies the name of the customer group assigned to AIN.</p> <p>Note: Use this sub group number when subfield DNTYPE is IBN or when subfield FEATURE is DISA.</p>
	SUBGRP	0 to 7	<p><i>Sub group</i></p> <p>This subfield specifies the subgroup number to which the customer group belongs.</p> <p>Note: Use this sub group number when subfield DNTYPE is IBN or when subfield FEATURE is DISA.</p>
	LINEATTR	0 to 2047	<p><i>Line attribute number</i></p> <p>This subfield specifies the line attribute number that relates to the DN and provides an index in table LINEATTR.</p>
	XLAPLAN		<p><i>Line area plan</i></p> <p>Enter an area plan.</p>
	RATEAREA		<p><i>Line attribute number</i></p> <p>Enter a rate area.</p>

AIN Service Enablers (continued)**Field descriptions (Sheet 4 of 5)**

Field	Subfield	Entry	Explanation and action
OPTION		see subfield	<p><i>AIN options</i></p> <p>This field specifies an option or options required. Enter a dollar sign (\$) to end option entry.</p> <p>Note: Use this option when subfield FEATURE is AIN.</p>
	NCOS	0 to 511	<p><i>Network class of service</i></p> <p>This subfield specifies the NCOS to apply to the call if the SCP instructs the SSP to route the call to a private destination. Entries must be correct in table NCOS.</p> <p>Note: Enter an NCOS when subfield OPTION is NCOS.</p>
	AUTHREQ	Y or N	<p><i>Authorization required</i></p> <p>Enter Y to indicate that the authorization code is necessary for users of this DN. Enter N if the authorization code is not needed.</p>
	SMDRTO	Y or N	<p><i>Originating station message detail recording</i></p> <p>Enter Y to indicate that station message recording is necessary on the leg of the call where the originator access DISA. Enter N if the call does not require SMDR.</p> <p>Note: Use this entry when subfield FEATURE is DISA.</p>

AIN Service Enablers (continued)

Field descriptions (Sheet 5 of 5)

Field	Subfield	Entry	Explanation and action
	SMDRFROM	Y or N	<p><i>Termination station message detail recording</i></p> <p>Enter Y to indicate that the call requires SMDR on the leg from DISA to the final IBN destination. Enter N if the call does not require SMDR.</p> <p>Note: Use this entry when subfield FEATURE is DISA.</p>
	INTRAGRP	Y or N	<p><i>Intragroup</i></p> <p>Enter Y to indicate intragroup calls. Enter N to indicate non-intragroup calls.</p>

Datafill example for table DNROUTE

The following example shows sample datafill for table DNROUTE.

MAP display example for table DNROUTE

AREACODE	OFCCODE	STNCODE	DNRESULT
919	555	0540	FEAT AIN IBN ABCCO 0 (NCOS 0) \$

Datafilling table DNFEAT

The table that follows shows the datafill specific to AIN Service Enablers for table DNFEAT. Only those fields that apply directly to AIN Service Enablers are shown. For a description of the other fields, refer to the data schema section of this document.

Note: Table DNFEAT blocks the subscription of the AINDN option to N or P type Secondary DNs. The N and P type SDNs inherit their AINDN subscription from the primary PDN.

The system dynamically allocates table size from 0 to 128 000 tuples. Depending on the distribution of DNs in table DNFEAT, the table can reach its

AIN Service Enablers (continued)

maximum capacity before attaining the limit. The DMSMON DBLOCKS tool can monitor the size of this table.

Note: With SOC option LOC000256 set to OFF, the capacity is 32,767 tuples. To provision capacity of 128,000 tuples the SOC option LOC00256 must be set to ON.

Table 1 Field descriptions

Field	Subfield	Entry	Explanation and action
AREACODE		0 to 9 (3 digits)	<p>Area code</p> <p>Enter the service numbering plan area (SNPA) associated with the directory number (DN). The entry in field AREACODE must correspond to an area code already datafilled in tables SNPANAME and TOFCNAME.</p>
OFCCODE		0 to 9 (up to 7 digits)	<p>Office code</p> <p>Enter the office code associated with the DN. The entry in field OFCCODE must correspond to an office code already datafilled in table TOFCNAME.</p> <p>When using the North American dial plan, the entry in this field is restricted to three digits.</p>

(continued)

Table 1 Field descriptions

Field	Subfield	Entry	Explanation and action
STNCODE		0 to 9 (up to 8 digits)	<p>Station code</p> <p>Enter the station code associated with the DN. The entry in this field corresponds to the remaining digits in the DN after the area code and office code.</p> <p>When using the North American dial plan, the entry in this field is the last four digits of the DN.</p>
OPTLIST		see subfield	<p>Options list</p> <p>This field consists of subfield DNOPT.</p>
	DNOPT	see subfields	Directory number option
		AIN	Enter AIN for the advanced intelligent network line option and datafill subfield AINGRP.
		AINDN	Enter AINDN for the advanced intelligent network DN option and datafill subfield AINGRP.
	AINGRP	alphanumeric (1 to 16 characters), or TIID	<p>AIN group</p> <p>Enter the AIN group name to use datafill in table TRIGGRP. Enter TIID to datafill the trigger item provisioning model subfields that follow.</p>
	TIID	see subfields	Trigger item identification. This field consists of subfields TDP, TINAME, and TRIGACT.

(continued)

Table 1 Field descriptions

Field	Subfield	Entry	Explanation and action
	TDP	1, 3, 4, 17, 19, 20, 22, 30, 32, 33	Trigger detection point Datafill the appropriate TDP. Subfield TDP includes: Origination_Attempt (1) Info_Collected (3) Info_Analyzed (4) Network_Busy (17) O_Called_Party_Busy (19) Termination_Attempt (20) Term_Resource_Available(22) T_Busy (30) T_No_Answer (32) O_No_Answer (33)
	TINAME	alphanumeric vector (1 to 8 characters)	Trigger item name Datafill the trigger items defined in table TRIGITM at the specified TDP.
	TRIGACT	ON, OFF	Trigger item assignment activation state code Datafill the value ON to activate the trigger item identified by the TIID. Datafill the value OFF to deactivate the trigger item identified by the TIID.

Datafill example for table DNFEAT

The following example shows sample datafill for table DNFEAT.

AIN Service Enablers (continued)

MAP display example for table DNFEAT

AREACODE	OFCCODE	STNCODE	OPTLIST
613	621	0000	(AINDN DNTRIG)\$

Note: For NA011 and further releases, during the One Night Process (ONP), AINDN subscriptions against N or P type SDNs are removed and the subscription of the Primary DN is applied to these DNs. If the AINDN subscription removed differs from the AINDN subscription of the Primary DN, the TRACECI output displays a message that indicates the removal of the SDN subscription information.

Datafilling table LTDATA

The table that follows shows the datafill specific to AIN Service Enablers for table LTDATA. Only those fields that apply directly to AIN Service Enablers are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table LTDATA (Sheet 1 of 3)

Field	Subfield	Entry	Explanation and action
LTDKEY		see subfields	<i>Logical terminal datakey</i> This field consists of subfields LTGRP, LTNUM, and DATATYPE.
	LTGRP	alphanumeric (maximum 8 characters)	<i>Logical terminal group</i> Enter the logical terminal group (LTG) name.
	LTNUM	1 to 1022	<i>Logical terminal number</i> Enter the logical terminal number within the group. The quantity of group numbers is restricted. A maximum of 31 entries is allowed.

AIN Service Enablers (continued)

Datafilling table LTDATA (Sheet 2 of 3)

Field	Subfield	Entry	Explanation and action
	DATATYPE	CLI, DN, SERV, or RN	<p><i>Logical terminal data type</i></p> <p>Enter the logical terminal data type as follows:</p> <ul style="list-style-type: none"> • Enter CLI to identify a calling line identifier (CLI) subscription parameter. • Enter DN for directory number. • Enter SERV for service-related data associated with a logical terminal identifier (LTID) or PRA interface. • Enter RN for redirected number. <p>Note: Data type CLI may not be available with all PCLs. CLI is a UK (United Kingdom) parameter.</p> <p>Any entries outside the range indicated for this field are invalid.</p>
LTDRSLT		see subfield	<p><i>Logical terminal result</i></p> <p>This field consists of subfield DATATYPE.</p>

AIN Service Enablers (continued)**Datafilling table LTDATA (Sheet 3 of 3)**

Field	Subfield	Entry	Explanation and action
	DATATYPE	CLI, DN, SERV, or RN	<p><i>Logical terminal data type</i></p> <p>Enter the logical terminal data type as follows:</p> <ul style="list-style-type: none"> • Enter CLI to identify a calling line identifier (CLI) subscription parameter. Enter the datafill for subfield OPTION. • Enter DN for directory number. Enter the datafill for subfields DFLTCGN and OPTIONS. • Enter SERV for service-related data associated with a logical terminal identifier (LTID) or PRA interface. Enter the datafill for subfields AUDTRMT, CGNREQD, CGNDELV, CDNDELV, and OPTION. • Enter RN for redirected number. Enter the datafill for subfield OPTION. <p>Any entries outside the range indicated for this field are invalid.</p> <p>Note: Data type CLI may not be available with all PCLs. CLI is a UK (United Kingdom) parameter.</p>
	OPTION	AIN_IPI_STR	<p><i>Option.</i></p> <p>This field contains options for PRI services. One or more options are assigned.</p> <p>The system can dump and restore during the one night process (ONP). When this condition occurs, the system can add the AIN_IPI_STR option to the tuples. This addition occurs when the PRI link that corresponds attaches to an IP.</p>

Datafill example for table LTDATA

The following example shows sample datafill for table LTDATA.

AIN Service Enablers (continued)

MAP display example for table LTDATA

LTDKEY	LTDRSLT
ISDN 557 SERV	
SERV N N ALWAYS ALWAYS (TBO 800 N) (CHG) (AIN_IPI_STR) \$	

Datafilling table TCAPTRID

The table that follows shows the datafill specific to AIN Service Enablers for table TCAPTRID. Only those fields that apply directly to AIN Service Enablers are shown. For a description of the other fields, refer to the data schema section of this document.

Note: The NA011 release no longer requires you to datafill AIN. The application uses the identification pooling (IDPL) transaction management system. This system automatically allocates storage. Table TCAPTRID permanently contains the information that follows:

TCAPAPPL	NUMRIDS	NUMCOMPS	IDPLUSER
AIN	0	0	Y

Datafilling table TCAPTRID (Sheet 1 of 2)

Field	Subfield	Entry	Explanation and action
TCAPAPPL		AIN (see Note)	<p><i>Transaction capabilities application</i></p> <p>Enter the name of the TCAP application that require transaction identifiers (TRID).</p> <p>Note: The Advanced Intelligent Network (AIN) application uses the identification pool (IDPL) transaction management system. Do not enter this datafill.</p>
NUMTRIDS		numeric (0 to 32 767)	<p><i>Number of transaction identifiers</i></p> <p>Enter the number of TRIDs that the application requires.</p> <p>Note: The AIN application uses the IDPL transaction management system. The permanent datafill for this field is 0.</p>

AIN Service Enablers (continued)**Datafilling table TCAPTRID (Sheet 2 of 2)**

Field	Subfield	Entry	Explanation and action
NUMCOMPS		numeric (0 to 32 767)	<p><i>Number of component identifiers</i></p> <p>Enter the number of component identifiers that the application requires.</p> <p>Note: The AIN application uses the IDPL transaction management system. The permanent datafill for this field is 0.</p>
IDPLUSER		Y or N	<p><i>Identifier pools in use</i></p> <p>When the value in field IDPLUSER is Y, the TCAP transaction and component identifiers for the application are dynamically allocated by IDPOOLS. The transaction and component identifiers are not engineered in table TCAPTRID, and datafill in table TCAPTRID cannot be changed by operating company personnel.</p>

Datafill example for table TCAPTRID

The following example shows sample datafill for table TCAPTRID.

MAP display example for table TCAPTRID

TCAPAPPL	NUMTRIDS	NUMCOMPS	IDPLUSER
AIN	0	0	Y

AIN Service Enablers (continued)

Datafilling table TIESCDIG

The table that follows shows the datafill specific to AIN Service Enablers for table TIESCDIG. Only those fields that apply directly to AIN Service Enablers are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table TIESCDIG

Field	Subfield	Entry	Explanation and action
ESGRP		Alpha-numeric vector (1 to 8 characters)	Digit based escape group name. Datafill the escape group name.
ESDIGS		Numeric vector (1 to 18 digits)	Escape digits. Datafill a vector of 1 to 18 digits to represent the dialed digits.

Datafill example for table TIESCDIG

The following example shows sample datafill for table TIESCDIG

MAP display example for table TIESCDIG

ESGRP	ESDIGS
OBNAESC	514
OBNAESC	613622
OBNAESC	6135551212
OHDESC	819
OHDESC	514
OHDESC	613

AIN Service Enablers (continued)**Datafilling table TRIGITM**

The table that follows shows the datafill specific to AIN Service Enablers for table TRIGITM. Only those fields that apply directly to AIN Service Enablers are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table TRIGITM (Sheet 1 of 5)

Field	Subfield	Entry	Explanation and action
TDP		1, 3, 4, 17, 19, 20, 22, 30, 32, 33	Trigger item identifier. This field supplies the trigger item definition through a two-part key. Part 1 is the trigger detection point (TDP). Subfield TDP includes: Origination_Attempt (1) Info_Collected (3) Info_Analyzed (4) Network_Busy (17) O_Called_Party_Busy (19) Termination_Attempt (20) Term_Resource_Available (22) T_Busy (30) T_No_Answer (32) O_No_Answer (33)
		Vector of up to 8 characters	Trigger item name. Enter the trigger item name.
TRIGGER		OFFHKIMM, OFFHKDEL, PRIB, INTEROFF, SFC, PFC, CDPCODE, SDS, N11, LNP, AFR, OCPB, TERMATT, TRA, TBUSY, TNOA, ONOA	Trigger type. Enter the trigger type. When the value of field TRIGGER is CDPCODE, datafill subfield RPRTDIGS. Note: When operating companies enter a trigger item tuple has been entered into table TRIGITM, a change to the corresponding trigger TYPE field cannot occur.

AIN Service Enablers (continued)

Datafilling table TRIGITM (Sheet 2 of 5)

Field	Subfield	Entry	Explanation and action
CRITERIA	RPRTDIGS	TRANS, NOTRANS	<p><i>AIN report digits</i></p> <p>This subfield indicates if the SSP can perform digit translation on the extension number before it sends a query message.</p> <p>Enter TRANS if the SSP can perform digit manipulation.</p> <p>Enter NOTRANS if the SSP can query using exact digits dialed.</p>
		DG, CT ESCEA ESCOF ESCCDN ESCCN ESCGP ESCCARR ESCCDN ESCIDDD ESCLATA ESCFI ESCDIG ESCMDC ESCDP ESCPREF	<p>Trigger criteria. Criteria consists of a set of digits, a call type, and escape codes (when applicable).</p> <p>When the value of field CRITERIA is DG datafill subfield DIGITS.</p> <p>When the value of field CRITERIA is CT datafill subfield CALLTYPE.</p> <p>When the value of field CRITERIA is ESCCN datafill subfield COIN_CALL_TYPE.</p> <p>When the value of field CRITERIA is ESCCARR datafill subfield CARRIER_GROUP.</p> <p>When the value of field CRITERIA is ESCCDN datafill subfield ESCGROUP.</p> <p>When the value of field CRITERIA is ESCLATA datafill subfields INTRATOLL and INTERTOLL.</p> <p>When the value of field CRITERIA is ESCFI datafill subfield FIS.</p> <p>When the value of field CRITERIA is ESCDIG datafill subfield ESCGROUP.</p> <p>When the value of field CRITERIA is ESCDPREF datafill subfield ESCGROUP.</p> <p>Note: Datafill a trigger item in table TRIGITM that has a digit based escape criteria, then datafill table TIESDIG.</p>
	DIGITS	Vector of up to 15 digits.	Digits. Enter the (info missing here)

AIN Service Enablers (continued)

Datafilling table TRIGITM (Sheet 3 of 5)

Field	Subfield	Entry	Explanation and action
	CALLTYPE	VBINFO, CMDATA	Calltype. Enter the call type.
	COIN_CALL_ TYPE	DD NP OA DD_NP DD_OA OA_NP ALL	Coin call type. Enter the type of coin call.
	CARRIER GROUP	NOINCASA	Carrier group. Enter the value NOINCASA.
	INTRATOLL	N, Y	Intratoll. Enter Y to indicate an intratoll call, or N to indicate the call is not intratoll.
	INTERTOLL	N, Y	intertoll. Enter Y to indicate an intertoll call, or N to indicate the call is not intertoll.
	FIS	Vector of up to 4 (ICS ACBFAIL REDIR AMSG)	
STATE		ULK, LK	Administrative state code. This field enables and disables a trigger item. Entry ULK (unlocked) activates a trigger item. Entry LK (locked) deactivates a trigger item.
ACTION		EVENT, ESCAPE	Action. This field describes the query behavior of the service switching point (SSP). The EVENT value instructs the SSP to launch a query. The ESCAPE value prevents the SSP from making a query.
	EVENT	Up to 8 characters	Event. When the ACTION field setting is EVENT, the setting requires service logic host route (SLHR) information. Valid SLHR fields are: Message Set, Transport, and global title translation (GTT).

AIN Service Enablers (continued)**Datafilling table TRIGITM (Sheet 4 of 5)**

Field	Subfield	Entry	Explanation and action
	MSGSET	R01,R02	Message set. This field indicates the functionality of the trigger referring to this tuple. R01 (AIN Essentials trigger and functionality), or R02 (AIN Service Enablers trigger and functionality).
	TRANSPORT	SS7TCPIP	Transport. This field supports North American signaling system 7 (SS7).
	GTT	C7_GT_ TYPE_NAME	Global title type. The Global Title name determines the translator for the node to perform translations based on the global title address.
	OPTIONS	DFLTRT, POTUSE,LA RP	Options. This field defines the optional attributes for the trigger. Enter DFLTRT for default routing. This option applies only to triggers N11 and SDS, and occurs if the call encounters an error condition. Datafill subfield SELECTOR. Enter POTUSE to specify the SDS trigger for a specific service or potential use. Datafill refinement POTUSE. Enter LARP to specify overriding line attributes. This option applies only to trigger SDS. Datafill subfields LINEATTR, XLAPLAN, RATEAREA, PIC, and LPIC.
	LINEATTR	alphanumeric (1 to 16 characters)	Line Attribute Index. Enter the line attribute index as defined in table LINEATTR.
	XLAPLAN	alphanumeric (1 to 16 characters)	XLAPLAN index. Enter the XLAPLAN line attributes index to identify the translations plan as defined in table XLAPLAN.
	RATEAREA	alphanumeric (1 to 16 characters)	RATEAREA index. Enter the RATEAREA line attributes index to identify the RATEAREA line attributes as defined in table RATEAREA.
	PIC	alphanumeric (1 to 16 characters)	Primary Interexchange (or InterLATA) Carrier. Enter the PIC as defined in table OCCNAME. For no carrier, enter NILC.

AIN Service Enablers (continued)

Datafilling table TRIGITM (Sheet 5 of 5)

Field	Subfield	Entry	Explanation and action
	LPIC	alphanumeric (1 to 16 characters)	Local Primary IntraLATA Carrier. Enter the LPIC as defined in table OCCNAME. For no carrier, enter NILC.
	SELECTOR	ANNDN, ANN, DN, or E911ESN	<p>Selector. This subfield specifies the voice announcement and directory number selection.</p> <p>Enter the ANN for announcement. Datafill subfield ANNIDX.</p> <p>Enter ANNDN for announcement and directory number. Datafill subfield DN.</p> <p>Enter E911ESN to access information in table E911ESN. This entry is valid only when the entry in field TRIGGER is TERMATT. Datafill subfield ESN. For more information on the enhanced 911 service, see the Translations Guide.</p>
	ANNDX	1 to 65535	Announcement index. Enter the voice announcement index to table AINANNNS of the desired announcement.
	DN	numeric (1 to 15 digits) or \$	Directory number. Enter the directory number used to route the call. When the DN is \$, call processing continues to the next point in call (PIC).
	ESN	0 to 15999	Emergency service number. Enter the number used to index table E911ESN.
	POTUSE	TFS, E911	<p>Potential use indicator.</p> <p>Enter TFS to identify toll-free service on AIN calls. Entry TFS is valid only when the entry in subfield MSGSET is R02.</p> <p>Enter E911 to identify E911 service on AIN calls. Entry 911 is valid only when the trigger type is TERMATT.</p>

AIN Service Enablers (continued)

Datafill example for table TRIGITM

The following example shows sample datafill for table TRIGITM.

MAP display example for table TRIGITM

4 AUTON411							
N11					(DG	411)\$
ULK EVENT R02 SS7	AUTOAINGT1						\$
17 AUTOAFR							\$
AFR							\$
ULK EVENT R02 SS7	AUTOAINGT1						\$
19 AUTOOCPB							\$
OCPB							\$
ULK EVENT R02 SS7	AUTOAINGT1						\$
20 AUTOTAT							\$
TERMATT							\$
ULK EVENT R02 SS7	AUTOAINGT1						\$
22 TRATRG							\$
TRA							\$
ULK EVENT R02 SS7	AUTOAINGT1						\$
30 AUTOTBSY							\$
TBUSY							\$
ULK EVENT R02 SS7	AUTOAINGT1						\$
32 AUTOTNOA							\$
TNOA							\$
ULK EVENT R02 SS7	AUTOAINGT1						\$
33 AUTOONOA							\$
ONOA							\$
ULK EVENT R02 SS7	AUTOAINGT1						\$

AIN Service Enablers (continued)**Datafilling table CUSTTIID**

The table that follows shows the datafill specific to AIN Service Enablers for table CUSTTIID. Only those fields that apply directly to AIN Service Enablers are shown. For a description of the other fields, refer to the data schema section of this document.

Note 1: Datafill subscription table CUSTTIID after tables TRIGITM and CUSTENG.

Note 2: To assign triggers PFC or SFC to a customer group, datafill this table.

Datafilling table CUSTTIID

Field	Subfield	Entry	Explanation and action
CUSTNAME		alphanumeric (1 to 16 characters)	Customer name Datafill the customer group name as defined in table CUSTENG.
TIID		alphanumeric (vector of up to 8 characters)	Trigger item identifier A two part key as defined in table TRIGITM: consists of subfields TDP and TINAME.
	TDP	1, 3, 4, 17, 19, 20, 30, 32, 33	Trigger detection point. Enter the standard number that represents the desired TDP. The TDP subfield includes: Origination_Attempt (1), Info_Collected (3), Info_Analyzed (4), Network_Busy (17), O_Called_Party_Busy (19), Termination_Attempt (20), T_Busy (30), T_No_Answer (32), O_No_Answer (33)
	TINAME	alphanumeric (1 to 8 characters)	Trigger item name. Datafill this field to identify the trigger item as defined in table TRIGITM.
TRIGACT		ON, OFF	Trigger active. Datafill this field with value ON to activate the identified trigger item. Datafill this field with value OFF to deactivate the identified trigger item.

Datafill example for table CUSTTIID

The following example shows sample datafill for table CUSTTIID.

AIN Service Enablers (continued)

MAP display example for table CUSTTIID

CUSTNAME		TIID	TRIGACT
RESG200	4	CDP2	ON
COMKODAK	4	CDP1	OFF
RESG200	19	OCPB1	OFF
COMKODAK	19	OCPB2	ON

Datafilling table AINPRI

The table that follows shows the datafill specific to AIN Service Enablers for table AINPRI. Only those fields that apply directly to AIN Service Enablers are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table AINPRI (Sheet 1 of 2)

Field	Subfield	Entry	Explanation and action
PRIMEMS			PRI members. This field is the key to table AINPRI and has four parts: LTGRP, LTNUM, FROMCHNL and TOCHNL
	LTGRP		Logical terminal group number Identifies the logical terminal group of a logical terminal.
	LTNUM	1 to 1022	Logical terminal number in a group Identifies the logical terminal number of a logical terminal.
	FROMCHNL	0 to 9999	External trunk name Identifies the beginning of a range of B-channels in a logical terminal.
	TOCHNL	0 to 9999	External trunk name Identifies the end of a range of B-channels in a logical terminal.
TIIDLIST			Trigger item identification list This two-part field indicates the trigger item entered in table TRIGITM.
	TDP		Trigger detection point Enter standard number representing a trigger detection point (TDP).

AIN Service Enablers (continued)**Datafilling table AINPRI (Sheet 2 of 2)**

Field	Subfield	Entry	Explanation and action
	TINAME	8-character alphanumeric string	Name Enter the trigger item name.
	TRIGACT	ON or OFF	Trigger active Enter the field with option ON to activate the trigger item in the TIID. Enter the field with option OFF to deactivate the trigger item in the TIID.

Datafill example for table AINPRI

The following example shows sample datafill for table AINPRI.

MAP display example for table AINPRI

	PRIME MS	TIIDLIST
ISDN	567 12 45	3 PRIB ON
\$		

AIN Service Enablers (continued)

Datafilling table OFCTIID

The table that follows shows the datafill specific to AIN Service Enablers for table OFCTIID. Only those fields that apply directly to AIN Service Enablers are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table OFCTIID

Field	Subfield	Entry	Explanation and action
KEY			Key A two-part key with NAME (8 character alphanumeric string), and a trigger detection point (TDP) consisting of a two-digit number.
	NAME	TDP (1, 3, 4, 17, 19, 20, 30, 32, 33)	Trigger detection Point. Enter the trigger detection point. The TDP subfield includes: Origination_Attempt (1) Info_Collected (3) Info_Analyzed (4) Network_Busy (17) O_Called_Party_Busy (19) Termination_Attempt (20) T_Busy (30) T_No_Answer (32) O_No_Answer (33)
	TDP	NAME	Name. Enter the name of the Trigger item identifier.
TRIGACT		ON, OFF	Trigger activation. ON indicates an active trigger item identified by the TIID. OFF indicates a deactivated trigger item.

Datafill example for table OFCTIID

The following example shows sample datafill for table OFCTIID.

AIN Service Enablers (continued)**MAP display example for table OFCTIID**

```

                KEY TRIGACT
-----
4 S213254D      ON
4 SBK1000D      ON
4 SBK2000D      ON
4 SBK5001D      ON
4 SBK5002D      ON

```

Datafilling table MSRTAB

The table that follows shows the datafill specific to AIN Service Enablers for table MSRTAB. Only those fields that apply directly to AIN Service Enablers are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table MSRTAB

Field	Subfield	Entry	Explanation and action
MSRID		10-digit string	Message Storage and Retrieval Identification. Enter the ten-digit value for the MSRID in this field.
OPTLIST		NIL (\$)	Option. Enter \$ to indicate a nil value as there are currently no option available.

Datafill example for table MSRTAB

The following example shows sample datafill for table MSRTAB.

MAP display example for table MSRTAB

```

                MSRID      OPTLIST
-----
6137216050          $
8197228907      (NIL )$

```


AIN Service Enablers (end)

Datafilling table REASONS

The table that follows shows datafill specific to AIN for table REASONS. Only those fields that apply directly to AIN are shown. For a description of other fields, refer to the data schema section of this document.

Datafill example for table REASONS

Field	Subfield	Entry	Explanation and action
REASNSET		alphanumeric (1 to 16 characters)	Reason set. Enter the name of the reason set. For AIN, enter DEFAULTSET.
REASONID		AINRSNNAM EP, AINRSNNAM EO, AINRSNNUM BERP, AINRSNNUM BERO,	Reason identification Enter the name of the reason. Any entry outside of the range indicated for this field is invalid. Enter AINRSNNAMEP for Private Name. Enter AINRSNNAMEO for Unknown Name. Enter AINRSNNUMBERP for Private Number. Enter AINRSNNUMBERO for Unknown Number.
MESSAGE		alphanumeric (up to 15 characters)	Displayed message. Enter a descriptive message to program the option. Enter an underscore between words to insert a blank space between words. The underscore does not appear on the display.

MAP display for table REASONS

The following example shows sample datafill for table REASONS.

MAP display example for table REASONS

REASNSET	REASONID	MESSAGE
DEFAULTSET	AINRSNNAMEP	PRIVATE_NAME
DEFAULTSET	AINRSNNUMBERO	OUT_OF_AREA

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