Critical Release Notice

Publication number: 297-8021-351
Publication release: Standard 12.02

Attention!

****

The North America DMS-100 Data Schema Reference Manual, 297-8021-351, will continue to be updated and provided in the North America - DMS NTP collection.

****

The content of this customer NTP supports the SN09 (DMS) software release.

Bookmarks used in this NTP highlight the changes between the NA015 baseline and the SN08 (DMS) release. The bookmarks provided are color-coded to identify release-specific content changes. NTP volumes that do not contain bookmarks indicate that the NA015 baseline remains unchanged and is valid through the SN08 (DMS) release.

Bookmark Color Legend

Black: Applies to content for the NA015 baseline that is valid through the current release.

Red: Applies to new or modified content for NA017 that is valid through the current release.

Blue: Applies to new or modified content for NA018 (SN05 DMS) that is valid through the current release.

Green: Applies to new or modified content for SN06 (DMS) that is valid through the current release.

Purple : Applies to new or modified content for SN07 (DMS) that is valid through the current release.

Pink: Applies to new or modified content for the SN08 (DMS) that is valid through the current release.

Orange: Applies to new or modified content for SN09 (DMS) that is valid through the current release.

Attention!

Adobe ® Acrobat ® Reader ™ 5.0 or higher is required to view bookmarks in color.

Publication History

***Note**: Refer to the NA015 baseline document for Publication History prior to the NA017 software release.*

January 2006

Standard NTP release 12.02 for the SN09 (DMS) software release.

Volume 1

Modified data schema – AMAOPTS (A00009252)

Volume 4

Modified data schema – ESAPXLA (Q01228425-01)

Volume 6

Modified data schema – IPNETWRK (Q01215905 and Q01227402)

Volume 7

Modified data schema – LNSMTCE (Q00959081)

Volume 9

New data schema – PATHSET (modified by Q01077097)

New data schema – SBSRMINV (Q01063949)

Volume10

New data schema – SERVRINV (Q01063949)

Volume12

Deleted the term TBD, which occurred in two places in this volume.

September 2005

Preliminary NTP release 12.01 for the SN09 (DMS) software release.

Volume 1

Modified data schema – AMAOPTS (A00009252, A00009508); ANNMEMS, ANNPHLST (A00009013)

Volume 8

Modified data schema – OAFUNDEF (A00009012)

Volume 9

Modified data schema – SCAICOMS (A00009078)

Volume 11

Modified data schema – TOPSFTR (A00009012)

Volume 12

Modified data schema – TRKSGRP type ISDN (Q01112597)
Modified data schema – XPMIPMAP (A00009011)

August 2005

Standard NTP release 11.03 for the SN08 (DMS) software release.

Volume 5

Modified data schema – IBNFEAT feature SimRing

Volume 6

Modified data schema – KSETFEAT feature SimRing

Volume 7

Modified data schema – LTCINV

Volume 11

New data schema – TOPSMCDB
Modified data schema – TOPSTOPT

June 2005

Standard NTP release 11.02 for the SN08 (DMS) software release.

The following Data Schema content is updated for the SN08 (DMS) release. Content provided in this NTP is not superceded by content provided in the replacement NTP as indicated for the Preliminary release.

Volume 3

New data schema – CUSTSTN option CNDBO

Volume 4

Modified data schema – EADAS

Volume 6

New data schema – KSETINV
New data schema – LCMINV

Volume 8

New data schema – NSCDEFS
New data schema – NSCPMAP

March 2005

Preliminary NTP release 11.01 for the SN08 (DMS) software release.

The following updated Data Schema content is provided in the Carrier VoIP Operational Configuration: Data Schema Reference NTP, NN10324-509. The content provided in NTP 297-8021-351 is superseded by the content provided in NTP NN10324-509.

ACDMISPL
CGBLDADD
CGBLDDGL
CGBLDDIG
CGBLDNI
CGBLDPI
CGPNBLDR
CUSTSTN_OPTION_DBO
EDAS
IBNLINES
ISERVOPT
KSETINV
TLDSIAMAOPTS
TRKSGRP_TYPE_C7UP

The following new Data Schema content is provided in the Carrier VoIP Operational Configuration: Data Schema Reference NTP, NN10324-509. This content will not be provided in NTP 297-8021-351.

CGBLDSIN
LOGTHROT
NTPOLL

October 2005

Standard release 10.04 for software release SN07 (DMS). Updates made in the North American Data Schema Reference Manual are shown below

Volume 2

Table BEARNETS description added for CR Q01083765.

Volume 3

Table DESDATA description added for CR Q01083765.

Volume 4

Table DPTRKMEM was created as part of activity A59015739 in an earlier release. Documentation updated for CR Q01083781.

Volume 5

Table IHEADRR description added for CR Q01083765.

Volume 8

Table NET2NET description added for CR Q01083765
Table NETBRDGE description added for CR Q01083765
Table NETPATH description added for CR Q01083765

Volume 9

Table PCEMENTT was created as part of activity A00007196 in an earlier release. Documentation updated for CR Q01077110.

Table PCEMFEID was created as part of activity A00007196 in an earlier release. Documentation updated for CR Q01077137.

Table PRSUDATA description added for CR Q01083765.

Table PVDNCHAN description modified for CR Q00806759/Q01207784

Volume 10

Table SELDEFS and table SETDEFS descriptions added for CR Q01083765.

December 2004

Standard release 10.03 for software release SN07 (DMS). Updates made in the North America Data Schema Reference Manual are shown below

Volume 9

Table PECINV amended for CR Q00900178

Standard release 10.02 for software release SN07 (DMS). Updates made in the North America Data Schema Reference Manual are shown below

Volume 1

AINPRESC (new), ACDENLOG, ACDGRP, ACDLOGIN, ANNS

Volume 2

No changes

Volume 3

CMIPADDR, CUSTSTN option AINDENY

Volume 4

No changes

Volume 5

IBNFEAT feature ACD, IBNFEAT feature SUPR

Volume 6
IPAPPL (new), KSETFEAT feature SUPR, KSETFEAT feature IPCLIENT, KSETLINE feature ACD

Volume 7
No changes

Volume 8
MULTITM (new), OAFUNDEF, OANODINV

Volume 9
PADDATA, QMSMIS

Volume 10
No changes

Volume 11
TOPSFTR, TOPTDROP, TRIGINFO, TRIGITM, TRKAIN

Volume 12
No changes

September 2004

Preliminary release 10.01 for software release SN07 (DMS). Updates made in the North America Data Schema Reference Manual are shown below

Volume 1
ACDENLOG, ACDGRP, ACDLOGIN

Volume 2
AUTHCDE

Volume 3
CUSTN, CUSTN option VOWDN (new)

Volume 4
DIRPOOL2 (new), DIRPPOOL, DNROUTE, DNROUTE feature VOWDN (new)

Volume 5
IBNFEAT feature ECM, IBNXLA

Volume 6
ISUPTRK, KSETFEAT feature ECM

Volume 7
LIUINV, LTCINV, MNHSCARR, MSCIDMAP (new), MSCINMAP (new)

Volume 8
MUMRTAB

Volume 9
RESFEAT

Volume 10
TDBDAOPT, TMTMAP

Volume 11
TOLLTRKS, TOPSFTR, TOPSPARM, TOPSTLDN

Volume 12
TRKOPTS, VOWINV (new), XLABILL (new), XLACLASS (new)

March 2004

Standard release 09.03 for software release SN06 (DMS). Updates made in the North America Data Schema Reference Manual are shown below.

Volume 1
DCA references changed / made obsolete

Volume 2
CARRMTC, C7UPTMR

Volume 3
DCA references changed / made obsolete

Volume 4
DNROUTE, DNROUTE feature DISA

Volume 5-6
No changes

Volume 7
LNPOPTS, LTDATA

Volume 8
OPTOPT

Volume 9
PADDATA, RDTINV

Volume 10
SUSHELF, SYNCLK, DCA references changed / made obsolete

Volume 11-12
No changes

September 2003

Standard release 09.02 for software release SN06 (DMS). Updates made in the North America Data Schema Reference Manual are shown below.

Volume 1
No changes

Volume 2
BCCODES

Volume 3
CSEDPMAP

Volume 4
DSLIMIT, FNPACONT.RTEREF

Volume 5

HNPACONT.RTEREF, IBNFEAT feature MWT, IBNLINES option MDN, IBNLINES option STN, IBNRTE selector CND, IBNRTE selector NOT, IBNXLA, IBNXLA selector FTR type LSPKP

Volume 6
ISDNPARM, ISERVOPT, KSETLINE

Volume 7
LENLINES, LTCINV, MNMGPIP

Volume 8
OFRT selector CND, OFRT selector NOT

Volume 9
No changes

Volume 10
STDPRTCT.STDPRT selector E911

Volume 11
TODHEAD, TONES, TRKGRP E911, TRKGRP type IT

Volume 12
TRKOPTS, VFGDATA, VIRGRPS

June 2003

Preliminary release 09.01 for software release SN06 (DMS). Updates made in the North America Data Schema Reference Manual are shown below.

Volume 1
ACRTE, ALMSC, ALMSCGRP, ALMSD, ALDSDGRP, ANNAUDID (new), ANNMEMS, ANNPHLST (new)

Volume 2
No changes

Volume 3
CSEDPMAP (new), CUSTN option CFIND, DEFDATA

Volume 4
FNPACONT

Volume 5
HNPACONT, IBNFEAT feature CFIND, IBNLINES, IBNRTE selector CND, IBNRTE selector NOT

Volume 6
ISERVOPT, KSETLINE

Volume 7
LRGPINV (new), LTDATA, MNCKTPAK, MNIPPARM (new), MNNODE

Volume 8
OFRT selector CND, OFRT selector NOT

Volume 9
PADDATA, REXSCHED

Volume 10
SERVSINV, SPMECAN, SPMLDVAL (new), STDPRTCT.STDPRT selector E911

Volume 11
TODHEAD, TONES, TRKGRP E911, TRKGRP type IT

Volume 12
TRKMEM, TRKOPTS, TRKSGRP, VFGDATA, VIRTGRPS

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DMS-100 Family

North American DMS-100

Customer Data Schema Reference Manual Volume 11 of 12

Data Schema TODHEAD-TRKGRP type NU

LET0015 and up Standard 05.02 May 2001

NORTEL NETWORKS™

DMS-100 Family

North American DMS-100

Customer Data Schema Reference Manual Volume 11 of 12

Data Schema TODHEAD-TRKGRP type NU

Publication number: 297-8021-351
Product release: LET0015 and up
Document release: Standard 05.02
Date: May 2001

Contents

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Data Schema TODHEAD-TRKGRP type NU

NTP Summary Contents

1 Data schema tables

The following pages contain the data schema tables.

TODHEAD

Table name

Time of Day Head Table

Functional description

Time of Day system

The Time of Day (TOD) feature is provided in switching units with the following software packages:

- Integrated Business Network (IBN) Time of Day Routing (software package NTX433AA)
- IBN Time of Day Network Class of Service (NCOS) (software package NTX434AA)
- International switching units with Time of Day Routing (software package NTX488AA)
- DMS-300 switching units with Time of Day and Percentage Routing (software package NTX295AA)
- Europe telecommunications standard institute (ETSI) integrated services digital networks user part (ISUP) Network Advice of Charge (NAOC) Tariff and Time of Day Switchover Percentage Routing

The Time of Day system is dependent on four other tables:

- DAYTYPES
- DAYOWEEK
- DAYOYEAR
- TIMEODAY

Feature TOD allows or denies route choices, NCOS screening choices. In a switching unit with international translations and the DMS-100 Metering System, the TOD feature allows or denies Tariff Changeover Control, also called Time of Day Changeover, based on the time of day. The times can be set according to the rate schedules of the carriers (public network and other common carriers) accessible to the user. The changeovers can also be varied based on the day of the week or day of the year, to account for weekends and holidays.

The TOD system specifies changeovers for up to 16 results (time ranges) based on the time of day and day of week or day of year. Different results can be defined for any day, or set of days on a weekly basis, or for any specific day of the year.

TODHEAD (continued)

The TOD system allows special days of the year to override the normal day type. For example, if Christmas (December 25) is on a Sunday, the following day types are defined:

- SATURDAY (Saturday)
- SUNDAY (Sunday)
- WEEKDAY (weekday—Monday to Friday inclusive)
- STATHOL (December 25)

If no override was allowed, then normal tariff (SUNDAY) would apply. Allowing the day of year override causes holiday tariffs to apply.

The user must reconcile variables, for example Standard, Daylight, Central Time, Greenwich Mean Time, and holidays such as Easter, Thanksgiving, and Labor day, on a yearly basis. The user must define separate TOD systems for remotes and other switches that operate in different time zones.

Table SFWALARM has two entries that define the actions related to the TOD system:

- The entry in field TODSYS defines the action taken by the alarm system when the TOD system shuts itself down. It is accompanied by log AUDT169 which indicates that the TOD system has been shut down.
- The entry in field TODSYS defines the action taken by the alarm system when the TOD system shuts down a TOD feature when the trap threshold for that feature is exceeded. It is accompanied by log AUDT168 which indicates the feature that was disabled.

Routing

TOD routing and percentage routing allows cost-effective use of facilities available by allowing or denying route choices based on the time of day. The times can be set according to the rate schedules of the carriers (public network and other common carriers) accessible to the user. In order to provide the most cost-effective routing, route lists must allow variable routing as a function of time of day. This is achieved by defining different results for the same times on different days of the week, or days of the year.

Percentage routing is especially required when splitting traffic between several common carriers to another country.

TOD routing and percentage routing for IBN is done from table IBNRTE as a refinement of the conditional selector (CND) with a TOD sub-selector for Time of Day and RND sub-selector for Random-conditional routing.

TOD routing and percentage routing for DMS-300 is done from tables OVR0-OVR9 as a refinement of selector CND with a TOD sub-selector for Time of Day and RND sub-selector for Random-conditional routing.

This allows efficient routing to other routes in tables IBNRTE or OVR0-OVR9 as a function of time of day. The day can be partitioned into a maximum of 1440 (1 min apart over 24 h) segments, with a maximum of 16 different results (time ranges) based on the time of day and day of the week or year. Different results can be defined for any day, or set of days on a weekly basis or for any specific day of the year.

The TOD IBN NCOS Screening feature allows the operating company to impose a more restrictive NCOS on calls made after normal business hours. This type of routing allows flexible screening of class of service values, so that calls having a more restrictive NCOS could be routed to treatments, and calls with a less restrictive NCOS could be routed over a particular trunk group (that is, no extra translator is needed for screening).

The International TOD DMS-100 Metering System feature which allows the operating company to implement Tariff Changeover Control, (also called Time of Day Changeover), which refers to the time of day and type of day changes which must be performed to determine the current tariff.

The ETSI ISUP Network Advice of Charge Tariff and Time of Day Switchover (NAOC) feature determines charge related information between a charge determination point (CDP) and a charge generation point (CGP). The CDP determines which tariff to apply for a call. The CGP is an exchange where the charging information received from the network converts into a format delivered to the actual subscriber.

The INAP Time of Day feature allows the operating company to adjust the current tariff rate according to Time of Day changeover rules, to be used for Chinese calling card services. This tariff rate for specific TODNAME and their discount index values can be found in table TARFCLAS.

Restrictions

The following restrictions apply to the TOD system:

- Consecutive changeovers to a network cannot take place more than once every half hour.
- Time of Day changes must occur on the quarter hour (this is enforced by table control).
- A maximum of ten changeovers over each 24-h period is enforced.
- The TOD system overrides are not allowed if metering is involved.

TODHEAD (continued)

To prevent the changeover system from overloading the message system, changeover requests are spread over a changeover period. At the beginning of this changeover period, a snapshot of the current relevant metering tables is taken. Changes made to the metering tables during this period take effect at the end of the current period. This ensures system integrity in all cases.

Due to the static nature of tariff tables, and to maintain a degree of security on the metering system, no abortive action is provided for the user once a changeover period is in effect. The user can only make corrective actions after the current period and prior to the next changeover period. (This does not preclude the user from specifying a changeover period immediately following the current changeover period.)

Tables DAYTYPES, TODHEAD, DAYOWEEK, and TIMEODAY show examples of datafill for routing service calls (for example, Repair Service) differently after business hours.

Functional description of table TODHEAD

Table TODHEAD is the head table for the Time of Day system. It defines how tables DAYOWEEK, DAYOYEAR, and TIMEDAY are used.

If a switching unit has the universal translations and the metering utilities, all metering networks datafilled in table LNETWORK must have a corresponding entry in this table with field TODTYPE format set to MTR. Failure to do so results in no charges for calls using metering on that network.

Newly added TOD names (field TODNAME) are in disabled status. When all the TOD and related tables are datafilled, enter CI (command interpreter) command TDQ TODRESET *todname* to start up the new TODNAME.

A disabled TOD name may react differently from an overridden one depending on the feature. If override is required, do not disable the TOD name. (With IBN TOD routing, a disabled TOD name always causes the conditional route to fail; the branch is never taken). A disabled TOD name can be overridden.

The default data may be changed at anytime, but the TOD type (field TODTYPE) must remain the same.

If the entry is disabled by the TOD system, it is re-enabled by a change, even if the data was not modified. The TOD name must be restarted manually using the CI command TDQ TODRESET *todname*.

If the entry is disabled or overridden manually, the status of the TOD name is not changed. (A TDQ TODRESET command must be entered for the TOD scheduler to resume maintenance of the system).

The day type vector (field DAYTYPE) cannot be changed. Attempted changes are ignored. Use the following procedure to add a day type to a TOD name:

1. Dump the current data for that TOD name from all TOD tables except DAYTYPES.
2. Dump all the data that references that TOD name in non-TOD tables. (The tables affected depend on the TOD name's feature.)
3. Delete the just-dumped data (including the TOD head entry [field TODHEAD]).
4. Add the TODHEAD entry with the new, enlarged day type list.
5. Restore the data for the other tables.

Recommended practice is to enter some spare day types (for example, spare1, spare2). These can be renamed if required during the next dump and restore or BCS conversion.

Partitioned table editor

If feature BC1459 (Partitioned Table Editor) has been purchased for an IBN switch, the ownership of each tuple in this table is defined in tables DATAOWNR and OWNTAB as follows:

- The entries in table DATAOWNR that apply to table TIMEODAY are those in which the entry in field TABNAME is equal to the entry in field TODNAME, and both are equal to the value of field TODNAME in this table.
- The entry in field TABNAME in table OWNTAB must be TODHEAD.

Datafill sequence and implications

Enter the data for the following tables before table TODHEAD:

- COSMAP
- DAYTYPES
- MTRLNET

Enter the data for the following tables in this order to activate the NAOC feature:

- CARNAME
- RESNAME

TODHEAD (continued)

- TARFINDX
- TODHEAD
- TIMEODAY

Enter the data for the following tables after table TODHEAD:

- TIMEODAY
- DAYOWEEK
- DAYOYEAR

Table size

0 to 255 tuples

Prior to BCS35, the memory size for this table is defined by the user in table DATASIZE.

Datafill

The following table lists datafill for table TODHEAD.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
TODNAME		see subfield	*Time of day name key* This field consists of subfield TODNAME. This is the key to the table.
	TODNAME	alphanumeric (1 to 8 characters) or blank	*Time of day name* For the first record for the Integrated Business Network (IBN) or DMS-300 Time of day (TOD) or Percentage Routing entry, enter the name assigned to the TOD system. This TOD name is assigned in one or more entries in table IBNRTE for an IBN switching unit, and in tables OVR0-OVR9 for a DMS-300 switching unit. For the first record for the Time of Day Network Class of Service (NCOS) Screening entry, enter the name assigned to the time of day system. This name is assigned to the customer group in table CUSTHEAD with the option TODNCOS. For the first record for the Time of Day DMS-100 Metering System entry, enter the name assigned to the time of day system. If the TODTYPE is NAOC, the TODNAME keeps the CARRIER or RESELLER name for this record as entered in either table CARNAME or RESNAME. For all other records, leave the field blank.

TODHEAD (continued)

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
TODTYPE		MTR, RTE, NCOS, NAOC, INAP	*Time of day type* For the first record for the International TOD DMS-100 Metering System entry, enter the TOD type MTR (meter) and datafill refinements NETWORK and TNTNUM. This entry keeps the Tariff Change Over index. For the first record for the IBN or DMS-300 TOD or Percentage routing entry, enter the TOD type RTE (route) and datafill refinement TIME. For all other records, leave field blank.
	LNETNAME	alphanumeric (1 to 8 characters) or blank	*Logical metering network* If the entry in field TODTYPE is MTR, datafill this refinement. For the first record for the Time of Day DMS-100 Metering entry, enter the Logical Metering Network name assigned to this TOD DMS-100 Metering System entry. This name is assigned in table LNETWORK. For all other records, leave the field blank.
	TNTNUM	0 to 9 or blank	*Tariff number table number* If the entry in field TODTYPE is MTR or INAP, datafill this refinement. For the first record for the Time of Day DMS-100 Metering System entry, enter the number of the Tariff Number table that applies to the entry. TNTNUM is defined in table MTARFNUM field TABLEKEY. For INAP TOD types, TNTNUM applies to discount entries in table TARFCLAS. For all other records, leave the field blank. Go to field DAYTYPES.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
	COSMAP	alphanumeric (1 to 16 characters) or blank	*Class of service mapping* If the entry in field TODTYPE is NCOS, datafill this refinement. For the first record for the Time of Day NCOS screening entry, enter the Class of Service name assigned to TOD NCOS screening. For all other records, leave the field blank. Go to field DAYTYPES.
	TCOINDX	0 to 15	If the entry in field TODTYPE is NAOC, datafill this refinement. The value entered must be already used by an entry for the same carrier or carrier reseller in table TARFINDX. For all other records, leave the field blank.
	TIME	0 to 9 A to F or blank	*Time* If the entry in field TODTYPE is RTE, datafill this refinement. For the first record for the Route entry, enter the time range applicable to the entry. For all other records, leave the field blank.
DAYTYPES		alphanumeric (1 to 8 characters)	*Types of day* Enter up to thirty-two day types assigned to this TOD route entry. One entry is required for each of the three TOD types datafilled in field TODTYPE. These day types are defined in table DAYTYPES. Examples are: WEEKDAY, WEEKEND, XMAS, HOLIDAY, JULY4, and SATDAY. If less than 32 TOD types are required, end the list with a $ (dollar sign).

Datafill example

The following example shows sample datafill for table TODHEAD.

The first tuple shows a typical entry for IBN and DMS-300 TOD and Percentage routing for TOD system GROUP1.

The second tuple shows a typical entry for an IBN TOD NCOS Screening entry for a TOD system with the name LONTODN.

TODHEAD (continued)

The third tuple shows a typical entry for an International TOD DMS-100 Metering system for a TOD system with the name GOCTODN.

The fourth tuple specifies the datafill used if service calls (for example, repair service) is to be routed differently after business hours.

The fifth tuple shows the carrier or name for the NAOC feature.

The sixth tuple shows the reseller name for the NAOC feature.

MAP display example for table TODHEAD

```
TODNAME      TODTYPE           DAYTYPES
_____________________________________________________

GROUP1         RTE  0
                    (WEEKDAY) ( SATDAY) ( SUNDAY)$

LONTODN NCOS NCOSTODMAP
                    (WEEKDAY) ( SATDAY) ( SUNDAY)$

GOCTODN  MTR NATIONAL 2
                    (WEEKDAY) ( SATDAY) ( SUNDAY)$

REPAIR         RTE  0
                              (WEEKDAY) (WEEKEND)$
```

Table history

SN06 (DMS)

INAP added as an entry for TODTYPE, to support Intelligent Network Application Part (INAP) protocol. Feature A89008170.

MMP15

With feature 59023132, the table TODHEAD definition space is increased to allow up to 10 tariffs instead of 8.

EUR012

The NAOC value for the TODTYPE field was new to table TODHEAD. This value was necessary to schedule a NETWORK AOC tariff changeover.

Field TOCIDX was new to table TODHEAD.

TODHEAD (end)

EUR006

The following fields were added to table TODHEAD:

- LNETNAME
- TNTNUM
- DAYTYPES

The range of values in field TODTYPE was changed to only include MTR or RTE.

The size of table TODHEAD was increased from 32 to 255 tuples.

BCS36

The table size was changed.

TOFCNAME

Table name

Terminating Office Name

Functional description

Table TOFCNAME stores the area code and office code for the switch. A terminating office number (TOFCNO) consists of both an area code and an office code. Table HNPACONT or table SNPANAME must define the area code.

Table TOFCNAME replaces table THOUGRP. Table DNROUTE stores all routing information originally stored in table THOUGRP.

Software optionality control (SOC) options NPE00001 and NPE00002 implement duplicate office code and table TOFCNAME expansion capabilities. When NPE00001 is active, you can datafill one office code against more than one area code in table TOFCNAME. When NPE00002 is active, you can datafill table TOFCNAME with up to 8151 entries.

Office parameter ACTIVE_DN_SYSTEM in table OFCENG controls the DN system in use on the switch. You can set this parameter to the following:

- NORTH_AMERICAN. In this occurrence, table TOFCNAME can store up to 100 entries (tuples)
- UNIVERSAL. In this case, the following occurs:
  - — If the state of SOC option NPE00002 is IDLE, table TOFCNAME can store up to 1024 entries
  - — If the state of SOC option NPE00002 is ON, table TOFCNAME can store up to 8151 entries

Note: Unless SOC option NPE00001 is active, the DMS switch does not allow two area codes to share the same office code.

Note: When the capacity of table TOFCNAME increases, the capacity of tables DNINV and DNROUTE decreases (from 1 000 000 to 300 000).

TOFCNAME (continued)

Local Number Portability

For Local Number Portability (LNP), it is preferable for the switch to use the universal directory number (DN) system with the North American dialing plan.

The DN is “ported-in" if you move the DN from a donor switch to a recipient switch . Option NONNATIVE in field OPTIONS is assigned to area code and office code entries for ported-in DNs.

Note: In North American applications, if table HOMELRN uses the resident area code and office code, you cannot change the resident area code and office code to nonresident.

Datafill sequence and implications

Datafill one or the other of the following tables before table TOFCNAME:

- HNPACONT
- SNPANAME

Table size

The size of table TOFCNAME depends on:

- the value of office parameter ACTIVE_DN_SYSTEM in table OFCENG
- if SOC option NPE00002 is active

The following table shows sizes for table TOFCNAME.

TOFCNAME size

value of ACTIVE_DN_SYSTEM	maximum size of TOFCNAME
NORTH_AMERICAN	100 tuples
UNIVERSAL	1024 tuples if NPE00002 is not active 8151 tuples if NPE00002 is active

Datafill

The following table lists datafill for table TOFCNAME.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
AREACODE		0 to 9999999 (vector of up to 7 digits)	*Area code* Enter the area code. The area code (NPA) identifies a geographical area served by the switch. This field can contain one to seven digits. In an office that uses the North American numbering plan, the area code must be three digits. Enter an area code defined in table SNPANAME.
OFCCODE		0 to 9999999 (vector of up to 7 digits)or $	*Office code* Enter the office code. The area code region consists of a number of areas. The office code identifies the area served by the office. An office code can have from zero to seven digits. For an office that uses the North American numbering plan, the office code must contain three digits. Enter a number that is not used as an area code. For example, if the area code is 613, the office code cannot be 613. ***Note:*** Service interruption can occur if you enter an office code that is an area code. The switch can route calls to the wrong location because the switch cannot determine the termination point of the call. A tuple (AREACODE plus OFCCODE entry) cannot be an expansion or reduction of another entry. For example, if 200 34 (area code 200 plus office code 34) is a tuple, you cannot add the following tuples to the table: 20 03, 2003 45 or 20 034.
OPTIONS		NONNATIVE	*Ported-in DN* Enter NONNATIVE to identify a ported-in DN. End the tuple with a $ (dollar sign). ***Note:*** Translations ports in only DNs with nonnative NPA-NXX that reside on the switch.

TOFCNAME (continued)

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
		CODEHLDR	Enter CODEHLDR to indicate that an NPA-NXX is LERG assigned even though 1000 blocks may be pooled out to other switches. To assign the CODEHLDR option to a tuple the NPE00005 SOC option must be active.
Note:			
The CODEHLDR option cannot be present with the NONNATIVE TOFCNAME option and vice versa.			

Datafill example

The following example shows typical datafill for table TOFCNAME without ported-in DNs datafilled.

MAP display example for table TOFCNAME

```
AREACODE    OFCCODE                                    OPTIONS
_____________________________________________________________

     200        234                                        $
     784        324                                        $
     201        786                                        $
     613        621                                        $
     245        879                                        $
```

The following MAP display example shows typical datafill for table TOFCNAME with datafilled ported-in DNs.

In this example, all DNs for

- 613 621 are local to the switch
- 819 725 are not local to the switch (ported-in)

MAP display example for table TOFCNAME,

```
AREACODE      OFCCODE                                  OPTIONS
_____________________________________________________________

    613           621                                      $
    819           725                       (NONNATIVE )   $
```

Table history

NA013

Option CODEHLDR is introduced by feature 59012574.

NA010

NA010 reduces the maximum number of tuples from 8171 to 8151. This reduction accomodates the allocating store on the POWERPC platform.

NA009

Added information on SOC options NPE00001 and NPE00002

NA007

Added field OPTIONS and option NONNATIVE and corrected the table capacity information.

Added error information.

TOFCNAME (end)

Supplementary information

The following table explains error messages that can occur when you attempt to datafill table TOFCNAME.

Error messages

Message	Explanation	User action
`This tuple will create an ambiguity with 613 621`	The area code and office code of the tuple being added isa superset of the area code and office code of a tuple already in table TOFCNAME.	Enter the tuple again, using a different area code, office code, or both.
`ERROR: This entry creates an ambiguity with a more precise entry and is not allowed.`	The area code and office code of the added tuple isa subset of the area code and office code of a tuple already in table TOFCNAME.	Enter the tuple again, using a different area code, office code, or both.
`This tuple will create a duplicate with 613 621ERROR: Duplicate office codes are not allowed while NPE00001 is idle`	The office code of the tuple being added is equal to or a superset of the office code of a tuple already in table TOFCNAME.	Activate NPE00001. Enter the tuple again.
`ERROR: This entry creates a duplicate office code with a more precise entry.Duplicate office codes are not allowed while NPE00001 is idle.`	The office code of the tuple being added is a subset of the office code of a tuple already in table TOFCNAME.	Activate NPE00001. Enter the tuple again.

TOLLENTC

Table name

Entry Code Table

Functional description

Table TOLLENTC is required in all toll switching units configured for centralized automatic message accounting (CAMA), local switching units configured for local automatic message accounting (LAMA), and combined local and toll switching units configured for CAMA and LAMA.

Note: For non-TOPS (Traffic Operator Position System) calls, module ATTCLSSI of feature package NC0078 (Class of Service Indication on AMA Calls) must be present in the switch.

For each of the charge classes listed in table BILLCODE for incoming or two-way CAMA trunk groups, or listed in table LINEATTR for lines, table TOLLENTC provides the entry code and indicates whether a charge is applicable.

If the switching unit is toll or combined local and toll with outgoing Super CAMA trunk groups (trunk group type OS) that require an automatic message accounting (AMA) recording, and if for some of the calls there are no called or calling digits, a tuple with the following entry values is required in table TOLLENTC.

Field	Value
CHGCLSS	SPCL
ENTCODE	63
APPLYCHG	Y

If the switching unit has the above configuration, field DATADUMP in table CRSFMT must be set to Y so that the incoming and outgoing CLLIs are added to the AMA entry. This avoids confusion in downstream processing of AMA tapes for calls that have no called or calling digits.

For local or combined local and toll switches that have the CDR feature, local calls can be distinguished from other LAMA calls through the use of the entry code assigned to charge class LCDR (local CDR).

Charge class MBG is for use with multi-location business group lines.

TOLLENTC (continued)

Charge class RCFW is for use with remote call forwarding lines.

Charge class TRMB is for use with local billable calls that terminate on a line belonging to a hunt group.

Charge class LLOR is for use with local land-originated calls for DMS-MTX switching units.

Charge classes and their uses are outlined below:

- DLLS data local low speed 300 to 9.6K
- DLHS data local high speed 19.2K to 64K
- DIHS data international high speed 56k
- CAM1 future charge class for voice
- CAM2 future charge class for voice
- CAM3 future charge class for voice

With BCAMA (Bellcore AMA) format, the entry for field APPLYCHG has no meaning even though it needs to be datafilled. AMA module code 306, which contains a three-digit originating line information parameter (OLIP) plus hexadecimal value C, is appended. The OLIP is derived from the two-digit field ENTCODE in table TOLLENTC and padded with a leading zero. For all calls with field CHGCLSS datafilled as NONE in table LINEATTR, module code 306 is appended with an OLIP value datafilled for the NONE tuple in TOLLENTC. If appending of the module code is not desired for these calls, the NONE tuple should be removed.

Datafill sequence and implications

There is no requirement to datafill other tables prior to table TOLLENTC.

Table size

0 to 27 tuples

The maximum table size is limited by the number of charge classes that are defined in the switch, up to a maximum of 64. Since 27 different charge class types are currently defined, this places an upper limit on the table size.

Datafill

The following table lists datafill for table TOLLENTC.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
CHGCLSS		CAM0, CAM1, CAM2, CAM3, CSD0, DAT0, DAT1, DAT2, DAT3, DIHS, DLHS, DLLS, INW0, LAM0, LCDR, LLOR, MBG, MOBL, MOB0, MOB1, RCFW, SPCL, TOPS, TRMB, TWX0, WAT0, or NONE	*Charge class* Enter an alphanumeric character string to specify the charge class.
ECANDCHG		see subfields	*Entry code and charge* This field consists of subfields ENTCODE and APPLYCHG.
	ENTCODE	numeric (0 to 99)	*Entry code* Enter the entry code assigned to charge class.
	APPLYCHG	N or Y	*Apply charge* If a charge is applied for call, enter Y (yes). Otherwise, enter N (no).

Datafill example

The following example shows sample datafill for table TOLLENTC. The entry codes listed are assigned to various charge classes. All classes except LCDR have applied charge.

TOLLENTC (end)

MAP display example for table TOLLENTC

```
CHGCLSS          ECANDCHG
_____________________________________________________________

  CAM0             00 Y
  TWX0             08 Y
  WAT0             11 Y
  DAT0             15 Y
  LCDR             18 N
  RCFW             00 Y
  SPCL             63 Y
  INW0             80 Y
  DLLS             31 Y
  DLHS             32 Y
  DIHS             33 Y
  DAT1             34 Y
  DAT2             35 Y
  CAM1             36 Y
  CAM2             37 Y
  CAM3             38 Y
  DAT3             39 Y
```

Table history

CSP02

A note for non-TOPS calls requiring feature package NC0078 was added.

TOLLTRKS

Table name

Toll Trunks Table

Functional description

Table TOLLTRKS stores the common language location identifiers (CLLI) of all trunk groups carrying incoming toll-completing traffic. The key to the table is a CLLI name. No other data is included in this table. The list of CLLIs is used to evaluate long distance indicators (LDI) when reverse translation of the calling digits fails.

The custom local area signaling services (CLASS) LDI provides the capability to deliver extra information to the customer premises equipment (CPE) of the called party for incoming long distance calls. The LDI feature is optionally available to the subscriber of any CLASS display features using the multiple data message (MDM) format.

In Canada, CLASS is known as call management services (CMS).

Feature operation

The LDI is provided to the CLASS (or CMS) set if the following conditions are met:

- An incoming toll completing call is received.
- The call terminates to a line that is assigned a CLASS (or CMS) display feature using the multiple data message format.
- There is enough space in the message being sent from the computing module (CM) to include the call qualifier parameter.

If these conditions are met, the LDI is sent to the terminating CPE in the call qualifier parameter as part of the call setup message.

Recognizing a toll call

Either of the following methods can be used to determine whether an incoming call is toll-completing:

- reverse translation of the calling digits
- use of table TOLLTRKS

If reverse translation fails for any reason (for example, no calling digits received from network, office not equipped with reverse translation software, or unsuccessful reverse translation) the long distance status of the call is evaluated using table TOLLTRKS, where the CLLIs of trunk groups that carry terminating toll completing calls are identified. All calls received on these

TOLLTRKS (continued)

defined CLLIs, provided the calls meet the conditions listed under the heading "Feature operation", result in an LDI being sent to the terminating CPE.

The following table illustrates the possibilities.

Methods used to evaluate the LDI

Display feature	Calling info received	Method used
Calling Number Delivery Single Data Msg	—	LDI not evaluated
Calling Number Delivery Mult. Data Msg	Yes	Reverse translation or table TOLLTRKS
Calling Number Delivery Mult. Data Msg	No	Table TOLLTRKS
Dialable Directory Number	Yes	Reverse translation or table TOLLTRKS
Dialable Directory Number	No	Table TOLLTRKS

Restrictions and limitations

If non-toll calls complete to a terminating office on trunks normally selected for toll completing calls (for example, calls that overflow from regular trunk groups), and the trunk group is datafilled in table TOLLTRKS, these calls may be erroneously identified as toll calls to a subscriber with a CLASS (or CMS) display feature. Trunks that can carry toll and non-toll calls must not be datafilled in table TOLLTRKS.

Datafill sequence and implications

The following tables must be datafilled before table TOLLTRKS:

- CLLI
- TRKGRP

Trunk CLLIs that are added to this table must first be datafilled in table TRKGRP. Trunks that are removed from table TRKGRP must first be removed from table TOLLTRKS.

Table size

0 to 8192 tuples

Datafill

The following table lists datafill for table TOLLTRKS.

Field descriptions

Field	Subfield	Entry	Explanation and action
CLLI		alphanumeric (1 to 16 characters)	*Common language location identifier* Enter a 1- to 16-character name to identify a trunk group that carries toll completing traffic into the switching unit. This field is the same as the key to table TRKGRP. Any value entered in this field must have been previously datafilled in table TRKGRP.

Datafill example

The following example shows sample datafill for table TOLLTRKS.

MAP display example for table TOLLTRKS

```
CLLI
-------------------------------------------------------------------
TOWNAINCTOLL
TOWNBINCTOLL
TOWNCINCTOLL
```

Table history

SN07 (DMS)

Table size increased from maximum 2048 tuples to maximum 8192 tuples by feature A00002558, LDI Display for CLASS Phones.

Table history section added.

TONES

Table name

Tones Table

Functional description

Table TONES defines tones that are generated by line or trunk peripheral modules.

The special tones listed below are generated on cards located on a trunk module (TM) or maintenance trunk module (MTM), and defined in table STN instead of table TONES:

- BVTONE: IBN busy verification tone
- CWT: call waiting tone
- DISTCWT: distinctive call waiting tone
- EBOT: executive busy override tone
- ERWT: expensive route warning tone
- OHQT: offhook queuing tone
- ROH: receiver offhook tone

The special tones listed below are generated on cards located on a TM or MTM, and are defined in table SVRCKT instead of table TONES:

- SVDTMF: DIGITONE outpulsing circuit
- SVOBSV: service observing circuit

Where field KIKEY in table KEY_ITEM table is datafilled with an entry of TONEKEY, the maximum number of tones that can be allocated is determined by the value of field SIZE in table KEY_ITEM.

Where field DATSKEY field in table DATASIZE is datafilled with an entry of TONES, memory for table TONES is allocated in accordance with the value of field SIZE in table DATASIZE.

To extend the length of the table, the size in the DATASIZE table must be increased and a cold restart performed.

Datafill sequence and implications

There is no requirement to datafill other tables prior to table TONES.

TONES (continued)

The following tables must be datafilled after table TONES.

- CLLIMTCE
- OFRT
- OFR2
- OFR3
- OFR4

Table size

0 to 20 tuples

United Kingdom

If the switching unit is a DMS-100 Switch in the United Kingdom and office parameter MARKET_OF_OFFICE in table OFCENG is set to UK PABX, the recommended values for the entry in table CUSTPROT with field TABNAME equal to TONES are shown in the following table.

UK PABX datafill for table CUSTPROT

Field name	Entry
TABNAME	TONES
READPROT	15
UPDTPROT	30
ALLPROT	30

Datafill

The following table lists datafill for table TONES.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
CLLI		alphanumeric(1 to 16 characters)	*Common language location identifier* Enter the code assigned to the tone in table CLLI.
TRAFSNO		0 to 127	*Traffic separation number* LOCAL, TOLL, LOCAL/TOLL, GATEWAY, or INTERNATIONAL only: If switching unit has the optional Traffic Separation software feature, enter the outgoing traffic separation number 0 to 127 assigned to the tone. If traffic separation not required, enter 0 (zero). The range of values for the outgoing traffic separation number is dependent upon office parameter TFAN_OUT_MAX_NUMBER in table OFCENG. It is recommended that outgoing traffic separation numbers 1 to 9 be reserved for generic separation numbers. See table TFANINT for the assignment of incoming to outgoing traffic separation numbers. With the traffic separation feature, a peg count of all calls, by type of call, can be accumulated between an incoming source (incoming trunk or an originating line attribute) and an outgoing source (outgoing trunk, terminating line attribute, tone or announcement). Direct Dial (DD), Operator Assisted (OA) and No Prefix (NP) are the call types supported.
SEGTIME		10 to 250	*Segment time* Enter the duration of one segment of tone specified in multiples of 10 ms (for example: 20 = 200 ms).

TONES (continued)

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
OFFTIME		10 to 250	*Off time* Enter the duration of the no-tone period specified in multiples of 10 ms (for example: 20 = 200 ms).
TONEPATT		numeric (16 digits)	*Tone pattern* Enter a 16-digit string of 0s and 1s. Each digit corresponds to one segment of tone pattern and represents the binary state on the tone, where: 0 = tone off 1 = tone on
TONETYP		alphanumeric	*Tone type* Enter the type of tone generator required. New tones are added as necessary, and the the list below is not fully comprehensive. Since some of the tone generators listed below are mutually exclusive, only a subset of these tone generators can be found in a given software load.
		HI	*High tone* This is a general purpose high frequency tone generator.
		HZ400_5DB	*400 Hz tone, five decibels* This is the tone generator for 400 Hz at -5 dBm.
		INTL_ROH_ TONE	*International ROH tone* This is for use in an international DMS when the entry in field CLLI is IROH.
		LO	*Low tone* This is a general purpose low frequency tone generator.
		1024HZ_ TONE	Datafill this field for any CLLI when setting up the Bangladesh feature tones. This datafill is not active until you have set FEATURE_TONE_SET to BNGLDTC in table OCFENG.

TONES (continued)

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
		SILENT_ TONE	*Silent tone* Silence
OFFTONE		alphanumeric	*Off tone* Tone types are as for TONETYP
MAXDURN		1 to 255	*Maximum duration* Enter the maximum time in seconds that a call condense block can be attached. For information on office parameter NCCBS (Number of Call Condense Blocks), see table OFCENG. The maximum time duration for silent tone is 10 s.
MAXCONN		127	*Maximum connections* Enter 127 to satisfy the table editor. Entry values other than 127 are not valid. ***Note:*** This field is operative in tables ANNS and STN because members of such trunk groups represent real physical resources, but is not operative in table TONES because LM-generated tones do not represent real physical resources. The DMS maintains a count of tone usage but does not prohibit the number of users from exceeding MAXCONN.

TONES (continued)

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
FNTONID		alphanumeric	*Functional tone identity* This field is used for Succession Networks operation only. Enter a tone identity from the Unified Toneid range. For Succession Networks operation, CLLI and FNTONID are the only fields in this table that require datafill. This field has no impact on TDM operation ***Note:*** After an ONP in a Succession load, the FNTONID value defaults to TONE_NULL. This must be changed to a useful value, or a software error will occur in the GWC.
TONESGRP		Y or N	*Table TONESGRP* This field indicates whether there are additional tone definitions in table TONESGRP.

The Netherlands

The ‘engaged’ tuple should have TONETYP set to DIAL_TONE when the DUTCHMF and DUTCHMFC toneset is used. This changes the engaged (busy) tone heard by the subscriber from 450 Hz to 425 Hz, which is the standard busy tone frequency in the Dutch market.

Datafill examples

General example for Succession and DMS (TDM) loads

The example below shows datafill for DMS (TDM) and Succession loads. The datafill in bold is for Succession, as indicated by the fact that FNTONID is **not** TONE_NULL.

Note: Any provisioned tone that can be played to both TDM and Succession agents must have complete datafill.

Note: Tone types are not specific to TDM or Succession operation. For Succession operation, equivalent FNTONIDs can be defined for all tones.

MAP example for table TONES

```
CLLI TRAFSNO SEGTIME OFFTIME TONEPATT TONETYP OFFTONE MAXDURN MAXCONN
FNTONID TONESGRP
-----------------------------------------------------------------
120T0 0 25 25 101010 HI SILENT_TONE 30 30 TONE_NULL N
FRA0 0 25 25 101010 LO SILENT_TONE 30 30 TONE_NULL N
TSTONE 0 25 25 111100 HI SILENT_TONE 30 30 TONE_NULL N
BUSY 0 50 50 101010 LO SILENT_TONE 40 30 TONE_BSY N
OFLO 0 25 25 101010 LO SILENT_TONE 30 30 TONE_NULL N
TSECDT 0 65 65 000111 LO SILENT_TONE 10 10 TONE_NULL N
```

For Brazil tonesets

An example of DMS (TDM) datafill for the Brazil tonesets BRASMF and BRASMFC appears in the following figure.

TONES (continued)

MAP example for table TONES

```
CLLI TRAFSNO SEGTIME OFFTIME TONEPATT TONETYP OFFTONE MAXDURN MAXCONN

FNTONID TONESGRP

-----------------------------------------------------------------

ENGAGED 0 25 25 101010 UNUSED_TONE2 SILENT_TONE 40 30
TONE_NULL N

BRAGNCT 0 50 50 101010 UNUSED_TONE2 SILENT_TONE 40 30
TONE_NULL N

CONFMN 0 50 50 111111 CONFIRMATION_TONE SILENT_TONE 40 30
TONE_NULL Y

NROH 0 10 10 101010 UNUSED_TONE3 SILENT_TONE 40 30
TONE_NULL N

NOBT 2 25 25 101110 UNUSED_TONE2 SILENT_TONE 40 30
TONE_NULL N

BRAFNL 0 25 25 101110 UNUSED_TONE2 SILENT_TONE 40 30
TONE_NULL N

BRAFNL 0 25 25 101110 UNUSED_TONE2 SILENT_TONE 40 30
TONE_NULL N
```

FNTONID is TONE_NULL in each case for DMS (TDM) datafill. The CLLI entries in the example correspond to the following tones and signals:

- ENGAGED - Busy tone
- BRAGCNT - Congestion tone
- CONFMN - Confirmation tone
- NROH - Howler/ROH tone
- NOBT - Number Unobtainable tone
- BRAFNL - Inaccessible Code signal
- BRANACK - Unaccepted Programming signal

For Succession loads, only the CLLI and FNTONID fields are used. The equivalence between CLLIs and FNTONIDs in this case is as follows:

- ENGAGED - tone_bsy
- BRAGCNT - tone_congestion

- CONFMN - tone_confirmation
- NROH - tone_receiver_off_hook
- NOBT - tone_vacant
- BRAFNL - tone_nack
- BRANACK - tone_nack

Table history

SN06 (DMS)

New fields added: OFFTIME, OFFTONE, and FNTONID. Range for SEGTIME increased. Datafill examples updated to show both DMS (TDM) and Succession operation. Feature A59022704.

New tone type added for Bangladesh feature tones (feature A89007151)

SN04 (DMS)

Datafill example added for Brazil tonesets BRASMF and BRASMFC (feature 59033657).

TOPAMAOP

Table name

TOPS AMA Options Table

Functional description

Table TOPS AMA Options (TOPAMAOP) allows the Operating Company to control various options relating to TOPS Bellcore AMA. Table TOPAMAOP contains one tuple for every option, and initially contains the default value for each of these options.

Operating Companies can specify the phase of expanded Bellcore automatic message accounting (AMA) format (EBAF) that is used to generate Traffic Operator Position System (TOPS) AMA records. EBAF provides the ability to append modules to the AMA records. These modules contain additional call record information that is used to generate billing for a call. EBAF is implemented in three phases as follows:

- **Phase 0** - This phase of EBAF contains no modules.
- **Phase 1** - This phase introduces the modular concept for recording additional call record information in the AMA records. Additional call codes are used in this phase. This phase of EBAF uses different structure codes to generate 1+ non-operator-handled centralized AMA (CAMA) calls.
- **Phase 2** - This phase completes the transition to the modular concept. New structure codes are used in this phase. Call codes represent the service received on a call (in previous phases the call codes represented the billing class of a call).

Table EBAFTKPH allows an Operating Companies to set the phase of EBAF for generating AMA records on a trunk group basis.

Datafill sequence and implications

There is no requirement to datafill other tables prior to table TOPAMAOP.

Table size

3-19 tuples

Datafill

The following table lists datafill for table TOPAMAOP.

Field descriptions (Sheet 1 of 9)

Field AMAOPT	Field OPTINFO	Explanation and action
EA_SERV_PROCESSING_TIME	Y or N	Determines whether module 059 (exchange access service processing time) is in the EBAF AMA records (either phase 1 or phase 2) for carrier calls. Enter Y to append the module. The default value is N (no).
EBAF_PHASE	PHASE2 (note, PHASE0, and PHASE1 are not valid in NA005)	This parameter defines the expanded Bellcore AMA format (EBAF) phase used for generating AMA records. Enter the appropriate value to set the EBAF phase for the entire office. Refer to functionality TOPS Extended BCAMA EBAF, OSB00001. If this parameter is changed, a caution message is output stating that the values in table EBAFTKPH can also impact the phase of EBAF that is used to generate AMA records. Refer to table EBAFTKPH for information on setting the EBAF phase for a specific trunk group. Before an AMA record is generated, the datafill for the EBAF phase in tables TOPAMAOP and EBAFTKPH are compared. If these values are different, the higher value is used (0 < 1 < 2).

TOPAMAOP (continued)

Field descriptions (Sheet 2 of 9)

Field AMAOPT	Field OPTINFO	Explanation and action
		In NA005, the OPTINFO field is changed for EBAF_PHASE. PHASE0, PHASE1 and PHASE2 appear on the MAP display; however, only PHASE2 can be datafilled. Also, PHASE0 and PHASE1 datafill is changed to PHASE2 during an ONP software upgrade. Reference the “TOPS AMA Modifications" functionality (OSB00001) in this document for additional information about this option.
GENERATE_IN_INTERWORKING_AMA	Y or N	This parameter indicates whether to generate billing records for IN operator backup calls. Enter Y to generate the records. Or, enter N to not generate the records. The default value is Y. All billing information collected by the operator is sent to the SCP. Therefore, the TOPS switch does not have any call context information to generate a subscriber billing record. The billing record generated at the TOPS switch represents the operator involvement in the call (for example. operator work time). The subscriber billing record is generated at the SSP. Therefore, the AMA record at the TOPS switch may not be needed since the actual subscriber billing record is generated at the SSP. Also, if the same operating company owns both the SSP switch and the TOPS switch, then record matching between the two switches may not be needed.

TOPAMAOP (continued)

Field descriptions (Sheet 3 of 9)

Field AMAOPT	Field OPTINFO	Explanation and action
RECORD_800_SERVICE_INFORMATION	Y or N	Determines whether or not enhanced 800 service and out-of-band are included in the EBAF AMA records for operator-assisted (OA) calls that provide call completion service for enhanced 800 service numbers. N is the default value. When the default value is set, no records are created.
RECORD_AMA_FOR_ABANDONED_DA_CALL	Y or N	***Note:*** This parameter is valid only in the US. This option was introduced in NA005. If it is set to Y, call code 194 AMA records and call code 195 records are created for DA calls that are abandoned while in queue waiting for an operator. Call code 194 records are created when the DA call originates from a TOPS trunk; call code 195 records are created when the DA call originates from an ATC trunk. Reference the “TOPS AMA Modifications" functionality (OSB00001) in this document for additional information about this option.
RECORD_AO_SPID_INFO	ALL, NONE, CLG, CLD, BLG, REQ	This parameter indicates the account owner service provider identifiers (AO SPID) that require recording in AMA module code 338. The values are ALL (all values), NONE (no values), CLG (calling), CLD (called), BLG (billing), and REQ (requested). Any number of these values can be datafilled. The default is ALL.

TOPAMAOP (continued)

Field descriptions (Sheet 4 of 9)

Field AMAOPT	Field OPTINFO	Explanation and action
RECORD_BSP_SPID_INFO	ALL, NONE, CLG, CLD, BLG	This parameter indicates the billing service provider identifiers (BSP SPID) that require recording in AMA module code 338. The values are ALL (all values), NONE (no values), CLG (calling), CLD (called), and BLG (billing). Any number of these values can be datafilled. The default is ALL. Note, value REQ (requested) appears but currently is not supported.
RECORD_CALL_ORIGINATION_TYPE	Y or N	Determines whether origination call type is included in the EBAF AMA records for all calls.
RECORD_CLI_WITH_CHARGE_NUM	Y or N	This parameter allows the calling line identifier (CLI) to be recorded in AMA module code 164 and appended to the record. The CLI and charge number must be present and unique. The values are Y (record and append) and N (do not record and append). The default value is N.
RECORD_DNIS_IN_MODULE_315	Y or N	This parameter controls the generation of Module Code 315 when a Generic Address Parameter (GAP) is received in the IAM with a type of address equal to Dialed Number. The default is N.
RECORD_GUEST_NAME_AND_ROOM_NUM	Y or N	Determines whether hotel information is included in EBAF AMA records for all hotel calls.

TOPAMAOP (continued)

Field descriptions (Sheet 5 of 9)

Field AMAOPT	Field OPTINFO	Explanation and action
RECORD_INTERLATA_CALL_CODE_251	Y or N	Determines whether or not call type code 251, Inter-LATA 1+, 0+, 0-, Call Transfer, should be included in Phase 2 EBAF AMA records for all calls that tandem through TOPS to ATC trunks. The default value is N.
RECORD_LOCAL_CALL_INDICATOR	Y or N	Determines whether or not Local Determination is included in EBAF AMA records for calls that provide call completion service to a local number.
RECORD_MEMO	Y or N	When set to Yes, appends module code 194 if a memo has been keyed and the call is a GOS call. When RECORD_MEMO is Yes, parameter CRS_SUBRU_POOL3_SIZE in table OFCENG is utilized.
RECORD_NOTIFY_RECALL	Y or N	When set to Yes, appends module code 093 if a notify time has been keyed and the call is a GOS call. When RECORD_NOTIFY_RECALL is Yes, parameter CRS_SUBRU_POOL1_SIZE in table OFCENG is utilized.
RECORD_OPERATOR_KEYING_ACTIONS	Y or N	Determines whether or not operator keying action is included in the EBAF AMA records for all OA calls.

TOPAMAOP (continued)

Field descriptions (Sheet 6 of 9)

Field AMAOPT	Field OPTINFO	Explanation and action
RECORD_ORIG_BILLING_SERVICE	Y or N	Record Originating Billing Service. This field specifies whether or not to generate module codes 019 or 219 for calls which have had an OLNS query launched. The range of values is Y and N. If set to Y, then module code 019 or 219 is appended to AMA records with structure code 0772.
RECORD_ORIGINATING_TRK_GRP_NUM	Y or N	Determines whether Fixed trunk group number is included in EBAF AMA records for all calls.
RECORD_OVERSEAS_CALLING_CARD	Y or N	Determines whether Overseas calling card billing is included in EBAF AMA records for all calls alternately billed to an overseas format calling card.
RECORD_OVERWRITTEN_NUM	Y or N	Determines whether overwritten number is included in EBAF AMA records for OA calls where the forward or special billing number is overwritten with a new number.
RECORD_PARTY_NAME	Y or N	Determines whether module 038 (party name) is included in phase 2 EBAF AMA records for Overseas Operator Center (OOC)-assisted calls that include either or both calling and called party names. If set to Y (yes) and a party name exists, then module 038 is produced in the AMA record. If RECORD_PARTY_NAME is set to N (no), then the module is not recorded, even if a party name is present.

TOPAMAOP (continued)

Field descriptions (Sheet 7 of 9)

Field AMAOPT	Field OPTINFO	Explanation and action
RECORD_PARTY_NAME_EXPANDED	Y or N	When set to Yes, appends module code 194 if a party name has been keyed and the call is a GOS call. Table TOPAMAOP parameter RECORD_PARTY_NAME must be set to No before RECORD_PARTY_NAME_EXPANDED can be set to Yes. When RECORD_PARTY_NAME_EXPANDED is Yes, parameter CRS_SUBRU_POOL3_SIZE in table OFCENG is utilized.
RECORD_QMS_SERVICE	Y or N	When set to Yes, appends module code 097 if a custom QMS service has been keyed and the call is a GOS call.
RECORD_REQUESTED_NUMBER_FOR_DA	Y or N	Determine whether module 307 (requested number) is in the phase 2 EBAF AMA records for directory assistance or intercept service calls. Values for intercept service calls will be recorded in a future BCS. Default value is N.

TOPAMAOP (continued)

Field descriptions (Sheet 8 of 9)

Field AMAOPT	Field OPTINFO	Explanation and action
RECORD_RLT_REL_MODULE_123	Y or N	This parameter allows AMA Module 123 to be recorded on the billing record for calls using the RLT REL variant service. ***Note:*** The RLT REL variant provides RLT by the use of the ISUP GAP (Generic Address Parameter) and SAP (Service Activation Parameter) parameters to transport call completion information to the previous office. These parameters are appended to the ISUP REL message once it is determined that RLT is capable. This variant is used by datafilling the RLT field to RLT_REL in table ISUPTRK. This enhancement is made since the method of recording the RLT service on AMA, by the Service Identification field in AMA Module 055, may be overwritten by a custom service datafilled from either table TQMSSERV or AMASRVID. Since only one service AMA module is allowed per call the existing AMA Module 123 is chosen as an optional method to record the RLT REL variant service. RECORD_RLT_REL_MODULE_123 - enables/disables AMA Module 123 from appearing on RLT REL variant calls. When set to Y the AMA Module 123 is appended to the AMA record for RLT REL variant calls. When set to N the AMA Module is not appended to the AMA record.

TOPAMAOP (continued)

Field descriptions (Sheet 9 of 9)

Field AMAOPT	Field OPTINFO	Explanation and action
RECORD_RLT_REL_MODULE_123 (continued)	Y or N	When the parameter is set to Y for RLT REL variant calls the AMA Module 123 fields are set as follows. The billing identifier field, Table 804, is set to all 0s and the application identifier field, Table 802, is set to '001' - TOPS RLT. Therefore, the AMA record indicates that RLT service was provided (application id is 001), but record matching was not provided (billing id is all 0s). This activity does not change how RLT or TOPS custom services are recorded on AMA Module 055 by the Service Indication field, Table 283. This activity does not change how AMA Module 123 is recorded for RLT variant FAR calls.
RECORD_TICKET_NUMBER	Y or N	When set to Yes, appends module code 095 if a ticket number has been keyed and the call is a GOS call. When RECORD_TICKET_NUMBER is Yes, parameter CRS_SUBRU_POOL2_SIZE in table OFCENG is utilized.

Datafill example

The following example shows sample datafill for table TOPAMAOP.

TOPAMAOP (continued)

MAP display example for table TOPAMAOP

```
AMAOPT                                              OPTINFO
-----------------------------------------------------------
EA_SERV_PROCESSING_TIME                              Y
EBAF_PHASE                                           PHASE2
GENERATE_IN_INTERWORKING_AMA                         Y
RECORD_800_SERVICE_INFORMATION                       Y
RECORD_AMA_FOR_ABANDONED_DA_CALL                     Y
RECORD_AO_SPID_INFO                                  ALL
RECORD_BSP_SPID_INFO                                 CLG CLD
RECORD_CALL_ORIGINATION_TYPE                         Y
RECORD_CLI_WITH_CHARGE_NUM                           Y
RECORD_DNIS_IN_MODULE_315                            Y
RECORD_GUEST_NAME_AND_ROOM_NUM                       Y
RECORD_INTERLATA_CALL_CODE_251                       Y
RECORD_LOCAL_CALL_INDICATOR                          Y
RECORD_MEMO                                          Y
RECORD_NOTIFY_RECALL                                 Y
RECORD_OPERATOR_KEYING_ACTIONS                       Y
RECORD_ORIG_BILLING_SERVICE                          Y
RECORD_ORIGINATING_TRK_GRP_NUM                       Y
RECORD_OVERSEAS_CALLING_CARD                         Y
RECORD_OVERWRITTEN_NUM                               Y
RECORD_PARTY_NAME                                    Y
RECORD_PARTY_NAME_EXPANDED                           Y
RECORD_QMS_SERVICE                                   Y
RECORD_REQUESTED_NUMBER_FOR_DA                       Y
RECORD_RLT_REL_MODULE_123                            Y
RECORD_TICKET_NUMBER                                 Y
```

Error messages for table TOPAMAOP

The following error messages apply to table TOPAMAOP:

Error messages for table TOPAMAOP

Error message	Explanation and action
"PHASE 0 AND PHASE 1 ARE NOT ALLOWED"	This message is displayed when PHASE0 or PHASE1 datafill is attempted for the tuple EBAF_PHASE.

Table history

TOPS15

Parameter RECORD_DNIS_IN_MODULE_315 is added by feature 59026113 in functionality TOPS 15 CM Enhancements, OSB00101.

TOPS12

Parameter GENERATE_IN_INTERWORKING_AMA is added by feature AF7805 in functionality IN Operator Backup, ENSV0106.

TOPS09

Parameters RECORD_AO_SPID_INFO and RECORD_BSP_SPID_INFO were added by feature AF7133 in functionality Billing changes, UNBN0001.

TOPS08.1

Parameter RECORD _CLI_WITH_CHARGE_NUM added by feature AF6822 in functionality GOSS7 Signaling, GOS00004.

NA006

Parameter RECORD_ORIG_BILLING_SERVICE added by functionality TOPS OLNS Interface, ABS00012.

TOPS05

Feature AN1645 in the functionality TOPS AMA Enhancements (OSB00001) adds or changes the following:

- The option RECORD_AMA_FOR_ABANDONED_DA_CALL is introduced.
- The OPTINFO field is changed for EBAF_PHASE. PHASE0, PHASE1 and PHASE2 appear as valid field values; only PHASE2 can be datafilled. Also, PHASE0 and PHASE1 datafill is changed to PHASE2 during an ONP software upgrade.

TOPS03

Feature AN1085 in GOS Enhancements, GOS000001 added the following:

- RECORD_PARTY_NAME_EXPANDED
- RECORD_MEMO
- RECORD_TICKET_NUMBER
- RECORD_NOTIFY_RECALL
- RECORD_QMS_SERVICE

TOPAUDIO

Table name

TOPS Audio

Functional description

TOPAUDIO defines audio programs for playing to a caller while waiting for an operator. A program consists of a combination of ringing, music, announcements, and, or silence.

Datafill sequence and implications

Tables CLLI, ANNS, and ANNMEMS must be datafilled before table TOPAUDIO.

Table CT4QNAMS must be datafilled after table TOPAUDIO. Therefore, an associated tuple must be deleted from table CT4QNAMS before deleting from table TOPAUDIO.

Table size

0 to 128 tuples

Datafill

The following table lists datafill for table TOPAUDIO.

Field descriptions (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
AUDIOKEY		1 to 16 alphanumeric characters	Audio key. This field is the key to the table and defines a name for this program. This name is used in table CT4QNAMS.
ROUTES		see subfield	Routes. This field consists of up to 6 occurrences of subfield AUDIOSEL and refinements.

Field descriptions (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	AUDIOSEL	ANN, MUSIC, SILENCE, RINGING, REPEAT	Audio selection. This field defines the components of the program. The values are defined as follows: • ANN (announcement) - enter datafill in fields ANNCLLI and AUDRING. • MUSIC - enter datafill in refinements MUSICLLI and TIME. • SILENCE - enter datafill in refinement TIME. • RINGING - enter datafill in refinement TIME. • REPEAT - enter datafill in refinement ROUTE. This value continuously replays the sequence of entries in AUDIOSEL, starting with the entry number in ROUTE and going to the last entry before REPEAT. When REPEAT is used, it must be the last entry. Also, REPEAT cannot be the only entry. Each value, except REPEAT, can be used more than once.
	ANNCLLI	name from table ANNMEMS	Announcement CLLI. Enter data in this field if field AUDIOSEL = ANN. This field defines the announcement CLLI and it must be entered in tables CLLI, ANNS, and ANNMEMS.
	AUDRING	Y or N	Audible ringing. Enter data in this field if field AUDIOSEL = ANN. This field indicates if audible ringing is provided (Y) or not (N) to the caller after the announcement is connected and before the beginning of a cycle.
	MUSICLLI	name from table ANNMEMS	Music CLLI. Enter data in this field if field AUDIOSEL = MUSIC. This field defines the music CLLI and it must be entered in tables CLLI, ANNS, and ANNMEMS.

TOPAUDIO (continued)

Field descriptions (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	TIME	0 to 1800	Time. Enter data in this field if field AUDIOSEL = MUSIC, RINGING, or SILENCE. Field TIME defines how many seconds the music, ringing or silence are played. If MUSIC, RINGING, or SILENCE is the last entry in field AUDIOSEL, TIME must be set to 0. Value 0 provides continuous playing of the MUSIC, RINGING, or SILENCE.
	ROUTE	1 to 5	Route. Enter data in this field if field AUDIOSEL = REPEAT. This field indicates the starting entry number in field AUDIOSEL of the sequence of AUDIOSEL entries that are to be continuously replayed. When value REPEAT is used in field AUDIOSEL, REPEAT must be the last entry.

Datafill example

The following example shows sample datafill for table TOPAUDIO.

MAP display example for table TOPAUDIO

```
AUDIOKEY            ROUTES
-------------------------------------------------------------------
POP_MUSIC_ONLY     (MUSIC POP_MUSIC_CLLI 0)
SILENCE_ONLY       (SILENCE 0)
BUSOFC_AFTER_HRS   (ANN  BUS_HRS_ANN_CLLI Y) (MUSIC  ROCK_MUSIC_CLLI  0)
STD_WAIT_TRMT      (RINGING 4) (ANN HOLD_4_OPR_CLLI  Y)
                   (MUSIC  ROCK_MUSIC_CLLI  30)
                   (ANN  DONT_HANGUP_CLLI  N) (REPEAT 3) $
```

The following are comments on the above tuples:

1. The first example tuple shows a one-element audio route list that could be used to replace ringing with music for queued calls. After the music selector, the route specifies the music CLLI and the duration of the music in seconds. A non-zero duration would be used if the music were to be followed by an announcement after some number of seconds. But in this example, music is the last element of the route list, so the duration datafill is zero indicating infinite duration. (For music in queue, infinite duration

means to continue the treatment until the operator becomes available or the caller goes on hook).

2. The second example tuple shows a one-element audio route list that could be used to simply replace ringing with silence. No CLLI is entered in datafill when the silence selector is used. However, a duration is entered and interpreted the same way as a music duration. (A route with the ringing selector has a similar field for the duration.)

3. The third example shows an audio route that might be used for after hours calls to the business office, if these calls are routed to an operator. The audio route begins with an announcement, which might say the business office is closed, but an operator will be connected if the caller stays on the line. After the announcement, music is played until an operator becomes available.

   The Y entry in this announcement route is for the audible ringing sub-field. A Y value indicates that audible ringing should be applied between the time the announcement is connected and the beginning of a cycle.

4. The last example specifies 4 seconds of ringing, followed by an announcement (which might ask the caller to hold for an operator), followed by 30 seconds of music and then a different announcement (which might ask the caller to stay on the line). The “(REPEAT 3)" after the last announcement specifies that the last announcement should be followed by element 3 of the route list, which is music. So the pattern of 30 seconds of music followed by the “don't hang up" announcement continues until the operator becomes available or the caller goes onhook.

   In the last example, note that the actual duration of ringing before the first announcement could be anywhere from 4 seconds to 4 plus nearly the number of seconds the announcement takes. This longer ringing time would occur if the caller were connected to the announcement just after a cycle had begun, and had to wait almost an entire cycle's length before beginning to hear the announcement.

   Also in the last example, notice that the Audible Ringing sub-field is Y for the first announcement but N for the second one. When an announcement follows ringing, a “Y" selector is recommended because it causes the ringing to simply continue until the beginning of the announcement cycle comes around. But when an announcement follows music, it may be better to provide silence, rather than a short burst of ringing, until the beginning of a cycle. This is especially true if the announcement is short.

It is recommended that the last route in each audio route list specify either repetition or an interval (music, ringing, or silence) of infinite duration. Otherwise, the route list does not specify what happens if the end of the list is

TOPAUDIO (continued)

reached before the operator becomes available. When this happens, ringing is applied until the operator becomes available.

Error messages for table TOPAUDIO

The following error messages apply to table TOPAUDIO.

Error messages for table TOPAUDIO (Sheet 1 of 2)

Error message	Explanation and action
`TUPLE ALREADY EXISTS`	The field AUDIOKEY name must be unique. If an attempt is made to add a second tuple with the same name this error message is displayed.
`INVALID ANNOUNCEMENT/MUSIC CLLI. CHECK TABLE ANNS.`	When field AUDIOSEL= MUSIC, then MUSICLLI refinement specifying music CLLI must be already in tables CLLI, ANNS and ANNMEMS tables. Otherwise this error message is displayed.
`MUSIC AS THE LAST CHOICE MUST HAVE ZERO TIME.`	If MUSIC is the last selection in field AUDIOSEL, then the associated TIME must be 0 (zero). Otherwise this error message is displayed
`RINGING AS THE LAST CHOICE MUST HAVE ZERO TIME.`	If RINGING is the last selection in field AUDIOSEL, then the associated TIME must be 0 (zero). Otherwise this error message is displayed
`SILENCE AS THE LAST CHOICE MUST HAVE ZERO TIME.`	If the SILENCE is the last selection in field AUDIOSEL, then the associated TIME must be 0 (zero). Otherwise this error message is displayed.
`REPEAT ROUTE MUST NOT BE GREATER THAN <n>`	When field AUDIOSEL=REPEAT then ROUTE refinement specifies the route number {1 to 5} where the repeat sequence begins. If the specified target route does not exist or the route is illegal (for example, the last selection is route #5 and entered as REPEAT 5) then this error message is displayed.

Error messages for table TOPAUDIO (Sheet 2 of 2)

Error message	Explanation and action
AUDIOKEY MUST BE DELETED FROM CT4QNAMS FIRST.	If an attempt is made to delete a tuple whose AUDIOKEY is still entered in table CT4QNAMS, then this error message is displayed.
NO AUDIO SELECTION WAS DATAFILLED.	At least one audio selection must be entered in field AUDIOSEL. Otherwise, this error message is displayed.
TABLE LIMIT HAS BEEN REACHED.	If the limit of tuples in table TOPAUDIO is reached, this error message is displayed.
INTERNAL RESOURCE ALLOCATION ERROR.	If table TOPAUDIO is not able to allocate more data store, this error message is displayed.
REPEAT MUST BE THE LAST CHOICE ONLY	If the REPEAT choice in field AUDIOSEL is not the last one, this error message is displayed.
SINGLE REPEAT CHOICE IS NOT ALLOWED.	If REPEAT is only choice in field AUDIOSEL, this error message is displayed.

Table history

TOPS10

Table created by feature AF7567 in functionality Music and Announcement in Queue, ADVQ0008.

TOPCACAR

Table name

TOPS Competitive Access Carrier

Functional description

Table TOPCACAR defines carrier identification codes (CICs) and names for the global environment.

Datafill sequence and implications

There is no requirement to datafill other tables prior to table TOPCACAR.

Table size

0 to 1000 tuples

Datafill

The following table lists datafill for table TOPCACAR.

Field descriptions (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
CICKEY		see subfield	Carrier identification code key. This field is the key to the table and consists of subfield CIC.
	CIC	0 to 9999	Carrier identification code. This field is the key to the table. Enter a unique CIC for each carrier. ***Note:*** All CICs (whether signalled, determined, or entered by an operator) are validated by table TOPCACAR. If the CIC is not found in table TOPCACAR, then it is not valid.
NAME		up to 8 characters	Name. Enter a name for the carrier. The number of characters displayed at the operator position is vendor specific.

TOPCACAR (continued)

Field descriptions (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
SERVICE		COMPLETE or TRANSFER	Service. This new field indicates operator handling of a carrier call. The values are as follows: • TRANSFER - Transfer the carrier call to the carrier office. • COMPLETE - Service and complete the carrier call for the carrier. The call can be completed through a live operator or an automated system. This value is used if there is a contract with the carrier to service and complete the call. Datafill subfields PUBRATE, PRIVRATE, SCRNIDX, STDCC, and DACC. If the CIC is not datafilled in table TOPCACAR, a carrier error indication is presented to the operator and the call is blocked from outpulsing. A new carrier must selected. For TOPS MP, instead of the carrier error indication, the CIC flashes.
	PUBRATE	Y or N	Public rate. Datafill this field if field SERVICE = COMPLETE. The values are as follows: • Y - Calls originating from a public phone (coin, hotel) are allowed Time and Charges (T&C). Also, they are allowed to use the Automatic Coin Toll Service (ACTS) and bill the call Station Paid or Person Paid (in addition to other options). • N - Calls originating from a public phone are not allowed T&C, ACTS, or to bill the call as Station Paid or Person Paid.
	PRIVRATE	Y or N	Private rate. Datafill this field if field SERVICE = COMPLETE. The values are as follows: • Y- Calls originating from a private line are allowed T&C. • N - Calls originating from a private line are not allowed T&C.

TOPCACAR (continued)

Field descriptions (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	SCRNIDX	0 to 100	Screening index. This field is an index into table RESTBIL (TA call) or DARSTBIL (DA call). Value 100 is nil.
	STDCC	NONE, LCL, NONLCL, ALL	Standard call completion. This field indicates the standard call completion choice for the carrier. • NONE - call completion is not allowed. Fields STDCC and DACC cannot both be set to NONE at the same time. • LCL - call completion is allowed only for local calls • NONLCL - call completion is allowed only for non-local calls. • ALL - call completion is allowed for both local and non-local calls.
	DACC	NONE, LCL, NONLCL, ALL	Directory assistance call completion. This field indicates the DA call completion choice for the carrier. • NONE - call completion is not allowed. Fields STDCC and DACC cannot both be set to NONE at the same time. • LCL - call completion is allowed only for local calls • NONLCL - call completion is allowed only for non-local calls. • ALL - call completion is allowed for both local and non-local calls.

Datafill example

The following example shows sample datafill for table TOPCACAR.

MAP display example for table TOPCACAR

```
CICKEY   NAME    SERVICE
-------------------------------------------------------
123      TLMX    COMPLETE   5  Y  Y  NONE  LCL
191      TLNR    TRANSFER
```

Error messages for table TOPCACAR

The following error messages apply to table TOPCACAR.

Error messages for table TOPCACAR

Error message	Explanation and action
CIC IS IN USE IN TABLE TOPCATRK CIC IS IN USE IN TABLE GCASSET	A tuple in table TOPCACAR may not be deleted if the CIC is present in table TOPCATRK or GCASSET. If an attempt is made to delete this tuple, either or both of these error messages is given and the deletion is blocked.

Table history

TOPS14

Subfields STDCC and DACC are added by feature 59015886 in functionality GOS Local Determination, GOS00001.

TOPS12

Subfield SCRNIDX is added by feature 59006832 in functionality Call Restrictions for Wholesaling, UNBN0006.

TOPS11

Field SERVICE is added by feature AF7576 in functionality Global Competitive Access II, GOS00007.

TOPS10

This table was created by feature AF7575 in functionality Global Competitive Access, GOS00006.

TOPCATRK

Table name

TOPS global competitive access (GCA) trunk

Functional description

Table TOPCATRK defines GCA trunks. This table contains default CIC information and outgoing route indices.

The incoming trunk group must be datafilled to perform GCA screening; otherwise, the call is considered an Operating Company call.

Datafill sequence and meaning

Enter datafill into tables TRKGRP and TOPCACAR before table TOPCATRK.

Table size

0 to 8191 tuples

Datafill

The table that follows lists datafill for table TOPCATRK.

Field descriptions (Sheet 1 of 2)

Field	Subfield	Entry	Explanation and action
CLLI		name from TRKGRP	Common language location identifier. This field is the key to the table. Enter an incoming GCA trunk group defined in table TRKGRP.
TRKCIC		0 to 9999	Trunk carrier identification code. Enter a default CIC for the trunk group.
DFLTCIC		Y or N	Default CIC. Indicate if the default CIC in field TRKCIC should be considered. The values are as follows: • N - All incoming calls on the trunk group are Operating Company calls. • Y - Continue GCA processing by determining if a CIC is required (unless a CIC was signalled from the previous office).

TOPCATRK (continued)

Field descriptions (Sheet 2 of 2)

Field	Subfield	Entry	Explanation and action
TOPSCIC		Y or N	TOPS CIC. Indicate if a default CIC should be used based on the calling number. The values are as follows: • Y - The default CIC is obtained from table DNSCRN option TOPSCIC. • N - The trunk default CIC, TRKCIC, is used.
NATXLA		see subfields	National translations. This field defines an index into the universal translations tables for outgoing GCA calls which are completing to a national called number. This field consists of subfields XLASYS and XLANAME.
	XLASYS	NIL, AC, PX, CT, FA, OFC, AM, FT, or NSC	Universal translations system. Specify the starting point within the universal translations system. These entries (systems) are defined under table ACHEAD in the data schema section of this translations guide. Value NIL is for no system.
	XLANAME	alphanumeric (1 to 8 characters)	Translator name. Specify the translator name to start translations.
INTXLA		see subfields	International translations. This field defines an index into the universal translations tables for outgoing GCA calls which are completing to an international called number. This field consists of subfields XLASYS and XLANAME.
	XLASYS	NIL, AC, PX, CT, FA, OFC, AM, FT, or NSC	Universal translations system. Specify the starting point within the universal translations system.
	XLANAME	alphanumeric (1 to 8 characters)	Translator name. Specify the translator name to start translations.

Datafill example

The figure that follows shows sample datafill for table TOPCATRK.

TOPCATRK (end)

MAP display example for table TOPCATRK

```
CLLI          TRKCIC    DFLTCIC    TOPSCIC    NATXLA        INTXLA
-------------------------------------------------------------------
TOPSGOSS7IC   123       Y          Y          AC NATXLA     AC INTXLA
```

Error messages for table TOPCATRK

The following error messages apply to table TOPCATRK.

Error messages for table TOPCATRK

Error message	Explanation and action
TRKCIC MUST BE DATAFILLED IN TABLE TOPCACAR	Table TRKCIC must be datafilled in table TOPCACAR before it can be datafilled in table TOPCATRK. If an attempt is made to add or change a tuple or change a tuple with an undatafilled CIC, this error message is given, and the add or change is blocked.
ONLY TOPS TRUNKS MAY BE ADDED TO TABLE TOPCATRK	Only TOPS trunks may be datafilled in table TOPCATRK. If an attempt is made to add a trunk to TOPCATRK which is not a TOPS trunk, this error message is given, and the add is blocked.

Table history

TOPS11

This table was created by feature AF7576 in functionality Global Competitive Access II, GOS00007.

Table name

TOPS Equal Access Carrier Table

Functional description

Table TOPEACAR specifies whether operator services are provided for certain carriers and defines the billing procedure for calls to that carrier.

Determination of alternate carriers

Field ALTCARR indicates for each datafilled carrier what that interexchange carrier's (IEC) alternate carrier is. This alternate is used for any call that the carrier itself cannot complete, including international, domestic, 0- transfer, and subscriber dialed 00/10XXX0/10XXX00 calls. If the alternate carrier is datafilled, it is important to consider that for all calls to route successfully, the alternate must be able to complete all types of calls the initial carrier cannot complete. Depending on the operating company and carrier practice, the alternate can be chosen by the operating company or can be determined by each carrier based on contracts with other (alternate) carriers. If an alternate for any particular carrier is not needed or desired, then the datafilled alternate must be the same as the initial carrier.

Carriers that have operator services provided by the operating company (field OPSERV set to SERV) as well as non-served carriers (field OPSERV set to NOSERV) require datafill of field ALTCARR. Any carrier that is datafilled as an alternate must already be datafilled in table PICNAME. The carrier datafilled in table OFCVAR as the TOPS_OTC_CARRIER_NUMBER (which is used in some offices as the presubscribed carrier for coin phones) cannot be used as an alternate carrier.

Transfer of 0- carrier calls

There are two types of carrier 0- calls. 0- transfer calls are originated by the subscriber as 0-, route to a Traffic Operator Position System (TOPS) position for handling, and are transferred to a carrier when the operator realizes that an IEC must complete the call. This can be because of

- a location mentioned by the subscriber that the operator knows is inter-LATA (local access and transport area)
- a screen display resulting from the entering of a called number or
- the subscriber mentioning a carrier that they want the call transferred to

In any of these cases, the operator may transfer the 0- call to an IEC.

Field BLK0MXFR (Block Zero Minus Transfer) indicates if a carrier accepts 0- calls transferred from a TOPS operator. This field only applies to carriers

TOPEACAR (continued)

that do not have operator services provided for them by the operating company, so the field only appears if field OPSERV is set to NOSERV. Any carrier that is provided with TOPS inter-LATA carrier services (TIC) (field OPSERV set to SERV) has operator calls handled by a TOPS operator, so 0- calls may remain at the TOPS position for handling.

If field BLK0MXFR is set to N (no) for the no-service carrier designated to handle a 0- transfer carrier call, then a route to the carrier's operator services system is determined. The position display indicates to the operator that the call requires transfer; TOPS equal access (EA) has previously selected the appropriate carrier for the call. The call outpulses to the carrier upon release from the TOPS position.

If field BLK0MXFR is set to Y (yes), then the carrier's alternate is chosen to receive the call. If the alternate is a carrier that has operator services provided by the operating company (field OPSERV set to SERV), then the call remains at the TOPS position and the new carrier information is displayed. If the alternate is a NOSERV carrier with field BLK0NXFR set to N, then that carrier is chosen to receive the call. If neither the original nor the alternate carrier can complete the call, then the carrier code for the first carrier flashes to indicate to the operator that a new carrier access code must be entered.

If 00-, 10XXX0, or 10XXX00 is dialed, the subscriber knows that they need service from an IEC operator service system. These three dialing patterns comprise the second type of carrier 0- calls. These calls route directly to a carrier from the originating EA end office (EAEO) or use feature group D (FGD) cut-through in the tandem office. However, it is possible to signal these calls to the TOPS office in such a way that TOPS EA handling is given. For these call types, the carrier does or does not want an alternate carrier chosen for the call, even if that carrier cannot handle 0- calls. For example, if a particular carrier wants to receive calls dialed 00-, and then play an announcement that includes dialing instructions for another carrier, then the TOPS office does not send these calls to an alternate.

Field ZEROALT allows carrier data to indicate that 00, 10XXX0, and 10XXX00 calls must not have an alternate carrier chosen. This field does not apply for 0- calls transferred by a TOPS operator. Since carriers serviced by TICS can always handle these types of calls, this field only appears if a carrier is datafilled as NOSERV.

If a subscriber dials 00, 10XXX0, or 10XXX00 and the carrier for the call is not served by TICS, field ZEROALT is checked. If field ZEROALT is set to N, then the call outpulses to the carrier, regardless of the setting of field BLK0MXFR. However, if field ZEROALT is set to Y, then alternate carrier selection applies so the carrier's alternate is chosen to complete the call. If the

alternate is served by TICS, then the call routes to a TOPS position for handling. If the alternate is not served by TICS, then the alternate's field BLK0MXFR determines if the call can be outpulsed to that carrier, since field BLK0MXFR provides the more accurate indication of whether or not a carrier is capable of call completion for 0- calls.

Forwarding of domestic and international calls

Terminating points screening, described below, determines if a domestic or international call can be completed by a given IEC. Prior to this screening, the call must be identified as a carrier call by TOPS EA. Depending on the features in use and the operating company's rules for handling carrier calls, this can include inter-LATA, intra-LATA, interstate, intrastate, and international calls. Terminating points screening is performed on plus-dialed carrier calls (0+ and 1+) that arrive at the DMS on a TOPS trunk group as well as carrier recalls at an operator position that have a called number present. If this screening results in the need for an alternate, then field ALTCARR determines what carrier completes the call.

LIDB query routing based on CIC

The capability of determining which LIDB to query based on the Carrier Identification Code (CIC) and billing number associated with the call, is provided by the LIDB query routing based on CIC feature. This functionality is activated on a per-CIC basis through table TOPEACAR, and only applies to calls originated from a carrier. Enhancements are also made to the release line trunk (RLT) protocol to signal the International organization for standardization (ISO) card information back to the DMS-250 in the facility request message (FAR).

The LIDB portion of this feature is controlled through:

- the software optionality code (SOC), UNBN0104
- table TOPSFTR, parameter UNBUNDLING_LIDB_QUERY_ROUTING

The LIDB functionality is activated through field LIDBYCIC in table TOPEACAR on a per-carrier basis. When field LIDBYCIC is set to yes, the LIDB to query is based on the CIC and the billing number. The RLT functionality is controlled through table TOPSPARM, parameter RLT_SUPPORT_ISO_CARDS.

Datafill sequence and implications

Tables SCRNNAME, BAGNAME, BNSAGRMT, and CCVAGRMT must be datafilled before table TOPEACAR. Table LDBIDXNM must be datafilled prior to datafilling subfield LIDBIDX in table TOPEACAR, when field LIDBYCIC is set to yes.

TOPEACAR (continued)

Table SCRNNAME must contain the screening class names prior to datafilling fields NATERM and INTERM in table TOPEACAR.

Table size

Table TOPEACAR is a static table (maximum 1000 tuples) that requires 2K words of data store.

Datafill

The following table lists datafill for table TOPEACAR.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
CARDIG		0000 to 9999	Carrier digits. Enter the value or values of the carrier access code or codes.
CARNAME		NILCAR NOCAR NODATA or name from PICNAME	Carrier name. Enter the name of the carrier as defined in table PICNAME. The default value for this field is NODATA.
ALTDISP		alphanumeric (up to 16 characters)	Alternate carrier name displayed. Enter the name of the alternate carrier as defined in table PICNAME. The alternate carrier is used if the primary carrier is unable to complete the call. The default value for this field, if no alternate was selected, is the same as the primary carrier in field CARNAME.
OPLSCLD		Y or N	Outpulse called digits. Enter Y (yes) to ensure that the called digits (if collected) for all 0-inter-LATA (local access and transport area) calls transferred to a carrier are sent to that carrier. The default value for this field is N (no).

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
CAMABILL		Y or N	Centralized automatic message accounting billing. Enter Y to create billing records (047XX) for non-operator-handled (1+) centralized automatic message accounting (CAMA) calls, or operator number identification (ONI) (1+) CAMA calls. Otherwise, enter N. The default value for this field is N.
ALTCARR		0000 to 9999	Alternate carrier digits. Enter the value or values of the alternate carrier access code or codes. The default value for this field, if no alternate carrier was selected, is the same as for the primary carrier in field CARDIG.
NATERM		see subfield	National terminating points screening. This field indicates if the carrier is restricted in ability to complete calls dialed with the national dialing plan. This field consists of subfield TERMSEL.
	TERMSEL	DENY RESTRICT or UNREST	National terminating points screening select. Enter DENY if the carrier cannot complete any national dialed calls. Calls are disallowed and terminating points screening is not performed. No refinements require datafill. Go to field INTERM. Enter RESTRICT if the carrier can complete some national calls but not others. Terminating points screening is required for national calls. Datafill refinement SCRN. Enter UNREST if the carrier can complete all national calls. Screening based on the terminating numbering plan area (NPA) or NPA-NXX is not required. No refinements require datafill. Go to field INTERM.

TOPEACAR (continued)

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
	SCRN	alphanumeric (1 to 32 characters)	National terminating points screening. If the entry in subfield TERMSEL is RESTRICT, datafill this refinement. Enter the screening name as defined in table SCRNNAME. This screening name, along with the called number, is used to index table TOPEATRM.
INTERM		see subfield	International terminating points screening. This field indicates if carrier is restricted in ability to complete calls dialed with the international dialing plan. This field consists of subfield TERMSEL.
	TERMSEL	DENY RESTRICT or UNREST	International terminating points screening select. Enter DENY if the carrier cannot complete any national dialed calls. Calls are disallowed and terminating points screening is not performed. No refinements require datafill. Go to field OPSERV. Enter RESTRICT if the carrier can complete some national calls but not others. Terminating points screening is required for national calls. Datafill refinement SCRN. Enter UNREST if the carrier can complete all national calls. Screening based on the terminating NPA or NPA-NXX is not required. No refinements require datafill. Go to field OPSERV
	SCRN	alphanumeric (1 to 32 characters)	International terminating points screening. If the entry in subfield TERMSEL is SCRN, datafill this refinement. Enter the screening name as defined in table SCRNNAME. This screening name, along with the called number, is used to index table TOPEATRM.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
OPSERV		NOSERV or SERV	Operator service. Enter NOSERV to deny operator service to the carrier and datafill refinements ZEROALT and BLK0MXFER. Enter SERV to provide operator service for this carrier and datafill refinements CCVQUERY, CCVVAL, BNSQUERY, BNSVAL, COLQUERY, COLVAL, PUBRATE, PRIVRATE, AUTZPLUS, SCRNIDX, and BILAGRMT.
TDBIDX		0 to 32,767	Table TOPSDB index. Index into table TOPSDB for ADACC screening on a carrier basis. This field is an index into the table for values 0-32766. Value 32767 is a nil value used to block all ADACC for a carrier. Value 32767 does not point to a TOPSDB tuple. This field is used to screen on a carrier basis for calls that require interLATA completion that arrived at the TOPS switch with a table TRKGRP CLGID field other than COMFGD, OSSANI, EAOSS, or EAOSSIC. Field TDBIDX points to a tuple in TDBDAOPT through TOPSDB. The tuple in TDBDAOPT indicates whether or not ADACC is offered for the call, and what billing options are valid.
CICSCHEM		see subfield	Carrier identification code scheme. This field consists of subfield NEWXLA.
	NEWXLA	Y or N	New TOPS translations. This field enables assignment of a CICGRP to a carrier for use in table XLACIC to refine an XLAGRP based on the carrier. Enter Y to enable and enter datafill in subfield CICGRP. Enter N to disable. The default is N.
	CICGRP	name from table CICGRP	CIC group. This field only appears if field NEWXLA = Y. Enter a CIC group defined in table CICGRP.

TOPEACAR (continued)

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
LIDBYCIC		Y or N	By setting this field to Y, LIDB queries are routed based on the carrier and the billing number, datafill subfield LIDBIDX. N, is the default value.
	LIDBIDX	Up to eight alphanumeric characters.	This subfield provides an index into tables CCVPROV, BNSPROV and ISOCCPRV. This subfield provides a method to route to a LIDB based on the CIC and billing number.
SCRNIDX		0 - 100	Screening index. This field is an index into table RESTBIL (TA call) or DARSTBIL (DA call). This field is used if table WSALEOPT field INTER or INTRA contains CIC. Value 100 is nil.

OPSERV = NOSERV

If the entry in field OPSERV is NOSERV, datafill refinements ZEROALT and BLK0MXFER as described below.

Conditional datafill for table TOPEACAR

Field	Subfield or refinement	Entry	Explanation and action
	ZEROALT	Y or N	Zero calls alternate carrier selection. Enter Y to select an alternate carrier for 00, 10XXX0, and 10XXX00 calls. Otherwise, enter N.
	BLK0MXFR	Y or N	Block zero minus call transfer. Enter Y to block 0- calls transferred from a Traffic Operator Position System (TOPS) operator on a carrier. This applies only to carriers with no operator services provided by the operating company. Otherwise, enter N.

OPSERV = SERV

If the entry in field OPSERV is SERV, datafill refinements CCVQUERY, CCVVAL, BNSQUERY, BNSVAL, COLQUERY, COLVAL, PUBRATE, PRIVRATE, AUTZPLUS, SCRNIDX, and BILAGRMT as described below.

Conditional datafill for table TOPEACAR

Field	Subfield or refinement	Entry	Explanation and action
	CCVQUERY	BLK NOQUERY or QUERY	Calling card validation query. Enter BLK to prohibit calling cards from being used. Enter NOQUERY to allow the use of calling cards and to disallow database queries. Enter QUERY to allow Common Channel Interoffice Signaling (CCIS) database queries. The default value for this field is BLK.
	CCVVAL	Y or N	Calling card validation. Enter Y if a message, MAN, instructing the operator to perform manual calling card validation must be displayed on the operator position CRT. Otherwise, enter N. This field can be set to Y only if field CCVQUERY is set to NOQUERY. If this field is set to Y, message MAN appears on the CRT if the operator attempts to bill a call to a calling card. The default value for this field is N.
	BNSQUERY	BLK NOQUERY or QUERY	Billing number service query. Enter BLK to prohibit third-number billing. Enter NOQUERY to allow third-number billing and to disallow database queries. Enter QUERY to allow third-number billing and database queries. The default value for this field is BLK.

TOPEACAR (continued)

Conditional datafill for table TOPEACAR

Field	Subfield or refinement	Entry	Explanation and action
	BNSVAL	Y or N	Billing number service. Enter Y if a message, MAN, instructing the operator to perform third-number billing validation must be displayed on the operator position CRT. Otherwise, enter N. This field can be set to Y only if field BNSQUERY is set to QUERY or NOQUERY. If this field is set to Y, message MAN appears on the CRT if the operator attempts to bill a call to a third number. The default value for this field is N.
	COLQUERY	BLK NOQUERY or QUERY	Collect query. Enter BLK to prohibit collect number billing. Enter NOQUERY to allow collect number billing and to disallow database queries. Enter QUERY to allow collect number billing and database queries. The default value for this field is BLK.
	COLVAL	Y or N	Collect validation. Enter Y if a message, MAN, instructing the operator to perform collect number billing validation must be displayed on the operator position CRT. Otherwise, enter N. This field can be set to Y only if field COLQUERY is set to QUERY or NOQUERY. If this field is set to Y, message MAN appears on the CRT if the operator attempts to bill a call to a collect number. The default value for this field is N.

Conditional datafill for table TOPEACAR

Field	Subfield or refinement	Entry	Explanation and action
	PUBRATE	Y or N	Public rating. Enter Y if rating must be performed automatically for public lines (coin, hotel, non-coin) to this carrier. Otherwise, enter N. If this field is set to N and the operator presses the STA PD, the PER PD, or the T&C key, the following actions occur: the key pressed is disabled (if T&C pressed), message PD flashes on the operator position CRT (if STA PD or PER PD pressed), and message NORATE appears on the CRT. The default value for this field is N.
	PRIVRATE	Y or N	Private rating. Enter Y if rating must be performed automatically for the private lines of this carrier. Otherwise, enter N. If this field is set to N and the operator presses the T&C key, the key is disabled and message NORATE appears on the operator position CRT. The default value for this field is N.
	AUTZPLUS	Y or N	Automate zero plus. Enter Y to indicate that 0+ calls to the interexchange carrier receive automated handling to enter and verify the calling card number. The interexchange carrier is specified in table CARNAME. Otherwise, enter N. The default value for this field is N.
	SCRNIDX	0-100	Screening index. This field is an index into the restricted billing tables.
	BILAGRMT	See subfield AGRMTYPE.	Billing agreement. This field consists of subfield AGRMTYPE. This field is examined to determine the type of billing agreement that is in place for the given provider. This field is checked when table TOPSPARM parameter ALL_CALLS_USE_OPR_SVC_ AGRMTS is set to N (No).

TOPEACAR (continued)

Conditional datafill for table TOPEACAR

Field	Subfield or refinement	Entry	Explanation and action
	AGRMTYPE	SELF, OPRSVC, or NONE	Agreement type. This field indicates the type of billing agreement. The values are as follows: • SELF - The service provider has its own billing agreements. Datafill refinements CCVAGRMT, BNSAGRMT, and NOSPDERRThe refinement includes a group name for CCV and BNS agreements and a field for error handling when no SPID is returned from the LIDB query. • OPRSVC - The service provider is using the billing agreements already established by the Operator Services wholesaler. No refinements require datafill. The billing agreement groups used to index tables CCVAGRMT and BNSAGRMT are obtained from parameter OPR_SVC_AGRMTS in table TOPSPARM. • NONE - No billing agreement checking is to be performed. No refinements require datafill. This value is used for the following reasons. — to allow a default for ONPs from a pre-TOP13 — to allow for default datafill when the feature is not SOCed On — to allow for default datafill when TOPSPARM parameter ALL_CALLS_USE_OPR_SVC_AGRMTS is set to Y and individual agreements are irrelevant — to allow screening for billing agreements to be activated on a per SPID or per CIC basis

Conditional datafill for table TOPEACAR

Field	Subfield or refinement	Entry	Explanation and action
			For value NONE, if this feature is SOCed ON and TOPSPARM parameter ALL_CALLS_USE_OPR_SVC_ AGRMTS is set to N, checks for billing agreements are not performed and the call is handled as if this feature is SOCed IDLE.
	CCVAGRMT	name from table BAGNAME	Calling card validation agreement. This field is the billing agreement group name associated with the originating party. For an LEC call, this group name is associated with a SPID in table SPIDDB. For a carrier call, this group name is associated with a CIC in table TOPEACAR. The name must be defined in table BAGNAME. This group name is used as part of the index into table CCVAGRMT.
	BNSAGRMT	name from table BAGNAME	Billing number service agreement. This field is the billing agreement group name associated with the originating party. For an LEC call, this group name is associated with a SPID in table SPIDDB. For a carrier call, this group name is associated with a CIC in table TOPEACAR. The name must be defined in table BAGNAME. This group name is used as part of the index into table BNSAGRMT.
	NOSPDERR	ACCPT, BLOCK, or OPER	No AO nor BSP SPID is returned from the LIDB database. Log TOPS12, No Billed AO or BSP SPID Returned, is produced. This field determines error handling with the values as follows: • ACCPT—Accept the call. • BLOCK—Block the call. • OPER—Send the call to an operator if the call is not at an operator (that is, at an automated system), or if at an operator, block that billing method and allow the operator to prompt for another method of payment.

TOPEACAR (continued)

Datafill example

The next example shows sample datafill for table TOPEACAR.

MAP display example for table TOPEACAR

```
CARDIG CARNAME     ALTDISP OPLSCLD CAMABILL ALTCARR      NATERM
   INTERM                                                    OPSERV
TDBIDX CICSCHEM  LIDBYCIC
-------------------------------------------------------------------
  0111    C111        C111       Y        Y    0111     UNREST
   UNREST        SERV NOQUERY Y NOQUERY Y NOQUERY Y Y Y Y 100   OPRSVC
     0       N    N
  0112 LECTOPS      LECTOPS      Y        Y    0113     UNREST
   UNREST                                              NOSERV N N
    0        N     N


   0114    C114        C114      Y         Y    0114     UNREST
    UNREST       SERV NOQUERY Y NOQUERY Y NOQUERY Y Y Y Y 100    NONE
      0      N     Y    CAR114
```

Error messages

The following error messages apply to table TOPEACAR.

Error messages for table TOPEACAR

Error message	Explanation and action
Tuple 39 is not datafilled in table TOPSDB.	Table TOPSDB must be datafilled prior to datafilling table TOPEACAR with an index into the database. If the craftsperson attempts to add or change a table TOPEACAR tuple with a given TDBIDX prior to adding the tuple to table TOPSDB, the add or change is not allowed and an error message is given.
Datafilling 32767 in TDBIDX will disable ADACC for all calls on this carrier if the cellular ADACC screening feature is active.	If the craftsperson attempts to add or change a tuple with TDBIDX=32767, this warning message is given.

Table history

TOPS16

Table TOPEACAR is changed due to feature A59032520.

TOPS13

Field BILAGRMT is added by feature 59011929 in functionality Screening for Billing Agreement, UNBN0007..

TOPS12

The feature Calling Restrictions for Wholesaling (59006832), UNBN0006, adds field SCRNIDX.

Field CICSCHEM is added by feature 59006822 in functionality OPRTRANS and EA, UNBN0001.

TOPS03

Added field TDBIDX per feature AN0262 in Cellular/IXC/LEC ADACC, OSDA0005

The range of fields CARDIGS and ALTCARR is increased from 3 to 4 digits per feature AN0834 in Equal Access Carrier Code Expansion, OSEA0001.

TOPEATRK

Table name

Equal Access Carrier Information for Trunk Group Type TOPS Table

Note: This table is also referred to as the TOPS Equal Access Trunk Group Extension Table.

Functional description

Table TOPEATRK contains information that is used for routing inter-LATA (Local Access and Transport Area) calls when the DMS-200 includes Traffic Operator Position System (TOPS) Equal Access software.

Table control does not allow tuples to be manually added to or deleted from table TOPEATRK. Instead, tuple changes are made automatically when a TOPS, ATC, or IT trunk group is added to or deleted from table TRKGRP.

The default value for each field within this table is provided in section “Field descriptions." The default values for the fields within table TOPEATRK should be changed in accordance with call routing and screening requirements.

Table TOPEATRK provides access to select LATA screening or zone screening. LATA screening refers to the process for screening the terminating number to determine whether the number is an intra-LATA or inter-LATA call. The TOPS12 feature LATA Screening Alternative allows the concept of zones to be used to determine whether a carrier handles a call. Before introduction of this feature, zones only applied to global markets.

For related information, refer to table TRKGRP (TOPS, ATC, or IT).

In NA005, trunk group types IT and ATC can be datafilled.

Datafill sequence and implications

The following tables must be datafilled before table TOPEATRK.

- TOPEACAR
- LATANAME
- PICNAME
- DNPIC
- LATAXLA
- TRKGRP

- SCRNCLAS
- TOPSZONE

Table size

0 to 8191 tuples

Datafill

The following table lists datafill for table TOPEATRK.

(Sheet 1 of 6)

Field	Subfield or refinement	Entry	Explanation and action
TRUNKGRP		see subfield	Trunk group key. This field is the key to the table and consists of subfield TRUNKGRP.
	TRUNKNAME	name from table CLLI	Trunk group name. Enter the common language location identifier (CLLI) assigned to the trunk group in table CLLI. This CLLI must be defined in the table TRKGRP for group types TOPS, IT, or ATC.
ENDOFFCE		CONFORM, NCONFORM or NONE	Type of originating end office. Enter CONFORM to indicate that the end office is a conforming end office. Enter NCONFORM to indicate that the end office is a non-conforming end office. Enter NONE to indicate that this information is unknown or not required.
CARRIER		alphanumeric (0000-9999 or NNNN)	Carrier for all inter-LATA traffic. Enter a three-digit code to identify the carrier to which inter-LATA traffic routes. All inter-LATA traffic routes to this carrier unless the carrier code is overwritten by the operator or the entry in field DNLOOK. The DMS switch sets this field to the default value of NNNN when table TRKGRP is datafilled for group type TOPS.
SCRNFLDS		see subfields	Screening fields. This field consists of subfield SCRNTYPE.

TOPEATRK (continued)

(Sheet 2 of 6)

Field	Subfield or refinement	Entry	Explanation and action
	SCRNTYPE	LATA or ZONE	Screening type. This subfield indicates which method of screening for the trunk group as follows: • LATA - Use LATA screening and enter datafill in subfield LATANM. • ZONE - Use zone screening and enter datafill in subfield TRKZONE.
	LATANM	name from LATAXLA or NILLATA	LATA name. This subfield appears if subfield SCRNTYPE = LATA. This field indicates the LATA of the calling party that is used with the called digits as an index into table LATAXLA. If traditional operator services signaling (OSS) is used on an incoming trunk group of type TOPS, table LATAXLA indicates if the calls on that trunk group are intra-LATA or inter-LATA. The name must be defined in tables LATAXLA and LATANAME. Enter NILLATA if there is no entry in table LATAXLA for this tuple.
	TRKZONE	Y or N	Trunk zone. This subfield appears if subfield SCRNTYPE = ZONE. This subfield indicates whether a zone is designated for the incoming trunk group. Enter Y to indicate a zone and enter datafill in subfield ZONENM. Otherwise, enter N for no zone.
	ZONENM	name from TOPSZONE	Zone name. This subfield appears if subfield TRKZONE = Y. This subfield indicates the zone of the calling party. The name must be defined in table TOPSZONE.
XLASCHEM		see subfield	Translations scheme. This field consists of subfield NEWXLA.

TOPEATRK (continued)

(Sheet 3 of 6)

Field	Subfield or refinement	Entry	Explanation and action
	NEWXLA	Y or N	New TOPS translations scheme. This field enables the new TOPS translations and screening for this trunk group, which only has equal access calls. The values are as follows: • Y - Enable the new translations. Enter datafill in subfield EAXLAGRP. • N - Disable the new translations and use the prior method. Enter datafill in fields INTRASSC, INTERSSC, OVSSCL, and STS. The default is N.
	INTRASSC	alphanumeric (1 to 4 characters) or NSCR	Intrastate screening. This field only appears if field NEWXLA = N. If class of service screening is required for intrastate-interLATA calls, enter the name of the class of service screening subtable (table CLSVSCRC subtable CLSVSCR) where the screening is to be performed. The name of this subtable must also be defined in tables CLSVSCRC and SCRNCLAS. Enter NSCR if class of service screening is not required. The DMS sets this field to the default value of NSCR when table TRKGRP is datafilled for trunk group type TOPS. ***Note:*** Field STATE in table LATAXLA determines the type of domestic screening (INTRASSC or INTERSSC) that is used.

TOPEATRK (continued)

(Sheet 4 of 6)

Field	Subfield or refinement	Entry	Explanation and action
	INTERSSC	alphanumeric (1 to 4 characters) or NSCR	Interstate screening. This field only appears if field NEWXLA = N. If class of service screening is required for interstate-interLATA calls, enter the name of the class of service screening subtable (table CLSVSCRC subtable CLSVSCR) where the screening is to be performed. The name of this subtable must also be defined in tables CLSVSCRC and SCRNCLAS. Enter NSCR if class of service screening is not required. The DMS switch sets this field to the default value of NSCR when table TRKGRP is datafilled for trunk group type TOPS.
	OVSSCL	alphanumeric (1 to 4 characters) or NSCR	Overseas call class of service screening table name. This field only appears if field NEWXLA = N. If class of service screening is required for overseas calls, enter the name of the class of service screening subtable (table CLSVSCRC subtable CLSVSCR) where the screening is to be performed. The name of this subtable must also be defined in tables CLSVSCRC and SCRNCLAS. Enter NSCR if class of service screening is not required. The DMS switch sets this field to the default value of NSCR when table TRKGRP is datafilled for trunk group type TOPS.
	STS	000 to 999	Serving translations scheme. This field only appears if field NEWXLA = N. If class of screening service is required for either or both interLATA and overseas calls, enter the STS NPA used with the class of service screening subtable name as an index into table CLSVSCRC.

TOPEATRK (continued)

(Sheet 5 of 6)

Field	Subfield or refinement	Entry	Explanation and action
	EAXLAGRP	name from table XLAGRP	Equal access translations group. This field only appears if field NEWXLA = Y. Enter a translations group name defined in table XLAGRP for this trunk group (field GRPKEY). The EAXLAGRP entry is the initial XLAGRP used for refinement to determine a final outgoing route.
DNLOOK		Y or N	Directory number lookup. Enter Y (yes) if table DNPIC is required to be searched for a particular DN to determine the carrier. Otherwise, enter N (no). The default value is N.

TOPEATRK (continued)

(Sheet 6 of 6)

Field	Subfield or refinement	Entry	Explanation and action
DFLTPIC		Y or N	Default or primary inter-LATA carrier. Enter Y to associate a carrier with a 0- call. The carrier name is taken from table DNPIC if the value in field DNLOOK is Y, or from table TRKGRP if the value in field DNLOOK is N. To specify that the operator must obtain the carrier from the calling party, enter N.
BYPASS		HOTEL and/or ZEROM	Bypass BOC operator call types. Datafill this field to specify one or more types of calls to route to the carrier specified in field CARRIER of this table or in field PIC of table DNPIC, as indicated below. • Enter HOTEL to route all hotel calls to the inter-LATA carrier (IC). • Enter ZEROM to route all zero minus traffic to the IC. • Enter $ to indicate the end of list. • Leave this field blank if operating company operators are not bypassed for hotel and 0- calls. ***Note:*** If TOPS Inter-LATA Carrier Service software is present, and the operating company provides operator services for the carrier to which the calls datafilled in field ZEROM are destined, calls are routed to the operator for handling. The DMS switch sets this field to the default value of $ when table TRKGRP is datafilled for trunk group type TOPS.

Datafill example

The following example shows sample datafill for table TOPEATRK.

MAP display example for table TOPEATRK

```
 TRUNKGRP   ENDOFFICE   CARRIER       SCRNFLDS              XLASCHEM
DNLOOK    DFLTPIC     BYPASS
_____________________________________________________________________

 TBELLIC1     CONFORM      0111  LATA NILLATA  N STRA STER SOVS 619
    N           N            $
 TEAOSSIC1    CONFORM      0111  LATA L123     N STRA STER SOVS 619
    Y           Y            $
```

TOPS12

The feature LATA Screening Alternative (59006827) adds field SCRNFLDS. This field provides option to select LATA or zone screening. The subfields of SCRNFLDS are SCRNTYPE, LATANM, TRKZONE, and ZONENM.

Field XLASCHEM is new by feature 59006822 in functionality UNBN OPRTRNAS and EA, UNBN0001.

NA005

Trunk group types IT and ATC are supported per functionality GR317/GR394 ISUP to/from TOPS, OSEA0005.

TOPS03

The range of field CARRIER was expanded from 3 to 4 digits by feature AN0883 in EA Carrier Code Expansion, OSEA0001.

TOPEATRM

Table name

TOPS Equal Access Terminating Screening Table

Functional description

Table TOPEATRM allows terminating point screening of TOPS calls designated for completion by an interexchange carrier. If a carrier requires screening to determine call completion ability based on the destination of the call, then this table is indexed using a screening name (given for the carrier in table TOPEACAR, field NATERM or INTERM) and the called number. If a tuple corresponding to this combination is found in the table, then the carrier can complete the call.

There are no default tuples.

Datafill sequence and implications

The following tables must be datafilled before table TOPEATRM.

- SCRNNAME
- SCRNNAME

Table size

The maximum size for this table cannot be given. Since a digilator is used to allow digit keys that vary in length, the data store usage cannot be determined without considering the distribution of the data elements. The maximum size is determined from the data store usage.

Datafill

The following table lists datafill for table TOPEATRM.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
TERMKEY		see subfields	Terminating key. This field consists of subfields SCRNNAME and CLDCODE.

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	SCRNNAME	alphanumeric (1 to 32 characters)	Screen name. Enter a screening name that has been previously defined in table SCRNNAME (field SYMBOL).
	CLDCODE	numeric (vector of up to 18 digits)	Calling number. Enter a sequence of digits to specify a range of called numbers. This field is typically datafilled with an NPA, an NPA-NXX, or a country code.

Datafill example

The following example shows sample datafill for table TOPEATRM.

MAP display example for table TOPEATRM

```
TERMKEY
_____________________________________________________________
IN1 33
IN1 44
IN3 33
NA3 212
NA3 617441
NA3 617442
NA3 617446
NA3 718
```

TOPLNPOP

Table name

TOPS Local Number Portability (LNP) Options

Functional description

Table TOPLNPOP contains parameters which control LNP.

Datafill sequence and implications

There is no requirement to datafill other tables before or after table TOPLNPOP.

Table size

4 tuples

Datafill

The following table lists datafill for table TOPLNPOP.

Parameter descriptions (Sheet 1 of 3)

Parameter	Explanation and action
AMAPARM	This parameter determines which AMA module is attached when this functionaltiy is active. The values are the following: • MOD_719 - attach Module 719. For proper operation of this functionalitiy, enter MOD_719. • MOD_720 - attach Module 720. This value is the default.
CLDPARM	This parameter is used for the Called Party ID parameter sent in an LNP query. The values are the following: CHGNUM_OPTION - This field controls sending of the charge number for the calling party in the LNP query. The values are the following: • HOLD_CHG - do not send the charge number (default value) • SEND_CHG - send the charge number CLGPTYID_OPTION - This field controls sending of the Calling Party ID in the LNP query. The values are the following: • HOLD_CLG - do not send the Calling Party ID (default value) • SEND_CLG - send the Calling Party ID TRIGCRIT_OPTION - This field consists of subfield T_STATUS. • T_STATUS - This field controls sending of the Trigger Criteria Type in the LNP query. The values are — HOLD_TRG - hold trigger information (default value) — SEND_TRG - send trigger information. If SEND_TRG is entered, enter datafill in refinement T_VALUE.

TOPLNPOP (continued)

Parameter descriptions (Sheet 2 of 3)

Parameter	Explanation and action
CLDPARM (continued)	TRIGCRIT_OPTION (continued) • T_VALUE - This refinement indicates the type of event that caused a trigger to occur. The values are the following: — FEAT_ACT (feature activator) — VSC (vertical service code, a parameter sent in an LNP query) — CUSTAC (customized access) — CUSTINT (customized intercom) — NPA (numbering plan area) — NPANXX (NPA-NXX) — NXX (NXX) — NXX4X (NXX-XXXX) — NPAN6X (NPA-NXXXXXX) — CCNPAN6X (country code NPA-NXX-XXXX) — CARAC (carrier access) — PREF (prefixes) — N11 (N11) — AFR (automatic flexible routing) — SHAIOTRK (shared input/output trunk) — TERMATT (termination attempt) — OFFHKIMM (off-hook immediate) — OFFHKDEL (off-hook delay) — SETUPPRI (channel setup PRI) — NPAN (NPA-N) — NPANX (NPA-NX)

TOPLNPOP (continued)

Parameter descriptions (Sheet 3 of 3)

Parameter	Explanation and action
CLDPARM (continued)	TRIGCRIT_OPTION (continued) • T_VALUE (continued) — NPAN3X (NPA-NXXX) — NPAN4X (NPA-NXX-XX) — NPAN5X (NPA-NXX-XXX) — NETBUSY (network busy) — T_NOANS (terminating no answer) — TERMBUSY (terminating busy) — CLDBUSY (originating called party busy) — SPECFEAT (specific feature code) — O_NOANS (originating no answer) — PRINET (private network services) — OSWIHKIM (originating switch hook flash immediate) — OFEATACT (originating feature activator) — OSWIHKSC (originating switch hook flash sc) — TSWIHKIM (terminating switch hook flash immediate) — TFEATACT (terminating feature activator) — TSWIHKSC (terminating switch hook flash sc) — LNP (local number portability) — ONEPLUS (one plus) — SPECCARR (specific carrier) — INTNATL (international) — ZEROPLUS (zero plus) — ZEROMIN (zero minus)
CLGPARM	This parameter is used for the Calling Party ID parameter sent in an LNP query. The values are the same as the CLDPARM parameter.
SPLPARM	This parameter is used for a third number billing validation in an LNP query. The values are the same as the CLDPARM parameter.

Datafill example

The following example shows sample datafill for table TOPLNPOP.

TOPLNPOP (end)

MAP display example for table TOPLNPOP

```
PARMNAME                                              PARMVAL
-------------------------------------------------------------
CLGPARM          SEND_CHG  SEND_CLG  SEND_TRG  LNP
CLDPARM          SEND_CHG  SEND_CLG  SEND_TRG  LNP
SPLPARM          HOLD_CHG  HOLD_CLG  HOLD_TRG
AMAPARM           MOD_719
```

Table history

TOPS10

Table was created by feature AF7496 in functionality TOPS Bellcore LNP, OSEA0010.

TOPS

Table name

Digit Translation Routing to TOPS Table

Functional description

Digit translation routing to table TOPS is available in a toll or combined local and toll switching unit equipped with TOPS.

Table TOPS is initialized by the switch to default values. Operating company input for this table is optional.

For routing to TOPS, table TOPS is used by the DMS TOPS program when translation of dialed digits in other customer data schema tables points to table TOPS, provided the dialed digits originate on incoming group types TOPS, intertoll (IT), or ATC trunk groups.

The operating company can provide access to selected groups of TOPS operator positions when a specified access code is dialed by the subscriber.

Calls attempting to dial digits routing to table TOPS from other sources, other than incoming trunk groups for TOPS, IT, ATC trunk groups are sent by the DMS TOPS program to treatment RODR.

The code displayed on the position screen identifies the call type. The operating company may select the standard display provided by the DMS TOPS program, or enter a string of up to six alphanumeric characters as the display code for the specified call type.

The standard display for calls arriving on incoming trunks of group type TOPS, IT, or ATC trunk groups are shown in the table that follows. The explanation for call types using the OOC feature are shown in the second table that follows.

Since table TOPS is a table with a fixed number of entries, it is created automatically at loadbuild time. The customer is allowed to modify existing entries by using selector C. For example:

DELAY C DELAY N N

TOPS (continued)

The customer is not allowed to add any new entries.

Initial default values for table TOPS (Sheet 1 of 3)

CO	*DISPLAY*	*HOLDREQ*
UNSPEC	S	N
OH	S	N
OA	S	N
DD	S	N
CAMA	S	N
RCAMA	S	N
DELAY	S	N
121	C INW121	N
131	C INW131	N
141	C INW141	N
151	C INW151	N
161	C INW161	N
171	C INW171	N
181	C INW181	N
191	C INW191	N
555	S	N
1150	C IN1150	N
1151	C IN1151	N
1152	C IN1152	N
1153	C IN1153	N
1154	C IN1154	N
1155	C IN1155	N
1156	C IN1156	N

Initial default values for table TOPS (Sheet 2 of 3)

CO	*DISPLAY*	*HOLDREQ*
1157	C IN1157	N
1158	C IN1158	N
1159	C IN1159	N
1160	C IN1160	N
1161	C IN1161	N
1162	C IN1162	N
TS	S	N
TSUB	S	N
APS	S	N
ALM	S	N
INTC	S	N
211	S	N
311	S	N
411	S	N
511	S	N
611	C REPAIR	N
711	S	N
811	C BUSOFC	N
911	C EMERGY	N
MOBILE	C ROAMER	N
999	S	N
HOM555	C HOM555	N
FOR555	C FOR555	N
SPARE1	C SPARE1	N

TOPS (continued)

Initial default values for table TOPS (Sheet 3 of 3)

CO	*DISPLAY*	*HOLDREQ*
SPARE2	C SPARE2	N
SPARE3	C SPARE3	N
SPARE4	C SPARE4	N
SPARE5	C SPARE5	N
INTS	S	N
COINTEST	S	N
BOOK	S	N
DATABASE	S	N
CDIR	S	N
ININTWRK	S	N
SLRN	S	N

Initial default values for table TOPS for the Gateway Operator Services and Rate-and-Route Information Feature OOC

CO	*DISPLAY*	*HOLDREQ*
OOC141	S	N
OOC151	S	N
OOCOVS	S	N
OOCMAN	S	N
OOC801	S	N
OOCDELAY	S	N

Datafill sequence and implications

The following tables must be datafilled before table TOPS:

- TOPSPOS
- TRKSGRP

- HNPACONT
- SERVICES

Table size

A fixed number of entries are created automatically at loadbuild. Entries cannot be added.

Datafill

The following table lists datafill for table TOPS.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
CO		See above tables for list of entries	Call origination. Enter one of the call type codes. See 5th table, 6th table (OOC), or 7th table (DMS-250 TOPS) for descriptions. DMS-250 TOPS Service Interception (SVI) uses call type INTS. Overseas Operator Center (OOC): Only call originations OOC141, OOC151, OOC801, OOCDELAY, OOCMAN, OOCOVS and OOCDB are used by OOC.
DISPLAY		see subfields	Display. This field is comprised of subfields SEL and HEADER defined below.
	SEL	S or C	Selector. Enter S if standard display is required . Enter C to indicate that the display shown in subfield HEADER is required.

TOPS (continued)

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	HEADER	alphanumeric (1 to 6 characters)	Header. Leave blank if SEL = S. If SEL = C, enter an alphanumeric string to be displayed on the screen in place of the standard display associated with this call type.
HOLDREQ		Y or N	Request connection hold. Note, this field is valid only in a global environemt, not the North American environment. This field indicates whether the TOPS switch may request connection hold for the given call origination type (field CO). Connection hold keeps the connection between the the operator and calling party until the TOPS switch ends the call, even if the calling party hangs up. The values are the following: • Y - request connection hold. • N - do not request connection hold.This value is the default. On a two-way trunk, this field applies only to incoming calls.

Call types arriving on incoming trunks of group type TOPS or IT (or other as noted) (Sheet 1 of 6)

CO	Standard display	Call type interpretation by DMS TOPS program
The following call types are set up automatically by the DMS TOPS program upon arriving on incoming trunks of group type TOPS. The default values should not be changed by the operating company.		
UNSPEC	0 Flashing	Unspecified—to be defined
OH		Operator Handled (0), dialed from:
	0 Flashing	System unable to identify origin
	0	Non Coin station
	0 COIN	Coin station
	0 HOTEL	Hotel station
OA		Operator assisted (0 + 7 or 10 digits or 01 + overseas number), dialed from:

Call types arriving on incoming trunks of group type TOPS or IT (or other as noted) (Sheet 2 of 6)

CO	Standard display	Call type interpretation by DMS TOPS program
	0+	Non coin station
	0+COIN	Coin station
	0+HOTEL	Hotel station
DD		Operator assisted (0 + 7 or 10 digits) dialed from:
	1+	Non coin station over incoming trunk of group type TOPS 100% ONI
	1+ COIN PRE	Prepaid coin station (call from coin station over incoming trunk of group type TOPS with coin control field CCONT of table TRKSGRP set to other that NO).
	+ COIN PO	Postpaid coin station (call from coin station over incoming trunk of group type TOPS with coin control field CCONT of table TRKSGRP set to NO).
CAMA		Operator assisted (1 + 7 or 10 digits), dialed from non coin station over incoming trunk of group type TOPS carrying ONI and ANI calls when:
	CAMA flashing	ANI fails
	CAMA	ANI spill identifies call as ONI
RCAMA	RCAMA flashing RCAMA	Same as CAMA but from remote CAMA
COINTEST	No display	This tuple is used to implement the ability to test a coin pay phone by using it. The calls are never routed to a TOPS position. Therefore a message is never displayed.
BOOK	Dependant on operator action	This tuple is used to allow an operator to enter a failed call attempt into a database for future processing. A call may be entered for a number of reasons. For a list of call-fail classes, see table IDBCLASS.
DATABASE	Dependant on operator action	This tuple is used to allow an operator to retrieve a call from a database or to report on booked calls in the database queue.
The following is an operator initiated call type.		
DELAY	DELAY	Delay

TOPS (continued)

Call types arriving on incoming trunks of group type TOPS or IT (or other as noted) (Sheet 3 of 6)

CO	Standard display	Call type interpretation by DMS TOPS program
The following call type is assigned to calls arriving over incoming trunks of group type TOPS, ISUP IT, or ISUP ATC when functionality GR317/GR394 ISUP to/from TOPS (OSEA0005) is present and the call meets the requirements in functionality Auto Country Direct (ENSV0010).		
CDIR	CDIR	Country direct call
The following call types arrive over ISUP trunks..		
ININTWRK	S	TOPS intelligent network (IN) operator backup. Refer to functionality IN Operator Backup, ENSV0023.
SLRN	S	Special location routing number service. Refer to functionality OSSAIN 12 Enhancements, OSAN0007.
The following call types are assigned to calls arriving over incoming trunks of group type IT (Intertoll) from distant operators who have dialed an access code for TOPS operator assistance. The access code is translated and routed via table TOPS.		
121	INW	Inward from other operator for assistance and calls to ring down tributaries.
131	131	Call from another operator for directory assistance
141	0 flashing	none
151	0 flashing	none
161	0 flashing	none
171	0 flashing	none
181	181	Call from another operator for a toll station
191	0 flashing	none
1160	0 flashing	Manual inward validation. Function enabled (use SEL = C) only where MCCS option applies.
1161	0 flashing	Future on MCCS
1162	0 flashing	Future on MCCS
The following call type is assigned to calls arriving over a trunk of group-type TOPS from subscribers who have dialed an access which is translated and routed via table TOPS.		

Call types arriving on incoming trunks of group type TOPS or IT (or other as noted) (Sheet 4 of 6)

CO	Standard display	Call type interpretation by DMS TOPS program
555	555	Subscriber has dialed the access code for directory assistance for a number outside of the subscriber's home NPA.
HOM555	555-HOM	Subscriber has dialed the access code for directory assistance for a number within the serving NPA.
FOR555	555-FOR	Subscriber has dialed the access code for directory assistance from a foreign NPA.
The following call types are assigned to calls arriving over incoming trunks of group type IT (Intertoll) from distant operators who have dialed an access code to hand over a subscriber call to a TOPS operator for completion. The access code is translated and routed using table TOPS.		
1150	50	Operator-dialed multi-digit call back to the universal operator
1151	0 flashing	none
1152	0 flashing	Call from a distant operator for mobile service. Future development.
1153	0 flashing	Call from a distant operator for marine service. Future development.
1154	0 flashing	none
1155	55	Operator-dialed multi-digit call back call to a non-coin telephone where T & C is requested..
1156	56	Operator-dialed multi-digit call back call to a hotel.
1157	0 flashing	none
1158	58	Operator-dialed multi-digit call back call to a non-coin telephone where T & C and special billing is requested.
1159	59	Operator-dialed multi-digit call back call to a hotel where special billing is requested.
The following call types are set up automatically by the DMS TOPS program upon arriving on incoming trunks of group type TOPS. The default values should not be changed by the operating company.		
TS	TS	Call originates at a toll station over a trunk of group type TOPS whose station class field STATCLAS is set to TOLLSTA.

TOPS (continued)

Call types arriving on incoming trunks of group type TOPS or IT (or other as noted) (Sheet 5 of 6)

CO	Standard display	Call type interpretation by DMS TOPS program
TSUB	TSUB	Call originates at a toll subscriber over a trunk group type TOPS whose station class field STATCLAS is set to TOLLSUB.
APS	0 flashing	none
ALM	ALM	Call originates in a local office with a maintenance alarm condition and arrives over a trunk of group type TOPS either with ANI information digit set to 8 or with a station class field STATCLAS set to ALARM.
INTC	INTC	Call originates from another operator or subscriber that is rerouted by the local office to TOPS because the number dialed is not in service. Call arrives over a trunk of type TOPS either with ANI information digit set to 9 or with a station class field STATCLAS set to INTCPT.
The following call types are assigned to calls arriving over a trunk of group type TOPS from subscribers who have dialed an access code which is translated and routed using table TOPS.		
211	0 Flashing	None
311	0 Flashing	None
411	0 Flashing	None
511	0 Flashing	None
611	0 Flashing	None
711	0 Flashing	None
811	0 Flashing	None
911	0 Flashing	None
MOBILE	0 Flashing	None
SPARE1	0 Flashing	None
SPARE2	0 Flashing	None
SPARE3	0 Flashing	None

Call types arriving on incoming trunks of group type TOPS or IT (or other as noted) (Sheet 6 of 6)

CO	Standard display	Call type interpretation by DMS TOPS program
SPARE4	0 Flashing	None
SPARE5	0 Flashing	None

Description of call types in table TOPS for Gateway Operator Services and Rate-and-Route Information Feature OOC

CO	Standard display	Call type interpretation by DMS TOPS program
OOC141		Rate and Route calls
OOC151		Calls originating overseas
OOCOVS		Overseas calls originating in Canada
OOCMAN		Calls terminating in or originating from countries serviced only by manual trunks
OOC801		Leave word or messenger calls
OOCDB		Calls recalled from the delay call database
OOCDELAY		Calls from the booked call database

Description of call types in DMS-250 TOPS

CO	Standard display	Call type interpretation by DMS TOPS program
999		999 emergency calls, which originate on DMS-250 trunk group types MEL, 3L, 3J, or 3JII, specially handled by DMS-250 TOPS

Datafill example

Digits 411 arriving over incoming trunk group type TOPS

Digits 411 arrive over an incoming trunk of group type TOPS with the station class field set to COMBINED. ANI SPILL allows the DMS TOPS program to determine that this is a call from a non coin station with ANI and the type of call is DD.

Translation of dialed digits 411 using tables TRKMEM, TRKSGRP, TRKGRP, TOPSBG and STDPRT points to table HNPACONT subtable HNPACODE as follows.

TOPS (continued)

MAP display example for table HNPACONT.HNPACODE

```
          FROMDIGS              TODIGS      CDRRTMT
_____________________________________________________
              411                 411    SCD3  64 $
```

Code type SCD3 tells the DMS program that 411 is a local service code to be allowed if the number of digits is 3 and the originating source is local, which is the case for all calls received over incoming trunk groups of type TOPS. Translation thus proceeds, screening tables LCASCRCN, PFXTREAT and CLSVSCRC permitting, to table HNPACONT subtable RTEREF at Route Reference Index 64 as follows.

MAP display example for table HNPACONT.RTEREF

```
RTE                                        RTELIST
_____________________________________________________
 64                                  (T   TOPS 411)$
```

Which points to table TOPS at index 411 as follows.

MAP display example for table TOPS

```
     CO    DISPLAY HOLDREQ
_____________________________________________________
      411     C DA       N
```

This will connect the caller to a TOPS position and display D.A. on the position screen.

Digits 121 arriving over incoming trunk group type IT

Digits 121 arrive over an incoming trunk of group type IT (Intertoll).

Translation of dialed digits 121 using tables TRKMEM, TRKSGRP, TRKGRP and STDPRT determines that the type of call is NP by default and points to table HNPACONT subtable HNPACODE as follows.

MAP display example for table HNPACONT.HNPACODE

FROMDIGS	TODIGS	CDRRTMT
121	121	OPC 3 41 $

Code type OPC3 tells the DMS program that 121 is an operator code to be allowed if the number of digits is 3 and the originating source is non-local which is the case for all calls received over incoming trunk groups of IT. Translation thus proceeds, screening table CLSVSCRC permitting, to table HNPACONT subtable RTEREF at Route Reference Index 42 as follows.

MAP display example for table HNPACONT.RTEREF

RTE	RTELIST
42	(T TOPS 121)$

Which points to table TOPS at index 121 as follows.

MAP display example for table TOPS

CO	DISPLAY	HOLDREQ
121	S	N

This will display the standard display for 121 which is INW on a TOPS position.

TOPS (end)

Table history

TOPS12

Fields NOAMA, POSTYPE, and SERVTYP are deleted by featured MD Code Removal and ReEngineering, OSB00001.

CO type SLRN is added by feature 59007166 in functionality OSSAIN 12 Enhancements, OSAN0007.

CO type ININTWRK is added by feature AF7805 in functionality IN Operator Backup, ENSV0023.

TOPS10

Field HOLDREQ was added by feature AF7435 in functionality GOS ETSI-ISUP Signalling, GOS00005.

NA005

Added call origination type CDIR per functionality Auto Country Direct, ENSV0010.

TOPSACTS

Table name

TOPS Automatic Coin Toll Service Table

Functional description

Table TOPSACTS supports the Automatic Coin Toll Service (ACTS) feature.

To receive ACTS, calls must be made from a coin phone capable of generating dual frequency coin deposit tones that the coin detector circuit (CDC) can recognize.

The ACTS compatibility of a coin phone is determined using table TOPSACTS. Table TOPSACTS is an extension of Traffic Operator Position System (TOPS) trunk group data, and is used to indicate one of three characteristics of coin calls arriving on a particular TOPS trunk group:

- all coin calls arriving on the trunk group are ACTS compatible
- no coin calls arriving on the trunk group are ACTS compatible
- some coin calls arriving on the trunk group are ACTS compatible

If the last condition occurs, then a further check is performed in table SPLDNID using the calling number as the index. If the calling number is not found in the table, then it is assumed that the call is ACTS compatible. However, if the calling number is found in the table, then value is checked to determine ACTS compatibility.

The following example serves to clarify the case in which the some coin calls arriving on the trunk group are ACTS compatible. Tables TOPSACTS and SPLDNID contain some sample datafill that can be used during a 1+ call from a coin station.

Tuple 1

If a 1+ call originates from a coin station (613-781-2397), the trunk common language location identifier (CLLI) code from table TRKGRP indexes table TOPSACTS, and the value MAYSERV is read from field ACTSSERV. This causes table SPLDNID to be read, in which the calling number (613-781-2397) is found. The value NOACTS in the ACTS_COMPATIBLE field tells the switch that this trunk does not have ACTS service and the call is routed to an operator.

Tuple 2

In this case, assume the number of the originating coin station is 613-775-2323. When table TOPSACTS is accessed, the value MAYSERVE is read in field ACTSSERV. This causes table SPLDNID to be read, and the

TOPSACTS (continued)

calling number (613-775-2323) is found. Field ACTS_COMPATIBLE contains the value ACTS, meaning that this trunk can receive ACTS service. A CDC is then connected, and the call proceeds with ACTS service.

MAP display example for table TOPSACTS

```
            CLLI ACTSSERV LARGECHG
_____________________________________________________________
        OTTOHULL  MAYSERV     2500
        OTTOMONT  MAYSERV     2500
```

MAP display example for table SPLDNID

```
             SPLDN                      SPLSEL
_____________________________________________________________
        6137752323      COIN STD   ACTS N 100
        6137812397      COIN STD NOACTS N 100
```

In NA005, trunk group types IT and ATC may be datafilled.

Datafill sequence and implications

Table TRKGRP must be datafilled before table TOPSACTS.

This table must be datafilled after table TRKGRP.

Table size

0 to 8191 tuples

The size of table TOPSACTS is controlled by the entry for table TRKGRP in table DATASIZE. The size of each tuple is one word.

Approximately 8K of memory allocation is required.

Datafill

The following table lists datafill for table TOPSACTS.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
CLLI		alphanumeric (up to 16 characters)	Common language location identifier. Enter the name of the Traffic Operator Position System (TOPS) trunk on which the call arrived.
ACTSSERV		MAYSERV NOSERV or SERV	Automatic Coin Toll Service. This field indicates whether coin calls arriving on this trunk can receive Automatic Coin Toll Service (ACTS). Enter MAYSERV if table SPLDNID is checked to determine the ACTS status on a calling number basis. Enter NOSERV if coin calls arriving on this trunk group are routed to an operator for processing. Enter SERV if coin calls arriving on this trunk group can receive ACTS service. When SERV is entered, table SPLDNID is not used, and the call is assumed to be ACTS compatible.
LARGECHG		0 to 4095	Large charge. Indicates the maximum amount in cents that a coin call can cost and still be processed by ACTS. If a coin call costs more than this amount, it is handled by an operator.

Datafill example

The following example shows sample datafill for table TOPSACTS.

MAP display example for table TOPSACTS

```
          CLLI ACTSSERV LARGECHG
________________________________________________________
      OTTOHULL  MAYSERV     2500
      OTTOMONT  MAYSERV     2500
```

TOPSACTS (end)

Table history

NA005

Trunk group types IT and ATC are supported per functionality GR317/GR394 ISUP to/from TOPS, OSEA0005.

TOPSAMA

Table name

TOPS AMA Table

Functional description

Table TOPSAMA allows an operating company to select unanswered Traffic Operator Position System (TOPS) calls (by call type) recorded in the automatic message accounting (AMA) record generated in an office using Northern Telecom format (NTFMT) recording. Table TOPSAMA does not apply to offices using Bellcore format recording.

In a Bellcore format office, the UNANS_TOPS tuple must be turned on in table AMAOPTS and the call codes requiring unanswered records must be assigned in table BCCODES to generate TOPS unanswered call records.

The office parameter NO_ANS_CALLS_ONTAPE in table OFCENG determines whether to have all unanswered calls or none recorded on tape.

The operating company must use the table editor command REP (replace) to replace default values if changes are needed because table TOPSAMA is a change-only table.

If specified, the calls are recorded on the AMA device when the calling party disconnects.

Table TOPSAMA belongs to optional feature package NTX138AA (TOPS Automatic Message Accounting).

If feature package NTX138AA and table TOPSAMA are provided, the office parameter and table work together in the following manner:

NO_ANS_CALLS_ON_TAPE	TOPSAMA	Call recorded on tape?
Y	Y	Yes
Y	N	Yes
N	Y	Yes

If feature package NTX138AA and table TOPSAMA are not provided, the office parameter has full control of the TOPS AMA recording process.

TOPSAMA (continued)

If the software load is built for an office, table TOPSAMA is datafilled with the default values shown in the following table.

Default values (Sheet 1 of 3)

CO	TOT	RECNOANS
ALM	05	N
APS	03	N
BOOK	00	N
CAMA	01	N
CDIR	00	N
COINTEST	00	N
DATABASE	00	N
DD	01	N
DELAY	70	N
FOR555	90	N
HOM555	90	N
INTC	06	N
INTS	00	N
MOBILE	09	N
OA	02	N
OH	03	N
RCAMA	04	N
SPARE1	00	N
SPARE2	00	N
SPARE3	00	N
SPARE4	00	N
SPARE5	00	N
TS	03	N

TOPSAMA (continued)

Default values (Sheet 2 of 3)

CO	TOT	RECNOANS
TSUB	03	N
UNSPEC	00	N
1150	40	N
1151	00	N
1152	42	N
1153	07	N
1154	00	N
1155	50	N
1156	60	N
1157	00	N
1158	62	N
1159	63	N
1160	00	N
1161	00	N
1162	00	N
121	10	N
131	20	N
141	08	N
151	00	N
161	00	N
171	00	N
181	30	N
191	00	N
211	00	N

TOPSAMA (continued)

Default values (Sheet 3 of 3)

CO	TOT	RECNOANS
311	00	N
411	89	N
511	00	N
555	90	N
611	00	N
711	00	N
811	00	N
911	00	N
999	90	N

The following call origination types apply to the Overseas Operator Center (OOC):

- OOC141
- OOC151
- OOC801
- OOCDB
- OOCDELAY
- OOCMAN
- OOCOVS

Datafill sequence and implications

There is no requirement to datafill other tables prior to table TOPSAMA.

Table size

The data for table TOPSAMA is entered during the software loadbuild procedure. No new call origination types can be added to this table as TOPSAMA is a change-only table.

Datafill

The following table lists datafill for table TOPSAMA.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
CO		system default list	Call origination type. Enter the specified type of unanswered call for which there is a record on tape. See table Table , "Default values" on page -106. The only call origination types that apply to the Overseas Operator Center (OOC) are: OOC141, OOC151, OOC801, OOCDELAY, OOCMAN, OOCOVS, and OOCDB.
TOT		00 to 99	Traffic Operator Position System origination type code. Enter the two-digit Traffic Operator Position System (TOPS) origination type code. This is a field in the TOPS automatic message accounting (AMA) record.
RECNOANS		Y or N	Record no answer. Enter Y (yes) if unanswered calls are recorded on the AMA device. Otherwise, enter N (no).

Datafill example

The following example shows sample datafill for table TOPSAMA.

MAP display example for table TOPSAMA

```
      CO TOT RECNOANS
_____________________________________________________________________
  UNSPEC  00        N
```

Table history

NA005

Added default call origination type CDIR per functionality Auto Country Direct, ENSV0010.

TOPSBC

Table name

TOPS Billing Code Table

Functional description

Table TOPSBC lists the following information for each Nxx central office code, special billing code, and outward wide area telecommunication service (WATS) originating code that is allowed to originate Traffic Operator Position System (TOPS) calls over a specified common language location identifier (CLLI) of trunk group type TOPS:

- name of the local calling area screening subtable that is assigned to the code, if local calling area screening is required
- name of the class of service screening subtable that is assigned to the code, if class of service screening is required
- actual code and numbering plan area (NPA) that is recorded on the automatic message accounting (AMA) tape
- the charge class applicable to the code

In NA005, trunk group types IT and ATC may be datafilled.

Datafill sequence and implications

The following tables must be datafilled before table TOPSBC.

- CLLI
- CLSVSCRC
- LCASCRCN
- TOLLENTC

Table size

0 to (8191 trunk groups X 1000 billcodes) = 8,191,000 tuples

The memory allocated for table TOPSBC is equal to the values of field BILLCD for all TOPS trunk groups.

A maximum of 1000 tuples per TOPS trunk group can be allocated.

Datafill

The following table lists datafill for table TOPSBC.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
CLLI		alphanumeric (1 to 16 characters)	Common language location identifier. Enter the common language location identifier (CLLI) assigned to the trunk group as previously datafilled in table CLLI. Group types TOPS, IT, and ATC are supported.
BILLCODE		0 to 9 (3 digits)	Billing code. Enter the billing code to include the following: • all central office Nxx codes • special billing codes • wide area telephone service (WATS) originating codes that are allowed to originate direct distance dialing (DDD) calls over the trunk group ***Note:*** The number of NXX codes allowed in field BILLCODE is limited to 999.
LCANAME		alphanumeric (4 characters)	Local calling area screening table name. Enter NLCA if: • the LCANAME specified in table TRKGRP provides the proper screening • no local calling area screening is required If the traffic carried by the trunk group requires local calling area screening particular to the code specified in field BILLCODE, enter a local calling area screening subtable name. The entry for field LCANAME must be datafilled in table LCASCRCN. ***Note:*** If an LCANAME other than NLCA is entered in tables TRKGRP and TOPSBC, the local calling screening test is performed twice, wasting switch central processing unit (CPU) capacity.

TOPSBC (continued)

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
SCRNCL		alphanumeric (4 characters)	Class of service screening table name. Enter NSCR if: • the SCRNCL specified in table TRKGRP provides the proper screening • no class of service screening is required If the traffic carried by the trunk group requires class of service screening particular to the code specified in field BILLCODE, enter a class of service screening subtable name. The entry for field SCRNCL must be datafilled in table SCRNCLAS. ***Note:*** If a SCRNCL other than NSCR is entered in tables TRKGRP and TOPSBC, the class of service screening test is performed twice, wasting switch CPU capacity.
ACTUALBC		0 to 9 (6 digits)	Actual billing code. Enter the actual billing code (NPA + Nxx) that is recorded on the automatic message accounting (AMA) tape.
CHGCLSS		alphanumeric (4 characters)	Charge class. For Northern Telecom AMA format, enter a charge class that is datafilled in table TOPSENTC, field CHGCLSS. For Bellcore AMA format, enter TOPS (Traffic Operator Position System).

Datafill example

The following example shows sample datafill for table TOPSBC.

MAP display example for table TOPSBC

```
            CLLI
             BILLCODE LCANAME SCRNCL ACTUALBC CHGCLSS
-------------------------------------------------------------
          LNTOPSI
                   621    NLCA   NSCR   613621    TOPS
```

Table history

NA005

Trunk group types IT and ATC are supported by functionality GR317/GR394 ISUP to/from TOPS, OSEA0005.

TOPS04

Table size increase due to increase of field NOBILLCD in TRKGRP (TOPS) maximum size from 63 to 1023. Per feature AN1379 in TOPS Robustness, OSB00001.

TOPSBPC

Table name

TOPS Billing Party Category Table

Functional description

Table TOPSBPC associates a billing party category (or calling party category if a billing party category is not provided) with an index into table TOPSDB. The index into table TOPSDB can override the one specified in table TOPSPFX. The key field into this table is in two parts consisting of a CATCLASS index and a category.

This table is only valid in the TOPS Global environment.

Datafill sequence and implications

Tables TOPSDB and CATCLASS should be datafilled before table TOPSBPC.

Table CATCLASS is not checked during datafill of table TOPSBPC. However, it should be ensured that TOPSBPC datafill corresponds to table CATCLASS datafill. A mismatch in datafill does not cause corruption, but it is useless datafill that takes up space in the table.

Following are entry definitions for field CATEGORY:

(Sheet 1 of 2)

Category	Description
REGULAR	Call is from a regular subscriber. This may be used when there is no information about the calling party.
PRIORITY	Call is from a priority subscriber. No special routing or service privileges are provided.
MTC_EQ	Call is from maintenance equipment.
COIN	Call is from a coin box.
OPER	Call is set up by an operator.
UNIT_FEE_COIN	Call is from a coin box using the “unit fee" mode of operation. The DMS does not support this service. This category is propagated to the succeeding exchange.
DATA	Call is from a subscriber using data transmission equipment.
NO_CALL_TRANS	Number dialed should not be subject to any form of call transfer at the terminating office. The DMS treats these calls the same as regular calls.

TOPSBPC (continued)

(Sheet 2 of 2)

Category	Description
REGULAR_INTL	Originator is making an international direct dialed call.
ANI_FAILURE	ANI digits (called party address) could not be determined at the originating office.
ATME	Call is from automatic test and measurement equipment. The DMS does not support this service. This category is propagated to the succeeding exchange.
SHARED_1	This is the first subscriber on the party line. The DMS does not support this service. This category is propagated to the succeeding exchange.
SHARED_2	This is the second subscriber on the party line.
SHARED_3	This is the third subscriber on the party line.
OPER_INTL	Call is from an international operator.
SPARE_CAT1	This activity is used if the appropriate activity cannot be found. This activity is propagated to the succeeding exchange.
SPARE_CAT2	This activity is used if the appropriate activity cannot be found. This activity is propagated to the succeeding exchange.
TIME_AND_CHG	Calling party has requested a quote of elapsed time and total charges for the call.
PBX	The PBX (whose numbering has been accommodated in local networks) uses this mark to identify the calling extension numbers. The DMS treats this as a REGULAR activity.
FREE_CALL	This is an originating toll or originating international exchange call. Call is not billed. Charging for the call is not started in the charging office upon answer.
LOCAL_COIN	Call originated from a local public phone.
TOLL_COIN	Call originated from a long distance public phone.

Table size

0 to 2032 tuples

TOPSBPC (continued)

Datafill

The following table lists datafill for table TOPSBPC.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
IDX	see subfields		Index. This field consists of subfields CATIDX and CATEGORY.
	CATNAME	Entry from table CATCLASS, field CATNAME	Category Class Index. This field specifies the table CATCLASS index. This field along with the CATEGORY field make up the two-part key into this table.
	CATEGORY	Entry from table CATCLASS, field CATEGORY	Category. The CATEGORY field is the second part of the key. It defines the calling or billing party category. The complete set of categories depends on datafill in table CATCLASS, which defines the categories supported by the office. The entries are defined in the above listing.
OVRPFX		Y or N	Override Prefix. Specifies whether or not the TOPSDB index specified below should override the one specified in Table TOPSPFX.

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
OVRRST		Y or N	Override restricted billing information. This field determines if the calling service and restricted billing information should be taken from table TDBNORM based on table TOPSBPC (enter Y) or table TOPSPFX data (enter N). Note, fields OVRRST and OVRPFX cannot both be set to Y. Specifically, if set to Y, the table flow is as follows: table TOPSBPC, field TDBIDX indexes into table TOPSDB. Then, table TOPSDB, field TDBNORM, indexes into table TDBNORM only for fields CALLSERV and RBIL. The remaining fields in table TDBNORM are accessed as follows: table TOPSPFX, field TDBIDX, indexes into table TOPSDB. Then table TOPSDB, field TDBNORM, indexes into table TDBNORM only for fields CALLORIG, CALLSRC, NOAMA, OVRXLACO, and ANIFAIL. Specifically, if set to N, the table flow is as follows: table TOPSPFX, field TDBIDX, indexes into table TOPSDB. Then table TOPSDB, field TDBNORM, indexes into table TDBNORM for all fields.
TDBIDX		0 to 32766	TOPSDB Index. Provides the index into table TOPSDB, which leads to the data used in service determination and normalization. If OVRPFX=N, then the TDBIDX index from Table TOPSPFX is used.

Datafill example

The following example shows sample datafill for table TOPSBPC.

MAP display example for table TOPSBPC

```
IDX                          OVRPFX    OVRRST    TDBIDX
-------------------------------------------------------
PROTR2        OPER            N         N         0
```

TOPSBPC (end)

Table history

TOPS07

Added note that table is only valid in the TOPS Global environment per feature AF6428 in functionality Interface Signaling, OSB00001.

TOPS05

New field OVRRST added by PRS MX51957 in functionality R2 on TOPS, GOS00001.

TOPS04

Table was introduced by feature AN1228 in functionality R2 on TOPS, GOS00001.

TOPSCOIN

Table name

TOPS Coin Table

Functional description

Table TOPSCOIN allows the operating company to specify the delay between the reception of the last calling digit by the Traffic Operator Position System (TOPS) office and the transmission of coin signals by the TOPS office on 0+, 0- and 1+ coin calls. The delay is set on a trunk group basis. The operating company can set the delay anywhere between 0 to 2 s in 10 ms increments. If the operating company does not specify a delay in table TOPSCOIN, the system assumes the default delay of 750 ms.

Fields PADSTAT0, PADSTAT1, and COINTYPE were removed from table TRKGRP and placed in table TOPSCOIN. Since these fields need only be datafilled for trunk groups that carry coin traffic, their removal from the table TRKGRP eliminates the need to datafill fields related to coin traffic on trunks that do not carry coin traffic.

Three fields, CCFCNRET, PADSTATB, and PADSTAT8, allow the operating company to specify whether pad enable signals or coin return signals are sent for (1)-950 and 1-800 coin calls.

With the TOPS13 activity Operator Services Network Capability (59012548), it is possible to add Integrated Services Digital Network User Part (ISUP) Intertoll (IT) and ISUP Access to Carrier (ATC) trunks to table TOPSCOIN. Before this feature, it was possible to only datafill TOPS trunks in table TOPSCOIN.

Table TOPSCOIN needs to be datafilled only if the entries required are different from the default values. The default values are as follows:

Default values (Sheet 1 of 2)

Field	Default
CNSDELAY	75 (750 ms)
PADSTAT0	UNKNOWN
PADSTAT1	UNKNOWN
COINTYPE	CCFCDF
CCFCNRET	N

TOPSCOIN (continued)

Default values (Sheet 2 of 2)

Field	Default
PADSTATB	UNKNOWN
PADSTAT8	UNKNOWN

Restrictions

A CDF telephone can be used by a customer without an initial coin deposit.

A customer must make an initial deposit to use a CCF telephone. Without a coin deposit in the hopper, a customer cannot use the digitone keypad on a CCF telephone nor does the customer receive dial tone.

A TOPS trunk group can service CCF telephones, CDF telephones, or both types of telephones (CCFCDF). A TOPS trunk group can also service postpay coin telephones, but they are not used with field COINTYPE since no coin signaling is done for postpay coin telephones.

If a call not dialed 1-800 or (1)-950 encounters a TOPS common language location identifier (CLLI), the pad state indicated by field PADSTAT8 is assumed.

The pad state fields PADSTAT8 and PADSTATB take precedence over fields PADSTAT1 and PADSTAT0 for non-operator handled calls. For example, prior to the existence of these fields, a 1-800 call from a coin phone fell into the PADSTAT1 category. Now, it is guided by the PADSTAT8 category.

Fields PADSTAT1 and PADSTAT0 do not use the TOPSCOINENABLE CLLI, but the pad state fields PADSTAT8 and PADSTATB do.

Datafill sequence and implications

Table TRKGRP must be datafilled before table TOPSCOIN.

Table size

Table TOPSCOIN can have a maximum of 8191 tuples and the size of each tuple is two words. The size of table TOPSCOIN is controlled by the entry for table TRKGRP in table DATASIZE.

Approximately 16 kbytes of data store are required.

Datafill

The following table lists datafill for table TOPSCOIN.

Field descriptions (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
GRPKEY		alphanumeric (up to 16 characters)	Trunk group key. This field contains the common language location identifier (CLLI) assigned to a trunk group in table TRKGRP. This trunk group carries coin traffic.
CNSDELAY		0 to 200	Coin signal delay. This field specifies the delay between the reception of the last calling digit and the transmission of the coin signal. The delay is set in 10 ms increments. The default is 75 (750 ms).
PADSTAT0		DISABLED ENABLED or UNKNOWN	Keypad state on 0+ and 0- coin calls. This field specifies the state in which the digitone keypad was left in by the end office upon initial connection to the tandem for Mechanized Calling Card Service (MCCS) and operator assisted 0+ and 0- coin calls. This field also improves central control (CC) realtime use by eliminating unnecessary signaling between the end office and the tandem. For example, on an MCCS call, the keypad must be in the enabled state for the calling party to be able to enter the calling card number. If field PADSTAT0 is set to ENABLED, the keypad is assumed to be in the correct state and the tandem does not send a signal to enable the keypad. If field PADSTAT0 is set to DISABLED or UNKNOWN, the tandem sends a signal to enable the keypad. The default entry for the PADSTAT0 field is UNKNOWN.

TOPSCOIN (continued)

Field descriptions (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
PADSTAT1		DISABLED ENABLED or UNKNOWN	Keypad state on 1+ coin calls. This field specifies the state in which the digitone keypad was left in by the end office upon initial connection to the tandem for Automatic Toin Coll Service (ACTS) or operator assisted 1+ coin calls. This field also improves CC realtime use by eliminating unnecessary signaling between the end office and the tandem. This field functions in the same manner as field PADSTAT0. The default entry for the PADSTAT1 field is UNKNOWN.
COINTYPE		CCF, CDF, or CCFCDF	Coin type. This field specifies the type of coin telephone that is serviced by the TOPS trunk specified in field GRPKEY in table TRKGRP. Enter CCF for prepay coin first telephones. Enter CDF for prepay dial tone first telephones. Enter CCFCDF if both types of telephones are serviced by this trunk. The default is CCFCDF (see restrictions).
CCFCNRET		Y or N	CCFCN return. This field specifies whether a coin return signal is sent upon termination of a 1-800 or 1-950 coin call. If the entry is Y (yes), a coin return signal is sent when a 1-800 or 1-950 call is terminated. Y is a valid entry only if field COINTYPE is set to CCF or CCFCDF. If the entry is N (no), no special coin signals are sent when the call is terminated. The default is N.

Field descriptions (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
PADSTATB		DISABLED ENABLED or UNKNOWN	Pad status B. This field indicates the state of the keypad upon connection to the end office on 1-950 coin calls. If the entry is DISABLED, the state of the keypad is disabled. If the entry is ENABLED, the state of the keypad is enabled. If the entry is UNKNOWN, the state of the keypad cannot be determined. The default is UNKNOWN.
PADSTAT8		DISABLED ENABLED or UNKNOWN	Pad status 8. This field indicates the state of the keypad upon connection to the end office on 1-800 coin calls. If the entry is DISABLED, the state of the keypad is disabled. If the entry is ENABLED, the state of the keypad is enabled. If the entry is UNKNOWN, the state of the keypad cannot be determined. The default is UNKNOWN.
OTTYPE		PRE or POST	Overtime charges type. Determines whether coin phones on a specific trunk are pre-pay or post-pay for overtime charges. The default value is POST.

Datafill example

The following example shows sample datafill for table TOPSCOIN.

MAP display example for table TOPSCOIN

```
          GRPKEY CNSDELAY  PADSTAT0 PADSTAT1 COINTYPE CCFCNRET PADSTATB
PADSTAT8 OTTYPE
_____________________________________________________________________________
       OTTTOHULL       75  UNKNOWN  UNKNOWN   CCFCDF        N  UNKNOWN
 UNKNOWN   PRE
```

TOPSCOIN (end)

Table history

TOPS03

Feature AN0408 in Pre-paid Coin, ENSV0007:

- Added field OTTYPE.

Feature 59012548 in Operator Services Network Capability, OSEA0013:

- allowed for addition of ISUP IT and ISUP ATC trunks to TOPSCOIN

TOPSDB

Table name

TOPS Database Table

Functional description

Table TOPSDB consists of a numeric key and data values. The key contains data from the attribute in table DNSCRN. The data values are indices into tables TDBCLASS, TDBDAOPT, TOPSPFX, and TOPSBPC.

Tuple 0 is a default and cannot be changed or deleted.

It is suggested that the entries in fields DNSCRIDX, TDBCLIDX, and TDBDAOPT use the same value. For example, if field DNSCRIDX is set to 17, field TDBCLIDX is also set to 17. Corresponding datafill is not required, but is suggested because it simplifies the association of the directory number (DN) and the data.

For related information, refer to tables TDBCLASS, TDBDAOPT, DNSCRN, TOPSPFX, and TOPSBPC.

Datafill sequence and implications

Tables TDBDAOPT, TDBCLASS, TOPSPFX, TOPSBPC, and OAFUNBLK must be datafilled before table TOPSDB.

Table size

0 to 32 768 tuples

Data store is dynamically allocated.

Datafill

The following table lists datafill for table TOPSDB.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
TDBKEY		see subfield	TOPS data base key. This field is the key to field is indexed by tables TOPEACAR, DNSCRN, COANISCR, TOPSPFX, and TOPSBPC.
	IDX	0 to 32 766	Index. Enter the data value from the attribute in table DNSCRN, TOPEACAR, COANISCR, TOPSPFX, or TOPSBPC.

TOPSDB (continued)

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
TDBCLIDX		0 to 1000	Traffic Operator Position System Database Class Table index. Enter the index into table TDBCLASS.
TDBDAOPT		0 to 1000	TOPS data base directory assistance options. Enter the index into table TDBDAOPT for ADACC screening.
TDBNORM		0 to 1000	Table TDBNORM index. This field is the index into table TDBNORM. The default value is 0, which is the default tuple in table TDBNORM.
TDBSERV		0 to 1000	Table TDBSERV index. This field is the index into table TDBSERV. The default value is 0, which is the default tuple in table TDBSERV.
OAFUNBLK		0 to 1022	OSSAIN function block. This is an index into table OAFUNBLK. This field is used to block functions for a DN.

Datafill example

The following example shows sample datafill for table TOPSDB.

MAP display example for table TOPSDB

```
TDBKEY   TDBCLIDX   TDBDAOPT   TDBNORM   TDBSERV   OAFUNBLK
-------------------------------------------------------------
0        0          0          0         0         0
1        1          1          0         0         0
2        2          2          0         1         2
3        4          3          0         3         1
4        0          4          0         2         0
5        5          5          0         0         0
```

In the above datafill example, tuple 0 is a default and cannot be changed or deleted.

Error messages

The following error messages apply to table TOPSDB.

Error messages for table TOPSDB

Error message	Explanation and action
Tuple 39 is not datafilled in table TDBDAOPT. Tuple 39 is not datafilled in table TDBCLASS.	Tables TDBCLASS and TDBDAOPT must be datafilled prior to datafilling table TOPSDB. If the craftsperson attempts to add or change a table TOPSDB tuple with a given TDBCLIDX or TDBDAOPT prior to adding the tuple to table TDBCLASS or TDBDAOPT, the add or change is not allowed, and an error message is given.
Tuple 29 is referenced by table DNSCRN, TOPEACAR, or COANISCR.	Table TOPSDB must be datafilled prior to datafilling tables DNSCRN, TOPEACAR, or COANISCR with an index into TOPSDB. If the craftsperson attempts to delete a table TOPSDB tuple which is referenced by a tuple in tables DNSCRN, TOPEACAR, or COANISCR, the deletion is not allowed, and an error message is given.
Tuple 0 cannot be deleted or changed.	If the craftsperson attempts to change or delete default tuple 0, the change or deletion is not allowed, and an error message is given.
`Tuple <idx> is not datafilled in table OAFUNBLK.`	This message is displayed if an attempt is made to datafill table TOPSDB with an index (field OAFUNBLK) that has not been defined in table OAFUNBLK (field IDX). Table OAFUNBLK must be datafilled before table TOPSDB.

Table history

NA006

Field OAFUNBLK added by functionality Operator Services, ENSV0014.

TOPS04

Added fields TDBNORM and TDBSERV from feature AN1228 in functionality R2 on TOPS, GOS00001.

TOPS03

Feature AN0262 in Cellular/IXC/LEC ADACC, OSDA0005:

- Changed name of field DNSCRIDX to TDBKEY.
- Added field TDBDAOPT.

TOPSDB (end)

BCS36

Table TOPSDB was introduced.

Supplementary information

This section provides information on dump and restore procedures for table TOPSDB.

Dump and restore

Normal dump and restore procedures apply.

TOPSDEV

Table name

TOPS Device Table

Functional description

Table TOPSDEV is used to list the Traffic Operator Position System (TOPS) devices that require trunk circuit (data) and to identify the trunk circuit locations. These devices include all the teletype terminals (TTY) as well as the force management cathode ray tube (FMCRT) terminals. Additional information associated with the devices is also captured.

The trunk circuit for each position can be assigned to either the odd or even circuit on the trunk module (TM).

For related information, refer to table TOPSPOS.

Adding, deleting, and modifying devices

Each TOPS device requires a tuple in table TOPSDEV. To add a device, add a tuple to the table as shown in the following example. To delete a device, delete the tuple that describes that device.

Note: Any attempt to enter NILDEV as a TOPS device in table TOPSDEV is rejected and the following error message is generated:

```
NILDEV ENTRY NOT ALLOWED
```

Do not use the CHANGE command to modify information about a device. The following steps must be performed to change information in table TOPSDEV:

1. From the trunk test positions (TTP) level of the maintenance and administration position (MAP) terminal, place the selected devices in the installation busy (INB) state.
2. Edit table TOPSDEV.
3. Delete the selected tuples in table TOPSDEV.
4. Add the changed tuples to table TOPSDEV.
5. Quit from the table editor.
6. From the TTP level of the MAP terminal, busy (command BSY) and return to service (command RTS) each device deleted and re-added in table TOPSPOS.

Changing tuples in table TOPSDEV

The steps and commands used at the MAP terminal to change any information about the devices are as follows:

TOPSDEV (continued)

At the MAP terminal:

1. Access the TTP level of the MAP terminal by typing

   >MAPCI;MTC;TRKS;TTP

   and pressing the Enter key.

2. Post the selected device by typing

   >POST G TOPSDEV devno

   and pressing the Enter key.

   where

   devno
   is the device number

3. Place the selected device in the installation busy state by typing

   >BSY;BSY INB;HOLD

   and pressing the Enter key.

4. Determine if there are more devices to be posted.

If	Do
yes	step 2
no	step 5

5. Access table TOPSDEV by typing

   >TABLE TOPSDEV

   and pressing the Enter key.

6. Position on the first tuple to be deleted in table TOPSDEV by typing

   >POS n

   and pressing the Enter key.

   where

   n
   is the position number of the tuple to be deleted

7. Delete the tuple by typing

   >DEL

and pressing the Enter key.

8. Determine if there are more tuples to be deleted.

If	Do
yes	step 6
no	step 9

9. Add the first new tuple by typing

```
>ADD  devno devtype  refinements
```

and pressing the Enter key.

where

devno
is the device number (field DEVNO)

devtype
is the device type (field DEVTYPE)

refinements
are the refinements (see datafill descriptions)

10. Determine if there are more tuples to be deleted.

If	Do
yes	step 9
no	step 11

11. Quit from the table editor by typing

```
>QUIT
```

and pressing the Enter key.

12. Post the first device posted in step 2 by typing

```
>POST G TOPSDEV devno
```

and pressing the Enter key.

where

devno
is the device number

TOPSDEV (continued)

13. Busy the selected device, return it to service, and release the trunk by typing

    >BSY;RTS;HOLD

    and pressing the Enter key.

14. Determine if there are more devices to be posted.

If	Do
yes	step 12
no	step 15

15. Return to the MAPCI level of the MAP terminal by typing

    >QUIT ALL

    and pressing the Enter key.

Device selectors

The following devices can be entered in field DEVSEL.

AQ

Auto Quote

The AQ is a receive-only TTY located in a hotel. The device automatically prints call details and time and charge information for calls made from rooms within the hotel. The AQ is connected to the TOPS switch by dedicated lines.

DADS

Delay Call Database Administrator Device

The DADS is an input/output TTY used to administer the overseas operator center (OOC) delay call database. As a result, it is only available if a switch is in the international TOPS environment. From the DADS, the delay call database administrator requests printouts of portions of the database. Additionally, the DADS is used to control aspects of the database and output of reports. There is only one DADS for each office.

FMCRT

Force Management Cathode Ray Tube

The FMCRT is an output only CRT that resembles an in charge (IC) position but displays information for all teams in a traffic office. The FMCRT, paired

with the FADS device, provides the FM with aggregate information about each team in a multitraffic office. The FMCRT by itself displays the number of operator positions in various states (out-of-service, unoccupied, loop accessed, idle). The FMCRT is only used in multitraffic office configurations. FMCRT does not support the open position protocol (OPP) format. Format OPP cannot be datafilled in field PROTOCOL if the device is FMCRT.

HADS
Hotel Administration Data System

The HADS is an input/output TTY located in the hotel billing information center (HOBIC). The HADS receives information concerning remote AQ devices. If the AQ at a hotel is out-of-service, the HADS can be used to send time and charge information accumulated while the AQ was out of service.

NOTIS
Network Operator Trouble Information System

This device is used to output trouble reports. When the operator keys KP TRBL + (trouble code), the information can be saved in a log or a trouble report appearing on a NOTIS device. The NOTIS device is input/output, and only one is allowed for each office.

QFADS
Queue Management System (QMS) Force Administration Data System

The QFADS device is used to print switch wide statistics. The QFADS report pegs data against the following criterion: traffic office, queue, service and call class. The data output by the QFADS report (except for traffic office data) is summed over all traffic offices.

QMFADS
QMS Mechanized Force Administration Data System

The QMFADS TOPS device selector is used to output the mechanized QMS FM reports. Only one QMFADS device can be datafilled in table TOPSDEV. Each report contains report and system general information, as well as information on QMS services and QMS teams.

QTADS
QMS Traffic Office Administration Data System

The QTADS is an input/output TTY used in all traffic offices served by QMS. Each operator team has a QTADS, that is used to monitor operator statistics and operator status and to assign operator characteristics. Study registers and

TOPSDEV (continued)

controlled traffic modes are examples of operator characteristics assignable at the QTADS. Broadcast messages can also be sent from the QTADS. A QTADS device can be datafilled against each TOPS traffic office for up to 30 QTADS devices.

RECORD
Record

The RECORD device is an output-only device that prints duplicate copies of the information sent to the AQ or VQ devices. The record device serves as a backup in case the AQ device at a hotel is out-of-service, and the VQ device at the TOPS office is out-of-service as well.

VQ
Voice Quote

The VQ performs the same functions as the AQ, but the VQ is located in the HOBIC. Call details and time and charge information are recorded for verbal quotation from the office to the hotel. If a hotels AQ is out-of-service, the VQ also records call data that would have been sent to that AQ so billing information for that hotel is not lost.

Queue Management System (QMS)

QMS is a software package that provides enhanced capabilities for the management of call queues and agent queues.

Datafill sequence and implications

The following tables must be datafilled before table TOPSDEV:

- CLLI
- TMINV

Table size

0 to 554 tuples

The size of table TOPSDEV is specified in field TRKGRSIZ in table CLLI for the fixed common language location identification (CLLI) code, TOPSDEV. To increase the size of the table, all members of table TOPSDEV are deleted, the value in field TRKGRSIZ (in table CLLI), for the fixed CLLI TOPSDEV is increased, a cold or reload restart is done, and the members of table TOPSDEV are readded.

Datafill

The following table lists datafill for table TOPSDEV.

Field descriptions (Sheet 1 of 6)

Field	Subfield or refinement	Entry	Explanation and action
DEVNO		1 to 9999	Device number. Enter the device number assigned to the Traffic Operator Position System (TOPS) device. This number can be assigned in random order with gaps. Entries outside the indicated range are invalid. The MAP dispaly shows a range of 0 to 9999; however, 0 is not valid.
DEVTYPE		see subfield	Device type. This field consists of subfield DEVSEL and refinements.
	DEVSEL	see below	Device selector. Note, values NILDEV and DUAQ appear on the MAP display but are not valid. For DUAQ, use table HOBICDEV. Following are valid values:
		AQ	AQ (Auto quote) and datafill refinements LANG, LC, HACR, and DATATYPE.
		DADS	DADS and datafill refinements LANG and DATATYPE.
		FMCRT	FMCRT and datafill refinement DATAPATH.
		HADS	HADS (Hotel Administration Data System) and datafill refinements LANG and DATATYPE.
		NOTIS	NOTIS (Network Operator Trouble Information System) and datafill refinements MEMVAR, CARDCODE, and PROTOCOL.
		QFADS	QFADS (QMS FADS) and datafill refinements LANG and DATATYPE.
		QMFADS	QMFADS (QMS Mechanized FADS) and datafill refinement DATATYPE.
		QTADS	QTADS (Queue Management System [QMS] TADS) and datafill refinements LANG, TRAFOFC and DATATYPE.

TOPSDEV (continued)

Field descriptions (Sheet 2 of 6)

Field	Subfield or refinement	Entry	Explanation and action
		RECORD	RECORD and datafill refinements LANG, LC and DATATYPE.
		VQ	VQ (Voice quote) and datafill refinements LANG, LC, and DATATYPE.
	LANG	E or F	Language. If the entry in subfield DEVSEL is AQ, QTADS, RECORD, or VQ, datafill this refinement. Enter E for English or F for French. This field is currently used only in the OOC environment. If the entry in subfield DEVSEL is AQ, RECORD, or VQ, go to refinement LC below. If the entry in subfield DEVSEL is QTADS, go to refinement TRAFOFC.
	LC	FF LF1 or LF17	Line control. If the entry in subfield DEVSEL is AQ, RECORD or VQ, datafill this refinement. Enter the line control function selected. FF-Form Feed: Form feed sent after each message. LF1-Line Feed 1: One line feed sent after each message. LF17-Line Feed 17: 17 line feeds sent after each message. If the entry in subfield DEVSEL is AQ, go to refinement HACR below. If the entry in subfield DEVSEL is RECORD or VQ, go to refinement MEMVAR.
	HACR	alphanumeric (3 characters)	Hotel acronym. If the entry in subfield DEVSEL is AQ, datafill this refinement. Enter the acronym for the hotel the AQ TTY is located. Go to refinement MEMVAR.
	TRAFOFC	0 to 30	Traffic office. If the entry in subfield DEVSEL is QTADS, datafill this refinement. Enter the traffic office the device belongs to. Go to refinement MEMVAR.

TOPSDEV (continued)

Field descriptions (Sheet 3 of 6)

Field	Subfield or refinement	Entry	Explanation and action
	DATAPATH	see below	Data type. If the entry in subfield DEVSEL is FMCRT, datafill this refinement. This field consists of subfield DATATYPE and refinements.
	DATATYPE	DMODEM, TMS, or EIULAN	Data type. If DEVSEL = FMCRT, datafill this field. This field indicates the path data is transmitted to the TOPS terminal. Enter the type of data transmission for TOPS device information. The values are as follows: • DMODEM - traditional trunk based digital modem for sending information to TTYs. This data type was used before this functionality and is not changed. Datafill refinements POSTYPE, PROTOCOL, MEMVAR, CARDCODE, and XMISSION. • TMS - For FMCRT, datafill refinements POSTYPE, PROTOCOL, TPCNO and TPCPSNO. • EIULAN - Ethernet interface unit local area network. Enter EIULAN for passing data over the IP based DMS LAN and datafill subfields LANG, DISPATTR, and PORT. The default is DMODEM.
	DATATYPE	see below	Data type. If the entry in subfield DEVSEL is AQ, DADS, HADS, QFADS, QMFADS, QTADS, RECORD, or VQ, datafill this refinement. This field consists of subfield DATATYPE and refinements.

TOPSDEV (continued)

Field descriptions (Sheet 4 of 6)

Field	Subfield or refinement	Entry	Explanation and action
	DATATYPE	DMODEM or EIULAN	Data type. If DEVSEL = AQ, DADS, HADS, QFADS, QMFADS, QTADS, RECORD, or VQ, datafill this refinement, This field indicates the path data is transmitted to the TOPS terminal. Enter the type of data transmission for TOPS device information. The values are as follows: • DMODEM - traditional trunk based digital modem for sending information to TTYs. This data type was used before this functionality and is not changed. Datafill refinements MEMVAR, CARDCODE, and PROTOCOL. • EIULAN - Ethernet interface unit local area network. Enter EIULAN for passing data over the IP based DMS LAN and datafill subfield PORT. The default is DMODEM.
	LANG	E, F, S	Language. This field is new when DATATYPE = EIULAN. The values are E (English), F (French), and S (Spanish).
	DISPATTR	BOLD, BLINK, REVERSE, or UNDERLINE	Display pattern. If subfield DEVSEL = FMCRT and subfield DATATYPE = EIULAN, datafill this field. Value REVERSE means video.
	PORT	8000 to 8095	Data port. Enter the IP address on the DMS LAN of the telnet server port for this TOPS device. The entry must be unique within the CM.
	POSTYPE	BP or MP	Position type. Enter the type of position at this position number. BP is the dedicated directory assistance/intercept terminal. MP is the multi-purpose position terminal (TOPS MP).

TOPSDEV (continued)

Field descriptions (Sheet 5 of 6)

Field	Subfield or refinement	Entry	Explanation and action
	PROTOCOL	ASCII	Protocol. This field defines the format of the data messages sent between DMS switch and the TOPS terminal. ASCII is the ASCII based protocol. Entries outside the indicated range are invalid. If the entry in refinement DATAPATH is DMODEM, go to refinement MEMVAR. If the entry in refinement DATAPATH is TMS, datafill refinements TPCNO and TPCPOSNO below.
	TPCNO	0 to 254	TOPS position controller number. If the entry in subfield DEVSEL is FMCRT and the entry in refinement DATAPATH is TMS, datafill this refinement. Enter the number of the TOPS position controller (TPC).
	TPCPOSNO	0 to 3	High speed line interface card number. If the entry in subfield DEVSEL is FMCRT and the entry in refinement DATAPATH is TMS, datafill this refinement. Enter the number of the high speed line interface (HSLI) card the TOPS multipurpose position (MP) is connected to. Entries outside the indicated range are invalid. Datafill is complete for refinement TMS in device FMCRT.

TOPSDEV (continued)

Field descriptions (Sheet 6 of 6)

Field	Subfield or refinement	Entry	Explanation and action
	MEMVAR	see subfield	Variable data for members. This field consists of subfield PMTYPE and its refinements.
	PMTYPE	DCM, DTC, DTCI, LTC, TMS, or TM8	Peripheral module type. Enter the peripheral module (PM) the trunk is assigned to, which are defined as follows: • DCM (digital carrier module) and datafill refinements DCMNO, DCMCKTNO, and DCMCKTTS • DTC (digital trunk controller) and datafill refinements DTCNO, DTCCKTNO, and DTCCKTTS • DTCI (ISDN digital trunk controller) and datafill refinements DTCNO, DTCCKTNO, and DTCCKTTS • LTC (line trunk controller) and datafill refinements LTCNO, LTCCKTNO, and LTCCKTTS • TMS (TOPS message switch) and datafill refinements TMSNO, TMSCKTNO, and TMSCKTTS • TM8 (Trunk module type 8), if the trunk is assigned to a trunk module (TM), enter TM8 and datafill refinements TMNO, TMCKTNO, and TMCKTTS Any entry outside the range indicated for this field is invalid as all other PM cannot have TOPS devices assigned to them.

PMTYPE = DCM

If the entry in subfield PMTYPE is DCM, datafill refinements DCMNO, DCMCKTNO, and DCMCKTTS as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	DCMNO	0 to 511	Digital carrier module number. Enter the DCM number assigned to the trunk.
	DCMCKTNO	0 to 4	Digital carrier module circuit number. Enter the DCM voice circuit card number assigned to the trunk.
	DCMCKTTS	1 to 24	Digital carrier module circuit time slot. Enter the DCM circuit card North American first level multiplex digital signaling (DS-1) time slot number assigned to the trunk.

PMTYPE = DTC or DTCI

If the entry in subfield PMTYPE is DTC or DTCI, datafill refinements DTCNO, DTCCKTNO, and DTCCKTTS as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	DTCNO	0 to 511	Digital trunk controller number. Enter the DTC or DTCI number assigned to the trunk.
	DTCCKTNO	0 to 19	Digital trunk controller circuit number. Enter the DTC or DTCI voice circuit card number the trunk number is assigned.
	DTCCKTTS	1 to 24	Digital trunk controller circuit time slot. Enter the DTC or DTCI circuit card DS-1 signaling time slot number assigned to the trunk.

TOPSDEV (continued)

PMTYPE = LTC

If the entry in subfield PMTYPE is LTC , datafill refinements LTCNO, LTCCKTNO, and LTCCKTTS as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	LTCNO	0 to 511	Line trunk controller number. Enter the LTC number assigned to the trunk.
	LTCCKTNO	0 to 19	Line trunk controller circuit number. Enter the LTC voice circuit card number assigned to the trunk.
	LTCCKTTS	1 to 24	Peripheral module circuit time slot. Enter the LTC circuit card DS-1 signaling time slot number signaling time slot number assigned to the trunk.

PMTYPE = TMS

If the entry in subfield PMTYPE is TMS, datafill refinements TMSNO, TMSCKTNO, and TMSCKTTS as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	TMSNO	0 to 255	TOPS message switch. Enter the TMS number assigned to the trunk.
	TMSCKTNO	0 to 19	TOPS message switch voice circuit. Enter the TMS voice circuit card number assigned to the trunk.
	TMSCKTTS	1 to 31	TOPS message switch time slot. Enter timeslot 1 to 24 for carrier type DS-1. Enter timeslot 1 to 15 and 17 to 31 for pulse code modulation (PCM30) carrier type.

PMTYPE = TM8

If the entry in subfield PMTYPE is TM8, datafill refinements TMNO and TMCKTNO as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	TMNO	0 to 2047	Trunk module number. Enter the number assigned to the TM that the trunk is mounted on.
	TMCKTNO	0 to 29 (even only)	Trunk module circuit number. Enter the TM circuit number assigned to the trunk.

TOPSDEV (continued)

PMTYPE = all entries

For all entries in subfield PMTYPE, continue datafill with field CARDCODE as described below.

Field descriptions for conditional datafill (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	CARDCODE	2X72AA or DS1SIG	Card code. Enter the card code for the TOPS position circuit. If the entry in subfield PMTYPE is TM8, enter 2X72AA (analog). For all entries in subfield PMTYPE except TM8, enter DS1SIG (digital).

Field descriptions for conditional datafill (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	PROTOCOL	BELL108 BELL202 BELL212H or BELL212L	Protocol. For all entries in field DEVSEL except FMCRT, datafill this refinement. Enter the communication protocol used for transmitting (tx) and receiving (rx) data to and from the TOPS device. The FMCRT can be assigned to a TPC or NT4X71 controller. Enter BELL202 in an office with only TOPS MP equipment. Datafill for an FMCRT with field CNTRLR set to TPC. Enter BELL108 in a TOPS single purpose toll and assistance terminal (IV) office. Field CNTRLR is set to NT4X71. For a NOTIS or HADS device, enter BELL108 for 300 baud devices. For VQ, RECORD, and AQ devices, enter BELL108 for 300 baud devices. Enter BELL202 for either 300 or 1200 baud devices. For QTADS and QFADS devices, enter BELL108 or BELL202 for either 300 or 1200 baud devices. For QMFADS device, enter BELL202 for either 300 or 1200 baud devices. ***Note 1:*** The values BELL212L and BELL212H are reserved for future use. ***Note 2:*** All devices, except FMCRT, can datafill BELL202.
	XMISSION	BELL108 BELL202 BELL212H or BELL212L	Protocol. If the entry in subfield DEVSEL is FMCRT, datafill this refinement. Enter the communication protocol used for transmitting (tx) and receiving (rx) data to and from the TOPS device.

Datafill example

The following example shows sample datafill for table TOPSDEV.

TOPSDEV (continued)

MAP display example for table TOPSDEV

```
DEVNO                                                DEVTYPE
_____________________________________________________________

 1     AQ E LF17 VER  DMODEM   TM8  0  0   2X72AC  BELL108
 5         VQ E  LF1  DMODEM   TM8  2  0   2X72AC  BELL108
21                                QFADS E  EIULAN   8000
```

The above example indicates QMFADS uses a DMODEM and QFADS uses the DMS LAN.

The TOPS device port number is used with the DMS LAN host address in table IPNETWRK, shown below.

MAP display example for table IPNETWRK

```
KEYREF  CMIPADDR      SUBNET  OPTION     PARMAREA
-------------------------------------------------------
0       47 245 8 11    18     EIU 0 $    SCRNFLAG N $
```

With the above datafill, the telnet client software can connect to address 47.245.8.11 port 8000 to gain access to QFADS information.

Error messages for table TOPSDEV

The following error messages apply to table TOPSDEV.

Error messages for table TOPSDEV

Error message	Explanation and action
TELNET PORT NUMBER IN USE BY ANOTHER DEVICE	Telnet server port numbers must be unique for each device. This error message is displayed if this condition is not met.

Table history

TOPS13

The changes are as follows:

- When DEVSEL = FMCRT and DATATYPE = EIULAN, subfields POSTYPE and PROTOCOL are removed and fields LANG and

DISPATTR are added. These changes are made by feature 59006812 in functionality FMCRT Elimination, OSB00001.

- Value SP is removed from field POSTYPE by feature 59012553 in functionality Code Removal of TOPS IV, OSB00001.

TOPS12

For field DEVSEL, values FADS, FADSHADS, MFADS, SADS, SADSHADS, SPDEV, and TADS are deleted by feature 59006864 in functionality MD Code Removal and ReEngineering, OSB00001.

TOPS11

Field DATATYPE is added to devices AQ, DADS, FMCRT, HADS, QFADS, QMFADS, QTADS, RECORD, and VQ by feature AF7827 in functionality Position/Device Evolution IP, OSB00001.

CSP02

Explanation of QTADS was changed to include all traffic offices served by QMS, not just multi-traffic offices.

TOPSDISP

Table name

Expanded Operator Display Table

Functional description

In addition to standard TOPS display, table TOPSDISP allows the operating company to assign special instructional displays based on the incoming TOPS trunk group. Field DISPLAY of the trunk group data (table TRKGRP) is used to index table TOPSDISP to get the right display. The display consists of a maximum of 6 characters and follows the calling number (CLG NUMBER) display (second row positions 24 to 29).

Datafill sequence and implications

There is no requirement to datafill other tables prior to table TOPSDISP.

Table size

300 words

Datafill

The following table lists datafill for table TOPSDISP.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
DISPNO		see subfield	Display number. This field consists of subfield DISP_NO.
	DISP_NO	1 to 254	Display number. Enter the instructional display number indexed by the Traffic Operator Position System (TOPS) trunk group data (field DISPLAY in table TRKGRP). 0 (zero) is not a valid entry.
INSTRUCT		alphanumeric (up to 6 characters)	Instructional data. Enter the instructional data that appears on the operator screen following the calling number (CLG NUMBER) display at second row position 24.

Datafill example

The following example shows sample datafill for table TOPSDISP.

MAP display example for table TOPSDISP

```
DISPNO   INSTRUCT
_____________________________________________________________

     1     XXXXXX
```

Table history

TOPS11

The range of field DISPNO is increased from {0 to 31} to {0 to 254} by feature AF7833 in functionality Table TOPSDISP Expansion, OSB00001.

BCS36

Table size was added. Field DISPNO was added.

TOPSDP

Table name

TOPS Dial Plan

Functional description

Table TOPSDP defines the TOPS dial plan by SPID and, or NPA-NXX. This table is for use by the TOPS translations and routing system.

Datafill sequence and implications

Table XLAGRP must be datafilled before table TOPSDP.

Table size

0 to 8K tuples

Datafill

The following table lists datafill for table TOPSDP.

Field descriptions (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
XLAGRP		name from table XLAGRP	Translations group. This field is the key field. Enter a translations group name defined in table XLAGRP. This value is an index into table XLAGRP.
STS		value from table HNPACONT	Serving translations scheme. Enter the home serving numbering plan area (SNPA) code with an entry in table HNPACONT . Subsequent translations uses this value; whereas, initial translations uses the SNPA field in table TRKGRP. Field STS is an index into table HAPACONT.
OPERPRTN		name from table STDPRTCT or NPRT	Operator pretranslator name. Enter the operator pretranslator subtable name defined in table STDPRTCT for pretranslations from the operator position. This value is an index into table STDPRTCT. Enter NPRT for no pretranslation.

TOPSDP (continued)

Field descriptions (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
ORIGSCRN		name from table CLSVSCRC or NSCR	Originating number screening class. Enter the class of service screening subtable name defined in table CLSVSCRC for screening based on the location of the originator. This value is an index into table CLSVSCRC. Enter NSCR (no screening) if this type of screening does not apply or for no screening.
OPERSCRN		name from table CLSVSCRC or NSCR	Operator screening class. Enter the class of service screening subtable name defined in table CLSVSCRC. This value serves for call screening at an operator position or service node. This value is an index into table CLSVSCRC. Enter NSCR (no screening) if this type of screening does not apply or for no screening.
MCCSPRTN		name from table STDPRTCT or NPRT	Mechanized calling card service (MCCS) pretranslator name. Enter the pretranslator subtable name defined in table STDPRTCT for pretranslations of MCCS sequence calls. This value is an index into table STDPRTCT. Enter NPRT for no pretranslation.

TOPSDP (continued)

Field descriptions (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
MCCSSCRN		name from table CLSVSCRC or NSCR	MCCS screening class. Enter the class of service screening subtable name defined in table CLSVSCRC for call screening of MCCS sequence calls. This value is an index into table CLSVSCRC. Enter NSCR (no screening) if this type of screening does not apply or for no screening.
LCANAME		name from table LCASCRCN or NLCA	Local calling area screening name. Enter the local calling area screening subtable name defined in table LCASCRCN for translations. This name determines if the call is local. This value is an index into table LCASCRCN. This field applies when field XLAGRP associates to a calling AO SPID. Then, field LCANAME in table TRKGRP does not apply. This association occurs in table TOPSTOPT (fields XLASCHEM and TRKSPID for an SPID on a trunk). And, or the association occurs in table XLASPID (for an SPID group). Enter NSCR (no screening) if this type of screening does not apply or for no screening.

Datafill example

The following example shows sample datafill for table TOPSDP.

MAP display example for table TOPSDP

```
XLAGRP          STS    OPERPRTN    ORIGSCRN   OPERSCRN   MCCSPRTN   MCCSSCRN
   LCANAME
-------------------------------------------------------------------------
TRK1ILEC        ILEC   PRTNM1      SCR1       OPR1       PRTNM1     MCCS1
   LCA1
TRK1CLEC919720  ILEC   PRTNM2      SCR2       OPR2       PRTNM2     MCCS2
   LCA2
```

Table history

TOPS09

Initial release by feature AF7159 in functionality Translations and Routing, UNBN0003

TOPSENTC

Table name

TOPS Entry Code Table

Functional description

Table TOPSENTC is required in all toll or local/toll switching units with Traffic Operator Position System (TOPS) feature of other than Bellcore format (Northern Telecom automatic message accounting [AMA] format).

Table TOPSENTC lists the entry code and if charge is applicable, for each of the charge classes associated with incoming TOPS trunk groups and listed in table TOPSBC.

Datafill sequence and implications

There is no requirement to datafill other tables prior to table TOPSENTC.

Datafill

The following table lists datafill for table TOPSENTC.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
CHGCLASS		CAM0, CSD0, DAT0, LAM0, NONE, RCFW, SPCL, TOPS, TWX0, or WAT0	Charge class. Enter one of the charge classes.
ECANDCHG		see subfields	Entry code and charge. This field consists of subfields ENTCODE and APPLYCHG.
	ENTCODE	0 to 99	Entry code. Enter the entry code assigned to the charge class.
	APPLYCHG	Y or N	Apply charge. Enter Y (yes) if a charge is to be applied for call. Otherwise, enter N (no).

Datafill example

The following example shows sample datafill for table TOPSENTC.

TOPSENTC (end)

Entry code 00 is assigned to charge classes CAM0 and has applied charge.

MAP display example for table TOPSENTC

```
CHGCLASS ECANDCHG
_____________________________________________________________

    CAM0     00 Y
```

TOPSFTR

ATTENTION
This table applies to new or modified content for SN09 (DMS) that is valid through the current release.

TOPS features

This table enables TOPS features.

Datafill sequence and meaning

There is no requirement to enter datafill into other tables.

Table size

47 tuples. Tuples cannot be added nor deleted.

Datafill

The table that follows lists datafill for table TOPSFTR.

Datafill related to table TOPSFTR

Field	Entry	Explanation and action
FTRNAME	AUTHORIZATION_CODE_BILLING AUTOMATED_ROOM_AND_AUTH_NUM_CO LL BELLCORE_NUMBER_PORTABILITY CALL_REST_FOR_WSALE CALLING_CARD_DENIAL_REASONS CANADIAN_EQUAL_ACCESS CELLULAR_AUTOMATIC_DA_CALL_COMP COMMERCIAL_CREDIT_CARD_SUPPORT COUNTRY_DIRECT DISALLOWED_CARD_ISSUER ESTIMATE_OF_CHARGES EXTERNAL_RATING FLEX_ANI GLOBAL_COMPETETIVE_ACCESS GOSS7_ANSI GOSS7_ETSI, IN_OPERATOR_BACKUP INTRA_LATA_PIC_VIA_OLNS ISUP_FOR_TOPS MESSAGE_DELIVERY_SERVICE MUSIC_AND_ANN_IN_QUEUE NUMBER_PORTABILITY OLNS_FOREIGN_LANGUAGE OLNS_NO_AUTOMATION ORIGINATING_LINE_NUMBER_SCREEN OSS7_OSNC OSSAIN_INITIAL_RELEASE OSSAIN_RELEASE_07 OSSAIN_RELEASE_09 OSSAIN_RELEASE_10 OSSAIN_RELEASE_11 OSSAIN_RELEASE_12 OSSAIN_RELEASE_22 PRE_PAID_COIN QMS_BILLING_SATISFIED QMS_CASE RLT_FOR_GSM RLT_FOR_IS41 RLT_FOR_ISUP RLT2_FOR_ISUP SCREEN_FOR_BILLING_AGREEMENT SECONDS_BASED_ANNOUNCEMENTS TOPS_ON_OFF_SWITCH UNBUNDLING_BRANDING_VIA_SPID UNBUNDLING_REFINEMENT_FOR_SPID UNBUNDLING_SPID_IN_MIS_STREAM UNBUNDLING_TRANSLATIONS_VIA_SPID	Feature name. This field is fixed, read only, it cannot be changed. This field indicates the feature name to be enabled or disabled in field FTRENABL. In order for a feature to be completely enabled, all of the following must be met. • SOC option OSB00101 must be on to enable the TOPS system. Refer to functionality TOPS On/Off Switch, OSB00101. • The SOC governing the feature must be on. In table TOPSFTR, the tuple for the feature must be set to Y.
FTRENABL	Y or N	Feature enable. Activates or deactivates an optional TOPS feature.The tuple default value is N.

Datafill example

The figure that follows shows sample datafill for table TOPSFTR.

MAP display example for table TOPSFTR

```
FTRNAME                                                  FTRENABL
---------------------------------------------------------------
AUTHORIZATION_CODE_BILLING                                N
AUTOMATED_ROOM_AND_AUTH_NUM_COLL                          N
BELLCORE_NUMBER_PORTABILITY                               Y
CALL_REST_FOR_WSALE                                       Y
CALLING_CARD_DENIAL_REASONS                               Y
CANADIAN_EQUAL_ACCESS                                     Y
CELLULAR_AUTOMATIC_DA_CALL_COMP                           N
COMMERCIAL_CREDIT_CARD_SUPPORT                            N
COUNTRY_DIRECT                                            N
DISALLOWED_CARD_ISSUER                                    N
ESTIMATE_OF_CHARGES                                       N
EXTERNAL_RATING                                           Y
FLEX_ANI                                                  N
GLOBAL_COMPETETIVE_ACCESS                                 N
GOSS7_ANSI                                                N
GOSS7_ETSI,                                               Y
IN_OPERATOR_BACKUP                                        Y
INTRA_LATA_PIC_VIA_OLNS                                   N
ISUP_FOR_TOPS                                             Y
MESSAGE_DELIVERY_SERVICE                                  Y
MUSIC_AND_ANN_IN_QUEUE                                    Y
NUMBER_PORTABILITY                                        Y
OLNS_FOREIGN_LANGUAGE                                     Y
OLNS_NO_AUTOMATION                                        N
ORIGINATING_LINE_NUMBER_SCREEN                            N
OSS7_OSNC                                                 Y
OSSAIN_INITIAL_RELEASE                                    N
OSSAIN_RELEASE_07                                         N
OSSAIN_RELEASE_09                                         Y
OSSAIN_RELEASE_10                                         Y
OSSAIN_RELEASE_11                                         Y
OSSAIN_RELEASE_12                                         N
OSSAIN_RELEASE_22                                         N
PRE_PAID_COIN                                             N
QMS_BILLING_SATISFIED                                     N
QMS_CASE                                                  N
RLT_FOR_GSM                                               Y
RLT_FOR_IS41                                              Y
RLT_FOR_ISUP                                              Y
RLT2_FOR_ISUP                                             N
SCREEN_FOR_BILLING_AGREEMENT                              Y
SECONDS_BASED_ANNOUNCEMENTS                               N
TOPS_ON_OFF_SWITCH                                        N
UNBUNDLING_BRANDING_VIA_SPID                              Y
UNBUNDLING_REFINEMENT_FOR_SPID                            Y
UNBUNDLING_SPID_IN_MIS_STREAM
UNBUNDLING_TRANSLATIONS_VIA_SPID                          N
```

Error messages

Warning messages are provided in the SOC procedures to caution the user of conflicting interactions. For example, if a given SOC option is changed from IDLE to ON, then for each SOC feature controlled by that SOC option, a message is displayed listing the state as specified in TOPSFTR. This enables the user to be aware of what features are enabled when the given SOC option is turned ON. Similarly, if a given SOC option is changed from ON to IDLE, a message is displayed listing all SOC features that would no longer be active.

Warning messages are also displayed if there is a conflict in the enable/disable status of a feature in TOPSFTR and the state of the SOC option controlling that feature. For example, when the user attempts to enable a SOC feature in TOPSFTR by setting FTRENABL to Y, a warning message is displayed if the SOC option controlling that feature is IDLE.

Table history

SN09 (DMS)

The addition of OSSAIN_RELEASE _22 to the TPOPSFTR table under feature A00009012.

SN07 (DMS)

Tuple RLT_FOR_GSM which controls GSM ADACC, is added to field FTRNAME under feature A00003687.

TOPS15

Table was created by feature 59017625 in functionality TOPS and Succession Interworking, OSB00101.

TOPSHDLC

Table name

TOPS Data Link Controller Table

Functional description

Table TOPSHDLC is a general purpose datalink table designed originally for operator centralization but with consideration for future application.

Table TOPSHDLC is required in host and remote offices with the operator centralization (OC) features BV0775 (Operator Centralization—Host [ETOF]) and BV0776 (Operator Centralization—Remote [ETOF]).

Table TOPSHDLC is similar to table TRKMEM and must be filled for host and remote offices.

Table TOPSHDLC lists the digital facilities provided for the interchange of data between the host and remote offices.

Note: Each data link must be assigned to a unique digital carrier module (DCM).

Other tables used by features BV0775 and BV0776 are:

- OCGRP
- OCOFC
- VLMEM

Datafill sequence and implications

Table CLLI must be datafilled before table TOPSHDLC.

Table size

0 to 64 tuples

Datafill

The following table lists datafill for table TOPSHDLC.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
DLGRP		alphanumeric (1 to 16 characters)	Data link group. Enter the data link group common language location identifier (CLLI) from table CLLI associated with a specific office. Each data link must be assigned to a unique digital carrier module (DCM).
EXTRKNM		0 to 9999	External trunk number. Enter the external number assigned to the trunk. Up to four external trunk numbers can be entered.
DLCMVAR		see subfield	Variable data for datalink members. This field consists of subfield PMTYPE and its refinements.
	PMTYPE	DCM or DTC	Peripheral module type. Enter DCM for a digital carrier module and datafill refinements DCMNO, DCMCKTNO, and DCMCKTTS. Or, enter DTC, for a digital trunk controller and datafill refinements DTCNO, DTCCKTNO, and DTCCKTTS. Any entry outside the range indicated for this field is invalid.

PMTYPE = DCM

If the entry in subfield PMTYPE is DCM, datafill refinements DCMNO, DCMCKTNO and DCMCKTTS as described below.

Field descriptions for conditional datafill (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
DCMNO		0 to 511	Digital carrier module number. Enter the DCM number assigned to the trunk.

TOPSHDLC (end)

Field descriptions for conditional datafill (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
DCMCKTNO		0	Digital carrier module circuit number. Enter 0 (zero), which corresponds to the card assigned to the OC data link. Any entry outside the range indicated for this field is invalid.
DCMCKTTS		1 to 24	Digital carrier module circuit time slot. Enter 1 for the DS-1 signaling time slot number to which the datalink is assigned.

PMTYPE = DTC

If the entry in subfield PMTYPE is DTC, datafill refinements DTCNO, DTCCKTNO and DTCCKTTS as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
DTCNO		0 to 511	Digital trunk controller number. Enter the DTC number assigned to the trunk.
DTCCKTNO		0 to 19	Digital trunk controller circuit number. Enter the DTC voice circuit board number assigned to the trunk.
DTCCKTTS		1 to 24	Digital trunk controller circuit time slot. Enter the DTC circuit board DS-1 signaling time slot number assigned to the trunk.

Datafill example

The following example shows sample datafill for table TOPSHDLC.

MAP display example for table TOPSHDLC

```
            DLGRP
              EXTRKNUM                PMTYPE
_____________________________________________________

            ITSE
                  291          DCM  25 0  1
```

TOPSLANG

Table name

TOPS Language Table

Functional description

Table TOPSLANG enables an operator to mark a call with language selections for use with the Traffic Operator Position System (TOPS) Queue Management System (QMS).

Table TOPSLANG is used to support the Automated Alternate Billing Service (AABS) dual language function. Up to 15 of the 100 languages supported by table TOPSLANG can be designated for AABS use. For a particular call, any two of the 15 languages (depending on the languages supported by a particular VSN) can be used to support bilingual AABS.

Note: Fields LANGDIGT, LANGNAME, and LANGNUM in table TOPSLANG are specific to each telephone operating company and must be datafilled in accordance with the language specification in the interconnecting VSN.

Feature AN0343 (TOPS Enhancements for MDS) adds a cross-check to table control to prevent any autolang status change to `n', or deletion of any language that is datafilled in tables MDSLANG or MDSACTN.

Datafill sequence and implications

The following tables must be datafilled before table TOPSLANG.

- Not applicable

The following tables must be datafilled after table TOPSLANG.

- MDSOPT
- MDSLANG
- MDSACTN
- LANGTOQ

Tuples cannot be deleted from this table if references to the LANGNAME field exist in tables MDSOPT, MDSLANG, MDSACTN, or LANGTOQ..

Note: Table MDSACTN maps the fields OLDLANG and NEWLANG to the LANGNAME field in table TOPSLANG.

TOPSLANG (continued)

Table size

0 to 100 tuples

Datafill

The following table lists datafill for table TOPSLANG.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
LANGDIGT		0 to 99	Language digit. This field is the key to the table and is used to uniquely identify the language to the system. In the Traffic Operator Position System (TOPS) 4 environment, it is also the digit or digits that are keyed in by the operator to represent a language.
LANGNAME		alphanumeric (up to 3 characters)	Language name. The entry in this field represents the language being specified. It is tied with the corresponding language digits datafilled in field LANGDIGT.
AUTOLANG		see subfield	Automated languages. This field consists of subfield AUTOLANG.
	AUTOLANG	Y or N	Automated languages. Enter Y (yes) to activate the language selection function used between DMS and a voice service node (VSN) and datafill refinement LANGNUM. Enter N (no) to deactivate the language selection function. Audiogram Delivery Services-Offer of Service Prompt (ENSV0013) adds a check to this table to ensure that no tuple may be deleted nor can the AUTOLANG field be set to N without first deleting the tuples from table MDSOPT.
	LANGNUM	0 to 14	Language number. If the entry in subfield AUTOLANG is Y, datafill this refinement. This field contains the unique numeric value that represents a language. It is sent to and from a VSN to represent the language used.

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
ISUPLANG		Y or N	Integrated services digital network user part (ISUP language selector. This field indicates if a GOSS7 call can be marked by an operator with this language selection for use by QMS. Enter N if the call cannot be marked. Or, enter Y if the call can be marked and datafill refinement OPERLANG. This field is only valid in a global environment. In the North American environment, this field is set to N by default. If this field should be set to Y, it will have no effect.
	LANGUAGE	French, English, German, Russian, or Spanish	Operator language. Datafill this field with one value if field ISUPLANG = Y. This field identifies the language of the requested QMS operator. This value can only be associated with one value in field LANGNAME.

Datafill example

The following example shows sample datafill for table TOPSLANG.

MAP display example for table TOPSLANG

```
LANGDIGT   LANGNAME   AUTOLANG    ISUPLANG
_____________________________________________

2          ENG         Y  6       Y ENGLISH
```

TOPSLANG (continued)

Error messages for table TOPSLANG

The following error messages apply to table TOPSLANG.

Error messages for table TOPSLANG

Error message	Explanation and action
LANGUAGE MUST FIRST BE DELETED FROM TABLE MDSLANG TUPLE/TUPLES.	If an attempt is made to delete a language that appears in tables MDSLANG, MDSACTN or MDSOPT, one or more of these messages is displayed. Audiogram Delivery Services-Offer of Service Prompt (ENSV0013) adds a message for table MDSOPT.
LANGUAGE MUST FIRST BE DELETED FROM TABLE MDSACTN TUPLE/TUPLES.	
LANGUAGE MUST FIRST BE DELETED FROM TABLE MDSOPT TUPLE/TUPLES.	
LANGUAGE MUST REMAIN AS AN AUTOLANG OR FIRST BE DELETED FROM TABLE MDSLANG TUPLE/TUPLES.	If an attempt is made to change the AUTOLANG field to N for a language that appears in tables MDSLANG, MDSACTN or MDSOPT, one or more of these messages is displayed. Audiogram Delivery Services-Offer of Service Prompt (ENSV0013) adds a message for table MDSOPT.
LANGUAGE MUST REMAIN AS AN AUTOLANG OR FIRST BE DELETED FROM TABLE MDSACTN TUPLE/TUPLES.	
LANGUAGE MUST REMAIN AS AN AUTOLANG OR FIRST BE DELETED FROM TABLE MDSOPT TUPLE/TUPLES.	
LANGUAGE MUST FIRST BE DELETED FROM TABLE OLNSLANG TUPLE/TUPLES.	A tuple referenced by table OLNSLANG cannot be deleted without first deleting the references in table OLNSLANG. If an attempt is made that does not meet this requirement, the entry is blocked.

Table history

TOPS11

Error message added about table OLNSLANG by feature AF7728 in functionality OLNS Foreign Language, ENSV0021.

TOPS08.1

Field ISUPLANG and refinement LANGUAGE added by feature AF6815 in functionality GOSS7 Signaling, GOS00004.

NA005

Feature AN1542 in the functionality Audiogram Delivery Services-Offer of Service Prompt (ENSV0013) adds or changes the following:

- Table MDSOPT is added as a new table that is dependent upon table TOPSLANG datafill.
- A check is added to this table to ensure that no tuple may be deleted nor can the AUTOLANG field be set to N without first deleting the tuples from table MDSOPT.
- If an attempt is made to delete a language that appears in table MDSOPT, an error message is displayed. Reference “Error messages for table TOPSLANG".
- If an attempt is made to change the AUTOLANG field to N for a language that appears in table MDSOPT, an error message is displayed. Reference “Error messages for table TOPSLANG".
- Tables MDSOPT and MDSLANG must be datafilled after table TOPSLANG. This change is a correction and is not specific to TOPS05.

BCS36

Added functionality of feature AN0343 to section “Functional description of table TOPSLANG", and revised datafill sequence

TOPSMCDB

Table name

TOPS Message Center Database

Functional description

This table provides datafill for a TOPS SMS SS7-based message center simulator. An operator position or automated node can send SMS messages using either IS-41 TCAP or GSM TCAP. When the simulator receives the SMS, it locates the data stored against the SMS destination number to determine the disposition of the SMS. The simulator can successfully acknowledge the SMS, send back a failure message, or ignore the SMS so that the TOPS SMS time-out code executes.

Datafill sequence and meaning

There is no requirement to enter datafill into other tables before table TOPSMCDB.

Table size

Minimum 0, maximum 64 tuples (2 words per tuple)

Datafill

The table that follows lists datafill for table TOPSMCDB.

Field descriptions

Field	Subfield	Entry	Explanation and action
DESTDIGS		1-18 digits	Digilator field containing the destination number
RESPAREA	RESULT	SUCCESS, REJECT, or ERROR	Tells disposition of SMS to this destination number. Different refinements appear depending on the value of RESULT.
	PROBTYPE (Subfield of RESPAREA when RESULT set to REJECT)	GENPROB, INVPROB, RESPROB, ERRPROB, TRANSPROB	This field currently provides IS-41 values. The field can be used for GSM testing by picking IS-41 problem types and code whose integer values are the same as the desired GSM problem types and codes.

TOPSMCDB (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
RESPAREA (continued)	PROBCODE (Subfield of RESPAREA when RESULT set to REJECT)	UNRECCOMP	These entries are possible when PROBTYPE is set to GENPROB.
		INCORRCOMPPOR	
		BADCOMPSTRUCT	
		INCORRCOMPCOD	
		DUPINVOKEID	These entries are possible when PROBTYPE is set to INVPROB.
		UNRECOPERATION	
		INCORRPARM	
		UNRECCORRID	
		RESLIMIT	
		INITRELEASE	
		LINKEDRESPUN	
		UNEXPCORRID	
		UNRECCORRID	These entries are possible when PROBTYPE is set to RESPROB.
		UNEXPRESULT	
		INCORRPARM	
		UNRECCORRID	These entries are possible when PROBTYPE is sey to ERRPROB.
		UNEXPRETURN	
		UNRECERROR	
		UNEXPERROR	
		INCORRPARM	
		UNRECPACKAGE	These entries are possible when PROBTYPE is set to TRANSPROB.
		INCORRTRANS	
		BADTRANS	
		UNRECTRANS	
		PERMRELEASE	
		RESUNAVAIL	

TOPSMCDB (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
RESPAREA (continued)	IS41CODE (Subfield of RESPAREA when RESULT set to ERROR)	ADDRVACANT ADDRXLAFL NETRESSHORT NETFAILURE INVTELSVID OTHERNETPROB NOPAGERESP DESTBUSY NOACK DESTRESSHORT DELPOSTPONED DESTOUTSERV DESTNOLONGAT OTHERTERMPROB RADIORESSHORT RADIOINCOMPAT OTHERRADIOPROB ENCODINGPROB SMSORIGDENIED SMSTERMDENIED SUPPSVCNOTSUP SMSNOTSUPPORT MISSEXPPARM MISSMANDPARM UNRECPARMVAL UNEXPPARMVAL USERDATASIZE OTHERGENPROB	Contains cause code to send for IS-41 message center negative acknowledgment. Several dozen cause codes are defined in IS-41.

TOPSMCDB (end)

Field descriptions

Field	Subfield	Entry	Explanation and action
RESPAREA (continued)	GSMCODE (Subfield of RESPAREA when RESULT set to ERROR)	0 to 255	Contains error code to send for GSM message center negative acknowledgment. Many error codes are defined in GSM 29.002. The byte value datafilled in this field is returned as the error code in the GSM ERROR message.
DELAYSEC		0 to 255	Delay in seconds before sending response. Helps simulate real-world response time.

Datafill example

The figure that follows shows sample datafill for table TOPSMCDB.

MAP display example for table TOPSMCDB

```
TABLE: TOPSMCDB
DESTDIGS RESPAREA DELAYSEC
-------------------------------------------------
6199421465 ERROR SMSNOTSUPPORT 15       2
9194321234 REJECT GENPROB BADCOMPSTRUCT 2
9199910000 SUCCESS 2
```

Table history

SN07 (DMS)

Table TOPSMCDB was created for SN07 (DMS) under feature A00003687. Documentation updated at SN08 (DMS).

TOPSOIC

Table name

TOPS Office Identification Code Table

Functional description

Tables TOPSOIC and OICBC allow the operating company to assign office identification codes (OIC) based on call origination types, and to verify the calling XXX (formerly NXX) codes as valid billing codes for automatic message accounting (AMA) purposes. The tables also allow the operating company to specify class charges for calls.

Two tables are used:

- Table TOPSOIC specifies valid office identification codes received from an end office over a Traffic Operator Position System (TOPS) trunk group. The call origination type is specified using the trunk group common language location identifier (CLLI) and the OIC.
- Table OICBC is indexed using the trunk group CLLI, the office identification code, and the calling XXX code. This table verifies the calling XXX code as a valid billing code for AMA purposes.

Table TOPSOIC specifies OICs that are received from an end office over a TOPS trunk group. This table specifies the call origination type based on the OIC key that is used to index table TOPSOIC. The OIC key is made up of the CLLI and the OIC.

Datafill sequence and implications

The following tables must be datafilled before table TOPSOIC.

- CLLI
- TOPS

Table size

0 to 2048 tuples

Datafill

T he following table lists datafill for table TOPSOIC.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
OICKEY		see subfields	Office identification code key. This field, which consists of subfields CLLI and OIC, is the index into table TOPSOIC.
	CLLI	alphanumeric (1 to 16 characters)	Common language location identifier. Enter the CLLI for the directory assistance (DA) charging trunk group. The entry must be datafilled in table CLLI.
	OIC	numeric (0 to 99)	Office identification code. Enter a numeric value to specify the OIC.
CO		alphanumeric (up to 8 characters)	Call origination. Enter the DA call origination type. This entry must be datafilled in field CO of table TOPS.

Datafill example

The following example shows sample datafill for table TOPSOIC.

The first tuple contains CLLI TOPCOMAMF, an OIC of 27, and a CO type of HOM555.

The second tuple contains CLLI TOPCOMAMF, an OIC of 14, and a CO type of 411.

MAP display example for table TOPSOIC

```
OICKEY          CO
_____________________________________________________

TOPCOMAMF 27    HOM555
TOPCOMAMF 14    411
```

Supplementary information

This section provides additional information related to table TOPSOIC.

TOPSOIC (end)

Data store usage

Tables TOPSOIC and OICBC share some common storage. The size of table TOPSOIC, which changes dynamically, can be calculated using the following equation:

$$min = [33 + 256 \cdot R (s / 256)] \cdot d$$
$$max = min + 100 \cdot n \cdot (1 + d)$$

where

min
is the minimum table size (expressed in words of storage)

max
is the maximum table size (expressed in words of storage)

R
is a function that returns a value that is rounded up to the next whole integer value

s
is the maximum number of trunk groups used (which cannot exceed the value of 8191)

d
is the number of words in the descriptor (3 for NT40 switches, 4 for SuperNode switches)

n
is the number of unique trunk group entries in table TOPSOIC

For example, if d = 4, s = 300, and only one unique trunk group is used, the calculations are as follows:

$$\begin{aligned} min &= [33 + 256 \cdot R (s / 256)] \cdot d \\ &= [33 + 256 \cdot R (300 / 256)] \cdot 4 \\ &= (33 + 256 \cdot 2) \cdot 4 \\ &= 2180 \text{ words} \\ max &= min + 100 \cdot n \cdot (1 + d) \\ &= 2180 + 100 \cdot 1 \cdot (5) \\ &= 2680 \text{ words} \end{aligned}$$

TOPSPARM

Table name

TOPS Office Parameter

Functional description

Table TOPSPARM lists office parameters unique to TOPS offices.

Datafill sequence and implications

There is no requirement to datafill other tables prior to table TOPSPARM.

Table size

Up to 107 tuples. The minimum and maximum number of tuples is increased by 2.

Datafill

The following table lists datafill in fields PARMNAME and PARMVAL for table TOPSPARM.

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
AABS_ OPTIMIZATION	ON or OFF	This parameter determines whether optimization can be used for Automated Alternate Billing System (AABS) calls. This parameter has two states: ON and OFF. When set to OFF and the parties go on-hook, the DMS switch waits for a message from the automated voice system (Voice Service Node - VSN, or Interactive Voice System - IVS) before releasing the port. When this parameter is set to ON, the DMS switch automatically releases the port when the parties go on-hook. This parameter must be set to OFF for AABS calls to the VSN and ON for AABS calls to the IVS. The following paragraph explains this requirement. This parameter is created by functionality GR317/GR394 ISUP to/from TOPS (OSEA0005). The VSN is upgraded in release TOPS05 to support this functionality, but the IVS is not upgraded. Since ISUP calls cannot use AABS optimization, this parameter must be OFF for the VSN and ON for the IVS. This is also true for non-ISUP calls since the VSN does not differentiate between ISUP and non-ISUP calls. When the IVS is upgraded, this parameter will not be necessary.

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
ACCOUNT_ CODE_ BILLING_ ENABLE	Y or N	Enter ACCOUNT_CODE_BILLING_ENABLE to allow the operating company to turn the Account Code Billing feature on or off. Enter Y (yes) to allow the operating company to turn the Account Code Billing feature on. Otherwise, enter N (no). If the parameter is set to N, it only disables account code billing for calls designated with the Account Code Billing feature. This parameter also exists in table VSNOPT. Field PARMVAL must be set to the same value in both tables TOPSPARM and VSNOPT for the feature to function properly. The default is Y. Activation is immediate.
ACTS_ DOLLAR_ COINTEST	Y or N	Automatic Coin Toll Service dollar coin test. This parameter enables coin testing using dollars. Set this parameter to Y for phones that accept dollars, or to N for phones that do not accept dollars. The default is N. If the test fails, a TOPS117 log is produced. For further information on coin testing, refer to functionality Automatic Coin Toll Service, ENSV00002.
ADAS_ CASSETTE_ ICON	Y or N	Enter ADAS_CASSETTE_ICON to allow the operating company to enable or disable the cassette tape icon. This icon is used to indicate that the directory assistance call was automated. Enter Y if the cassette tape icon is displayed on call origination for directory assistance calls that have been routed to the Automated Directory Assistance Service (ADAS) Voice Processing System (VPS). Enter N if the cassette tape icon is not displayed on call origination for ADAS-handled calls. The default is N. Activation is immediate. If you are using IBM DA, a text string appears instead of an icon.
ADAS_BARGE_ IN	Y or N	This parameter enables or disables ADAS Barge-In. The values are Y (enable) and N (disable). For more information, refer to functionality ADAS Base Barge-In, ALPP0001.

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
ADAS_ ENABLE	Y or N	Enter ADAS_ENABLE to allow the operating company to enable or disable the Automated Directory Assistance Service (ADAS) Voice Processing System (VPS) feature. Enter Y to enable the ADAS VPS feature. Otherwise, enter N. If the parameter is set to N, this feature is disabled and all directory assistance calls are routed directly to the operator, bypassing ADAS. The default is N. Activation is immediate.
ADAS_ INWARDS_ ENABLE	Y or N	Enter ADAS_INWARDS_ENABLE to allow the operating company to enable or disable the ADAS for 131 inward calls. Enter Y to allow 131 inwards calls to route to ADAS prior to receiving operator assistance. Enter N to disallow service for 131 inwards calls. The default is N. Activation is immediate.
ADAS_OPR_ PROFILE_ICON	Y or N	Enter ADAS_OPR_PROFILE_ICON to allow the operating company to enable or disable the operator profile icon. The operator profile icon is used to indicate that a call was not automated. Enter Y to display the operator profile icon for non-automated (non-ADAS) directory assistance calls. Enter N to disable the display. The default is Y. Activation is immediate. If you are using IBM DA, a text string appears instead of an icon.
ADASPLUS_ ARU_WINK	N or Yx (x is 1-20)	This parameter disables/enables and determines the duration of the reverse wink (on-hook or off-hook) sent on the ADASPLUS ARU when it is connected to the operator. If set to N, no wink is sent. If set to Y, plus a value in the range 1-20 (10ms), a wink of the value duration is sent. For example, a value of 5 sends a wink of 50 milliseconds.

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
ADASPLUS_ CALLER_ JOINED_TONE	NONE, REGDACA, LOWHIGH, or HIGHLOW	For ADAS+, this parameter is used to choose a tone to be played to the operator when the calling party is joined to the operator. This occurs after ADAS+ playback to the operator or when the operator split/joins or RLS CLD during playback. ADAS+ is provided by feature AN0880 in DA Automation I/F, OSDA0006. The values are as follows: • NONE - No call arrival tone • REGDACA - Regular DA call arrival tone • LOWHIGH - Low to high ADAS+ call arrival tone • HIGHLOW - High to low ADAS+ call arrival tone The default is NONE.
ADASPLUS_ ENABLE	Y or N	This parameter enables (Y) or disables (N) routing of eligible calls to ADAS+. ADAS+ is provided by feature AN0880 in DA Automation I/F, OSDA0006. In order for ADAS+ to function properly, the following conditions must be met: • ADASPLUS_ENABLE must be set to Y • in table SERVICES: — the protocol must be set to CCI — ADASPLUS must be set to Y — VERSION must be greater than or equal to 3 • SOC option OSDA0006 must be ON Value Y can only be set if SOC option OSDA0006 has been set to ON. It can be set to N at any time. Option OSDA0006 can only be set to IDLE if ADASPLUS_ENABLE is set to N. The correct setting is described in section “Activation" of DA Automation I/F, OSDA0006. The default is N.

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
ADASPLUS_POST _ DEFLECT	Y or N	ADAS Plus post deflect. This tuple allows ADAS Plus calls to be deflected from queue to treatment after ADAS Plus processing based on table QMSCQDEF field DEFLAREA. This field indicates the wait time and number of calls in the queue before deflection. Enter Y for deflection. Otherwise, enter N for no deflection. The default is N.
ADAS_ RINGING_ DURING_ PLAYBACK	Y or N	When set to Y, the subscriber is connected to ringing while ADAS plays the recordings to the operator. When set to N, the subscriber hears nothing while ADAS play the recordings to the operator. ADAS+ is provided by feature AN0880 in DA Automation I/F, OSDA0006. The default is N. Activation is immediate.
ADAS_WITH_ PARS_ENABLE	Y or N	Enter ADAS_WITH_PARS_ENABLE to allow the operating company to route ADAS-handled calls to the personal audio response system (PARS) when the call is presented to an operator. Enter Y if the subscriber is played an introductory greeting by PARS. Enter N if no introductory greeting is played. The default is N. Activation is immediate.
ALERT_ TONE_TIME	5 to 30	Prior to the expiry of the allocated time for a fixed-duration call, a warning tone warns the subscriber that the call is about to end. Enter ALERT_TONE_TIME to specify the number of seconds that a warning tone is heard before the subscriber's call is disconnected. Enter the number of seconds that the warning tone is heard before the subscriber is disconnected. The default is 5. Activation is immediate.

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
ALL_CALLS_USE_ OPR_SVC_ AGRMTS	Y, N	This parameter allows the operator services provider to wholesale their billing agreements when CLECs do not want to secure their own agreements. The values are as follows: • Y - All calls incoming on TOPS/ISUP trunks use the operator services billing agreements for the checks. The agreement groups are obtained from TOPSPARM parameter OPR_SVC_AGRMTS, if OPR_SVC_AGRMTS is set to Y. • N - Determine whether to use the operator services agreements on an individual basis by field BILAGRMT in table TOPEACAR or SPIDDB.
APS_DISPLAY_ DOLLAR_SIGN	Y or N	This parameter controls display of the dollar sign in the CHARGE field of the APS log in the range APS100-APS121. Enter Y to display $ in front of the charge. Enter N for no $.

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
ARAN_ STATUS	NONE, BOTH, HOTEL, INSTN	This parameter activates/deactivates ARAN on an office-wide basis. Allowable values are: • NONE - ARAN deactivated for hotel and institution subscribers. Both hotel and institution calls are not routed to ARAN. Instead, hotel calls that require room number collection are sent to an operator for manual room number collection and institution calls tandem through the TOPS office. • BOTH - ARAN activated for hotel and institution subscribers. Both hotel calls that require room number collection and institution calls are routed to ARAN. • HOTEL - ARAN activated for hotel subscribers only. Only hotel calls that require room number collection are routed to ARAN. However, institution calls tandem through the TOPS office. • INSTN - ARAN activated for institution subscribers only. Only institution calls are routed to ARAN. However, hotel calls that require room number collection are sent to an operator for manual room number collection. The default is NONE. ***Note:*** Note: If ARAN_STATUS is activated for hotel subscribers, it is activated for numbers datafilled in tables SPLDNID and TDBCLASS.
AUTO_MDS_ QMS_CQPROF	N or Yxx (xx is queue)	Enter AUTO_MDS_QMS_CQPROF to enable a coin subscriber's keypad upon presentation to the automated message delivery system (MDS). If the call queue profile number of the automated MDS is datafilled as the parameter value for parameter AUTO_MDS_QMS_CQPROF and the origination station is a coin phone, the subscriber's keypad is enabled. Enter Yxx, where xx is the desired call queue number; otherwise, enter N. The default is N. Activation is immediate.

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
AUTO_ OUTPULSE_ UPON_CCV_ SUCCESS	Y or N	This parameter determines whether the DMS switch automatically outpulses the forward number if a valid calling card is entered. The values are Y (auto outpulse, the same as prior to OSSAIN) and N (no auto outpulse). The default is Y.
BRAND_ USING_ DEFAULT_SPID	Y or N	This parameter enables front end (calling party) branding for non-carrier calls using the SPID in TOPSPARM parameter DEFAULT_SPID. The values for BRAND_USING_DEFAULT_SPID are Y (enable) and N (disable). Therefore, if BRAND_USING_DEFAULT_SPID = Y and no SPID is given in table DNSCRN for the calling party's DN, then the default SPID in TOPSPARM parameter DEFAULT_SPID is used for front end branding. Also, data in table SPIDDB is used for the branding. If BRAND_USING_DEFAULT_SPID = N or no SPID is assigned to the calling DN, the NBEC code is used for branding of non-carrier calls. No SPID is assigned if an SPID is not provided by an OSSAIN SN or OLNS query, there is no SPID entry in table DNSCRN, or parameter DEFAULT_SPID is not datafilled with a default SPID. ***Note:*** This parameter does not automatically appear in the table; it must be added.
CCARD_ SALES_ REPORT_ ACTIVE	Y or N	This parameter enables the commercial credit card sales report. The values are Y (enable) and N (disable). This capability is described in functionality TOPS Commercial Credit Card, ABS00008.

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
CC_CARRIER_ SELECT_ DEFAULT	ALLOW or BLOCK	This parameter determines default outpulsing of calling card calls when selecting a terminating carrier. This parameter is used if a match is not found in table CCCSOPTS. The values are: • ALLOW - Outpulse the existing translations: network prefix + country code + national number. There is no carrier code, so the following network (international gateway) must perform translations to select the carrier. • BLOCK - Disallow outpulsing. A display is presented on the operator screen. The default is ALLOW. For further information, refer to feature AF7021 in functionality Carrier Selection, ENSV0001.
CC_CARRIER_ SELECT_ ENABLE	Y or N	This parameter enables calling card carrier selection. The values are Y (enable) and N (disable). This functionality introduces a serious operator outpulsing restriction; therefore, this parameter is required to limit the application of this restriction. The restriction is that an operator is blocked from outpulsing an outbound call until a valid billing method is selected. This restriction is enforced when this parameter is activated and the called number is foreign. The default is N. For further information, refer to feature AF7021 in functionality Carrier Selection, ENSV0001.
CCV_ACCS_ 15TH_DIGIT_ TIMER	1 to 15	Specifies the time that ACCS will wait for entry of a 15th digit after the 14th digit is entered. This parameter does not apply to AABS. It does apply to ACCS, as the name implies. Range is 1 to15 seconds. The default is 2.

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
CDIR_ CARRIER_ SELECT_ DEFAULT	ALLOW or BLOCK	This parameter determines default outpulsing of country direct calls when selecting a terminating carrier. This parameter is used if a match is not found in either table CDCSOPTS nor CDCSOPT2. The values are: • ALLOW - Outpulse the existing translations: network prefix + country code + national number. There is no carrier code, so the following network (international gateway) must perform translations to select the carrier. • BLOCK - Disallow outpulsing. A display is presented on the operator screen. The default is ALLOW. For further information, refer to feature AF7021 in functionality Carrier Selection, ENSV0001.
CDIR_ DEDICATED_DN	Y or N	Determines the calling number. If set to N, the digit stream is used. If set to Y, a 10-digit DN (datafilled after the Y) is used (with possible modification) as the calling number for all Country Direct calls in that office. If a country code is sent, it replaces the last 3 digits of the datafilled DN. If no country code is sent, the datafilled DN is used without change.
CDIR_RATING	Y or N	This parameter is used in a GOS environment to indicate the signalled codes on which to base rating of country direct calls. The values are: • Y (the default) - Base the rate on the signalled country and carrier codes. Then, use the special country direct tables to derive an SSETNAME for entering the GOS rating system. • N - Base the rate on the signalled access, country and carrier codes. These codes are used to index table CLGSSET which gives an SSETNAME for entering the GOS rating system. For further information, refer to functionality Auto Country Direct, ENSV0010.

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
CHECK_BILL_ AGRMT_USING_ BSP_SPID	Y or N	The LIDB can return both an AO SPID and a BSP SPID. This feature allows for screening on both the AO and BSP SPIDs. Screening is always done on the AO SPID. Optional screening on the BSP SPID is controlled by this parameter. If no AO or BSP SPID is returned from the LIDB, the default behavior is defined by field NOSPDERR in applicable table SPIDDB or TOPEACAR. The values of this parameter are as follows: • Y - screen on both the AO and BSP SPID If both an AO and a BSP SPID are returned by the LIDB, screening is done on the basis of the AO SPID first. If an agreement based on the AO SPID is not found, the BSP SPID is used to screen. If, however, an agreement is found based on the AO SPID, no further screening is done on the basis of the BSP SPID. • N - screen only on the AO SPID
CHG_ DISPLAY_ DECIMAL	0 to 3	Enter CHG_DISPLAY_DECIMAL for a TOPS Global Operator Services (GOS) office. This parameter specifies how many decimal digits to place to the right of the decimal point for display of call charge values. This is useful for countries with decimal currency systems since charge values can be displayed in a format familiar to the TOPS operator. If the monetary system is not based on decimal units, then the GOS rating system is not able to convert the results into the proper units. However, the calculations are still valid in the base units. This parameter is not available in North American TOPS offices. If this parameter is set to 0, no decimal point is displayed. The default is 2. Activation is immediate.
CLD_DNSCRN_ ENABLED	Y or N	This parameter determines whether or not the called number is screened for restricted attributes (UNPAID, BLCKCALL) in table DNSCRN. The range is Y (screen) and N (do not screen). The default is N.

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
COIN_PAY_ SEQUENCE	POSTPAY or PREPAY	Enter COIN_PAY_SEQUENCE to select either pre-pay or post-pay for all coin phones that are routed to a TOPS Global Operator Services (GOS) office. This selection determines how calls are charged. If the value is set to POSTPAY, the customer is asked to deposit the necessary amount for the initial coin recall period. When this period has expired, no additional payment deposit is required. After each subsequent recall period expires, the call is brought back to the TOPS position and the customer is requested to deposit the necessary amount to cover the charges for the period that just expired. When the call is terminated, the call is brought back to the TOPS position so that the charges for the unpaid portion of the call can be collected. If the value is set to PREPAY, the customer is requested to deposit the necessary amount before each recall period. When the call is terminated, the call does not recall to the TOPS position since no incurred charges are unpaid. The default is POSTPAY. Activation is immediate.
CZECH_ OFFICE	Y or N	This parameter was created for use by SPT (the Czech Republic Telephone Company). When set to Y, this parameter allows the table TQMSOPT parameter QMS_BLOCK_RECALL_SERVICE_CHANGE to be activated. In order to set CZECH_OFFICE=Y, table TOPSPARM parameter NUMBERING_PLAN must first be set to OPEN_NUMBERING. For more information, refer to feature AN1085 in GOS Enhancements, GOS00001. This parameter only appears in a global load.

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
DACC_CIC_ OVERRIDE_ ENABLE	Y or N	This parameter enables an override of the carrier associated with an interLATA ADACC call. Then, a replacement carrier is selected in one of the following ways: • office-wide basis in TOPSPARM parameter DACC_OVERRIDE_CIC • service-provider basis in table SPIDDB, field DACICOVR The values are Y (enable) and N (disable). If the carrier override functionality is not required, this parameter should be set to N.
DACC_OVERRIDE _CIC	Y and cic or N	This parameter overrides the carrier associated with an interLATA ADACC call. This parameter is valid only if TOPSPARM parameter DACC_CIC_OVERRIDE_ENABLE = Y. Then, DACC_OVERRIDE_CIC is checked, which has the following values: • Y - Enable override on an office-wide basis. Refinement CARRNO appears, which is a 4-digit carrier number. The carrier must be datafilled in table TOPEACAR. If DACC_OVERRIDE_CIC and table SPIDDB, field DACICOVR are both set to Y, then DACC_OVERRIDE_CIC has precedence. • N - Disable override. This value is required for override on a service-provider basis in table SPIDDB, field DACICOVR.
DANI_ DISPLAY_ CLG_NUM	Y or N	Enter DANI_DISPLAY_CLG_NUM to specify whether the calling number is displayed to the operator for all calls over TOPS trunk groups with a calling group identification (CLGID) of DANI. Enter Y to display the calling number. Otherwise, enter N. The default is Y. Activation is immediate.

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
DEFAULT_ LOCLZONE	Y or N	This parameter is used for calls with no incoming trunk group (Delay and system initiated) to enable local screening and select an initial zone name. The values are as follows: • Y - use GOS Local Determination to determine if the call is local and datafill refinement LOCLZONE with a zone name defined in table TLCLZONE. • N - use the universal translations method with the CLASS option. This value is the default. For calls on a trunk group, table TRKGRP, subfield LOCLZONE provides this equivalent function.
DEFAULT_ PRODUCT	NA100 or GLOBAL	This parameter determines which TOPS product controls processing of switch originated calls (that is, Operator and OSSAIN service node originated calls). This parameter is necessary when multiple TOPS products are combined. The values are NA100 and GLOBAL. In TOPS07, this is a read-only parameter where the value is automatically set according to the environment and cannot be changed. Therefore, no data entry is required or allowed for this TOPS07 release since only single product loads are available. For future releases with loads that contain multiple products, this parameter is automatically initialized but can be changed.

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
DEFAULT_SPID	Yxxxx or N (xxxx are characters	This parameter indicates the default account owner (AO) SPID on an office-wide basis. This parameter is used if no AO SPID is assigned by an OSSANI SN, OLNS query, calling or ANI digits, table DNSCRN, or table TOPSTOPT. The AO SPID is used for TOPS protocols, screen updates, AMA processing, and front end (calling party) branding of non-carrier calls. Table SPIDDB provides supportive data. The values for DEFAULT_SPID are Y and N, indicating a default SPID is or is not specified, respectively. If Y is entered, also enter the default SPID, previously datafilled in table SPID. If BRANDING_USING_DEFAULT_SPID = N or no SPID is assigned to the calling DN, the NBEC code is used for branding of non-carrier calls. This is dependent upon the service being enabled in table SPIDDB. If a DEFAULT_SPID is specified and parameter BRANDING_USING_DEFAULT_SPID = Y, the DEFAULT_SPID is used for branding This is dependent upon the service being enabled in table SPIDDB. If the service is disabled, no branding is provided, not even using the NBEC code. An SPID cannot be removed from table SPID if it is datafilled as the DEFAULT_SPID in table TOPSPARM. ***Note:*** This parameter does not automatically appear in the table; it must be added.
DELAY_ SPECIFIED_ SNPA	SNPA from HNPACONT or SNPANAME	This parameter specifies the SNPA used to expand a 7-digit calling number to 10 digits for a delay call. Enter an SNPA that is defined in table HNPACONT or SNPANAME.

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
DEVICE_ OUTPUT_CR	Y or N	Device output carriage return. This parameter determines if an extra LF/CR is put into a character string that is longer than 80 characters. This parameter should be set to N (do not include extra LF/CR) for a Call Store Buffer/TLCS VQ made by CGI. For all other VQ TTYs, set this parameter to Y. The default is N. With functionality TOPS IDDD 15 Digit Expansion (OSB00001), some Hobic devices require more than 80 ASCII characters to display one billing record. The calling and called number fields are increased to handle up to 19 digits. Since the TOPS device buffer is only 80 characters, an extra LF/CR is used to send the record in two lines. However, the VQ TTY in some sites is not a TTY but a Call Store Buffer/TLCS made by CGI and the VQ uses the LF/CR as a flag to indicate end/beginning of a new record. Since the CGI equipment cannot be modified to allow for the extra LF/CR, one billing record looks like two.
DISPLAY_ CALLED_ NUMBER	NONE, MP, OPP, or BOTH	This parameter indicates the type of TOPS position to receive the called number from the DMS switch, if sent. Following are the values: • NONE - The called number is not sent to any TOPS position. • MP - The called number is sent and displayed at TOPS MP positions. • OPP - The called number is sent and displayed at OPP-compatible positions. • BOTH - The called number is sent and displayed at both TOPS MP and OPP-compatible positions. The default is N.

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
DISTINCT_ NUM_CALL_ ARRIVAL_ TONES	Y or N	Enter DISTINCT_NUM_CALL_ARRIVAL_TONES to activate or deactivate the Distinct Number of Call Arrival Tones feature. If the parameter is set to Y, one call arrival tone indicates a toll assistance (TA) call arrival at the operator's position, two call arrival tones indicate an intercept call arrival or operator number identification (ONI) call arrival, and three call arrival tones indicate a directory assistance (DA) call arrival. If the parameter is set to N, one call arrival tone indicates a TA or DA call, and two call arrival tones indicate an intercept or ONI call. The default is Y. Activation is immediate.
DOM_CCARD_ FORMAT_ CHECKS	Y or N	Domestic calling card format checks. This parameter allows disabling of RAO and NPA checks on North American 14-digit domestic calling card number formats. This parameter is provided for countries in North America that have open numbering, so do not have these format requirements. The values for this parameter are: • Y - Enable the RAO and NPA checks as prior to this parameter. These checks are the following: — In North America, domestic calling card number formats are checked for one of the following: – The card number has a 0 or 1 as its fourth digit, making it an RAO card. – The card number begins with a valid North American NPA; that is, the first digit is in the range 2-9. — Also, the following requirements are enforced: – The card number does not begin with 700, 800, or 900. – The card number begins with a valid North American NPA; that is, the first digit is in the range 2-9. – The four-digit personal identification number (PIN) does not begin with 0 or 1.

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
DOM_CCARD_ FORMAT_ CHECKS (continued)		Domestic calling card format checks (continued). The values for this parameter are: • N - Disable the RAO and NPA checks as follows: — The domestic calling card number is not checked to determine if it is an RAO card. — Since the domestic calling card number is not an RAO card, checks in tables RAO and RAOCHECK are skipped. Also, the RAO number is not removed from the billing number field of module codes 061 and 066. Additionally, the RAO number is not recorded as a “special number" in the Billing Type Identification field of module codes 052 and 061; it is instead recorded as a calling card. — Since this card is not an RAO card but a valid NPA card, checks in tables NPACHECK are skipped. And, since datafill in table NPACHECK determines whether further checks in table CHKDIGIT are involved, table CHKDIGIT is also ignored. — “Vfy" is no longer displayed to the operator if a non-RAO domestic calling card's first three digits are not in table NPACHECK and table CHKDIGIT is no longer checked. — The following check is not performed: Verification that a domestic calling card number does not begin with digits 700, 800, or 900, or have 555 as digits 4-6. — Verification that the PIN begins with a digit in the range 2-9 is skipped.

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
DOM_CCARD_ FORMAT_ CHECKS (continued)		The default is Y. The following calling card checks are independent of card format and numbering plan so are not affected by this parameter: • regional domestic credit card checks in tables DOMBILL and REGNUM • table HOTLIST checks This parameter is checked on all TOPS office call types that may be billed to a domestic calling card number. This includes operator-assisted (OA), MCCS, AABS, and OSSAIN calls. This parameter is checked in North American and open numbering plan offices. This parameter also affects card numbers in table INTCCFMT that require transitional validation. These card numbers use an ITU-T format, but are subject to the same format validation as 14-digit domestic calling cards. For further information, refer to SR 50058693 in functionality TOPS Call Processing Features (Call Processing), OSB00001.
FIXED_ DURATION	ALL, COIN, HOTEL, NONE, RESTRICT, STATION	Datafill this parameter to specify the set of call types that are marked as fixed-duration calls upon call arrival. The default is NONE. Activation is immediate.
FIXED_ DURATION_APS	Y or N	This parameter indicates whether APS calls are marked as fixed duration. APS calls are marked as fixed duration by either this parameter or the operator. When a call is marked as fixed duration, the operator must first enter a duration for the call. Then the operator can release the call. When the duration period ends, the switch ends the call and generates a record with the charges. The values are Y (yes, APS calls are fixed duration) and N (no, APS calls are not fixed duration). Table TOPSPARM parameter ALERT_TONE_TIME indicates the number of seconds before the duration period ends that a notification tone sounds.

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
FORWARD_ ANI_AS_CLI	Y or N	Forward Automatic Number Identification as Calling Line Identification. Enables conversion of ANI on an incoming trunk to CLI for an outgoing ISUP trunk. If set to N, ANI is not forwarded as CLI. If set to Y, ANI may be forwarded as CLI. Forwarding of CLI also depends on table ISUPTRK, field ANI2CLI, and table TOPSTOPT, field ANITOCLI. ANI is forwarded as CLI only if all 3 values are set to Y. The default is N.
FOUR_DIGIT_ CIC_STATUS	THREEDIG, FOURDIG, or PERMISSIVE	Enter FOUR_DIGIT_CIC_STATUS to specify how many carrier identification codes (CIC) the office can process. Enter THREEDIG if the office can only process three-digit CICs. Enter FOURDIG if the office can only process four-digit CICs that begin with 0 (zero), 5, or 6 (that is, 0xxx, 5xxx, or 6xxx). Enter PERMISSIVE if the office can handle both three-digit and four-digit CICs. The default is THREEDIG. Activation is immediate.
GCACALL_ DEFAULT	Y or N	This parameter is used if there is no tuple for the call in table GCASCRN. It determines if the call should be considered a GCA call. If set to Y, the call is a GCA call; otherwise, it is an Operating Company call. The default value is N. This parameter is visible only in TOPS global loads.
GCA_PHASE	PHASE_1 or PHASE_2	This parameter allows a graceful change of GCA from phase 1 to phase 2. At installation, the value is set to PHASE_1. While preparing datafill to convert from phase 1 to phase 2, the value should be set to PHASE_1. Once datafill is complete or the site is a new GCA site, set the value to PHASE_2. The default value is PHASE_1. This parameter is visible only in TOPS global loads.

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
GEN_DNSCRN_ INVALID_CIC_ LOG	Y or N	This parameter specifies if the TOPS130 log should be generated when an invalid CIC is encountered in table DNSCRN. If Y, the log is generated. If N, the log is not generated. A CIC is invalid if it is not datafilled in table TOPCACAR. Due to the size of table DNSCRN, there are no cross checks to prevent deletion of a CIC from table TOPCACAR that is datafilled in table DNSCRN. The default value is Y. This parameter is visible only in TOPS global loads.
GEN_NO_BILL_ AGRMT_LOG	Y or N	This parameter enables generation of log TOPS612, No Billing Agreement, which is generated under the following conditions: • billing is blocked due to the lack of a billing agreement • no Billed AO or BSP SPID is returned from the LIDB database • no Calling AO SPID and TOPSPARM parameter OPR_SVC_AGRMTS is set to N BLOCK The values of the parameter are as follows: • Y - enable generation of the log • N - disable generation of the log
IN_ NTERWORKING_ RESPONSE_ TIMER	1 to 60	This parameter indicates the length of time in seconds that the TOPS switch waits for a message from the SSP after sending a response to a previous Invoke. The default is 5. The timer is started when the TOPS switch sends an ISUP FAR or FAC message to the SSP. When the timer expires, the following occurs: • the ISUP connection is released • the operator terminal is notified of the release • log TOPS608, IN Interworking Response Timer Popped, is generated

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
INTERNATIONAL_ DACC_PREFIX	0 to 999	This parameter defines the prefix digits to indicate the DA listing is an international number. The prefix is prepended to the requested listing, either at the DAS or by the operator, and can be one, two or three digits long. This parameter does not interact with other datafill. For the functionality to work, SOC options ENSV0108, ENSV0101, OSB00101, OSDA0101, and OSDA0102 must be ON.
IPPOS_AUDIT_ INTERVAL	5 to 15	This parameter specifies the time interval in seconds between each audit cycle. The default is 5 s. Setting this parameter higher saves CM realtime and messaging but may delay the time it takes for the audit and position to recognize a loss of data connectivity. Setting it lower has the opposite effect.
IPPOS_AUDIT_ THRESHOLD	2 to 5	The parameter specifies how many consecutive times an OPP Audit Request should be sent to a position without receiving a response before the state of the position is changed to SYSB. The default is 3. Increasing the threshold increases the messaging and real time but it also reduces the number of positions being put into a SYSB state because of an occasional packet loss.
LANG_ ERROR_ SCREEN_ DISPLAY	alphanumeric (1 to 4 characters)	Enter LANG_ERROR_SCREEN_DISPLAY for error display on TOPS 4 operator consoles. It provides a method of displaying error conditions to the operator when one or more incorrect digits are entered by the operator. The displayed message is a character string that can be customized by the operating company. Enter the customized message. The default is LANG. Activation is immediate.

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
LNP_QUERY_ FOR_AMA_ ONLY	CLG, SPL, ALL, or NONE	This parameter specifies which numbers are valid for LNP queries for AMA module 720 recording purposes only. The values are: • CLG - calling number Including CLG in the set has no effect unless TOPSTOPT field LNPCLGAM is `Y' for the originating trunk group. • SPL - special (third and 14-digit line-based calling card) numbers • ALL - all (CLG and SPL) numbers. This is the default value. A value of ALL does not always cause LNP modules to be appended. For example, if table TOPSTOPT has the LNPCLGAM field set to N (for calling number), then no LNP information for AMA is required. So no LNP module would be appended. • NONE - no numbers A value of NONE does not prevent appending LNP modules for calling and special billing numbers because: — Queries for these numbers can be made for reasons other than AMA recording. For example, in a delay call, an LNP query is made for the calling number so it can route to the back party. — The LRN associated with the calling number may be datafilled against the incoming trunk group. The called number is not included as a value, because if LNP information is required, the query is made for routing rather than for AMA purposes. AMA information on a called number is recorded without consulting this parameter. This parameter is specific to North American TOPS switch loads and is only referenced when TOPS LNP is active.

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
LNP_ TIMEOUT	1 to 60	This parameter is referenced when an LNP query is launched to determine how long TOPS call processing waits for a response to its query. The range is 1 - 60 seconds. The default is 2. This parameter is specific to North American TOPS loads and is only referenced when TOPS LNP is active.
MF_TRUNK_ WINK_ REQUEST_ DELAY	1 to 200	Specify the delay time before a wink is sent from a TOPS office to an end office to request automatic number identification (ANI). This parameter also controls the delay before a wink is sent by a TOPS office for treatment supervision. This parameter only applies to multifrequency (MF) TOPS trunks utilizing MF receivers that gather automatic number identification (ANI) digits spilled from the end office. Enter the delay time, in 10-ms increments, before a wink is sent from a TOPS office to an end office to request ANI. The default is 25. Activation is immediate.
MP_DISPLAY_ POSSIBLE_ AUTOMATION	Y or N	Enter MP_DISPLAY_POSSIBLE_AUTOMATION to control the display of an icon indicating whether calls reaching the TOPS position could have been automated. Enter Y if a question mark icon is displayed on the screen whenever a call reaches the TOPS position that could have been automated, but was not. Enter N if the display is the same as before and no indication of possible automation is provided. The default is N. Activation is immediate.
MULTI_LISTING_ DA	Y or N	When MULTI_LISTING_DA is set to Y, the DAS has the ability to transfer a DA call at announcement to a DA TOPSOPER function via OSSAIN control lists. If eligible, the call can receive ADASPLUS treatment prior to going to the operator. The default is N. Activation is immediate.

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
MULTI_NPA_ INWARD_XLA	Y or N	Enter MULTI_NPA_INWARD_XLA to determine whether the inwards code entered by the operator on an inwards call is translated using information from tables TRKGRP and TOPSBC instead of information from table OPRTRANS alone. Enter Y if inwards calls are routed using the calling party's trunk group data. Enter N if translations are performed using the operator's translations data for routing. The default is N. Activation is immediate.
MULTI_NPA_ NO_AMA_XLA	Y or N	Enter MULTI_NPA_NO_AMA_XLA to activate or deactivate the Multiple Trunk Group per NPA feature. Enter Y for an operator assisted call that is not billable and the called number entered by the operator is translated with information from tables TRKGRP and TOPSBC. Enter N if the called number entered by the operator is translated with information from table OPRTRANS. The default is N. Activation is immediate.
NOTIFY_RECALL_ OPTIONS	Y or N	When set to Y (yes), this parameter enables the following functions (fields) provided by feature AN1085 in GOS Enhancements, GOS00001: • MUTED_NFY_RECALL (muted notify recall) • AUTO_NFY_RECALL (automatic notify recall) • NFY_RECALL_CNT (notify recall count) Each field is enabled by setting it to Y. Refer to the datafill example at the end.

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
NSC_800PLUS_ QUERY_AT_ POSITION	Y or N	This parameter indicates where NSC processing is done for an 800 Plus call at an operator position. The values are as follows: • Y - Do NSC processing at the current TOPS switch. The call is routed with the DN received from the database. LNP processing is done at an adjacent switch. This process is the same as before this functionality. • N - Do NSC processing at an adjacent switch. The calling and toll-free numbers are signalled to the adjacent switch. LNP processing also is done at the adjacent switch. If the adjacent switch is not a tandem switch, a looparound trunk to the same office ensures that LNP processing occurs soon enough in the network to avoid last resort routing. For trunking recommendations, refer to the Operator handled calls section in functionality 800+ Interworking with LNP, OSB00001 in this manual. The default is Y.
NUMBERING_ PLAN	N_AMERICAN or OPEN_ NUMBERING	This parameter allows TOPS software to function in an Open Numbering Plan environment. This parameter is used for internal purposes only. It cannot be accessed by the operating company. The default is N_AMERICAN. Activation is set during software load-build.

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
OCIPDL_AUDIT_ THRESHOLD	2 to10	Operator Centralization Internet Protocol Data Link (OCIPDL) maintenance audit threshold. OCIPDL audits typically occur every 30 seconds for in-service links. Every 30 seconds, an audit message is sent by the near-end switch over the OCIPDL to maintenance at the far-end switch. The near end waits up to 5 seconds for an audit response, which indicates the far end is in service. If a response is not received within 5 seconds, the audit is considered a failure; however, the audits continue. If a consecutive number of audit failures equals this parameter, the ODIPDL changes state from INSV to SYSB. The link can be recovered as follows: • the continuing audits become successful, which is automatic • the far end initiates recovery • the near end manually busies and RTSes to initiate recovery The default value is 3 s.
OC_PMIST_ FORMAT	OFF or FULL	This parameter enables decoding and formatting of the PMIST message for the operator centralization (OC) protocol. The range is OFF and FULL. When set to OFF, the message is displayed in hexadecimal format. When set to FULL, the message is displayed in both the hexadecimal and decoded formats. The default is OFF.
OFFER_LOCAL_ DACC	NONE, LCL, NLCL, or ALL	This parameter indicates the DA call completion choice for Operating Company calls. The values are as follows: • NONE - call completion is not allowed • LCL - call completion is allowed only for local calls • NLCL - call completion is allowed only for non-local calls • ALL - call completion is allowed for both local and non-local calls

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
OFFER_LOCAL_ STDCC	NONE, LCL, NLCL, or ALL	This parameter indicates the standard call completion choice for Operating Company calls. The values are as follows: • NONE - call completion is not allowed for local calls • LCL - call completion is allowed only for local calls • NLCL - call completion is allowed only for non-local calls • ALL - call completion is allowed for both local and non-local calls
OLNS_EAANI_ DACC	Y or N	This parameter determines whether the DACC indicator is considered when determining what ANI ID digits to spill to the carrier on interLATA calls. Enter Y to consider the DACC indicator. Refer to section “Spilling ANI ID to carrier on InterLATA calls" in functionality TOPS OLNS Interface (ABS00012) for more details. The default is N.
OLNS_EAANI_ ADD_BILLSRV	Y or N	This parameter determines whether the Additional Originating Billing Services Indicator is considered when determining what ANI ID digits to spill to the carrier on interLATA calls. Enter Y to consider the DACC indicator. Refer to section “Spilling ANI ID to carrier on InterLATA calls" in functionality TOPS OLNS Interface (ABS00012) for more details. The default is N.
OLNS_ILP_ DACC	Y or N	Originating line number screening intraLATA presubscription directory assistance call completion. This parameter indicates whether ILP should be offered on intraLATA toll DACC calls. The values are Y (offer ILP) and N (do not offer ILP). Refer to functionality OLNS IntraLATA Presubscription, OSEA00006. The default is N.

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
OLNS_ RESTRICTED_ DACC	Y or N	This parameter is used to determine if a call is restricted when an ANI ID 7 is signalled. The values are: • Y - The TA (sent paid, collect, third, calling card, and special BNS) and DA (sent paid, collect, third, calling card, special BNS, and DACC) indicators are checked. • N - The TA (sent paid, collect, third, calling card, and special BNS) and DA (sent paid, collect, third, calling card, and special BNS) indicators are checked. Error handling is applied to calls with no billing restriction which are signalled with an ANI ID 7. These calls are treated as ANIF, routed to an operator, and a TRK118 log is generated. ***Note:*** This parameter does not automatically appear in the table; it must be added.
OLNS_ TIMEOUT	1 to 15	This parameter indicates the timeout period in seconds for an OLNS response message. This value can range from 1 to 15 s with a default value of 2 s.
OPP_ALWAYS_ SEND_SPID_ INFO	Y or N	This parameter indicates whether both trunk group and SPID display information should be sent to an OPP compatible position if both are applicable. If this parameter is N, the switch passes either the SPID display or the trunk group display to the position as applicable. Otherwise, both displays are sent if available. For further information, refer to table SPIDDB. ***Note:*** This parameter does not automatically appear in the table; it must be added. This capability is available on a trunk-group basis in table TOPSTOPT, field DISPSIPD.
OPP_PMIST_ FORMAT	BRIEF, FULL, or OFF	Enter OPP_PMIST_FORMAT to control the formatted peripheral module intercept system test (PMIST) output for Open Position Protocol (OPP) messages. Enter BRIEF to select a condensed format, FULL to provide the full format, or OFF to turn off the formatting. The default is FULL.

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
OPR_ COMPROMISED_ CALL_ OVERRIDE	Y or N	Enter OPR_COMPROMISED_CALL_OVERRIDE to specify how an operator can complete compromised calls. This option allows operators to be notified about possible billing problems without having to restrict the calls being handled. Enter Y if the operator can complete compromised calls without changing the billing method. Enter N if the operator can only complete compromised calls by changing the billing method and taking a manual ticket, or by just taking a manual ticket. The default is N. Activation is immediate.
OPR_SVC_ AGRMTS	Y or N	This parameter allows CLECs to use their own billing agreements or use the billing agreements already established by the Operator Services wholesaler. This parameter identifies the billing agreement groups of the Operator Services wholesaler. This parameter is used as the default behavior when no Calling AO SPID is associated with the call.

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
OPR_SVC_ AGRMTS (continued)		The values are as follows: • Y - There are operator services billing agreements. Datafill the following refinements: — CCVAGRMT - Call card validation. Enter a billing agreement group name defined in table BAGNAME. This name is used as part of an index into table CCVAGRMT. — BNSAGRMT - Billed number screening. Enter a billing agreement group name defined in table BAGNAME. This name is used as part of an index into table BNSAGRMT. — NOSPDERR - No SPID is returned from the database. The values for error handling are as follows: – ACCPT—Accept the call. – BLOCK—Block the call. – OPER—Send the call to an operator if the call is not at an operator (that is, at an automated system), or if at an operator, block that billing method and allow the operator to prompt for another method of payment. • N - There are no operator services billing agreements. This value is allowed only if TOPSPARM parameter ALL_CALLS_USE_OPR_SVC_AGRMTS = N and no SPID in table SPIDDB nor CIC in table TOPEACAR is using the operator services billing agreements. Datafill refinement NO_CLG_AO_ACTION. This refinement allows the Operator Services wholesaler to define default handling when there is no Calling AO SPID associated with the call (for LEC calls only) and no Operator Services Agreements are datafilled. The values are as follows: — ACCPT - Accept the call (default). This value allows the feature to be activated through SOC and screening for billing agreement to be done on a per-SPID basis. After all necessary datafill is in place for all SPIDs in table SPIDDB, this field can be changed to BLOCK if desired. — BLOCK - block the call

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
OPR_ SPECIFIED_ SNPA	SNPA from HNPACONT or SNPANAME	This parameter specifies the SNPA used to expand a 7-digit calling number to 10 digits for an operator call. Enter an SNPA that is defined in table HNPACONT or SNPANAME.
OSNC_OUTGOING _DEFAULT	Y or N	This parameter allows all outgoing ISUP calls to default to OSNC signalling. This parameter eliminates the need to add the OSNCCAP selector to all route lists that should be using OSNC signalling. The values are as follows: • Y - All outgoing ISUP traffic is routed with OSNC signalling unless overridden by the OSNCCAP selector indicating not to use OSNC signalling for incoming OSNC calls. • N - All outgoing ISUP traffic is routed with TOPS/ISUP (functionality GR317/GR394 ISUP to/from TOPS, OSEA0005) signalling unless OSNC signalling is specified in the route list by selector OSNCCAP for incoming OSNC calls.

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
OVERRIDE_ ANIFSPL_ HANDLING	Y or N	ANI ID failure special. This subfield determines on a switch-wide basis whether an ANI failure call should be displayed as ANI success to the operator. An ANI failure occurs if the call is marked as special and no calling number is found in table SPLDNID or DNSCRN. The values are as follows: • Y - An ANI failure is allowed to proceed through the system, no restrictions are marked against the call, and the call is displayed as ANI success. This parameter has precedence over table TOPSTOPT field ANIFSPL. Therefore, when this parameter is set to Y, field ANIFSPL is not valid. • N - An ANI failure is displayed as ANI failure as prior to this feature. This value is the default. For this value only, an ANI failure can be displayed as ANI success on a trunk-group basis according to table TOPSTOPS, field ANIFSPL. This behavior applies to calls marked as special by the ANI ID tables (OSSCAT, BELLCAT, and OPENANI) that arrive on STATCLAS = DNLOOKUP or RESTBIL trunk groups. When a call arrives with an ANI ID marked as special, the screening tables are used to identify the calling service (for example, coin, restricted, and so forth). When there is no data in these tables for a call marked as special and the datafill indicates not to mark this call as ANI failure, the calling service is marked as station.
PARS_PMIST_ FORMAT	OFF or FULL	This parameter enables decoding and formatting of the PMIST message for the personal audio response (PARS) protocol. The range is OFF and FULL. When set to OFF, the message is displayed in hexadecimal format. When set to FULL, the message is displayed in both the hexadecimal and decoded formats. The default is OFF.
POSITION_ SANITY_TIMER	N or Yx (x is 1 to 60)	Enter POSITION_SANITY_TIMER to set the TOPS position sanity timer on or off in a TOPS office. Enter Y to turn on the sanity position timer and then enter a timer duration in the range of 1 to 60 seconds. Otherwise, enter N to turn off the timer. The default is N. Activation is immediate.

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
POST_WINK_ PRE_OFFHOOK_ DELAY	1 to 200 (80 is the default value)	This parameter indicates the delay in 10ms increments between each trunk signalled ACK and OFFHK. That is, multiply the entry by 10ms. Therefore, the range is 1 (10ms) to 200 (2000ms). This parameter is used for the intermittent problem of calls routing to a position and then going to reorder. This happens when an end office takes the call down and generates a TRK121 log due to no start dial. This only occurs when the TOPS trunk is set for COMFGD. The end office is missing the OFFHK from the TOPS office and reports a CALL_FAILURE_MSG in the XPMIST. XPMIST shows the interval between the EXECS sent to the XPM for the final wink and the answer offhook to be a minimum of 300ms. The XPM data shows the DMS100 switch side of the TOPS switch is being sent these messages in 60 to 70ms. The LSSGR states that the minimum time between these two should be 250ms. If table OFCSTD parameter WK_DD_PRE_DIAL_DELAY is set far below the default (80ms) to 40ms, the failures stop occurring. However, changing this OFCSTD parameter is difficult to activate and the change must be performed in each end office. Therefore, this table TOPSPARM parameter provides a convenient solution. If the above problem occurs, increase the value. Start at the default value of 80 and increase the value in increments of 10 ms until the problem no longer occurs. ***Note:*** This parameter does not automatically appear in the table; it must be added.
PPCO_ DISCONNECT	Y or N	Pre-paid coin overtime disconnect. This parameter indicates whether to route a call to an operator when the caller does nothing after all the ACTS prompts and time-outs for overtime payment are finished. Enter N to route the call to an operator. Enter Y to disconnect the call. The default value is N.

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
RONI_TAKE_ DOWN_DELAY	Y or N	Use the RONI_TAKE_DOWN_DELAY parameter to indicate whether additional time is required to wait for a successful digits indication from centralized automatic message accounting (CAMA) offices. Enter Y if additional time is allocated. Enter N if no additional time is allocated to wait for the indication. The default is N. Activation is immediate.
RTRS_ADACC_ DAS_ANN_QUERY	Y or N	This parameter enables/disables the ADACC surcharge query sent to the external real-time rating system. The values are as follows: • Y - Perform the ADACC surcharge query. Use this value when ADAC calls can have different surcharges. This value is the default. • N - Disable the ADACC surcharge query. This value should only be used if all of the following conditions are met: — All ADACC calls have the same surcharge. — The DAS has a pre-recorded hardcoded announcement of the static surcharge or the charges are not announced.
RTRS_ADACC_ QUERY_FAIL_ ACTION	BLOCK, OPER, or FREE	This parameter indicates the error recovery action if a rate could not be obtained for the ADACC portion of a real-time rated call. This takes place from a coin or hotel phone. Following are the values: • BLOCK - The subscriber is given an announcement indicating technical difficulties and the call is terminated. • OPER - The subscriber is connected to an operator. • FREE - The subscriber is not charged for the ADACC service and the call progresses. The default is OPER.
RTRS_ DEFAULT_ COMPANY_ CODE	000000 to 999999	This parameter provides the default company code for calls requiring real-time rating which do not have an associated company code in table COMPCODE per their origination status (trunk, NPA-NXX). The range is 000000 to 999999. The default is 000000.

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
RTRS_ DEFAULT_ SYSTEM	INTERNAL or EXTERNAL	This parameter determines the real-time rating system (INTERNAL or EXTERNAL) for calls requiring real-time rating which do not have an entry in table COMPCODE per their origination status (trunk, NPA-NXX). A value of INTERNAL selects the older table-driven real-time rating system to use in determining the call's rate(s). A value of EXTERNAL selects the external real-time rating system (the RTRS) to query the call's rate(s). The default is INTERNAL.
RTRS_FIRST_ MTS_COIN_ QRYFL_ACTION	BLOCK, OPER, or FREE	This parameter indicates the error recovery action if a rate could not be obtained from the RTRS for the first period of a coin call (pre or post pay overtime) if at ACTS. Following are the values: • BLOCK - The subscriber is given an announcement indicating technical difficulties and the call is terminated. • OPER - The subscriber is connected to an operator. • FREE - The subscriber is not charged for the first coin time period and the call progresses. The default is OPER.
RTRS_SUBSE_ MTS_COIN_ QRYFL_ACTION	OPER or FREE	This parameter indicates the error recovery action if a rate could not be obtained from the RTRS for a non-initial period of a coin call (pre or post pay overtime) if at ACTS. • OPER - The subscriber is connected to an operator. • FREE - The subscriber is not charged for the coin time period and the call progresses. The default is OPER.
RTRS_TIMEOUT	0 to 600	This parameter indicates the time in seconds when a query to the RTRS is considered timed-out. The range is 0 to 600 seconds. The default is 1 s.

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
RTRS_VERSION	VERSION_1 or VERSION_2	This parameter indicates the external rater protocol version. The values are: • VERSION_1 - This version is the original release (TOPS04) of this functionality. This is the default value. • VERSION_2 - This version is the current release (TOPS09) and beyond of this functionality. For more information, refer to functionality External RTRS Interface, ENSV0009.
SA_ QUEUEING_ BY_REQUEST_ AGE	Y or N	Enter SA_QUEUEING_BY_REQUEST_AGE to allow old SA/IC (service assistant/in-charge) requests to be dequeued on the basis of the time spent waiting in the queue to be serviced by the next available team. This allows an SA/IC request that has been waiting the longest in the queue to be connected to the most recently released SA/IC team, as long as the service is compatible. Enter Y to allow old SA/IC requests to be dequeued on the basis of the time spent waiting in the queue to be serviced by the next available team. Enter N if the enqueued request is only serviced by the team on which it was enqueued. The default is N. Activation is immediate.
SEND_SECONDS_ TO_HOBIC	Y or N	This parameter enables sending of minutes and seconds to the HOBIC device for display. This parameter applies only to the external real-time rater, not the internal rater. The values are as follows: • Y - Send minutes and seconds. • N - Send only minutes. This value is the default, the process before this functionality. Since downstream processors must be ready to use the seconds based information, use value N during preparation.

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
SPECIAL_ HANDLING_ COLLECT	Y or N	This parameter activates the global functionality Special Handling for Collect Calls, GOS00101, and specifies a new route for collect calls when this feature is active. The values are Y (activate this feature) and N (disable this feature). For Y only, enter a valid XLASYS and XLANAME to index table PXCODE. This parameter is valid only in a global environment, not in North America.
SPLIT_CLG_FOR_ COLLECT	Y or N	This parameter indicates if the calling party should be split on collect calls when the called number is outpulsed. The values are Y (split) and N (do not split). This parameter is created by the global functionality Special Handling for Collect Calls, GOS00101. This parameter is valid only in a global environment, not in North America.
SMS_LOG_MC_FA ILURE		This parameter controls when the TOPS131 log is generated in response to failures reported by the Short Message Service Center. This parameter and parameter SMS_TIMEOUT apply to Signaling System #7 (SS7) based TOPS SMS. These parameters do not apply to workstation-based Internet Protocol (IP) SMS.
	Set of {NONE, NETWK, TERM, RADIO, MISC, TIMEOUT, ALL}	This parameter can be set to NONE, ALL, or any combination of the five remaining values. Its default value is ALL, meaning generate the TOPS131 in all failure situations.
SMS_TIMEOUT		This parameter controls the amount of time in seconds before TOPS marks an SMS attempt as timed out.
	0 to 255	Parameter SMS_TIMEOUT can be set to values 0 to 255. The default value is 10 seconds.

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
TBI_AUTO_ SPLIT	Y or N	Manual Toll Break-In (MTBI) automatic split. The values are as follows: • Y - The calling party (who is requesting the break-in) is automatically split from the call when the operator attempts MTBI via the Trunk Offer Start (TOS) function. When MTBI ends, the operator uses the Trunk Offer End (TOE) function. This causes the system to restore the calling party's voice path back to either split or joined as prior to the TOS function. • N - TOS does not automatically split the calling party's voice path out of the call. The operator must use the split/join function. This parameter appears in global loads only.
TMT_FOR_INTC_ FAILURES	Y or N	This parameter indicates handling of the following types of intercept failures: • failure to get an ARU • failure of the DAS to find a listing • timeout of the DAS to find a listing • failure of a facility during playback • a wake up message received during playback • split referral The values for this parameter are as follows: • Y - Send intercept failures to Emergency Route 6 (EMR6) in an Operator Centralization (OC) configuration. This value enables this feature. • N - Send intercept failures to the queue management system (QMS) refinement tables. This value is the default and disables this feature.

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
TOPS06_DEVICE_ ENHANCEMENTS	Y or N	This parameter enables additional information in the output reports for TOPS TTY devices for the commands listed below. Enter Y to enable or N to disable the new information. Value Y is the default. Following are the commands, devices, and new information: • RA/EA (assign a study register) - Used on TADS, SADS, SADSHADS, and QTADS devices. The response, when successful, now indicates how many study registers are in use by the team and how many are available for assignment. • RQ/EN (query study register assignments) - Used on TADS and QTADS devices. The response indicates how many study registers are available for assignment. This parameter is non-optional, that is, it is valid regardless of the SOC state of functionality QMS Customer Service Enhancements, ADVQ0006. Also, this parameter is applicable in the TOPSACD and QMS environments. For more information about these commands, refer to the applicable (TOPS MP, MPX, or IWS) Force Management Guide.

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
TOPS11_DEVICE_ ENHANCEMENTS	Y or N	This parameter controls appearance of the calling number in TOPS devices. The values are as follows: • N - The devices output the same as before this TOPS11 parameter. The calling number usually does not appear, but can appear in some cases such as a collect call billed to a hotel, or a charge adjustment not associated with an AQ or DUAQ device in table TOPSDEV or HOBICDEV. This parameter value is the default. • Y - The calling number appears in the billing records output by TOPS autoquote (AQ), voice quote (VQ), dial-up autoquote (DUAQ0, and record devices. Also, the calling number appears in charge adjust records generated on the hotel administration data system (HADS), VQ, or record devices. Charge adjust records appear when the operator makes a charge adjustment. This parameter is not optional and appears in all loads, North American and global. Refer to functionality TOPS Call Processing Features (Billing), OSB00001, under feature 50095068, in the *Translations Guide* for more information.
TOPS_RLT_REL_ VIA_CCTO	Y or N	This parameter supports release link trunking (RLT) in the end office. This parameter indicates the Service Activation Parameter (SAP) feature value sent to the DMS-100 end office if field RLT in table ISUPTRK is set to RLT_REL 1. The values are: • N - Send the SAP feature indicator value of RLT_REQUEST_MSG. This value is supported in NA0015 and up. • Y - Send the SAP feature indicator of CCTO_ALL_ISUP or CCTO_NOT_ALL_ISUP (as applicable). This value (Y) is the default. This value represents the behavior prior to this parameter. This value must be used if any DMS-100 end office connected to the TOPS office is below NA0015 and is using RLT_REL.

TOPSPARM (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
TWO_AMA_REC_ FOR_SERVED_ 0MINUS_EA	Y or N	This parameter applies to 0- call originations that turn out to be EA calls destined for carriers that are SERVed by the Operating Company. The term SERVed means table TOPEACAR, field OPSERV, subfield OPSERVSEL= SERV. For these calls, this parameter enables generation of two AMA records that are identical except as follows: • One record has a call code 190 and the other record has call code 192. For the record with the call code 192, if the operator enters a carrier ID but no called number and makes no attempt to outpulse (that is, cancels calls and releases position), then a call code 196 replaces 192. • The call code 190 record does not have a call completion module, Module Code 051, nor a Module Code 316. In addition, Module Codes 314, 315, 184, 186, and 187 are not included on the call code 190 record. These modules are only included on the call code 192, if applicable to the call. The values of this parameter are as follows: • Y - Enable generation of the two AMA records as described above. This feature only applies to 0- dialed calls. 00-, 10XXX0-, and 10XXX00- calls routed to the TOPS system do not generate the access record. • N - Generate one AMA record (Structure Code 752 with call code 192) with a call completion module (module code 51) indicating that completion service was provided for the call. In addition, module code 53 is also included to identify the carrier associated with the call. If Origination Line Number Screening (OLNS) is in use, Structure Code 772 is generated instead of Structure Code 752.

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
ZENITH_EA_ ROUTING	Y or N	Enter ZENITH_EA_ROUTING to specify whether Zenith calls are to use TOPS equal access (EA) translations. Enter Y if calls receive local access and transport area (LATA) screening and are routed through equal access (EA) translations. Enter N if no LATA screening is performed and calls use standard non-EA translations. The default is N. Activation is immediate.
ZENITH_TEN_ DIGIT_DIALLING	Y or N	Enter ZENITH_TEN_DIGIT_DIALING to allow individual offices to select seven- or ten-digit Zenith numbers. Enter Y if the Zenith number remains ten digits. Enter N if the area code is stripped from Zenith numbers that have the same area code as the TOPS operator position. The default is N. Activation is immediate.

Datafill example

The following example shows sample datafill for table TOPSPARM.

TOPSPARM (continued)

MAP display example for table TOPSPARM

```
PARMNAME                          PARMVAL
_____________________________________________________

AABS_OPTIMIZATION                    OFF
ACCOUNT_CODE_BILLING_ENABLE            Y
ACTS_DOLLAR_COINTEST                   Y
ADAS_BARGE_IN                        Y
ADAS_CASSETTE_ICON                     Y
ADAS_ENABLE                          Y
ADAS_INWARDS_ENABLE                    Y
ADAS_OPR_PROFILE_ICON                  Y
ADASPLUS_ARU_WINK                    Y  5
ADASPLUS_CALLER_JOINED_TONE            REGDACA
ADASPLUS_ENABLE                      Y
ADASPLUS_POST_DEFLECT                  N
ADAS_RINGING_DURING_PLAYBACK           Y
ADAS_WITH_PARS_ENABLE                  Y
ALERT_TONE_TIME                    25
ALL_CALLS_USE_OPR_SVC_AGRMTS           Y
APS_DISPLAY_DOLLAR_SIGN                Y
ARAN_STATUS                        BOTH
AUTO_MDS_QMS_CQPROF                  Y 16
AUTO_OUTPULSE_UPON_CCV_SUCCESS         Y
BRAND_USING_DEFAULT_SPID               Y
CC_CARRIER_SELECT_DEFAULT            ALLOW
CC_CARRIER_SELECT_ENABLE               Y
CCV_ACCS_15TH_DIGIT_TIMER              5
CDIR_CARRIER_SELECT_DEFAULT          ALLOW
CDIR_DEDICATED_DN                    Y  6193200000
CDIR_RATING                        Y
CHECK_BILL_AGRMT_USING_BSP_SPID        Y
CHG_DISPLAY_DECIMAL                                2
CLD_DNSCRN_ENABLED                     Y
COIN_PAY_SEQUENCE                  POSTPAY
CZECH_OFFICE                       N
DACC_CIC_OVERRIDE_ENABLE               Y
DACC_OVERRIDE_CIC                    Y 1234
DANI_DISPLAY_CLG_NUM                   Y
```

TOPSPARM (continued)

MAP display example for table TOPSPARM (continued)

```
PARMNAME                          PARMVAL
_____________________________________________________

DEFAULT_LOCLZONE                    Y
DEFAULT_PRODUCT                          NA100
DEFAULT_SPID                               Y  12AB
DELAY_SPECIFIED_SNPA                 919
DEVICE_OUTPUT_CR                   Y
DISPLAY_CALLED_NUMBER                NONE
DISTINCT_NUM_CALL_ARRIVAL_TONES      Y
DOM_CCARD_FORMAT_CHECKS                                 Y
FIXED_DURATION                     ALL
FIXED_DURATION_APS                   Y
FORWARD_ANI_AS_CLI                   N
FOUR_DIGIT_CIC_STATUS                FOURDIG
GCACALL_DEFAULT                    Y
GCA_PHASE                        PHASE_2
GEN_DNSCRN_INVALID_CIC_LOG           Y
GEN_NO_BILL_AGRMT_LOG                N
IN_INTERWORKING_RESPONSE_TIMER       Y
IPPOS_AUTIT_INTERVAL                 5
IPPOS_AUDIT_THRESHOLD                3
LANG_ERROR_SCREEN_DISPLAY            LANG
LNP_QUERY_FOR_AMA_ONLY               CLG
LNP_TIMEOUT                    2
MF_TRUNK_WINK_REQUEST_DELAY          28
MP_DISPLAY_POSSIBLE_AUTOMATION       Y
MULTI_LISTING_DA                           Y
MULTI_NPA_INWARD_XLA               Y
MULTI_NPA_NO_AMA_XLA                Y
NOTIFY_RECALL_OPTIONS              Y Y Y N
NSC_800PLUS_QUERY_AT_ POSITION       Y
NUMBERING_PLAN                   N_AMERICAN
OCIPDL_AUDIT_THRESHOLD               3
OC_PMIST__FORMAT                   FULL
OFFER_LOCAL_DACC                     ALL
OFFER_LOCAL_STDCC                    ALL
OLNS_EAANI_ADD_BILLSRV                 Y
OLNS_EAANI_DACC                    Y
OLNS_ILP_DACC                    Y
OLNS_RESTRICTED_DACC                 Y
OLNS_TIMEOUT                   2
```

TOPSPARM (continued)

MAP display example for table TOPSPARM (continued)

```
PARMNAME                          PARMVAL
_____________________________________________________

OPP_ALWAYS_SEND_SPID_INFO              Y
OPP_PMIST_FORMAT                    FULL
PPCO_DISCONNECT                     Y
OPR_COMPROMISED_CALL_OVERRIDE          Y
OPR_SPECIFIED_SNPA                  619
OPR_SVC_AGRMTS             Y OPRCCVGRP OPRBNSGRP OPER
OSNC_OUTGOING_DEFAULT                  Y
OVERRIDE_ANIFSPL_HANDLING              Y
PARS_PMIST_FORMAT                   OFF
POSITION_SANITY_TIMER                Y 6
POST_WINK_PRE_OFFHOOK_DELAY           80
RONI_TAKE_DOWN_DELAY                   Y
RTRS_ADACC_DAS_ANN_QUERY               Y
RTRS_ADACC_QUERY_FAIL_ACTION          BLOCK
RTRS_DEFAULT_COMPANY_CODE          121543
RTRS_DEFAULT_SYSTEM               INTERNAL
RTRS_FIRST_MTS_COIN_QRYFL_ACTION       OPER
RTRS_SUBSE_MTS_COIN_QRYFL_ACTION       OPER
RTRS_TIMEOUT                        1
RTRS_VERSION                     VERSION_1
SA_QUEUEING_BY_REQUEST_AGE             Y
SEND_SECONDS_TO_HOBIC                  Y
SMS_LOG_MC_FAILURE   ALL
SMS_TIMEOUT 10
SPECIAL_HANDLING_COLLECT           Y PX ADDCOLDIG
SPLIT_CLG_FOR_COLLECT                  Y
TBI_AUTO_SPLIT                      Y
TMT_FOR_INTC_FAILURES                  Y
TOPS06_DEVICE_ENHANCEMENTS             Y
TOPS11_DEVICE_ENHANCEMENTS             Y
TOPS_RLT_REL_VIA_CCTO                  N
TWO_AMA_REC_FOR_SERVED_0MINUS_EA       Y
ZENITH_EA_ROUTING                      Y
ZENITH_TEN_DIGIT_DIALLING              Y
```

Error messages

The following error messages apply to table TOPSPARM.

Error messages for table TOPSPARM

Error message	Explanation and action
Auto muted notify does not apply unless muted notify is set.	Muted notify recalls must be allowed for automatic muted notify recalls to be permitted. If an attempt is made to change the value of AUTO_NFY_RECALL to Y when MUTED_NFY_RECALL is N, the change is not allowed.
Parameter NOTIFY_RECALL_OPTIONS only applies when the office numbering plan is open numbering.	Parameter NOTIFY_RECALL_OPTIONS only applies to open numbering offices. If a craftsperson attempts to change parameter NOTIFY_RECALL_OPTIONS in a North American office, the change is allowed and the warning message is displayed.

Additional information

When performing a dump and restore from an SN06 load to an SN07 or later load, SMS_LOG_MC_FAILURE will be restored with a value of ALL, and SMS_TIMEOUT will be restored with a value of 30.

Table history

SN07 (DMS)

Parameter INTERNATIONAL_DACC_PREFIX was added by feature A00002740, TOPS International Directory Assistance Call Completion.

Parameters SMS_LOG_MC_FAILURE, SMS_TIMEOUT were added by feature A00003687.

SN06/TOP19

The MULTI_LISTING_DA parameter was added by feature A00000601.

TOPS15

The changes are as follows:

- IPPOS_AUDIT_INTERVAL and IPPOS_AUDIT_THRESHOLD are added by feature 59006653 in functionality OPP Over IP, OSB00101.
- OCIP_DEFAULT_CODEC is deleted by feature 59022288 in functionality OPP Over IP, OSB00101.

TOPSPARM (continued)

- APS_DISPLAY_DOLLAR_SIGN is added by feature 59022816 in functionality GOS APS Log Enhancements, GOS00101.
- TOPS_RLT_REL_VIA_CCTO is added by 50332563 in support of DMS-100 end office feature 59026484.
- OCIPDL_AUDIT_THRESHOLD is added.

TOPS14

The changes are as follows:

- SPECIAL_HANDLING_COLLECT and SPLIT_CLG_FOR_COLLECT are added by feature 59020491 functionality Special Handling for Collect Calls, GOS00101.
- TMT_FOR_INTC_FAILURES is added by feature 59021348 in functionality Treatment for Intercept Failures, OSB00101.
- DACC_CIC_OVERRIDE_ENABLE and DACC_OVERRIDE_CIC are added by feature 59021116 in functionality DACC Enhancements I, OSDA0102.
- RTRS_ADACC_DAS_AN_QUERY is added by feature 59020353 in functionality External RTRS Interface, ENSV0009.
- OSNC_OUTGOING_DEFAULT is added by feature 59019041 in functionality OSNC Enhancements, OSEA0013.
- OFFER_LOCAL_DACC, OFFER_LOCAL_STDCC, and DEFAULT_LOCLZONE are added by feature 59015886 in functionality GOS Local Determination, GOS00001.

TOPS13

The changes are as follows:

- OCIP_DEFAULT_CODEC is added by feature 59012723 in functionality TOPS IP OC Infrastructure, ENSV0107.
- TWO_AMA_REC_FOR_SERVED_0MINUS_EA is added by feature 59013695 in functionality Billing Enhancements for EA Calls, OSB00001.
- The following parameters are added by feature 59011929 in functionality Screening for Billing Agreement, UNBN0007:
  - ALL _CALLS_USE_OPR_SVC_AGRMTS
  - OPR_SVC_AGRMTS
  - CHECK_BILL_AGRMT_USING_BSP_SPID
  - GEN_NO_BILL_AGRMT_LOG
- The following parameters are deleted by feature 59012553, in functionality Code Removal of TOPS IV, OSB00001:
  - ARAN_AUTH_DISPLAY
  - BLOCK_SP_PO_PB_CHARS
  - INSTITUTION_DISPLAY
  - LANG_DIGIT_INTERPRETATION
  - NON_PAYMENT_SCREEN_DISPLAY
  - QCD_SCREEN_DISPLAY
  - QCQ_SCREEN_DISPLAY
  - QCT_25_PCT_SCREEN_DISPLAY
  - QCW_SCREEN_DISPLAY
  - QUERY_FAIL_SCREEN_DISPLAY
  - SERV_DENIAL_SCREEN_DISPLAY
  - SERV_RESTRICTION_SCREEN_DISPLAY
  - SP_GEN_AMA_DISPLAY
  - SPLIT_CLG_LOOP1_DISPLAY
  - SPLIT_CLG_LOOP2_DISPLAY
  - THRESHOLD_EXCDED_SCREEN_DISPLAY

TOPS12

The following parameters are added:

TOPSPARM (continued)

- SEND_SECONDS_TO_HOBIC by feature 59006873 in functionality Seconds Based Announcements, OSB00001
- OVERRIDE_ANIFSPL_HANDLING by feature 59006832, in functionality UNBN Call Restrictions for Wholesaling, UNBN0006
- IN_INTERWORKING_RESPONSE_TIMER by feature AF7805 in functionality IN Operator Backup, ENSV0023
- ADASPLUS_POST_DEFLECT by feature 59011217 in functionality ADAS Plus Call Deflection, OSB00001

TOPS11

The following parameters are added or changed:

- GCACALL_DEFAULT, GCA_PHASE, and GEN_DNSCRN_INVALID_CIC_LOG by feature AF7576 in functionality Global Competitive Access II, GOS00007
- NSC_800PLUS_QUERY_AT_POSITION by feature AF7864 in functionality 800+ Interworking with LNP, OSB00001
- TOPS11_DEVICE_ENHANCEMENTS by SR 50095068
- POST_WINK_PRE_OFFHOOK_DELAY has a new instruction to add 10 ms increments (according to a PRS). This change applies to TOPS09 and up.

TOPS10

The following parameters are added by feature AF7498 in functionality TOPS BC/STS/SNPA, OSB00001:

- DELAY_SPECIFIED_SNPA
- OPR_SPECIFIED_SNPA

TOPS09

The following parameters are added:

- ADAS_BARGE_IN is added by feature AF7135 in functionality ADAS Base Barge-In, ALPP0001
- FIXED_DURATION_APS is added by feature AF7161 in functionality Attendant Pay Station, OSB00001

  During early development of TOPS09, parameter APS_CALL_RECORD_FORMAT was added and existing parameter FIXED_DURATION had new value APS. These changes were reported in

documentation. Later, these changes were replaced by parameter FIXED_DURATION_APS.

- RTRS_VERSION is added by feature AF7163 in functionality External RTRS Interface, ENSV0009

TOPS08.1

The following parameters were added:

- CCARD_SALES_REPORT_ACTIVE is added by feature AF6957 in functionality TOPS Commercial Credit Card, ABS00008
- CC_CARRIER_SELECT_DEFAULT is added by feature AF7021 in functionality Carrier Selection, ENSV0001
- CC_CARRIER_SELECT_ENABLE is added by feature AF7021 in functionality Carrier Selection, ENSV0001
- CDIR_CARRIER_SELECT_DEFAULT is added by feature AF7021 in functionality Carrier Selection, ENSV0001
- DOM_CCARD_FORMAT_CHECKS is added by SR 50058693 in functionality TOPS Call Processing Features (Call Processing), OSB00001
- CDIR_RATING is added by SR 50058691 in functionality Auto Country Direct, ENSV0010

TOPS08

Parameter OLNS_RESTRICTED_DACC is added by feature AN1565 in functionality TOPS OLNS Interface, ABS00012.

TOPS07

The following parameters are added or changed:

- LNP_TIMEOUT and LNP_QUERY_FOR_AMA_ONLY are added by feature AF6553 in functionality TOPS LNP, OSEA0008
- OC_PMIST__FORMAT and PARS_PMIST_FORMAT are added by feature AN1856 in functionality TOPS Robustness, OSB00001
- DEFAULT_PRODUCT is added by feature AF6428 in functionality Interface Signaling, OSB00001
- CLD_DNSCRN_ENABLED is added by feature AF6712 in functionality GOS Miscellaneous Enhancements, GOS00001
- BRAND_USING_DEFAULT_SPID, DEFAULT_SPID, and OPP_ALWAYS_SEND_SPID_INFO are added by feature AF6711 in functionality Branding via SPID, ENSV0017

TOPSPARM (continued)

- The requirements in ADASPLUS_ENABLE are changed by feature AF6711 in functionality Branding via SPID, ENSV0017
- The following parameters were added by a patch in release TOPS07 and then deleted in TOPS09 since they are moved to tables OAFUNDEF and OANODINV. These parameters never appeared in this document since their presence was discovered too late. However, details are provided in the *Translations Guide* under functionality OSSAIN 07 Enhancements, OSAN0003:
  - OAIN_AUDIT_FREQUENCY—moved in TOPS09 to table OANODINV field AUDFREQ for all ONPMTYPEs
  - OAIN_AUDIT_NUMBER_OF_TRIES—moved in TOPS09 to table OANODINV field AUDTRIES
  - OAIN_AUDIT_TIMER—moved in TOPS09 to table OANODINV field AUDTIMR
  - OAIN_SESSION_BEGIN_TIMER—moved in TOPS09 to table OAFUNDEF field SBTIMOUT

TOPS06

The following parameters are added:

- DISPLAY_CALLED_NUMBER and AUTO_OUTPULSE_UPON_CCV_SUCCESS by functionality Operator Services, ENSV0014
- OLNS_EAANI_DACC, OLNS_EAANI_ADD_BILLSRV, and OLNS_TIMEOUT by functionality TOPS OLNS Interface, ABS00012
- TOPS06_DEVICE_ENHANCEMENTS by functionality QMS Customer Service Enhancements, ADVQ0006
- OLNS_ILP_DACC by feature AN1842 in functionality OLNS IntraLATA Presubscription, OSEA00006
- ARAN_AUTH_DISPLAY, ARAN_STATUS, and INSTITUTION_DISPLAY by feature AN0819 in functionality Automated Room and Authorization Number, ABS00009. These parameters were proprietary in TOPS03, but are now generally available.
- SERV_DENIAL_SCREEN_DISPLAY, NON_PAYMENT_SCREEN_DISPLAY, THRESHOLD_EXCEEDED_SCREEN_DISPLAY, and SERV_RESTRICTION_SCREEN_DISPLAY by feature AN0820 in functionality Calling Card Denial Reasons, ABS00010. These parameters were proprietary in TOPS03, but are now generally available.

- ACTS_DOLLAR_COINTEST per functionality Automatic Coin Toll Service, ENSV00002
- BLOCK_SP_PO_PB_CHARS per PRS BY10279

NA005

The following parameters were added:

- FORWARD_ANI_AS_CLI and AABS_OPTIMIZATION per functionality GR317/GR394 ISUP to/from TOPS, OSEA0005
- CDIR_DEDICATED_DN per functionality Auto Country Direct, ENSV0010
- DEVICE_OUTPUT_CR per functionality TOPS IDDD 15 Digit Expansion, OSB00001
- POST_WINK_PRE_OFFHOOK_DELAY per PRS UT50372

TOPS04

The following parameters were added:

- TBI_AUTO_SPLIT per feature AN0881 in Manual Toll Break-In, GOS00001
- RTRS_DEFAULT_COMPANY_CODE, RTRS_DEFAULT_SYSTEM, RTRS_FIRST_MTS_COIN_QRYFL_ACTION, RTRS_SUBSE_MTS_COIN_QRYFL_ACTION, and RTRS_TIMEOUT per feature AN1505 in External RTRS Interface, ENSV0009

TOPS03

The following information was added:

- PPCO_DISCONNECT per feature AN0408 in Pre-paid coin, ENSV0007
- CCV_ACCS_15TH_DIGIT_TIMER per feature AN0409 in TOPS Commercial Credit Card, ABS00008
- ADAS_RINGING_DURING_PLAYBACK per feature AN1027 in ADAS, OSDA0004
- ADASPLUS_CALLER_JOINED_TONE and ADASPLUS_ENABLE per feature AN0880 in DA Automation I/F, OSDA0006
- proprietary Canada-only parameters: ARAN_STATUS, INSTITUTION_DISPLAY, ARAN_AUTH_DISPLAY, SERV_DENIAL_SCREEN_DISPLAY, NON_PAYMENT_SCREEN_DISPLAY, THRESHOLD_EXCDED_SCREEN_DISPLAY, and SERV_RESTRICTION_SCREEN_DISPLAY

TOPSPARM (end)

- CZECH_OFFICE per feature AN1084 in GOS Enhancements, GOS00001
- NOTIFY_RECALL_OPTIONS per feature AN1085 in GOS Enhancements, GOS00001
- ADASPLUS_ARU_WINK per feature AN0880 in DA Automation I/F, OSDA0006

CSP02

Parameters FOUR_DIGIT_CIC_STATUS, QCD_SCREEN_DISPLAY, QCQ_SCREEN_DISPLAY, QCT_25_PCT_SCREEN_DISPLAY, QCW_SCREEN_DISPLAY were added.

BCS36

The following information was added:

- field PARMNAME was split into field PARMNAME and subfield PARM_KEY
- in the description of office parameter DISTINCT_NUM_CALL_ARRIVAL_TONES, two arrival calls can also indicate an ONI call arrival
- refinement PSTIMER_DURATION
- refinement SP_GEN_AMA_CUSTOM_VALUE
- refinement SPLT_CLG_LP1_CUSTOM_VALUE
- refinement SPLT_CLG_LP2_CUSTOM_VALUE
- parameter AUTO_MDS_QMS_CQPROF to field PARMNAME
- value for parameter AUTO_MDS_QMS_CQPROF to field PARMVAL

TOPSPFX

Table name

TOPS Prefix Digits Table

Functional description

Table TOPSPFX associates a dialed prefix with an index into table TOPSDB plus an indication if ANI is required. The index into table TOPSDB can be overridden by table TOPSBPC.

This table is only valid in the TOPS Global environment.

Datafill sequence and implications

Table TOPSDB should be datafilled before table TOPSPFX.

Table size

1 to 1000 tuples.

Datafill

The following table lists datafill for table TOPSPFX.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
INDEX	see subfields		Index. This field consists of subfields FROMPFX and TOPFX.
	FROMPFX	digits in range 0-F per digit	From Prefix Digits. Start of prefix digit range.
	TOPFX	digits in range 0-F per digit	To Prefix Digits. End of prefix digit range.
ANISTAT		ANIREQ, NOANI	ANI Status. Specifies if ANI is expected for the call.
TDBIDX		0 to 32766	Table TOPSDB Index. Provides index into table TOPSDB, which leads to the data used in service determination and normalization. The TDBIDX index in table TOPSBPC can override the index datafilled here.

Datafill example

The following example shows sample datafill for table TOPSPFX.

TOPSPFX (end)

MAP display example for table TOPSPFX

```
          INDEX             ANISTAT  TDBIDX
-------------------------------------------------
  92        92               ANIREQ      3
```

Table history

TOPS07

Added note that table is only valid in the TOPS Global environment per feature AF6428 in functionality Interface Signaling, OSB00001.

TOPS04

Table TOPSDB was introduced by feature AN1228 in functionality R2 on TOPS, GOS00001.

TOPSPOS

Table name

TOPS Position Table

Overview

Tables TOPSPOS and TOPSDEV specify the functions and characteristics of all Traffic Operator Position System (TOPS) positions and devices, including all teletypewriter terminals (TTY) and force management cathode ray tube (FMCRT) terminals. These tables contain information describing the location of the trunk circuits associated with the positions and devices.

Table TOPSPOS contains information relating to TOPS positions that require two trunk circuits for each position. These include in-charge positions, assistance positions, and regular operator positions.

Table TOPSDEV is used to capture information for TOPS devices that require only one trunk circuit. These include all TTYs and the FMCRT.

Functional description

Table TOPSPOS lists the TOPS positions that require two trunk circuits (one for data, one for voice) and identifies the trunk circuit locations. The traffic office to which the position belongs is also listed.

For analog trunk circuits, assignments are made to the same trunk card. Because nonconsecutive assignments cause the switch to allocate data store based on the largest selected circuit, assignments must be consecutive (for example, a circuit one, circuit two assignment allocates one quarter of the data store memory of a circuit one, circuit eight assignment). Voice is always the lower numbered circuit (voice = n, data = n + 1).

An eight-wire trunk module (TM8) used exclusively for TOPS positions can be fully utilized by assigning voice = even and data = odd.

For digital trunk circuits on digital trunk controllers (DTC), assignments must be consecutive with voice assigned to the lower numbered circuit (voice = n, data = n + 1). For best usage of circuits, voice = odd, data = even is recommended.

For digital trunk circuits on digital carrier modules (DCM), voice and data circuits must be assigned four circuits apart (voice = n, data = n + 4). For most efficient usage of circuits, voice assignments must be in the range of 1 to 4, 9

TOPSPOS (continued)

to 12, or 17 to 20. Data circuit assignments must be in the range 5 to 8, 13 to 16, or 21 to 24.

Note: For TOPS extended multi-purpose (MPX) positions, all virtual position controllers (VPCs) must be assigned TPCPOSNO = 0 in table TOPSPOS. Each VPC must also have a position number that is a multiple of four (for example, 0, 4, or 8) assigned using utility DEFPOS in the MPX.

The two type 1 MPX positions with directory assistance (DA) search links for each token ring must be assigned to different VPCs in order to provide better system reliability. They must not be assigned to the group of four positions associated with the same VPC in table TOPSPOS.

Datafill sequence and implications

The following tables must be datafilled before table TOPSPOS.

- TCPINV
- CLLI
- DCMINV
- LTCPSINV
- PADDATA
- TMINV
- TQSVPROF
- IPCOMID (IP based position only)
- IPSVCS (IP based position only)
- TRKOPTS (IP based position only)

Table size

0 to 1023 tuples

The size of table TOPSPOS is specified in field TRKGRSIZ of table CLLI for the two fixed common language location identification (CLLI) codes, TOPSPOS and TOPSPOSDATA. For each of the two fixed CLLI codes, the value in field TRKGRSIZ of table CLLI must be identical.

Warning: The maximum size of table TOPSPOS is 1023 tuples. If table CLLI field TRKGRSIZ is set higher than 1023 for either CLLI (TOPSPOS or TOPSPOSDATA), then attempts to add tuples to table TOPSPOS are not allowed and an error message is displayed (as of LET004). Since tuples cannot be changed, all tuples must be deleted and re-added as described below. For

releases prior to LET004, this causes an outage due to the cold restart requirement as given below.

Following are the procedures for increasing and deallocating memory:

Increase prior to TOP04: A restart is required.

1. Delete all tuples in table TOPSPOS.
2. Increase the value of field TRKGRSIZ in table CLLI for both TOPSPOS and TOPSPOSDATA CLLIs.
3. Perform a cold/reload restart.
4. Re-add the tuples to table TOPSPOS.

Increase for TOP04 and up: The restart requirement for increasing size is eliminated in TOPS04:

1. Increase the value of TRKGRSIZ in table CLLI for both TOPSPOS and TOPSPOSDATA CLLIs.
2. Add the new tuples in Table TOPSPOS. No restart is required.

Deallocate: Deallocation of memory is not changed, all tuples must still be deleted:

1. Delete all tuples in table TOPSPOS
2. Change the value of field TRKGRSIZ in table CLLI for both TOPSPOS and TOPSPOSDATA CLLIs to value 0.
3. Change the value of field TRKGRSIZ in table CLLI for both TOPSPOS and TOPSPOSDATA CLLIs to the new desired size.
4. Add or re-add desired tuples to table TOPSPOS. No restart is required.

TOPSPOS (continued)

Datafill

The following table lists datafill for table TOPSPOS.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
POSNO		numeric (0 to 9999)	Position number. Enter the position number assigned to the TOPS position. There is no requirement to datafill position numbers in any specific order. Entry values outside this range are not valid.
VLPATH		see subfield	Voice link path. This field consists of subfield VLTYPE and refinements.

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	VLTYPE	TDM or PKTV	Voice link type. The values are defined as follows: • TDM - Pre-IP voice and data connectivity that uses traditional time division multiplexed trunking facilities to transmit non-packetized voice and data. This value also applies to a system that routes IP traffic over a SONET backbone, for example, and thus may be using an underlying TDM technology even with IP. Datafill subfields PMTYPE, VOICE_PADGRP, and CARDCODE. • PKTV - Packetized IP voice. Enter this value for an IP position and datafill subfield VLCLLI.
	PMTYPE	DCM, DTC, LTC, TMS or TM8	Peripheral module type. This field applies only if VLTYPE = TDM. If the trunk is assigned to a digital carrier module (DCM), enter DCM and datafill refinements DCMNO, DCMCKTNO, and DCMCKTTS. If the trunk is assigned to a digital trunk controller (DTC), enter DTC and datafill refinements DTCNO, DTCCKTNO, and DTCCKTTS. If the trunk is assigned to a line trunk controller (LTC), enter LTC and datafill refinements LTCNO, LTCCKTNO, and LTCCKTTS. If the trunk is assigned to a TOPS message switch (TMS) module, enter TMS and datafill refinements TMSNO, TMSCKTNO, and TMSCKTTS. If the trunk is assigned to a trunk module, enter TM8 and datafill refinements TMNO and TMCKTNO. Entry values other than those listed are not valid.

TOPSPOS (continued)

PMTYPE = DCM (and VLTYPE = TDM)

If the value in subfield PMTYPE is DCM, datafill fields DCMNO, DCMCKTNO, and DCMCKTTS as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	DCMNO	numeric (0 to 511)	Digital carrier module number. Enter the DCM number assigned to the trunk.
	DCMCKTNO	numeric (0 to 4)	Digital carrier module circuit number. Enter the DCM voice circuit card number assigned to the trunk.
	DCMCKTTS	numeric (1 to 24)	Digital carrier module circuit time slot. Enter the DCM circuit card North American first level multiplex digital signaling (DS-1) time slot number assigned to the trunk. Use circuits 1 to 4, 9 to 12, and 17 to 20 for voice.

PMTYPE = DTC (and VLTYPE = TDM)

If the value in subfield PMTYPE is DTC, datafill fields DTCNO, DTCCKTNO, and DTCCKTTS as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	DTCNO	numeric (0 to 511)	Digital trunk controller number. Enter the DTC number assigned to the trunk.
	DTCCKTNO	numeric (0 to 19)	Digital trunk controller circuit number. Enter the DTC voice circuit card number the trunk number is assigned.
	DTCCKTTS	numeric (1 to 24)	Digital trunk controller circuit time slot. Enter the DTC circuit card DS-1 signaling time slot number assigned to the trunk. The voice circuit is the lower numbered circuit (odd for voice; even for data).

PMTYPE = LTC (and VLTYPE = TDM)

If the value in subfield PMTYPE is LTC, datafill fields LTCNO, LTCCKTNO, and LTCCKTTS as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	LTCNO	numeric (0 to 511)	Line trunk controller number. Enter the LTC number assigned to the trunk.
	LTCCKTNO	numeric (0 to 19)	Line trunk controller circuit number. Enter the LTC voice circuit card number assigned to the trunk.
	LTCCKTTS	numeric (1 to 24)	Peripheral module circuit time slot. Enter the LTC circuit card DS-1 signaling time slot number assigned to the trunk.

PMTYPE = TMS (and VLTYPE = TDM)

If the value in subfield PMTYPE is TMS, datafill fields TMSNO, TMSCKTNO, and TMSCKTTS as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	TMSNO	numeric (0 to 255)	TMS number. Enter number of the TMS on which the voice circuit resides.
	TMSCKTNO	numeric (0 to 19)	TMS circuit number. Enter the peripheral side (P-side) number of the voice circuit. On TMS, voice circuits can only be assigned to circuit numbers 0 to 5. The higher TMS circuit numbers are reserved for D-channel handler (DCH) and inter-DCH links. Entry values outside this range are not valid.
	TMSCKTTS	numeric (1 to 31)	TMS circuit time slot. For the North American first level multiplex digital signaling (DS-1) carrier type, enter a time slot number within the range 1 to 24. For the pulse code modulation (PCM30) carrier type, enter a time slot number within the range 1 to 15 or 17 to 31.

TOPSPOS (continued)

PMTYPE = TM8 (and VLTYPE = TDM)

If the value in subfield PMTYPE is TM8, datafill fields TMNO and TMCKTNO as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	TMNO	numeric (0 to 2047)	Trunk module number. Enter the number assigned to the trunk module on which the trunk is mounted.
	TMCKTNO	numeric (0 to 29)	Trunk module circuit number. Enter the trunk module circuit number assigned to the trunk, with voice being assigned the lower number. For best usage of circuits, use even numbered voice circuits.

All tuples

For tuples with VLTYPE = TDM, datafill fields VOICE_PADGRP, CARDCODE, DATAPATH, and POSAREA. For tuples with VLTYPE = PKTV, datafill fields VLCLLI, DATAPATH, and POSAREA.

Field descriptions for conditional datafill (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	VOICE_ PADGRP	alphanumeric (1 to 5 characters)	Voice circuit pad group. This field only applies if VLTYPE = TDM. Enter the name of the pad group assigned to this device. The name of the pad group must be datafilled in table PADDATA.
	CARDCODE	DS1SIG or 2X72AA	Card code. This field only applies if VLTYPE = TDM. Enter the card code for the TOPS position circuit as follows: • If the value in field PMTYPE is DCM, enter DS1SIG (digital). • If the value in field PMTYPE is DTC, enter DS1SIG (digital). • If the value in field PMTYPE is DTCI, enter DS1SIG (digital). • If the value in field PMTYPE is LTC, enter DS1SIG (digital). • If the value in field PMTYPE is TMS, enter DS1SIG (digital). • If the value in field PMTYPE is TM8, enter 2X72AA (analog).
	VLCLLI	name from TRKOPTS	Voice link CLLI. This field only applies if VLTYPE = PKTV. Enter a voice link CLLI for the TOPS IP position. The CLLI must be defined in table TRKOPTS and defined in that table as DYNAMIC using the POS application.

TOPSPOS (continued)

Field descriptions for conditional datafill (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
DATAPATH		see subfields	Data path. This field, which consists of subfield DATATYPE and refinements, is used to indicate the path for data transmission to the TOPS terminal.
	DATATYPE	DMODEM, TMS, or IP	Data type. Enter one of the following: • DMODEM: If a digital modem is used to transport data to the terminal, enter DMODEM and datafill refinements POSTYPE, PROTOCOL, DATA_CIRCUIT, DATA_PADGRP, and XMISSION. • TMS: If the terminal is subtending a TOPS message switch (TMS), enter TMS and datafill refinement fields POSTYPE, PROTOCOL, TPCNO, and TPCPSNO. • IP: For a position that is IP based, enter IP and datafill subfields IPCOMID and URESOK..

DATATYPE = DMODEM

If the value in subfield DATATYPE is DMODEM datafill fields POSTYPE, PROTOCOL, DATA_CIRCUIT, DATA_PADGRP, and XMISSION as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	POSTYPE	MP or BP	Position type. Datafill this field, which defines the type of position at the specified position number, as follows: • Enter BP for a dedicated directory assistance/intercept terminal (The Dedicated DA Subtending TMS feature must be present in the office). • Enter MP for a TOPS multi-purpose position (MP) terminal.
	PROTOCOL	ASCII or OPP	Protocol. This field defines the format of the data messages sent between the DMS switch and the TOPS terminal. Datafill this field as follows: • Enter ASCII for the ASCII based protocol. • Enter OPP for the open position protocol (if feature package NTX0049, Open Position Protocol, is present in the load).
	DATA_ CIRCUIT	see subfield	Data circuit members. This field consists of subfield PMTYPE and refinements.
	PMTYPE	DCM, DTC, LTC or TM8	Peripheral module type. If the trunk is assigned to a digital carrier module (DCM), enter DCM and datafill refinements DCMNO, DCMCKTNO, and DCMCKTTS. If the trunk is assigned to a digital trunk controller (DTC), enter DTC and datafill refinements DTCNO, DTCCKTNO, and DTCCKTTS. If the trunk is assigned to a line trunk controller (LTC), enter LTC and datafill refinements LTCNO, LTCCKTNO, and LTCCKTTS. If the trunk is assigned to a trunk module, enter TM8 and datafill refinements TMNO and TMCKTNO. Entry values other than those listed are not valid.

TOPSPOS (continued)

PMTYPE = DCM (and DATATYPE = DMODEM)

If the value in subfield PMTYPE is DCM, datafill fields DCMNO, DCMCKTNO, and DCMCKTTS as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	DCMNO	numeric (0 to 511)	Digital carrier module number. Enter the DCM number assigned to the trunk.
	DCMCKTNO	numeric (0 to 4)	Digital carrier module circuit number. Enter the DCM data circuit card number assigned to the trunk.
	DCMCKTTS	numeric (1 to 24)	Digital carrier module circuit time slot. Enter the DCM circuit card DS-1 signaling time slot number assigned to the trunk. For most efficient use of circuits, use circuits 5 to 8, 13 to 16, or 21 to 24 for data.

PMTYPE = DTC (and DATATYPE = DMODEM)

If the value in subfield PMTYPE is DTC, datafill fields DTCNO, DTCCKTNO, and DTCCKTTS as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	DTCNO	numeric (0 to 511)	Digital trunk controller number. Enter the DTC number assigned to the trunk.
	DTCCKTNO	numeric (0 to 19)	Digital trunk controller circuit number. Enter the DTC data circuit card number the trunk number is assigned. Use only odd circuit numbers for data.
	DTCCKTTS	numeric (1 to 24)	Digital trunk controller circuit time slot. Enter the DTC circuit card DS-1 signaling time slot number assigned to the trunk. Assignments must be consecutive, with data assigned the upper numbered circuit.

PMTYPE = LTC (and DATATYPE = DMODEM)

If the value in subfield PMTYPE is LTC, datafill fields LTCNO, LTCCKTNO, and LTCCKTTS as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	LTCNO	numeric (0 to 511)	Line trunk controller number. Enter the LTC number assigned to the trunk.
	LTCCKTNO	numeric (0 to 19)	Line trunk controller circuit number. Enter the LTC data circuit card number assigned to the trunk.
	LTCCKTTS	numeric (1 to 24)	Peripheral module circuit time slot. Enter the LTC circuit card DS-1 signaling time slot number assigned to the trunk.

PMTYPE = TM8 (and DATATYPE = DMODEM)

If the value in subfield PMTYPE is TM8, datafill fields TMNO and TMCKTNO as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	TMNO	numeric (0 to 2047)	Trunk module number. Enter the number assigned to the trunk module on which the trunk is mounted.
	TMCKTNO	numeric (1 to 29)	Trunk module circuit number. Enter the trunk module circuit number assigned to the trunk. Assignments must be consecutive, with data circuits being the upper numbered circuit.

TOPSPOS (continued)

All PMTYPE values (and DATATYPE = DMODEM)

For all values of subfield PMTYPE, datafill fields DATA_PADGRP and XMISSION as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	DATA_ PADGRP	alphanumeric (1 to 5 characters)	Data circuit pad group. Enter the name of the pad group assigned to this device. The name of the pad group must be datafilled in table PADDATA.
	XMISSION	BELL108, BELL202, BELL212H, or BELL212L	Transmission type. This field defines the baud rate used for data communication over the digital modem. Datafill this field as follows: • Enter BELL108 to provide reception and/or transmission (rx/tx) at 300 bits per second (BPS). • Enter BELL202 to provide rx/tx at 300/1200 BPS. • Values BELL212L and BELL212H are reserved for future use.

DATATYPE = TMS

If the value in subfield DATATYPE is TMS, datafill fields POSTYPE, PROTOCOL, TPCNO, and TPCPOSNO as described below.

Field descriptions for conditional datafill (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	POSTYPE	MP or BP	Position type. This field defines the type of position at this position number. Datafill this field as described below: • Enter BP for a dedicated directory assistance/intercept terminal (the Dedicated DA Subtending TMS feature must be present in the office). • Enter MP for a multi-purpose terminal (TOPS MP). ***Note:*** The two type 1 MPX positions, with DA search links, per token ring must be assigned to different VPCs for reliability. They must not be assigned the same group of four positions associated with the same VPC for this table.
	PROTOCOL	ASCII or OPP	Protocol. This field defines the format of the data messages sent between the DMS switch and the TOPS terminal. Datafill this field as follows: • Enter ASCII for the ASCII based protocol. • Enter OPP for the open position protocol (if feature package NTX0049, Open Position Protocol, is present in the load).
	TPCNO	numeric (0 to 254)	TOPS position controller number. Enter the number of the TOPS position controller (TPC). Entry values outside this range are not valid. When functionality TOPS Increased Multiplexing (EWSS0005) is present and datafilling an MP (whether an operator position or a device) on a TPC, the MP and TPC must be connected to the same TMS. Otherwise, the entry is blocked and an error message is given.

TOPSPOS (continued)

Field descriptions for conditional datafill (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	TPCPOSNO	numeric (0 to 95)	High speed line interface card number. Enter the number of the high speed line interface (HSLI) card to which the TOPS MP position is connected. If the value in field PROTOCOL is OPP, the maximum value allowed for this field is dependent upon the maximum cluster size, which is defined in field CLUSTRSZ in table TPCINV. Although the valid range of this field is 0 to 95, current engineering restrictions limit entries for this field to a maximum value of 20. If the value in field PROTOCOL is not OPP, entry values must be within the range 0 to 3. The two VPC data links for each group of four MPX positions must be assigned TPC position numbers 0 or 1 in field TPCPOSNO. The primary data link is assigned TPCPOSNO 0 and the secondary data link is assigned TPCPOSNO 1. In the MPX, utility DEFPOS assigns a position number that uniquely defines each position within the token ring. Primary VCP positions must be assigned a position number that is a multiple of four, such as 0, 4 or 8. Secondary VPC links are assigned the next sequential position number, such as 1, 5 or 9.
	TPCPOSNO (continued)		For MPX positions with duplicated data links, each group of four that has two data links must have these two data links assigned as TPCPOSNO 0 and TPCPOSNO 1. In TOPS translations, refer to TOPS MPX Guide in the OSI section for further details. When functionality TOPS Increased Multiplexing (EWSS0005) is present, the range for field TPCPOSNO is changed from 0-3 to 0-19. This means that for a TPC subtending a TMS, up to 20 operator positions can be datafilled. When doing a listing of the range at the MAP, it shows 0-95; however, only numbers in the range 0-19 are allowed. Without this functionality, the range is 0-3.

DATATYPE = IP

If the value in subfield DATATYPE is IP, datafill fields IPCOMID and URESOK as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	IPCOMID	0 to 1023	IP data link communications identifier. This field is an index into table IPCOMID.
	URESOK	N or Y	Unconnected Restricted Idle state is okay. This field indicates whether it is okay for the position to remain in the URES maintenance state indefinitely (rather than transitioning to SYSB) if an in-service request is not received from the position within 15 seconds. Enter Y to remain in the URES state or N to change to the SYSB state.

All tuples

For all tuples, datafill field POSAREA as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
POSAREA		see subfield	Position area. This field consists of subfield POS and refinements.
	POS	ASST, IC or OPR	Position type. This field specifies the TOPS position type. Datafill this field as follows: • IC: To specify an in-charge position, enter IC and datafill refinements TEAM and SVCSET. One position of this type is required for each team. • ASST: To specify an assistance position, enter ASST and datafill refinements TEAM and SVCSET. The ASST position type is similar to the IC position type, but has no query capabilities. There can be more than one ASST position in each team. • OPR: To specify a regular operator position, enter OPR and datafill refinements TEAM and SERVPROF.

TOPSPOS (continued)

POS = ASST or IC

If the value in subfield POS is ASST or IC, datafill fields TEAM and SVCSET as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	TEAM	numeric (0 to 30)	Team. Enter the number of the team that the position belongs. Entry values outside this range are not valid.
	SVCSET	TASERV, DASERV, INTCSERV, or ALL	Call services set. Enter one of the following values to specify the services that can be provided by the operator position: • Enter TASERV to specify that this operator can handle toll and assist call types. • Enter DASERV to specify that the operator can handle directory assistance call types. • Enter INTCSERV to specify that the operator can handle intercept call types. • Enter ALL to specify that the operator can handle all call types. Entry values other than those listed are not valid. ***Note:*** The DASERV option can be used only if a position is a TOPS MP position and the DA software is present. Options DASERV and INTCSERV must not be datafilled simultaneously if both services are provided by separate vendors as datafilled in table SERVICES.

POS = OPR

If the value in field POS is OPR, datafill fields TEAM and SERVPROF as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	TEAM	numeric (0 to 30)	Team. Enter the team for the position. Values outside of the range are invalid.
	SERVPROF	numeric (0 to 254)	Service profile number. Enter the service profile number for the position. The corresponding service profile is datafilled in table TQSVPROF. For TOPS MP positions with ASCII protocol, the service profile corresponding to the profile number cannot contain a service with a corresponding service number in table TQMSSERV greater than 15. Entry values other than those listed are not valid.

Datafill example

The following example shows sample datafill for table TOPSPOS.

TOPSPOS (continued)

MAP display example for table TOPSPOS

```
POSNO                                VLPATH
                                          DATAPATH
                                                  POSAREA
_____________________________________________________________

170      TDM  TM8 0 24    NPDGRP    2X72AA
         DMODEM SP ASCII TM8 8 19  NPDGRP BELL108
                                OPR 6 QMSCAM CORECAM 80

505      TDM  TMS 0 3 5   NPDGRP    DS1SIG
                                TMS MP OPP 116 2
                                              OPR 6 50

540      TDM  TMS 0 0 3   NPDGRP    DS1SIG
                                TMS MP ASCII 0 0
                                OPR 6 QMSCAM CORECAM 80

2000                        PKTV  POSCLLI1
                                        IP 4 N
                                OPR 6 QMSCAM CORECAM 50
```

Error messages

The following error messages apply to table TOPSPOS.

Error messages for table TOPSPOS (Sheet 1 of 2)

Error message	Explanation and action
`THE POSITION NUMBER MUST BE IN THE RANGE (0-19).`	When functionality TOPS Increased Multiplexing (EWSS0005) is present and an attempt is made to datafill an operator position number in field TPCPOSNO greater than 19.
`THE POSITION NUMBER MUST BE IN THE RANGE (0-3).`	When TOPS Increased Multiplexing (EWSS0005) is not present, and an attempt is made to datafill an operator position number in field TPCPOSNO greater than 3.
`The MP and the TPC must be on the same TMS.`	When TOPS Increased Multiplexing (EWSS0005) is present and an attempt is made to datafill an MP (whether an operator position or a device) on a TPC that is not connected to the TMS that the MP is connected.

Error messages for table TOPSPOS (Sheet 2 of 2)

Error message	Explanation and action
POSITION WITH IP DATATYPE MUST USE PKTV VLTYPE.	An attempt to add a tuple with a TDM voice link type and an IP data type will produce the following error message. The tuple addition is disallowed.
WARNING: PLACEHOLDER CLLI USED. THIS POSITION CANNOT SUPPORT DELAY CALLS OR NON-OC MONITORING.	This warning appears when a placeholder CLLI is datafilled. Placeholder CLLIs are CLLIs that have no table TRKGRP datafill. A placeholder CLLI is employed in a host when no voice links to positions are needed, since OC-IP Host Voice Bypass is in use. The tuple addition is allowed.
WARNING: NO TRUNK MEMBERS EXIST FOR THIS TRUNK GROUP. DATAFILL TABLE IPINV TO DEFINE TRUNK MEMBERS.	This warning appears when a voice link CLLI is datafilled and the CLLI has table TRKGRP datafill, but no actual members exist because no IPGW in table IPINV is datafilled with the CLLI name. The tuple addition is allowed.
TRUNK MUST BE ASSIGNED DYNAMIC POS OPTION IN TABLE TRKOPTS	This error message appears when attempting to add a CLLI which has table TRKGRP datafill but is not defined as a POS dynamic trunk in table TRKOPTS. The tuple addition is not allowed.

Supplementary information

This section contains additional information related to table TOPSPOS.

Adding, Deleting, and Modifying Positions

Each TOPS position requires a tuple in table TOPSPOS. To add an in-charge, assistance, or regular operator position, follow the procedure shown in the following example. If the tuple is entered using the no-prompt version of the ADD command, fields SVCSET and XFRSET must be terminated with a $. If the tuple is entered on a field-by-field basis, fields SVCSET and XFRSET can be terminated by either a $ or a carriage return.

To delete a position, delete the tuple that describes that position, as shown in the following example.

TOPSPOS (continued)

Do not use the CHANGE command to modify information about a position. The following steps must be performed to change information in table TOPSPOS:

- From the trunk test positions (TTP) level of the maintenance and administration position (MAP) command interpreter (CI), place the positions to be changed in the installation busy (INB) mode.
- Edit table TOPSPOS.
- Delete the tuples to be changed in table TOPSPOS.
- Re-add the changed tuples to table TOPSPOS.
- Quit from the table editor.
- From the TTP level of the MAP CI, busy (command BSY) and return to service (command RTS) each position deleted and re-added in table TOPSPOS.

Other comments

The following example shows the commands used at the MAP to change any information about general operator positions 100 and 101.

CI:

- MAPCI;MTC;TRKS;TTP
- POST G TOPSPOS 100
- BSY;BSY INB;HOLD
- POST G TOPSPOS 101
- BSY;BSY INB;HOLD
- TABLE TOPSPOS
- POS 100; DEL
- POS 101; DEL
- ADD 100 DCM 0 1 1 NPDGP DS1SIG OPR 1 TASERV $ GEN XFR1 XFR2 $ +
- NT4X71 DCM 0 1 2 NPDGP BELL108
- ADD 101 TM8 1 20 NPDGP 2X72AC IC 1 TASERV $ +
- NT4X71 TM8 1 21 NPDGP BELL108
- QUIT
- POST G TOPSPOS 100;BSY;RTS;HOLD

- POST G TOPSPOS 101;BSY;RTS;HOLD
- QUIT ALL

Table history

TOPS15

Field VLPATH is added with value PKTV for new configuration IP positions. Field DATATYPE has new value IP. OC-IP error messages are added. These changes are made by features 59006658 and 59022293 in functionality OPP Over IP, OSB00101.

TOPS13

Under field POSTYPE, value SP is removed for DATATYPE = DMODEM and TMS. This change is made by feature 59012553 in functionality Code Removal of TOPS IV, OSB00001.

TOPS12

Under the POSAREA, when POS = OPR, subfields ACDAREA, ACD, SVCSET, XFRSET, and CAMLOC are deleted. This change is made by feature 59006865 in functionality MD Code Removal and ReEngineering, OSB00001.

TOPS06

Added warning to `Table size' section about exceeding maximum limit.

TOPS04

Restart requirement removed for size increase per feature AN1456 in functionality TOPS Robustness, OSB00001.

TOPS03

Added feature AF3003 in TOPS Increased Multiplexing (EWSS0005) comments to fields TPCNO and TPCPOSNO and error messages: Range of TPCPOSNO is limited to 0-19, and MP and TPC must be on same TMS.

BCS35

Added OPP value to PROTOCOL field. Field TMSCKTTS changed. Field PMTYPE description and refinement information changed to remove incorrect indication that DTCI is a valid entry.

TOPSQAGE

Table name

TOPS Queue Aging Table

Functional description

This table is deleted in release TOPS12 since it is specific to automatic call distribution (ACD), which is manufacturer discontinued in release TOPS12. For further information, refer to feature 59006865 in functionality MD Code Removal and ReEngineering, OSB00001.

TOPSR2

Table name

TOPS With R2 Protocol Table

Functional description

Table TOPSR2 maps the incoming R2 call information into Traffic Operator Position System (TOPS) fields. Table TOPSR2 is indexed by an R2 category and the tuples contain TOPS information such as service class, no automatic message accounting (AMA) indicator and call origination.

If the billing category is received during the call processing of an incoming integrated business network (IBN) R2 call to TOPS, then it is always used as the index into table TOPSR2. The calling category is only used to index table TOPSR2 if the billing category is not present in the call information.

Table TOPSR2 is initialized with all possible tuples added to the table. The initial datafill contains default values for all tuples. Deletions from the table are not allowed.

Datafill sequence and implications

There is no requirement to datafill other tables prior to table TOPSR2.

Table size

0 to 19 tuples

Table size is dynamically determined by the number of tuples added in field R2CAT.

TOPSR2 (continued)

Datafill

The following table lists datafill for table TOPSR2.

Field descriptions (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
R2CAT		ANI_FAILURE ATME, COIN, DATA, FREE_CALL, MTC_EQ, OPER, OPER_INTL, PBX, PRIORITY, REGULAR, REGULAR_ INTL, SHARED_1, SHARED_2, SHARED_3, SPARE_CAT1, SPARE_CAT2, TIME_AND_ CHG, or UNIT_FEE_ COIN	R2 category. Enter up to 19 category activities that were received from the originating office as a forward signal. If less than 19 activities are required, end the list with a $ (dollar sign). For further information, refer to table TOPS.
SERV		COIN, HOTEL or STATION	Traffic Operator Position System service class. Enter the Traffic Operator Position System (TOPS) service class that applies to the category for this tuple. The default value for this field is STATION.
NOAMA		Y or N	No automatic message accounting indicator. Enter Y (yes) if the call is handled as NO AMA. Enter N (no) if the call is handled as a normal call. The default value for this field is N.

Field descriptions (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
ORIGACT		DEFAULT or OVERWRITE	Traffic Operator Position System origination action. This field specifies what action is taken with field ORIG. Enter DEFAULT if the value in field ORIG is only used if no origination has been set in translation to the TOPS system (using an S selector or table R2BILSRV). Enter OVERWRITE if the value in field ORIG is used as the call origination regardless of what origination was set in translating to TOPS. The default value for this field is DEFAULT.

TOPSR2 (continued)

Field descriptions (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
ORIG		APS, ALM, BOOK, CAMA, COINTEST, DATABASE, DD, DELAY, FOR555, HOM555, INTC, INTS, MOBILE, OA, OCC141, OCC151, OH, OOCOVS, OOCMAN, OOC801, OOCDELAY, OOCDB, RCAMA, SPARE1, SPARE2, SPARE3, SPARE4, SPARE5, TS, TSUB, UNSPEC, 121, 131, 141, 151, 161, 171, 181, 191, 555, 211, 311, 411, 511, 611, 711, 811, 911, 999, 1150, 1151, 1152, 1153, 1154, 1155, 1156, 1157, 1158, 1159, 1160, 1161, or 1162	Traffic Operator Position System origination. This field specifies an origination applicable to the category. If the entry in field ORIGACT is DEFAULT, then the value in field ORIG is only used if no origination is set in translation to the TOPS system. If the entry in field ORIGACT is OVERWRITE, then the value in field ORIG is used as the call origination regardless of what origination was set in translating to TOPS. Enter the type of origination. The default value for this field is OA.

Datafill example

The following example shows sample datafill for table TOPSR2.

MAP display example for table TOPSR2

```
          R2CAT     SERV NOAMA    ORIGACT      ORIG
_____________________________________________________

       REGULAR STATION      N    DEFAULT        OA
```

Table history

BCS35

Table TOPSR2 was introduced.

TOPSSN

Table name

TOPS Mapping SNID to Service Number (SN) Table

Functional description

Table TOPSSN provides a mapping from service number index (SNID) to displayed or outpulsed service number (SN), and alternate SNID, if any.

For related information, refer to table TOPSSNCD.

Datafill sequence and implications

There is no requirement to datafill other tables prior to table TOPSSN.

Table size

0 to 2000 tuples

Datafill

The following table lists datafill for table TOPSSN.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
KEY		1 to 9999	Service number index. Enter the service number (SN) index used to select the applicable record in table TOPSSN from table TOPSSNCD.
SN		0 to 9 (up to 11 digits)	Service number. Enter the number to be outpulsed to reach the service agency corresponding to this service number index.
ALTAREA		see subfield	Alternate area. This field consists of subfield ALTTYPE.

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	ALTTYPE	DISPLAY NIL or OUTPULSE	Alternate selector. Enter DISPLAY if the SN is displayed without being outpulsed and there is an alternate service number identified in refinement SNID below. Datafill refinement SNID. Enter NIL if the SN is to be outpulsed and there is no alternate service number. No refinements require datafill. Enter OUTPULSE if the SN is outpulsed and there is an alternate service number identified in refinement SNID below. Datafill refinement SNID.
	SNID	0 to 10,000	Alternate service number index. If the entry in subfield ALTTYPE is DISPLAY or OUTPULSE, datafill this refinement. Enter the service number index into table TOPSSN to identify the alternate service number index.

Datafill example

The following example shows sample datafill for table TOPSSN.

MAP display example for table TOPSSN

```
KEY          SN         ALTAREA
_____________________________________________________

  4           3  DISPLAY  9900
```

TOPSSNCD

Table name

TOPS Mapping Service Number Code, NPA-NXX, and Locality Reference Code to Service Number Index Table

Overview

The Traffic Operator Position System (TOPS) service number tables are used in a switching unit with the TOPS as part of a feature to reduce TOPS operator work time while dialing forward to reach a service agency (fire, ambulance, or other) directory number (DN) applicable to the originating subscriber.

The TOPS operator need only key one digit, the service number code (SNCD), to outpulse the service number for the service agency applicable to the originating subscriber provided.

The subscriber NPA-NXX, or equivalent, is determined automatically (refer to the section “Automatic determination of originating subscriber NPA-NXX" and figure 1 below). Otherwise, the TOPS operator must also key in the calling number.

A single service agency covers the subscriber NPA-NXX area. Otherwise the TOPS operator must also key in a two-digit reference code (REFCD) to identify the particular service agency within the subscriber's NPA-NXX applicable to the originating subscriber.

Automatic determination of originating subscriber NPA-NXX

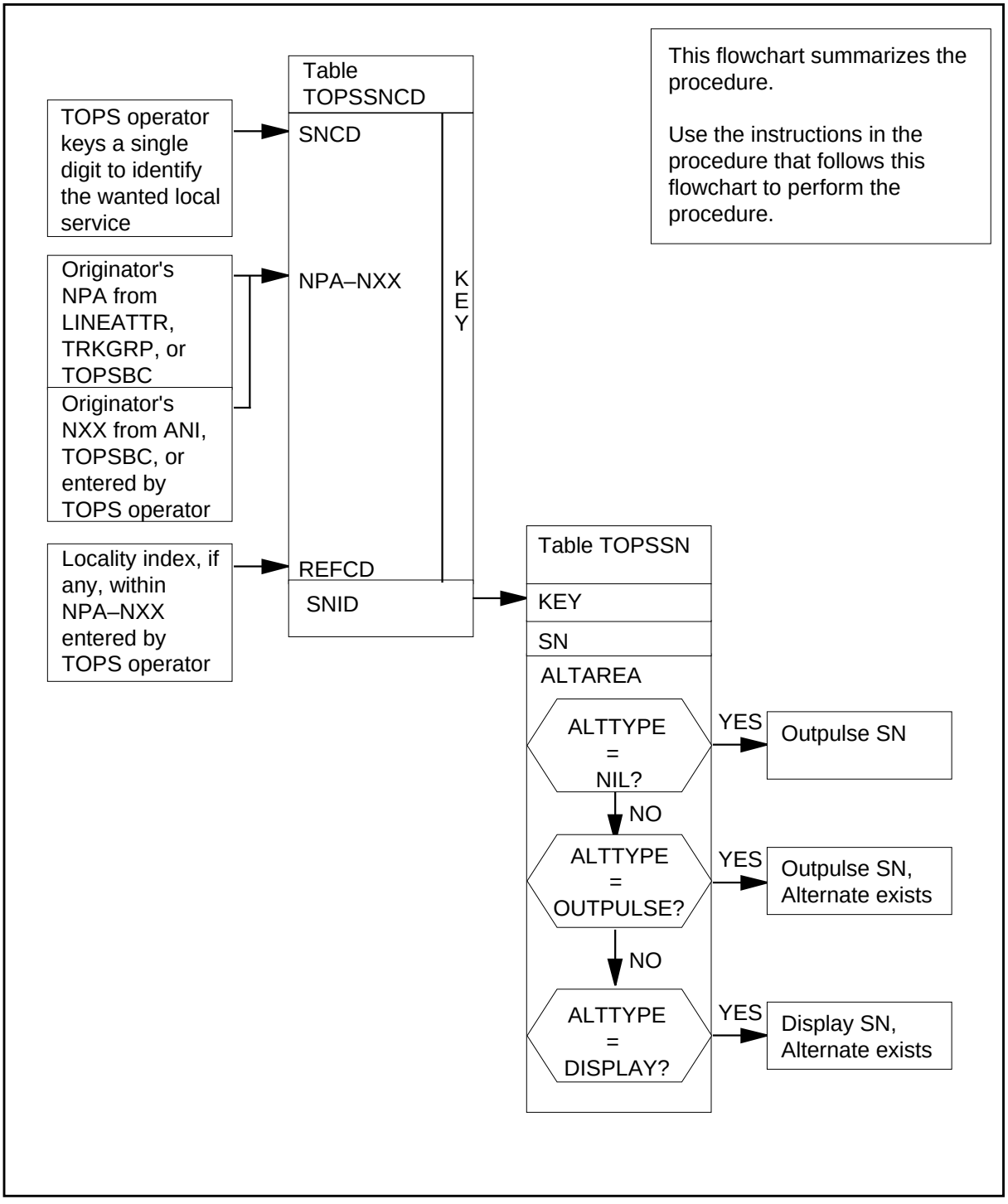
The numbering plan area (NPA) code for customers reaching a TOPS operator is determined from table LINEATTR, table TRKGRP, or table BILLCODE, field BILLCODE.

The station (NXX) code for customers reaching a TOPS operator is determined from the ANI spill of the calling number, or table BILLCODE field BILLCODE.

When automatic determination of the NPA-NXX is not possible, the TOPS operator must follow the procedure for entering the calling number.

TOPSSNCD (continued)

Service Number Tables Flow Diagram



TOPSSNCD (continued)

Functional description

Table TOPSSNCD provides a mapping of requested SNCD, originator's NPA-NXX or equivalent, and originator's locality reference code (REFCD), if any, to the service number index (SNID) into table TOPSSN (refer to figure Figure , "Service Number Tables Flow Diagram" on page -253).

Datafill sequence and implications

There is no requirement to datafill other tables prior to table TOPSSNCD.

Table size

0 to 32 000 tuples

Datafill

The following table lists datafill for table TOPSSNCD.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
KEY		see subfields	Key into table TOPSSNCD. This field consists of subfields SNCD, DIGITS, and REFCD.
	SNCD	0 to 9	Service number code. Enter the SNCD that the TOPS operator keys in to identify the required service agency number to outpulse (a TOPS operator requests outpulsing to a service number [SN] using the keys KP SN in sequence with the SNCD and the START key).
	DIGITS	0 to 9 (up to 6 digits)	Originator's NPA. Enter digits representing the originator's NPA-NXX or equivalent (billcode from table TOPSBC).
	REFCD	0 to 9 (2 digits)	Locality reference code. When more than one service agencies are available within the NXX area, enter a two digit code identifying the service agency applicable to the originator of the call. Otherwise, enter $.
SNID		1 to 10,000	Service number index. Enter the SNID into table TOPSSN to identify the number to outpulse to reach the applicable service agency. Any entry outside the range indicated for this field is invalid.

Datafill example

The following example shows sample datafill for table TOPSSNCD.

MAP display example for table TOPSSNCD

```
         KEY   SNID
_____________________________________________________________

0  61323  $     1
0 613256  $     3
0 613824 21   131
0 613824 22   132
0 613839  $   238
0 819771  $   234
1  61323  $     9
1 613256  $     4
1 613839  $   237
1 819771  $   233
2  61323  $     2
2 613256  $     5
2 613839  $     2
2 819771  $   235
3  61323  $     6
3 613256  $     7
3 819771  $  1236
5  61323  $    11
6 613231  $     0
8    613  $   239
```

TOPSTERM

Table name

TOPS Keying Sequence Enabling ANI to OOC Table

Functional description

Table TOPSTERM is used in a DMS TOPS office to define the TOPS operator keying sequence that results in the call being forwarded to the Overseas Operator Centre (OOC) with ANI spill. No billing is then done at the TOPS office.

Note: As of release TOPS04, this table is no longer supported since OOC is no longer supported.

This table is deleted in release TOPS15 by feature 59022361 in functionality EOL for TOPS15.

TOPSTLDN

Table name

TOPS Temporary Local Directory Numbers

Functional description

Table TOPSTLDN contains all TLDNs which can be used by TOPS when providing a Wireless Intelligent Network (WIN) service such as ADACC with release. When a wireless DA call is initiated and TOPS receives an AnalyzedInformation INVOKE or a GSM InitialDP, TOPS selects an idle TLDN from Table TOPSTLDN and sends it back to the originating mobile switching center (MSC).

Tuples in Table TOPSTLDN define pools of TLDNs from a low TLDN to a high TLDN. Each pool has a numerical index, the pool ID. Two new tables, MSCIDMAP and MSCINMAP map MSC identifiers to one or more pool IDs. When an MSC sends an AnalyzedInformation or InitialDP, the MSC identifier in the message is used to index Table MSCIDMAP (IS-41) or Table MSCINMAP (GSM) to determine a pool ID. An idle TLDN is then selected from the pool in Table TOPSTLDN and sent back to the MSC.

A maximum of 2,000 TOPS TLDNs can be defined. The holding time of a TOPS TLDN is very short (around one second), so this number of TLDNs should be able to accommodate heavy TOPS WIN traffic.

Datafill sequence and meaning

Table TOPSTLDN must be datafilled before Table MSCIDMAP and Table MSCINMAP. The datafill sequence is as follows:

- Pool IDs must be datafilled in table TOPSTLDN before they can be used in pool lists in Table MSCIDMAP or Table MSCINMAP.
- Pool IDs cannot be deleted from Table TOPSTLDN if they are in use in Table MSCIDMAP or Table MSCINMAP.

Table MSCIDMAP has no dependency on Table MSCINMAP and vice versa.

Table size

0 to 2000 tuples.

The memory for all 2000 tuples (ten words each) is allocated when the first tuple is added. Memory is deallocated when the last tuple is deleted.

TOPSTLDN (continued)

Datafill

The table that follows lists datafill for table TOPSTLDN:

Field descriptions

Field	Subfield	Entry	Explanation and action
KEY	None	0 to 1999	Pool Identifier: an integer field identifying the pool of TLDNs.
FROMDIGS	None	up to 18 digits	From Digits - the start of the TLDN digit range for this tuple.
TODIGS	None	up to 18 digits	To Digits - the end of the TLDN digit range for this tuple.

Datafill example

The figure that follows shows sample datafill for table TOPSTLDN:

MAP display example for table TOPSTLDN

```
TABLE: TOPSTLDN
KEY FROMDIGS     TODIGS
---------------------
0       2012201234 2012201234
1       2013364400 2013364899
2       2018591400 2018591489
```

TOPS TLDNs can be datafilled singly or in bands. The datafill shown defines the following TOPS TLDNs:

- 2012201234 defines one TLDN.
- 2013364400 through 2013364899 defines 500 TLDNs.
- 2018591400 through 2018591489 defines 90 TLDNs.

Additional information

During dump and restore from SN06 to a later release, if Table TOPSTLDN contains datafill on the SN06 side, it is restored into Table TOPSTLDN on the restore side with sequential pool IDs beginning with 0.

Table history

SN07 (DMS)

Modified to use a pool ID as the key field by feature A00003687.

SN06 (DMS)

Table initially created in SN06 by feature A00000816 to allow wireless calls that receive TOPS Directory Assistance (DA) to be released back to the originating Mobile Switching Center (MSC) for call completion.

TOPSTOPT

Table name

Traffic Operator Position System Trunk Options Table

Functional description

Table TOPSTOPT is used to specify different options for Traffic Operator Position System (TOPS) trunks. The Automatic Call Distribution (ACD) field is used to specify the processing used on a trunk group basis. An entry of QMSCAM in field ACD is not permitted in BCS32. The ACD used is TOPSACD for trunks not datafilled in this table for BCS32.

Standard dump and restore applies after BCS32. This table can be left empty. If the table is empty, TOPSACD is used internally.

Fields SPIDPRC and TRKSPID interact as follows.

Control of SPID processing by fields SPIDPRC and TRKSPID

Field SPIDPRC	Field TRKSPID	Effect on calling AO SPID assignment
N	N	SPID processing is not performed, so no value is assigned to the calling AO SPID. This condition applies even if an attempt is made to assign one. An AO SPID assignment attempt can be made from an OLNS query, table DNSCRN, and so forth.
N	Y nnnn	SPID processing is not performed, so no value is assigned to the calling AO SPID. A default SPID value `nnnn' can be entered, but does not effect SPID assignment.
Y	N	SPID processing occurs, but the calling AO SPID has no value at this point. SPID assignment may occur later (for example, from an OLNS query, table DNSCRN, and so forth).
Y	Y nnnn	SPID processing occurs, and a default SPID value `nnnn' is assigned to calling AO SPID. This initial SPID value may be overridden later (for example, from an OLNS query, and so forth).

The table below shows how field DISPSPID and the indicated parameter combinations determine the SPID display.

Field and parameter interactions for SPID display

Table TOPSTOPT field DISPSPID value	Table TOPSPARM parameter OPP_ALWAYS_SEND_SPID_INFO value	CSPID display sent to position?
N	N	no
Y	N	yes
N	Y	yes
Y	Y	yes

Datafill sequence and implications

The following tables must be datafilled before table TOPSTOPT.

- CLLI
- TRKGRP
- SPID
- WSALEOPT
- TRKOPTS (if field MAXCONNS is set to a non-zero value)

If the common language location identifier (CLLI) in table TOPSTOPT is an Integrated Business Networks (IBN) trunk, the CLLI is interlocked to the corresponding CLLI in table TRKGRP(IBN). An IBN trunk CLLI must be datafilled in table TRKGRP(IBN) prior to being datafilled in table TOPSTOPT.

Table size

0 to 8191 tuples

Actual table size is based on the entry TRKGRP in table DATASIZE.

Datafill

The following table lists datafill for table TOPSTOPT.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
GRPKEY		see subfield	Group key. GRPKEY consists of subfield CLLI.
	CLLI	alphanumeric (1 to 16 characters)	Common language location identifier. Enter a valid incoming or two-way trunk CLLI used for TOPS traffic. This entry must be datafilled in table CLLI and table TRKGRP. If the CLLI is an IBN trunk, it must be datafilled in table TRKGRP(IBN) before being datafilled in table TOPSTOPT.
ORGAREA		see subfield	Originating area. This field consists of subfield ORGCRIT_SEL.
	ORGCRIT_ SEL	Y or N	Originating criterion selector. If calls are to be CT4Q refined by the originating criteria (table CTQORIG and associated tables), enter Y and datafill refinement ORGCRIT. Otherwise, if there is no criterion, enter N and do not datafill ORGCRIT.
	ORGCRIT	name from TQORGNAM	.Originating criteria. This field is valid only if field ORGCRIT_SEL = Y. Enter a call originating location name from table TQORGNAM. This field segregates traffic on a trunk group basis according to the calling number and is used in table CT4QORIG.
DISPCLG		Y or N	Display calling number. Enter Y if the calling number is displayed at the TOPS terminal for use by the TOPS operator. The default value is N, calling number is not displayed.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
ADASERV		NONE, ADAS, or ADASPLUS	Automated directory assistance service availability. ADAS service allowed for calls on trunk. The values are defined as follows: • NONE - Do not to use any ADAS system. • ADAS - Use the ADAS system in functionality ADAS, OSDA0004. • ADASPLUS - Use the ADAS system in functionality DA Automation I/F, OSDA0006. The default value is NONE.
ADASANS		NA, IMMEDIATE, or DELAYED	ADAS answer supervision. Controls when answer supervision is returned to the originating trunk. Entries are: • NA - Not applicable. Use when ADASERV is set to anything other than ADAS (i.e. NONE or ADASPLUS). When ADASERV=ADAS, ADASANS cannot be NA. • IMMEDIATE - Answer supervision is provided when the incoming trunk is initially connected to ADAS. • DELAYED - Answer supervision is not provided until the call arrives at the operator position. DELAYED can only be used for Intertoll or TOPS ONI trunks.
ANITOCLI		see subfield	Automatic Number Identification to Calling Line Identification. This field consists of subfield ANI2CLI.
	ANI2CLI	Y or N	Automatic Number Identification to Calling Line Identification. Enables conversion of ANI on an incoming trunk to CLI for an outgoing ISUP trunk. If set to N, ANI is not forwarded as CLI. If set to Y, ANI may be forwarded as CLI, depending on tables ISUPTRK and TOPSPARM. When set to Y, datafill subfield BLKCLI. CLI is forwarded if field ANITOCLI is set to Y in tables ISUPTRK and TOPSTOPT, and parameter FORWARD_ANI_AS_CLI is set to Y in table TOPSPARM.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
	BLKCLI	Y or N	Block Calling Line Identifier. This subfield is present only if field ANITOCLI = Y. Set BLKCLI = Y to mark all calls incoming on the given trunk as `presentation restricted'; that is, mark the caller's ID (number) as blocked. Set to N to allow presentation of the CLI. When set to N, table TDBCLASS, field BLKCLI is searched before forwarding the CLI with presentation allowed.
OLNSQRY		NONE or ALL	Originating Line Number Screening Query. This field indicates which calls can launch a query on a given incoming trunk. The following are descriptions of the values: • NONE - No OLNS queries are made for incoming calls. • ALL - OLNS queries are made on all calls prior to arrival at the operator position except for intercept and inwards calls. For these two call types, OLNS queries are not made since the subscriber calling number is not signalled to the DMS switch. For the ALL case, if the call is ONI or ANI fail, the query is launched automatically when the calling number is entered by the operator at position. No more than one OLNS query is made for a call unless the calling number is changed as can be done for operator number identification (ONI) or ANI fail calls.
DCIBIDX		0 to 511	Disallowed card issuer blocking index. This field is an index into table DCICSET for blocking calling cards on a trunk group basis. The default value is 0, which means that the disallowed card issuer blocking functionality is not offered on this trunk group. This feld is used the two conditions as follow are true: • The DCIB SOC (ABS00014) is ON • This trunk is not eligible for OLNS; that is, field OLNSQRY = NONE.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
LNPCLGAM		Y or N	Local number portability calling number AMA. This field specifies whether to append a module 720 to the AMA record for calls that originate on the trunk group. The value Y indicates that the LRN of the calling number should be included in the AMA record. The default is N, indicating LNP information for AMA is not required. If a trunk is not datafilled in TOPSTOPT, then LNP information for AMA is not required. A value of N does not always prevent an LNP module for the calling number from being appended to the AMA record. For example, a module 720 is appended if a query is made for the purpose of routing to that calling number. Likewise, a value of Y does not always cause an LNP module for the calling number to be appended to the AMA record. For example, even when this value is Y, no module 720 is appended if an LRN is not datafilled against the incoming trunk group (table TRKGRP) and the parameter LNP_QUERY_FOR_AMA_ONLY does not include the value CLG (table TOPSPARM). This field is only available in North American TOPS switch loads and is specific to TOPS LNP. It is only referenced when TOPS LNP is active.
XLASCHEM		see subfield	Translations scheme. This field consists of subfield NEWXLA.
	NEWXLA	Y or N	New TOPS translations. This field enables this trunk group (field GRPKEY) for use by the new TOPS translations process. Enter Y (enable) or N (disable). For value Y, datafill refinement XLAGRP. The default is N.
	XLAGRP	name from table XLAGRP	Translations group. Datafill this field if field NEWXLA = Y. Enter a translations group name defined in table XLAGRP that contains this trunk group (field GRPKEY).

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
SPIDPRC		Y or N	Service provider identifier processing. This field enables SPID processing for this incoming trunk group. Enter Y (enable) or N (disable). For value N, the earlier method of translations applies for this trunk group. The default is Y. The value of this field does not stop entering a value in field TRKSPID. However, if SPIDPRC= N, the TRKSPID field is not used. Note, this field affects all SPID processing in the whole unbundling functionality group (UNBN0001). Note, the “Functional description" section describes the interaction of fields SPIDPRC and TRKSPID.
TRKSPID		Y or N	Trunk Service Provider Identifier. This field indicates whether a default SPID has been assigned for the given trunk group. If this field is set to N, there is no trunk-associated default SPID. If this field is set to Y, then datafill refinement SPID Note, the “Functional description" section describes the interaction of fields SPIDPRC and TRKSPID.
	SPID	4 characters	Trunk Service Provider Identifier. Datafill this field if TRKSPID = Y with the default SPID to be associated with this trunk group.
BILLSCRN		see subfield	Billing screening. This field consists of subfield BILLSCRN.
	BILLSCRN	Y or N	Billing screening. This field indicates whether screening methods apply to the trunk group. Wholesale screening is considered only if DN screening finds no restrictions for non-directory assistance call completion (non-DACC) calls. The values are as follows: • Y - Enable screening and enter datafill in subfields WSIDX, SCRNIDX, DACCSCRM, and ANIDSCR. • N - Disable screening. This value is the default.
	WSIDX	0-99	Wholesale index. This subfield is an index into table WSALEOPT.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
	SCRNIDX	0-100	Screening index. This subfield is an index into table RESTBIL (TA call) or DARSTBIL (DA call). This subfield is used for trunk based screening when table WSALEOPT field INTRA or INTER contains TRK. Value 100 is nil.
	DACCSCR	Y or N	Directory Assistance Call Completion screening. This subfield indicates whether wholesale screening should apply to Directory Assistance Call Completion (DACC) calls. The values are Y yes) and N (no).
	ANIIDSCR	Y or N	Automatic number identification screening. This subfield determines whether calls should be screened based on the ANI ID. This screening is only considered if DN screening finds no restrictions for non-DACC calls and table WSALEOPT screening is attempted but there are no entries in applicable field INTER or INTRA. The values are as follows: • Y - Enable screening. The signaling type is determined from table TRKGRP field SIGTYPE to access applicable table BELLCAT, OSSCAT, or OPENANI field SCRNIDX (all tables). The applicable table provides an index into applicable table RESTBIL (TA call) or DARSTBIL (DA call). • N - Disable screening.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
ANIFSPL		Y or N	ANI ID failure special. This subfield determines on a trunk group basis whether an ANI failure call should be displayed as ANI success to the operator. An ANI failure occurs if the call is marked as special and no calling number is found in table SPLDNID or DNSCRN. The values are as follows: • Y - An ANI failure is allowed to proceed through the system, no restrictions are marked against the call, and the call is displayed as ANI success. This value is valid only if table TOPSPARM parameter OVERRIDE_ANIFSPL_HANDLING = N, since this parameter has precedence over field ANIFSPL. • N - An ANI failure is displayed as ANI failure as prior to this feature. This value is the default. This behavior applies to calls marked as special by the ANI ID tables (OSSCAT, BELLCAT, and OPENANI) that arrive on STATCLAS = DNLOOKUP or RESTBIL trunk groups. When a call arrives with an ANI ID marked as special, the screening tables are used to identify the calling service (for example, coin, restricted, and so forth). When there is no data in these tables for a call marked as special and the datafill indicates not to mark this call as ANI failure, the calling service is marked as station.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
MAXCONNS		0 to 2016	Maximum connections. This field indicates the maximum number of voice over IP (VoIP) connections that can be initiated on a trunk group reserved for TOPS VoIP calls. Each VoIP connection corresponds to a trunk member. Although the MAP display indicates the range maximum is 32767, the effective maximum is 2016, since a TOPS dynamic trunk group may have at most 2016 members. Entering a value greater than 2016 has no effect; the maximum number of connections for that trunk group remains at 2016. MAXCONNS applies to all TOPS dynamic trunk types: remote OC-IP voice links, host OC-IP voice links, and IP position voice links. For all other trunk types (non-dynamic), set this field to 0. MAXCONNS has no effect on trunk groups that are not datafilled as OC or POS dynamic trunks in table TRKOPTS. In table TRKOPTS, indicate the trunk group is reserved for OC or POS dynamic trunks before setting field MAXCONNS in table TOPSTOPT.
DISPSPID		Y or N	Display SPID. This field determines on a trunk group basis if the SPID display information from table SPIDDB (field SCRNDISP) should be sent to the OPP-compatible position on carrier calls. Enter Y to send the display or N to not send the display. This same functionality is available on an office-wide basis in table TOPSPARM parameter OPP_ALWAYS_SEND_SPID_INFO. Refer to the table at the beginning of this module for the interaction of this parameter and field DISPSPID.
WIRELESS		IS-41, GSM, NIL	Wireless: Indicates if the trunk group carries wireless (cellular) traffic. This field controls whether TOPS can use wireless functions on a non-WIN (non-CAMEL) call. If the field is set to IS-41, all traffic is assumed to be from a wireless phone in an IS-41 network. If the field is set to GSM, all traffic is assumed to be from a wireless phone in an GSM network. If the field is set to NIL (the default value), all traffic is assumed to be from a wireline network.

Datafill example

The following example shows sample datafill for table TOPSTOPT.

MAP display example for table TOPSTOPT

```
GRPKEY ORGAREA DISPCLG ADASERV ADASANS ANITOCLI OLNSQRY DCIBIDX
LNPCLGAM
XLASCHEM SPIDPRC TRKSPID BILLSCRN ANIFSPL MAXCONNS DISPSPID WIRELESS
------------------------------------------------------------------------
-
TEAOSSIC N Y NONE NA Y N NONE 0 N N N N N N 0 N NIL
TOSSIC N Y NONE NA Y N NONE 0 N N N N N N 0 N Y IS41
TBELLBIC N Y NONE NA N NONE 0 N N N N N N 0 N Y GSM
```

Error messages

The following error messages apply to table TOPSTOPT.

Error messages for table TOPSTOPT

Error message	Explanation and action
`The DCIBIDX index must be datafilled in Table DCICSET prior to use in Table TOPSTOPT.`	A DCIBIDX value cannot be datafilled in table TOPSTOPT unitl it has been defined in table DCICSET. If an attempt is made to datafill a DCIBIDX that has not been defined in table DCICSET, the table change is not allowed and this error message is displayed.
`Trunk group not marked as a dynamic trunking application in Table TRKOPTS. MAXCONNS must be 0.`	This message appears when attempting to increase MAXCONNS to a nonzero value for a trunk group not reserved for TOPS VoIP calls. The tuple addition or change is not allowed.
`Warning: MAXCONNS is set to 0. No connections will be allowed on this trunk group.`	This warning message appears when attempting to set MAXCONNS to zero for a TOPS dynamic trunk group. The tuple addition or change is allowed.

Error messages for table TOPSTOPT

Error message	Explanation and action
`Warning: MAXCONNS is set higher than the maximum per trunk group. A maximum of 2016 connections will be used by call processing.`	This warning message appears when setting MAXCONNS to a value higher than 2016. The tuple addition or change is not allowed.
`Warning: TOPS VoIP usage limits are not supported in this load. MAXCONNS will be set to the maximum per trunk group, which is 2016.`	This warning message appears when trying to use VoIP usage limits, but the required DMS-100 software is not present in the load. The tuple addition or change is allowed. The MAXCONNS field will be set to 2016, and VoIP Usage Limits will not be used.

Additional information

The default value of WIRELESS on a dump and restore is NIL. Currently this field is only used when sending a TOPS SMS on a non-WIN (non-CAMEL) call. On an IS-41 WIN or GSM CAMEL call, the originating wireless network type is already known through signaling

Table history

SN07 (DMS)

Field WIRELESS was added by feature A00003687. Documentation updated at SN08 (DMS).

TOPS15

Field MAXCONNS is added by feature 59022293 in functionality OPP Over IP, OSB00101. For a dump and restore from pre-TOPS15 to TOPS15 for a dynamic trunk sets this field to 32767 so that call processing is not affected.

TOPS12

Feature Calling Restrictions for Wholesaling (59006832), UNBN0006, adds the fields BILLSCRN and ANIFSPL.

Field ACDDATA is renamed to ORGAREA and subfields ACD and LOCATION are deleted since they are ACD specific, which is terminated. These changes are made by feature 59006865 in functionality MD Code Removal AND ReEngineering, OSB00001.

TOPS09

Fields XLASCHEM and SPIDPRC are added by feature AF7159 in functionality Translations and routing, UNBN0003.

Field DCIBIDX is now functional. It is added by feature AN1843 in functionality Disallowed Card Issuer Blocking, ABS00014.

TOPS07

Field LNPCLAM is added by feature AF6553 in functionality TOPS LNP, OSEA0008.

Field TRKSPID is added by feature AF6711 in functionality Branding via SPID, ENSV0017.

TOPS06

Field OLNSQRY added by functionality TOPS OLNS Interface, ABS00012.

Field DCIBIDX added, that is currently nonfunctional.

TOPS05

Added field ANITOCLI per functionality GR317/GR394 ISUP to/from TOPS, OSEA0005.

TOPS03

Changed range of field ADASERV from N/Y to NONE, ADAS, and ADASPLUS per feature AN0880 in DA Automation I/F, OSDA0006.

Added field ADASANS per feature AN1027 in ADAS, OSDA0004.

TOPSTRBL

Table name

TOPS Operator Reporting Trouble Disposition Table

Functional description

Table TOPSTRBL enables the Traffic Operator Position System (TOPS) operator to report troubles on a call being handled by the operator.

The TOPS operator can enter either a one-digit (0 to 9) or two-digit code (10 to 99). As a result, TOPS can accept a maximum of 100 codes (0 to 99). Each of the trouble report codes is assigned by the operating company to represent one of the designated trouble conditions listed in the following table.

Trouble reports by type of DMS office

Table TOPSTRBL disposition	Resulting report name	TOPS	EA TOPS	ACTS TOPS	OOC
MTCE	SNAC101	Y	Y	Y	Y
MTCEMAJ	SNAC103	Y	Y	Y	Y
MTCEMIN	SNAC102	Y	Y	Y	Y
NOTISDEV	NOTIS	Y	Y	Y	N
OOCSVC	SNAC104	N	N	N	Y
SNAC	SNAC100	Y	Y	Y	Y
SUSFRAUD	See ref	N	Y	N	N
SUSPCDC	TRK106 or TRK107	N	N	Y	N

Note: Y at the intersection of a trouble report row and type of office column indicates that the report is available.

The types of office shown (vertical columns) are:

- •TOPS
- •EA TOPS (TOPS with Equal Access)
- •Automatic Coin Toll Service (ACTS) TOPS
- •OOC (Overseas Operating Center)

The format used by the DMS program to display each of report names SNAC100 to SNAC103, TRK106, and TRK107 is described in the *Log Report Manual*, 297-1001-840.

TOPSTRBL (continued)

The format of the NOTIS report is described in *AT & T Operator Services Operating Practice*, division C, section 24.

The reports for trouble codes SUSFRAUD (suspected fraud) and CNCREDIT (coin credit) may be found in a Bell Communications Research (Bellcore) document titled *OSS AMA Recording in the New Standard AMA Record Format for Bell Operator Service Systems*.

The devices and conditions for display of aforementioned reports are defined by the operating company in the tables listed in table Table , "Device and condition tables" on page -270.

Device and condition tables

Table	Function
LOGCLASS	Log Class Table
LOGDEV	Log Device Table
TERMDEV	Terminal Device Table

Only one output device can be associated with each trouble code: SNAC or NOTISDEV.

Overseas Operating Center (OOC):

Similar to TOPS operators, the OOC operators initiate messages to report troubles in the switching network. When trouble is encountered by an operator or reported by a subscriber to the operator, the operator presses the trouble key and enters a two-digit code to initiate a trouble report. The trouble report is sent to a plant printer or to the Switched Network Analysis Center (SNAC) reporting system.

In addition to the TOPS trouble reports, SNAC100 through SNAC103, there is a trouble report for OOC service-related problems: SNAC104. SNAC104 is sent to the facilities manager's printer.

Description of the OOC trouble handling system:

The following OOC trouble conditions can occur:

- no ring
- can't hear
- cut off
- reach announcement

- no position release
- reach wrong number

When a trouble condition is detected, the OOC operator generates a log using the following sequence of keystrokes:

Der + tc + Envoi

where:

Der
is the OOC terminal keyboard trouble key

tc
is a one-or two-digit trouble code number, unsigned integer between 0 and 99

Envoi
is the OOC terminal keyboard start key which, acts as a delimeter for all digit-oriented key functions

Invalid trouble codes flash on the OOC terminal screen, but valid codes generate one of the four possible existing TOPS trouble reports or the OOC trouble report as follows:

```
1 – SNAC TROUBLE REPORT             (SNAC100)
2 – NO ALARM MAINTENANCE REPORT     (SNAC101)
3 – MINOR ALARM MAINTENANCE REPORT  (SNAC102)
4 – MAJOR ALARM MAINTENANCE REPORT  (SNAC103)
5 – OOC SERVICE REPORT              (SNAC104)
```

Logs SNAC100 through SNAC103 are available to both TOPS and OOC, but the SNAC104 report is only for OOC.

TOPSTRBL (continued)

Logs SNAC100 through SNAC103 will remain as they existed in the TOPS environment and provide the information as shown in table Table , "SNAC 100-103 report format" on page -272.

SNAC 100-103 report format

SNAC100 date time seqnbr TBL tc oprno posno

INCOMING TRK = clgcpid

OUTGOING TRK = cldcpid

CLGNO = clgno

CLDNO = cldno

SNAC101 through SNAC103 are the same format as SNAC100.

Field contents	*Field description*
seqnbr (system sequential number)	0000 to 9999
TBL (trouble indication)	TBL
tc (trouble code)	positive integer (0 to 99)
oprno (operator number)	positive integer (000 to 999)
posno (position number)	positive integer (000 to 999)
clgcpid (calling subscriber call processing identifier [CPID])	incoming trunk
cldcpid (called subscriber CPID)	outgoing trunk
clgno (calling subscriber number)	character string, increased to maximum 20 columns for OOC
cldno (called subscriber number)	character string, increased to maximum 20 columns for OOC
(F [foreign] prefix with subscriber number)	character included in called/calling subscriber number

A new report SNAC104 is created in OOC for trouble condition in overseas service. The service-related categories are as follows:

- information and inward codes
- city and country codes

- TX code
- alternate route
- service periods
- service categories

SNAC 104 report format

SNAC104 date time seqnbr TBL tc oprno posno	
DMR : clgno OM clgname	
DME : cldno OM cldname	
RTE ALT : altrte	
memo	
Field contents	*Field description*
seqnbr (system sequential number)	0000 to 9999
TBL (trouble indication)	TBL
tc (trouble code)	positive integer (0 to 99)
oprno (operator number)	positive integer (000 to 999)
posno (position number)	positive integer (000 to 999)
DMR (calling subscriber heading)	DMR
clgno (calling subscriber number)	character string, maximum 20 columns
clgname (calling subscriber name)	character string, maximum 20 columns
DME (called subscriber heading)	DME
cldno (called subscriber number)	character string, maximum 20 columns
cldname (called subscriber name)	character string, maximum 20 columns
OM (overseas number indicator)	OM (optional)
RTE ALT (alternate route heading)	RTE ALT
altrte (alternate route code)	character string, maximum 3 columns
memo (memo field)	character string, maximum 64 columns

TOPSTRBL (continued)

The following is a sample of the new log (note that being OOC, the output is in French):

Report format

```
SNAC104    FEB05   14:25:46   6776   TBL   14   315   21
           DMR : 514-8706657                    SMITH
           DME  : 44-214567832            OM    COLLINS
           RTE ALT : PAR
          LA RTE ALT DE PARIS N'EST PLUS AUTHORISEE.
```

The relationship between the trouble code and the log generated is determined during onsite datafilling of the database table TOPSTRBL (TOPS/OOC Trouble Table).

Datafill sequence and implications

The following tables must be datafilled before table TOPSTRBL:

- TOPSDEV
- LOGDEV
- TERMEV

Table size

Memory is automatically allocated for 100 trouble codes (tuples).

Datafill

The following table lists datafill for table TOPSTRBL.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
TRBLCODE		0 to 99	Trouble code. Enter the trouble code. Ensure that a single digit is used between 0 and 9 (for example, 0-9 and not 00-09); the leading zero implies that it is an overseas call.
DISPOSN		MTCE MTCEMIN MTCEMAJ NIL_TRBL_ ROUTE NOTISDEV OOCSVC SNAC SUSFRAUD or SUSPCDC	Trouble disposition. Refer to table Table , "Trouble reports by type of DMS office" on page -269 in the section “Functional description" for a detailed description of trouble disposition codes and associated trouble reports. In a TOPS office enter SNAC, MTCE, MTCEMIN, MTCEMAJ, or NOTISDEV to select report name SNAC100, SNAC101, SNAC102, SNAC103, or NOTIS respectively. In a TOPS office with equal access enter SNAC, MTCE, MTCEMIN, MTCEMAJ, NOTISDEV, or SUSFRAUD. In a TOPS office with Automatic Coin Toll Service (ACTS), enter SNAC, MTCE, MTCEMIN, MTCEMAJ, NOTISDEV, or SUSPCDC. In an Overseas Operating Center (OOC) office, enter SNAC, MTCE, MTCEMIN, MTCEMAJ, NOTISDEV, or OOCSVC. The device on which the report is generated is selected in tables LOGCLASS, LOGDEV, and TERMDEV. The device on which the NOTIS report is generated is selected in table TOPSDEV. For no trouble disposition, enter NIL_TRBL_ROUTE.

Datafill example

The following is an example of input for table TOPSTRBL and associated tables LOGCLASS and LOGDEV.

The index from table TOPSTRBL into table LOGCLASS is provided by the DMS program which associates table LOGCLASS report names SNAC100,

TOPSTRBL (end)

SNAC101, SNAC102, and SNAC103 with table TOPSTRBL, field DISPOSN entries SNAC, MTCE, MTCEMIN, and MTCEMAJ, respectively.

Table LOGCLASS associates a class with each report name while table LOGDEV associates classes with each terminal device.

MAP display example for table TOPSTRBL

```
TRBLCODE        DISPOSN
-------------------------
       1        SNAC
       2        MTCE
       3        MTCEMIN
       4        MTCEMAJ
       5        NOTISDEV
```

MAP display example for table LOGCLASS

```
REPNAME   CLASS  THRESHLD  SUPPRESS  TUNITS
-----------------------------------------
SNAC100       0         0         N      00
SNAC101       0         0         N      00
SNAC102       0         0         N      00
SNAC103       0         0         N      00
```

MAP display example for table LOGDEV

```
DEV          ALT                                  CLASSES
-----------------------------------------------------------
MAPVDU       MAPPRT                                     0
```

Table history

BCS36

The following changes were made to table TOPSTRBL:

- removed CNCREDIT from range of values for field DISPOSN
- added NIL_TRBL_ROUTE to range of values for field DISPOSN

TOPSVNIN

Table name

TOPS Virtual Node Inventory Table

Functional description

Table TOPSVNIN contains protocol and data link information for external applications such as automated alternate billing service (AABS). The table must be datafilled with the name of each application, and the names of the protocol and data link used by that application. The DMS can then index this table by application name and retrieve data link and protocol information.

For related information, refer to table VSNMEMBR and VSNOPT.

Datafill sequence and implications

The following tables must be datafilled before table TOPSVNIN:

- TRKGRP
- CLLI
- VSNOPT

Table size

0 to 2 tuples

Datafill

The following table lists datafill for table TOPSVNIN.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
INDEX		see subfield	Index. This field consists of subfield INDEX.
	INDEX	1 to 2	Index to table. Enter the integer associated with the external application.
XAPPLN		AABS, ADAS, or NILXAP	External applications. Enter the name of the external application: AABS (automated alternate billing service), ADAS (Automated Directory Assistance System), or NILXAP (no external application). For BCS33 software, the only valid entry is AABS.
PROTOCOL		NILPROT or TABS	Protocol name. Enter the name of the protocol associated with the external application.

TOPSVNIN (continued)

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
DATALINK		MPC, MTS, NILDATA, or STUB	Data link name. Enter the name of the data link used by the external application: MPC (multiprotocol controller), MTS (message transport system), NILDATA (non data link), or STUB. MTS is not a valid data link in BCS33. The value STUB is used for testing only and must not be datafilled by the operating company.
LINKDATA		see subfield	Link data. This field consists of subfield VLTYPE and refinement VSN_TRUNK_CLLI.
	VLTYPE	CHANNEL NILVOICE or TRUNK	Voice link type. Enter the voice link type. Enter CHANNEL for a channel link. Enter NILVOICE for no link. Enter TRUNK for a trunk and datafill refinement VSN_TRUNK_CLLI.
	VSN_ TRUNK_CLL I	alphanumeric (1 to 16 characters)	VSN Ttrunk Common Language Location Identifier. If the entry in subfield VLTYPE is TRUNK, datafill this refinement. Enter the trunk common language location identifier (CLLI) name. This value must be datafilled in table CLLI before it can be datafilled in this field.

Datafill example

The following example shows sample datafill for table TOPSVNIN.

MAP display example for table TOPSVNIN

```
INDEX XAPLLN PROTOCOL DATALINK              LINKDATA
  1   AABS     TABS      MPC     TRUNK TOPSVSNVL
```

Error messages

The following error messages apply to table TOPVNIN.

Error messages for table TOPSVNIN

Error message	Explanation and action
`WARNING: By adding AABS to table TOPSVNIN, the AABS feature is being activated. Ensure that the VSN is able to handle AABS calls.`	This warning message is displayed if AABS is datafilled in field XAPPLN.
`WARNING: By deleting AABS from table TOPSVNIN, the AABS feature is being de-activated.`	This warning message is displayed if AABS is deleted from field XAPPLN.

Table history

TOPS07

Added error messages.

BCS36

Datafill sequence was changed to include table CLLI. Subfield INDEX was added.

TOPSZONE

Table name

TOPS Zone

Functional description

Table TOPSZONE defines zones for originating and terminating numbers. The zone can include a group of countries, a single country, or a portion of a country. The zone is used in other tables for selecting a zone carrier.

Note: GCASCRN only exists in loads for global markets.

Datafill sequence and implications

No other tables must be datafilled before table TOPSZONE. However, tuples may not be deleted until all references are removed from tables ZONENAT, ZONEFOR, CDCSOPTS, CCCSOPTS, GCASCRN, TOPEATRK, and EASCRN.

A tuple may be changed with the change being reflected in other tables that use the TOPSZONE name.

Enter datafill into table TOPSZONE before table TOPEATRK.

Table size

0 to 2000 tuples

Datafill

The following table lists datafill for table TOPSZONE.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
INDEX		0 to 1999	Index. This field is the index to the table. It allows for ease of table cross-checks and changing field TOPSZONE without having to delete and re-add.
TOPSZONE		up to 32 alphanumeric characters	TOPS zone. Enter an originating or terminating zone name. The zone can be any area, for example, a city, country, or group of countries.

Datafill example

The following example shows sample datafill for table TOPSZONE.

MAP display example for table TOPSZONE

```
INDEX   TOPSZONE
-------------------------------------------------------
0       RALNC
1       BURLNC
2       WASHDC
3       MIDWEST
4       HOTLINES
5       PARIS
6       CARIBBEAN
7       JAPAN
```

Table history

TOPS12

The feature LATA Screening Alternative expands table TOPSZONE to allow for 2000 entries in functionality, OSB Table LATANAME Expansion, OSB00001.

TOPS11

Table TERMZONE is changed to TOPSZONE and field TERMZONE is changed to TOPSZONE by feature AF7576 in functionality Global Competitive Access II, GOS00007.

TOPS08.1

This table was created by feature AF7021 in functionality Carrier Selection, ENSV0001.

TOPTDROP

Table name

TOPS call detail recording record options

Functional description

Table TOPTDROP contains office wide parameter to control TOPS Detail Recording (TDR) records.

This table is datafilled at initial program load (IPL).

Datafill sequence and meaning

There is no requirement to enter datafill into other tables before table TOPTDROP.

Table size

8 tuples

Datafill

The table that follows lists datafill for table TOPTDROP.

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
BHR_RECORD_SIZE	FIXED_SIZE {8 to 128} or VAR_SIZE {8 to 128}	This parameter specifies the type and length in words of a Block Header Record (BHR). A BHR is created when a new block containing TDR call records is created in the DIRP file. The length should be set to the exact length of the Block Header Record. The values are as follows: • VAR_SIZE {8 to 128} - This entry selects a variable size, followed by the upper limit. And, TDR records are not padded. • FIXED_SIZE {8 to 128} - This entry selects a fixed size, followed by the size. The default is FIXED_SIZE 8.
CCR_RECORD_SIZE	FIXED_SIZE {7 to 127}, VAR_SIZE {7 to 128}, or NONE	This parameter controls the type and size of a Clock Change Record (CCR). A CCR is created when the time or data is changed in the DMS switch. For a description of the values, refer to parameter BHR_RECORD_SIZE. The default is FIXED_SIZE 7.

TOPTDROP (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
ESR_RECORD_SIZE	FIXED_SIZE {5 to 128}, VAR_SIZE {5 to 128}, or NONE	This parameter controls the type and size of an Emergency Start Record (ESR). An ESR is created when a problem with the billing file causes an emergency rotate of the DIRP file. For a description of the values, refer to parameter BHR_RECORD_SIZE. The default is FIXED_SIZE 5.
GEN_PADDED_ RECORD_LOG	Y or N	This parameter enables generation of the TDR101 log when padding occurs on TDR records. Records are padded when parameter TDR_RECORD_SIZE is set to FIXED_SIZE and the record size is smaller than the size in that parameter. Enter Y to enable the log. The default is N.
GEN_RECORD_LOG	Y or N	This parameter enables a hex dump of the TDR billing record into the TDR200 log. Enter Y to enable the dump. Since this dump can produce a large volume of logs, this parameter can be used to disable the dump. The default is N.
GER_RECORD_SIZE	FIXED_SIZE {24 to 128}, VAR_SIZE {24 to 128}, or NONE	This parameter controls the type and size of a Graceful End Record (GER). A GER is created when a manual rotate of the DIRP file has occurred. For a description of the values, refer to parameter BNR_RECORD_SIZE. The default is FIXED_SIZE 24.
GSR_RECORD_SIZE	FIXED_SIZE {5 to 128}, VAR_SIZE {5 to 128}, or NONE	This parameter controls the type and size of a Graceful Start Record (GSR). A GSR is created when a manual rotate of the DIRP file has occurred. For a description of the values, refer to parameter BNR_RECORD_SIZE. The default is FIXED_SIZE 5.
SRR_RECORD_SIZE	FIXED_SIZE {5 to 128}, VAR_SIZE {5 to 128}, or NONE	This parameter controls the type and size of a Switch Restart Record (SRR). An SRR is created when a restart is performed on the DMS switch. For a description of the values, refer to parameter BNR_RECORD_SIZE. The default is FIXED_SIZE 5.

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
TDR_RECORD_SIZE	FIXED_SIZE {4 to 128} or VAR_SIZE {4 to 128}	This parameter specifies the type and length in words of each TDR record. The length should be set to the exact length of the longest template. The values are as follows: • VAR_SIZE {4 to 128} - This entry selects a variable size, followed by the upper limit. And, TDR records are not padded. • FIXED_SIZE {4 to 128} - This entry selects a fixed size, followed by the size. If a template is smaller than the entered size, zeros are added as padding to produce consistent size records. And, log TDR101 is produced, if enabled by parameter GEN_PADDED_RECORD_LOG, plus OM TDR register PAD is pegged. Record padding reduces the number of records per block of data. If a template is larger than the entered size, the record is truncated to the datafilled length. And, log TDR100 is produced, plus OM TDR register TRUNC is pegged. The default is FIXED_SIZE 72.
TEMPLATE_TYPE	SINGLE_ FIXED or MULTI_FIXED	This parameter selects a TDR template, which defines the record format. The values are as follows: SINGLE_FIXED: The combined template is used for all TOPS calls. This template contains a superset of the fields from the individual templates. This template could be used if per call type records are not desired. While this option makes downstream processing easier, it causes larger records. This means that fewer records could be stored per block of data. Also, the OSSAIN Custom Billing data can not be produced. Log TDR102 is produced when the combined template is used and OSSAIN Custom Billing data is attached to the call. The combined template does not support OSSAIN Custom Billing.

TOPTDROP (continued)

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
TEMPLATE_TYPE (continued)		MULTI_FIXED: The applicable individual template is used from the following list: • Call Completion - used for a call completion call • Call Transfer to IC Template - used for a transfer to a carrier • Listing Services Template - used for directory assistance • BLV/Interrupt Template - used for a busy line verification call • Charge Adjust Template - used for a charge adjust call • Intercept Template - used for an intercept call • IN Interworking Billing Template - used for an IN interworking call (presence of this template depends on functionality IN Fall Back, ENSV0023) • General Assistance Template - used if none of the above templates are applicable • OSSAIN Custom Billing Template - used for an OSSAIN call and added to the above applicable template. There can be multiple OSSAIN templates for the same call. Multiple records can be associated downstream by the Sequence Number and Associated TDR fields. Associated records have the same Sequence Number and the Associated TDR field indicates an associated record. The default is MULTI_FIXED.

Field descriptions

Field PARMNAME	Field PARMVAL	Explanation and action
TEMPLATE_VERSION	0 to 63	This parameter specifies the version of the TDR templates. Only values 0, 1, or 2 are currently supported. The default is 0. Version 2 is added to support commercial credit card authcode. This parameter allows an office to update without updating the downstream processor for TDR records at the same time. Then, when the processor is updated, this field can be updated to the new version. Only the last three TDR template versions are supported. For example, once version 4 is released, version 0 is no longer supported. TDR templates may not change every TOPS release. On a dump and restore of table TOPTDROP, the old version becomes the new version unless that version is no longer supported on the new side. In that case the version is set to the lowest possible value. This parameter is not changed during dump and restore even if a new version of the templates is delivered with the load. This parameter must be changed manually after downstream billing has been changed to support the new template version.
UNANSWERED_CALL _ RECORDING	Y or N	This parameter indicates if TDR records are generated for unanswered calls. Enter Y to generate a TDR record for unanswered calls. The default is Y.
WORD_LAYOUT	READRL or READLR	This parameter specifies the word layout of TDR records. The values are as follows: • READLR - Read bits from left to right. • READRL - Read bits from right to left. This layout does not apply to the entire three word TDR header, which is read from left to right. The default is READRL.

Datafill example

The figure that follows shows sample datafill for table TOPTDROP.

TOPTDROP (end)

MAP display example for table TOPTDROP

```
PARMNAME                                  PARMVAL
-------------------------------------------------------
BHR_RECORD_SIZE                        FIXED_SIZE 8
CCR_RECORD_SIZE                        FIXED_SIZE 7
ESR_RECORD_SIZE                        FIXED_SIZE 5
GEN_PADDED_RECORD_LOG                           N
GEN_RECORD_LOG                                  N
GER_RECORD_SIZE                       FIXED_SIZE 24
GSR_RECORD_SIZE                        FIXED_SIZE 5
SRR_RECORD_SIZE                        FIXED_SIZE 5
TDR_RECORD_SIZE                         VAR_SIZE 68
TEMPLATE _TYPE                          MULTI_FIXED
TEMPLATE_VERSION                                2
UNANSWERED_CALL_RECORDING                       Y
WORD_LAYOUT                                READRL
```

Table history

SN07 (DMS)

Table TOPTDROP is enhanced in the TOP20 (SN07) release to include template version 2. Setting the version to 2 is not dependent on a SOC. Refer to feature A00003704.

TOPS11

This table was created by feature AF7817 in functionality TOPS/Carrier Interworking, OSB00001.

TPCINV

Table name

TOPS Position Controller Inventory

Functional description

Table TPCINV is used by the telephone operating company to datafill Traffic Operator Position System (TOPS) position controllers (TPC) that extend beyond a TOPS message switch (TMS). Table TPCINV uniquely identifies each TPC in the system.

Table TPCINV contains the following information:

- TPC number
- physical location of the TPC
- data channel location (port and channels)

Datafill sequence and implications

There is no requirement to datafill other tables prior to table TPCINV.

Table size

0 to 255 tuples

Datafill

The following table lists datafill for table TPCINV.

Field descriptions (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
TPCNAME		see subfields	TOPS position controller name. This field consists of subfields PMT and TPCNO.
	PMT	DA, ORDB, RCC2, SRCC, or TPC	Peripheral module type. Enter the peripheral module (PM) type.
	TPCNO	0 to 254	TPC number. Enter the number of the Traffic Operator Position System (TOPS) position controller (TPC).
FRTYPE		PCE	Frame type. Enter the frame type for the TPC.

TPCINV (continued)

Field descriptions (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
FRNO		0 to 511	Frame number. Enter the frame number.
SHPOS		0 to 77	Shelf position. Enter the shelf position.
FLOOR		0 to 99	Floor. Enter the floor number where the TPC is located.
ROW		A to Z, AA to ZZ, except I, O, II, OO	Row. Enter the row on the floor where the TPC is located.
FRPOS		0 to 99	Frame position. Enter the frame position within the row.
LOAD		alphanumeric (up to 8 characters)	Load name. Enter the TPC load name.
TMSNO		0 to 255	TMS number. Enter the number of the TOPS message switch (TMS) on which the TPC is configured. A check is made to ensure that the TMS is not datafilled in table LTCINV with field OPTATTR= OC.
TMSCKTNO		0 to 19	TMS circuit number. Enter the TMS peripheral (P)-side link connecting the TPC.
TMSCKTTS		1 to 24 for DS1 1 to 15 or 17 to 31 for D30	TMS circuit time slot. Enter up to two DS-1 or D30 channels on the link used for messaging by the TPC. If less than two channels are required, end the list with a $ (dollar sign).
TPCTYPE		alphanumeric (up to 8 characters)	TPC type. Enter the type of TPC, for example NT_TPC, IBMMPX16, or IBMMPX20. The default value for this field is NT_TPC (Northern Telecom TPC).

TPCINV (continued)

Field descriptions (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
RTSTIMR		1 to 31	Return to service timer. Enter the maximum time integer that the central control (CC) waits for a response to an attempt to return an operator position to service. The integer value is multiplied by 20 s and the result is the approximate time that the CC waits for response to an RTS attempt. For example, if field RTSTIMR is set to 30, the CC waits 10 min (30 × 20 s = 600 s = 10 min). The default value for this field is 21 (7 min). The default value is against a TPC datafilled in field TPCTYPE as NT_TPC. If another TPC is datafilled, this field must be updated to the correct value as defined by the TPC vendor.
CLUSTRSZ		1 to 96	Cluster size. Enter the integer value that defines the maximum number of terminals, that is, operator positions with or without an force management cathode ray tube (FMCRT), that can subtend a TPC. In other words, this field is used to keep track of the number of operator positions datafilled against the TMS. ***Note:*** Although the valid range of this field is 1 to 96, engineering restrictions limit datafilling to a maximum of 20. The default value for this field is 4. ***Note:*** To change the value of field CLUSTRSZ, the entire TPCINV tuple must be deleted from table TPCINV and readded with the new value for field CLUSTRSZ.

Datafill example

The following example shows sample datafill for table TPCINV.

MAP display example for table TPCINV

```
TPCNAME       FRTYPE   FRNO   SHPOS   FLOOR   ROW   FRPOS   LOAD
 TMSNO   TMSCKTNO     TMSCKTTS   TPCTYPE   RSTIMR    CLUSTRSZ

  TPC   0        PCE      0       0      0     AA     0        0
    0       0  (23)   (24)$     IBMMPX16       1          16
```

Table history

TOPS04

Added note to field TMSNO that table LTCINV is checked for OC optional attribute per feature AN1133 in functionality Enhanced TOPS OC and Increased Remote Support, ENSV0008 and ENSV0011.

BCS36

Explanation of field RTSTIMR was added.

Supplementary information

This section provides information on possible error messages when datafilling table TPCINV.

If feature AF3003 (Increased Multiplexing of TOPS Operator Data) is not present in the DMS, any attempt to datafill field CLUSTRSZ with a value greater than 4 results in the following error message:

```
THE CLUSTER SIZE MUST BE IN THE RANGE (1-4)
```

TPROMPTS

Table name

Table Prompt Tones

Functional description

Table TPROMPTS supports a multiple toneset environment. Table TPROMPTS allows service providers the option of datafilling prompt tones based on the service for which the prompt tones are required on a per toneset basis. The following services are supported:

- in-switch calling-card service
- mid-call

Datafill sequence and meaning

There is no requirement to enter datafill into other tables before table TPROMPTS.

Table size

0 to 255 tuples

Datafill

The table that follows lists datafill for table TPROMPTS.

Field descriptions

Field	Subfield	Entry	Explanation and action
TPROMKEY		AUS100, AUS300, AUTMF, AUTMFC, BELMF, BELMFC, BRASMF, BRASMFC, CEP, CEP100, CHINA, CHINA100, CLMDTC, CLMLGC, COSTONES, CWAPCDTC, CWAPCLGC, CWCHIDTC, CWCHILGC, CZECHMF, CZECHMFC, DENMARKMF, DENMARKMFC, DNZLGC, DUTCHMF, DUTCHMFC, EGMF, EGMFC, EVSTONES, FDASRILANKA, FDAUS300, FDMEXMF, FDMXDTMF, FDNZDTC, FNZLGC, GERDTC, GERLGC, HONGKONG, HUNDTC, HUNLGC, INDIA, IRISHMF, ISRL69AD, ISRTONES,	Prompt toneset key. Enter the toneset value.

Field descriptions

Field	Subfield	Entry	Explanation and action
		ITALYMF, ITALYMFC, JAPAN1, JAPAN3, MCL, MALAYSIA, MALYADSI, MEXDTMF, MEXMF, MOROCCO, MXTONLGC, NORTHAA, NORTHAM, NORWMF, NORWMFC, NZDTC, PERUDTC, PERULGC, PHILADSI, PHILTONE, PNGMFC, POLDTC, POLLGC, PORTON, RWNDATON, SAUDIDTC, SAUDILGC, SINGMF, SINGMFC, SPAINMF, SPAINMFC, SRILADSI, SWDDTC, SWDLGC, SWISSMF, SWISSMFC, TLR425, TONFRMF, TONFRMFC, TURKLGC, TURKR1R2, UK, UK100, US100, UKADSI, VIETTONE	

Field descriptions

Field	Subfield	Entry	Explanation and action
OPTIONS		ACCTREQ, CALLINGCARD, DISA, DTMFSCRN, MID_CALL, MONA	Services. Enter the service for which prompt tones are required for the particular toneset. For each entry in field TPROMKEY, you can enter from 0 to 5 tone type options.

Field descriptions

Field	Subfield	Entry	Explanation and action
	ACCTREQ, CALLINGCARD, DISA, DTMFSCRN, MID_CALL, MONA	AUDRING_TONE, BUSY_TONE, CARRIER DIAL TONE, CONFIRMATION_TONE, DIAL_TONE, HI, HZ2000_M12_TONE, HZ2400_200_TONE, HZ2400_M9_TONE, HZ2600_M9_TONE, HZ400_5DB, LO, MF1_TONE, MF2_TONE, MF3_TONE, MF4_TONE, MF5_TONE, MF6_TONE, MF7_TONE, MF8_TONE, MF9_TONE, MF10_TONE, MF11_TONE, MF12_TONE, MF_KP_TONE, MF_KP2_TONE, MF_ST_TONE, NSSCDT, NUMBER_UNOBTAINABLE, PCM_TONE, REORDR_TONE, SF_FAINT_TONE, SF_LOUD_TONE, SILENT_TONE, STUTTERDIAL TONE, UNUSED_TONE1, UNUSED_TONE2, UNUSED_TONE3, UNUSED_TONE8	Tone. For the entries in field OPTIONS, enter a number of tones as follows: • ACCTREQ - 1 • CALLINGCARD - 2 • DISA - 4 • DTMFSCRN - 3 • MID_CALL - 1 • MONA - 4

Datafill example

The figure that follows shows sample datafill for table TPROMPTS.

MAP display example for table TPROMPTS

```
TPROMKEY
                                                                  OPTIONS
--------------------------------------------------------------------------
   UK100
(CALLINGCARD   DIAL_TONE CONFIRMATION_TONE)
(DTMFSCRN      DIAL_TONE DIAL_TONE DIAL_TONE)
(DISA          DIAL_TONE DIAL_TONE   DIAL_TONE  CONFIRMATION_TONE)
(MONA          DIAL_TONE DIAL_TONE   DIAL_TONE  CONFIRMATION_TONE)
(MID_CALL      DIAL_TONE) $
```

Table history

MMP16

Feature 59027567 introduced table TPROMPTS.

TQCAPROF

Table name

TOPS Queue Management System (QMS) Capability Profile

Functional description

This table defines capability profiles for QMS operators, just as tables TQCQPROF, TQCTPROF, and TQSVPROF define call queue, controlled traffic, and service profiles for QMS operators.

Table TQCAPROF is consulted whenever a QMS operator logs onto an OPR position datafilled as MP OPP or MP ASCII. The datafilled capabilities are activated when the SOC state is ON for functionality QMS Customer Service Enhancements, ADVQ0006.

Datafill sequence and implications

Table TQCAPROF must be datafilled before table TQOPROF. Prior to deleting a tuple from table TQCAPROF, the referencing tuple in table TQOPROF must be deleted first.

Table size

1 to 16 tuples

Datafill

The following table lists datafill for table TQCAPROF.

Field descriptions (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
PROFNUM		0 to 15	Capability profile number. This is the key to the table and is indexed from table TQOPROF. Value 0 is used for the mandatory default tuple zero which has field CAPSET set to NONE. This default tuple does not allow any of the special capabilities in this functionality. Tuple zero can be changed, but cannot be deleted.
CAPSET		set of {INTEROPR, MON, QINFO, STATS} , ALL, or NONE	Capability set. These capabilities are only valid when the SOC state is ON for functionality QMS Customer Service Enhancements, ADVQ0006. Following are descriptions of the capabilities that can be assigned to an operator: • INTEROPR - Inter-operator communication. The operator can page other operators, be paged by other operators, make directed assistance calls to other operators, and receive directed assistance calls from other operators. The other operator may or may not have the INTEROPR capability. It is sufficient for either one of the two operators involved in the page or directed assistance call to have the INTEROPR capability. This capability can establish connections with other operators regardless of their capabilities. So if this capability is given to general operators, they can use it to call each other. If this capability is datafilled for all CSEs and no general operators, then capabilities are as follows: — All CSEs can page and make directed assistance calls to both CSEs and general operators. — All general operators can page and make directed assistance calls to all CSEs. — General operators can not page or make directed assistance calls to each other.

TQCAPROF (continued)

Field descriptions (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
CAPSET (continued)			Following are descriptions of the capabilities that can be assigned to an operator (continued): • MON - Monitor. The operator can monitor other operators. If it is desired to exclude handling of subscriber and general assistance calls, datafill table TQCQPROF with no entries in field CQLIST. Note, monitoring is denied for the reasons listed in section “Monitoring". • QINFO - QMS call queue information. (This capability is only available when table TQMSOPT parameter QMSFM_BASIC is set to Y.) This capability provides warnings to the operator when QMS call queues have been marked with calls waiting (according to thresholds datafilled in table TQCQINFO), calls deflecting, or calls queued with no logged-in operator who serves the queue. The DMS switch sends per-queue information for the affected queues to OPP-compliant positions, if requested. If QMS basis statistics are enabled by parameter QMSFM_BASIC=Y in table TQMSOPT, per-queue information is also sent to the QTADS TTY. For more information about queue information, refer to the applicable (TOPS MP or IWS) Force Management Guide.

Field descriptions (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
CAPSET (continued)			Following are descriptions of the capabilities that can be assigned to an operator (continued): • STATS - Statistics. The operator receives and can query information about team position states and about operators in the team who are receiving controlled traffic. Also, the operator receives alarms when certain emergency conditions occur, such as operator services suspended by a craftsperson or all time and charges devices out of service. Except for the alarms, these capabilities are only available when QMS basic statistics are enabled by QMSFM_BASIC=Y in table TQMSOPT. For more information about statistics, refer to the applicable (TOPS MP or IWS) Force Management Guide. • ALL - All capabilities (INTEROPR, MON, QINFO, and STATS) are allowed. • NONE - None of the capabilities (INTEROPR, MON, QINFO, and STATS) are allowed.

Datafill example

The following example shows sample datafill for table TQCAPROF.

MAP display example for table TQCAPROF

```
PROFNUM       CAPSET
------------------------------------------------------
0             NONE
1             INTEROPR MON OINFO$
5             INTEROPR QINFO STATS $
10            ALL $
```

In the above example, tuple 0 is a default entry and cannot be deleted or changed.

TQCAPROF (end)

Error messages

The following error messages apply to table TQCAPROF.

Error messages for table TQCAPROF

Error message	Explanation and action

`THIS CAPABILITY PROFILE NUMBER IS REFERENCED IN TUPLES FOR THE FOLLOWING OPERATOR NUMBERS IN TABLE TQOPROF:`
`OPERATOR NUMBER: operator ID OPERATOR NUMBER: operator ID`
`.....`
`THESE REFERENCES MUST BE REMOVED BEFORE THIS CAPABILITY PROFILE MAY BE DELETED.`
	A tuple in TQCAPROF cannot be deleted if it is referenced by any tuple of TQOPROF. If an attempt is made to delete a TQCAPROF tuple that is referenced by TQOPROF, this message is displayed. (The actual operator IDs from all applicable TQOPROF tuples are listed, rather than “operator ID" as in the example.)

`CHANGE NOT ALLOWED AT THIS TIME - OPERATORS WITH THIS CAPABILITY PROFILE NUMBER IN THEIR TABLE TQOPROF OPERATOR PROFILES ARE CURRENTLY LOGGED IN.`	A tuple in TQCAPROF cannot be modified if the capability profile is in use by any logged-in operator. If an attempt is made to modify a tuple when one or more logged-in operators are using the profile, this message is displayed:
`TUPLE ZERO CANNOT BE DELETED.`	The first tuple in TQCAPROF, which has PROFNUM 0, cannot be deleted. If an attempt is made to delete it, this message is displayed.

Table history

NA006

This table was created by functionality QMS Customer Service Enhancements, ADVQ0006.

Supplementary information

None

TQCARDIG

Table name

TOPS QMS Carrier Digits Table

Functional description

Table TQCARDIG is a digilator that associates groups of called digits with symbolic names. These symbolic names (or CARCRIT values) are then used as a criterion for traffic segregation in table CT4QCAR.

Datafill sequence and implications

Table TQCARNAM must be datafilled before table TQCARDIG.

Field CARCRIT must be datafilled in table TQCARNAM before it can be used in table TQCARDIG.

Table size

0 to 10 000 tuples

Datafill

The following table lists datafill for table TQCARDIG.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
CARDIGS		1 to 18 digits	Called digits. This is a digilator key field of the table. Enter a set of called numbers of 1 to 18 digits.
CARCRIT		1 to 32 characters	Called digits criterion. Enter a name associated with the given digilator key.

Datafill example

The following example shows sample datafill for table TQCARDIG.

The example consists of four calls, each of which specify the set of called numbers in field CARDIGS, and the corresponding name specified in field CARCRIT.

TQCARDIG (end)

MAP display example for table TQCARDIG

```
           CARDIGS                           CARCRIT
     ____________________________________________________
          5551313 CUSTOMER_NAME_AND_ADDRESS_DN
              560            BUSINESS_OFFICE_DN
              936               TIME_WEATHER_DN
          9761234         PROTOTYPE_SERVICE_DN
```

Table history

BCS34

Table TQCARDIG was introduced.

Supplementary information

This section provides information on datafilling table TQCARDIG for specific applications, and product descriptive information related to table TQCARDIG.

No dump and restore is needed when first applied. Normal dump and restore procedures apply after the first application.

Entries in field CARCRIT must match entries in table TQCARNAM.

TQCARNAM

Table name

TOPS QMS Inter-LATA Carrier Name Table

Functional description

Table TQCARNAM defines a group of names that describe types of inter-LATA carrier access codes. The values that are datafilled for field CARCRIT in this table are used in table CT4QCAR to segregate incoming traffic for each inter-LATA carrier.

A special default tuple exists in this table at all times. This tuple has a carrier name index code (field CARCODE value) of 000, and is known by the carrier name (field CARCRIT value) UNKNOWN_CARCRIT. The UNKNOWN_CARCRIT value is used in table CT4QCAR to segregate traffic for which a field CARCRIT value cannot be determined.

Datafill sequence and implications

There is no requirement to datafill other tables prior to table TQCARNAM.

Field CARCRIT entries cannot be deleted from table TQCARNAM if they are in use in table CT4QCAR. If an attempt is made to delete a tuple from table TQCARNAM and the CARCRIT value is in use in table CT4QCAR, the following message is displayed:

```
MUST DELETE ALL TUPLES USING THIS CARCRIT FROM TABLE CT4QCAR
FIRST
```

Table size

0 to 127 tuples

Store for the potentially large Traffic Operator Position System Queue Management System (TOPS QMS) tables is allocated dynamically on several levels, which reduces storage consumption but increases the complexity of estimating store use. Contact Northern Telecom for assistance in determining the data store required for this table.

TQCARNAM (end)

Datafill

The following table lists datafill for table TQCARNAM.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
CARCODE		numeric (0 to 126)	Carrier name index code. Enter the numeric key to be associated with the field CARCRIT entry.
CARCRIT		alphanumeric (1 to 32 characters)	Carrier criterion. Enter a carrier name that is associated with a type of called number. This field is used as part of the key for table CT4QCAR.

Datafill example

An example of datafill for table TQCARNAM is shown below. This example consists of three calls, each of which specifies the numeric carrier code in field CARCODE and the carrier name in field CARCRIT.

MAP display example for table TQCARNAM

```
    CARCODE       CARCRIT
  ________________________________________________________
      000          UNKNOWN_CARCRIT
      123          ACME_CARRIER
      087        SMALL_REGIONAL_CARRIER
```

Table history

BCS34

Table TQCARNAM was introduced

TQCATDEF

Table name

TOPS QMS Call Category Definition Table

Functional description

Table TQCATDEF associates call type for queueing (CT4Q) names with Traffic Operator Position System Queue Management System (TOPS QMS) call category names.

The resulting call categories are used to construct TOPS QMS controlled traffic profiles (in table TQCTPROF). These profiles indicate which CT4Qs an operator with a particular controlled traffic profile is assigned to handle. Controlled traffic is used for operator training.

Tuples may be added, changed or deleted anytime.

Datafill sequence and implications

The following tables must be datafilled before table TQCATDEF.

- CT4QNAMS
- TQCATNAM

Table size

0 to 2047 tuples

Datafill

The following table lists datafill for table TQCATDEF.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
CT4Q		1 to 32 characters	Call type for queuing. This is the key field of the table. Enter the value with which the call category name is associated. This name must first be defined in table CT4QNAMS.
CATNAME		CT_OA, CT_DA, CT_COIN, CT_SERV	Call category name. Enter the category into which the CT4Q name specified is placed. This value must first be defined in table TQCATNAM.

TQCATDEF (end)

Datafill example

The following example shows sample datafill for table TQCATDEF.

MAP display example for table TQCATDEF

CT4Q	CATNAME
ZPLUS	0_PLUS
ONEPLUS	1_PLUS
DA_411	DIRASST
DA_555	DIRASST

Table history

BCS34

Table TQCATDEF was introduced.

Supplementary information

This section provides information on datafilling table TQCATDEF for specific applications, and product descriptive information related to table TQCATDEF.

No dump and restore is needed when first applied. Normal dump and restore procedures apply after the first application.

Entries in fields CT4Q and CATNAME must match entries in tables CT4QNAMS and TQCATNAM, respectively.

TQCATNAM

Table name

TOPS QMS Call Category Name Table

Functional description

Table TQCATNAM allows operating companies to datafill call category names, that are then available for use in table TQCATDEF.

Datafill sequence and implications

Table TQCATDEF must be datafilled after table TQCATNAM.

Table size

0 to 255 tuples

Datafill

The following table lists datafill for table TQCATNAM.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
CATNUM		0 to 254	Call category number. This is the key field of the table. Enter the number of the call category.
CATNAME		1 to 15 characters	Call category name. Enter a string of 1 to 15 characters representing a call category name.

Datafill example

The following example shows sample datafill for table TQCATNAM.

The example consists of three tuples, CATNUM 0 (zero) to 2. The CATNAMEs are 0_PLUS, 1_PLUS, and DIRASST, respectively.

MAP display example for table TQCATNAM

```
     CATNUM          CATNAME
  ____________________________________________________
          0           0_PLUS
          1           1_PLUS
          2          DIRASST
```

TQCATNAM (end)

Table history

BCS34

Table TQCATNAM was introduced.

Supplementary information

This section provides information on datafilling table TQCATNAM for specific applications, and product descriptive information related to table TQCATNAM.

No dump and restore is needed when first applied. Normal dump and restore procedures apply after the first application.

If an attempt is made to delete a call category name that is currently referenced by a tuple in table TQCATDEF, the following message is output, and the deletion is denied.

```
MUST FIRST DELETE TUPLES IN TABLE TQCATDEF WHICH REFERENCE THIS
CALL CATEGORY NAME
```

If an attempt is made to delete a call category name that is currently referenced by a tuple in table TQCTPROF, the following message is output, and the deletion is denied.

```
MUST FIRST DELETE TUPLES IN TABLE TQCTPROF WHICH REFERENCE THIS
CALL CATEGORY NAME
```

If an add or change is attempted and the name specified is already specified against a different category number, the following message is output, and the attempt is denied.

```
CALL CATEGORY NAME MUST BE UNIQUE
```

TQCLDDIG

Table name

TOPS QMS Called Digits Table

Functional description

Table TQCLDDIG is a digilator that associates groups of called digits with values for field CLDCRIT, used in table CT4QCLD.

Entries in field CLDCRIT must match entries in table TQCLDNAM.

Datafill sequence and implications

Table TQCLDNAM must be datafilled before table TQCLDDIG.

Field CLDCRIT must be datafilled in table TQCLDNAM before it can be used in table TQCLDDIG.

Table size

0 to 10 000 tuples

Datafill

The following table lists datafill for table TQCLDDIG.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
CLDDIGS		1 to 18	Called digits. This is the first and key field of the table. Enter a group of 1 to 18 digits that correspond to a group of called numbers that begin with the specified digits.
CLDCRIT		1 to 32 characters	Called code criterion. This is the second field of the table. Enter the called code criterion. This entry must first be defined in table TQCLDNAM.

Datafill example

The following example shows sample datafill for table TQCLDDIG.

TQCLDDIG (end)

The example consists of four calls. Field CLDDIGS specifies the sets of called numbers. Field CLDCODE specifies the name associated with the given digilator key.

MAP display example for table TQCLDDIG

```
CLDDIGS         CLDCRIT
-------------------------------------------
5551313 CUSTOMER_NAME_AND_ADDRESS_DN

    560 BUSINESS_OFFICE_DN

    936 TIME_WEATHER_DN

9761234 PROTOTYPE_SERVICE_DN
```

Table history

BCS34

Table TQCLDDIG was introduced.

Supplementary information

This section provides information on datafilling table TQCLDDIG for specific applications, and product descriptive information related to table TQCLDDIG.

No dump and restore is needed when first applied. Normal dump and restore procedures apply after the first application.

TQCLDNAM

Table name

TOPS QMS Called Names Table

Functional description

Table TQCLDNAM defines a group of names to describe types of called numbers associated with calls. The values in field CLDCRIT in this table are used in table CT4QCLD to segregate incoming traffic on the basis of groups of called digits. The digits associated with particular CLDCRIT values are specified in a digilator table TQCLDDIG.

A special default tuple exists in this table at all times. This tuple has CLDCODE index of 0, and is known by the CLDCRIT value UNKNOWN_CARCRIT. This value may be used to segregate traffic for which a CLDCRIT cannot be determined.

Datafill sequence and implications

The following tables must be datafilled after table TQCLDNAM.

- CT4QCLD
- TQCLDDIG

No CLDCRIT can be deleted from table TQCLDNAM if it is in use in table CT4QCLD or table TQCLDDIG.

Table size

0 to 127 tuples

Store for the potentially large Traffic Operator Position System Queue Management System (TOPS QMS) tables is allocated dynamically on several levels, which reduces storage consumption, but increases the complexity of estimating store use. Contact Northern Telecom for assistance in determining the datastore required for this table.

TQCLDNAM (continued)

Datafill

The following table lists datafill for table TQCLDNAM.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
CLDCODE		0 to 126	Called digits code. This is a numeric and key field of the table. Enter an integer index associated with each CLDCRIT.
CLDCRIT		1 to 32 characters	Called digits criterion. Enter the name associated with a type of called number. This value is used as part of the key of table CT4QCLD.

Datafill example

The following example shows sample initial datafill for table TQCLDNAM.

The example consists of three calls, each of which specify the numeric index in field CLDCODE, associated with the type of call name specified in field CLDCRIT.

MAP display example for table TQCLDNAM

```
 CLDCODE                   CLDCRIT
 ----------------------------------------------
       0               UNKNOWN_CLDCRIT

      1      CUSTOMER_NAME_AND_ADDRESS

      2            TIME_AND_WEATHER_DN
```

Table history

BCS34

Table TQCLDNAM was introduced.

Supplementary information

This section provides information on datafilling table TQCLDNAM for specific applications, and product descriptive information related to table TQCLDNAM.

TQCLDNAM (end)

No dump and restore is needed when first applied. Normal dump and restore procedures apply after the first application.

If an attempt is made to delete a tuple from table TQCLDNAM where the value in field CLDCRIT is in use in tables CT4QCLD or TQCLDDIG, the following message is displayed:

```
Must delete all tuples using this CLDCRIT from tables CT4QCAR
and TQCLDDIG first.
```

TQCLSDEF

Table name

TOPS QMS Call Class Definition Table

Functional description

Table TQCLSDEF consolidates up to 2047 force management Queue Management System (FM QMS) call types into up to 16 FM QMS call classes.

Datafill sequence and implications

The following tables must be datafilled before table TQCLSDEF

- TQCLSNAM
- TQFMNAMS

Each value in field CLASSNAM used in table TQCLSDEF must first be defined in table TQCLSNAM. Each value in field FMCT used in table TQCLSDEF must first be defined in table TQFMNAMS.

Table size

0 to 2047 tuples

Datafill

The following table lists datafill for table TQCLSDEF.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
FMCT		1 to 32 characters	Force management call type. This is the key field of the table. Enter a value first defined in table TQFMNAMS.
CLASSNAM		1 to 10 characters	Call class name. Enter a QMS call class value. This value must first be defined in table TQCLSNAM.

Datafill example

The following example shows sample datafill for table TQCLSDEF.

The example consists of 12 tuples, specifying values for fields FMCT and CLASSNAM for each tuple.

MAP display example for table TQCLSDEF

FMCT	CLASSNAM
DA_411	DA
DA_555_FOR	DA
DA_555_DOM	DA
NCN_0MIN_FRENCH	NCN_0MINUS
NCN_0MIN_ENGLISH	NCN_0MINUS
NCN_0MIN_SPANISH	NCN_0MINUS
COIN_RECALL	COIN_RECALL
131	INWARDS
NCN_0PLUS_FRENCH	NCN_0PLUS
NCN_0PLUS_ENGLISH	NCN_0PLUS
911	EMERGENCY
DELAY	DELAY

Table history

BCS34

Table TQCLSDEF was introduced.

Supplementary information

This section provides information on datafilling table TQCLSDEF for specific applications, and product descriptive information related to table TQCLSDEF.

No special reformatting is needed for the addition of table TQCLSDEF.

Entries in fields FMCT and CLASSNAM must match entries in tables TQFMNAMS and TQCLSNAM, respectively.

An FM QMS call type and a FM QMS call class can have the same ASCII name.

TQCLSNAM

Table name

TOPS QMS Call Class Name Table

Functional description

Table TQCLSNAM enables the operating company to datafill up to 15 unique Queue Management System (QMS) call classes. QMS segregates calls into the call classes according to a wide range of criteria. The Traffic Operator Position System (TOPS) Queue Management System (TOPS QMS) force management (FM) interface then outputs statistics concerning each call class.

Datafill sequence and implications

There is no requirement to datafill other tables prior to table TQCLSNAM.

Table size

15 tuples

Datafill

The following table lists datafill for table TQCLSNAM.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
CLASSNUM		1 to 15	Class number. This is the key field of the table. Enter an integer as a unique representation of field CLASSNAM. Indicated values outside this range are not valid. ***Note:*** CLASSNUM 0 (zero) is reserved for the UNDEFINED class. All call types that are not mapped to a call class by table TQCLSDEF are relegated to the UNDEFINED class. CLASSNUM 0 is not shown when the table is listed. CLASSNUM 0 data is printed on Queue Management System (QMS) Mechanized Force Administration Data System (QMFADS), QMS Force Administration Data System (QFADS), QMS Traffic Administration Data System (QTADS), and study registers reports.
CLASSNAM		alphanumeric (1 to 10 characters)	Class name. Enter a QMS call class name.

Datafill example

The following example shows sample datafill for table TQCLSNAM.

MAP display example for table TQCLSNAM

CLASSNUM	CLASSNAM
1	DELAY

Table history

BCS34

Table TQCLSNAM was introduced.

TQCQINFO

Table name

TOPS Queue Management System Call Queue Information Table

Functional description

Table TQCQINFO marks the service of each call based on the call queue (field CALLQ) assigned in table TQMSFCQA. For calls that recall to an operator after having been previously served by an operator, this table is not used to assign service. A service value is already associated with a recall.

The value in field QMSSERV corresponds to a value in table TQMSSERV. Fields CWOFF and CWON allow the operator's Call Waiting (CW) displays to function in Traffic Operator Position System (TOPS) Queue Management System (QMS). The ALRTAREA area provides access to select alerting queues and to assign Queue Call Alerting (QCA) thresholds.

Datafill sequence and implications

The following tables must be datafilled before table TQCQINFO.

- TQMSSERV
- PKTVPROF

Table size

0 to 255 tuples

Datafill

The following table lists datafill for table TQCQINFO.

Field descriptions (Sheet 1 of 5)

Field	Subfield or refinement	Entry	Explanation and action
CALLQ		CQX (where X is a value from 0 to 254)	Call queue. Enter a QMS call queue number. If the CALLQ associated with a call is not datafilled in this table, CQ0 determines QMSSERV, CWOFF, CWON and TREAT. In this case, a minor software alarm is sounded, and log EXT106 is generated. Table OFCENG parameter TOPS_QMS_MAX_ACTIVE_CALL_QUEUES determines the maximum number of call queues that may be datafilled in this table.
QMSSERV		name from table TQMSSERV alphanumeric (up to 32 characters)	QMS service. Enter the QMS service name assigned to calls designated to the specified CALLQ. This entry must first be defined in table TQMSSERV.

TQCQINFO (continued)

Field descriptions (Sheet 2 of 5)

Field	Subfield or refinement	Entry	Explanation and action
CWOFF		0 to 32767	Call waiting off. Enter the call age when the CW display is turned off. The entry is in tenths of seconds. Each time a call is queued for an operator, the projected wait time for the call is determined. The projected wait time is based on the number of calls in queue and the rate at which calls are coming out of queue. If the projected wait time exceeds the CWON threshold, then the Calls Waiting (CW) indicator is displayed on operator positions serving the call queue. When the projected wait time for calls falls below the CWOFF threshold for the call queue, the CW indicator is erased. If an operator serves more than one call queue and the CW threshold has been exceeded for any of the call queues served, then the CW indicator is displayed on that operator's screen. The indicator is erased from the operator's screen only when the projected wait times fall below the CWOFF threshold for all call queues served by the operator. The CWON field value must be greater than the CWOFF value. (This restriction is enforced at datafill time.) Specification of the maximum value, which is 32766, in the CWON field is interpreted as an infinite age. The value in this field means the CW indicator is never turned on for the specified call queue. The CWOFF field is irrelevant in this case, and may be set to any value. Call age is determined by the projected time in the queue given by the QMS Call and Agent Manager (CAM).
CWON		0 to 32767	Call waiting on. Enter the call age in tenths of seconds for when the CW display is turned on for the call queue. For further information, refer to field CWOFF. Call age is determined by the projected time in the queue given by the QMS CAM.

TQCQINFO (continued)

Field descriptions (Sheet 3 of 5)

Field	Subfield or refinement	Entry	Explanation and action
TREAT		name from table TMTCNTL.T alphanumeric (1 to 4 characters)	Treatment. Enter the treatment used if the call deflects from the requested call queue. This entry must first be defined in table TMTCNTL.TREAT.
ALRTAREA		see subfield	Alerting queue area. This field consists of subfield ALERT.
	ALERT	N or Y	Calls alerting (CA). This field enables the queue for a Sonalert and display of CA if there are any calls in the queue. This alert is referred to as a CA condition and the queue is referred to as an alerting queue. If the operator has the QINFO capability in table TQCAPROF, they can use the QMS CSE screen to display a listing of alerting queues in the CA condition. Set this field in the applicable TOPS operator centralization (OC) host or TOPS stand-alone office. Assignment in the TOPS OC remote office has no effect. A queue is in a stand-alone office if the queue is not present in table OCHOSTQ. The values are as follows: • Y - Mark this queue as an alerting queue. Enter datafill in subfield QCA. • N - Mark this queue as a non-alerting queue.. If the change is from Y to N, the queue must be empty. Otherwise, this tuple must be deleted and re-added for the change to take effect.

TQCQINFO (continued)

Field descriptions (Sheet 4 of 5)

Field	Subfield or refinement	Entry	Explanation and action
	QCA	N or Y	QMS calls alerting. This field appears if field ALERT = Y. This alert is referred to as a QCA condition. This alert is only a Sonalert (no display) that indicates that the number of calls in the alerting queue has exceeded the threshold in subfield QCAON. If the operator has the QINFO capability in table TQCAPROF, they can use the QMS CSE screem to display a listing of alerting queues in the QCA condition. The values are as follows: • Y - Enable this alert to be set if a QCA condition occurs. Enter datafill in subfields QCAOFF and QCAON. • N - Disable this alert. ***Note:*** QCA thresholds are based on the number of calls in a queue. Whereas, the CW thresholds (fields CWOFF and CWON) are based on the predicted wait time.
	QCAOFF	0 to 253	QMS calls alerting off. This field appears if field QCA = Y. When the number of calls drops to this value, the QCA condition ends. The QCAOFF value must be less than the QCAON value. This alerting queue must not be in a calls alerting (CA) condition to change this field. That is, the queue must not contain calls. Otherwise, this tuple must be deleted and re-added for the change to take effect.

Field descriptions (Sheet 5 of 5)

Field	Subfield or refinement	Entry	Explanation and action
	QCAON	1 to 254	QMS calls alerting on. This field appears if field QCA = Y. When the number of calls rises to this value, the QCA condition begins. The QCAON value must be more than the QCAOFF value. This alerting queue must not be in a calls alerting (CA) condition to change this field. That is, the queue must not contain calls. Otherwise, this tuple must be deleted and re-added for the change to take effect.
PKTVPROF		0 to 63	Paketized voice profile. This field is used for voice over IP and is an index into table PKTVPROF. This value must be previously datafilled in table PKTVPROF. This index indicates the preferred profile, G729 (PKTV only) or G711 (PKTV or TDM) if the call queue is provisioned correctly. The references (PKTV and TDM) are the relationships to table TOPSPOS, field VLTYPE. So, the possible call handling situations are as follows: • If the call is at a position type (TDM or PKTV) that matches the index (TDM or PKTV), the index is used. • If the call is at a TDM position, but the index is to G729 (PKTV only), then G711 is used instead. For OC, both the host and remote have a packetized voice profile number (PVPN), but for OC-IP, the PVPN datafill in the remote is used. For OC-TDM and IP positions, PVPN datafill in the host is used.

Datafill example

The figure that follows shows sample datafill for table TQCQINFO..

TQCQINFO (end)

MAP display example for table TQCQINFO

```
CALLQ  QMSSERV  CWOFF   CWON  TREAT        ALRTAREA   PKTVPROF
-------------------------------------------------------------

  CQ6  TOPS_TA    150    200   VACT              N          0
  CQ7  TOPS_TA    150    200   VACT    Y  Y  10  15          1
  CQ6  TOPS_TA    150    200   VACT         Y  N         15
```

Table history

TOPS15

Field PKTVPROF is added by feature 59022288 in functionality OPP Over IP, OSB00101. During an ONP to TOPS15, field PKTVPROF is set to the corresponding value in table OCHOSTQ, field CODEC. Otherwise, table TOPSPARM parameter OCIP_DEFAULT_CODEC is used to set the field.

TOPS12

Addition of field ALRTAREA by feature A59006877 in functionality QMS Customer Services, ADVQ0006.

BCS36

Corrected information in section “Datafill sequence" and corrected range for field TREAT

BCS34

Table TQCQINFO was introduced.

TQCQPROF

Table name

TOPS QMS Call Queue Profile Table

Functional description

Table TQCQPROF defines call queue profiles by associating lists of call queues with a call queue profile number. Individual operator numbers are then associated with one of these profile numbers. Datafill for profiles common to several operators is centralized for easier maintenance and reduced data store consumption.

Call queue profiles are specified in one of two ways:

- Using office-wide priority and office-wide assignable grade of service (AGS) values (see subfield PRIOTYPE set to OFC).
- Using profile-specific priority and profile-specific assignable grade of service (AGS) values (see subfield PRIOTYPE set to PROF).

Call queue profiles datafilled using office-wide priorities contain a list of up to 255 call queues (subfield CQLIST). Each call queue is specified as a value in the range CQ0 to CQ254. The priority and AGS associated with each of the call queues specified are the office-wide values defined for the queue in table QMSCQDEF. Office-wide priority call queue profiles result in consistent office-wide priorities and AGS values being applied to all operators.

If the operating company wishes to override the system priority and AGS associated with each call queue, the particular profile is datafilled using priority and AGS values specific to that profile. For each of up to four priority levels (labeled PRIO3, PRIO2, PRIO1,and PRIO0, with PRIO3 being the highest priority level), a list of up to 32 call queues along with the desired AGS for each is specified.

Datafill sequence and implications

The following tables must be datafilled before table TQCQPROF:

- CT4QNAMS
- QAPLNDEF
- QMSCQDEF

Entries in field AGENTQ and subfield CALLQ must match entries in table QAPLNDEF.

TQCQPROF (continued)

Table size

0 to 255 tuples

Datafill

The following table lists datafill for table TQCQPROF.

Field descriptions (Sheet 1 of 5)

Field	Subfield or refinement	Entry	Explanation and action
CQPROFNM		see subfield CQPROFNM	Call queue profile number. This is the key into the table and is indexed from table TQOPROF. This field consists of subfield CQPROFNM.
	CQPROFNM	0 to 254	Call queue profile number. This number is associated with lists of call queues. Then, individual operator numbers in table TQOPROF may be associated with one of these profile numbers.
DLAYCT4Q		CT4Q name from table CT4QNAMS	Call type for queueing for delay calls. This field specifies the CT4Q name (from table CT4QNAMS) to be used for any delay calls which an operator with the specified Call Queue profile might initiate. This allows separation and tracking of delay calls for force management and statistical purposes.
AGENTQ		AQ0 to AQ254	TOPS QMS agent queue number. Enter the agent queue where an operator is placed when idle and available to handle calls. The range is limited by the value in field AGENTQS, table QAPLNDEF. For example, if AGENTQS = 5, only agent queues in the range AQ0 to AQ4 should be datafilled in table TQCQPROF. If this agent queue is to be prioritized, also datafill this queue in table QMSCQDEF, field AQNUM. For more information on priority agent queues, refer to table QMSCQDEF, field PRIOAQ. Field AGENTQ can also be used for more efficent searching of agent queues. For further information on field AGENTQ, refer to the paragraphs about field AGENTQ that follow the datafill example.
PRIOAREA		see subfield	Call queue priority type selector. This field consists of subfield PRIOTYPE.

TQCQPROF (continued)

Field descriptions (Sheet 2 of 5)

Field	Subfield or refinement	Entry	Explanation and action
	PRIOTYPE	OFC or PROF	Call queue priority type. The values are: • OFC—call queue priorities and AGS values are determined office-wide by table QMSCQDEF. This applies to call queues in refinement CQLIST. Value OFC is the easiest to datafill and results in consistent priorities and AGS values applied to all operators. Datafill refinement CQLIST. For further information, refer to the paragraphs about field PRIOTYPE that follow the datafill example. • PROF—specifies priority and AGS values for each call queue, rather than office-wide. Datafill refinements PRIO3, PRIO2, PRIO1, and PRIO0. Up to four multiples of each specified priority levels PRIO3 (highest priority), PRIO2, PRIO1, and PRIO0 (lowest priority) can be datafilled. If less than four multiples are required, end the list with a $ (dollar sign). For further information, refer to the paragraphs about field PRIOTYPE that follow the datafill example.

TQCQPROF (continued)

Field descriptions (Sheet 3 of 5)

Field	Subfield or refinement	Entry	Explanation and action
	CQLIST	CQ0 to CQ254	Call queue list. If the entry in subfield PRIOTYPE is OFC, datafill this refinement. Enter a value for each call queue to be included in the profile. No further refinements require datafill. Prior to functionality QMS Customer Service Enhancements (ADVQ0006) in NA006, at least one queue had to be datafilled. In NA006, no queues need be datafilled, regardless of the SOC state of this functionality. Note that datafilling an empty office-wide call queue profile affects an operator who uses that profile, regardless of whether the functionality is active. This field defines the list of office-wide call queues which an operator using the profile is serving. This list is not applicable to operators using controlled traffic profiles as opposed to call queue profiles (datafilled in TQOPROF), and it is not applicable to operators using call queue profiles that are profile-specific as opposed to office-wide (datafilled in TQCQPROF). If an operator's call queue list is empty, the operator does not receive any subscriber or general assistance calls. However, the operator may still receive directed assistance calls.
	PRIO3	see subfields	Priority level 3. If the entry in subfield PRIOTYPE is PROF, datafill this refinement. This field is the highest priority level and consists of subfields CALLQ and AGS.
	CALLQ	CQ0 to CQ254	Call queue. If the entry in subfield PRIOTYPE is PROF, datafill this refinement. Enter up to 32 call queues to be included in the profile. If less than 32 queues are required, end the list with a $ (dollar sign). The range of call queues is limited by field CALLQS in table QAPLNDEF. For example, if CALLQS is set to 10, only call queues in the range CQ0 to CQ9 should be datafilled in table TQCQPROF. Each call queue specified should be datafilled in table QMSCQDEF.

TQCQPROF (continued)

Field descriptions (Sheet 4 of 5)

Field	Subfield or refinement	Entry	Explanation and action
	AGS	10 to 80	Assignable grade of service. If the entry in subfield PRIOTYPE is PROF, datafill this refinement. Enter the aging factors from 1.0X to 8.0X for the grade of service to be applied to the call queue (refinement CALLQ) for the purposes of this profile. If no aging, enter 10. The oldest call is served first.
	PRIO2	see subfields	Priority level 2. If the entry in subfield PRIOTYPE is PROF, datafill this refinement. This field is the second highest priority level and consists of subfields CALLQ and AGS.
	CALLQ	CQ0 to CQ254	Call queue. If the entry in subfield PRIOTYPE is PROF, datafill this refinement. Enter up to 32 call queues to be included in the profile. If less than 32 queues are required, end the list with a $ (dollar sign). The range of call queues is limited by field CALLQS in table QAPLNDEF. For example, if CALLQS is set to 10, only call queues in the range CQ0 to CQ9 should be datafilled in table TQCQPROF. Each call queue specified should be datafilled in table QMSCQDEF.
	AGS	10 to 80	Assignable grade of service. If the entry in subfield PRIOTYPE is PROF, datafill this refinement. Enter the aging factors from 1.0X to 8.0X for the grade of service to be applied to the call queue (refinement CALLQ) for the purposes of this profile. If no aging, enter 10. The oldest call is served first.
	PRIO1	see subfields	Priority level 1. If the entry in subfield PRIOTYPE is PROF, datafill this refinement. This field is the third highest priority level and consists of subfields CALLQ and AGS.

TQCQPROF (continued)

Field descriptions (Sheet 5 of 5)

Field	Subfield or refinement	Entry	Explanation and action
	CALLQ	CQ0 to CQ254	Call queue. If the entry in subfield PRIOTYPE is PROF, datafill this refinement. Enter up to 32 call queues to be included in the profile. If less than 32 queues are required, end the list with a $ (dollar sign). The range of call queues is limited by field CALLQS in table QAPLNDEF. For example, if CALLQS is set to 10, only call queues in the range CQ0 to CQ9 should be datafilled in table TQCQPROF. Each call queue specified should be datafilled in table QMSCQDEF.
	AGS	10 to 80	Assignable grade of service. If the entry in subfield PRIOTYPE is PROF, datafill this refinement. Enter the aging factors from 1.0X to 8.0X for the grade of service to be applied to the call queue (refinement CALLQ) for the purposes of this profile. If no aging, enter 10. The oldest call is served first.
	PRIO0	see subfields	Priority level 0. If the entry in subfield PRIOTYPE is PROF, datafill this refinement. This field is the lowest priority level and consists of subfields CALLQ and AGS.
	CALLQ	CQ0 to CQ254	Call queue. If the entry in subfield PRIOTYPE is PROF, datafill this refinement. Enter up to 32 call queues to be included in the profile. If less than 32 queues are required, end the list with a $ (dollar sign). The range of call queues is limited by field CALLQS in table QAPLNDEF. For example, if CALLQS is set to 10, only call queues in the range CQ0 to CQ9 should be datafilled in table TQCQPROF. Each call queue specified should be datafilled in table QMSCQDEF.
	AGS	10 to 80	Assignable grade of service. If the entry in subfield PRIOTYPE is PROF, datafill this refinement. Enter the aging factors from 1.0X to 8.0X for the grade of service to be applied to the call queue (refinement CALLQ) for the purposes of this profile. If no aging, enter 10. The oldest call is served first.

Datafill example

The following example shows sample datafill for table TQCQPROF.

MAP display example for table TQCQPROF

```
CQPROFNM    AGENTQ
    DLAYCT4Q        PRIOAREA
_____________________________________________________________
  0  DLAYCQ  AQ0   OFC    (CQ1) (CQ4) (CQ0) $
  1  DLAYCQ  AQ0   OFC    (CQ2) $
  2  DLAYCQ  AQ0   OFC    (CQ1) (CQ2) $
  3  DLAYCQ  AQ0   OFC    (CQ0) $
  4  DLAYCQ  AQ1   PROF   (CQ5 10) $
                          (CQ6 20) (CQ10 30) (CQ11 10) $
                          (CQ7 15) (CQ9 10) $ $
  5  DLAYCQ  AQ1   PROF   (CQ7 15) (CQ9 10) $
                          (CQ6 10) (CQ10 10) $
                          (CQ11 10) $
                          (CQ5 10) $
  6  DLAYCQ  AQ1   PROF   (CQ8 25) (CQ6 10) $ $ $ $
```

The above datafill example is used for further discussion about fields AGENTQ and PRIOTYPE in the following paragraphs:

- Field AGENTQ

  Field AGENTQ allows more efficient searching of agent queues. Searching occurs if a call arrives when idle agents are present in the agent queues. While a single agent queue may be used for an entire TOPS configuration, judicious use of multiple agent queues can result in real time savings. In general, if operators are divided up into separate functional groups with regard to the types of calls they are designated to receive, then a separate agent queue should be used for each group.

  For example, in the above sample datafill, two different agent queues are specified. TA operators are serving call queues CQ0 to CQ4, and are placed in agent queue AQ0 when idle. DA operators are serving call queues CQ5 to CQ11, and are placed in agent queue AQ1 when idle.

  The advantage to this split becomes apparent if, for example, many DA operators are idle, so are queued in AQ1, but the TA operators are all busy and AQ0 is empty. Then, if a TA call arrives marked for call queue CQ3, only AQ0 is checked. Since AQ0 is empty, the call is placed in call queue CQ3. However, if all operators (both TA and DA) are assigned to a single

TQCQPROF (continued)

agent queue, the search goes through all idle DA agents in the agent queue before finding that there are no idle TA operators, and then call is queued.

- Field PRIOTYPE

  Both absolute (table QMSCQDEF, field CQPRIO) and relative (table QMSCQDEF, field CQAGS) call queue priorities may be specified on either an application-wide ((table TQOPROF, field PRIOTYPE = OFC) or a per-agent basis (table TQOPROF, field PRIOTYPE = PROF). Specification on a per-agent basis allows configuration of groups of agents based upon the concept of primary work/secondary work differentiation.

  For example, within a given application, one agent group may serve calls of category A at a higher priority than those of category B, while another agent group may serve those of category B at a higher priority than those of category A. Each group is capable of doing the same types of work, but each may prioritize the mix of calls handled in a different way.

  A real life example of an application requiring primary work/secondary work differentiation is one where groups of directory assistance operators are trained and experienced in providing assistance for particular localities, but also provide backup for operator groups serving other localities in their region when necessary. Each group may be configured to handle calls for a particular locality (their primary work) at a high priority and calls from elsewhere in their region (their secondary work) at a lower priority.

  Or as another example:

  — Operator team A is to serve Directory Assistance calls first, and Toll and Assist calls only if no Directory Assistance calls are in queue.

  — Operator team B is to serve Toll and Assist calls first, and Directory Assistance calls only if no Toll and Assist calls are in queue.

  In this case, office-wide priorities are insufficient, and profile-specific priorities are required to allow two or more different teams to serve the same sets of call queues at differing priority levels.

  In the example datafill above, profile number 0 is defined with a priority type of OFC. The call queues specified are searched according to the office-wide priority and AGS values defined in table QMSCQDEF when an operator of this profile type becomes available.

  Profile number 4, on the other hand, has a priority type of PROF, which means that the call queues specified in the tuple are searched in the precise manner indicated by the ordering of the call queue lists.

  If an operator with profile 4 becomes available, profile 4's highest priority call queue list (PRIO3) is traversed first. PRIO3 contains only call queue CQ5, which is checked first (the AGS associated with CQ5 in the CQ/AGS

couplet is irrelevant in this case since there is only one call queue in the PRIO3 list). If there is a call waiting in CQ5, it is presented to the operator.

If no calls are in CQ5, the list of queues at PRIO2 (CQ6, CQ10 and CQ11) is considered. The oldest call in each queue (if any) is weighted according to the Assignable Grade of Service weight specified for each queue. The oldest weighted call is then selected.

Only if there are no calls in CQ5, CQ6, CQ10 or CQ11 is the PRIO1 call queue list (containing call queues CQ7 and CQ9) considered.

No call queue list is specified for PRIO0. If no call is found in any of the listed call queues, the operator is placed in the idle agent queue specified in field AGENTQ.

Table history

NA006

Field CQLIST is modified to allow an empty call queue list. This is provided by functionality QMS Customer Service Enhancements, ADVQ0006.

BCS34

Table TQCQPROF was introduced.

Supplementary information

This section provides information on dump and restore procedures and possible error messages when datafilling table TQCQPROF.

Dump and restore

No dump and restore is needed when this table is first applied. Normal dump and restore procedures apply after the first application.

Error messages

At least one element must be specified in the list(s) for a profile, otherwise the entry is denied and the following message is displayed:

```
AT LEAST ONE CALLQ MUST BE SPECIFIED
```

A call queue may not appear in more than one priority level in a profile-specific (subfield PRIOTYPE set to PROF) call queue profile, otherwise the entry is denied and the following message is displayed:

```
A CALL QUEUE MAY NOT APPEAR IN MORE THAN ONE PRIORITY LEVEL
```

TQCQPROF (end)

If an attempt is made to delete a call queue profile tuple which is referred to by an entry in table TQOPROF, the entry is denied and the following message is displayed:

```
DELETE NOT ALLOWED - AN OPERATOR IS DATAFILLED IN TABLE TQOPROF
WITH THIS CALL QUEUE PROFILE NUM
```

If an attempt is made to change or delete a call queue profile tuple that is currently in use (for example, an operator is logged on with an operator profile that specifies this call queue profile number in table TQOPROF), the entry is denied and the following message is displayed:

```
ALL OPERATORS WHO LOGGED ON WITH THIS CALL QUEUE PROFILE MUST
LOG OUT BEFORE IT MAY BE CHANGED/DELETED
```

TQCTPROF

Table name

TOPS QMS Call Queue Profile Table

Functional description

Table TQCTPROF groups Traffic Operator Position System (TOPS) Queue Management System (QMS) (TOPS QMS) call category names (from table TQCATNAM) into TOPS QMS controlled traffic profiles. These profile numbers can then be datafilled against individual operator numbers in table TQOPROF.

Datafill sequence and implications

The following tables must be datafilled before table TQCTPROF

- CT4QNAMS
- TQCATDEF
- TQCATNAM

Entries in fields DLAYCT4Q and CATLIST must match entries in tables CT4QNAMS and TQCATNAM, respectively.

Table size

0 to 255 tuples

Datafill

The following table lists datafill for table TQCTPROF.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
CTPROFNM		0 to 254	Controlled traffic profile number. This is the key field of the table. Enter a value for the controlled traffic profile.

TQCTPROF (continued)

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
DLAYCT4Q		alphanumeric (1 to 32 characters)	Call type for queuing for delay calls. Enter the call type for queuing (CT4Q) applied to a delay call when initiated by an operator with this profile. Values in this field must first be entered in table CT4QNAMS.
CATLIST		alphanumeric (1 to 15 characters)	Category list. Enter a list of 1 to 128 call category names. If less than 128 names are required, end the list with a $ (dollar sign). Values in this field must first be entered in table TQCATNAM.

Datafill example

The following example shows sample datafill for table TQCTPROF.

MAP display example for table TQCTPROF

```
CTPROFNM DLAYCT4Q
                                                        CATLIST
_____________________________________________________________

    0   UNSPEC
                                                    (DIRASST)$

       1     CAMA
                                          (DIRASST) ( 0_PLUS)$
```

Table history

BCS34

Table TQCTPROF was introduced.

Supplementary information

This section provides information on dump and restore procedures and possible error messages when datafilling table TQCTPROF.

Dump and restore

No dump and restore is needed when first applied. Normal dump and restore procedures apply after the first application.

Error messages

If an add or change is attempted that specifies an empty list of call categories, the following message is output and the attempt is denied:

```
LIST MUST CONTAIN AT LEAST ONE CALL CATEGORY
```

If an attempt is made to delete a controlled traffic profile from this table, and an entry exists in table TQCTPROF that references the controlled traffic profile number being deleted, the following message is output and the deletion is denied:

```
DELETE NOT ALLOWED - AN OPERATOR IS DATAFILLED IN TABLE TQOPROF
WITH THIS CONTROLLED TRAFFIC PROFILE
```

If an attempt is made to delete a controlled traffic profile tuple that is currently in use, the following message is output and the deletion is denied:

```
ALL OPERATORS WHO LOGGED OM WITH THIS CONTROLLED TRAFFIC PROFILE
MUST LOG OUT BEFORE IT MAY BE DELETED
```

TQDAYDEF

Table name

TOPS QMS Day Type Definitions Table

Functional description

Table TQDAYDEF defines the TIMECRIT values that correspond to different combinations of time of day, and type of day. For example, 8 a.m. to 5 p.m. is generally a heavy traffic period on a weekday, but is probably a light traffic period on a weekend. Each tuple contains a key field of type DAYTYPE, and between one and eight TIMESLOT fields, used to assign different time criterion (field TIMECRIT) values to different times of day.

Datafill sequence and implications

The following tables must be datafilled before table TQDAYDEF:

- TQDAYNAM
- TQTIMENM

Table size

0 to 379 tuples

Datafill

The following table lists datafill for table TQDAYDEF.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
TQDEFKEY		see subfield	TOPS QMS definition key. Field TQDEFKEY consists of the subfield DAYTYPE. This is the key field of the table.
	DAYTYPE	1 to 32 characters	Day type. Enter the name associated with a value from field DAYTYPE of table TQDAYNAM.
TIMESLOT		see subfields	Time slots. This field consists of subfields HH, MM, and TIMECRIT. A maximum of eight field TIMESLOT values is allowed in each tuple. If less than eight timeslots are required, end the list with a $ (dollar sign).

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	HH	00 to 23 (2 digits)	Hour. Enter the hour based on the 24-h clock (00 is midnight, 12 is noon). Hour values higher than 23 are blocked.
	MM	00 to 59 (2 digits)	Minutes. Enter the minutes of the hour. Hour values higher than 59 are blocked.
	TIMECRIT	alphanumeric (1 to 32 characters)	Time criterion. Enter a name associated with a value from table TQTIMENM.

Datafill example

The following example shows sample datafill for table TQDAYDEF.

The example consists of one day type, MOTHER'S DAY, and begins at midnight. Traffic is heavy.

MAP display example for table TQDAYDEF

```
TQDEFKEY
                                                        TIMESLOT
MOTHERS_
DAY
                                              ( 0  0 HEAVY_TRAFFIC)$
```

Table history

BCS34

Table TQDAYDEF was introduced.

TQDAYNAM

Table name

TOPS QMS Day Names Table

Functional description

Table TQDAYNAM defines a group of names to describe the types of days that are used in conjunction with table TQDAYDEF to determine a time criterion used to segregate incoming traffic in table CT4QTIME.

Datafill sequence and implications

There is no requirement to datafill other tables prior to table TQDAYNAM.

Values in field DAYTYPE cannot be deleted from table TQDAYNAM if they are in use in tables TQDAYDEF, TQHOLDAY, or TQWKDAY.

Table size

0 to 127 tuples

Store for the potentially large Traffic Operator Position System (TOPS) Queue Management System (QMS) (TOPS QMS) tables is allocated dynamically on several levels, which reduces storage consumption, but increases the complexity of estimating store use. Contact Northern Telecom for assistance in determining the datastore required for this table.

Datafill

The following table lists datafill for table TQDAYNAM.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
DAYCODE		see subfield	Day code. This field consists of subfield DAYCODE. This is the key field of the table.
	DAYCODE	0 to 126	Day code. Enter a numeric value that associates an integer index with each entry in field DAYTYPE.
DAYTYPE		alphanumeric (1 to 32 characters)	Type of day. Enter a name associated with a type of day (for example, WEEKDAY, HOLIDAY).

Datafill example

The following example shows sample datafill for table TQDAYNAM.

The example consists of three tuples, with a DAYCODE index of 0 to 2, and DAYTYPE names of BANK_HOLIDAY, MOTHERS_DAY, and WEEKDAY.

MAP display example for table TQDAYNAM

```
DAYCODE                    DAYTYPE
-------                    -------
      0                BANK_HOLIDAY
      1                 MOTHERS_DAY
      2                     WEEKDAY
```

Table history

BCS36

Subfield DAYCODE was added.

BCS34

Table TQDAYNAM was introduced.

Supplementary information

This section provides information on dump and restore procedures and possible error messages when datafilling table TQDAYNAM.

Dump and restore

No dump and restore is required when the table is first applied. Normal dump and restore procedures apply after the first application.

Error messages

If an attempt is made to delete a tuple from table TQDAYNAM and the entry in field DAYTYPE is in use in tables TQDAYDEF, TQHOLDAY, or TQWKDAY, the following error message is displayed:

```
Must delete all tuples using this DAYTYPE from tables TQDAYDEF,
TQHOLDAY and TQWKDAY first.
```

TQFMCLAS

Table name

TOPS Queue Management System Force Management Class of Service Table

Functional description

Table TQFMCLAS provides force management call type (FMCT) refinement on the basis of class of service.

Datafill sequence and implications

Table TQFMNAMS must be datafilled before table TQFMCLAS.

Table size

0 to 10 240 tuples

Store for the potentially large Traffic Operator Position System (TOPS) Queue Management System (QMS) tables is allocated dynamically on several levels, which reduces storage consumption, but increases the complexity of estimating store use. Contact Northern Telecom (NT) for assistance in determining the datastore required for this table.

Datafill

The following table lists datafill for table TQFMCLAS.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
OLDFMCT		alphanumeric (1 to 32 characters)	Old force management call type. This is the first of a two-part key field of the table. Enter the old force management call type (FMCT). This field must first be defined in table TQFMNAMS.

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
CLASCRIT		UNKNOWN_CLAS, COIN, STATION, HOTEL, or RESTRICT-ED	Class of service criterion. This is the second of a two-part key field of the table. Enter a value specifying the class of service.
NEWFMCT		alphanumeric (1 to 32 characters)	New force management call type. This is the data field of each tuple. Enter a value specifying the FMCT assigned to a call matching the key field of the tuple. This field must first be defined in table TQFMNAMS.

Datafill example

The following example shows sample datafill for table TQFMCLAS.

The example consists of four calls, all of which have an OLDFMCT of 0_MINUS. The FMCLASs are STATION, COIN, HOTEL, and RESTRICTED, respectively. The NEWFMCTs are 0_MIN_MSTA, 0_MIN_MCN, 0_MIN_MHTL, and 0_MIN_RES, respectively.

MAP display example for table TQFMCLAS

```
OLDFMCT                                CLASCRIT      NEWFMCT
0_MINUS                                 STATION   0_MIN_MSTA
0_MINUS                                    COIN    0_MIN_MCN
0_MINUS                                   HOTEL   0_MIN_MHTL
0_MINUS                              RESTRICTED    0_MIN_RES
```

Table history

BCS34

Table TQFMCLAS was introduced.

TQFMCLDT

Table name

TOPS QMS Force Management Called Number Type Refinement Table

Functional description

Table TQFMCLDT provides force management call type (FMCT) refinement according to whether the call is domestic or overseas.

Datafill sequence and implications

Table TQFMNAMS must be datafilled before table TQFMCLDT.

Table size

0 to 10 240 tuples

Store for the potentially large Traffic Operator Position System (TOPS) Queue Management System (QMS) tables is allocated dynamically on several levels, which reduces storage consumption, but increases the complexity of estimating store use. Contact Northern Telecom (NT) for assistance in determining the datastore required for this table.

Datafill

The following table lists datafill for table TQFMCLDT.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
OLDFMCT		alphanumeric (1 to 32 characters)	Old force management call type. This is the first of the table's two-part key field. Enter the value for the old force management call type (FMCT). The entry in this field must first be defined in table TQFMNAMS.
CLDTCRIT		CLDNIL, DOM, DOMIC, OVS VFY, OPR, LOCAL, VCA, UCA, OGT, ZEN, SRV, REQ	Called number type criterion. This is the second of the table's two-part key field, specifying called number type DOM (domestic) or OVS (overseas). The types are defined as follows: • CLDNIL - Unkown • DOM - Toll (intralata) • DOMIC - Toll (interlata) • OVS - Overseas • VFY - Verify • OPR - Operator • LOCAL - Local • VCA - Vacant code announcement • UCA - Unauthorized code • OGT - Outgoing trunk • ZEN - Zenith • SRV -Service • REQ - Required Any entry outside the range indicated for this range is invalid.
NEWFMCT		alphanumeric (1 to 32 characters)	New force management call type. Enter the FMCT assigned to a call matching the key field of the tuple. The entry in this field must first be defined in table TQFMNAMS.

TQFMCLDT (end)

Datafill example

The following example shows sample datafill for table TQFMCLDT.

The example consists of two calls, both of which have OLDFMCTs of 0_MSTA. The CLDTCRITs are DOM, and OVS respectively, and the NEWFMCTs are 0_MSTA_DOM and 0_MSTA_OVS respectively.

MAP display example for table TQFMCLDT

```
OLDFMCT                          CLDTCRIT     NEWFMCT
_____________________________________________________

 0_MSTA                               DOM  0_MSTA_DOM
 0_MSTA                               OVS  0_MSTA_OVS
```

Table history

BCS34

Table TQFMCLDT was introduced.

TQFMCT4Q

Table name

TOPS QMS Initial Force Management Call Type Value Table

Functional description

Table TQFMCT4Q maps the final call type for queueing (CT4Q) associated with a call into an initial force management call type (FMCT) value. If the operating company does not require that the FMCT values be broken down any further than the CT4Q values, the other FMCT tables remain empty, and the initial FMCT value serves as the final FMCT value. This table is used as a starting point if more detail for FMCT than CT4Q is required.

Datafill sequence and implications

The following tables must be datafilled before table TQFMCT4Q.

- TQFMNAMS
- CT4QNAMS
- TQMSFCQA

Entries in field CT4Q must match entries in tables CT4QNAMS and TQMSFCQA. Entries in field FMCT must match entries in table TQFMNAMS.

The entries UNSPEC and CAMA can be changed, but not deleted.

Table size

2 to 2047 tuples

TQFMCT4Q (continued)

Datafill

The following table lists datafill for table TQFMCT4Q.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
CT4Q		see subfield	Call type for queueing. This field consists of subfield CT4Q. This is the key field of the table.
	CT4Q	alphanumeric (1 to 32 characters)	Call type for queueing. Enter the call type for queueing (CT4Q) value. This field must first be defined in tables CT4QNAMS and TQMSFCQA. The default entries are UNSPEC (unspecified) and CAMA (centralized automatic message accounting). The UNSPEC and CAMA tuples can be changed but not deleted.
FMCT		alphanumeric (1 to 32 characters)	Force management call type. Enter a value for the force management call type (FMCT). This field must first be defined in table TQFMNAMS. The default entries are UNSPEC and CAMA. The UNSPEC and CAMA tuples can be changed but not deleted.

Datafill example

The following example shows sample datafill for table TQFMCT4Q.

MAP display example for table TQFMCT4Q

```
    CT4Q   FMCT
________________________________
UNSPEC UNSPEC
```

Table history

BCS36

Subfield CT4Q was added.

BCS34

Table TQFMCT4Q was introduced.

Supplementary information

This section provides information on dump and restore procedures when datafilling table TQFMCT4Q.

Dump and restore

No dump and restore is needed when table TQFMCT4Q is first applied. Normal dump and restore procedures apply after the first application.

TQFMNAMS

Table name

TOPS QMS Force Management Call Type Names Table

Functional description

Table TQFMNAMS defines the group of force management call types (FMCT) that can be used by the other FMCT tables in this feature.

Datafill sequence and implications

There is no requirement to datafill other tables prior to table TQFMNAMS.

Table size

2 to 2047 tuples

Store for the potentially large Traffic Operator Position System (TOPS) Queue Management System (QMS) (TOPS QMS) tables is allocated dynamically on several levels, which reduces storage consumption, but increases the complexity of estimating store use. Contact Northern Telecom for assistance in determining the datastore required for this table.

Datafill

The following table lists datafill for table TQFMNAMS.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
FMCTNUM		see subfield	Force management call type number. This field consists of subfield FMCTNUM. This the key field of the table.

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	FMCTNUM	0 to 2046	Force management call type number. Enter the value used as an index associated with the force management call type (FMCT). The default values are 0 (zero) and 1.
FMCTNAME		alphanumeric (1 to 32 characters)	Force management call type name. Enter the value used as the name in all the other FMCT tables. If the default value in subfield FMCTNUM is 0 (zero), the default value in field FMCTNAME is UNSPEC (unspecified). If the default value in subfield FMCTNUM is 1, the default value in field FMCTNAME is CAMA (centralized automatic message accounting).

Datafill example

The following example shows sample datafill for table TQFMNAMS.

MAP display example for table TQFMNAMS

```
FMCTNUM                                  FMCTNAME
---------------------------------------------------------------------
        0                                   UNSPEC
```

Table history

BCS36

Subfield FMCTNUM was added.

BCS34

Table TQFMNAMS was introduced.

Supplementary information

This section provides information on dump and restore procedures when datafilling table TQFMNAMS.

Dump and restore

No dump and restore is needed when table TQFMNAMS is first applied. Normal dump and restore procedures apply after the first application.

TQFMREST

Table name

TOPS QMS Force Management Call Type Restricted Billing Table

Functional description

Table TQFMREST provides force management call type (FMCT) refinement on the basis of REST, which is class of service.

Datafill sequence and implications

Table TQFMNAMS must be datafilled before table TQFMREST.

Table size

0 to 20 480 tuples

Datafill

The following table lists datafill for table TQFMREST.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
OLDFMCT		1 to 32 characters	Old force management control type. This is the first of this table's two-part key field. Enter a value for the old FMCT. The entry in this field must first be defined in table TQFMNAMS.
RESTCRIT		0 to 100	Restricted criterion. This is the second of this table's two-part key field. Enter a restricted billing index value. Values outside this range are invalid.
NEWFMCT		1 to 32 characters	New force management control type. This is the data field of each tuple. Enter the FMCT assigned to a call matching the key field of the tuple. The entry in this field must first be defined in table TQFMNAMS.

Datafill example

The following example shows sample datafill for table TQFMREST.

The example consists of one call, specifying an OLDFMCT of 0_RES, a RESTCRIT of 55, and a NEWFMCT of 0_RES_55.

MAP display example for table TQFMREST

```
OLDFMCT          RESTCRIT       NEWFMCT
_____________________________________________________

  0_RES                55      0_RES_55
```

Table history

BCS34

Table TQFMNAMS was introduced.

TQHOLDAY

Table name

TOPS QMS Holiday Table

Functional description

Table TQHOLDAY defines what day type value is used for specific days of the year. Although the table name reflects one day type, holiday, its use is not restricted. For example, the table can be used to set up a unique segregation for each day of the year.

If the month and day combination in table TQHOLDAY matches the month and day of the call, the entry in field DAYTYPE is used to determine the time criterion taken from this table, not from table TQWKDAY.

Datafill sequence and implications

Table TQDAYNAM must be datafilled before table TQHOLDAY.

Note: Illegal month and day combinations (for example, FEB 31) are not blocked.

Table size

0 to 372 tuples

Datafill

The following table lists datafill for table TQHOLDAY.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
MONTH		JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP, OCT, NOV, or DEC	Month. This is the first of a two-part key field. Enter the three-letter abbreviation of the month.
DAY		numeric (1 to 31)	Day. This is the second of a two-part key field. Enter the number of the day of the month specified in field MONTH.
DAYTYPE		alphanumeric (1 to 32 characters)	Day type. Enter a name associated with a value from table TQDAYNAM.

Datafill example

The following example shows sample datafill for table TQHOLDAY.

MAP display example for table TQHOLDAY

```
MONTH DAY DAYTYPE
-------------------------------------------------------------------------------
JAN   15 BANK_HO
         LIDAY

MAY   12 MOTHERS
         _DAY
```

Table history

BCS34

Table TQHOLDAY was introduced.

Supplementary information

This section provides information on dump and restore procedures when datafilling table TQHOLDAY.

Dump and restore

No dump and restore is needed when table TQHOLDAY is first applied. Normal dump and restore procedures apply after the first application.

TQMISOPT

Table name

TOPS QMS MIS Office Parameters Table

Functional description

Table TQMISOPT provides office parameters used by the Queue Management System (QMS).

Datafill sequence and implications

There is no requirement to datafill other tables prior to table TQMISOPT.

Office parameters TQMS_MIS_MPC_BUFFS and TQMS_MIS_TEST_LOGS are provided in table OFCENG.

Table size

7 tuples

Datafill

The following table lists datafill for table TQMISOPT.

Field descriptions (Sheet 1 of 4)

Field	Subfield or refinement	Entry	Explanation and action
PARMNAM		see subfield	Parameter name. This field consists of subfield TQMISOPT_KEY. This is the key field of the table.
	TQMISOPT_ KEY	alphanumeric (1 to 32 characters)	TQMISOPT parameter name. Enter the parameter name.
PARMVAL		alphanumeric	Tqmisopt parameter value. Enter the parameter value.
		PARMNAM	Enter

TQMISOPT (continued)

Field descriptions (Sheet 2 of 4)

Field	Subfield or refinement	Entry	Explanation and action
		QMS_MIS_ MPC_ BUFF_XMIT_ TIMEOUT	1 to 59. Enter the maximum time taken before the management information system (MIS) is sent a message about any event (if one occurred). The range is over positive integers, which ensures that a buffer transmission time-out always occurs before more than one force management (FM) report period ends. For instance, if office parameter QMS_MIS_MPC_BUFF_XMIT_TIMEOUT is set to 2, then the DMS waits a maximum of 2 s before sending an enhanced multiprotocol controller (EMPC) buffer containing messages about any particular force management (FM) event. In times of very low traffic, buffers can be sent containing only an information message. The default is 10.
		QMS_MIS_ CALL_ PLACED_IN_ Q_THRESH	0 to 32 767. Enter a threshold value for the number of call placed in queue events that occurred at a particular queue since the last call presented to operator or call abandoned event occurred. This parameter allows the operating company to make real-time versus statistical granularity trade-off by providing a threshold value. If this parameter is set to 5, (five calls placed in queue events occurred since the last call presented to operator or call abandoned event occurred), the next call placed in queue event generates a call queue event message (unless a call is presented to the operator beforehand). The default is 5.

TQMISOPT (continued)

Field descriptions (Sheet 3 of 4)

Field	Subfield or refinement	Entry	Explanation and action
		QMS_MIS_ FM_ REPORT_ PERIOD	1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30. Enter the interval of time the MIS expects to gather information from before generating an updated report. Under very low traffic, buffer and indication of the boundary being reached cannot be sent for a few seconds, until an event message occurs or a buffer transmission time-out occurs. If no events have occurred since the last time-out, and a boundary is reached, then the buffer only contains an information message, that indicates a boundary was reached. This parameter can be any integer between 1 and 30, which is a factor of 30. For example, if set to 15, buffers are closed and sent at 6:15, 6:30, 6:45, and so on. The default is15.
		QMS_MIS_ MINOR_ ALARM_ THRESH	0 to 32 767. Enter the minimum number of links to an MIS to generate a minor alarm. If the number of links to an MIS decreases to the threshold, the alarm is turned on. If this parameter is set to 1, and the number of links available changes from two to one the alarm is turned on. When the number of links available changes from one to two, the alarm is turned off. The EMPC links go out of service over all switch restarts, so the alarm comes on then goes off as the links come back in service and the alarm threshold is exceeded. The default is 1.

TQMISOPT (continued)

Field descriptions (Sheet 4 of 4)

Field	Subfield or refinement	Entry	Explanation and action
		QMS_MIS_ MAJOR_ ALARM_ THRESH	0 to 32 767. Enter the minimum number of links to an MIS to generate a major alarm. If the number of links to an MIS decreases to the threshold, the alarm is turned on. If this parameter is set to 1, and the number of links available changes from two to one the alarm is turned on. When the number of links available changes from one to two, the alarm is turned off. The EMPC links go out of service over all switch restarts, so the alarm comes on then goes off as the links come back in service and the alarm threshold is exceeded. The default is 1.
		QMS_MIS_ CRITICAL_ ALARM_ THRESH	0 to 32 767. Enter the minimum number of links to an MIS to generate a minor alarm. If the number of links to an MIS decreases to the threshold, the alarm is turned on. If this parameter is set to 0 (zero), and the number of links available changes from one to zero the alarm is turned on. If the number of links available changes from zero to one, the alarm is turned off. The EMPC links go out of service over all switch restarts, so the alarm comes on then goes off as the links come back in service and the alarm threshold is exceeded. The default is 0.
		QMS_MIS_ CAM_ON	Y or N. Enter Y (yes) if queue event messages and information messages are composed and sent on in-service multiprotocol controller (MPC) links. Logs and alarms are raised. Enter N (no) if all messages, logs, and alarms are turned off. The MPC child process alarm is not affected by the value of parameters mentioned above. If the child process alarms dies, an alarm concerning its death is raised. The default is N.

TQMISOPT (end)

Datafill example

The following example shows sample datafill for table TQMISOPT.

MAP display example for table TQMISOPT

```
PARMNAM                          PARMVAL
-------------------------------------------
QMS_MIS_MPC_BUFF_XMIT_TIMEOUT      10
QMS_MIS_CALL_PLACED_IN_Q_T          5
```

Table history

BCS36

Field PARMNAM was separated into field PARMNAM and subfield TQMISOPT_KEY.

BCS34

Table TQMISOPT was introduced.

Supplementary information

This section provides information on dump and restore procedures when datafilling table TQMISOPT.

This table that exists only in offices with the QMS feature. Office parameters and default values are datafilled upon initial program load (IPL) restarts. Dump and restore needs to maintain parameter values between BCS insertions.

Activation does not apply.

TQMSFCQA

Table name

TOPS QMS Final Call Queue Assignment Table

Functional description

Table TQMSFCQA specifies the final call queue (CALLQ) for initial calls and recalls assigned to a call after call type for queueing (CT4Q) refinement is complete. The final CT4Q is used as an index to table TQMSFCQA, which returns a numeric value for the CALLQ that is known by the call and agent manager (CAM) component of the Traffic Operator Position System (TOPS Queue Management System (QMS) (TOPS QMS).

After a CALLQ has been assigned, the call routes to an operator who serves that call queue. Eventually the operator releases the call, and the call may recall, requiring further operator assistance. An example of this is on a DA call, where the subscriber remains off-hook following an automated recording unit (ARU) announcement to return to a live operator.

Typically, recalls are serviced before calls that have not been to an operator. This is accomplished by routing recalls to higher priority queues. Priority queues are determined by tables QMSCQDEF and TQCQPROF.

Datafill sequence and implications

The following tables must be datafilled before table TQMSFCQA

- TQCQINFO
- CT4QNAMS
- QMSCQDEF

Two tuples must be datafilled in field CT4Q in table TQMSFCQA: CAMA and UNSPEC. Both tuples are initialized with the entry CQ0 in fields CALLQ and RECALLQ. These tuples can be changed but not deleted.

A minor software alarm and log is associated with table TQMSFCQA. If a call completes CT4Q refinements with a CT4Q that is not datafilled in this table, an EXT106 software alarm log is generated, and the UNSPEC tuple is used to determine the CALLQ or the recall queue (RECALLQ).

Table size

2 to 2047 tuples

TQMSFCQA (continued)

Datafill

The following table lists datafill for table TQMSFCQA.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
CT4Q		see subfield	Call type for queuing. This field consists of subfield CT4Q. This is the key field of the table.
	CT4Q	name from table CT4QNAMS	Call type for queuing. Enter a final call type for queueing (CT4Q) value defined in table CT4QNAMS. Two tuples must be datafilled. Enter CAMA for centralized automatic message accounting and UNSPEC for unspecified.
CALLQ		CQ0 to CQ254	Call queue . Enter the Queue Management System (QMS) call queue assigned to non-recalls that have finished call type refinement with the given CT4Q. This call queue must be previously defined in table QMSCQDEF. For the initial CAMA and UNSPEC entries in field CT4Q, enter CQ0.
RECALLQ		CQ0 to CQ254	Recall queue. Enter the QMS call queue assigned to recalls (a recall is a call that has previously routed to an operator) that have finished call type refinement with the given CT4Q. This call queue must be previously defined in table QMSCQDEF. For the initial CAMA and UNSPEC entries in field CT4Q, enter CQ0.
ASSTAREA		see subfield	Assistance area. This field consists of subfield ASSTTYPE.

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	ASSTTYPE	SA or CSE	Assistance type. Enter the type of assistance a call can receive. Following are the values: • SA - Service assistant located at a service assistant position. No further refinements must be datafilled. • CSE - Customer Service Expert operator. A more experienced QMS operator located at a QMS operator position. Datafill refinement ASSTQ.
	ASSTQ	CQ0 to CQ254	Assistance queue. If ASSTTYPE = CSE, datafill this field. Enter the final QMS call queue for assistance by a CSE. This call queue must be previously defined in table QMSCQDEF.

Datafill example

The following example shows sample datafill for table TQMSFCQA.

MAP display example for table TQMSFCQA

```
CT4Q           CALLQ  RECALLQ  ASSTAREA
---------------------------------------
0_MINUS         CQ0    CQ70     SA
0_PLUS          CQ0    CQ71     SA
1_PLUS          CQ0    CQ71     SA
CAMA            CQ15   CQ15     SA
RCAMA           CQ15   CQ15     SA
UNSPEC          CQ0    CQ70     SA
0_MINUS        CQ10    CQ11     CSE CQ100
0_HOTEL        CQ30    CQ35     CSE CQ101
TA_EMERGENCY   CQ200   CQ200    CSE CQ200
DA_EMERGENCY   CQ201   CQ201    SA
```

CAMA and UNSPEC are reserved values that are always present and cannot be deleted. In table CT4QNAMS, CAMA is also a reserved name. This allows an operator to enter the REQ CAMA key to request a CAMA call from the CAMA call queue specified in table TQMSFCQA. In the above example, CQ15 is the CAMA (/RCAMA) queue.

TQMSFCQA (end)

RCAMA calls should route to the same queue as CAMA calls if it is desired for TOPS QMS to handle RCAMA calls as they are handled in non-QMS TOPS. CAMA and RCAMA calls need to have a unique call queue. Otherwise, CAMA calls and the REQ CAMA key function cannot be supported.

In non-QMS TOPS the separate queuing facilities associated with CAMA calls are maintained internally. To maintain existing TOPS functionality, the CAMA queuing facilities must be set up through TOPS QMS datafill.

If the CT4Q associated with a call is not datafilled in table TQMSFCQA when final call queue assignment is attempted (either for recalls or non-recalls), a minor software alarm is sounded. Then, log EXT106 is generated and the value datafilled against the reserved CT4Q value UNSPEC (if any) routes the call. If UNSPEC is not datafilled in TQMSFCQA, CQ0 is used.

The preceding example shows that several CT4Q values may map to a single queue. For this reason, the number of CT4Q values is not bound by the number of queues available to the call processing application.

Table history

NA006

Field ASSTAREA added by functionality QMS Customer Service Enhancements, ADVQ0006.

BCS36

Subfield CT4Q was added.

BCS34

Table TQMSFCQA was introduced.

Supplementary information

This section provides information on dump and restore procedures when datafilling table TQMSFCQA.

Dump and restore

No dump and restore is needed when table TQMSFCQA is first applied. Normal dump and restore procedures apply after the first application.

TQMSOPT

Table name

TOPS Queue Management System (QMS) Options Table

Functional description

Table TQMSOPT contains parameters required by the Traffic Operator Position System (TOPS) Queue Management System (QMS) (TOPSQMS).

Datafill sequence and implications

The following tables must be datafilled before table TQMSOPT

- TQORDERA
- TQORDERB

Office parameters QMSFM_NUM_QUEUES, QMSFM_NUMSERVICES, and QMSFM_NUM_STUDY_REG are provided in table OFCENG.

Table size

11 tuples

Datafill

The following table lists datafill for table TQMSOPT.

Field descriptions (Sheet 1 of 6)

Field PARMNAM	Field PARMVAL	Explanation and action
QMS_ACTIVE_CQA_ ORDER_TABLE	TQORDERA or TQORDERB	This parameter selects the active table that orders the CT4Q refinement tables. Refer to tables TQORDERA and TQORDERB for details. The default is TQORDERA.
QMS_BLOCK_RECALL _SERVICE_ CHANGE	Y or N	When a QMS service, language, and CT4Q are keyed, this parameter prevents the loss of the original service keyed, due to the CT4Q keyed, on recalls and call transfers. Loss of the original service is because the keyed CT4Q maps to a new service. The range is Y or N. The default is N. Table TOPSPARM parameter, CZECH_OFFICE, must be Yes in order to activate parameter QMS_BLOCK_RECALL_SERVICE_CHANGE by setting it to Y.

TQMSOPT (continued)

Field descriptions (Sheet 2 of 6)

Field PARMNAM	Field PARMVAL	Explanation and action
QMS_DEFAULT_XFER_STATUS_CT4Q	MARK or TRANSFER	Enter QMS_DEFAULT_XFER_STATUS_CT4Q to specify the default transfer status (transfer or mark) assumed by the DMS when an operator uses the outgoing trunk (OGT) keys to change the call type for queueing (CT4Q) for the call. Enter the default transfer status to change the CT4Q key. The default is TRANSFER.
QMS_DEFAULT_XFR_STATUS_LANG	MARK or TRANSFER	This parameter specifies the default transfer status assumed by the DMS switch when an operator uses the outgoing trunk (OGT) keys to change the language for the call. Refer to table TQOGTKEY for details on QMS OGT keying. The default is MARK. Enter the default transfer status to change the language for the call.
QMSFM_BASIC	Y or N	This parameter enables the collection and reporting of QMS statistics. The range is Y (enable) and N (disable). The default is Y. Changes to QMSFM_BASIC affect the system immediately. Setting this parameter is set to Y outputs all the real time displays and reports, and enables all QMS FM commands as follows: • Reports are generated at QMFADS, QFADS, and QTADS devices. • Real time QMS information is updated at In-Charge and Assistance positions. • QMS operator statistics are udpated at Force Management (FM) TTYs or through operator Feedback displays. • All commands that query the status of positions, real-time operator information, or services from Force Management TTYs are enabled. Enabled commands are L, P, F, R and C. Setting this parameter to N does not allow any of the above functionality; however, when possible, saves the DMS switch much CPU time which otherwise is spent collecting, collating and reporting on system data.

TQMSOPT (continued)

Field descriptions (Sheet 3 of 6)

Field PARMNAM	Field PARMVAL	Explanation and action
QMSFM_DISPLAY_ AWT	Y or N	This parameter controls whether system average work time (AWT) is displayed with the operator feedback or study register data. Enter Y if the system AWT is also displayed on operator terminals when feedback data is displayed. Printouts of feedback register (or study register) data also display the system AWT along with the operator's data, whether initiated from the operator terminal or the QTADS TTY F or R commands. Enter N if only the operator's data is displayed in these situations. The default is Y.
QMSFM_DISPLAY_ST	Y or N	This parameter enables display of `ST' at an operator's terminal when the operator is assigned a study register. The values are Y (enable) and N (disable). The default is Y.
QMSFM_DUMP_ STUDY_REG	Y or N	This parameter selects either the operator's study register or their feedback data for printing when a study register is assigned to the operator and a request for a printout of statistics is made from the operator's terminal. Values are Y (printout of a study register information dump by QTADS R command) and N (printout contains operator's feedback registers, as if no study register was assigned). The default is Y.

TQMSOPT (continued)

Field descriptions (Sheet 4 of 6)

Field PARMNAM	Field PARMVAL	Explanation and action
QMSFM_PASSWORD_ ENABLE	Y or N	This parameter enables the QMS password administration facility. The values are N (disable) and Y (enable). The default is N. Changes to this parameter affect the system immediately. When set to N, operators do not need a password and QMS password administration commands cannot be entered from QMS TTYs. When set to Y, operators must use a password to log on, change their passwords, and QMS password administration commands are valid from QMS TTYs. The available commands are WP, WI, WR, WD, and WA. This parameter applies to operator numbers in use from table TQOPROF. These operator numbers are for all QMS general operators and IWS SA/ICs serving the QMS teams. For comparison, parameter TOPS_PASSWORD_ENABLE in table OFCENG applies to operator numbers in use from table OPRDAT. These operator numbers are for ASCII-based (non-OPP) SA/ICs serving a QMS team.
QMSFM_POLLING_ID	Two ASCII characters	This parameter defines the characters that are sent to a QMFADS device to trigger a QMFADS report. When sent to the QMFADS device, the QMFADS device responds by sending a report every 15 min. Enter two ASCII characters. The first character is alphabetic, the second is alphanumeric. The default is aa. Changes to this parameter affect the system immediately.

TQMSOPT (continued)

Field descriptions (Sheet 5 of 6)

Field PARMNAM	Field PARMVAL	Explanation and action
QMSFM_REPORT_ INTERVALS	NONE, 15MIN, 30MIN, 6HR, 24HR, ALL	This parameter controls QMS force management report intervals for QFADS and QTADS devices. Enter a set of any combination of the values as follows: • NONE - no reports are displayed • 15MIN - display report every15 minutes • 30MIN - display report every30 minutes • 6HR - display report every 6 hours • 24HR - display report every 24 hours • ALL - display report every 15MIN, 30MIN, 6HR, and 24HR. The default is 15MIN. These reports are generated regardless of whether the device is using the IP interface or DMODEMs. These intervals are useful for DMODEM QMS devices since QMS reports have a variable length based on the number of call queues and services selected for reporting. If only minimal reporting is needed, a longer interval can prevent an overflow hazard. Overflow occurs when a periodic report should be printed, but the device is printing a previous report. If overflow does occur, a message is printed to the device and the number of call queues or services selected for reporting should be reduced. Refer to the *TOPS Force Management Guide*, for more information on selecting call queues and services for QMS force management devices.

TQMSOPT (continued)

Field descriptions (Sheet 6 of 6)

Field PARMNAM	Field PARMVAL	Explanation and action
QMSFM_ZERO_FB_REG	Y or N	This parameter enables the QTADS FI and FZ commands and conditionally allows all operators to zero their feedback registers. The values are Y (allowed) and N (not allowed). The default is Y. Value Y conditionally allows zeroing of feedback registers since the enabled QTADS FI and FZ commands control whether individual operators can zero their feedback registers.
QMS_MIS_COMPOSE_POS_ON	Y or N	This parameter enables the composition and sending of QMS management information system (MIS) position event messages on in-service MPC links. The values are Y (enable) and N (disable). The default is N. A value of N for parameter QMS_MIS_CAM_ON in table TQMISOPT overrides this parameter, disabling event messages. The disable is not changed even if QMS_MIS_COMPOSE_POS_ON is set to Y.

Datafill example

The following example shows sample datafill for table TQMSOPT.

MAP display example for table TQMSOPT

```
                        PARMNAM                        PARMVAL
________________________________________________________________
    QMS_ACTIVE_CQA_ORDER_TABLE                        TQORDERB
QMS_BLOCK_RECALL_SERVICE_CHANGE                              Y
   QMS_DEFAULT_XFR_STATUS_CT4Q                        TRANSFER
   QMS_DEFAULT_XFR_STATUS_LANG                            MARK
                   QMSFM_BASIC                               Y
             QMSFM_DISPLAY_AWT                               Y
              QMSFM_DISPLAY_ST                               Y
          QMSFM_DUMP_STUDY_REG                               Y
         QMSFM_PASSWORD_ENABLE                               N
              QMSFM_POLLING_ID                              AA
       QMSFM_REPORT_INTERVALS               15MIN  30MIN $
             QMSFM_ZERO_FB_REG                               Y
        QMS_MIS_COMPOSE_POS_ON                               N
```

Table history

TOPS11

Parameter QMSFM_REPORT_INTERVALS added by feature AF7828 in functionality Position/Device Evolution IP, GOS00001.

TOPS03

Added QMS_BLOCK_RECALL_SERVICE_CHANGE from feature AN1085 in GOS Enhancements, GOS00001.

BCS34

Table TQMSOPT was introduced.

Supplementary information

This section provides information on dump and restore procedures for table TQMSOPT.

Dump and restore

This table exists only in offices with the QMS feature. Parameters and default values are datafilled during initial program load (IPL). Non-default parameters values must be saved and restored over IPL insertions. All parameter changes specified in table TQMSOPT are activated immediately.

TQMSSERV

Table name

TOPS Queue Management System Services Names Table

Functional description

Table TQMSSERV defines a list of services that each operator can provide in the Queue Management System (QMS). Every Traffic Operator Position System (TOPS) QMS call is assigned one of the service names datafilled in this table.

In most operator service environments, groups of operators are typically assigned the same call handling responsibilities and possess the same call handling capabilities. Therefore, table TQMSSERV allows definition of a list of services common to several operators just once. Datafill for each operator may then simply reference this list.

Similarly, table TQMSSERV is referenced when datafilling existing table TOPSPOS to determine which services each TOPS operator position is configured to provide. At logon time the service profile of the position is compared to the service profile of the operator logging in to ensure that they are compatible.

Datafill sequence and implications

The following tables must be datafilled before table TQMSSERV:

- CT4QNAMS
- SERVNAME
- SERVICES
- MPCLSET
- MPCFASTA

The following tables must be datafilled after table TQMSSERV:

- TQCQINFO
- TQSVPROF

Table size

0 to 63 tuples

Note: Tuples cannot be deleted from table TQMSSERV for which there are entries in table TQCQINFO.

Datafill

The following table lists datafill for table TQMSSERV.

Field descriptions (Sheet 1 of 6)

Field	Subfield or refinement	Entry	Explanation and action
SERVNUM		0 to 62	QMS service index. Enter a QMS service index value.
QMSSERV		alphanumeric (up to 32 characters)	QMS service name. Enter the QMS service name. This name is used in table TQCQINFO.
BASESERV		see subfield	Basic service name. This field consists of subfield BASESERV_SEL.
	BASESERV_ SEL	TASERV, DASERV, or INTCSERV	Basic service name selector. The services are defined as follows: • TASERV -toll and assistance service. New services that do not require DA or INTC call control functionality should be datafilled as TASERV (for example, a “Time of Day" service). No further refinements require datafill. • DASERV - directory assistance service. New services that do require DA call control should be datafilled as DASERV. An example is Customer Name and Address (CNA). This service requires the use of a subset of the DA call control protocol, so it should be datafilled as DASERV. Datafill refinements APPLICATION and SETNO. • INTCSERV - intercept service. Datafill refinements APPLICATION and SETNO.

TQMSSERV (continued)

Field descriptions (Sheet 2 of 6)

Field	Subfield or refinement	Entry	Explanation and action
	APPLICATION	TOPSVR1, TOPSVR2, or STUB	Application. Datafill this field if field BASESERV = DASERV or INTCSERV. The application must be previously defined in table SERVICES. Applications TOPSVR1 and TOPSVR2 cannot both provide the same service. For example, TOPSVR1 and TOPSVR2 cannot both be set to DASERV in field BASESERV_SEL. STUB is used primarily in a lab environment, but is sometimes used in configurations that do not have DMS-DAS links. Table TQMSSERV associates a service with an application for QMS. For ACD, this association is made in table VROPT.
	SETNO	0 to 15	Link set number. Datafill this field if field BASESERV_SEL = DASERV or INTCSERV. Enter the link set number for the application. The link set number must be previously defined in table SERVICES. This field is the application instance (database). Therefore, up to 16 databases can be connected per application.
IMPLCT4Q		CT4Q name from CT4QNAMS	Implicit CT4Q name from table CT4QNAMS. This field assigns a CT4Q implicitly to the call when the service changed through operator keying actions. For example, if a call is dialled 0 minus and DA service is requested, the CT4Q can be changed to be the CT4Q which would have been assigned if the customer had directly dialled the service access code (perhaps DA_411). Then, if the call later recalls to the operator, the DA_411 CT4Q can be used to assure that the call recalls to an operator who serves DA_411.

Field descriptions (Sheet 3 of 6)

Field	Subfield or refinement	Entry	Explanation and action
			A form of this implicit assignment exists in non-QMS TOPS, where the DA queue mark is assigned to 0 minus calls which are converted to DA service. In non-QMS TOPS, however, the implicit assignment is fixed, and is not selectable. Table TQMSSERV allows specifying of any CT4Q as an implicit assignment for any service change. Thus, this field both fulfills the requirement that non-QMS functionality is preserved in TOPS QMS, while at the same time extending that functionality by making the CT4Q assignment datafillable. For example, consider a DA call which is handed off to ADACC and then AABS for call completion and billing service. In non-QMS TOPS if the call recalls to an operator, it arrives at the position in the billing screen. However, in QMS TOPS if the call recalls to an operator it arrives at the DA screen if no refinements are made. Similarly, the call can be refined as POSTAUTO into a billable TA type CT4Q which will cause it to arrive at the position in the billing screen. Table control checks ensure that the IMPLCT4Q is defined in CT4QNAMS, and prevents deletions from CT4QNAMS for CT4Qs datafilled as IMPLCT4Qs in QMSSERV. The IMPLCT4Q does not display on the operator's screen when changing service. Therefore, CT4Qs should be used to display the origination of the calling party since it remains constant throughout the entire call.
SERVTYPE			QMS service type. This field consists of selector SERVTYPE_SEL and refinements.
	SERVTYPE_ SEL	BASE or CUSTOM	QMS service type selector. The values are defined as follows: • BASE — mimic non-QMS services. Datafill refinement AUTOAMA. • CUSTOM — QMS services. Datafill refinements SRVAMANM, RATENAME, SERVBIL (if GOS rating) and CLDFLOAT.

TQMSSERV (continued)

Field descriptions (Sheet 4 of 6)

Field	Subfield or refinement	Entry	Explanation and action
	AUTOAMA	Y or N	Automatically produce AMA record when changing from this service to any other service. In non-QMS TOPS, an AMA record is not generated for calls marked TASERV when the service is changed to another service. If a BASESERV of TASERV is to be treated exactly as TASERV in non-QMS TOPS, then N should be datafilled in the AUTOAMA field for that tuple. Conversely, a call marked DASERV in non-QMS TOPS produces an AMA record when changed to any other service. To treat a BASESERV of DASERV exactly as it is treated in non-QMS TOPS, a value of Y should be datafilled in the AUTOAMA field. This field does not apply when the new service is the same as the old service. When the services are the same, an AMA record is always produced (regardless of the state of field AUTOAMA). Enter N (no) if an automatic message accounting (AMA) record is not to be produced when the operator changes the call from this service to any other service.
	SRVAMANM	000-015, 900-988	Service number for AMA. This number records the “service" on AMA. Assuming that the new services illustrated in these examples are listing services in nature, an Operating Company is able to obtain billing records for them (including full alternate billing capabilities) using the Expanded Bellcore AMA system. The General Assistance module (057) contains a Service Identification field that is set to the value in field SRVAMANM. The range of values for this field is discontinuous: • 000: Nil • 001-015: Bellcore defined service values • 900-988: New service values

Field descriptions (Sheet 5 of 6)

Field	Subfield or refinement	Entry	Explanation and action
	RATENAME	name from SERVNAME	Service rate step calculator name (from table SERVNAME). This is used for real-time rating of calls with CUSTOM service. Datafill this field if field SERVTYPE_SEL = CUSTOM. This is used as an index into table SRVRS, bypassing table SERVSCRN as a method of obtaining SERVNAM. If RATENAME is TOLLFREE, all calls with this custom DA service are marked NO AMA, that is, not billable. Following are the steps to determine if a QMS DA call is billable. 1. If the CT4Q for this call is datafilled in table CT4QNAMS with the NOAMA field set to Y, then the call is not billable. This rule applies to calls with any type of service. 2. If the base service of this call is DASERV, and the BILLRQD field in DATRKOPT for the incoming trunk group is set to N, then the call is not billable. 3. If the SERVTYPE of this service is BASE, and the base service is DASERV, then table DABILL is indexed by call origination and class of service to determine a SERVNAME. If the SERVNAME is TOLLFREE, then the call is not billable. 4. If the SERVTYPE of this service is CUSTOM, then field RATENAME of table TQMSSERV obtains the name of the rate name for the service. If RATENAME is TOLLFREE, the call is marked as not billable. 5. If none of the above rules hold, then the call is billable.

TQMSSERV (continued)

Field descriptions (Sheet 6 of 6)

Field	Subfield or refinement	Entry	Explanation and action
	SRVBILL	SURCHARGE or SERVBILL	Service billing. This field is only used for GOS rating. SERVBILL is the default. When set to SURCHARGE, rating includes the datafill in table ATQMSMD. Otherwise, SERVBILL does not include the datafill in table ATQLMSMD. To enter SURCHARGE, table TOPSPARM parameter NUMBERING_PLAN must be set to OPEN_NUMBERING. Datafill this field if field SERVTYPE_SEL = CUSTOM.
	CLDFLOAT	Y or N	Called number float. Floating to called party is allowed. Datafill this field if field SERVTYPE_SEL = CUSTOM. CLDFLOAT controls POS RLS when a called number has been entered. If CLDFLOAT is set to Y, keying POS RLS with a called number entered connects the called and calling parties, and floats the call. If CLDFLOAT is set to N, POS RLS does not float to a called number, although it floats for an OGT entered value. If the operator keys POS RLS with a called number entered, the call is taken down, whether or not the forward party is connected. For example, BASE services of type TASERV treat CLDFLOAT functionality as a Y, while BASE services of type DASERV treat CLDFLOAT as an N.

Datafill example

MAP display example for table TQMSSERV

```
SERVNUM  QMSSERV    BASESERV              IMPLCT4Q     SERVTYPE
-------------------------------------------------------------
4         TOLL      TASERV                 TA_CT4Q      BASE Y
5        DA_411     DASERV TOPSVR1 1       DA_411       BASE Y
6        DA_FOR555  DASERV TOPSVR1 3       DA_FOR555    BASE Y
7        INTERCEPT  INTCSERV TOPSVR2 0     INTERCEPT    BASE Y
19       DIRECTORY  DASERV STUB 0          DIRECTORY    BASE Y
```

Table history

NA006

Subfields are added to field BASESERV by feature AN1844 in functionality Multiple DA System I, OSDA00001.

TOPS03

Added field SRVBILL from feature AN1085 in GOS Enhancements, GOS00001.

BCS34

Table TQMSSERV was introduced.

TQOGTKEY

Table name

TOPS QMS Operator Key To Call Type For Queuing Table

Functional description

Table TQOGTKEY enables operators to change the call type for queuing (CT4Q) of a call while the call is at an operator's position. From the operator's perspective, the outtrunk keying action is initiated to either transfer the call, or mark the characteristics in case a subsequent recall occurs. Consequently, the operator may not be aware that an internal CT4Q is changed. A Traffic Operator Position System (TOPS) Master Position (TOPS)-MP outtrunks menu associates a natural language label with the outtrunks key number.

Datafill sequence and implications

The following tables must be datafilled before table TQOGTKEY:

- CT4QNAMS
- TOPSLANG

Table size

0 to 100 tuples

Datafill

The following table lists datafill for table TQOGTKEY.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
KEYNUM		0 to 99	Outgoing trunk key number. This is the key field of the table. Enter the number of the outgoing trunk (OGT) key.
LABEL		alphanumeric (1 to 8 characters)	Key label. Enter a key label display.
KEYINFO		see subfield	Key information. This field consists of subfield KEYTYPE and refinements.
	KEYTYPE	ASST, CT4Q, DUALANG, LANG, or OT	Key_selector_area. Enter the required selector and refinements.

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
			Enter ASST (assistance). No refinements need datafill. Enter CT4Q (call type for queuing) and datafill refinement CT4Q. Enter DUALANG (dual language) and datafill refinements FRNTLANG and BACKLANG. Enter LANG (language) and datafill refinement LANGUAGE. Enter OT (out trunk) or SO (senior operator) and datafill refinements CLDNO, SCRNTYPE, and BILLNUM.

KEYTYPE = CT4Q

If the entry in subfield KEYTYPE is CT4Q, datafill refinement CT4Q as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	CT4Q	alphanumeric (1 to 32 characters)	Call type for queuing. Enter the new CT4Q assigned when the corresponding OGT value is selected. This value must first be defined in table CT4QNAMS. The first two tuples in table CT4QNAMS are reserved as UNSPEC and CAMA.

TQOGTKEY (continued)

KEYTYPE = DUALANG

If the entry in subfield KEYTYPE is DUALANG, datafill refinements FRNTLANG and BACKLANG as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	FRNTLANG	alphanumeric (1 to 3 characters)	Front language. Enter the language associated with the front end of the call if the corresponding OGT key is activated. This value must first be defined in table TOPSLANG.
	BACKLANG	alphanumeric (1 to 3 characters)	Back language. Enter the language associated with the back end of the call if the corresponding OGT key is activated. This value must first be defined in table TOPSLANG.

KEYTYPE = LANG

If the entry in subfield KEYTYPE is LANG, datafill refinement LANGUAGE as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	LANGUAGE	alphanumeric (1 to 3 characters)	Language. Enter the language associated with the call when the corresponding OGT key is activated. This value must first be defined in table TOPSLANG.

KEYTYPE = OT or SO

If the entry in subfield KEYTYPE is OT or SO, datafill refinements CLDNO, SCRNTYPE, and BILLNUM as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	CLDNO	numeric (1 to 18 digits)	Called number. Enter the number used by the DMS to route the call upon activation of the associated key.
	SCRNTYPE	CUST or OPER	Screen type. Enter CUST if the originator's screening applies. Enter OPER if the operator's screening applies.
	BILLNUM	Y or N	Billing number. Enter Y (yes) to include the called number in the billing information. No refinements need datafill. Otherwise, enter N (no) and datafill refinement AMAINDEX.
	AMAINDEX	0 to 99	Automatic message accounting index. Enter the number put in automatic message accounting (AMA) records in place of the called number.

Datafill example

The following example shows sample datafill for table TQOGTKEY.

The example consists of three tuples, KEYNUM 0, 3, and 5. Field LABEL values are HELP, CARRIER1, and FIRE respectively.

Tuple KEYNUM 0 is defined with KEYTYPE ASST.

Tuple KEYNUM 3 is defined as KEYTYPE CT4Q CAMA.

Tuple KEYNUM 5 is defined as KEYTYPE OT with the called number 2122204444. The originator's screening applies, there is no billing. Record 4 is placed in the AMA index.

TQOGTKEY (end)

MAP display example for table TQOGTKEY

```
KEYNUM    LABEL                                    KEYINFO
_____________________________________________________________

     0     HELP                                      ASST
     3 CARRIER1                                  CT4Q   CAMA
     5     FIRE      OT          2122204444 OPER N  4
```

Table history

TOPS15

Field KEYTYPE value SO is removed by feature 59022361 in functionality EOL for TOPS15, OSB00101.

BCS34

Table TQOGTKEY was introduced.

TQOPROF

Table name

TOPS QMS Operator Profile Table

Functional description

Table TQOPROF allows specification of which Traffic Operator Position System (TOPS) Queue Management System (QMS) (TOPS QMS) call selection and service profiles apply to a particular operator number. The table also allows specification of the team of which the operator is a member, for the purposes of force management (FM).

When an operator logs on to a suitably configured position, calls are presented according to the operator's call selection profile. Once a call arrives at a position, the operator can provide for the call any service defined in the operator's TOPS QMS service profile.

In TOPS QMS, every CT4Q is associated with a single call queue, and every call queue is associated with a single service name. The operating company should ensure that the services required by an operator's Controlled Traffic or Call Queue Profile are present in the operator's Service Profile, table TQSVPROF.

Tuples may be added anytime. Tuples may not be changed if an attempt is being made to alter the Call Selection type and/or Service Profile number while the operator is logged on. Changes to the Call Selection Profile number do not take effect until the operator next logs on.

When datafilling QMS, assistants are datafilled in table OPRDAT for every position type except MPX. Then, the assistant must be datafilled in table TQOPROF as if the assistant is an operator.

In TOP06 and earlier, if a tuple is deleted, the corresponding password (associated with the operator) is not reset to the default password of `TOPS'. And the password stays set to the existing value when the tuple was deleted, even if the same operator number is subsequently added back into the table. This is true regardless of the value of table OFCENG parameter TOPS_PASSWORD_ENABLE with possible values Y and N.

In TOP07, if a tuple is deleted, the corresponding password (associated with the operator) is reset to the default password of `TOPS'. And the password stays set to the default value even if the same operator number is added back into the table at a later time. This is true regardless of the value of table OFCENG parameter TOPS_PASSWORD_ENABLE.

TQOPROF (continued)

In TOPS12, alternate FM statistics can be selected to prevent distortion of statistics for CSEs.

Datafill sequence and implications

The following tables must be datafilled before table TQOPROF:

- TQCTPROF
- TQSVPROF
- TQCAPROF

Tables TQCATNAM, TQCATDEF, and TQCQPROF must be datafilled before table TQOPROF if operators with controlled traffic call selection profiles are specified in table TQOPROF.

Table size

0 to 9998 tuples

Datafill

The following table lists datafill for table TQOPROF.

Field descriptions (Sheet 1 of 5)

Field	Subfield or refinement	Entry	Explanation and action
OPRNUM		see subfield	Operator number. This field consists of subfield OPRNUM. This is the key field of the table.
	OPRNUM	0 to 9997	Operator number. Enter the number of the operator whose profile is being defined. This number is entered by the operator at login. Assistant and In-Charge operator numbers must be datafilled in table OPRDAT, as TOPS Assistance processing uses its own call distribution, independent of TOPS QMS. However, assistances on MPX positions must be datafilled in table TQOPROF rather than table OPRDAT. For TOPS offices in transition between TOPS internal ACD and TOPS QMS, operator numbers must be unique between tables TQOPROF and OPRDAT. A number cannot be specified in both tables OPRDAT and TQOPROF.

TQOPROF (continued)

Field descriptions (Sheet 2 of 5)

Field	Subfield or refinement	Entry	Explanation and action
DFLTTEAM		1 to 30	Default team number. This field indicates which team (that is, Traffic Office) the operator belongs to when not logged on, for TOPS Force Management purposes. When logged on, the operator belongs to the team datafilled for the position in table TOPSPOS. The team number is also datafilled in tables TOPSPOS and TOPSDEV. No team number greater than the value in TOPS_NUM_TRAFFIC_OFFICES in table OFCENG can be datafilled. Refer to functionality TOPS ACD Features (OSB00001) for more team information.
SVCPRNUM		number from TQSVPROF	Service profile number. Enter the TOPS QMS service profile number, indicating which QMS services the operator is designated to provide. This number is defined in table TQSVPROF and used in table TOPSPOS.
CAPPRNUM		0 to 15	Capability profile number. This is an index into table TQCAPROF where a QMS operator's capabilities are defined. Value 0 references the tuple 0 in TQCAPROF, which by default has none of the capabilities. These capabilities become available when the operator logs onto an OPR position datafilled as MP OPP or MP ASCII in table TOPSPOS, if the SOC state is ON for functionality QMS Customer Service Enhancements, ADVQ0006.
SELAREA		see subfield	Call selection area. This field consists of subfield CALLSEL and its refinements.

TQOPROF (continued)

Field descriptions (Sheet 3 of 5)

Field	Subfield or refinement	Entry	Explanation and action
	CALLAREA	CONTRAF, CALLQ	Call selection type. This selector indicates whether Call Queue or Controlled Traffic call selection is in effect. The values are: • CONTRAF—calls are selected for the operator according to the datafill in table TQCTPROF associated with field CTPROFNM. Then, datafill refinement field CTPROFNM. • CALLQ—Calls are selected for the operator according to the datafill in table TQCQPROF associated with field CQPROFNM. Then, datafill refinement field CQPROFNM.
	CQPROFNM	number from TQCQPROF	Call queue profile number. If the entry in subfield CALLSEL is CALLQ, datafill this refinement. Enter the call queue profile number indicating which call queues the operator serves. This entry must first be defined in table TQCQPROF.
	CTPROFNM	number from TQCQPROF	Controlled traffic profile number. If the entry in subfield CALLSEL is CONTRAF, datafill this refinement. Enter the controlled traffic profile number indicating which call categories the operator serves. This entry must first be defined in table TQCTPROF.
FMAREA		see subfields	Force management area. This field consists of subfield ALTFM.

Field descriptions (Sheet 4 of 5)

Field	Subfield or refinement	Entry	Explanation and action
	ALTFM	Y or N	Alternate force management. This field enables alternate FM statistics to eliminate distortion of CSE statistics, which contribute to team and system statistics. The values are as follows: • Y - Enable alternate FM statistics. Use this value for CSEs whose work time cannot be counted like general operator. Enter datafill in fields ACBWV and NQWV. • N - Do not use alternate FM statistics. Use this value for general operators and CSEs whose work time can be counted like general operators.
	ACBWV	NOTEAM or TEAM	Assistance call busy work volume. This field appears if field ALTFM = Y. Field ACBWV is the time spent by CSEs servicing assistance requests. This time does not appear on QTADS and QFADS devices. This time counts towards the call queue statistics but not the system statistics. The values are as follows • NOTEAM - This time does not count towards the team statistics. Also, there is no count for the corresponding transfer position seizure (TPS). • TEAM - This time counts toward the team statistics.. ***Note:*** See section “Datafill recommendations for fields ACBWV and NQWV”, which follows the datafill example.

TQOPROF (continued)

Field descriptions (Sheet 5 of 5)

Field	Subfield or refinement	Entry	Explanation and action
	NQWV	NONE, TEAM or TEAMSYST	Non-queue work volume. This field appears if field FMALT = Y. Field NQWV is the sum of the idle time (IDLT) and non-call work volume (NCWV) time. Therefore, call queue statistics are not applicable. This field is the time CSEs spend not handling assistance requests nor subscriber calls. The values are as follows: • NONE - This time does not count towards the team nor system statistics. • TEAM - This time counts towards the team statistics but not towards the system statistics. • TEAMSYST - This time counts towards the team and system statistics. ***Note:*** See section “Datafill recommendations for fields ACBWV and NQWV”, which follows the datafill example.
ACWAREA		see subfields	Assistance calls waiting count area. This field consists of subfield ACWCOUNT.
	ACWCOUNT	N or Y	Assistance calls waiting count. This field enables display of the number of calls in an alerting queue, referred to as the ACW count, at an OPP-compliant position. The operator must have the QINFO capability in table TQCAPROF. The CSE must be logged out to change the ACWCOUNT and ACWCALLQ fields. The values are as follows: • Y - Enable display of the ACW count. Enter datafill in subfield ACWCALLQ.: • N - Disable display of the ACW count.
	ACWCALLQ	0 to 255	Assistance calls waiting call queue. This field appears if field ACWCOUNT = Y. Enter an alerting queue for dispay of the ACW count. There are no checks to ensure that it is an alerting queue..

Datafill example

The following example shows sample datafill for table TQOPROF.

MAP display example for table TQOPROF

```
OPRNUM DFLTTEAM SVCPRNUM CAPPRNUM   SELAREA            FMAREA ACWAREA
------------------------------------------------------------------

   498        3       10        5  CALLQ 10        Y TEAM NONE  Y 7
   502        6       10        0   CALLQ 5                 N    N
   599        6       10        5  CALLQ 15  Y NOTEAM TEAMSYST  Y 9
```

Error messages

The following error messages apply to table TQOPROF:

Error messages for table TQOPROF

Error message	Explanation and action
CAPPRNUM MUST FIRST BE DATAFILLED IN TABLE TQCAPROF	A capability profile number must be defined in table TQCAPROF before it can be datafilled in table TQOPROF. If an attempt is made use a capability profile number in TQOPROF when it has not been defined in TQCAPROF, this message is displayed.
CHANGE TO CAPPRNUM NOT ALLOWED WHILE OPR IS LOGGED ON	An operator's capability profile number cannot be changed while the operator is logged on. If an attempt is made to modify the CAPPRNUM field of a logged-on operator's profile, this message is displayed.

Table history

TOPS12

References to table TEAMACD removed since it is manufacturer discontinued (MD) by functionality MD Code Removal and ReEngineering, OSB00001.

Fields FMAREA and ACWAREA are added by feature A59006877 in functionality QMS Customer Services, ADVQ0006.

TOPS06

Field CAPPRNUM added by functionality QMS Customer Service Enhancements, ADVQ0006.

TQOPROF (continued)

BCS36

Subfields OPRNUM and CALLSEL were added. Subfields CALLQ and CONTRAF were removed.

BCS34

Table TQOPROF was introduced.

Supplementary information

This section provides additional information..

Datafill recommendations for fields ACBWV and NQWV

The factors that affect selection of values for fields ACBWV and NQWV are as follows:

- ACBWV - Is the CSE in a team with general operators or CSEs only?
- NQWV - Is the CSE handling subscriber calls and assistance requests, assistance requests only, or monitoring and observing alarms and statistics?

Recommendations according to these factors are given in the table that follows:

Recommendations for datafill of fields ACBWV and NQWV (Sheet 1 of 2)

Activities of the CSE			Team	ACBWV	NQWV
Subscriber calls	Assistance requests	Monitoring, Stats, and Alarms (see note)			
X	X	X	CSEs and operators	NOTEAM	TEAMSYST
			CSEs only	TEAM	TEAMSYST
	X	X	CSEs and operators	NOTEAM	NONE
			CSEs only	TEAM	TEAM

Note: When a CSE is datafilled to handle subscriber calls and assistance requests, because of the potential amount of work, it is not likely that they would also be datafilled to monitor other operators and observe Statistics and Alarms. Regardless of whether the CSEs take on the additional work of monitoring, statistics and alarms, the recommendations are still the same for datafilling ACBWV and NQWV.

Recommendations for datafill of fields ACBWV and NQWV (Sheet 2 of 2)

Activities of the CSE			Team	ACBWV	NQWV
Subscriber calls	**Assistance requests**	**Monitoring, Stats, and Alarms (see note)**			
		X	CSEs and operators	NOTEAM	NONE
			CSEs only	NOTEAM	TEAM
Note: When a CSE is datafilled to handle subscriber calls and assistance requests, because of the potential amount of work, it is not likely that they would also be datafilled to monitor other operators and observe Statistics and Alarms. Regardless of whether the CSEs take on the additional work of monitoring, statistics and alarms, the recommendations are still the same for datafilling ACBWV and NQWV.					

The table above shows recommended datafill for the ACBWV and NQWV fields when the decision for datafilling them is based on the activities of the CSEs and how they are teamed. The first column, “Activities Of The CSE”, groups the activities of the CSE. The ‘X’ marks a particular activity performed by each group of CSEs

The next column shows how the CSE is teamed. The CSE may be put in a team with general operators indicated by “CSEs and Operators”. Or, the CSE may be in a team without any general operators indicated by “CSEs only”.

When a CSE is in the same team as general operators and the CSE is handling subscriber calls and assistance requests, ACBWV should not be counted towards the team statistics so as not to skew the CBWV team statistics pertaining to the SCBWV contributions made by the general operator and CSEs. Since the CSEs are accumulating SCBWV for subscriber calls like the general operators, the CSEs’ NQWV should be counted towards the team and system statistics. If, however, the CSE is not in a team with general operators, the ACBWV should be counted towards the CSE’s team statistics since the general operators’ SCBWV is counted towards the team statistics of another team.

Again, if a CSE is in the same team as general operators, but if the CSE is only handling assistance requests, the CSE’s ACBWV should not be counted towards the team statistics as before, but now the NQWV should also not be counted towards the team and system statistics. Since the CSE is working more like an ASST operator, the CSE’s NQWV should not be counted towards the

TQOPROF (continued)

team and system statistics in order not to skew those team and system statistics pertaining to the general operators. If, however, the CSE is not in a team with general operators, the ACBWV and NQWV should be counted towards the team statistics as this does not skew the team statistics of the general operators.

If the only activity of the CSE is to monitor general operators or observe alarms and statistics, NQWV should not be counted towards the team and system statistics. If, however, the CSE is not in a team with general operators, the NQWV time should be counted towards the team statistics, but not counted towards the system statistics.

The intent of these recommendations is to offer guidance in deciding how to collect FM statistics on the CSE, without skewing the statistics on the general operators.

Although these are only recommendations, other reasons can influence how the ACBWV and NQWV fields are datafilled.

Finally, it should be noted that if a CSE is datafilled to have his or her ACBWV blocked from being counted towards the team and/or system statistics while providing assistance, the ACBWV continues to be blocked even if the operator drops off of the call before the CSE or if the operator releases the call to a call queue which a CSE services.

Dump and restore

No dump and restore is needed when table TQOPROF is first applied. Normal dump and restore procedures apply after the first application.

Error messages

If the value specified in field OPRNUM is present in table OPRDAT, the attempt is denied and the following message is output:

```
OPRNUM IS ALREADY PRESENT IN TABLE OPRDAT
```

If an attempt is made to change the service profile number of a logged-on operator, the attempt is denied and the following message is output:

```
CHANGE TO SVCPRNUM NOT ALLOWED WHILE OPERATOR IS LOGGED ON
```

If an attempt is made to change the call selection type of a logged-on operator, the attempt is denied and the following message is output:

```
CHANGE TO CALLSEL NOT ALLOWED WHILE OPERATOR IS LOGGED ON
```

TQOPROF (end)

If the team number specified in the DFLTTEAM field exceeds the number of teams specified in table OFCENG by office parameter TOPS_NUM_TRAFFIC_OFFICES, the attempt is denied and the following message is output:

```
DFLTTEAM MAY NOT EXCEED VALUE OF OFCENG PARAMETER
TOPS_NUM_TRAFFIC_OFFICES
```

If the service profile number specified is not present in table TQSVPROF, the attempt is denied and the following message is output:

```
SVCPRNUM MUST FIRST BE DATAFILLED IN TABLE TQSVPROF
```

If the call queue profile number specified in the CQPROFNM field is not defined in table TQCQPROF, the attempt is denied and the following message is output:

```
CQPROFNM MUST FIRST BE DATAFILLED IN TABLE TQCQPROF
```

If the controlled traffic profile number specified in the CTPROFNM field is not defined in table TQCTPROF, the attempt is denied and the following message is output:

```
CTPROFNM MUST FIRST BE DATAFILLED IN TABLE TQCTPROF
```

TQORDERA

Table name

TOPS QMS Call Type for Queueing Relative Ordering A Table

Functional description

Table TQORDERA specifies the relative ordering of the call type for queueing (CT4Q) tables at the three different call states where call queue assignment processing is performed in Traffic Operator Position System Queue Management System (TOPS QMS).

This is a fixed table, with exactly nine tuples. The values in the key fields are fixed, and match the names of the nine currently available CT4Q tables. The default data values for this table are all zeros. This table has a twin, named TQORDERB. Only one of these tables (TQORDERA or TQORDERB) is active at a time. Parameter QMS_ACTIVE_CQA_ORDER_TABLE in table TQMSOPT determines the active table. This parameter can have value TQORDERA or TQORDERB. This allows for dynamic updating of the table, where changes are made in the inactive table and then the inactive table is made active.

IT IS HIGHLY RECOMMENDED that the ordering of the CT4Q tables be changed as infrequently as possible. The mechanisms for re-ordering these tables are provided to allow for flexible, different configurations of traffic segregation in different offices. Changing an existing ordering in an office must be a slow and careful operation, because it changes the meaning and effect of the existing datafill in the CT4Q tables.

Datafill sequence and implications

Datafill all CT4Q refinement tables before datafilling the TQORDER tables (TQORDERA or TQORDERB). Otherwise, changing the TQORDER tables before finalizing the CT4Q refinement tables can cause incorrect routing of some calls.

If a CT4Q table is datafilled before being activated in table TQORDERA, the data has no effect until TQORDERA has a non-zero ordering added against that CT4Q table. Similarly, a non-zero ordering of a CT4Q table has no effect unless there is data in that CT4Q table which segregates traffic.

No deletions or changes are allowed in table TQORDERA if tuple TOPS_QMS_ACTIVE_CQA_ORDER_TABLE in table QMSOPT has a value of TQORDERA, making table TQORDERA the active order for the CT4Q refinement.

Table size

The size of this table is fixed at 9 tuples.

Datafill

The following table lists datafill for table TQORDERA.

Field descriptions (Sheet 1 of 4)

Field	Subfield or refinement	Entry	Explanation and action
CT4QTABL		name from table CT4QNAMS	CT4Q table name. This is the key field of the table. This is the name of the CT4Q table that is ordered relative to the other tables. The name is defined in table CT4QNAMS.
PREOPR		0 to 9 (0 is inactive)	Pre-operator relative ordering. This field defines the relative ordering of this CT4Q table (compared to the other CT4Q tables) for calls that have not yet been to either an operator or an automated service. This ordering is also used for calls that attempt to go to an automated service (for example, ACCS) but are unable to connect to the automated service for some reason (for example, the links to the database are down). PREOPR ordering provides the initial segregation of incoming traffic into an array of final CT4Qs. Then, these final CT4Qs can be used as the starting point for further POSTAUTO and RECALL refinements, where very little refinement is required. Enter a value of one to nine to represent a relative ordering. Value 0 indicates that this CT4Q table is not active within this ordering. Table CT4QBLST must be the last table of refinement or not used (value zero). This requirement prevents additional refinement that may change the billing satisfied/unsatisfied status. (value zero). This requirement prevents additional refinement that may change the billing satisfied/usnsatisfied status.

TQORDERA (continued)

Field descriptions (Sheet 2 of 4)

Field	Subfield or refinement	Entry	Explanation and action
			Enter a value of one to nine to represent a relative ordering. Value 0 indicates that this CT4Q table is not active within this ordering. Table CT4QBLST must be the last table of refinement or not used (value zero). This requirement prevents additional refinement that may change the billing satisfied/unsatisfied status.
POSTAUTO		0 to 9 (0 is inactive)	Post-automated service ordering. This field defines the relative ordering of this CT4Q table (compared to the other CT4Q tables) for calls that have not yet been to an operator but have been to an automated service. Real-time savings can be realized by including in the POSTAUTO and RECALL orderings only those CT4Q tables that the call criteria may have changed since the PREOPR CT4Q refinement was performed. It is expected that most offices do not have many CT4Q tables active in the POSTAUTO and RECALL orderings. For POSTAUTO ordering, only CT4QAUTO and CT4QLANG are likely to have their criteria values (AUTOCRIT and LANGNAME) changed after the PREOPR ordering was applied. The automated service value is always UNKNOWN during the PREOPR ordering and known afterwards. Therefore, the CT4QAUTO table has a relative ordering of 0 in the PREOPR case, and some non-zero value in the POSTAUTO case. The LANGNAME criterion also has a 0 value in PREOPR, but may be supplied by certain automated services.

TQORDERA (continued)

Field descriptions (Sheet 3 of 4)

Field	Subfield or refinement	Entry	Explanation and action
			Enter a value of one to nine to represent a relative ordering. Value 0 indicates that this CT4Q table is not active within this ordering. Table CT4QBLST must be the last table of refinement or not used (value zero). This requirement prevents additional refinement that may change the billing satisfied/unsatisfied status.
RECALL		0 to 9 (0 is inactive)	Recall/transfer ordering. This field defines the relative ordering of this CT4Q table (compared to the other CT4Q tables) for calls that have already been to an operator and are now recalling for operator service. This ordering is used for all calls that have previously been to an operator, even if they have most recently been to an automated service (for example, 0- AABS handoff recalls). For recall ordering, CT4QLANG, CT4QCAR, CT4QAUTO, and to a lesser extent, CT4QCLD, and CT4QORIG may change criterion after the PREOPR and POSTAUTO orderings were applied. The language, carrier, called, or calling numbers associated with the call may have been changed manually by the operator. Also the automated criterion may have been specified by the operator through ADACC or AABS handoff.

TQORDERA (continued)

Field descriptions (Sheet 4 of 4)

Field	Subfield or refinement	Entry	Explanation and action
			Enter a value of one to nine to represent a relative ordering. Value 0 indicates that this CT4Q table is not active within this ordering. Table CT4QBLST must be the last table of refinement or not used (value zero). This requirement prevents additional refinement that may change the billing satisfied/unsatisfied status.
ASST		0 to 9	Assistance relative ordering. This field defines the relative ordering of this CT4Q table (compared to the other CT4Q tables) for calls which a QMS operator has requested assistance and the request maps to Customer Service Expert (CSE) assistance in table TQMSFCQA. When the request is made, the current CT4Q is used as the starting point for refinement. Enter a value of one to nine to represent a relative ordering. Value of 0 indicates that this CT4Q table is not active (not used) within this ordering.

Datafill example

The following example shows sample datafill for table TQORDERA.

MAP display example for table TQORDERA

```
CT4QTABL   PREOPR   POSTAUTO   RECALL   ASST
_____________________________________________
CT4QCLAS       1          0        0      0
CT4QREST       2          0        0      0
CT4QPFXT       3          0        0      0
 CT4QCAR       4          0        0      0
 CT4QCLD       5          0        0      0
CT4QORIG       6          0        0      0
CT4QTIME       7          0        0      0
CT4QLANG       0          1        1      0
CT4QAUTO       0          2        0      0
CT4QSPID       0          0        0      0
CT4QBLST       0          0        0      0
CT4QCALT       0          0        0      0
CT4QSLRN       0          0        0      0
```

Refer to the above sample datafill. In an office with this datafill, incoming calls PREOPR traverse the call queue refinement phase in the following order: CT4QCLAS, CT4QREST, CT4QPFXT, CT4QCLD, CT4QORIG, CT4QTIME, and CT4QCAR. The remaining tables are not traversed in the preoperator stage, as each contains a 0 in the PREOPR data field. This example reflects a general recommendation that tables CT4QAUTO and CT4QLANG not be used as PREOPR tables, since it is impossible for language or automated service to be associated with the call at that point. If an attempt is made to put a non-0 value in the PREOPR field for either of these tuples, a warning is given, because these tables are useless until a call has been to an automated service. The 0 values in the POSTAUTO and RECALL fields for CT4QCLAS, CT4QREST, CT4QPFXT, CT4QCAR, CT4QCLD, CT4QORIG, and CT4QTIME of the example represent similar recommendations.

Note 1: The PREOPR column contains no duplications, and the non-0 indices are contiguous (that is, 1,2,3,4,5,6,7 as opposed to 1,2,3,4,5,8,9). Table control checks enforce these two restrictions.

Note 2: Table CT4QBLST must be the last table of refinement or not used (value zero). This requirement prevents additional refinement that may change the billing satisfied/unsatisfied status.

The ordering restrictions of this table are checked when the office parameter is toggled to make the “other" table ACTIVE. If any gaps or duplicates exist in

TQORDERA (end)

the ordering, the “swap" is denied. While working on the INACTIVE clone, however, the restrictions are not enforced, to allow the craftsperson to change ordering without undue constraints.

Table history

TOPS12

Table CT4QSLRN is added to the datafill example by feature 59007166 in functionality OSSAIN 12 Enhancements, OSAN0007.

TOPS10

Table CT4QCALT is added to the datafill example by feature AF7574 in functionality Queue by Called Type, ADVQ0001.

TOPS09

Table CT4QBLST is added to the datafill example. Also, added note that table CT4QBLST must be the last table of refinement to prevent changing the billing satisfied/unsatisfied status. These changes are made by feature AF7321 in functionality QMS Billing Indicator, ADVQ0007.

NA006

Field ASST is added by functionality QMS Customer Service Enhancements, ADVQ0006.

BCS34

Table TQORDERA was introduced.

TQORDERB

Table name

TOPS QMS Call Type for Queuing Relative Ordering B Table

Functional description

Table TQORDERB specifies the relative ordering of the call type for queueing (CT4Q) tables at the three different call states where call queue assignment processing is performed in Traffic Operator Position System Queue Management System (TOPS QMS).

This is a fixed table, with exactly nine tuples. The values in the key fields are fixed, and match the names of the nine currently available CT4Q tables. The default data values for this table are all zeros. This table has a twin, named TQORDERB. Only one of these tables (TQORDERA or TQORDERB) is active at a time. Parameter QMS_ACTIVE_CQA_ORDER_TABLE in table TQMSOPT determines the active table. This parameter can have value TQORDERA or TQORDERB. This allows for dynamic updating of the table, where changes are made in the inactive table and then the inactive table is made active.

IT IS HIGHLY RECOMMENDED that the ordering of the CT4Q tables be changed as infrequently as possible. The mechanisms for re-ordering these tables are provided to allow for flexible, different configurations of traffic segregation in different offices. Changing an existing ordering in an office must be a slow and careful operation, because it changes the meaning and effect of the existing datafill in the CT4Q tables.

Datafill sequence and implications

Datafill all CT4Q refinement tables before datafilling the TQORDER tables (TQORDERA or TQORDERB). Changing the TQORDER tables before finalizing the CT4Q refinement tables can cause incorrect routing of some calls.

If a CT4Q table is datafilled before being activated in table TQORDERB, the data has no effect until TQORDERB has a non-zero ordering added against that CT4Q table. Similarly, a non-zero ordering of a CT4Q table has no effect unless there is data in that CT4Q table which segregates traffic.

No deletions or changes are allowed in table TQORDERB if tuple TOPS_QMS_ACTIVE_CQA_ORDER_TABLE in table QMSOPT has a value of TQORDERB, making table TQORDERB the active order for the CT4Q refinement.

TQORDERB (continued)

Table size

9 tuples

Datafill

The following table lists datafill for table TQORDERB.

Field descriptions (Sheet 1 of 4)

Field	Subfield or refinement	Entry	Explanation and action
CT4QTABL		name from table CT4QNAMS	CT4Q table name. This is the key field of the table. This is the name of the CT4Q table that is ordered relative to the other tables. The name is defined in table CT4QNAMS.
PREOPR		0 to 9 (0 is inactive)	Pre-operator relative ordering. This field defines the relative ordering of this CT4Q table (compared to the other CT4Q tables) for calls that have not yet been to either an operator or an automated service. This ordering is also used for calls that attempt to go to an automated service (for example, ACCS) but are unable to connect to the automated service for some reason (for example, the links to the database are down). PREOPR ordering provides the initial segregation of incoming traffic into an array of final CT4Qs. Then, these final CT4Qs can be used as the starting point for further POSTAUTO and RECALL refinements, where very little refinement is required. Enter a value of one to nine to represent a relative ordering. Value 0 indicates that this CT4Q table is not active within this ordering. Table CT4QBLST must be the last table of refinement or not used (value zero). This requirement prevents additional refinement that may change the billing satisfied/unsatisfied status.

Field descriptions (Sheet 2 of 4)

Field	Subfield or refinement	Entry	Explanation and action
POSTAUTO		0 to 9 (0 is inactive)	Post-automated service ordering. This field defines the relative ordering of this CT4Q table (compared to the other CT4Q tables) for calls that have not yet been to an operator but have been to an automated service. Real-time savings can be realized by including in the POSTAUTO and RECALL orderings only those CT4Q tables that the call criteria may have changed since the PREOPR CT4Q refinement was performed. It is expected that most offices do not have many CT4Q tables active in the POSTAUTO and RECALL orderings. For POSTAUTO ordering, only CT4QAUTO and CT4QLANG are likely to have their criteria values (AUTOCRIT and LANGNAME) changed after the PREOPR ordering was applied. The automated service value is always UNKNOWN during the PREOPR ordering and known afterwards. Therefore, the CT4QAUTO table has a relative ordering of 0 in the PREOPR case, and some non-zero value in the POSTAUTO case. The LANGNAME criterion also has a 0 value in PREOPR, but may be supplied by certain automated services. Enter a value of one to nine to represent a relative ordering. Value 0 indicates that this CT4Q table is not active within this ordering. Table CT4QBLST must be the last table of refinement or not used (value zero). This requirement prevents additional refinement that may change the billing satisfied/unsatisfied status.

TQORDERB (continued)

Field descriptions (Sheet 3 of 4)

Field	Subfield or refinement	Entry	Explanation and action
RECALL		0 to 9 (0 is inactive)	Recall/transfer ordering. This field defines the relative ordering of this CT4Q table (compared to the other CT4Q tables) for calls that have already been to an operator and are now recalling for operator service. This ordering is used for all calls that have previously been to an operator, even if they have most recently been to an automated service (for example, 0- AABS handoff recalls). For recall ordering, CT4QLANG, CT4QCAR, CT4QAUTO, and to a lesser extent, CT4QCLD, and CT4QORIG may change criterion after the PREOPR and POSTAUTO orderings were applied. The language, carrier, called, or calling numbers associated with the call may have been changed manually by the operator. Also the automated criterion may have been specified by the operator through ADACC or AABS handoff. Enter a value of one to nine to represent a relative ordering. Value 0 indicates that this CT4Q table is not active within this ordering. Table CT4QBLST must be the last table of refinement or not used (value zero). This requirement prevents additional refinement that may change the billing satisfied/unsatisfied status.

Field descriptions (Sheet 4 of 4)

Field	Subfield or refinement	Entry	Explanation and action
ASST		0 to 9	Assistance relative ordering. This field defines the relative ordering of this CT4Q table (compared to the other CT4Q tables) for calls which a QMS operator has requested assistance and the request maps to Customer Service Expert (CSE) assistance in table TQMSFCQA. When the request is made, the current CT4Q is used as the starting point for refinement. Enter a value of one to nine to represent a relative ordering. Value of 0 indicates that this CT4Q table is not active (not used) within this ordering.

Datafill example

MAP display example for table TQORDERA

```
CT4QTABL   PREOPR   POSTAUTO   RECALL   ASST
_____________________________________________
CT4QCLAS       1          0        0      0
CT4QREST       2          0        0      0
CT4QPFXT       3          0        0      0
 CT4QCAR       4          0        0      0
 CT4QCLD       5          0        0      0
CT4QORIG       6          0        0      0
CT4QTIME       7          0        0      0
CT4QLANG       0          1        1      0
CT4QAUTO       0          2        0      0
CT4QSPID       0          0        0      0
CT4QBLST       0          0        0      0
CT4QCALT       0          0        0      0
CT4QSLRN       0          0        0      0
```

Refer to the above sample datafill. In an office with this datafill, incoming calls PREOPR traverse the call queue refinement phase in the following order: CT4QCLAS, CT4QREST, CT4QPFXT, CT4QCLD, CT4QORIG, CT4QTIME, and CT4QCAR. The remaining tables are not traversed in the

TQORDERB (continued)

preoperator stage, as each contains a 0 in the PREOPR data field. This example reflects a general recommendation that tables CT4QAUTO and CT4QLANG not be used as PREOPR tables, since it is impossible for language or automated service to be associated with the call at that point. If an attempt is made to put a non-0 value in the PREOPR field for either of these tuples, a warning is given, because these tables are useless until a call has been to an automated service. The 0 values in the POSTAUTO and RECALL fields for CT4QCLAS, CT4QREST, CT4QPFXT, CT4QCAR, CT4QCLD, CT4QORIG, and CT4QTIME of the example represent similar recommendations.

Note 1: The PREOPR column contains no duplications, and the non-0 indices are contiguous (that is, 1,2,3,4,5,6,7 as opposed to 1,2,3,4,5,8,9). Table control checks enforce these two restrictions.

Note 2: Table CT4QBLST must be the last table of refinement or not used (value zero). This requirement prevents additional refinement that may change the billing satisfied/unsatisfied status.

The ordering restrictions of this table are checked when the office parameter is toggled to make the “other" table ACTIVE. If any gaps or duplicates exist in the ordering, the “swap" is denied. While working on the INACTIVE clone, however, the restrictions are not enforced, to allow the craftsperson to change ordering without undue constraints.

Table history

TOPS12

Table CT4QSLRN is added to the datafill example by feature 59007166 in functionality OSSAIN 12 Enhancements, OSAN0007.

TOPS10

Table CT4QCALT added to datafill example by feature AF7574 in functionality Queue by Called Type, ADVQ0001.

TOPS09

Table CT4QBLST added to datafill example. Also, note added that table CT4QBLST must be the last table of refinement to prevent changing the billing satisfied/unsatisfied status. These changes are added by feature AF7321 in functionality QMS Billing Indicator, ADVQ0007.

NA006

Field ASST added by functionality QMS Customer Service Enhancements, ADVQ0006.

BCS34

Table TQORDERB was introduced.

TQORGDIG

Table name

TOPS QMS Originating Digits Table

Functional description

Table TQORGDIG associates calling digit streams with field ORGCRIT values used in table CT4QORIG for the Traffic Operator Position System (TOPS) Queue Management System (QMS). Table TQORGDIG is a digilator, which means the key is a group of 1 to 18 digits that correspond to a group of calling numbers that begin with whatever digits are specified.

Datafill sequence and implications

Table TQORGNAM must be datafilled before table TQORGDIG.

Table size

0 to 10 000 tuples

Datafill

The following table lists datafill for table TQORGDIG.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
ORGDIGS		0 to 9 (up to 18 digits)	Originating digits. This is the first and key field of the table. Enter a digilator field that describes a set of calling numbers.
ORGCRIT		alphanumeric (1 to 32 characters)	Originating code criterion. Enter a name associated with the given digilator key, for use in table CT4QORIG. Values in this field must first be defined in table TQORGNAM.

Datafill example

The following example shows sample datafill for table TQORGDIG.

MAP display example for table TQORGDIG

```
ORGDIGS          ORGCRIT
________________________________________________________
223517 UNKNOWN_ORGCRIT
```

Table history

BCS34

Table TQORGDIG was introduced.

TQORGNAM

Table name

TOPS QMS Originating Names Table

Functional description

Table TQORGNAM defines a group of names to describe types of originating locations associated with calls.

Datafill sequence and implications

There is no requirement to datafill other tables prior to table TQORGNAM.

Field ORGCRIT values used in table CT4QORIG or TQORGDIG must be datafilled in table TQORGNAM first. No entry in field ORGCRIT can be deleted from table TQORGNAM if it is in use in table CT4QORIG, TQORGDIG, or TOPSTOPT.

A default tuple exists in table TQORGNAM at all times and cannot be deleted. This tuple has field ORGCODE set to 0 (zero) and field ORGCRIT set to UNKNOWN_ORGCRIT. This value is used to segregate traffic for which a ORGCRIT cannot be determined.

Table size

0 to 127 tuples

Datafill

The following table lists datafill for table TQORGNAM.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
ORGCODE		0 to 126	Originating code. This is the first and numeric key field of the table. Enter an integer index value.
ORGCRIT		alphanumeric (1 to 32 characters)	Originating criterion. Enter a name associated with a type of called number. This field is used as part of the key of table CT4QORIG.

Datafill example

The following example shows sample datafill for table TQORGNAM.

MAP display example for table TQORGNAM

```
ORGCODE                          ORGCRIT
________________________________________________________
      0                  UNKNOWN_ORGCRIT
```

Table history

BCS34

Table TQORGNAM was introduced.

Supplementary information

This section provides information on dump and restore procedures for table TQORGNAM.

Dump and restore

No dump and restore is needed when first applied. Normal dump and restore procedures apply after the first application.

TQSPIDNM

Table name

TOPS Queue Management System Service Provider Identifier Name

Functional description

Table TQSPIDNM defines the service provider identifier (SPID) requirement for use in the queue management system (QMS). Table SPIDDB uses the name to define a group of SPIDs and then segregate incoming traffic in table CT4QSPID. This segregation conserves CT4Qs.

Tuple 0 is a default entry for unknown SPIDs.

Datafill sequence and implications

There is no requirement to datafill other tables prior to table TQSPIDNM.

Table TQSPIDNM must be datafilled before tables CT4QSPID and SPIDDB.

Table size

0 to 255 tuples

Datafill

The following table lists datafill for table TQSPIDNM.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
SPIDCODE		0 to 254	SPID code. This is the key to the table that associates an integer index with each SPIDCRIT.
SPIDCRIT		up to 32 characters	SPID criteria. Define a name for a group of SPIDs with like calling traffic. SPIDs are assigned to this group in table SPIDDB and QMS traffic segregates by this group in table CT4QSPID. There can be from zero to many SPIDs associated with this group in table SPIDDB.

Datafill example

The following example shows sample datafill for table TQSPIDNM.

MAP display example for table TQSPIDNM

```
SPIDCODE     SPIDCRIT
-------------------------------------------------------
0            UNKNOWN_SPIDCRIT
1             ILEC
2             CLECS
3             SMALLCLECS
4             BIGLEC
5             OTHERS
```

For the above example, tuple zero is a default entry for not present SPIDs. Change of this tuple is not allowed.

This datafill shows example categories as follows:

- ILEC is for an individual SPID.
- SMALLECS is for ten small CLECs with essentially identical traffic styles.
- BIGCLEC is for the traffic of a large CLEC that goes to a set of operators or service nodes assigned to it and no other traffic to go there.

Error messages

The following error messages apply to table TQSPIDNM..

Error messages for table (Sheet 1 of 2)

Error message	Explanation and action
`This SPIDCRIT is in use in table CT4QSPID or SPIDDB. You must remove all references to this SPIDCRIT before deleting it.`	The SPIDCRITs used in table CT4QSPID must be datafilled in this table first. Likewise, deletion of SPIDCRIT is not allowed from table TQSPIDNM if it is in use in table CT4QSPID or SPIDDB. This message displays for an attempt to delete a tuple from TQSPIDNM under a condition. The condition applies when the SPIDCRIT value is in use in table CT4QSPID. Or, this condition applies for the assignment of one or more SPIDs to the SPIDCRIT in table SPIDDB,

TQSPIDNM (end)

Error messages for table (Sheet 2 of 2)

Error message	Explanation and action
`This tuple is fixed, no deletes allowed.`	For an attempt to delete the default UNKNOWN_SPIDCRIT tuple, deletion is not possible and this message displays. This tuple serves as an SPID of <NIL>.
`This tuple is fixed, no changes allowed.`	For an attempt to change the name of the UNKNOWN_SPIDCRIT default tuple, the system blocks the attempt and displays this message.

Table history

TOPS09

Initial release by feature AF7160 in functionality Queueing, UNBN0002,

TQSRNDIG

Table name

TOPS queue management system (QMS) special location routing number (SLRN) digilator

Functional description

This table associates an SLRN criteria name defined in table TQSRNNAM with SLRN digits.

Datafill sequence and meaning

Enter datafill into table TQSRNNAM before table TQSRNDIG.

Enter datafill into table CT4QSLRN after you enter datafill into table TQSRNDIG.

Table size

0 to 1000 tuples

Datafill

The table that follows lists datafill for table TQSRNDIG..

Field descriptions

Field	Subfield	Entry	Explanation and action
SRNDIGS		see subfield	SLRN digits. This field is the key to the table and consists of subfield DIGILATOR_KEY.
	DIGILATOR_KEY	up to 18 digits	Digilator key. Enter signaled (called) digits to associate with the SLRNCRIT.
SRNCRIT		name from TQSRNNAM	SLRN criteria. Enter an SLRN refinement criteria from table TQSRNNAM.

Datafill example

The figure that follows shows sample datafill for table TQSRNDIG.

TQSRNDIG (end)

MAP display example for table TQSRNDIG

```
SRNDIGS              SRNCRIT
_____________________________________________

6194361234       CPP_SORELESS_CO1
6192312345       CPP_SORELESS_CO2
3045521212       OTHER_CPP
```

Table history

TOPS12

This table was introduced by feature 59007166 in functionality OSSAIN Enhancements 12, OSAN0007.

Additional information

None

TQSRNNAM

Table name

TOPS queue management system (QMS) special location routing number (SLRN) name

Functional description

This table defines the names of SLRN service criteria for use in other QMS tables.

Datafill sequence and meaning

Enter datafill into the tables that follow after you enter datafill into table TQSRNNAM:

- TQSRNDIG
- CT4QSLRN

Table size

1 to 127 tuples

Datafill

The table that follows lists datafill for table TQSRNNAM.

Field descriptions

Field	Subfield	Entry	Explanation and action
SRNCODE		0 to 127	SLRN code. This field is the key to the table.
SRNCRIT		up to 32 alphanumeric characters	SLRN criteria. Define an SLRN refinement criteria that is used by QMS tables TQSRNDIG and CT4QSLRN.

Datafill example

The figure that follows shows sample datafill for table TQSRNNAM.

TQSRNNAM (end)

MAP display example for table TQSRNNAM

```
SRNCODE            SRNCRIT
_____________________________________________

 1                  CPP_WIRELESS_CO1
 2                  CPP_WIRELESS_CO2
 3                  OTHER_OPP
```

Table history

TOPS12

This table was introduced by feature 59007166 in functionality OSSAIN 12 Enhancements, OSAN0007.

Additional information

None

TQSVPROF

Table name

TOPS QMS Service Profile Table

Functional description

Table TQSVPROF creates service profiles by associating lists of Traffic Operator Position System (TOPS) Queue Management System (QMS) (TOPS QMS) service names with a QMS service profile number. The service profiles defined are then available for inclusion in tables TOPSPOS and TQOPROF. These profiles then indicate the TOPS QMS services that a TOPS QMS position is configured to provide, and the TOPS QMS services that a TOPS QMS operator is designated to provide.

Datafill sequence and implications

Table TQMSSERV must be datafilled before table TQSVPROF.

Table size

0 to 254 tuples

Datafill

The following table lists datafill for table TQSVPROF.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
PROFNUM		see subfield	TOPS QMS service profile number. This field consists of subfield PROFNUM. This is the key field of the table.
	PROFNUM	0 to 254	TOPS QMS service profile number. Enter a value for the Traffic Operator Position System (TOPS) Queue Management System (QMS) (TOPS QMS) service profile number.
SVCLIST		alphanumeric (1 to 32 characters)	TOPS QMS service names. Enter up to 63 TOPS QMS service names. If less than 63 names are required, end the list with a $ (dollar sign). The service names specified must be previously defined in table TQMSSERV, field QMSSERV.

TQSVPROF (continued)

Datafill example

The following example shows sample datafill for table TQSVPROF.

MAP display example for table TQSVPROF

```
PROFNUM                                              SVCLIST
_____________________________________________________________

     3                                          (TOPS_TA) $
```

Table history

BCS36

Subfield PROFNUM was added.

BCS34

Table TQSVPROF was introduced.

Supplementary information

This section provides information on dump and restore procedures and possible error messages when datafilling table TQSVPROF.

Dump and restore

No dump and restore is needed when table TQSVPROF is first applied. Normal dump and restore procedures apply after the first application.

Error messages

If an add or change is attempted that specifies an empty list of call categories, the following message is output and the attempt is denied:

```
LIST MUST CONTAIN AT LEAST ONE CALL CATEGORY
```

If an attempt is made to delete a profile from table TQSVPROF, and an entry exists in table TQOPROF that references the controlled traffic profile number being deleted, the following message is output and the deletion is denied:

```
DELETE NOT ALLOWED - AN OPERATOR IS DATAFILLED IN TABLE TQOPROF
WITH THIS CONTROLLED TRAFFIC PROFILE
```

TQSVPROF (end)

If an attempt is made to delete a controlled traffic profile tuple that is currently in use, the following message is output and the entry is denied:

```
ALL OPERATORS WHO LOGGED ON WITH THIS CONTROLLED TRAFFIC PROFILE
MUST LOG OUT BEFORE IT MAY BE DELETED
```

TQTIMENM

Table name

TOPS QMS Time Names Table

Functional description

Table TQTIMENM defines a group of names to describe types of called numbers associated with calls.

Datafill sequence and implications

The following tables must be datafilled after table TQTIMENM:

- CT4QTIME
- TQDAYDEF

An entry in field TIMECRIT cannot be deleted from table TQTIMENM if that value is used by tables CT4QTIME or TQDAYDEF.

Table size

0 to 127 tuples

Datafill

The following table lists datafill for table TQTIMENM.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
TIMECODE		see subfield	Time code. This field consists of subfield TIMECODE. This is the key field of the table.
	TIMECODE	0 to 126	Time code. Enter an integer index value.
TIMECRIT		alphanumeric (1 to 32 characters)	Time name criterion. Enter a name associated with a type of called number. This field is used as part of the key for table CT4QTIME.

Datafill example

The following example shows sample datafill for table TQTIMENM.

MAP display example for table TQTIMENM

```
TIMECODE                          TIMECRIT
________________________________________________________
       0                  UNKNOWN_TIMECRIT
```

Table history

BCS36

Subfield TIMECODE was added.

BCS34

Table TQTIMENM was introduced.

Supplementary information

This section provides information on dump and restore procedures when datafilling table TQTIMENM.

Dump and restore

No dump and restore is needed when table TQTIMENM is first applied. Normal dump and restore procedures apply after the first application.

TQWKDAY

Table name

TOPS QMS Days Of The Week Table

Functional description

Table TQWKDAY defines DAYTYPE values used for each day of the week. Values specified in this table are superseded by the holidays defined in table TQHOLDAY.

Datafill sequence and implications

Table TQDAYNAM must be datafilled before table TQWKDAY

This table is normally datafilled before table TQDAYDEF, but the requirement is not mandatory.

Table size

7 tuples

Store for the potentially large Traffic Operator Position System (TOPS) Queue Management System (QMS) (TOPS QMS) tables is allocated dynamically on several levels, which reduces storage consumption, but increases the complexity of estimating store use. Contact Northern Telecom for assistance in determining the datastore required for this table.

Datafill

The following table lists datafill for table TQWKDAY.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
TQWKKEY		see subfield	TOPS QMS week key. This field consists of subfield DAYOWEEK. This is the key field of the table.
	DAYOWEEK	SUN, MON, TUE, WED, THU, FRI, or SAT	Day of week. Enter a value for the day of the week.
DAYTYPE		alphanumeric (1 to 32 characters)	Type of day. Enter a value for the type of day. This value must first be defined in table TQDAYNAM.

Datafill example

The following example shows sample datafill for table TQWKDAY.

The example consists of the seven days of the week specified in field TQWKDAY while the type of the day is defined in field DAYTYPE.

MAP display example for table TQWKDAY

```
TQWKKEY  DAYTYPE
_____________________________________________________________

    SUN  WEEKDAY
```

Table history

BCS36

Subfield DAYOWEEK was added.

BCS34

Table TQWKDAY is introduced.

Supplementary information

This section provides information on dump and restore procedures when datafilling table TQWKDAY.

Dump and restore

No dump and restore is needed when table TQWKDAY is first applied. Normal dump and restore procedures apply after the first application.

TRAFSAMP

Table name

Traffic Operator Position System Traffic Sampling Table

Functional description

Table TRAFSAMP is used in a switching unit provisioned with feature package Traffic Operator Position System (TOPS) Enhanced Administration.

The TOPS traffic sampling feature allows the operating company to record on an automatic message accounting (AMA) tape `one of N' distinct calls that reaches a TOPS position for analysis and report generation by downstream programs.

If the sampled call is of a type that results in an AMA billing entry, that billing entry includes a flag indicating that the call is traffic-sampled.

If the sampled call is of a type that does not result in an AMA billing entry, the fact that the call is sampled forces an AMA billing entry including a traffic sample flag.

The sampling count excludes

- calls that do not reach a TOPS position
- position reseizures
- operator-originated calls

Table TRAFSAMP lists the N of the `one of N' fraction for each of the following: WEEKDAY, SATURDAY, and SUNDAY.

Datafill sequence and implications

There is no requirement to datafill other tables prior to table TRAFSAMP.

Table size

The table size is fixed at 3 tuples.

Datafill

The following table lists datafill for table TRAFSAMP.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
TRAFDAY		SAT, SUN, or WEEK	TOPS traffic sampling day. Enter SAT (Saturday), SUN (Sunday), or WEEK (Weekday) to indicate the day on which this tuple applies.
FRACTION		0 to 32767	Number N of `one of N' fraction. Enter the number N to indicate that every Nth TOPS call (see Functional description of table TRAFSAMP) is to be entered on the AMA tape with the traffic sample flag.

Datafill example

The following example shows sample datafill for table TRAFSAMP.

MAP display example for table TRAFSAMP

```
TRAFDAY FRACTION
_____________________________________________________________

   WEEK       50
   SAT        50
   SUN        50
```

TRBLCODE

Table name

Integrated Business Network Console Trouble Code Table

Functional description

Feature BV0982 (Trouble Key on IBN Console) allows an attendant to indicate a problem in the handling of a particular call. Typical problems include noise, poor sound quality, echo, clipping, no ring, call dropped, and malicious calls.

A set of trouble codes, defined by the operating company through table TRBLCODE, allows the attendant to classify the problem under the most appropriate category. Only trouble codes entered in table TRBLCODE are valid for use with feature BV0982. Associated with each trouble code is a trouble code meaning and an alarm severity.

The meaning assigned to each trouble code can include blank spaces, but such blanks must be typed as underscore characters (_) due to the design of the table editor. Trailing blanks at the end of the name are automatically removed when the name is stored.

The meaning assigned to a trouble code is presented to the attendant for confirmation, and also appears in the log report generated for maintenance personnel.

The alarm condition specified for each trouble code in table TRBLCODE determines the alarm severity that is signaled when the trouble code is used. Use of a trouble code results in an alarm condition of no alarm, minor alarm, major alarm, or critical alarm.

Feature BV0982 can be assigned to an attendant console as a dedicated special function key (through table FNMAP), or as one of up to 100 meanings of the wildcard key (through table WCKCODES).

Datafill sequence and implications

There is no requirement to datafill other tables prior to table TRBLCODE.

Table size

0 to 100 tuples

Datafill

The following table lists datafill for table TRBLCODE.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
CODE		0 to 99	*Trouble code number* Enter the trouble code number.
MESSAGE		alphanumeric (up to 16 characters)	*Trouble description message* Describe the nature of the call handling problem.
ALARM		CR, MJ, MN, or NA	*Alarm condition* Enter one of the following alarm conditions: • CR (critical alarm) • MJ (major alarm) • MN (minor alarm) • NA (no alarm)

Datafill example

The following example shows sample datafill for table TRBLCODE.

Trouble code 24 has been defined as a minor alarm condition with the associated message indicating noise from the destination. An attendant who can barely hear a caller due to transmission problems can enter this trouble code into the attendant console to report the difficulty.

Trouble code 6 has been defined as a no alarm condition with the associated message indicating a malicious call. An attendant who receives a threatening call can enter this trouble code into the attendant console to report the event.

TRBLCODE (end)

MAP display example for table TRBLCODE

```
  CODE           MESSAGE   ALARM
_____________________________________________________________

    24  NOISE_FROM_DEST     MN
     6   MALICIOUS_CALL     NA
```

TRGSIESC

Table name

Trigger Shared Interoffice Escape

Functional description

Table TRGSIESC stores an escape code list for the Shared Interoffice Trunk trigger. The INTEROFF trigger subscribed against a pretranslation code is bypassed if the called (inpulsed) digits match any digit pattern datafilled in table TRGSIESC.

At the Information Collected TDP, after translation of the pretranslation code has taken place—that is, the 0ZZXXX(X) digits are removed—the inpulsed called digits are compared to the digits datafilled in table TRGSIESC. If any of the first ten digits match the digit pattern of the escape code, the call bypasses the INTEROFF trigger and continues through regular translations. Other triggers are not affected by the escape list in table TRGSIESC.

The digit format in table TRGSIESC is one to ten digits from N to NPA-NXX-XXXX. The NPA or NPA-NXX values do not have to appear in other SSP data tables; they can correspond to SCP-based service dial patterns.

Datafill sequence and implications

There is no requirement to datafill other tables prior to table TRGSIESC.

Table size

A maximum of 32 766 digits can be datafilled in table TRGSIESC.

Datafill

The following table lists datafill for table TRGSIESC.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
ESCAPECD		numeric	*Escape code.* Enter any number of tuples containing digit patterns (1 to 10 digits each) which should escape processing the Shared Interoffice Trunk trigger and continue through regular translations.

Datafill example

The following example shows sample datafill for table TRGSIESC.

TRGSIESC (end)

MAP display example for table TRGSIESC

```
ESCAPECD
________________________________________________________________
  800
  888375
  888641
  888723
```

Table history

NA005

Table introduced in accordance with AINSSP: AIN and E800 Interworking.

Supplementary information

None

TRIGDIG

Table name

Trigger Digits

Functional description

The advanced intelligent network (AIN) allows the operating company to create and modify telecommunications services for its subscribers. Two key components of AIN are service switching points (SSP) and service control points (SCP). The SSPs are connected to customer premises by existing telephone lines. SCPs or adjuncts can be programmed to create new services and to tailor services to meet individual subscriber needs.

The SSP can recognize calls that require AIN handling by attempting prespecified triggers at detection points (DP). A trigger occurs when an SSP determines that it must query the SCP or adjunct to continue processing a call.

The major types of information associated with each trigger are

- types of triggers
- trigger assignments
- trigger criteria

Trigger types are defined by applications. Trigger assignments specify triggers that are assignable to an individual agent, group, or office. Trigger criteria describe conditions that are needed to trigger. If the trigger criteria are met, the SSP launches a query to the SCP or adjunct for further instructions as to how the call should proceed.

The relationship between AIN and trigger tables TRIGGRP, TRIGDIG, and TRIGINFO is established by subscribing to AIN for an agent, directory number and call type basis, group, or office, and indicating the desired AIN behaviors in the trigger tables.

Table TRIGDIG is used to specify trigger digit criteria and is based on the dialed digits. The table also indicates the action required when a match occurs between dialed digits and digits datafilled in the corresponding tuple.

A *match* is defined as the most specific match. For example, if the dialed digits are 6137225998 and the datafilled digits in table TRIGDIG are 613, 613722, and 6137225998, the most specific digits (6137225998) match. If the SCP or adjunct instructs the SSP to continue processing, the next most specific digits (613722) match.

TRIGDIG (continued)

The key to table TRIGDIG is a three-part key containing the digit group identifier from table TRIGGRP, the trigger name, and the digits to be matched. The trigger appears twice—once as part of the key, and once as part of the data area. The trigger is used as a selector in the data area where additional fields can be prompted for, depending on the trigger value.

Field TRIGGER specifies the trigger type.

Field ACTION specifies the SSP action to be taken if the dialed digits match the value in subfield DIGITS.8

Starting with NA003, the AIN default routing (DFLTRT) option allows calls encountering an AIN Final (AINF) treatment to be routed to a DN, an announcement, or both. This option applies to the N11 and Specific Digit String (Public Office Dialing Plan) triggers.

R02 is added to the range of values that can be datafilled in field MSGSET of table TRIGDIG for North American (CNA) releases. R02 represents the AIN R0.2 (Service Enablers) message set.

An entry in table TRIGDIG cannot be deleted if it is used as the last instance of a digit name (subfield DIGNAME) in table TRIGGRP.

For Local Number Portability (LNP), an LNP trigger type is added.

Datafill sequence and implications

If global title translation (GTT) is used, table C7GTTYPE must be datafilled before table TRIGDIG.

The AIN Essentials software option, AIN00002, must be present for table TRIGDIG to be used during call processing.

Table size

0 to 32766 tuples

Table TRIGDIG contains a three-part key containing subfields DIGNAME, TRIGGER, and DIGITS. Under the following conditions, the maximum table size is less than 32 766 tuples:

- subfields DIGNAME and TRIGGER contain a small number of different entries, or
- digit values entered in subfield DIGITS are spread widely apart

Table size is allocated dynamically.

The DMSMON DBLOCKS tool can monitor the size of table TRIGDIG. If the number of digit blocks being used is approaching 100%, the number of digilator pools used by table TRIGDIG can be increased with office parameter TRIGDIG_NUM_DGLTR_POOLS in table OFCENG. *This office parameter cannot be decreased.*

Datafill

The following table lists datafill for table TRIGDIG.

Field descriptions (Sheet 1 of 6)

Field	Subfield or refinement	Entry	Explanation and action
KEY		see subfields	*Key* This field is the key to table TRIGDIG and contains subfields DIGNAME, TRIGGER, and DIGITS.
	DIGNAME	alphanumeric (up to 8 characters)	*Digit name* 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)	*Trigger* Enter a symbolic name representing a subscribed trigger. Valid entries are CDPCODE, INTEROFF, GENTRIG, LNP, N11, PODP, PODPFEAT and SFC.
	DIGITS	0 to 9, B, C, D or E (up to 18 characters)	*Digits* 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 (#). The additional overdecadic digits D and E can be used anywhere in the digit string. Enter up to 18 digits for CS-1R in the Australian or Japanese markets.

TRIGDIG (continued)

Field descriptions (Sheet 2 of 6)

Field	Subfield or refinement	Entry	Explanation and action
TRIGGER		alphanumeric (up to 8 characters)	*Trigger* 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 refinement RPRTDIGS. The TRIGGER field adds SFC as a trigger (NA008).
	RPRTDIGS	TRANS, NOTRANS	*AIN report digits* This subfield indicates whether the SSP should perform digit translation on the extension number before it sends a query message. Enter TRANS if the SSP should perform digit manipulation. Enter NOTRANS if the SSP should query using exact digits dialed.
ACTION			*Action* This field consists of subfield ACTION.

Field descriptions (Sheet 3 of 6)

Field	Subfield or refinement	Entry	Explanation and action
	ACTION	EVENT, ESCAPE	*AIN action type* Enter the action to be taken by the SSP if the dialed digits match the value in subfield DIGITS. Enter EVENT to launch a query to the SCP or adjunct if the SSP determines that the trigger criteria of are met. Datafill refinements PROTOCOL, MSGSET, and TRANSPRT. Enter ESCAPE to allow the dialed number to escape the trigger when the dialed number matches the specified escape criteria. ***Note:*** When field ACTION is set to ESCAPE, there are no further sub-fields (PROTOCOL, MSGSET, and TRANSPRT are not datafilled).
	PROTOCOL	TCAP	*AIN protocol* Enter the protocol to be used to communicate with the SCP or adjunct. Enter TCAP for the transaction capabilities application part.
	MSGSET	alphanumeric	*Message set* 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. Enter INAPV8 for CS-1R in the Australian and Japanese markets.
	TRANSPRT	SS7	*AIN transport* Enter SS7, the transport medium used to communicate with the SCP or adjunct. Datafill refinements GTT and GTSOURCE.

TRIGDIG (continued)

Field descriptions (Sheet 4 of 6)

Field	Subfield or refinement	Entry	Explanation and action
	GTT	alphanumeric (up to 16 characters)	*Global title translator* If the entry in subfield TRANSPRT is SS7, datafill this refinement. This field is an index into table C7GTTYPE. Enter a global title translation (GTT) name previously datafilled in table C7GTTYPE.
	GTSOURCE	CALLED, CHARGE, or DFLT	*Global title source* If the entry in subfield TRANSPRT is SS7, datafill this refinement. 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. 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. Enter CHARGE if the global title value is taken from the charge number. Enter DFLT if the service key value is to be used as the index into table C7GTT. Datafill subfield SERVICE_KEY.
OPTIONS		see subfield	*Options* This field contains subfield OPTION.

Field descriptions (Sheet 5 of 6)

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	DFLTRT, POTUSE, or SERVKEY	*Option* Specifies information required when the InitialDP is built. 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 refinements. Enter POTUSE to specify the AIN 0.1 PODP trigger for a specific service or potential use. Datafill the POTUSE refinement. Enter SERVKEY to specify the intelligent network application part (INAP) service key. Datafill subfield SERVICE_KEY. Enter $ (dollar sign) for no options.
	SELECTOR	ANN, ANNDN, or DN	*Selector* 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. Complete refinement ANNIDX for selectors ANN and ANNDN. Complete refinement DN for selectors ANNDN and DN.
	ANNIDX	1 to 65535	*Announcement index* Enter the voice announcement index (from table AINANNS) of the announcement to be played.
	DN	numeric (up to 15 digits)	*Directory number* Enter the directory number used to route the call. If the DN is nil, call processing continues to the next point in call.

TRIGDIG (continued)

Field descriptions (Sheet 6 of 6)

Field	Subfield or refinement	Entry	Explanation and action
	POTUSE	CPC, TFS	*Potential use indicator* 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.
	SERVICE_KEY	numeric (0 to 2147483647)	*Service key* This field is a mandatory parameter of the InitialDP operation. Enter the value of the service key for the required service to be sent from the SSP to the SCP in an InitialDP operation.
	SERVIDX	numeric (0 to 9999)	*Service index* This field is the key to table SERVINFO. 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 SERVINFO tuple.

Datafill example

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  GTT1  DFLT
                              (  DFLTRT    ANN 34    )  $
```

The following example shows sample datafill for table TRIGDIG option SERVKEY.

MAP display example for table TRIGDIG option SERVKEY

```
KEY              TRIGGER
                 ACTION                          OPTIONS
-------------------------------------------------------------

BTUPBTUP GENTRIG 06004200 GENTRIG EVENT TCAP INAPV8
SS7 EINJAZZ CALLED (SERVKEY 6200) (SERVIDX 6200) $
```

Table history

MMP15

The range of DIGITS field is extended to include overdecadic digits D and E for feature A59023775.

EUR008

Added SERVIDX field to replace SERVKEY as the index to table SERVINFO.

The range of SERVKEY is extended from 9999 to 2147483647.

NA008

SFC Trigger 0.2 (AF6852) adds specific feature code (SFC) as a valid trigger to the TRIGGER subfield of field KEY, and to field TRIGGER.

Toll-Free Service on AIN Service Enablers (AR2219) adds toll-free service (TFS) value to field POTUSE.

AIN Service Enablers SDS Escape List (AU2332) adds ESCAPE value to the ACTION field to datafill an escape code for the following digit-based triggers:

- specific digit string (SDS)
- N11 (dialing codes for specific services, for example, 411 and 911)
- customer dial plan (CDP)
- public office dial plan feature (PODPFEAT)
- specific feature code (SFC)
- local number portability (LNP)

NA007

Added Local Number Portability (LNP) trigger.

TRIGDIG (end)

EUR005

Added the CALLED option to field GTSOURCE. Changed the DFLT option, which now uses the Service Key as an index into table C7GTT.

NA006

POTUSE option and subfield added.

NA005

Table size clarified.

NA004

Trigger type PODPFEAT added to the list of triggers.

NA003

Refinements SELECTOR, ANNIDX, and DN added to subfield OPTION. Option DFLTRT added.

BCS36

Table TRIGDIG was introduced.

Supplementary information

This section provides information on dump and restore procedures for table TRIGDIG.

Dump and restore

A reformat is required to change the GTSOURCE field from the value DFLT to the value CALLED.

TRIGESC

Table name

Trigger Escape Codes Table

Functional description

The Advanced Intelligent Network (AIN) provides the capability for the operating company to create and modify telecommunications services to its subscribers. Two key components of AIN are service switching points (SSP) and service control points (SCP). The SSPs are connected to customer premises by existing telephone lines. The SCPs, or adjuncts, can be programmed to create new services and tailor services to meet individual subscriber needs.

The SSP can recognize calls that need AIN handling by attempting the pre-specified triggers at the trigger detection points (TDP). A trigger occurs when the SSP determines that it must query the SCP or adjunct to continue processing a call.

Three major types of information are associated with each trigger:

- types of triggers
- trigger assignments
- trigger criteria

Types of triggers are defined by applications. Trigger assignments specify triggers assignable to an individual agent, a group, or an office. Trigger criteria describe the conditions needed to trigger.

If the trigger criteria is met, the SSP launches a query to the SCP or adjunct for further instructions as to how the call proceeds.

The relationship between AIN and the trigger tables (TRIGGRP, TRIGDIG, TRIGESC, and TRIGINFO) is mainly established by subscribing to AIN for an agent, a directory number (DN) and call type (CT), a group or an office, and indicating the desired AIN behaviors in the trigger tables.

Table TRIGESC stores public office dialing plan digits corresponding 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 receivied digits do not match the digits stored in table TRIGESC, the call acts on the trigger, that is, a query is launched to the SCP.

Table TRIGGRP queries table TRIGESC to determine the escape codes when the ESC (escape) criteria is datafilled.

TRIGESC (continued)

For further information, see tables TRIGDIG, TRIGGRP, and TRIGINFO.

Datafill sequence and implications

There is no requirement to datafill other tables prior to table TRIGESC.

Table size

Size for table TRIGESC is dynamically allocated.

Datafill

The following table lists datafill for table TRIGESC.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
KEY		see subfield	*Digilator table key* This field is the key to the table and consists of subfield DIGILATOR_KEY.
	DIGILATOR_ KEY	0 to 9 (vector of up to 18 digits)	*Digilator key* Enter the escape code. Digits received at the INFO_COLLECTED trigger detection point after translation to public office dialing plan digits are compared with the digits datafilled in this field in order to determine if the escape criterion is met. There is no default value for this field.

Datafill example

The following example shows sample datafill for table TRIGESC.

MAP display example for table TRIGESC

```
KEY
_____________________________________________________

411
911
```

Table history

CSP02

Table TRIGESC was added.

Supplementary information

This section contains information on dump and restore procedures for table TRIGESC.

Dump and restore

Normal dump and restore procedures apply.

TRIGGRP

Table name

Trigger Group

Functional description

The Advanced Intelligent Network (AIN) enables the operating company to create and modify telecommunications services for its subscribers. Two key components of AIN are service switching points (SSP) and service control points (SCP). The SCPs, or adjuncts, can be programmed to create new services and tailor services to meet individual subscriber needs.

The SSP can recognize calls that need AIN handling by detecting prespecified triggers at trigger detection points (TDP). A trigger occurs when the SSP determines that it must query the SCP or adjunct to continue processing a call.

Three major types of information are associated with each trigger:

- types of triggers
- trigger assignments
- trigger criteria

Types of triggers are defined by applications. Trigger assignments specify triggers that are assignable to an individual agent, a group, or an office. Trigger criteria describe the conditions needed to trigger.

If the trigger criteria is met, the SSP launches a query to the SCP or adjunct for further instructions as to how the call should proceed.

The relationship between AIN and the trigger tables (TRIGGRP, TRIGDIG, and TRIGINFO) is mainly established by subscribing to AIN for an agent, a directory number and call type, a group, or an office, and indicating the desired AIN behaviors in the trigger tables.

Table TRIGGRP is the main table used for defining AIN behavior. The table is indexed by a two-part key consisting of

- the AIN group (field TRIGNAME) that associates a symbolic name to a grouping of subscribed TDPs and their triggers
- a TDP (field TDP) that is a symbolic name representing a certain TDP defined by applications

For a particular key, one or more triggers can be assigned, along with criteria. If the criteria of a trigger is met, the trigger is armed and an action is performed according to the pre-specified AIN behavior. The AIN behavior associated

with each trigger group and TDP is provided in field TRIGDATA and its subfields TRIGGER, CRITERIA, and INFONAME. The information name (subfield INFONAME) is the index into table TRIGINFO.

Each application using table TRIGGRP supplies checks for invalid triggers at a given TDP, and invalid criteria at a given TDP and trigger combination.

The order in which triggers are listed in each tuple in table TRIGGRP is the order in which they are encountered during call processing.

If a TDP has more than one trigger, trigger precedence is handled in the following order:

- triggers assigned on an individual basis
- triggers assigned on a group basis
- triggers assigned on an office basis

For related information, refer to tables TRIGDIG and TRIGINFO.

Datafill sequence and implications

The following tables must be datafilled before table TRIGGRP:

- TRIGDIG
- TRIGINFO

The AIN Essentials software option, AIN00002, must be present for table TRIGGRP to be used during call processing.

LNP triggers are datafilled in the same manner as AIN 0.1 Public Office Dialing Plan (PODP) triggers in table TRIGGRP, except that the trigger type LNP replaces PODP.

LNP triggers can use all of the escape criteria available to PODP triggers.

Note: Always set the ESCEA, ESCOP, ESCDN, and ESCCN escape criteria to the trigger group when datafilling an LNP trigger group in table TRIGGRP.

Table size

0 to 31 999 tuples

TRIGGRP (continued)

Datafill

The following table lists datafill for table TRIGGRP.

Field descriptions (Sheet 1 of 5)

Field	Subfield or refinement	Entry	Explanation and action
KEY		see subfield	*Key* This field is the key to the table and consists of subfields TRIGNAME and TDP.
	TRIGNAME	alphanumeric (up to 16 characters)	*AIN trigger name* Enter the trigger name that is used to define a group of triggers. Table TRIGGRP 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.
	TDP	alphanumeric (up to 8 characters)	*Trigger detection points* 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. The range of values includes OCPB, ONOA, INFOCOL, and INFOANAL.
TRIGDATA		see subfields	*Trigger data* 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).

Field descriptions (Sheet 2 of 5)

Field	Subfield or refinement	Entry	Explanation and action
	TRIGGER	alphanumeric (up to 8 characters)	*Trigger* 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. Valid values are AFR, CDPCODE, GENTRIG, INTEROFF, LNP, N11, OCPB, OFFHKDEL, OFFHKIMM, ONOA, ORIGATT, PRIB, PODP, PODPFEAT, SFC, TBUSY, TERMATT, TNOA. ***Note:*** Although entries PRIB, TBUSY and TNOA show on the switch, you cannot datafill these values.

TRIGGRP (continued)

Field descriptions (Sheet 3 of 5)

Field	Subfield or refinement	Entry	Explanation and action
	CRITERIA	ASSIGNED, BC, CT, DG, ESC, ESCCN, ESCDN, ESCEA, ESCGP, ESCMDC, ESCOP	*Criteria types* Enter up to four criteria selectors. If fewer than four selectors are required, end the list with a $ (dollar sign). ORIGATT, INFOANAL, INFOCOL, and TERMATT support ASSIGNED (unconditional triggering) criteria under the GENTRIG trigger. ORIGATT supports BC (bearer capability) criteria under the GENTRIG trigger. Enter CT for call type and datafill subfield CALLTYPE. Enter DG for digit and datafill DIGNAME. 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. Enter ESCCN to prevent coin dialtone 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. For Local Number Portability (LNP), the following ESCCN options apply: DD, OA, DD_OA, NP, DD_NP, OA_NP, ALL Enter ESCDN to escape a trigger when the dialed DN is resident on the switch. Enter ESCEA to escape a trigger when the call is an equal access call.

Field descriptions (Sheet 4 of 5)

Field	Subfield or refinement	Entry	Explanation and action
			To escape the PODP trigger when the GAP is present, enter ESCGP for Escape Generic Address Parameter (applied to PODP trigger type). Enter ESCOP to escape atrigger when the call is an operator call. Enter ESCMDC to escape the Off_Hook_Delay trigger if the call is placed in the Intercom Range Enter FTC to allow calls to trigger at TDP-2 by Feature Code Criterion. A DIGNAME value corresponding to an existing entry in table TRIGDIG must also be entered. Enter MDC to allow calls to trigger at TDP-2 by Minimum Digit Criterion. Datafill refinement MINDIGS. Enter SPC to allow calls to trigger at TDP-2 by Specific Digit String Criterion.
	MINDIGS	0 to 255	*Minimum digits* Specifies the value of the minimum digits required. Enter a value no greater than 18 for CS-1R on the DMS-SSP.
	DIGNAME	alphanumeric (up to 8 characters)	*Digit name* Enter the digit translator used to index into table TRIGDIG. The digit name must be previously datafilled in table TRIGDIG. If this field contains datafill, subfield INFONAME must be set to NIL.
	CALLTYPE	VBINFO or CMDATA	*AIN call type* Enter VBINFO for voice-band information. Enter CMDATA for circuit mode data.

TRIGGRP (continued)

Field descriptions (Sheet 5 of 5)

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 (up to 8 characters) or NIL	*AIN trigger information identifier* Enter the trigger information identifier. The entry is either NIL or an index into table TRIGINFO where the SCP or adjunct information is provided. If field DIGNAME contains datafill, the entry in subfield INFONAME must be NIL. If trigger AFR is used, the entry in subfield INFONAME must be NIL. 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.

Datafill example

The following example shows sample datafill for table TRIGGRP.

MAP display example for table TRIGGRP

```
KEY
                                                    TRIGDATA
_____________________________________________________________________
AINGRP1     ORIGATT    (  OFFHKIMM  (CT  VBINFO)  $
NIL)  $
```

NA013

Activity 59014551 introduced ORIGATT and TERMATT fields for the GENTRIG trigger. The ORIGATT and TERMATT fields support the ASSIGNED and BC criterias.

NA010

Feature AU2867 adds the OCPB and ONOA trigger detection points, the OCPB, ONOA and SFC triggers, and the ESCMDC criteria type.Added note about valid entries for the TRIGGER field.

NA008

SFC Trigger 0.2 (AF6852) adds the specific feature code (SFC) trigger to subfield TRIGGER of field TRIGDATA.

AIN 0.2 O_CPB and O_NOA Triggers (AQ1576) adds triggers OCPB and ONOA to the TDP subfield of the KEY field, and to the TRIGGER subfield of the TRIGDATA field.

NA007

Added Local Number Portability trigger.

Added subfield criteria ESCGP.

EUR05

The symbolic range INFOCALL was added to the subfield TDP. The FTC, MDC, and SPC entries were added in subfield CRITERIA.

NA006

Four added entries in subfield CRITERIA. New subfield TYPECALL added.

TRIGGRP (end)

NA005

Table size corrected. Optional escape criteria added for shared interoffice trigger, using new table TRGSIESC.

NA004

Restrictions on trigger types that can be used in the same trigger group were removed. Trigger types can include AFR, CDPCODE, INTEROFF, OFFHKDEL, OFFHKIMM, N11, PODP, PODPFEAT, and TERMATT.

NA003

The following restrictions are removed from the functional description:

- changes to triggers in a trigger group are not permitted if there are currently any subscribers to that trigger group
- triggers may not be added to or deleted from any trigger group entry if there are subscribers to that trigger group

APC03

Reduced table size to 255 tuples and decreased the maximum number of TRIGDATA entries per tuple to 16.

BCS36

Table TRIGGRP was introduced.

Supplementary information

This section provides information on dump and restore procedures for table TRIGGRP.

Dump and restore

Normal dump and restore procedures apply.

TRIGINFO

Table name

Trigger Information

Functional description

The advanced intelligent network (AIN) enables the operating company to create and modify telecommunications services for its subscribers. Two key components of AIN are service switching points (SSP) and service control points (SCP). The SSPs are connected to customer premises by existing telephone lines. The SCPs, or adjuncts, can be programmed to create new services and tailor services to meet individual subscriber needs.

The SSP can recognize calls that need AIN handling by attempting pre-specified triggers at trigger detection points (TDP). A trigger occurs when the SSP determines that it must query the SCP (adjunct) to continue processing a call.

Three major types of information are associated with each trigger:

- types of triggers
- trigger assignments
- trigger criteria

Types of triggers are defined by applications. Trigger assignments specify triggers assignable to an individual agent, a group, or an office. Trigger criteria describe the conditions needed to trigger.

If the trigger criteria is met, the SSP launches a query to the SCP or adjunct for further instructions as to how the call should proceed.

The relationship between AIN and the trigger tables (TRIGGRP, TRIGDIG, and TRIGINFO) is mainly established by subscribing to AIN for an agent, a directory number and call type basis, a group, or an office, and indicating the desired AIN behaviors in the trigger tables.

Table TRIGINFO specifies the address of the SCP (adjunct) that is used when no references to table TRIGDIG are provided for a trigger in table TRIGGRP.

Field ACTION specifies what action is taken by the SSP when the dialed digits match the value in field DIGITS.

Starting with NA003, the AIN default routing (DFLTRT) option allows calls encountering an AIN Final (AINF) treatment to be routed to a DN, an

TRIGINFO (continued)

announcement, or both an announcement and a DN. This option applies to the Terminating Attempt trigger.

R02 is added to the range of values that can be datafilled in field MSGSET of table TRIGDIG in PCLs containing the CNA DRU. R02 represents the AIN R0.2 message set.

Starting with CNA008, the AIN default routing (DFLTRT) option includes the E911ESN selector in order to ensure failure recovery by allowing a tertiary default emergency services number (ESN) to be assigned to Enhanced 911 Emergency Service (E911) calls that have triggered an AIN query to the Emergency Services SCP (ESSCP).

For related information, refer to tables TRIGDIG and TRIGGRP.

Datafill sequence and implications

If global title translation (GTT) is used, table C7GTTYPE must be datafilled before table TRIGINFO.

The AIN Essentials software option, AIN00002, must be present for table TRIGINFO to be used in call processing.

If the specified DFLTRT ESN has not first been correctly datafilled in table E911ESN, the following error message is output: `Invalid ESN specified. ESN must be present in Table E911ESN.`

Entries cannot be deleted from table TRIGINFO if the entry is referenced by another table.

Normal dump and restore procedures apply.

Note: A warning message is introduced in the NA009 release. The warning message is displayed when a user tries to change field MSGSET from R02 to R01. The warning message follows:

Warning: Changing MSGSET from R02 to R01 may impact Service Enablers triggering. Please verify table TRIGGRP for Service Enablers triggers using this infoname.

Table size

0 to 4095 tuples

Table size is allocated dynamically.

Datafill

The following table lists datafill for table TRIGINFO.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
KEY		alphanumeric (up to 8 characters)	*AIN trigger information identifier* 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	*AIN action type* 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 refinements PROTOCOL, MSGSET, and TRANSPRT.
	PROTOCOL	TCAP	*AIN protocol* Enter the transport protocol used to communicate with the SCP or adjunct. Enter TCAP for the transaction capabilities application part.
	MSGSET	alphanumeric (3 characters)	*Message set* 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.
	AIN_TRANSPORT	SS7, TCPIP or SCTPIP	*Transport* Enter the transport medium used to communicate with the SCP or adjunct. Enter SS7 for signaling system 7 and datafill refinements GTT and GTSOURCE. Enter TCPIP for the transmission protocol (TCP) and Internet protocol (IP) (TCP/IP) and datafill refinement INSTANCE. Enter SCTP_INSTANCE for the SCTPIP prompt TYPE IS INST {0 TO 64}. The default is SS7.

TRIGINFO (continued)

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
	GTT	alphanumeric (up to 16 characters)	*Global title translation* 7If the entry in subfield TRANSPRT is SS7, datafill this refinement. This field is an index into table C7GTTYPE. Enter a global title translation (GTT) name previously datafilled in table C7GTTYPE.
	GTSOURCE	CALLED, CHARGE, or DFLT	*Global title source* If the entry in field TRANSPRT is SS7, datafill this refinement. 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.
	INSTANCE	0 to 3	*Instance* If the entry in field TRANSPRT is TCPIP, datafill this refinement. Enter the instance number of the TCP application. 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.
OPTIONS		see subfield	*Options* This field consists of subfield OPTION.
	OPTION	DFLTRT or $	*Option* Enter DFLTRT for default routing. This option applies to the Terminating Attempt trigger and occurs if the call encounters an error condition. Enter $ (dollar sign) for no options.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
	SELECTOR	ANN, ANNDN, DN, or E911ESN	*Selector* 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. Complete refinement ANNIDX for selectors ANN and ANNDN. Complete refinement DN for selectors ANNDN and DN. Complete refinement ESN for selector E911ESN.
	ANNIDX	1 to 65535	*Announcement index* Enter the voice announcement index from table AINANNS to be played.
	DN	numeric (up to 15 digits)	*Directory number* Enter the directory number used to route the call. If the DN is nil, call processing continues to the next point in call.
	ESN	0 to 15999	*Emergency Service Numbe* Enter the tertiary default ESN used to route the call.
	SERVICE_KEY	0 to 2147483647	*Service Key* This field specifies the Service Key used if a call triggers at TDP-2 with the Minimum Digits Criterion (MDC).
	SERVIDX	0 to 9999	*Service Index* This field is the index to table SERVINFO.

Datafill example

The following example shows sample datafill for table TRIGINFO.

TRIGINFO (continued)

MAP display example for table TRIGINFO

```
TABLE TRIGINFO
KEY ACTION OPTIONS

INFO EVENT TCAP R01 SS7 GTT DFLT
(DFLTRT E911ESN 110)$


TABLE TRIGINFO

KEY ACTION OPTIONS

AININFO EVENT TCAP R02 SCTPIP 0 $
```

The following example shows the warning message for table TRIGINFO (introduced in NA009).

MAP display example for table TRIGINFO

```
>cha
MACHINES NOT IN SYNC - DMOS NOT ALLOWED
JOURNAL FILE UNAVAILABLE - DMOS NOT ALLOWED
ENTER Y TO CONTINUE PROCESSING OR N TO QUIT
>Y
ACTION: EVENT
>
PROTOCOL: TCAP
>
MSGSET: R02
>r01
TRANSPRT: SS7
>
GTT: AINTATS
>
GTSOURCE: DFLT
>
OPTION:
>$
WARNING: CHANGING MSGSET FROM R02 TO R01 MAY IMPACT
SERVICE ENABLERS
         TRIGGERING. PLEASE VERIFY TABLE TRIGGRP FOR
         SERVICE ENABLERS TRIGGERS USING THIS INFONAME.
TUPLE TO BE CHANGED:
   AINSE  EVENT TCAP R01   SS7      AINTATS   DFLT

                $

ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
>
```

Table history

SN07 (DMS)

Entry SCTP INST added to field AIN_TRANSPORT in this data schema by feature A00004500 (IN TCAP Messaging on IP).

NA009

Update to switch response to describe a warning message. When operating company personnel modify the MSGSET field datafill, the switch generates a warning message.

EUR008

Added the SERVIDX option to the OPTION field.

TRIGINFO (continued)

Extended the range of the SERVICE_KEYfield to from 9999 to 2147483647.

NA008

Added the E911ESN selector and its ESN parameter to option DFLTRT.

NA007

Added new value R02 in field MSGSET.

EUR005

Added option SERVICE_KEY.

NA006

Adjusted the datafill example.

NA005

Clarified table size.

NA003

Added refinements SELECTOR, ANNIDX, and DN to subfield OPTION.

BCS36

Introduced table TRIGINFO.

TRIGITM

Table name

Trigger Item Identifier

Functional description

The TRIGITM table defines the trigger items for the DMS trigger item interface.

Datafill sequence and implications

The following tables must be datafilled before table TRIGITM:

- AINPRESC
- C7GTTYPE
- TIESCDIG

When option LARP is specified, datafill the following tables before table TRIGITM:

- LINEATTR
- XLAPLAN
- RATEAREA
- OCCNAME
- OCCINFO

The following tables must be datafilled after table TRIGITM:

- AINPRI
- OFCTIID
- CUSTTIID

For an office that upgrades to NA012 while still subscribed to trigger groups, the trigger item transition tool converts PODPATTR tuples to the LARP option while converting trigger groups to functionally equivalent trigger items.

For an ONP, add the LARP option to the TRIGITM tuple (based on the PODPATTR tuples that appy) as the table is restored on the inactive side of the switch.

Table size

The system dynamically allocates table size for table TRIGITM between 0 and 32 000 tuples for each TDP.

TRIGITM (continued)

Datafill

The following table lists datafill for table TRIGITM.

Field descriptions

Field	Subfield	Entry	Explanation and action
AIN_TRANSPORT		SCTPINST {0 to 64 digits}	Adding SCTP as a valid AIN transport.
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.

TRIGITM (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
TRIGGER		OFFHKIMM, OFFHKDEL, PRIB, INTERNTL, INTEROFF, SFC, PFC, CDPCODE, SDS, N11, LNP, AFR, OCPB, ONEPLUS, OPERSERV, SPECARR, TERMATT, TRA, TBUSY, TNOA, ONOA, TERMATT,	Trigger type. Enter the trigger type. If the value of field TRIGGER is CDPCODE, datafill subfield RPRTDIGS. ***Note:*** When operating company personnel enter a trigger item tuple in table TRIGITM, a change to the corresponding trigger TYPE field cannot occur.
	RPRTDIGS	TRANS, NOTRANS	AIN Report Digits. This subfield indicates whether the SSP should perform digit translation on the extension number before it sends a query message. Enter TRANS if the SSP should perform digit manipulation. Enter NOTRANS if the SSP should query using exact digits dialed.

TRIGITM (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
CRITERIA		DG, CT,ESCEA, ESCOP, ESCDN, ESCCN, ESCGP, ESCCARR, ESCCDN, ESCIDDD, ESCLATA, ESCFI, ESCDIG, ESCMDC, ESCDP, ESCPREF, ESCPRFX	Trigger criteria. Criteria consists of a set of digits, a call type, and escape codes when applicable. If the value of field CRITERIA is DG datafill subfield DIGITS. If the value of field CRITERIA is CT datafill subfield CALLTYPE. If the value of field CRITERIA is ESCCN datafill subfield COIN_CALL_TYPE. If the value of field CRITERIA is ESCCARR datafill subfield CARRIER_GROUP. If the value of field CRITERIA is ESCCDN datafill subfield ESCGROUP. If the value of field CRITERIA is ESCLATA datafil subfields INTRATOLL and INTERTOLL. If the value of field CRITERIA is ESCFI datafill subfield FIS. If the value of field CRITERIA is ESCDIG datafill subfield ESCGROUP. If the value of field CRITERIA is ESCPREF datafill subfield ESCGROUP. If the value of field CRITERIA is ESCPRFX datafill field ESCKEY in table AINPRESC with escape key name.
	DIGITS	Vector of up to 15 digits.	Digits. Enter the number for the DN_DIGIT_REGISTER.
	CALLTYPE	VBINFO, CMDATA	Call type. 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.

TRIGITM (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
	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)	Enter ICS to escape O_BNA triggers if either ICSDEACT (In Call Service Activation Deactivated) or SDSDENY line options are assigned to the triggering agent. Enter ACBFAIL to escape O_BNA triggers if the DN in the OCMB of the triggering agent is unreliable or if ACB is not available on the line. Enter REDIR to escape O_BNA triggers on the redirected leg of a redirected interswitch call. Enter AMSG to escapes O_BNA triggers if either MSGDEACT or AMSGDENY line options are assigned to the triggering agent.
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	EVENT, ESCAPE Up to 8 characters	Action. This field specifies 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. When the ACTION field is set to EVENT the service logic host route (SLHR) information is required. Message Set, Transport, and global title translation (GTT) make up the valid SLHR fields.
	MSGSET	R01R02	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).

TRIGITM (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
	TRANSPORT	SS7, TCPIP	Transport. This field supports North American signaling system 7 (SS7).
	GTT	C7_GT_ TYPE_NAME	Global title type. The Global Title name is used to determine the translator used on the node to perform translations based on the global title address.
OPTIONS		DFLTRT, POTUSE, LARP	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 to triggers SDS, N11, and PFC. Datafill subfields LINEATTR, XLAPLAN, RATEAERA, PIC, LPIC, REDIR. FWDATTR, REDIR_REASON, REDIR_PARTY_ID, TCM, and CHARGE_NUMBER
	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.
	LPIC	alphanumeric (1 to 16 characters)	Local Primary IntraLATA Carrier. Enter the LPIC as defined in table OCCNAME. For no carrier, enter NILC.

TRIGITM (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
	REDIR	N,Y	Redirection field. This is a BOOLEAN field and can be datafilled as Y or N. The default value is N.
	FWDATTR	N,Y	Forwarding Attribute field. This is a selector field. This is a BOOLEAN field and can be datafilled as Y or N. The default value is N. For PFC triggers, if REDIR=Y then FWDATTR cannot=N. This is an error scenario.
	REDIR_ REASON	UNCOND, UNKNOWN, BUSY, NOREPLY	Redirecting Reason. This field can be datafilled by any values specified in Entry. This field will be prompted only when REDIR=Y and FWDATTR=Y.
	REDIR_PARTY _ID	3 to 15 digits	Redirecting Party ID. This field can be datafilled by any valid 3 to 15 digit. The nil-value is represented by $. This field will not be prompted if REDIR=N This field will not be prompted only when REDIR=Y and FWDATTR=Y.

TRIGITM (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
	TCM	0 to 2 digits	Traveling Class Mark. This field can be datafilled by any 2 digit number. The nil-value is represented by$. This field will be prompted if REDIR=N and FWDATTR=Y or REDIR=Y and FWDATTR='Y. **Note**: The values 11 and 12 are reserved and 10 is spare. The values A, B, and C cannot be used with TCM.
	CHARGE_ NUMBER	3 to 15 digits	Charge Number. This field can be datafilled by any valid 3 to 15 digits. The nil-value is represented by $. This field will be prompted if REDIR=N and FWDATTR=Y or REDIR=Y and FWDATTR=Y.

Datafill example

The following example shows sample MAP display of the 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 SSTAT
 TERMATT                                                          $
  ULK EVENT R02  SCTPIP 0 $

 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                                                          $
```

TRIGITM (continued)

The following example shows sample datafill for table TRIGITM with ESCDIG criteria for OPERSERV trigger.

Datafilling table TRIGITM with ESCDIG criteria for OPERSERV trigger

```
>TABLE TRIGITM
> add
MACHINES NOT IN SYNC - DMOS NOT ALLOWED
JOURNAL FILE UNAVAILABLE - DMOS NOT ALLOWED
ENTER Y TO CONTINUE PROCESSING OR N TO QUIT
>y
TDP:
>y
 *** ERROR ***
Y
|
TYPE OF TDP IS TI_EXTERNAL_TDP_TYPE
TDP:
>4
TINAME:
>operesc
TRIGGER:
>OPERSERV
CRITERIA:
>dsa
 *** ERROR ***
DSA
|
TYPE OF CRITERIA IS TI_CRITERIA_TYPE
CRITERIA:
>dsa
 *** ERROR ***
DSA
|
TYPE OF CRITERIA IS TI_CRITERIA_TYPE
TYPE IS TI_CRITERIA_TYPE {DG,CT,ESCEA,ESCOP,ESCDN,ESCCN,ESCGP,ESCCARR,
                ESCCDN,ESCIDDD,ESCLATA,ESCFI,ESCDIG,ESCMDC,ESCDP,
                ESCPREF,ESCPRFX}
CRITERIA:
>ESCDIG
ESCGROUP:
>das
 *** ERROR ***
DAS
|
TYPE OF ESCGROUP IS ESCGRP_TYPE
ESCGROUP:
>ads
 *** ERROR ***
ADS
|
TYPE OF ESCGROUP IS ESCGRP_TYPE
TYPE IS ESCGRP_TYPE {OPERESC}
ESCGROUP:
>OPERESC
CRITERIA:
>$
STATE:
>ulk
ACTION:
>event
MSGSET:
>r02
TRANSPRT:
>ss7
GTT:
>ainpop
OPTION:
>$
TUPLE TO BE ADDED:
```

TRIGITM (continued)

Table history

SN07 (DMS)

Feature A00004500 (IN TCAP Messaging on IP) adds a new field AIN_TRANSPORT and entry SCTP (Stream Control Transmission Protocol). This feature is designed to overcome the limitations of TCP as well as supporting the extra requirements of PSTN signalling over IP networks.

CSP18/SN05

Feature 59040089, AIN Operator Services Trigger, adds a new value ESCPRFX to the trigger criteria field CRITERIA. ESCPRFX escapes all prefix triggers (SPECARR, INTERNTL, OPERSERV, ONEPLUS) if the called digits' prefix pattern matches the prefix pattern for the escape code datafilled in table AINPRESC. The AIN Toll Free Service trigger is not affected by the AIN 800 CDP trigger precedence feature.

NA015

Feature A59022554 added two new prompts, REDIR and FWDATTR, to table TRIGITM in option LARP for SDS/N11/PFC triggers. FWDATTR adds four new refinement subfields REDIR_REASON, REDIR_PARTY_ID, TCM, and CHARGE_NUMBER.

NA014

Feature 59016005, Term Resource Available Trigger Processing, adds trigger TRA (22).

NA012

Feature A59006358, E911 parameter expansion, adds an E911 type to the Potential Use (POTUSE) entry in the OPTIONS field. The entry "POTUSE E911" indicates a trigger used for E911 calls.

Added option LARP, and the subfields that follow: LINEATTR, XLAPLAN, RATEAREA, PIC, and LPIC.

NA011

Added an ESCPREF escape criteria.Added the entries that follow to the TRIGGER field: SPECARR, ONEPLUS, INTERNTL, and OPERSERV.

NA010

Feature AJ5080 adds new triggers TBUSY and TNOA.

Feature AU2867 adds the value ESCMDC to field CRITERIA in table TRIGITM.

Feature AJ5123 adds three new triggers (CDP, OCPB, ONOA) and new criteria (CARR, CDN, ESCDPESCIDD, ESCFI, ESCLATA, ESCCDN, ESCCARR, IDDD, LATA and FI).

Feature AU2858 adds trigger PRIB to field TRIGGER.

Feature AU2934 adds triggers OHI, OHD, SIO, SFC, PFC, and TAT. This feature also includes individual and customer group support for trigger AFR and adds the new criteria value ESCDIG.

NA009

AIN Service Enablers Service Administration-Tables introduces table TRIGITM for the office wide triggers SDS, N11, and LNP at TDP Info_Analyzed, and AFR at the Network_Busy TDP.

Supplementary information

Error messages

When operating company personnel attempt to datafill PRIB with R01 message set in table TRIGITM, the MAP will display the following error message.

```
*** The R01 msgset is not valid for the PRIB trigger ***
```

When operating company personnel attempt to datafill SFC with R01 message set in table TRIGITM, the MAP will display the following error message.

```
*** The R01 msgset is not valid for the SFC trigger ***
```

When operating company personnel attempt to datafill OCPB with R01 message set in table TRIGITM, the MAP will display the following error message.

```
*** The R01 msgset is not valid for the OCPB trigger ***
```

When operating company personnel attempt to datafill ONA with R01 message set in table TRIGITM, the MAP will display the following error message.

```
*** The R01 msgset is not valid for the ONA trigger ***
```

TRIGITM (end)

When operating company personnel attempt to datafill TBSY with R01 message set in table TRIGITM, the MAP will display the following error message.

```
*** The R01 msgset is not valid for the TBSY trigger ***
```

When operating company personnel attempt to datafill TNOA with R01 message set in table TRIGITM, the MAP will display the following error message.

```
*** The R01 msgset is not valid for the TNOA trigger ***
```

SOC optionality

SN07 (DMS)

A new usage SOC INW00003 is created by this activity to control the allocation of IN SCTP links in table IPAPPL. If the limit has not been met then the user will be allowed to add entries to table IPAPPL.

SN05/CSP18

Order Code AIN00311, AIN SE R11 Pfx Pattern, is the new SOC option AIN introduced at CSP18/SN05 to control the ESCPRFX and ESCDIG functionality. When AIN0311 is in IDLE state, criteria checking is not done for prefix triggers using ESCPRFX criterion and for OPERSERV trigger using ESCDIG criterion.

The following warning message is displayed before the SOC options are toggled from ON to IDLE, indicating that the state transition disables the associated AIN Service Enablers Functionality.

```
AIN00311 Warning Message:

SERVICE AFFECTING: This transition will disable AIN Service
Enablers Release 11 Prefix Escape functionality for all
current and future subscribers.
```

This SOC is dependent on AIN00252 (Prefix Trigger) SOC.

TRKAIN

Table name

Trunk Group AIN Trigger

Functional description

Table TRKAIN supports AIN trigger processing on a trunk-group basis.

Prior to CSP03, AIN functionality was assigned to trunk groups using the AIN option in table TRKGRP. The AIN option has been removed from table TRKGRP, and table TRKAIN is used instead.

From SN07, the key for table TRKAIN consists of the CLLI of a trunk group that subscribes to AIN, together with an option name. The available options are:

- AIN
- AINDENY

The AIN option covers the pre-SN07 AIN trigger functionality of table TRKAIN. The AIN and AINDENY options, together with AIN trigger identification datafill, specify which triggers are allowed or denied, per trunk.

For the AINDENY option, up to 15 DENYs or RESTOREs are allowed.

This table also includes the names of trigger groups in table TRIGGRP and trigger items in table TRIGITM.

Datafill sequence and implications

Tables TRKGRP, TRIGITM and TRIGGRP must be datafilled before table TRKAIN.

Table size

0 to 8191 tuples. The size is equivalent to that of table TRKGRP.

TRKAIN (continued)

Datafill

The following table lists datafill for table TRKAIN.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
OPTKEY			Option key. This consists of subfields CLLI and OPTION.
	CLLI	alphanumeric	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: • IBNTI • IBNT2 • PRA • TI • IT • P2 (analog) • PX (digital) • T2 ***Note 1:*** The trunk types in all groups must be incoming or two-way. ***Note 2:*** P2 (analog) and PX (digital) trunks and trunk groups with GRPTYP=CELL in table TRKGRP can be added to table TRKAIN (NA008).
	OPTION	AIN, AINDENY	Enter either of the two options AIN or AINDENY, depending on whether AIN services are to be allowed or denied for the selected trunk. Both AIN and AINDENY have subfield OPTINFO.
OPTINFO for OPTION = AIN			
		TIID (constant)	Enter TIID to datafill the trigger item provisioning model refinements that follow.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
	TDP	1, 3, 4, 17, 19, 20, 30, 32, 33	Trigger detection point. Datafill the appropriate TDP.
	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
OPTINFO for OPTION = AINDENY			
		DENY	This entry is used to deny prefix triggers on the selected trunk. There are two possible types of DENY statements: • DENY ALL prefix_trigger_type • DENY TIID specific_trigger_identifier
		DENY ALL prefix_trigger_type	This denies all triggers that belong to the specified prefix trigger type. The trigger types are as follows: • SPECARR • ONEPLUS • INTERNTL • OPERSERV
		DENY TIID specific_trigger_identifier	This denies a specific trigger, identified by the TDP and the TINAME.
	TDP	1, 3, 4, 17, 19, 20, 30, 32, 33	Trigger detection point. Datafill the appropriate TDP.
	TINAME	alphanumeric vector (1 to 8 characters)	Trigger item name. Datafill the trigger items defined in table TRIGITM at the specified TDP.

TRKAIN (continued)

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
		RESTORE	This entry is used to restore prefix triggers on the selected trunk. There are two possible types of RESTORE statements: • RESTORE ALL prefix_trigger_type • RESTORE TIID specific_trigger_identifier
		RESTORE ALL prefix_trigger_type	This restores all triggers that belong to the specified prefix trigger type. The trigger types are as follows: • SPECARR • ONEPLUS • INTERNTL • OPERSERV
		RESTORE TIID specific_trigger_identifier	This restores a specific trigger, identified by the TDP and the TINAME.
	TDP	1, 3, 4, 17, 19, 20, 30, 32, 33	Trigger detection point. Datafill the appropriate TDP.
	TINAME	alphanumeric vector (1 to 8 characters)	Trigger item name. Datafill the trigger items defined in table TRIGITM at the specified TDP.

Datafill example

The following examples shows sample datafill for table TRKAIN.

MAP display example for table TRKAIN, option AIN

```
OPTKEY                                                          OPTINFO
_____________________________________________________________________

ISUP2WITEA AIN                AIN TIID (4 INTRL1 ON) (4 OPSRV3 ON) $
```

MAP display example for table TRKAIN, option AINDENY

```
OPTKEY                                                          OPTINFO
_____________________________________________________________________

ISUP2WITEA AINDENY   AINDENY (DENY ALL OPERSERV) (RESTORE TIID 4 OPSRV1) $
```

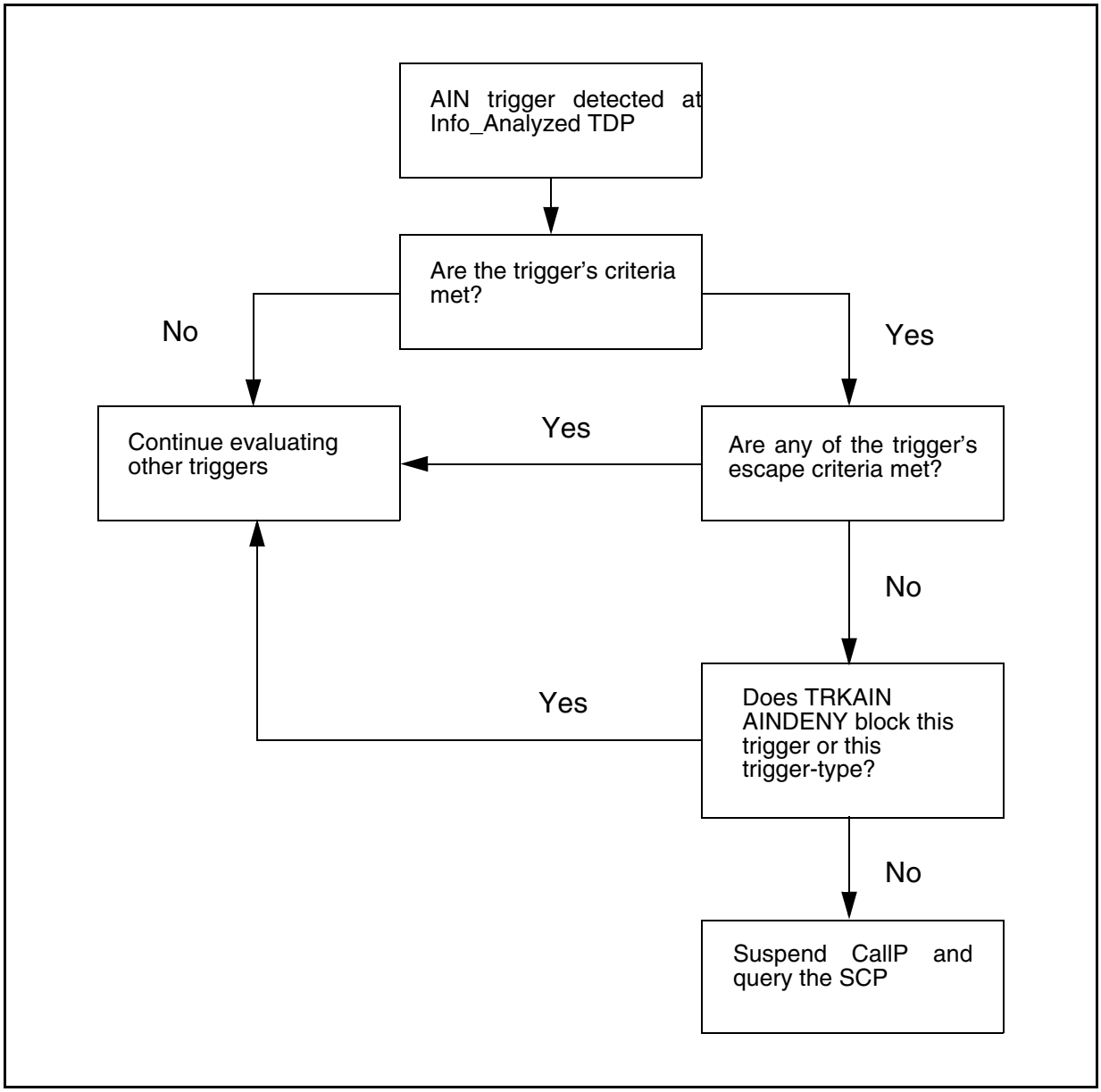
Supplementary information

TRKAIN AINDENY call processing (CallP) behavior

When an originating trunk encounters the INFO_ANALYZED TDP and is subscribed to any AIN triggers at this TDP, it will evaluate the criteria for each subscribed trigger. If all the trigger criteria are met (including escape criteria), call processing will be suspended while the SCP is queried. If there is a TRKAIN AINDENY option datafilled against the originating trunk and the option specifies that the specific trigger or trigger-type is denied, the SCP will not be queried and AIN will continue evaluating any other subscribed triggers at this TDP. This behavior is summarized in the flowchart that follows.

TRKAIN (continued)

TRKAIN AINDENY call processing behavior



Trunk group key

The trunk group key (CLLI) cannot be an outgoing trunk.

Dump and restore (CSP03)

During a software upgrade to CSP03, the dump and restore process copies the AIN subscription data from table TRKGRP on the active side into table

TRKAIN on the inactive side. The AIN option is then removed from table TRKGRP.

Table history

SN07 (DMS)

New AINDENY functionality added, and the AIN and AINDENY functionality arranged as table options. The table key now consists of the trunk CLLI, plus either of the options AIN, AINDENY. Feature A00002016.

NA010

Feature AU2933 adds option TIID to field AINGRP. Subfields TDP, TINAME, and TRIGACT contain supporting trigger item provisoning datafill.

NA008

AIN 0.2 Trigger Upgrade (CNA) (AF6762) allows trunk groups that have a GRPTYP=CELL in table TRKGRP to be added to table TRKAIN. P2 and PX trunks can be added to table TRKAIN (enabled by feature AIN 0.2 O_CPB and O_NOA Triggers).

NA004

Table TRKAIN was created.

TRKDCTS

Table name

Trunk Destination Code Traffic Summary Table

Functional description

Table TRKDCTS defines the trunk groups and destination codes used for collecting traffic data by operational measurement (OM) group TRKDCTS. OM group TRKDCTS indexes data by the trunk group and destination code.

Datafill sequence and implications

The following tables must be datafilled before table TRKDCTS:

- TRKGRP
- DCTS

Table size

Up to 2048 tuples (fixed)

Datafill

The following table lists datafill for table TRKDCTS.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
TDCTSKEY		alphanumeric (1 to 16 characters)	*Trunk destination code traffic summary key* Enter a character string to define the table key that represents the trunk group and destination combination.
TRKGNAME		alphanumeric (1 to 16 characters)	*Trunk group name* Enter a character string that corresponds to the CLLI of a valid outgoing (IBNTO) or two-way (IBNT2) trunk group. This value must be datafilled in table CLLI first.

TRKDCTS (end)

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
DESCODE		0 to 999999	*Destination code* Enter a destination code for which OM group TRKDCTS is required to accumulate traffic data. This value must be datafilled in table DCTS first. Do not enter destination codes that are part of, or include, an earlier defined destination code. For example, if 123 is a defined destination code, neither 12 nor 1234 can be entered for traffic data collection.

Datafill example

An example of datafill for table TRKDCTS follows.

- In this example, office traffic data is datafilled for the following destination codes and trunk group combinations:
- trunk group OGTOAAA and destination code 1121
- trunk group OGTOAAA and destination code 741
- trunk group OGTOAAA and destination code 335
- trunk group OGTOBBB and destination code 4166

MAP display example for table TRKDCTS

```
TDCTSKEY        TRKGNAME       DESTCODE
_____________________________________________

OGTOAAA1121     OGTOAAA        1121
OGTOAAA741      OGTOAAA        741
OGTOAAA335      OGTOAAA        335
OGTOBBB4166     OGTOBBB        4166
```

Table history

GL03

Values for field DESTCODE changed.

BCS34

Table TRKDCTS was introduced for the DMS100i product.

TRKGRP

Table name

Trunk Group Table

Functional description

Table TRKGRP contains operating company-defined data associated with each trunk group that exists in the switching unit. Entries in this table consist of the following information:

- a unique common language location identifier (CLLI) associated with each trunk group entry
- the group type of the trunk group
- the traffic separation number associated with the trunk group
- the pad group assigned to the trunk group
- the operational measurements (OM) no-circuit class associated with the trunk group
- additional refinements dependent on the group type

The titles of the documentation section associated with each of the trunk group types available in table TRKGRP are listed in the table below.

TRKGRP type

Type	Title
A5	Two-way or Outgoing from Local to N.E.
AI	Automatic Intercept System (AIS)
AN	Automatic Number Announcement
ANI	Automatic Number Identification
ATC	Access Tandem to Carrier
CA	Come-again Signaling
CELL	Cellular
CISANI	Commonwealth of Independent States Automatic Number Identification
DA	Directory Assistance Charging
DS0	Digital Signal Level 0

TRKGRP type

Type	Title
E911	Enhanced 911 Emergency Service
ES	Outgoing to Emergency Service Bureau
GER2W	Two-way 1TR7 ISUP
GERIC	Incoming 1TR7 ISUP
GEROG	Outgoing 1TR7 ISUP
GTRK	Global Trunks
GW	Gateway Trunks
IBNTI	IBN Incoming
IBNT2	IBN Two-way
IBNTO	IBN Outgoing
IET	Inter-exchange
INT101	International 101 Test
IR	Outgoing No Outpulsing
IS	Tandem Switching No Digits Incoming
IT	Intertoll
ITL2	International 102 Test
ITOPS	International TOPS
LOOPA	Line Loop Test Unit
LP4W	Four-wire Digital Loop Test Line
LPBK	Loopback
MAINT	Maintenance
MTR	International
NFA	Network Facility Access
NU	Nailed-up Connection
OC	OG/2W from Local to CAMA
OI	Operator Incoming

TRKGRP type

Type	Title
OP	OG/2W from Local or Toll to TOPS or TSPS
OPR	International Operator (No Metering)
OS	Outgoing from Toll
P2	Two-way PBX DID/DOD
PRA	ISDN Primary Rate Access
PRIVLN	Private Line
PX	Two-way Digital PBX
RC	Recording Completing
RONI	TOPS Remote Operator Number Identification
ROTL	Remote Office Test Line (ROTL)
SC	2W/IC from North AMR5 or CAMA
SOCKT	Short or Open Circuit Test Line (OCKT) or SCKT
SPC	Semi-permanent Connections
T101	101 Communication Test Line
T105	Terminating 105 Test Line
T2	Two-way End Office
TD	Incoming and Outgoing Test Desk
TDDO	Tandem Two-stage Direct-dial Overseas
TI	Incoming End Office
TL	CCIS Transmission Link
TO	Outgoing End Office
TOPS	TOPS Trunk Groups
TOPSARU	TOPS External Audio Response Unit
TOPSVL	TOPS Voice Link
TPS101	International 101 Test Line
TTL2	Terminating 102 Test Line

TRKGRP type

Type	Title
UT	Utility Telemetry
VR	Operator Verification
X75	X75
ZI	0+ or - Tandem to TSPS or TOPS

Description of trunk group types

The set of trunk group types available for use in a specific office is a function of the hardware and software features and feature packages installed in that office. Some trunk group types that are available in an office have fields that are subject to the presence of a feature.

The structure of the DMS software in an end-office can be legacy, generic services framework (GSF), or both. Legacy and GSF structures can be used at the same time on the same DMS switch.

Before attempting to datafill table TRKGRP (or any other data schema table) a trunking diagram or equivalent, reflecting the hardware and software features and feature packages ordered for the office, must be at hand.

The trunk group type descriptions listed in the following table are useful as a general guide only and should not be used as a definitive statement of the trunk group types available for use in any specific office.

Trunk group type descriptions

Type	Description
AI	*Automatic intercept system* In a DMS office, outgoing trunk group type AI interfaces with an automatic intercept system (AIS). An information digit that is sent to the AIS selects the recorded announcement that is returned to the originator of the call.
AN	*Automatic number announcement* In a DMS end office, outgoing trunk group type AN interfaces with an automatic number announcement (ANA) system. ANI spill consisting of the actual calling number is sent to ANA, which returns a recorded voice announcement of the calling number.

Trunk group type descriptions

Type	Description
ANI	*International automatic number identification* In an international DMS office, two-way, incoming, or outgoing trunk group type ANI interfaces with another international office for applications that require automatic number identification (ANI) information. In a DMS international centralized automatic message accounting (ICAMA) toll office, two-way, or incoming trunk group type ANI interfaces with an international office for calls requiring ICAMA services. Trunk group type ANI handles ANI signaling. A sample trunking configuration for this trunk group type is shown in figure 3.
ANIINTL	ANI International. This option has three subfields RECEIVE, CAINMSG, and CPNLBLK to support different functionality for processing the CPN for calls originating on SS7 FGD trunks. When the ANIINTL.RECEIVE option in set to 'Y', the CPN will not undergo ANI screening or be processed as an ANI for billing purposes and the CPN will not be populated in the ANISP (ANI Spill) field of the CDR273 record. This also ensures that the call will not go to ADBF (ANI Database Failture) treatment.
ATC	*Access tandem to carrier* In a DMS access tandem or a DMS equal-access end office, two-way trunk group type ATC interfaces with an interexchange carrier to carry equal-access traffic. A sample trunking configuration for trunk group type ATC is shown in figure 7.
A5	*Toll from North Electric AMR5* In a DMS end office, outgoing trunk group type A5 interfaces with an AMR5 toll office to handle automatic message accounting (AMA) and operator-assisted calls that use AMR5 signaling. Two-way trunk group type A5, in addition to the outgoing trunk functions, can be set up for the following incoming trunk functions: • dedicated to toll completing • dedicated to verification • combined toll completing and verification Refer to trunk group type VR for additional information on verification calls.
CA	*Siemens adds come-again signaling* In a DMS end office, outgoing trunk group type CA interfaces with a Siemens ADDS switch for one-plus (1+), zero-plus (0+) and zero-minus (0-) calls, each identified by a distinct ID digit that is prefixed to the called number. Coin and non-coin calls are routed using separate trunk groups.
CELL	*Cellular* Outgoing, incoming, or two-way trunk group type CELL allows a Bellcore type 2A interconnection between an access tandem (AT) DMS-200 switch and a cellular mobile carrier (CMC) switch. A sample trunking configuration for trunk group type CELL is shown in figure 8.

Trunk group type descriptions

Type	Description
CISANI	*Commonwealth of Independent States automatic number identification* Trunk group type CISANI is used to distinguish toll ANI trunks from local and local tandem trunks in the Commonwealth of Independent States (CIS) telephony network. This trunk group is used by the international DMS for ICAMA calls.
CPNLBLK	Calling Party Numbers Line Block. The CPNLBLK option for ISUP IMT trunks will be supported in table TRKGRP. When the CPNLBLK is present for the SS7 IMT terminator, the CPN is not included OPTIONAL PART of the outgoing IAM message.
DA	*Directory assistance charging* In a DMS end office, outgoing trunk group type DA interfaces with a directory assistance charging system. ANI spill can be outpulsed provided the call type is operator assisted (OA).
DS0	*Digital signal level 0* In a DMS service switching point (SSP) office, trunk group type DS0 has the capability of Common Channel Signaling 7 (CCS7) link access to a signal transfer point (STP) node. The DS0 link is a single channel 64 kbit/s link.
ES	*Emergency service bureau* In a DMS end office, outgoing trunk group type ES interfaces with an Emergency Service Bureau (ESB) system. Depending on the ESB setup, the trunk group can have ANI spill of the calling number in addition to outpulsing of the called number (for example, 911). Alternately, the trunk group can be set up to have no ANI spill (independent of whether the called number is outpulsed).
E911	*Enhanced 911 Emergency Service* In a DMS E911 tandem (DMS-100 or 100/200 with the Enhanced 911 Emergency Service feature), incoming trunk group type E911, together with tables E911PSAP and E911ESN, provides selective routing to the applicable public safety answering point (PSAP) using the emergency service number (ESN) corresponding to the emergency service zone (EZN) of the originator of the 911 call.
FWDXMT	Forward Transmit. Enter FWDXMT to control the voice path setup of trunk agencies. The DXMT option can be datafiled with one of three values: STD, IMM, ANS for SS7 FGD, SS7 IMT. For PTS FGD, the FWDXMT option can be datafiled with one of two values: STD and ANS. For 4-wire DAL-TIE, the FWDXMT option can be added without the option values.
GERIC GEROG GER2W	*Incoming 1TR7 ISUP* *Outgoing 1TR7 ISUP* *Two-way 1TR7 ISUP* Trunk group type GERIC, GEROG, and GER2W are required for the German Intelligent Network field trial in order to handle the requirements of 1TR7 ISUP signaling when the direction of the trunk group is incoming, outgoing, or two-way, respectively.

Trunk group type descriptions

Type	Description
GTRK	*Global Trunk* In an DMS Global-100 end office, trunk group type GTRK provides a single trunk type for two-way call processing.
GW	*International gateway* In a DMS international gateway office, two-way, incoming, or outgoing trunk group type GW is used as follows: • Gateway R1 and R1-5 Hybrid Signaling interfaces with the North American switching network. • Gateway CCITT 5 Signaling interfaces with the international switching network. • Gateway CCITT 6 Signaling interfaces with the international switching network.
IBNT2 IBNTI IBNTO	*Two-way Integrated Business Network* *Incoming Integrated Business Network* *Outgoing Integrated Business Network* In a DMS Integrated Business Network (IBN) end office, two-way trunk group type IBNT2, incoming trunk group type IBNTI, and outgoing trunk group type IBNTO interface with an IBN end office as tie trunk groups and FX trunk groups that provide one or two-way access between IBN customer groups on different switching units, or access to the same customer group when the customer group is assigned to two or more switching units.
IET	*Interexchange* IET is a general purpose tandem trunk type used in the setup of trunks that operate with send-receive multifrequency (SRMF) signaling.
IMTFGD	Enter IMTFGD to identify IFD trunk agencies. This option can be datafilled on SS7 FGD trunk agencies.
INT101	*International 101 test* In a DMS gateway office, incoming or outgoing trunk group type INT101 is used for the international 101 test.
IR	*Intercept, information, or repair with no outpulsing* In a DMS end office, outgoing trunk group type IR interfaces with an intercept, information, or repair desk. No digits are outpulsed.
IS	*Tandem switching no digits incoming* In a DMS toll or end office, incoming trunk group type IS can route a call (upon seizure) through table OFRT to an outgoing trunk group at the route index specified for the trunk group. Table OFRT permits digit prefixing where appropriate. Calls from a number of incoming trunk groups can be datafilled to go out on a common trunk group.
ISUPIDX	ISUPIDX enumerated range is expanded to include RSVD.

Trunk group type descriptions

Type	Description
IT	*Toll connecting* In a DMS toll or end office, two-way, incoming, or outgoing trunk group type IT interfaces with a toll or end office to carry toll connecting traffic including toll access, toll completing, and toll tandem. Overlap outpulsing is possible on incoming or two-way dial pulse (DP) trunk groups provided field OVLP in table TRKSGRP is set to Y (yes). In offices without the ROTL software package (without trunk group type T105), the 105 test line can be datafilled as trunk group type IT. A sample trunking configuration for trunk group type IT is shown in figure 7.
ITL2	*International 102 test* In a DMS office, trunk group type ITL2 is used for the international 102 test.
ITOPS	*International Traffic Operator Position System* In a DMS international office, outgoing trunk group type ITOPS interfaces with an international Traffic Operator Position System (TOPS) office for calls requiring the services of an ITOPS operator. In a DMS international TOPS office, incoming trunk group type ITOPS interfaces with a DMS international office for calls requiring the services of an ITOPS operator. In both cases, the signaling format meets the following international TOPS requirements: • Operator control of disconnect, which is used on outgoing trunks from the local end office to a toll office with ITOPS positions, allows ITOPS operators to have control of the calling and the called parties involved in a call. When the calling party disconnects (on-hook signal sent from end office to toll office), the end office does not initiate disconnect until it receives an on-hook signal from the toll office. This on-hook signal is under ITOPS operator control. • The RGF (ring forward) wink signal is used by an ITOPS operator at the originating toll office to recall the ITOPS operator at the terminating toll office for a previously established connection. • The RGB (ring back) wink signal is used by an ITOPS operator at the terminating toll office to recall the ITOPS operator at the originating toll office for a previously established connection. This signal is also used by an ITOPS operator to ring a calling party that has been disconnected. To meet ITOPS requirements, the line signaling system can support either delay-dial start or wink start. Trunk group type ITOPS software handles ANI. A sample trunking configuration for trunk group type ITOPS is shown in figures 4, 5, and 6.
LOOPA	*Looparound test* In a DMS office, trunk group type LOOPA is used for the looparound test.

Trunk group type descriptions

Type	Description
LPBK	*Loopback trunk* In a DMS ISDN office, incoming and outgoing trunk group type LPBK provides a means of connecting two agents in the same office when a call between the two agents is not possible using other loopback facilities. The call between the two agents is split into two legs: • The first leg of the call selects an outgoing LPBK trunk to terminate the original call. The outgoing trunk loops back to the same office to come in as an incoming trunk of trunk group type LPBK. • The second leg of the call connects the incoming LPBK trunk to the terminating agent.
LP4W	*Four-wire digital loop test* The four-wire digital loop test line trunk group is used for performing terminating and originating looparound tests on CCITT 7 ISUP trunks in a DMS-300 switching unit.
MAINT	*Maintenance tests* In a DMS office, trunk group type MAINT is used for the following maintenance support items and tests: • dialable cable locator tone • digital test unit • emergency stand-alone • position head set • position jack • line test unit • LTU monitor and talk • metallic test unit • 108 test line • trunk test transmission • terminating transmission test
MTR	*International with metering* In a DMS international office, two-way, incoming, or outgoing trunk group type MTR interfaces with other international offices for local or national traffic. Metering is available as an option; calls that do not require metering can also use MTR trunks. Metering (MTR) type trunk groups handle the majority of call types. A normal call requiring no operator and no ICAMA applications goes through the network on MTR trunks. Sample trunking configurations for trunk group type MTR are shown in figures 1, 3, 4, 5, and 6.

Trunk group type descriptions

Type	Description
NFA	*Network facility access* Trunk group type NFA is used for the assignment of network facility access (NFA) trunks that connect a subscriber line to an intelligent peripheral processor (IP). These connections provide subscribers with direct access to services provided directly by the IP.
NODELAY	No Delay. The NODELAY option only supports incoming and two-way PX trunks with IPULSTYP of DT and ISTARTSG of WK. When the NODELAY option is present on an incoming or two-way PX trunk, the 4-second post dial delay will not be present for 1+10 digit calls using the AMBI TIM selector. When the NODELAY option is not present on an incoming or two-way PX trunk, the 4-second post dial delay will be present for 1+10 digit calls using the AMBI TIM selector.
NU	*Nailed-up connection* In a toll, end, or international gateway office, a trunk of incoming trunk group type NU can be permanently connected (nailed-up) to a trunk of outgoing trunk group type NU. Table NLUPCLLI lists each nailed up connection that consists of an incoming trunk group type NU trunk and an outgoing trunk group type NU trunk.
OC	*Local ANI to toll CAMA* In a DMS end office, outgoing trunk group type OC interfaces with a toll office to carry noncoin subscriber dialed chargeable calls (TOPS operator assistance not required) recorded by CAMA in the toll office (calls are not recorded by LAMA in end office). Signaling formats include the CAMA ANI pulsing format, which is used for CAMA offices that do not use Traffic Service Position Systems (TSPS). If the far-end toll office is a DMS switch, the far end of trunk group type OC enters the far-end DMS toll office as trunk group type SC. In a DMS end office, two-way trunk group type OC interfaces with a toll office to carry, in addition to the outgoing trunk traffic, the following incoming trunk traffic: • dedicated to toll completing • dedicated to verification • combined toll completing and verification Refer to trunk group type VR for additional information on verification calls. In a DMS equal access end office (EAEO) or an access tandem office, two-way trunk group type OC interfaces with feature group B (FGB) equal access (EA) carriers. In a DMS toll or TOPS office, outgoing trunk group type OC can tandem a call to another toll office as a CAMA call, outpulsing ANI when required. A sample trunking configuration for trunk group type OC is shown in figure 7.

Trunk group type descriptions

Type	Description
OI	*Incoming operator verification* In a DMS office, incoming trunk group type OI interfaces with an operator switchboard or a TOPS office to carry one of the following traffic options: • dedicated to toll completing • dedicated to verification • combined toll completing and verification Refer to trunk group type VR for additional information on verification calls.
OP	*Local TSPS pulsing to TOPS* In a DMS end office, outgoing trunk group type OP interfaces with a TOPS or TSPS office and can be set up to carry any or all of the following types of traffic: • noncoin subscriber dialed chargeable calls recorded by CAMA in the TOPS office using ANI or ONI (provided they are not recorded by LAMA in the end office) ***Note:*** This function is similar to the function of trunk group type OC. TOPS operator assistance is not required. • coin and noncoin, TOPS operator-assisted calls that can be recorded by CAMA in the TOPS office using ANI or ONI Signaling formats include the pulsing format for TSPS from local office. If the far-end switch is a DMS TOPS office, the far end of trunk group type OP enters the DMS TOPS office as trunk group type TOPS. In a DMS end office, two-way trunk group type OP can be set up for the following incoming trunk functions (in addition to the outgoing trunk functions): • dedicated to toll completing • dedicated to verification • combined toll completing and verification A sample trunking configuration for trunk group type OP is shown in figure 7.
OPR	*International with operator* In a DMS international office, two-way, incoming, or outgoing trunk group type OPR interfaces with other international offices for local or national traffic involving an operator. Metering is not available. Operator (OPR) trunks are used to connect BA-1 switchboard operators to the DMS, and to connect two DMS switches for calls from one BA-1 switchboard operator to another office (possibly to another BA-1 switchboard operator). A sample trunking configuration for trunk group type OPR is shown in figure 2.

Trunk group type descriptions

Type	Description
OS	*Toll completing joint hold* In a DMS toll office equipped with feature package NTX193AA (4X Operation-AMR 5 Format ANI), outgoing trunk group type OS is used for toll completing and toll tandem calls requiring the joint hold feature.
PRA	*Primary rate access* Trunk group type PRA is used by the ISDN Primary Rate Access feature.
PRIVLN	*Gateway private line* Incoming or outgoing trunk group type PRIVLN is used for private lines in a DMS gateway office.
PX	*DID/DOD PBX digital* In a DMS end office, two-way, incoming, or outgoing trunk group type PX interfaces with a digital private branch exchange (PBX) for direct inward dialing (DID), direct outward dialing (DOD), or both.
P2	*DID/DOD PBX* In a DMS end office, two-way, incoming, or outgoing trunk group type P2 connects with a PBX for DID, DOD, or both.
RC	*Recording completing* In a DMS office, trunk group type RC interfaces to a 3CL switchboard with an audible class of service tone forwarded to the operator.
RESETBLK	Reset Dial Block. When this new option is assigned, reset dialing will not be allowed for calls on that trunk.
RONI	*Remote ONI* In a TOPS office, trunk group type RONI is part of a feature that records ONI calls (using LAMA or CAMA) in an office with no CAMA positions in operation. ANI fail and ONI calls are routed to a TOPS office where they come in on a trunk group of type RONI. The remote TOPS operator communicates by voice with the originator of the call and keys in the calling number, which is sent back to the original office where the call is recorded by LAMA or CAMA.
ROTL	*Remote office test line* Trunk group type ROTL is used in a DMS office that is equipped with feature BR0069 (Remote Office Test Line).

Trunk group type descriptions

Type	Description
SC	*Incoming/two-way CAMA* In a DMS toll office, and under certain conditions in a DMS TOPS office, incoming trunk group type SC interfaces with an end office to carry noncoin subscriber dialed chargeable calls (TOPS operator assistance not required) recorded by CAMA in the toll office (the calls are not recorded by LAMA in the far-end office). Signaling formats include the CAMA ANI pulsing format (non-TSPS CAMA office). ANI calls are recorded by CAMA automatically. Inband coin control is possible. ANI fail and ONI calls are handled by the CAMA operator who enters the calling number manually to enable the recording of the call by CAMA. The call is then sent on for toll completion. If the 4X feature is present, operator-assisted traffic (0+ and 0-) can tandem through the switch to a switching unit with TOPS or TSPS using outgoing trunk group type OP. If the far end is a DMS switch, the far end of trunk group type SC leaves the far-end DMS switch as trunk group type OC. In a DMS toll office, two-way trunk group type SC can be set up for the following outgoing trunk functions (in addition to the incoming trunk functions): • dedicated to toll completing • dedicated to verification • combined toll completing and verification A sample trunking configuration for trunk group type SC is shown in figure 7. Refer to trunk group type VR for additional information on verification calls.
SOCKT	*Transmission test* In a DMS office, trunk group type SOCKT is used for transmission tests.
SPC	*Semipermanent connection* In an international office, a trunk of an outgoing trunk group type SPC can be connected semipermanently to • a trunk of an outgoing trunk group type SPC • a line of line class code SPC Table SPCCON has a tuple for each semipermanent connection to identify the two members of the connection.
TD	*Test desk* In a DMS end office, incoming and outgoing trunk group type TD interfaces with a test desk (for example, #14 LTD or #3 LTC).
TDDO	*Two-stage direct dial overseas* In a DMS toll office, outgoing trunk group type TDDO interfaces with an international originating toll center for tandem switching of two-stage calls.

Trunk group type descriptions

Type	Description
TI TO T2	*Incoming end officeOutgoing end officeTwo-way end office* In a DMS office, incoming, outgoing, or two-way trunk group type TI, TO, or T2 interfaces with an end or toll office for local, direct, or tandem switching.
TL	*CCIS transmission link* In a DMS office capable of Common Channel Interoffice Signaling (CCIS), two-way trunk group type TL interfaces with another office capable of CCIS to transmit and receive signals between the two offices. Call processing functions are not supported.
TOPS	*Traffic Operator Position System* In a DMS TOPS office, incoming trunk group type TOPS interfaces with an end office and can be set up to carry any or all of the following types of traffic: • noncoin subscriber dialed chargeable calls recorded by CAMA in the TOPS office using ANI or ONI ***Note:*** This function is similar to the function of trunk group type SC. TOPS operator assistance is not required. • coin and noncoin TOPS operator-assisted calls that can be recorded by CAMA in the TOPS office using ANI or ONI Signaling formats include the pulsing format for Traffic Service Position System (TSPS) from local office. If the far end is a DMS switch, the far end of trunk group type TOPS leaves the far-end DMS office as trunk group type OP. In a DMS toll office, two-way trunk group type TOPS can be set up for the following outgoing trunk functions (in addition to the incoming trunk functions): • dedicated to toll completing • dedicated to verification • combined toll completing and verification A sample trunking configuration for trunk group type TOPS is shown in figure 7. Refer to trunk group type VR for additional information on verification calls.
TOPSAU	*TOPS external audio response unit* In a DMS TOPS office, outgoing trunk group type TOPSARU interfaces with a directory assistance system (DAS) external audio response unit (ARU) to provide an announcement in response to an operator request. No outpulsing is done.
TOPSVL	*TOPS voice link* In a DMS TOPS office, outgoing trunk group type TOPSVL interfaces with a voice service node (VSN), enabling the use of the Automated Alternate Billing Service (AABS). No outpulsing is done.
TPS101	*International 101 test line* In a DMS international office, trunk group type TPS101 is used as the international 101 test line.

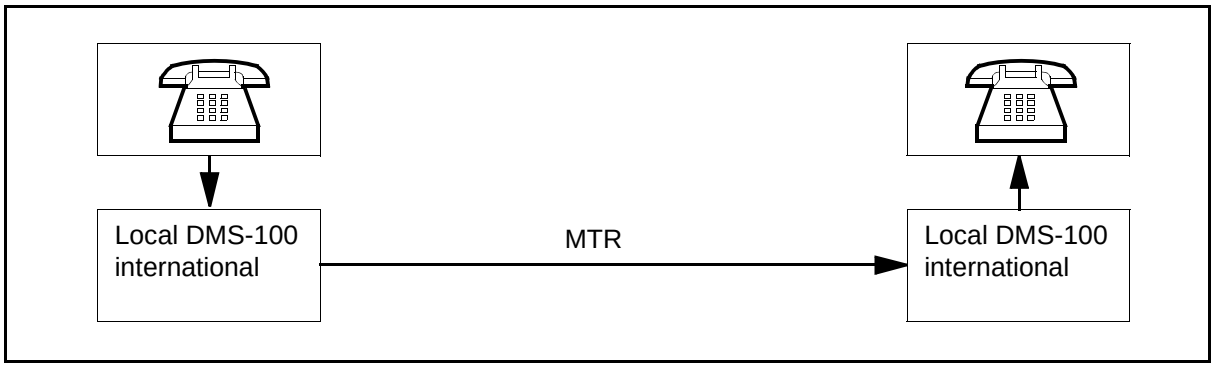
Trunk group type descriptions

Type	Description
TTL2	*Carrier milliwatt test* In a DMS office, trunk group type TTL2 is used for the carrier milliwatt supply and balance termination test.
T101	*101 test line* In a DMS office, incoming and outgoing trunk group type T101 is used for the 101 test.
T105	*105 test line* In a DMS office, trunk group type T105 is used for the terminating 105 test line provided the ROTL software package is present in the office. In offices without the ROTL package (without trunk group type T105), the terminating 105 test line can be datafilled as a trunk group of type IT.
UT	*Utility Telemetry* In a DMS office, incoming trunk group type UT connects to a Central Office Service Unit (COSU). The COSU initiates and controls telemetry calls to Telemetry Interface Units (TIU) on subscriber lines. The DMS office translates the digits received from the COSU and attempts to establish a no-ring connection to a subscriber's line. The UT trunk returns the appropriate treatment to the COSU if the line is not idle. If the line is idle, the COSU is cut through to the TIU and the telemetry session proceeds. When the telemetry session is completed or the subscriber goes off-hook, the COSU instructs the DMS office to take down the call.
VR	*Verification* In a DMS end office, outgoing trunk group type VR interfaces with a minibar switch to provide metallic path access to a call in progress between two other parties. The need for metallic path access arises when an authorized operator originated verification call attempts to terminate on a line that is busy. A call is a verification call when it originates on a trunk group type A5, OC, OP, OI, or TD and one of the following three groups of conditions is satisfied: • The type of call is OA (operator assisted). • The trunk group is dedicated to verification (MODE VF). • The trunk group is dedicated to both toll completing and verification (MODE CV).
X75	*X75*Trunk group type X75 allows the connection of DMS trunking facilities to a DMS packet handler (which uses X.75 protocol).
ZI	*Tandem 0+ and 0- to TOPS* In a DMS toll office, incoming trunk group type ZI can tandem zero-plus (0+) and zero-minus (0-) traffic to TOPS over outgoing trunk group type OP. If the far-end switch is a DMS switch, the far end of trunk group type ZI leaves the far-end DMS office as trunk group type OP.

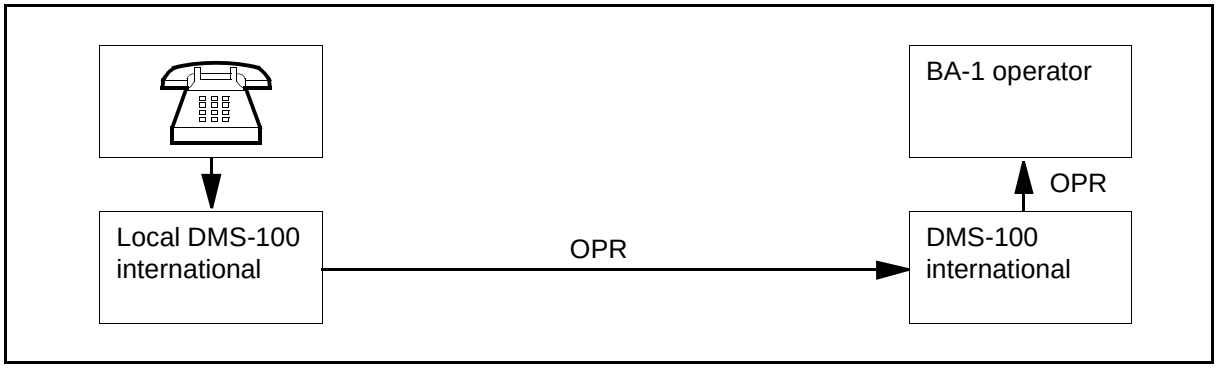
Sample trunking configurations

Sample trunking configurations for a number of typical applications are shown below. The arrows in each figure denote the direction of call progression, and in the case of trunks, indicate the connection from an outgoing trunk on one switch to an incoming trunk on the subsequent switch.

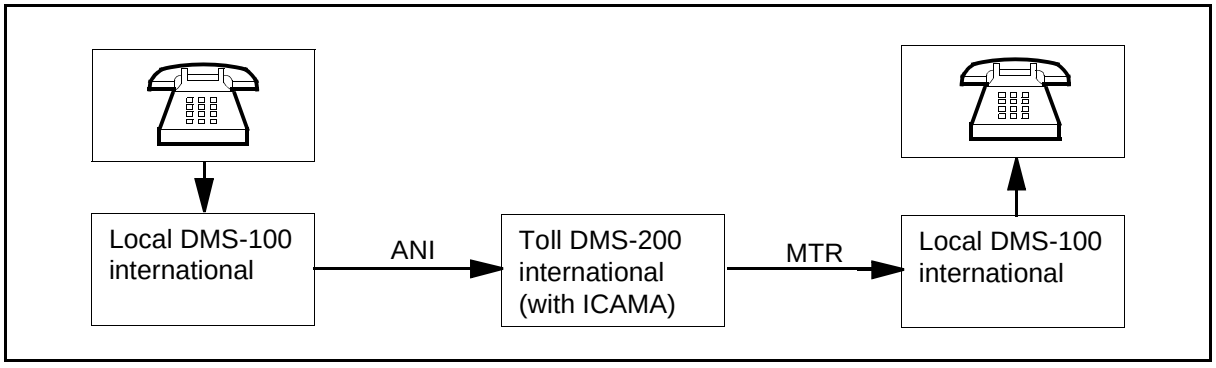
Inter-office local call (DMS international)



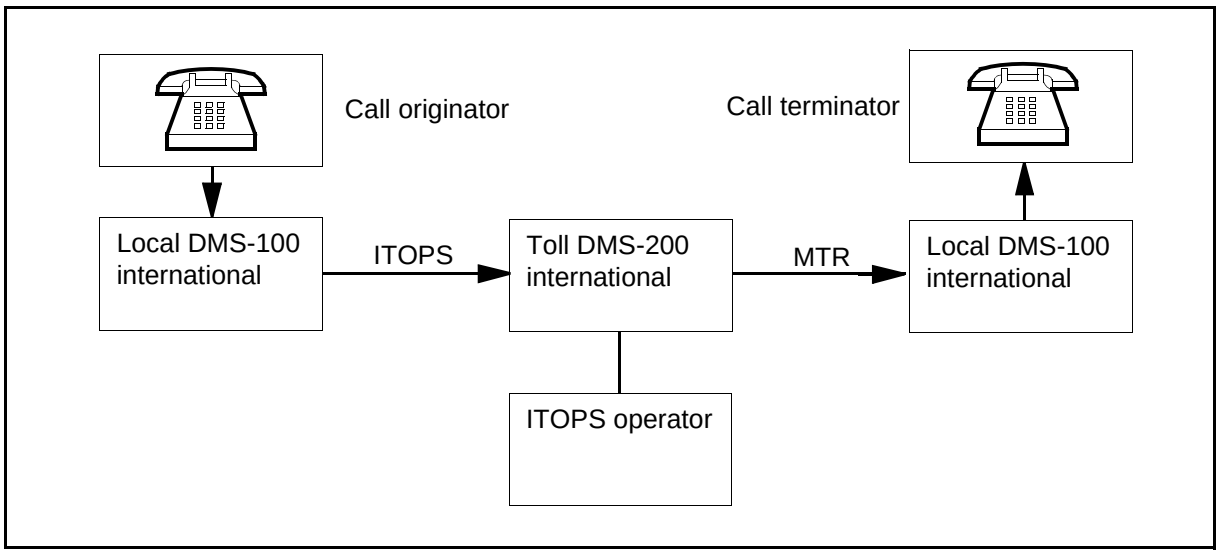
Subscriber to BA-1 board operator call (DMS international)



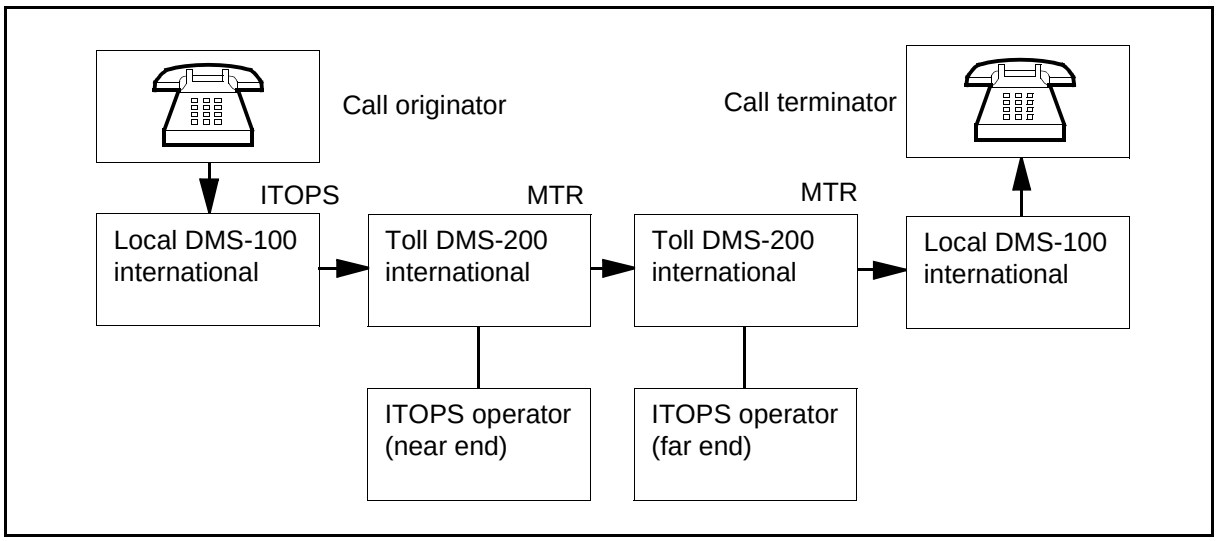
Subscriber-originated call through ICAMA (DMS international)



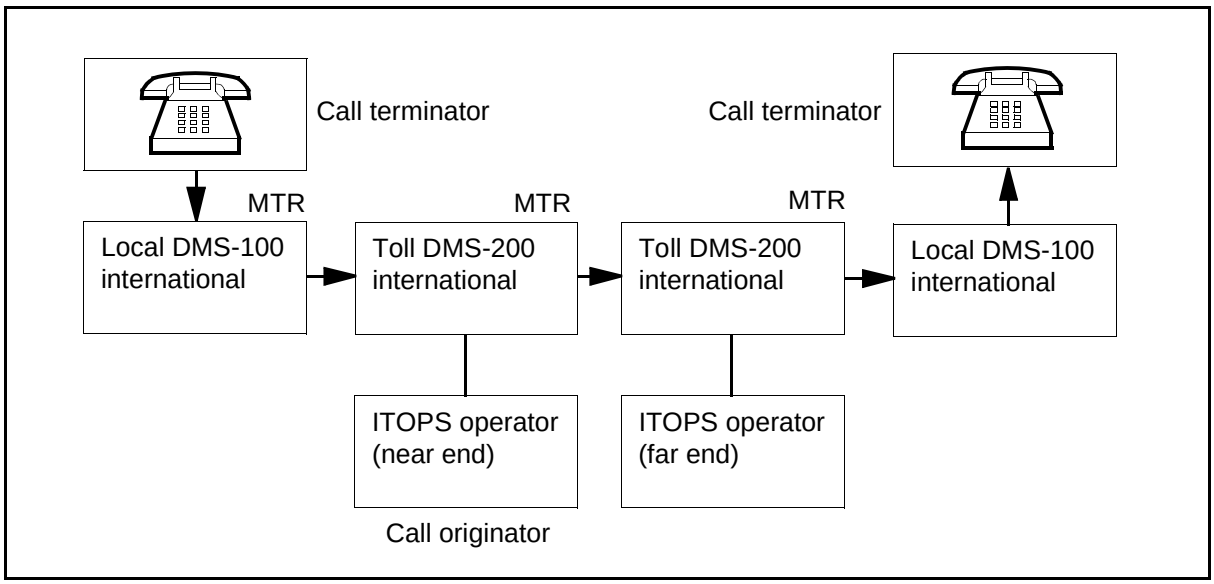
Subscriber-originated call through ITOPS (DMS international)



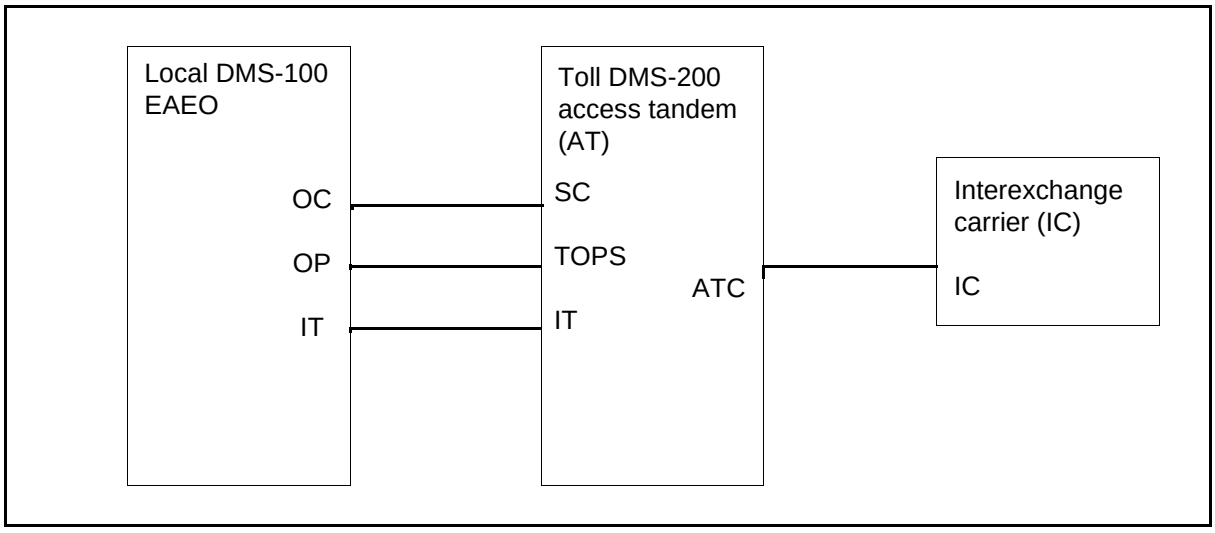
Subscriber-originated call through ITOPS operators (DMS international)



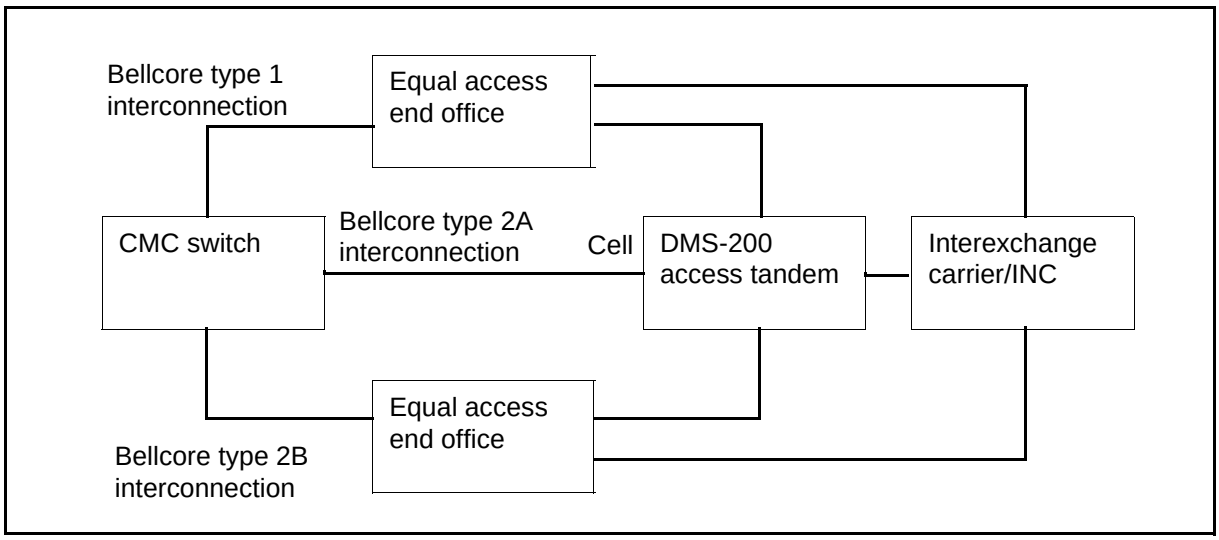
ITOPS operator-originated call (DMS international)



Access tandem environment (DMS AT and EAEO)



Cellular mobile carrier (CMC interconnection)



Datafill sequence and implications

Table CLLI must be datafilled prior to table TRKGRP.

The following tables may also require datafilling prior to table TRKGRP, depending on the group type.

- ANNMEMS
- BCDEF
- BCOS
- C7RTESET
- DEFDATA
- DGHEAD
- E911NPD
- LCASCRCN
- MTRMOG
- NCOS
- PADDATA
- PCOS
- POSNAME
- PXHEAD
- SNPANAME
- STDPRTCT.AMAPRT

- TRIGGRP
- TRKSIGPF
- TSTLCONT

Table size

Field SIZE in table DATASIZE specifies the total number of trunk groups that can be datafilled in table TRKGRP. The table length can be extended by changing the value of this field and performing a cold restart. The maximum number of trunk groups that can be datafilled is 8191. Each tuple in table TRKGRP requires 49 words of data store.

Note: If the NORESTARTSWACT utility is available on your switch, you can activate data changes without interrupting service. Refer to *NORESTARTSWACT/MTCSWACT User's Guide*, 297-1001-546.

ASEQ/DSEQ selection sequences should be limited to the following trunk group size:

- In DMS offices with NT40 processors, a maximum of 175 members.

Exceeding this recommended limit may significantly increase call completion time.

General field information

General field information that is common to most field types is included in this section of the document. For detailed information specific to a particular trunk group type, refer to the TRKGRP documentation section that deals with that trunk group type.

GRPINFO and related fields

While the default structure of table TRKGRP is set up as two fields, GRPKEY (which contains the key to the table) and GRPINFO (which contains all of the other fields), this structure may be modified if table CUSTFLDS is datafilled with an entry for table TRKGRP. The modified structure generally consists of fields GRPKEY, GRPTYP, TRAFSNO, PADGRP, NCCLS, and GRPINFO.

In the modified structure, fields GRPTYP, TRAFNSO, PADGRP, and NCCLS become separate fields rather than subfields of GRPINFO, however the datafill sequence for entry values remains unchanged. The documentation for table TRKGRP is based on the two field (default) structure, since this the most common.

Traffic class (field TRAFCLS)

This field is provided for the convenience of operating companies that associate their own traffic class code with each trunk group. The following table shows some sample traffic class codes.

DMS software does not use most of the data in field TRAFCLS.

Note: Class code BLV, for busy-line verification, is an exception. To enable local number portability (LNP) for an incoming trunk from a TOPS scrambler circuit, set the traffic class field for that trunk to BLV. Trunks with traffic class set to BLV must be dedicated to BLV calls.

Examples of traffic class codes

Traffic class	Usage
AL	Alarm
AN	Announcement
BLV	Busy Line Verify
CA	CAMA
CB	Coin box
CD	Customer dial instruction
CP	CAMA office to CAMA operator desk
CS	Coin supervision
DA	Directory assistance
DD	DDD access
DS	Dial tone speed
IA	Intraoffice
IE	Interoffice
IN	Information
IR	Intercept
IT	Intertoll
LW	Leave word
MA	Manual assistance
MB	Mobile radio

Examples of traffic class codes

Traffic class	Usage
MI	Miscellaneous
MN	Manual
MT	Intertandem
NT	No test
OA	Operator assistance
OF	Official
OW	Order wire
PS	Permanent signal
RC	Recording completing
RR	Rate and route
RS	Repair service
SC	Service code
SO	Service observing
SP	TSPS or TOPS
TA	Toll station
TC	Toll completing
TE	End office toll
TG	Tandem completing
TI	Time
TK	Test disk
TM	Toll completing and toll switching combined
TO	Tandem originating
TP	TOPS or TSPS unit to TOPS or TSPS position
TS	Toll switching
TT	Toll tandem

Examples of traffic class codes

Traffic class	Usage
TW	TWX switching plan
VC	Vacant code
VR	Verification
WE	Weather

Traffic separation numbers (field TRANSNO)

If the switching unit has feature package NTX085AA (Traffic Separation Peg Count), the range of values for the incoming and outgoing traffic separation numbers are dependent upon the value of office parameters TFAN_IN_MAX_NUMBER and TFAN_OUT_MAX_NUMBER in table OFCENG.

For switching units without feature package NTX085AA, the range of values for the traffic separation numbers is 0 to 15.

Incoming and outgoing traffic separation numbers 1 to 9 are reserved for generic traffic separation numbers. See table TFANINT for the assignment of incoming to outgoing traffic separation numbers.

With the traffic separation feature, a peg count of all calls, by type of call, direct dial (DD), operator assisted (OA), or no prefix (NP), can be accumulated between an originating source (incoming trunk or an originating line attribute) and a terminating destination (outgoing trunk, terminating line attribute, tone or announcement).

Pad groups (field PADGRP)

Field PADGRP contains the name of the pad group in table PADDATA that lists the value of the pad circuits that can be switched into the network when one of the members of the group is involved in a call.

Different values for the pad circuits can be specified when the circuit connects to an agent with a different pad group.

Network pad switching is only applicable when a new circuit is connected to the public switching network.

OM no-circuit classes (field NCCLS)

Table TRKGRP field NCCLS specifies the operational measurement (OM) register that is incremented when treatment GNCT occurs. Refer to the *Operational Measurements Reference Manual* for information on DMS OMs.

Treatment GNCT occurs when a trunk group is the last route in a route list and an all-trunks-busy condition is encountered on this list.

OM react to treatment GNCT by incrementing register OFZ2 to record the number of times the GNCT treatment is invoked and by incrementing one of the registers listed below to indicate which type of facility was unavailable, as defined by the entry in table TRKGRP field NCCLS.

If a trunk group is incoming, no-circuit class is not required. Enter NCRT to satisfy the table editor.

For outgoing or the outgoing side of a two-way trunk group, the operating company can assign any of the no-circuit classes listed in the following table.

No-circuit classes

Field NCCLS entry	Register name	Register description
NCBN	OFZNCBN	No-circuit business network (IBN trunks)
NCID	OFZNCID	No-circuit inward dial (2W DID/DOD trunks)
NCIM	OFZNCIM	No-circuit intermachine
NCIT	OFZNCIT	No-circuit intertoll
NCLT	OFZNCLT	No-circuit local tandem
NCOF	OFZNCOF	No-circuit offnet trunk (ONAL, ONAT, DOL, or DOT)
NCON	OFZNCON	No-circuit onnet trunk (DAL, MTX)
NCOT	OFZNCOT	No-circuit other trunk (test lines, test desk, or maintenance trunks)
NCRT	OFZNCRT	No-circuit (0+/0- tandem to TOPS, outgoing to AMR5 or CAMA, outgoing local, recording completing outgoing, TOPS outgoing)
NCTC	OFZNCTC	No-circuit toll completing
NCSC	OFZNOSC	No-service circuit (AN or AI trunks)

Select sequence - Trunk selection problems

Two main problems currently exist with central office (CO) trunk selection:

Problem 1: Killer trunks A killer trunk is one that has any of the characteristics listed below:

- A *repeatedly seized trunk* is repeatedly seized, but due to a malfunction is held for a very short time. Within a trunk group, these trunks have a higher than average attempt rate.
- A *slow release trunk* has a low attempt rate along with fairly high usage.
- An *always busy trunk* has a usage of 36.0 hundred call seconds (CCS), or one erlang, and zero attempts.
- An *always idle trunk* has a usage of zero CCS and zero attempts.

Problem 2: Glare Glare occurs if two COs try to seize the same trunk at the same time.

Select sequence - Trunk selection algorithms

The trunk selection algorithms for two-way trunk groups in a DMS office are datafilled in field SELSEQ. The following selection algorithms are available:

- most idle/least idle (MIDL/LIDL)
- control odd/control even (CNTLODD/CNTLEVN)
- ascending sequential/descending sequential (ASEQ/DSEQ)
- clockwise circular trunk hunt/counterclockwise circular trunk hunt (CWCTH/CCWCTH)

Note: CNTLODD and CNTLEVN are used for JPN ISUP only.

A summary of the problems and relative merits of the various trunk selection schemes follows.

Select sequence - MIDL/LIDL

The MIDL/LIDL process is based on the length of time a trunk member is idle. One central office (CO) selects from a trunk group the trunk that is idle for the longest period of time. The opposite end CO selects from a trunk group the trunk that is idle for the shortest period of time. The selection order of trunks is not fixed.

MIDL/LIDL and killer trunks

In a LIDL office, some types of killer trunks move to the head of the list. When one does, it becomes the least idle trunk and is repeatedly seized. All calls routed to this killer trunk fail to complete.

MIDL/LIDL and glare

MIDL/LIDL minimizes glare by preventing the possibility of simultaneous seizure prior to the seizure of the last idle trunk in the trunk group.

Select sequence - CNTLODD/CNTLEVN

The CNTLODD/CNTLEVN selection sequence method logically divides trunk groups into a controlling group and a non-controlling group on the basis of odd or even circuit identification codes (CIC). When an outgoing trunk is required, the controlling group circuit that has been released the longest (most idle) is selected. If all circuits in the controlling group are busy, the latest released circuit (least idle) in the non-controlling group is selected instead.

If a select sequence (field SELSEQ value) of CNTLODD is assigned, the controlling group is the set of odd numbered CICs. If a select sequence of CNTLEVN is assigned, the controlling group is the set of even numbered CICs.

CNTLODD/CNTLEVN and glare

CNTLODD/CNTLEVN trunk selection minimizes the occurrence of glare.

Select sequence - ASEQ/DSEQ

Sequential trunk selection minimizes the occurrence of glare and reduces reseizure of killer trunks encountered with the MIDL/LIDL trunk selection method when used for two-way trunks. In sequential trunk selection, the trunk selection order and selection starting point are fixed. The beginning of the list for one CO is the end of the list for the opposite end CO. This list is searched sequentially by each CO, starting from the beginning of the list, for the first idle trunk. One CO selects the first idle trunk, searching the list in ascending order. The opposite end CO selects the first idle trunk, searching the list in descending order.

CAUTION

ASEQ/DSEQ selection sequence limitations

It is recommended that ASEQ/DSEQ selection sequences should be limited to a maximum of 175 trunk members in DMS offices with NT40 processors. Exceeding this recommended limit may significantly increase call completion time.

ASEQ/DSEQ and killer trunks

The position of a killer trunk in the sequential list determines its impact on trunk selection. A killer trunk in the middle of the list has minimal impact but one near either end has significant impact. This is due to all searches starting at one end or the other of the trunk member list. If the traffic is such that an

idle trunk is found near the end of the list for most searches, then a killer trunk will be seized more often than a killer trunk in the middle of the list.

ASEQ/DSEQ and glare

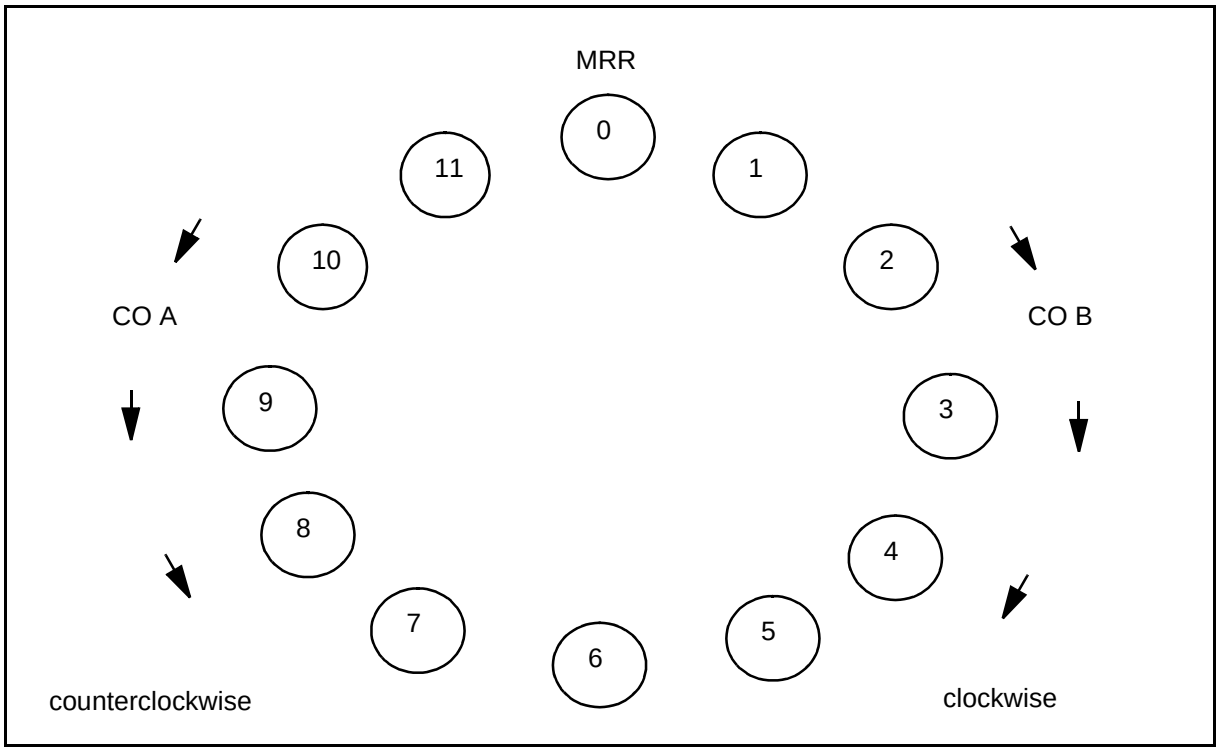
ASEQ/DSEQ minimizes glare by preventing simultaneous seizure prior to the seizure of the last idle trunk in the trunk group.

Select sequence - CWCTH/CCWCTH

Like ASEQ/DSEQ, the circular trunk selection strategy is based on a fixed ordered list of trunks. The two COs search the list in opposite directions, similar to the ASEQ/DSEQ method. The trunk selected is the first idle trunk found in a search starting after the most recently released (MRR) trunk in the trunk group.

For an analogy, use a clock to denote the list of trunks with the hours representing the trunks. In a two-way trunk group, one CO searches the list of trunks clockwise from a common reference point. The other CO searches the list of trunks counterclockwise from the same reference point as the first CO. The common reference point is the MRR trunk in the group. The reference point is updated each time a trunk is released.

Circular trunk group selection



CWCTH/CCWCTH and killer trunks

Circular trunk hunting (CTH) substantially reduces the impact of killer trunks. Repeatedly seized killer trunks are not reseized as often under the CTH selection method as with the MIDL/LIDL and ASEQ/DSEQ selection methods, in two-way trunk groups. In the CTH selection method, the selection starting point changes each time a trunk is released (the MRR trunk). If the MRR trunk is a killer trunk, the next trunk seized is a trunk to either side of the killer trunk. CTH has no effect on the other types of killer trunks.

CWCTH/CCWCTH, killer trunks, and operational measurements

The killer trunk feature gathers usage and peg counts for each trunk, over a specified interval of time, to detect killer trunks. The count is updated upon seizure of a trunk, when the trunk changes from a not-call-processing-busy state to a call-processing-busy state. CTH reduces the number of times a killer trunk is seized. Therefore, CTH lowers the threshold used in determining whether a trunk has killer trunk characteristics.

CWCTH/CCWCTH and glare

Glare occurs when one or two idle trunks are left in the trunk group. CTH does not affect the occurrence of glare. Glare occurrence during CTH is the same as glare occurrence during the two other trunk selection methods.

Select sequence - choosing a trunk selection method and sequence

Field SELSEQ defines the trunk selection method and sequence for the two-way trunk group. The trunk selection method for a two-way trunk group in a DMS office must be compatible with the switching office equipment at the far end of the trunk group. This requirement is outlined below.

If the trunk group is two-way and the far end is a link list switcher, enter one of the following select sequences. The link list switcher is a method of call processing that determines trunk selection based on a dynamically linked list of trunk members.

LIDL Enter LIDL (least idle) if far end is a link list switcher with MIDL (most idle) select sequence.

MIDL Enter MIDL (most idle) if far end is a link list switcher with LIDL (least idle) select sequence.

Far end not link list switcher - sequential selection required

If sequential selection (feature package NTX244AB, Enhanced Sequential Trunk Hunting) is present, the trunk group is two-way, the far end is not a link list switcher, and sequential selection is required, enter one of the following selection sequences:

ASEQ Enter ASEQ for ascending sequential selection based on the order of trunk members in table TRKMEM, if the far end is DSEQ (descending sequential selection).

DSEQ Enter DSEQ for descending sequential selection based on the order of trunk members in table TRKMEM, if the far end is ASEQ (ascending sequential selection).

CWCTH Enter CWCTH for clockwise circular trunk hunting from the most recently released (MRR) trunk in the trunk group, based on the order of trunk members in table TRKMEM, if the far end is CCWCTH (counterclockwise circular trunk hunting).

CCWCTH Enter CCWCTH for counterclockwise circular trunk hunting from the MRR trunk in the trunk group, based on the order of trunk members in table TRKMEM, if the far end is CWCTH (clockwise circular trunk hunting).

Far end not link list, sequential selection not required

If the trunk group is two-way, the far end is not a link list switcher, and sequential selection does not apply, enter MIDL (to satisfy the table editor).

Select sequence - Changing trunk selection method and sequence

A trunk group trunk selection method cannot be changed. If such a change is required, create a new trunk group that has the required trunk selection method, then delete the individual trunks from the old trunk group and add them to the new trunk group.

For an existing trunk group, the selection sequence can be changed to ASEQ from DSEQ or from DSEQ to ASEQ if all the members are installation busy (INB) or unequipped.

Software structure

Trunk groups belonging to legacy and generic services framework (GSF) software structures can be datafilled in table TRKGRP. Each structure uses different tables as shown below.

Mapping of Legacy tables to GSF tables

Legacy tables	GSF tables
TRKGRP	TRKGRP
ISUPDEST	TRKSERV
TRKSGRP	TRKSIGPF

Mapping of Legacy tables to GSF tables

Legacy tables	GSF tables
TRKMEM C7TRKMEM	TRKBCHNL
FAILMSG TMTMAP	FAILMAP TRKTRMT

Legacy software structure

This section contains information about datafilling tables for the legacy software structure.

Table TRKGRP - additional information in other tables

Additional information about table TRKGRP is defined in other tables as shown in the following table.

Recommended entry in table CUSTPROT

TABNAME	READPROT	UPDTPROT	ALLPROT
TRKGRP	15	20	30

Define table size in table DATASIZE

The total number of trunk groups for which memory is allocated in table TRKGRP is equal to the value of field SIZE in table DATASIZE. The length of the table can be extended by changing the value of SIZE in table DATASIZE and doing a cold restart. The maximum number of trunk groups is 8191.

Define trunk subgroups in table TRKSGRP

Each of the trunk groups in table TRKGRP is assigned a maximum of two subgroups. Subgroups are provided so that the trunk group can have a mixture of analog and digital trunks or a mixture of analog card types (maximum two).

Define trunk group members in table TRKMEM

The trunk number in a group, and the physical location of all analog or digital trunks assigned to the trunk groups, are listed in table TRKMEM.

Define trunk group billing code in table BILLCODE

The billing code data for each of the incoming or two-way CAMA or AMR5 trunk groups is listed in table BILLCODE.

United Kingdom

For switching units in the United Kingdom with office parameter MARKET_OF_OFFICE in table OFCENG set to UK PABX, the

recommended values for the entry in table CUSTPROT with field TABNAME equal to TRKGRP are indicated below:

- READPROT = 15
- UPDTPROT = 20
- ALLPROT = 30

GSF Structure

This section contains information about datafilling tables for the GSF software structure.

Define trunk subgroups in table TRKSIGPF

Each of the trunk groups in table TRKGRP is assigned a maximum of two subgroups. Subgroups are provided so that the trunk group can have a mixture of analog and digital trunks or a mixture of analog card types (maximum two).

Define trunk group members in table TRKBCHNL

The trunk number in a group, and the physical location of all analog or digital trunks assigned to the trunk groups, are listed in table TRKBCHNL.

Define CCS7 trunk members in table TRKBCHNL

The CCS7 Circuit Identification Code (CIC) for each CCS7 trunk member is listed in table TRKBCHNL.

Miscellaneous notes

Trunking diagram

Before datafilling various trunk group type forms, an office trunking diagram or equivalent must be available.

Synchronous clock table SYNCLK

For central office synchronization, two DS-1 channels must be assigned as synchronization timing links. Refer to the description of table SYNCLK for further details.

Restoration of original datafill after testing

Once installation tests are completed, the original trunk translations are restored to original datafill.

Equal Access for DMS-100 Wireless

When datafilling EA on the DMS-100 Wireless switch, the wireless portion of an ISUP integrated service link (ISL) trunk must be datafilled as a DID trunk group type with refinement RTEVIAAT set to Y. The wireline portion of the ISUP ISL trunk must be datafilled as an IT trunk type. Option CELL must be set to 2A to support North American EA ISL terminations. A distinct billable number must be designated for option BILLNO for the downstream processor

to distinguish the AMA records generated by the wireless DID ISL and non-ISL trunks.

Memory allocation

Tuples are allocated in blocks of 32, with each tuple consuming 100 bytes:(32*100 = 3200 bytes)

Each time a new group is added, an additional 64 bytes is allocated.

The following is an example calculation for 32 tuples:(32 * 100) + (32 * 64)

Note: If the NORESTARTSWACT utility is available on your switch, you can activate data changes without interrupting service. Refer to the *NORESTARTSWACT User Guide*.

Datafill examples

The following is an example of an EANT trunk type using the ANIINTL option with subfields RECEIVE, CAINMSG, and CPNLBLK.

```
GRPKEY GRPTYP TRAFSNO PADGRP NCCLS GRPINFO
_____________________________________________________

250TEANT2WS7 EANT 0 NPDGP NCOF UCS 0 2W 250PRETT LIDL 16 7 16 16 ANI-
PRETT 4
4 619 UCS2EAEO NIL 619 7 NONE 0 NONE 0 0 3_1KHZ 160 (ANIDIGS )
(TMANIDLV ALWAYS) (CICSIZE 4DIGS) (ANIINTL N N Y) $
```

The following is an example of a IMT trunk using the CPNLBLK option.

```
GRPKEY GRPTYP TRAFSNO PADGRP NCCLS GRPINFO
_____________________________________________________

250_OG_RLT_RTPC IMT 0 NPDGP NCIT UCS 0 OG NPRT MIDL 16 16 16 16 UCS2UCS
NIL
C N NONE 4 ALWAYS ADDR 1 1 INTER N SPEECH NONE 4 160 619 0 (RLT V1 N)
(TMCICBLK BLK_TNS) (CICSIZE 4DIGS) (CPNLBLK ) $
```

The following is an example of a PX trunk using the NODELAY option.

```
GRPKEY GRPINFO
_____________________________________________________________

RCC20PX PX 0 ELO NCRT IC NIL MIDL N POT1 NSCR 619 619 LCL NONE NONE NLCA N N 32 NIL 5400002
DIALTN N N N (NODELAY) $
RCC0PX PX 0 ELO NCRT 2W NIL MIDL N POT1 NSCR 619 619 LCL NONE NONE NLCA N N  32 NIL 5400002
DIALTN N N N (NODELAY) $
```

The following is an example of a PX trunk using the ISUPIDX option.

```
GRPKEY GRPTYP TRAFSNO PADGRP NCCLS GRPINFO
----------------------------------------
C7EANTTRK EANT 50 NPDGP NCOF 0 2W EAN MIDL 16 7 16 16 EAPT 4 4 214
RSVD NIL 214 650 MANUAL 0 RTE622 0 1 VOICE_DATA 160 $
```

The following example shows TRKGRP tuple with the RESETBLK option.

```
GRPKEY GRPTYP TRAFSNO PADGRP NCCLS GRPINFO
_____________________________________________________

DAL228TWDTLS DAL 127 NPDGP NCON 0 2W DAL MIDL 16 7 16 16 S 10 NIL DL 0 5
111
MANUAL 214 0 6112211 NONE 0 VOICE_DATA Y 1 N Y NONE 00 160 (MCCS )
(OHQTERM ) (CAIN ) (RESETBLK) $
```

Datafill warnings

If an attempt is made to datafill the option on an outgoing PX trunk, the following error message is displayed:

```
NODELAY option allowed on IC or 2W trunks only.
```

Table history

NA018

Added option IMTFGD (A19012090) and option FWDXMT (A19012099) in table TRKGRP.

NA017

Added option NODELAY to PX trunk options field in table TRKGRP. Also, added a new error message to support option NODELAY (A59033603).

Expanded the ISUPIDX enumerated range to include a value of RSVD (A59033997).

Introduced option Reset Dial Block (RESETBLK) in table TRKGRP. This option provides additional control of the reset dialing feature on a turnk group basis (A59036532).

Table TRKGRP is modified to add option ANIINTL to the OPTIONS vector field for ISUP EANT trunk types. Also, added the CPNLBLK option for IMT trunk types (A59038177).

NA015

Added the OFBSR and TDMPRFX subfields to the E911 option for IT trunks. OFBSR supports the Off-Board Selective Routing database feature. TDMPRFX is part of the Super E911 Tandem feature.

NA014

Added the CLID, DNIS, DTI, and OUTSCHM option to PX trunks. Added the DNIS option to PRA trunks. Added CLID, DNIS, and OUTSCHM options to the IBNTO and IBNT2 trunks.

NA013

Added the ORIGHOLD, ECPH, and RINGBACK options to ISUP trunking for E911 calls to trunk group type IT.

NA008

The following changes were made for NA008:

- Changed definition of field TRAFCLS: entering BLV activates LNP software for TOPS/BLV.
- Added feature-specific datafill information about datafilling Equal Access for DMS-100 Wireless (switch) under Miscellaneous notes section.

GL03.1

Changed description of trunk group type SPC in TRKGRP type table.

NA007

Added Local Number Portability (LNP) option to trunk group types IT, SC, TI, T2, and ATC.

NA006

Added the NRMLTRAF option for the OP trunk group type.

GL02

Added trunk group type GTRK.

TL05

Removed trunk group type ASP from tables 1 and 2.

NA005

Increased the range of subfield ESN to 15999 in accordance with E911 Non-CallP Enhancements.

NA004

Added option CICSET for trunk group type ATC.

TL02

Trunk group type UT and its description was added to tables 1 and 2.

BCS36

The following changes were made:

- Added reference to the NORESTARTSWACT utility.
- Added field OPERATOR_HOLD and refinements OPRHOLD and HLDTIMER for trunk group type ATC.
- Substituted field DIRECTSZ with field ANIREQSG for trunk group type E911.

TRKGRP type A5

OG/2W from Local to N. E. AMR5 Trunk Group Type

In a DMS end office, outgoing trunk group type A5 connects with an AMR5 toll office to handle automatic message accounting (AMA) and operator-assisted calls using AMR5 signaling.

Two-way trunk group type A5, in addition to the outgoing trunk functions, can be set up for the following incoming trunk functions:

- dedicated to toll completing
- dedicated to verification
- combined toll completing and verification

Refer to TRKGRP type VR for additional information on verification calls.

Datafill

The following table lists the datafill for table TRKGRP type A5.

Field descriptions (Sheet 1 of 8)

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 common language location identifier (CLLI) code assigned to the trunk group in table CLLI.
GRPINFO		see subfields	*Variable group data* This field consists of subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, NCATDIGS, NPACHK, ANITYPE, HOLDTYPE, SIGFMT, TRAFTYPE, TRAFCLS, SELSEQ, V2DATA, and OPTIONS. Refer to section “General field information" in table TRKGRP for information concerning an alternate structure for this field that results from the datafill of table CUSTFLDS.
	GRPTYP	A5	*Group type* Enter A5 to specify the trunk group type that applies for outgoing or two-way trunks from a DMS end office to an AMR5 toll office.

TRKGRP type A5 (continued)

Field descriptions (Sheet 2 of 8)

Field	Subfield or refinement	Entry	Explanation and action
	TRAFSNO	numeric(0 to 127)	*Traffic separation number* Enter the incoming and outgoing traffic separation number assigned to the trunk group. If a traffic separation number is not required, enter 0 (zero). For switches with software package NTX085AA (Traffic Separation Peg Count), enter a value from 1 to the value of office parameter TFAN_OUT_MAX_NUMBER in table OFCENG. For switches without software package NTX085AA, enter a value from 1 to 15. Incoming and outgoing traffic separation numbers 1 to 9 should be reserved for generic traffic separation numbers. For more information, refer to table TFANINT.
	PADGRP	alphanumeric (1 to 5 characters)	*Pad group* Enter the name of the pad group assigned to the trunk group in table PADDATA. For more information, refer to table PADDATA.
	NCCLS	NCBN NCID NCIM NCIT NCLT NCOF NCON NCOT NCRT NCTC or NOSC	*Operational measurements no-circuit class* Enter the operational measurements (OM) no-circuit class (NCCLS) to indicate which OM register is incremented if treatment GNCT (generalized no circuit) occurs. The initial value for this trunk group type is NCRT (no circuit). For more information, refer to table TRKGRP and the *Operational Measurements Reference Manual*.

TRKGRP type A5 (continued)

Field descriptions (Sheet 3 of 8)

Field	Subfield or refinement	Entry	Explanation and action
	NCATDIGS	numeric (2 or 3)	*Number of category digits* Enter the number of category digits in the AMR5 category codes. (Since one type is allowed for each office, there can be two or three digits.) If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y, all trunks in the group must be busy before the value of this field can be changed by data modification order (DMO).
	NPACHK	Y or N	*Numbering plan area check* Enter Y (yes) if a check of the numbering plan area (NPA) is required. Otherwise, enter N (no). If the value in this field is Y, the tens digit of the category code is modified to reflect the tributary information. NPA checks are not performed for automatic number identification failed (ANIFL) and operator number identification (ONI) calls. For these call types, the tens digit remains as it was in table CATCODES (for call types and classes not yet implemented).

TRKGRP type A5 (continued)

Field descriptions (Sheet 4 of 8)

Field	Subfield or refinement	Entry	Explanation and action
	ANITYPE	WK REV NO or REVUK	*ANI request type* For special requirements (RCF/TCF), enter WK (wink). This is the correct automatic number identification (ANI) fail-and-answer supervision on the second leg of a remote call-forwarding call. For normal Bell standard offices, enter REV (reversal or answer). This is the default datafill value. If ANI is not performed, enter NO. If interworking with DMS-250 TOPS trunks is required, enter REVUK. REVUK uses the UK250 ANI protocol format. ***Note:*** If optional feature package NTXE34AA (4X Operation - AMR5 Format ANI) is present, enter REV for this field value. Feature package NTXE34AA allows ANI to be forwarded if Feature Group C (FGC) signaling is used. If this package is present, other values for ANITYPE are not valid. If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y, all trunks in the group must be busy before the value of this field can be changed by DMO.

TRKGRP type A5 (continued)

Field descriptions (Sheet 5 of 8)

Field	Subfield or refinement	Entry	Explanation and action
	HOLDTYPE	NOHOLD or TERMHOLD	*Hold type* If the call is required to terminate when either the originator or terminator goes on-hook, enter NOHOLD. Use NOHOLD in no-operator configurations. If the call is required to terminate when the terminator goes on-hook, but not when the originator goes on-hook, enter TERMHOLD (terminating operator hold). Entries other than NOHOLD and TERMHOLD are not valid. If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y, all trunks in the group must be busy before the value of this field can be changed by DMO.
	SIGFMT	AMR5A AMR5B AMR5C or AMR3	*Signaling format* Datafill this field to specify the signaling format. If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y, all trunks in the group must be busy before the value of this field can be changed by DMO.
	TRAFTYPE	AMRONE AMRZERO or AMRCOMB	*Traffic type* Datafill this field to specify the traffic type, as described below. • Enter AMRONE for 1+ traffic. • Enter AMRZERO for 0+ and 0- traffic. • Enter AMRCOMB for 1+, 0+, and 0- traffic.
	TRAFCLS	alphabetic(2 characters)	*Traffic usage class* Enter the traffic usage class assigned to the trunk group. For more information, refer to table TRKGRP.

TRKGRP type A5 (continued)

Field descriptions (Sheet 6 of 8)

Field	Subfield or refinement	Entry	Explanation and action
	SELSEQ	ASEQ CCWCTH CWCTH DSEQ LIDL or MIDL	*Select sequence* If the trunk group direction is two-way (2W) and far end is a link list switcher, enter LIDL or MIDL (least or most idle) if far end is MIDL or LIDL respectively. If the trunk group direction is two-way, the far end is not a link list switcher and sequential selection does not apply, enter MIDL. If the trunk group direction is outgoing and sequential selection does not apply, enter MIDL.

TRKGRP type A5 (continued)

Field descriptions (Sheet 7 of 8)

Field	Subfield or refinement	Entry	Explanation and action
			If the trunk group is two-way, the far end is not a link list switcher, and feature package NTX244AB (Enhanced Sequential Trunk Hunting) is present, base the selection order on the order of the trunks in table TRKMEM, and enter • CWCTH or CCWCTH for clockwise or counterclockwise circular trunk hunting from the most recently released trunk in the trunk group, if the far end is CCWCTH or CWCTH respectively, or • ASEQ or DSEQ for ascending or descending sequential selection, if far end is DSEQ or ASEQ respectively. Entries outside this range are not valid. For more information, refer to table TRKGRP. ***Note:*** A trunk group trunk selection method cannot be changed. If a change in the selection method is required, a new trunk group must be created with the required trunk selection method. The individual trunks with the old selection sequence must be deleted from the old trunk group and then added to the new trunk group. For an existing trunk group, the selection sequence may be changed to ASEQ from DSEQ or from DSEQ to ASEQ if all the trunk members are installation busy (INB) or unequipped (UNEQ). Refer to table TRKGRP for additional information concerning field SELSEQ.

TRKGRP type A5 (continued)

Field descriptions (Sheet 8 of 8)

Field	Subfield or refinement	Entry	Explanation and action
	V2DATA	see subfield	*Data for two-way trunk group* This field consists of subfield DIR and refinements.
	DIR	OG or 2W	*Trunk direction* For outgoing trunk groups, enter OG and datafill field OPTIONS as described on page. For two-way trunk groups, enter 2W and datafill refinements PRTNM, SCRNCL, SNPA, ORIGSRC, MODE, and VDEVAR as described on page 518, then datafill field OPTIONS as described on page 521. If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y, all trunks in the group must be busy before the value of this field can be changed by DMO.

TRKGRP type A5 (continued)

DIR = 2W

If the value in field DIR is 2W, datafill refinements PRTNM, SCRNCL, SNPA, ORIGSRC, MODE, and VDEVAR as described below.

Field descriptions for conditional datafill (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	PRTNM	alphanumeric (1 to 4 characters) or NPRT	*Standard pretranslator name* If standard pretranslation is required, enter the name of the standard pretranslator defined in table STDPRTCT to which digit translation is to route after the receipt of the first digit. If pretranslation is not required, enter NPRT (no pretranslation). If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y, all trunks in the group must be busy before the value of this field can be changed by DMO.
	SCRNCL	alphanumeric (1 to 4 characters or NSCR	*Class-of-service screening table name* If class-of-service screening is required, enter the name of the class-of-service screening table (datafilled in table SCRNCLAS) to which digit translation routes. If class-of-service screening is not required, enter NSCR (no screening).
	SNPA	numeric (3 digits)	Enter the serving NPA code for the trunk group. This code, which is specified in table HNPACODE, specifies routing for digit translation. If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y, all trunks in the group must be busy before the value of this field can be changed by DMO.

Field descriptions for conditional datafill (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	ORIGSRCE	LCL or NLCL	*Originating source* Enter the originating source of the call, LCL (local) or NLCL (nonlocal). This field is used to screen calls in subtable HNPACONT.HNPACODE. For more information, refer to the “Notes on originating source" section in table HNPACONT.HNPACODE.
	MODE	AR CRCV or VF	*Mode of operation* Enter one of the following modes of operation: • AR for toll-completing with automatic ringing • CR for toll-completing with control ringing • CV for combined toll-completing and verification • VF for dedicated verification If the number to which a verification call is to terminate is busy, the call is completed using the operator verification trunk group (trunk group type VR) and table MTATRK.
	VDEVAR	see subfields	*Variable digit data* This field consists of subfield VDESEL and refinements.
	VDESEL	Y or N	*Variable digit selector* If the number of incoming digits is fixed, enter N and datafill refinement DIGREGEN. If the number of incoming digits is variable, enter Y and datafill refinements DIGSIN1 and DIGSIN2. ***Note:*** If the number of incoming digits is variable, a corresponding variable-digit-format entry is required in the table STDPRTCT.STDPRT.

TRKGRP type A5 (continued)

Field descriptions for conditional datafill (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	DIGREGEN	numeric (1 to 4 digits) or N	*Digits to be regenerated* Datafill this field if the value in field VDESEL is N. Enter the digit string to be prefixed to the incoming digits to regenerate a seven-digit number. The switch subtracts the length of the digit string from seven to determine the number of incoming digits to expect. The regenerated number is then translated in one or both of tables STDPRTCT.STDPRT and HNPACONT.HNPACODE. For example, if the entry is 73, the switch expects five incoming digits XXXXX and regenerates the number 73XXXXX. If no digits are to be prefixed, enter N. The switch then expects seven incoming digits.
	DIGSIN1	numeric (1 to 18)	*Minimum number of incoming digits* Datafill this field if the value in field VDESEL is Y. Enter the minimum number of incoming digits received on the trunk group. Entries outside the indicated range are not valid. If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y, all trunks in the group must be busy before the value of this field can be changed by DMO.
	DIGSIN2	numeric (1 to 18)	*Maximum number of incoming digits* Datafill this field if the value in field VDESEL is Y. Enter the maximum number of incoming digits received on the trunk group. Entries outside the indicated range are not valid. If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y, all trunks in the group must be busy before the value of this field can be changed by DMO.

All tuples

For all tuples, datafill field OPTIONS as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
OPTIONS		see subfield	*Options* This field consists of subfield OPTION and refinements.
	OPTION	BCNAME	*Option* To specify the bearer-capability-name option, enter BCNAME and datafill refinement BCNAME. If no options apply, leave this field blank. Option BCNAME is valid for incoming and two-way trunk groups only.
	BCNAME	alphanumeric (1 to 16 characters)	*Bearer capability name* If the entry in field OPTION is BCNAME, enter the bearer capability to be used by this trunk group. Refer to table BCDEF for the current list of available bearer capabilities. If field OPTION and refinement BCNAME are left blank, the default bearer capability of the central office is used.

Datafill example

The following examples show sample datafill for table TRKGRP type A5.

An example of datafill for table TRKGRP with two-way group type A5 is shown below. This example has been datafilled in accordance with the following datafill requirements:

- The code of the trunk group is OTWAON2303TO.
- The trunk group type is A5.
- The outgoing traffic separation number is 8.
- TLD is the name of the pad group assigned to the trunk group.
- NCRT is the no-circuit class.
- The number of category digits is 3.
- No NPA check is required.

TRKGRP type A5 (continued)

- The ANI type is wink.
- The hold type is TERMHOLD.
- The signal format is AMR5B.
- The traffic type is combined 0+, 0- and 1+.
- The traffic class is toll switching.
- The trunk selection sequence is descending based on the order of trunk members in table TRKMEM.
- The direction is two-way.
- The standard pretranslator name is VRCT.
- No class of service screening is required.
- The serving NPA is 613.
- The originating source is local.
- The mode is combined toll completing and verification.
- The number of incoming digits is variable, minimum 7 and maximum 9.

MAP display example for table TRKGRP type A5

```
GRPKEY          GRPINFO
_____________________________________________________________________________

OTWAON2303TO    A5 8 TLD NCRT 3 N WK TERMHOLD AMR5B AMRCOMB TS DSEQ
2W VRCT NSCR 613 LCL CV Y 7 9 BCNAME 56KDATA $
```

An example of datafill for table TRKGRP with outgoing group type A5 is shown below. This example has been datafilled in accordance with the following datafill requirements:

- The code of the trunk group is OTWAON2303TO.
- The trunk group type is A5.
- The outgoing traffic separation number is 8.
- TLD is the PAD group assigned to the trunk group.
- NCRT is the no-circuit class.
- The number of category digits is 3.

- No NPA check is required.
- The ANI type is wink.
- The hold type is TERMHOLD.
- The signal format is AMR5B.
- The traffic type is combined AMR5.
- The traffic class is toll switching.
- The trunk selection sequence is MIDL.
- The direction is outgoing.

MAP display example for table TRKGRP type A5

```
GRPKEY      GRPINFO
_____________________________________________________________________

OTWAON2303TO A5 8 TLD NCRT 3 N WK TERMHOLD AMR5B AMRCOMB TS MIDL OG $
```

TRKGRP type AI

Automatic Intercept System Trunk Group Type

Trunk group type AI is available in local and toll switching units for use as an automatic intercept system (AIS) interface.

Calls that cannot be completed as dialed are assigned various treatments. Any treatment can route to an AIS trunk group. Typical AIS routed treatments are as follows:

- OPRT - regular intercept
- DNTR - denied termination
- TESS - terminating service suspension
- TRBL - trouble intercept
- VACT - vacant code
- HNPI - home numbering plan area (NPA) intercept
- UNDN - unassigned directory number
- BLDN - blank directory number
- MSLC - misdirected local call

A separate route may be required for each type of treatment so that the correct information digit can be prefixed. This information digit is defined in table OFRT. If two or more treatments use the same information digit, they can be routed to the same index in table OFRT.

The AIS trunk can be any type of outgoing multifrequency (MF) trunk. When the AIS trunk is seized and a wink start signal detected, the information digit and the called number are outpulsed in MF. Upon detection of an answer, the speech path is connected and the originator receives a recorded announcement.

After completion of the announcement, AIS returns an off-hook signal. If the calling party remains off-hook, the connection is retained. After waiting for 4 s or more, AIS returns a second off-hook signal and an AIS operator is connected.

On completion of the call, the calling party goes on hook and the originating line or trunk and the AIS trunk are both idled.

Since the AIS can be on hook or off hook, AIS deallocation requires that the on-hook signal be presented to AIS for at least 450 ms. Following this interval, the trunk can be released. The trunk guard timing in table TRKSGRP must be at least 450 ms.

Datafill

The following table lists the datafill for table TRKGRP type AI.

Field descriptions (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 AIS. This is the pseudocode of the trunk group in table CLLI.
GRPINFO		see subfields	*Variable group data* This field consists of subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, TRAFCLS, and PROPAGAT. Refer to section “General field information" in table TRKGRP for information on an alternate structure for this field that results from the datafill of table CUSTFLDS.
	GRPTYP	AI	*Group type* Enter AI. This is the trunk group type for AIS trunk groups.
	TRAFSNO	numeric (0 to 127)	*Traffic separation number* Enter the outgoing traffic separation number assigned to the trunk group. If not required, enter 0 (zero). If the switching unit has feature package NTX085AA (Traffic Separation Peg Count), enter a number between 1 and the value of parameter TFAN_OUT_MAX_NUMBER in table OFCENG. For switching units without feature package NTX085AA, enter a number between 1 and 15. Incoming and outgoing traffic separation numbers 1 to 9 should be reserved for generic traffic separation numbers. Refer to table TFANINT for additional information.

TRKGRP type AI (end)

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	PADGRP	alphanumeric (1 to 5 characters)	*Pad group* Enter the name of the pad group assigned to the trunk group in table PADDATA. For more information, refer to table PADDATA.
	NCCLS	NCBN NCID NCIM NCIT NCLT NCOF NCON NCOT NCRT NCTC or NOSC	*Operational measurements no-circuit class* Enter the operational measurements (OM) no-circuit class (NCCLS) to indicate which OM register is incremented if treatment GNCT (generalized no circuit) occurs. The initial value for this trunk group type is NCRT (no circuit). For more information, refer to table TRKGRP and the *Operational Measurements Reference Manual*.
	TRAFCLS	alphabetic (2 characters)	*Traffic usage class* Enter the traffic usage class assigned to the trunk group. For more information, refer to table TRKGRP.
	PROPAGAT	Y or N	*Propagate answer back* Enter Y (yes) if the trunk group is to supervise the transmission of the Answer Back message sent to the originating central office switching center. Otherwise, enter N (no).

Datafill example

The following example shows sample datafill for table TRKGRP type AI.

MAP display example for table TRKGRP type AI

```
GRPKEY          GRPINFO
_____________________________________________________________

AIS           AI 0 TLA NOSC IR N
```

Automatic Number Announcement Trunk Group Type

Outgoing trunk group type AN in a DMS end office interfaces with an automatic number announcement (ANA) system.

Automatic number identification (ANI) spill consisting of the actual calling number is sent to ANA, which returns a recorded voice announcement of the calling number.

Datafill

The following table lists the datafill for table TRKGRP type AN.

Field descriptions (Sheet 1 of 3)

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 common language location identifier (CLLI) code assigned to the trunk group in table CLLI.
GRPINFO		see subfields	*Variable group data* This field consists of subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, TRAFCLS and AUDRING.
	GRPTYP	AN	*Group type* Enter AN. This is the trunk group type for automatic number announcement.

TRKGRP type AN (continued)

Field descriptions (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	TRAFSNO	numeric (0 to 127)	*Traffic separation number* Enter the outgoing traffic separation number assigned to the trunk group. If a traffic separation number is not required, enter 0 (zero). If the switching unit has software package NTX085AA (Traffic Separation Peg Count), enter a number between 1 and the value of parameter TFAN_OUT_MAX_NUMBER in table OFCENG. For switching units without software package NTX085AA, enter a number between 1 and 15. Incoming and outgoing traffic separation numbers 1 to 9 should be reserved for generic traffic separation numbers. Refer to table TFANINT for additional information.
	PADGRP	alphanumeric (1 to 5 characters)	*Pad group* Enter the name of the pad group assigned to the trunk group in table PADDATA. For more information, refer to table PADDATA.
	NCCLS	NCBN, NCID, NCIM, NCIT, NCLT, NCOF, NCON, NCOT, NCRT, NCTC, or NOSC	*Operational measurements no-circuit class* Enter the operational measurements (OM) no-circuit class (NCCLS) to indicate which OM register is incremented if treatment GNCT (generalized no circuit) occurs. The initial value for this trunk group type is NCRT (no circuit). For more information, refer to the overview section of table TRKGRP and the *Operational Measurements Reference Manual*.

Field descriptions (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	TRAFCLS	alphabetic(2 characters)	*Traffic usage class* Enter the traffic usage class assigned to the trunk group. For more information, refer to table TRKGRP.
	AUDRING	Y or N	*Audible ring* Enter Y (yes) if the switching unit is required to return audible ring to the originator. Otherwise, enter N (no).

Datafill example

The following example shows sample datafill for table TRKGRP type AN.

MAP display example for table TRKGRP type AN

```
GRPKEY                      GRPINFO
_____________________________________________________________

OTWAON08W01O                AN 0 ELO NOSC AN Y
```

TRKGRP type ANI

Automatic Number Identification Trunk Group Type

Trunk group ANI is used for international centralized automatic message accounting (ICAMA) and International Traffic Operator Position System (ITOPS) calls.

How ANI Accounting Works

In order for automatic number identification (ANI) accounting to work, both the incoming and the outgoing ends of a trunk group must be of type ANI.

When a call is made, the outgoing end outpulses the called number the same way it does for non-ANI trunks. When the outgoing end receives an ANI request signal, it then outpulses the calling number.

If the outgoing end times out before it gets an ANI request signal, the calling party is routed to treatment. The type of treatment can be datafilled separately for each route.

The incoming end first collects the called number digits the same way it does on non-ANI trunks. It then sends an ANI request signal and waits to receive the calling number digits.

Upon receiving the ANI request signal, the outgoing end performs a delay (specified through datafill in table LNSIGSYS) and then proceeds to outpulse the digits of the calling number.

At this point, the incoming end collects the outpulsed digits and makes them available to billing and verification applications. If the incoming end fails to receive the outpulsed digits, the call is routed to regular treatment.

Selectable translator types

ANI allows the translator type (for example, North American or universal translations) to be selected from the trunk group data.

The translation data selector NETATTR is an index into a new network attributes table. If this selector is used, translation data is datafilled in table NETATTR instead of table TRKGRP.

Datafill

The following table lists the datafill for table TRKGRP type ANI.

Field descriptions (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 common language location identifier (CLLI) code assigned to the trunk group in table CLLI.
GRPINFO		see subfields	*Variable group data* This field consists of subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, SAT, ESUPR, and DIRSEL. Refer to section “General field information" in table TRKGRP for information on an alternate structure for this field that results from the datafill of table CUSTFLDS.
	GRPTYP	ANI	*Group type* Enter ANI to specify the automatic number identification trunk group type.
	TRAFSNO	numeric (0 to 127)	*Traffic separation number* Enter the incoming and outgoing traffic separation number assigned to the trunk group. If a traffic separation number is not required, enter 0 (zero). For switches with software package NTX085AA (Traffic Separation Peg Count), enter a value from 1 to the value of office parameter TFAN_OUT_MAX_NUMBER in table OFCENG. For switches without software package NTX085AA, enter a value from 1 to 15. Incoming and outgoing traffic separation numbers 1 to 9 should be reserved for generic traffic separation numbers. For more information, refer to table TFANINT.

TRKGRP type ANI (continued)

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	PADGRP	alphanumeric (1 to 5 characters)	*Pad group* Enter the name of the pad group assigned to the trunk group in table PADDATA. For more information, refer to table PADDATA.
	NCCLS	NCBN, NCID, NCIM, NCIT, NCLT, NCOF, NCON, NCOT, NCRT, NCTC, or NOSC	*Operational measurements no-circuit class* Enter the operational measurements (OM) no-circuit class (NCCLS) to indicate which OM register, in OM groups OFZ2 and SOTS, is incremented if treatment GNCT (generalized no circuit) occurs. If the trunk direction is incoming (IC), this field is not required. Enter NCRT (no circuit). For more information, refer to table TRKGRP and the *Operational Measurements Reference Manual*.
	SAT	Y or N	*Satellite* Enter Y (yes) if the trunk is configured to switch through a satellite connection. Otherwise, enter N (no).
	ESUPR	Y or N	*Echo suppressor* If the trunk subgroup has echo suppressors, enter Y. Otherwise, enter N.
	DIRSEL	see subfield	*Direction selection* This field consists of subfield DIR and refinements.
	DIR	IC or OG	*Trunk direction* If the direction of the trunk group is incoming, enter IC and datafill refinement XLAD. If the direction of the trunk group is outgoing, enter OG and datafill refinements SELSEQ, ANIFMT, and ANIDNSIZ

DIR = IC

If the direction of the trunk group is incoming, datafill refinement XLAD as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	XLAD	see subfield	*Variable translation data* This subfield consists of subfield XLADSEL.
	XLADSEL	UNIV, NALT, or NETATTR	*Translation selector* If the universal translation system is used, enter UNIV and datafill subfields XLASYS and XLANAME. If the North American translation system is used, enter NALT and datafill subfields PRTNM, SCRNCL, SNPA, and ORIGSRC. If this table indexes into table NETATTR, enter NETATTR and datafill subfield NETINDX.

XLADSEL = UNIV

If the value in field XLADSEL is UNIV, datafill subfields XLASYS and XLANAME as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	XLASYS	AC, AM, CT, DN, FA, FT, NSC, OFC, PX, or NIL	*Translation system* Enter a character string to specify the name of the head table from which translations begin.
	XLANAME	alphanumeric (1 to 8 characters)	*Translation name* Enter a name from the code table that corresponds to the head table referenced by field XLASYS. If the entry in field XLASYS is NIL, leave this field blank.

TRKGRP type ANI (continued)

XLADSEL = NETATTR

If the value in field XLADSEL is NETATTR, datafill subfield NETINDX as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	NETINDX	numeric (0 to 1023)	*Network attribute index* Enter a valid network attribute index from table NETATTR. No other translation data is required (since it is available in table NETATTR).

XLADSEL = NALT

If the value in field XLADSEL is NALT, datafill the subfields PRTNM, SCRNCL, SNPA, and ORIGSRC as described below.

Field descriptions for conditional datafill (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	PRTNM	alphanumeric (1 to 4 characters)	*Standard pretranslation name* Enter the name of the standard pretranslator datafilled in table STDPRTCT to which translation is to route on receipt of the first incoming digit. If pretranslation is not required, enter NPRT (no pretranslator). If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y (yes), all trunks in the group must be busy before the value of this field can be changed by data modification order (DMO).
	SCRNCL	alphanumeric (1 to 32 characters) or NSCR	*Class-of-service screening table name* If class-of-service screening is required, enter the name of the class-of-service screening table (datafilled in table SCRNCLAS) to which digit translation routes. If class-of-service screening is not required, enter NSCR (no screening).

Field descriptions for conditional datafill (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	SNPA	numeric (3 digits)	*Serving numbering plan area* Enter the serving NPA code in table HNPACODE to which translation routes for digit translation. If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y, all trunks in the group must be busy before the value of this field can be changed by DMO.
	ORIGSRC	LCL or NLCL	*Originating source* Enter the originating source, LCL (local) or NLCL (non-local). The originating source determines, for the code dialed, whether the call is routed or blocked by the code type in table HNPACODE. Refer to subtable HNPACONT.HNPACODE, “Notes on Originating Source" for more information.

All XLADSEL values

For all values of XLADSEL, datafill subfields ANIFMT and ANIDNSIZ as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	ANIFMT	STDBELL or STDINTL	*ANI format* Enter either STDBELL or STDINTL to specify the size and values of the ID field in the ANI train.
	ANIDNSIZ	numeric (4 to 10)	*Originators directory number size* Enter the number of digits in the originator's directory number that are to be outpulsed or received in the ANI digit train.

TRKGRP type ANI (continued)

DIR = OG

If the direction of the trunk group is outgoing, datafill refinements SELSEQ, ANIFMT, and ANIDNSIZ as described below.

Field descriptions for conditional datafill (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	SELSEQ	MIDL, LIDL, CWCTH, CCWCTH, ASEQ, or DSEQ	*Select sequence* If the trunk group direction is two-way (2W) and far end is a link list switcher, enter LIDL or MIDL (least or most idle) if far end is MIDL or LIDL respectively. If the trunk group is 2W, the far end is not a link list switcher and sequential selection does not apply, enter MIDL. If the trunk group is 2W, the far end is not a link list switcher, and feature package NTX244AB (Enhanced Sequential Trunk Hunting) is present, base the selection order on the order of the trunks in table TRKMEM, and enter • CWCTH or CCWCTH for clockwise or counterclockwise circular trunk hunting from the most recently released trunk in the trunk group, if the far end is CCWCTH or CWCTH respectively, or • ASEQ or DSEQ for ascending or descending sequential selection, if far end is DSEQ or ASEQ respectively. Entries outside this range are invalid. For more information, refer to table TRKGRP. ***Note:*** The selection sequence for an existing trunk group can be changed from ASEQ to DSEQ, or from DSEQ to ASEQ, if all the members are made installation busy (INB) or unequipped (UNEQ). The selection method for an existing trunk group cannot be changed. To change the selection method for an existing trunk group from ASEQ or DSEQ to CWCTH or CCWCTH, or to MIDL or LIDL, define a new trunk group, as follows: Create a new trunk group with the required trunk selection method, delete the individual trunks from the old trunk group, and add the trunks to the new trunk group.

TRKGRP type ANI (continued)

Field descriptions for conditional datafill (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	ANIFMT	STDBELL or STDINTL	*ANI format* Enter either STDBELL or STDINTL to specify the size and values of the ID field in the ANI train.
	ANIDNSIZ	numeric (4 to 10)	*Originators directory number size* Enter the number of digits in the originator's directory number that are to be outpulsed or received in the ANI digit train.

Datafill example

The following example shows sample datafill for table TRKGRP type ANI.

An example of datafill for table TRKGRP (ANI) is shown below. This example, which consists of datafill for one outgoing trunk group and for one incoming trunk group, is datafilled as follows:

- The code in table CLLI for the outgoing trunk group is OGTOANI and for the incoming trunk group is INFRANI.
- The traffic separation number for the outgoing trunk group is 10 and for the incoming trunk group is 0.
- ELOA is the PAD group assigned to both trunk groups.
- NCRT is the no-circuit class for both trunk groups.
- Neither trunk group is arranged to switch through a satellite connection.
- Neither trunk group has echo suppressors.
- The direction for the outgoing trunk group is OG and for the incoming trunk group is IC.
- Both trunk groups use the universal translator.
- The translation for the incoming trunk group starts in table PX.
- The translation name for the incoming trunk group is ICANICN.
- The selection sequence for the outgoing trunk group is most idle.

TRKGRP type ANI (end)

- The ANI format for both trunks is STDINT.L
- The number of digits in the originator's directory number is seven.

MAP display example for table TRKGRP type ANI

```
GRPKEY      GRPINFO
_____________________________________________________________________

OGTOANI     ANI 10 ELOA NCRT N N OG MIDL STDINTL 7
ICFRANI     ANI 0 ELOA NCRT N N IC UNIV PX ICANICN STDINTL 7
```

TRKGRP type ATC

Access Tandem to Carrier Trunk Group Type

TRKGRP type ATC is used in a DMS-100/200 switch equipped with feature package NTX386AA (Feature Group D Carrier Code Expansion) to carry equal access (EA) traffic between an access tandem (AT) switch and an inter-LATA carrier (IC).

The equal access plan uses an AT to provide one or more dedicated trunks for EA signaling for each carrier that it serves.

The following trunks originate traffic to an ATC trunk:

- super-CAMA (GRPTYP = SC)
- intertoll (GRPTYP = IT)
- TOPS (GRPTYP = TOPS)

The following trunks terminate traffic from an ATC trunk:

- super-CAMA (SC)
- intertoll (IT)

MF (multifrequency) is the only pulse type permitted for TRKGRP (ATC) signaling.

Note: Coin lines from an office using Feature Group D are not supported over an outgoing ATC trunk to a TOPS office. However, incoming trunks with coin traffic can be used in tandem with an outgoing ATC trunk to a TOPS office.

The following table describes the office parameters affecting trunk group type ATC.

Office parameters affecting group type ATC (Sheet 1 of 2)

Parameter	Table	Type	Range
EA_REC_1ST_PRE_WK_TIME	OFCSTD	Byte	1 to 255
EA_REC_SUB_PRE_WK_TME	OFCSTD	Byte	1 to 255
Note: Use standard minimum wink time values.			

Office parameters affecting group type ATC (Sheet 2 of 2)

Parameter	Table	Type	Range
EA_REC_MAX_WK_TIME	OFCSTD	Byte	1 to 255
EA_TEST_CALL_SPILL ***Note:*** Office parameter EA_TEST_CALL_SPILL is datafilled when the office is engineered. These digits are outpulsed on a test call over an ATC trunk and consist of two information digits, three digits for calling NPA, and seven digits for calling number.	OFCVAR		up to 15 digits
Note: Use standard minimum wink time values.			

The following table shows the ST signals that are accepted for the possible station class types (refer to the description of field STNCLS for additional information).

ST signals accepted for entries in field STNCLS

ST signal	COMB	NONCOMB	INTERTOLL
ST for 1+ traffic (COIN)	X	X	X
STP for 0+ or 0- traffic (COIN)			X
ST2P for 1+ traffic (NONCOIN)	X		X
ST3P for 0+ traffic (NONCOIN)	X		X

Datafill

The following table lists the datafill for table TRKGRP type ATC.

Field descriptions (Sheet 1 of 12)

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 common language location identifier (CLLI) code assigned to the trunk group in table CLLI.

TRKGRP type ATC (continued)

Field descriptions (Sheet 2 of 12)

Field	Subfield or refinement	Entry	Explanation and action
GRPINFO		see subfields	*Variable group data* This field consists of subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, DIR, TRAFCLS, SELSEQ, PRTNM, SCRNCL, SNPA, CARRNM, ANI, SIGTYPE, STNCLS, OSIND, and OPTIONS. Refer to section “General field information" in table TRKGRP for information concerning an alternate structure for this field that results from the datafill of table CUSTFLDS.
	GRPTYP	ATC	*Group type* Enter ATC to specify the access tandem to carrier trunk group type.
	TRAFSNO	numeric (0 to 127)	*Traffic separation number*Enter the incoming and outgoing traffic separation number assigned to the trunk group. If a traffic separation number is not required, enter 0 (zero). For switches with software package NTX085AA (Traffic Separation Peg Count), enter a value from 1 to the value of office parameter TFAN_OUT_MAX_NUMBER in table OFCENG. For switches without software package NTX085AA, enter a value from 1 to 15. Incoming and outgoing traffic separation numbers 1 to 9 should be reserved for generic traffic separation numbers. For more information, refer to table TFANINT.
	PADGRP	alphanumeric (1 to 5 characters)	*Pad group* Enter the name of the pad group assigned to the trunk group in table PADDATA. For more information, refer to table PADDATA.

Field descriptions (Sheet 3 of 12)

Field	Subfield or refinement	Entry	Explanation and action
	NCCLS	NCBN NCID NCIM NCIT NCLT NCOF NCON NCOT NCRT NCTC or NOSC	*Operational measurements no-circuit class* Enter the operational measurements (OM) no-circuit class (NCCLS) to indicate which OM register is incremented if treatment GNCT (generalized no circuit) occurs. If the trunk group direction is incoming, this field is not required. Enter NCRT (no circuit). For outgoing and two-way trunk groups, the initial value for this trunk group type is NCIT (no-circuit intertoll) or NCTC (no-circuit toll completing). For more information, refer to table TRKGRP and the *Operational Measurements Reference Manual*.
	DIR	ICO or 2W	*Direction* This field specifies the trunk group direction. Enter IC for incoming, OG for outgoing, or 2W for two-way. If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y, all trunks in the group must be busy before the value of this field can be changed by data modification order (DMO).
	TRAFCLS	alphabetic (2 characters)	*Traffic usage class* Enter the traffic usage class assigned to the trunk group. For more information, refer to table TRKGRP.

TRKGRP type ATC (continued)

Field descriptions (Sheet 4 of 12)

Field	Subfield or refinement	Entry	Explanation and action
	SELSEQ	ASEQ CNTLEVN CNTLODD CCWCTH CWCTH LIDL DSEQ MIDL or WIDEBAND	*Select sequence* Datafill this field to specify the order of trunk selection. The order in which trunks are searched is determined by the order in which the trunk groups are datafilled in table TRKMEM, and by the value in this field. For incoming trunk groups, this field is not required. Enter MIDL. For outgoing and two-way trunk groups, datafill this field as follows: Enter ASEQ or DSEQ for ascending or descending sequential selection, based on the order of trunk members in table TRKMEM. The trunk circuit connected to the other end can use the opposite selection sequence in order to reduce B-channel glare. Feature package NTX244AB (Enhanced Sequential Trunk Hunting) must be present for ascending or descending sequential selection. Enter select sequence LIDL (least idle) if trunk selection is made on a status of least idle. The connecting trunk at the end office must be a link list switcher and must be set up with the LIDL select sequence. Enter select sequence MIDL (most idle) if trunk selection is made on a status of most idle. The connecting trunk at the end office must be a link list switcher and must be set up with the MIDL select sequence.

TRKGRP type ATC (continued)

Field descriptions (Sheet 5 of 12)

Field	Subfield or refinement	Entry	Explanation and action
			If the end office is not a link list switcher and feature NTX244AB is in the switching unit, base the selection order on the order of the trunks in table TRKMEM and enter CWCTH for clockwise or CCWCTH for counterclockwise circular trunk hunting based on the most recently released trunk in the trunk group (if the far end is CWCTH or CCWCTH, respectively). The entries CNTLEVN and CNTLODD are only valid if the Japan Public Network ISDN (JPNISUP) trunks (or any trunk where field SIGDATA in table TRKSGRP is equal to C7UP or ISDN) are installed in the switching unit. The JPNISUP trunks are divided into controlling groups and non-controlling groups. These groups in turn are divided into even and odd circuit identification codes (CIC). The difference between the four groups relates to the selection sequence used for locating idle trunks. Enter CNTLEVN in order to select the MIDL selection sequence algorithm for even-numbered CICs in the controlling group. Enter CNTLODD in order to select the MIDL selection sequence algorithm for odd-numbered CICs in the controlling group. If all circuits in the controlling group are busy, the least idle (LIDL) trunk in the non-controlling group is selected. This applies to both CNTLEVN and CNTLODD selection sequences.

TRKGRP type ATC (continued)

Field descriptions (Sheet 6 of 12)

Field	Subfield or refinement	Entry	Explanation and action
			If wideband trunk selection is allowed for primary rate access (PRI) ISUP trunks, enter WIDEBAND and datafill refinements WBSELSEQ, WBGRPING, and WBSEARCH. The WIDEBAND entry value is only valid if feature NTXR49AA (Dialable Wide Band Service PRI) is in the switching unit. ***Note:*** A trunk group trunk selection method cannot be changed. If a change in the selection method is required, a new trunk group must be created with the required trunk selection method. The individual trunks with the old selection sequence must be deleted from the old trunk group and then added to the new trunk group. For an existing trunk group, the selection sequence may be changed if all the trunk members are installation busy (INB) or unequipped (UNEQ). Refer to table TRKGRP for additional information concerning field SELSEQ.
	WBSELSEQ	ASEQ or DSEQ	*Wideband selection sequence* Datafill this field if the value in field SELSEQ is WIDEBAND. Specify whether the wideband trunks are selected in ascending order (ASEQ) from the first idle trunk on the search list, or in descending order (DSEQ), from the last idle trunk on the search list. The order of trunks in the search list is determined by the order in which the trunk groups are datafilled in table TRKMEM.

Field descriptions (Sheet 7 of 12)

Field	Subfield or refinement	Entry	Explanation and action
	WBGRPING	FIXED FLOATING or FLEXIBLE	*Wideband boundary preference* Datafill this field if the value in field SELSEQ is WIDEBAND. This field contains the wideband boundary preference. Enter FIXED to specify that idle trunks within a specific time slot frame are selected. This value is only valid for local exchange carriers (LEC). Enter FLOATING to specify that a number of consecutive idle trunks in a trunk group are selected. Enter FLEXIBLE to specify that a number of either consecutive or nonconsecutive idle trunks in a trunk group are selected. ***Note:*** The FLEXIBLE entry value is available only if functionality NI000027 DWS Flexible Acc (NTXR65AA Flexible DWS Access) is loaded.
	WBSEARCH	BESTFIT or FIRSTFIT	*Wideband search* Datafill this field if the value in field SELSEQ is WIDEBAND. This field specifies the wideband search algorithm. The BESTFIT algorithm finds the smallest segment of idle channels (DS-0s) among trunks (DS-1s) within a trunk group to accommodate a wideband call, according to the boundary preference (FIXED or FLOATING) specified. The FIRSTFIT algorithm finds the first segment of idle DS-0s that can accommodate a wideband call, according to the boundary preference specified.

TRKGRP type ATC (continued)

Field descriptions (Sheet 8 of 12)

Field	Subfield or refinement	Entry	Explanation and action
	PRTNM	alphanumeric (1 to 4 characters) or NPRT	*Standard pretranslator name* If standard pretranslation is required, enter the name of the standard pretranslator defined in table STDPRTCT to which digit translation is to route after the receipt of the first digit. If pretranslation is not required, as is the case for outgoing trunk groups, enter NPRT (no pretranslation). If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y, all trunks in the group must be busy before the value of this field can be changed by DMO.
	SCRNCL	alphanumeric (1 to 4 characters) or NSCR	*Class-of-service screening table name* If class-of-service screening is required, enter the name of the class-of-service screening table (datafilled in table SCRNCLAS) to which digit translation routes. If classof-service screening is not required, as is the case for outgoing trunk groups, enter NSCR (no screening).
	SNPA	numeric (3 digits)	*Serving numbering plan area* Enter the serving numbering plan area (NPA) for the trunk group. If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y, all trunks in the group must be busy before the value of this field can be changed by DMO.
	CARRNM	alphanumeric (1 to 16 characters) or NILC	*Carrier name* Enter a carrier name that was previously datafilled in table OCCINFO.
	ANI	Y or N	*Automatic number identification* Enter Y (yes) if the trunk group is to send automatic number identification (ANI) information. Otherwise, enter N (no). For incoming trunk groups, this field is not required. Enter N.

Field descriptions (Sheet 9 of 12)

Field	Subfield or refinement	Entry	Explanation and action
	SIGTYPE	BELLI BELLII EAPLAN or FGB	*ANI signaling type* Enter the signaling type for this trunk group. For signaling types BELLI, BELLII, or EAPLAN datafill refinement OPERATOR_HOLD. For signaling type FGB, no additional refinements are required.
	OPERATOR_HOLD	see subfield	*Operator hold* Datafill this field if the value in field SIGTYPE is BELLI, BELLII, or EAPLAN. This field consists of subfield OPRHOLD and refinement HLDTIMER.
	OPRHOLD	Y or N	*Operator hold* Datafill this field if the value in field SIGTYPE is BELLI, BELLII, or EAPLAN. If a signal is to be sent to the traffic operator position system (TOPS) to indicate that operator hold must be applied when the carrier sends an off-hook signal (to TOPS) after the called party goes off-hook, enter Y and datafill refinement HLDTIMER. Otherwise, enter N.
	HLDTIMER	numeric (0 to 60)	*Operator hold timer* Datafill this field if the value in field OPRHOLD is Y. Enter a numeric value to specify the duration in minutes before the operator hold timeout timer expires and terminates the call. If the entry value is 0 (zero), timer timeout does not occur.

TRKGRP type ATC (continued)

Field descriptions (Sheet 10 of 12)

Field	Subfield or refinement	Entry	Explanation and action
	STNCLS	COMB NONCOMB or INTERTOLL	*Station class signaling* Datafill this field to specify the type of signaling accepted by the inter-LATA carrier switch. If the trunk group direction is incoming, this field is not required. Enter COMB. If the office has a TOPS access tandem (AT) switch with an incoming TOPS trunk connected to an outgoing ATC trunk, datafill field STNCLS with the following values: • COMB for combined (coin and noncoin) traffic • NONCOMB for non-combined (dedicated) traffic • INTERTOLL for feature group B (FGB) signaling If the office does not have TOPS, or the incoming trunk group is of a type other than TOPS, datafill field STNCLS with the value COMB. For combined traffic, such as coin or noncoin, the ST signal indicates the class of service of the calls. For non-combined traffic, class-of-service is determined by fields CLGID and STATCSA in table TRKGRP (TOPS). Entry value INTERTOLL is valid only in TOPS offices. Refer to the table “ST signals accepted for entries in field STNCLS" for the ST signals accepted in accordance with each field STNCLS entry value.
	OSIND	Y or N	*Operator services indicator* Enter Y if the carrier is to receive an ANI ID indication that operator services were provided. Otherwise, enter N. For incoming ATC trunk groups, enter N.

TRKGRP type ATC (continued)

Field descriptions (Sheet 11 of 12)

Field	Subfield or refinement	Entry	Explanation and action
	OPTIONS	see subfield	*Options* This field consists of subfield OPTION and refinements.
	OPTION	BCNAME. BLOCKNB CICSET or LNP	*Option* The following options can be datafilled: • BCNAME - Bearer-capability-name. Datafill refinement BCNAME. This option is only valid for incoming and two-way trunk group types. • BLOCKNB - This option specifies whether narrow band calls are blocked on the trunk group. This option can be set when the TRKGRP table of the trunk group is datafilled with SELSEQ = WIDEBAND. • CICSET - Carrier identification code. Datafill refinement CICSET. This option controls the inclusion of the carrier identification parameter (CIP) in the Initial Address Message (IAM) for EA feature group D (FGD) MF to signaling system 7 (SS7) interworking calls for an ATC trunk group. • LNP - Local number portability. This option allows specifying a default location routing number (LRN) for the trunk group. Datafill refinement LRN. If no options apply, leave this field blank.

TRKGRP type ATC (continued)

Field descriptions (Sheet 12 of 12)

Field	Subfield or refinement	Entry	Explanation and action
	BCNAME	alphanumeric (1 to 16 characters)	*Bearer capability name* If the entry in field OPTION is BCNAME, enter the bearer capability to be used by this trunk group. Refer to table BCDEF for the current list of available bearer capabilities. If field OPTION and refinement BCNAME are left blank, the default bearer capability of the central office is used. If a BC is not datafilled for an ATC type trunk group, the office default bearer capability defined by office parameter DEFAULT_BEARER_CAPABILITY (either SPEECH or 3_1KHZ) applies. Refer to table OFCENG for more information on this office parameter. If the TRKGRP tuple is listed and the datafilled BC is the office default (SPEECH or 3_1KHZ), the BC option does not appear (on a MAP display).
	CICSET	alphanumeric (1 to 16 characters) or SSET	*Carrier identification code set name* If the entry in field OPTION is CICSET, enter the 1- to 16-character carrier identification code set name from table CICSETS, or enter SSET to specify that the CIP is always included in the IAM for the trunk group. If field OPTION and refinement CICSET are left blank, the default value (no assigned carrier identification code set for the trunk group) is assumed.
	LRN	10-digit directory number	*Location routing number* If field OPTION = LNP, datafill a 10-digit directory number that identifies the adjacent incoming office and is used in recording AMA module 720 of the calling number. This option is used if the LRN is not signalled. Exactly 10 digits must be datafilled.

Datafill example

The following example shows sample datafill for table TRKGRP type ATC.

The first tuple in this example is datafilled as follows for an incoming type ATC trunk group:

- The code in table CLLI for the trunk group is OTWAON0202AT.
- The trunk group type is ATC.
- Incoming traffic separation number 20 is assigned to the trunk group.
- TLD is the pad group assigned to the trunk group.
- NCRT is the no-circuit class.
- The direction is incoming (IC).
- The traffic class is intertoll (IT).
- The select sequence is not required, and is set to MIDL.
- No pretranslation or class-of-service screening is required.
- The trunk group is assigned to serving NPA 613.
- The trunk group does not send ANI information.
- The signaling type is BELLI.
- No signal is to be sent to TOPS to indicate that operator hold must be applied when the carrier sends an off-hook signal (to TOPS) after the called party goes off-hook.
- The station class is not required (STNCLS = COMB).
- The carrier does not receive notification of operator involvement (OSIND = N).
- The carrier receives no ANI ID indication when operator services are provided.
- There are no options for an incoming ATC trunk.

The second tuple in this example is datafilled as follows for an outgoing type ATC trunk group:

- The code in table CLLI for the trunk group is OGEACAR3.
- The trunk group type is ATC.
- The outgoing traffic separation number 21 is assigned to the trunk group.
- TLD is the pad group assigned to the trunk group.
- NCTC is the no-circuit class.

TRKGRP type ATC (continued)

- The direction is outgoing (OG).
- The traffic class is intertoll (IT).
- The select sequence is set to MIDL.
- Pretranslation and class-of-service screening are not required for outgoing trunk groups, and are set to NPRT and NSCR, respectively.
- The trunk group is assigned to serving NPA 613.
- The carrier name is one of the names in table OCCINFO.
- The trunk group sends ANI information.
- The signaling type is FGB.
- The station class is set for combined traffic (STNCLS = COMB).
- The carrier receives an ANI ID indication when operator services are provided.
- There are no options assigned.

The third tuple in this example is datafilled as follows for a two-way type ATC trunk group:

- The code in table CLLI for the trunk group is OTWAON2301T0.
- The trunk group type is ATC.
- The incoming and outgoing traffic separation number is 23.
- TLD is the pad group assigned to the trunk group.
- NCIT is the no-circuit intertoll class.
- The direction is two way 2W.
- The traffic class is intertoll (IT).
- The select sequence is most idle (MIDL).
- No pretranslation or class-of-service screening is required.
- The serving NPA is 613.
- The carrier name is one of the names in table OCCINFO.
- The trunk group sends ANI information.
- The signaling type is BELLI.
- A signal is to be sent to TOPS to indicate that operator hold must be applied when the carrier sends an off-hook signal (to TOPS) after the called party goes off-hook. The operator timeout duration is 15 minutes.
- The station class is set for combined traffic (STNCLS = COMB).

- The carrier receives no ANI ID indication when operator services are provided.
- There are no options assigned.

MAP display example for table TRKGRP type ATC

```
 GRPKEY          GRPINFO
_____________________________________________________________________

 OTWAON0202AT    ATC 20 TLD NCRT IC IT MIDL NPRT NSCR 613 MCI N
BELLI N COMB N
 OGEACAR3        ATC 21 TLD NCTC OG ITL MIDL NPRT NSCR 613 IC3 Y
FGB COMB Y
 OTWAON2301T0    ATC 23 TLD NCIT 2W IT MIDL NPRT NSCR 613 MCI Y
BELLI Y 15 COMB N
```

Table history

NA007

Value LNP added to field OPTION by feature AN1954.

TRKGRP type CA

Come-Again Signaling Trunk Group Type

Table TRKGRP, with group type CA, is used in local switches for trunk groups that interface to Siemens Automatic Dialing System (ADDS) equipment.

Coin and non-coin calls are routed to the ADDS through separate trunk groups.

Initial coin return is performed automatically by the switch.

The called number is outpulsed in dial-pulse mode.

The information digit precedes the called number.

The hold type for this trunk group type is joint hold. With this hold type, the call is taken down when both the originator and the terminator are on-hook.

Datafill

The following table lists the datafill for table TRKGRP type CA.

Field descriptions (Sheet 1 of 3)

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 common language location identifier (CLLI) code assigned to the trunk group in table CLLI.
GRPINFO		see subfields	*Variable group data* This field consists of subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, TRAFCLS, ZEROMDIG, ZEROPDIG, and ONEPDIG. Refer to section “General field information" in table TRKGRP for information on an alternate structure for this field that results from the datafill of table CUSTFLDS.
	GRPTYP	CA	*Group type* Enter CA to specify the group type for Come Again signaling.

TRKGRP type CA (continued)

Field descriptions (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	TRAFSNO	numeric (0 to 127)	*Traffic separation number* Enter the incoming and outgoing traffic separation number assigned to the trunk group. If a traffic separation number is not required, enter 0 (zero). For switches with software package NTX085AA (Traffic Separation Peg Count), enter a value from 1 to the value of office parameter TFAN_OUT_MAX_NUMBER in table OFCENG. For switches without software package NTX085AA, enter a value from 1 to 15. Incoming and outgoing traffic separation numbers 1 to 9 should be reserved for generic traffic separation numbers. For more information, refer to table TFANINT.
	PADGRP	alphanumeric (1 to 5 characters)	*Pad group* Enter the name of the pad group assigned to the trunk group in table PADDATA. For more information, refer to table PADDATA.
	NCCLS	NCBN NCID NCIM NCIT NCLT NCOF NCON NCOT NCRT NCTC or NOSC	*Operational measurements no-circuit class* Enter the operational measurements (OM) no-circuit class (NCCLS) to indicate which OM register is incremented if treatment GNCT (generalized no circuit) occurs. The initial value for this trunk group type is NCRT (no circuit). For more information, refer to table TRKGRP and the *Operational Measurements Reference Manual*.
	TRAFCLS	alphabetic (2 characters)	*Traffic usage class* Enter the traffic usage class assigned to the trunk group.For more information, refer to table TRKGRP.

TRKGRP type CA (end)

Field descriptions (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	ZEROMDIG	numeric (0 to 9)	*Zero minus digit* Enter the identification digit to be prefixed to the digits outpulsed on operator calls (0-). If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y (yes), busy all trunks in the group before changing the value of this field by data modification order (DMO).
	ZEROPDIG	numeric (0 to 9)	*Zero plus digit* Enter the identification digit to be prefixed to the called number on 0+ calls. If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y, busy all trunks in the group before changing the value of this field by data modification order (DMO).
	ONEPDIG	numeric (0 to 9)	If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y, busy all trunks in the group before changing the value of this field by data modification order (DMO). *One plus digit* Enter the identification digit to be prefixed to the called number on 1+ calls.

Datafill example

The following example shows sample datafill for table TRKGRP type CA.

MAP display example for table TRKGRP type CA

```
GRPKEY          GRPINFO
_____________________________________________________

OTWAO11CA       CA 22 ELO NCRT IE 4 4 5
```

TRKGRP type CELL

Cellular Trunk Group Type

In table TRKGRP, group type CELL is used to assign cellular trunks. These trunks allow type 2A interconnections between a cellular mobile carrier (CMC) and an access tandem (AT) switch.

Datafill

The following table lists the datafill for table TRKGRP type CELL.

Field descriptions (Sheet 1 of 5)

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 common language location identifier (CLLI) code assigned to the trunk group in table CLLI.
GRPINFO		see subfields	*Variable group data* This field consists of subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, DIR, TRAFCLS, SELSEQ, CONNGNPA, PRTNM, SCRNCL, SNPA, BILLNO, and CCWKVLD. Refer to section “General field information" in table TRKGRP for information on an alternate structure for this field that results from the datafill of table CUSTFLDS.
	GRPTYP	CELL	*Group type* Enter CELL to specify the cellular trunk group type.

TRKGRP type CELL (continued)

Field descriptions (Sheet 2 of 5)

Field	Subfield or refinement	Entry	Explanation and action
	TRAFSNO	numeric (0 to 127)	*Traffic separation number* Enter the incoming and outgoing traffic separation number assigned to the trunk group. If a traffic separation number is not required, enter 0 (zero). For switches with software package NTX085AA (Traffic Separation Peg Count), enter a value from 1 to the value of office parameter TFAN_OUT_MAX_NUMBER in table OFCENG. For switches without software package NTX085AA, enter a value from 1 to 15. Incoming and outgoing traffic separation numbers 1 to 9 should be reserved for generic traffic separation numbers. For more information, refer to table TFANINT.
	PADGRP	alphanumeric (1 to 5 characters)	*Pad group* Enter the name of the pad group assigned to the trunk group in table PADDATA. For more information, refer to table PADDATA.
	NCCLS	NCBN, NCID, NCIM, NCIT, NCLT, NCOF, NCON, NCOT, NCRT, NCTC,or NOSC	*Operational measurements no-circuit class* Enter the operational measurements (OM) no-circuit class (NCCLS) to indicate which OM register is incremented if treatment GNCT (generalized no circuit) occurs. The initial value for this trunk group type is NCRT (no circuit). For more information, refer to table TRKGRP and the *Operational Measurements Reference Manual*.

TRKGRP type CELL (continued)

Field descriptions (Sheet 3 of 5)

Field	Subfield or refinement	Entry	Explanation and action
	DIR	IC, OG, 2W	*Direction* Enter the direction of traffic flow: IC (incoming), OG (outgoing), or 2W (two-way). If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y (yes), all trunks in the group must be busy before the value of this field can be changed by data modification order (DMO).
	TRAFCLS	alphabetic (2 characters)	*Traffic usage class* Enter the traffic usage class assigned to the trunk group. For more information, refer to table TRKGRP.
	SELSEQ	MIDL, LIDL, CWCTH, CCWCTH, ASEQ, or DSEQ	*Select sequence* If the trunk group direction is two-way (2W) and far end is a link list switcher, enter LIDL or MIDL (least or most idle) if far end is MIDL or LIDL respectively. If the trunk group is 2W, the far end is not a link list switcher, and sequential selection does not apply, enter MIDL. If the trunk group is 2W, the far end is not a link list switcher, and feature package NTX244AB (Enhanced Sequential Trunk Hunting) is present, base the selection order on the order of the trunks in table TRKMEM, and enter • CWCTH or CCWCTH for clockwise or counterclockwise circular trunk hunting from the most recently released trunk in the trunk group, if the far end is CCWCTH or CWCTH respectively, or ASEQ or DSEQ for ascending or • descending sequential selection, if far end is DSEQ or ASEQ respectively. Entries outside this range are invalid. For more information, refer to table TRKGRP.

TRKGRP type CELL (continued)

Field descriptions (Sheet 4 of 5)

Field	Subfield or refinement	Entry	Explanation and action
			Note: The selection sequence for an existing trunk group can be changed from ASEQ to DSEQ, or from DSEQ to ASEQ, if all the members are made installation busy (INB) or unequipped (UNEQ). The selection method for an existing trunk group cannot be changed. To change the selection method for an existing trunk group from ASEQ or DSEQ to CWCTH or CCWCTH, or to MIDL or LIDL, define a new trunk group, as follows: Create a new trunk group with the required trunk selection method, delete the individual trunks from the old trunk group, and add the trunks to the new trunk group.
	CONNGNPA	numeric (3 digits)	*Connecting numbering plan area* If the outpulsed digits are translated, enter the NPA code of the switch. Otherwise, enter 000. If the trunk group is incoming, this field is not required. Enter 000.
	PRTNM	alphanumeric (1 to 4 characters) or NPRT	*Standard pretranslator name* If standard pretranslation is required, enter the name of the standard pretranslator defined in table STDPRTCT to which digit translation is to route after the receipt of the first digit. If pretranslation is not required, enter NPRT (no pretranslation). If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y, all trunks in the group must be busy before the value of this field can be changed by data modification order (DMO).
	SCRNCL	alphanumeric (1 to 32 characters)or NSCR	*Class-of-service screening table name* If class-of-service screening is required, enter the name of the class-of-service screening table (datafilled in table SCRNCLAS) to which digit translation routes. If class-of-service screening is not required, enter NSCR (no screening).

Field descriptions (Sheet 5 of 5)

Field	Subfield or refinement	Entry	Explanation and action
	SNPA	numeric (3 digits)	*Serving numbering plan area* Enter the code in table HNPACODE to which translation routes for digit translation. If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y, all trunks in the group must be busy before the value of this field can be changed by DMO.
	BILLNO	numeric (up to 11 digits)	*Billing number* Enter the directory number to be used as the cellular mobile carrier (CMC) number in CMC billing records. If only seven digits are used, the SNPA field is used as the NPA of the CMC billing number.
	CCWKVLD	Y or N	*Carrier connect wink* Enter N (no) to indicate that the carrier connect acknowledgement (wink) in equal access international calls is not regenerated. Otherwise, enter Y. Most non-DMS access tandem switches and equal access end offices that are not equipped with a DMS switch cannot handle this wink.

Datafill example

An example of datafill for table TRKGRP (CELL) is shown below. This example has been datafilled as follows:

- The code in table CLLI for the trunk group is CMCABCAT.
- The trunk group type is CELL.
- The incoming traffic separation number 0 is assigned to the trunk group.
- TLA is the pad group assigned to the trunk group.
- NCRT is the no-circuit class.
- The direction is two-way (2W).
- The traffic class is NIL.
- The select sequence is not required and therefore is set to DL.
- The connecting NPA is 613.

TRKGRP type CELL (end)

- The pretranslation required is PEA.
- No class-of-service screening is required.
- The trunk group is assigned to serving NPA 613.
- The directory number to be used in the billing records is 6211234.
- Carrier connect wink is not required.

MAP display example for table TRKGRP type CELL

```
GRPKEY      GRPINFO
_____________________________________________________________________

CMCABCAT    CELL 0 TLA NCRT 2W NIL MIDL 613 PEA NSCR 613 6211234 N
```

Commonwealth of Independent States Automatic Number Identification Trunk Group Type

Trunk group type CISANI is used to distinguish toll automatic number identification (ANI) trunks from local and local tandem trunks in the Commonwealth of Independent States (CIS) telephony network. This trunk group is used by the international DMS for ICAMA calls.

Datafill

The following table lists the datafill for table TRKGRP type CISANI.

Field descriptions (Sheet 1 of 4)

Field	Subfield or refinement	Entry	Explanation and action
GRPKEY		see subfield	This field consists of subfield CLLI.
	CLLI	alphanumeric (1 to 16 characters)	*Common language location identifier* Enter the common language location identifier (CLLI) code assigned to the trunk group in table CLLI.
GRPINFO		see subfields	*Variable group data* This field consists of subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, SAT, ESUPR, TRFC, and DIRSEL. Refer to section “General field information" in table TRKGRP for information concerning an alternate structure for this field that results from the datafill of table CUSTFLDS.
	GRPTYP	CISANI	*Group type* Enter CISANI to specify the trunk group type for Commonwealth of Independent States (CIS) ANI.

TRKGRP type CISANI (continued)

Field descriptions (Sheet 2 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	TRAFSNO	numeric (0 to 127)	*Traffic separation number* Enter the incoming and outgoing traffic separation number assigned to the trunk group. If a traffic separation number is not required, enter 0 (zero). For switches with software package NTX085AA (Traffic Separation Peg Count), enter a value from 1 to the value of office parameter TFAN_OUT_MAX_NUMBER in table OFCENG. For switches without software package NTX085AA, enter a value from 1 to 15. Incoming and outgoing traffic separation numbers 1 to 9 should be reserved for generic traffic separation numbers. For more information, refer to table TFANINT.
	PADGRP	alphanumeric (1 to 5 characters)	*Pad group* Enter the name of the pad group assigned to the trunk group in table PADDATA. For more information, refer to table PADDATA.
	NCCLS	NCRT	*Operational measurements no-circuit class* This field is not required for incoming trunk groups. Enter NCRT (no circuit). For more information, refer to table TRKGRP and the *Operational Measurements Reference Manual.*
	SAT	Y or N	*Satellite* Enter Y (yes) if the trunk is configured to switch through a satellite connection. Otherwise, enter N (no).
	ESUPR	Y or N	*Echo suppressor* If the trunk subgroup has echo suppressors, enter Y. Otherwise, enter N.

TRKGRP type CISANI (continued)

Field descriptions (Sheet 3 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	TRFC	CAMA, EASV, ITLL, TLLC, TNCA, or NONE	*International traffic class* Enter the type of traffic that is expected to flow through this trunk group. The types of traffic classes are outlined below. CAMA Centralized automatic message accounting is the traffic class for trunk groups if the calling subscriber digits are signaled between switching units. EASV Extended area service is the traffic class for trunk groups that handle local (non-toll) traffic only. ITLL Intertoll is the traffic class for trunk groups that carry traffic in the toll network. TLLC Toll-completion is the traffic class for trunk groups that carry traffic between a toll switching unit and a terminating toll switching unit. TNCA Tandem CAMA is the traffic class used to collect the calling party information, but not to perform toll billing. It is used in China for malicious call identification. NONE NONE is the traffic class used for trunk groups that do not belong to one of the other traffic classes, or for a trunk group to which traffic class is not applicable.
	DIRSEL	see subfield	*Trunk direction selector and refinements* This field consists of subfield DIR and refinements.

TRKGRP type CISANI (continued)

Field descriptions (Sheet 4 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	DIR	IC	*Trunk direction* Enter IC to specify that the direction of the trunk group is incoming, and datafill refinements MCTANI, XLAD, DGNAME, CISDNSIZ, and CISTLTYP.
	MCTANI	Y or N	*Forward ANI enable* Enter Y to indicate that on malicious call trace (MCT) calls connected to trunks that do not already send DN and CATEGORY, a backwards request for DN or CATEGORY is required. Enter N to indicate that on MCT calls connected to trunks that do not already send DN and CATEGORY, a backwards request for DN or CATEGORY is not required. This option is applicable for R2 calls only.
	XLAD	see subfield	*Translation system* This field consists of subfield XLADSEL and refinements.
	XLADSEL	UNIV, NALT, or NETATTR	*Translation selector* If the universal translation system is used, enter UNIV and datafill refinements XLASYS and XLANAME. If the North American translation system is used, enter NALT and datafill refinements PRTNM, SCRNCL, SNPA, and ORIGSRC. If this table indexes into table NETATTR, enter NETATTR and datafill refinement NETINDX.

XLADSEL = NALT

If the value in field XLADSEL is NALT, datafill refinements PRTNM, SCRNCL, SNPA, and ORIGSRC as described below.

Field descriptions for conditional datafill (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	PRTNM	alphanumeric (1 to 4 characters)	*Standard pretranslation name* Enter the name of the standard pretranslator datafilled in table STDPRTCT to which translation is to route on receipt of the first incoming digit. If pretranslation is not required, enter NPRT (no pretranslator). If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y (yes), all trunks in the group must be busy before the value of this field can be changed by data modification order (DMO).
	SCRNCL	alphanumeric (1 to 4 characters)or NSCR	*Class-of-service screening table name* If class-of-service screening is required, enter the name of the class-of-service screening table (datafilled in table SCRNCLAS) to which digit translation routes. If class-of-service screening is not required, enter NSCR (no screening).

TRKGRP type CISANI (continued)

Field descriptions for conditional datafill (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	SNPA	numeric (3 digits)	*Serving numbering plan area* Enter the serving NPA code in table HNPACODE to which translation routes for digit translation. If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y, all trunks in the group must be busy before the value of this field can be changed by DMO.
	ORIGSRC	LCL or NLCL	*Originating source* Enter the originating source, LCL (local) or NLCL (non-local). The originating source determines, for the code dialed, whether the call is routed or blocked by the code type in table HNPACODE. Refer to subtable HNPACONT.HNPACODE, “Notes on Originating Source" for more information.

XLADSEL = NETATTR

If the value in field XLADSEL is NETATTR, datafill refinement NETINDX as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	NETINDX	numeric (0 to 1023)	*Network attribute index* Enter a valid network attribute index from table NETATTR. No other translation data is required (since it is available in table NETATTR).

XLADSEL = UNIV

If the value in field XLADSEL is UNIV, datafill refinements XLASYS and XLANAME as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	XLASYS	AC, AM, CC, CT, CTY, DN, FA, FT, NN, NSC, OFC, PX, or NIL	*Translation system* Enter a character string to specify the name of the head table from which translations begin.
	XLANAME	alphanumeric (1 to 8 characters)	*Translation name* Enter a name from the code table that corresponds to the head table referenced by field XLASYS. If the entry in field XLASYS is NIL, leave this field blank.

All XLADSEL values

For all values of XLADSEL, datafill subfields DGNAME, CISDNSIZ, and CISTLTYP as described below.

Field descriptions for conditional datafill (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	DGNAME	alphanumeric (1 to 8 characters) or NIL	*Digit collection name* Enter the digit analysis instance required for an incoming trunk group. The digit analysis instance must have been previously defined in table DGHEAD. Enter NIL if no digit analysis is required.

TRKGRP type CISANI (end)

Field descriptions for conditional datafill (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	CISDNSIZ	numeric (1 to 7)	*CIS directory number size* Enter a numeric value to specify the number of digits in the originating subscribers directory number (DN) that are to be received in the ANI digits train. The number specified indicates the DN size in the numbering plan without prefix digits.
	CISTLTYP	AMTC23 AMTCKE or ARM20	*CIS toll type* Datafill this field to specify the type of automatic intercity telephone exchange (AMTC).

Datafill example

The following example shows sample datafill for table TRKGRP type CISANI.

MAP display example for table TRKGRP type CISANI

```
GRPKEY            GRPINFO
_____________________________________________________________

ICMFPP2BA         CISANI 0 ELOD NCRT Y N NONE
 IC N UNIV PX MFPP MFPP2 6 AMTC23
ICMFPP1BA         CISANI 0 ELOD NCRT Y N NONE
 IC N UNIV PX MFPP MFPP 6 AMTCKE
ICUIDPANI         CISANI 5 NPDGP NCRT N N NONE
 IC N NALT NPRT NSCR 111 LCL UIDPTRK 5 ARM20
ICARM20BA         CISANI 5 NPDGP NCRT N N NONE
 IC Y NETATTR 4 UIDPTRK 5 ARM20
```

Table history

BCS36

Group type CISANI was introduced for table TRKGRP.

Directory Assistance Charging Trunk Group Type

In a DMS end office, outgoing trunk group type DA connects to a directory assistance charging system.

To ensure that automatic number identification (ANI) is outpulsed, set the type of call to operator assisted (OA) in the standard pretranslator for directory assistance (411).

The ANI spill consists of the identification (ID) digit plus the billing number of the calling directory number.

The hold type for this trunk group type is no hold, which means that the connection is taken down if either the originator or the terminator goes on hook.

Datafill

The following table lists the datafill for table TRKGRP type DA.

Field descriptions (Sheet 1 of 3)

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 common language location identifier (CLLI) code assigned to the trunk group in table CLLI.
GRPINFO		see subfields	*Variable group data* This field consists of subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, TRAFCLS and AUDRING. Refer to section “General field information" in table TRKGRP for information on an alternate structure for this field that results from the datafill of table CUSTFLDS.
	GRPTYP	DA	*Group type* Enter DA to specify the trunk group type for directory assistance charging trunks.

TRKGRP type DA (continued)

Field descriptions (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	TRAFSNO	numeric (0 to 127)	*Traffic separation number* Enter the incoming and outgoing traffic separation number assigned to the trunk group. If a traffic separation number is not required, enter 0 (zero). For switches with software package NTX085AA (Traffic Separation Peg Count), enter a value from 1 to the value of office parameter TFAN_OUT_MAX_NUMBER in table OFCENG. For switches without software package NTX085AA, enter a value from 1 to 15. Incoming and outgoing traffic separation numbers 1 to 9 should be reserved for generic traffic separation numbers. For more information, refer to table TFANINT.
	PADGRP	alphanumeric (1 to 5 characters)	*Pad group* Enter the name of the pad group assigned to the trunk group in table PADDATA. For more information, refer to table PADDATA.
	NCCLS	NCBN, NCID, NCIM, NCIT, NCLT, NCOF, NCON, NCOT, NCRT, NCTC, or NOSC	*Operational measurements no-circuit class* Enter the operational measurements (OM) no-circuit class (NCCLS) to indicate which OM register is incremented if treatment GNCT (generalized no circuit) occurs. The initial value for this trunk group type is NCRT (no circuit). For more information, refer to table TRKGRP and the *Operational Measurements Reference Manual.*

Field descriptions (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	TRAFCLS	alphabetic (2 characters)	*Traffic usage class* Enter the traffic usage class assigned to the trunk group. For more information, refer to the general information section of table TRKGRP.
	AUDRING	Y or N	*Audible ring* Enter Y (yes) if the the switch is to return audible ringing to the originator. Otherwise, enter N (no).

Datafill example

The following example shows sample datafill for table TRKGRP type DA.

MAP display example for table TRKGRP type DA

```
GRPKEY              GRPINFO
_____________________________________________________

HULLPQMC61BO        DA 14 ELO NCRT DA Y
```

TRKGRP type DS0

Digital Signal Level 0

Trunk group type DS0 provides a service switching point (SSP) office with Common Channel Signaling 7 (CCS7) link access to a signaling transfer point (STP) node. In addition, the DS-0 links that interface to these nodes can respond to network-initiated maintenance action.

Trunk group type DS0 is used if a digital trunk controller (DTC) has DS-0 links. A DS-0 link consists of a single trunk and is not used for any call processing application.

Datafill

The following table lists the datafill for table TRKGRP type DS0.

Field descriptions (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 common language location identifier (CLLI) code assigned to the trunk group in table CLLI.
GRPINFO		see subfields	*Variable group data* This field consists of subfields GRPTYP, TRAFSNO, PADGRP, and NCCLS.Refer to section “General field information" in table TRKGRP for information on an alternate structure for this field that results from the datafill of table CUSTFLDS.
	GRPTYP	DS0	*Group type* Enter DS0 to specify the group type used for DS-0 links.

TRKGRP type DS0 (continued)

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	TRAFSNO	numeric (0 to 127)	Enter the incoming and outgoing traffic separation number assigned to the trunk group. If a traffic separation number is not required, enter 0 (zero). For switches with software package NTX085AA (Traffic Separation Peg Count), enter a value from 1 to the value of office parameter TFAN_OUT_MAX_NUMBER in table OFCENG. For switches without software package NTX085AA, enter a value from 1 to 15. Incoming and outgoing traffic separation numbers 1 to 9 should be reserved for generic traffic separation numbers. For more information, refer to table TFANINT.
	PADGRP	alphanumeric (1 to 5 characters)	*Pad group* Enter the name of the pad group assigned to the trunk group in table PADDATA.For more information, refer to table PADDATA.
	NCCLS	NCRT	*Operational measurements no-circuit class* This field is not required for incoming trunk groups. Enter NCRT (no circuit). For more information, refer to table TRKGRP and the *Operational Measurements Reference Manual*.

TRKGRP type DS0 (end)

Datafill example

The following example shows sample datafill for table TRKGRP type DS0.

MAP display example for table TRKGRP type DS0

```
GRPKEY          GRPINFO
_____________________________________________________________

DS0TLINK        DS0 0 NPDGP NCRT
```

TRKGRP type E911

Enhanced 911 Emergency Service Trunk Group Type

Trunk group type E911 (enhanced 911 emergency service) is used for dedicated 911 trunks that are incoming into a tandem office.

E911 type trunks support both multifrequency (MF) and dial-pulse (DP) signaling formats.

If office parameter E911_PSAPS_USING_1_INFO_DIGIT in table OFCSTD is set to Y (yes), datafill table E911NPD prior to datafilling field NPA in table TRKGRP for group type E911.

An emergency service number (ESN) datafilled in the E911 trunk group data must also be datafilled in table E911ESN.

Ensure that a default ESN for table TRKGRP and group type E911 is datafilled in table E911ESN. Otherwise, calls on this trunk group cannot be routed and are sent to vacant code treatment.

The maximum number of trunk subgroups that can be assigned is 4096.

Datafill

The following table lists the datafill for table TRKGRP type E911.

Field descriptions

Field	Subfield	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 (CLLI). Enter the CLLI code assigned to the trunk group in table CLLI.
GRPINFO		see subfields	Variable group data. This field consists of subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, SNPA, ECPHTIME, ORIGHOLD, SDATA, ANISEIZ, ANIPDIAL, ANIREQSG, ESCO, ESN, EXTSIG, and PRTNM. Refer to section “General field information” in table TRKGRP for information concerning an alternate structure for this field that results from the datafill of table CUSTFLDS.
	GRPTYP	E911	Group type. Enter E911 to specify the group type for enhanced 911 emergency service.

Field descriptions

Field	Subfield	Entry	Explanation and action
	TRAFSNO	numeric (0 to 127)	Traffic separation number. Enter the incoming and outgoing traffic separation number assigned to the trunk group. If a traffic separation number is not required, enter 0 (zero). For switches with software package NTX085AA (Traffic Separation Peg Count), enter a value from 1 to the value of office parameter TFAN_OUT_MAX_NUMBER in table OFCENG. For switches without software package NTX085AA, enter a value from 1 to 15. Incoming and outgoing traffic separation numbers 1 to 9 should be reserved for generic traffic separation numbers. For more information, refer to table TFANINT.
	PADGRP	alphanumeric (1 to 5 characters)	Pad group. Enter the name of the pad group assigned to the trunk group in table PADDATA. For more information, refer to table PADDATA.
	NCCLS	NCRT	Operational measurements no circuit class. This field is not required for incoming trunk groups. Enter NCRT (no circuit).
	PRTNM	Vector up to eight characters	Pretranslator name. To activate this option, enter the value in table STDPRTCT. Then enter the data for field PRTNM in table TRKGRP for the E911 MF trunk with that value. The default datafill for an E911 MF trunk is NPRT (nil pretranslator).
	SNPA	numeric (5 digits)	Serving numbering plan area. Enter the serving NPA of the E911 trunk group that has a numbering plan digit (NPD) datafilled in table E911NPD.
	ECPHTIME	numeric (0 to 255)	Enhanced called party hold (ECPH) time. This entry indicates the number of seconds ECPH is active. In NA013, ECPH time is available for intertoll (IT) ISDN user part (ISUP) trunks with the E911 option.
	ORIGHOLD	Y or N	Originator hold. Enter Y (yes) if the end office at which this trunk originated supports the operator hold function. Otherwise, enter N (no). In NA013, originator hold is available for IT ISUP trunks with the E911 option.

Field descriptions

Field	Subfield	Entry	Explanation and action
	SDATA	see subfield	Signaling data. This field consists of subfield SIGFMT and refinements.
	SIGFMT	AMR4 AMR5orBELL	Signaling format. Enter the format of the automatic number identification (ANI) information that is incoming on the trunk. If the format type is AMR4, enter AMR4 and datafill refinement NCATDIGS. If the format type is AMR5, enter AMR5 and datafill refinement NCATDIGS. If the format type is BELL, enter BELL and datafill refinement INFODIGS.
	NCATDIGS	numeric (2 or 3)	Number of category digits. Datafill this field if the value in field SIGMT is AMR4 or AMR5. Enter the number of category digits expected along with the ANI.
	INFODIGS	numeric (1 or 2)	Information digits. Datafill this field if the value in field SIGMT is BELL. Enter the number of information digits expected along with the ANI.
	ANISEIZ	numeric (2 to 30)	ANI seizure timing. Enter the time, in seconds, that the trunk waits for reception of the first ANI digit or signal after the ANI request signal.
	ANIPDIAL	numeric (2 to 30)	ANI partial dial timing. Enter the time, in seconds, that the trunk waits for reception of each ANI digit or signal after the first digit.
	ANIREQSG	REV or WK	ANI request signal. Enter REV to specify that a reversal signal is used to request ANI information. This entry value is used for multifrequency or dial pulse signaling. Enter WK to specify that a wink signal is used to request ANI information. This entry value is used for public safety answering point (PSAP) signaling.
	ESCO	numeric (000 to 9999) (4 digits)	Emergency service central office. Enter the number representing the end office at which the E911 trunk originated.

Field descriptions

Field	Subfield	Entry	Explanation and action
	ESN	numeric (000 to 15999)	Emergency service number. Enter the number associated with the emergency service zone (ESZ). This number is used to obtain the directory number (DN) of the primary PSAP to which the call is routed by default.
	EXTSIG	Y or N	Extended signaling. Enter Y to specify that the trunk uses the extended signaling protocol. Enter N to turn off this option.
	ACKWINK	Y or N	Acknowledgment wink. Enter Y to receive an ACKWINK on incoming wireless calls over MF trunks to the E911 tandem. The E911 tandem receives the ACKWINK after receiving digits. The default setting is N. To change the ACKWINK field to Y, set the EXTSIG field to Y.
	OFBSR	Y or N	Off-Board Selective Routing database. Enter Y if facility uses the OFBSR for translations and routing of both MF and ISUP E911 trunks.

Datafill example

The following example shows sample datafill for table TRKGRP type E911.

MAP display example for table TRKGRP type E911

```
GRPKEY                                                          GRPINFO
_____________________________________________________________________

E911WRLS    E911 20 ELO NCRT NPRT 613 Y 123 Y BELL 2 10 10 REV 0849 321 Y
            $
E911ICMF    E911 20 ELO NCRT P621 613 Y 0 Y BELL 1 10 10 REV 0692 111
            N N $
E911ICNG    E911 0  ELO NCRT P621 613 Y 123 Y AMR4 3 10 10 REV 0847 005 N
            $
```

The following examples show sample datafill for Table TRKGRP type E911, using the OFBSR subfield for an MF trunk.

MAP display example for table TRKGRP type E911 for MF trunk

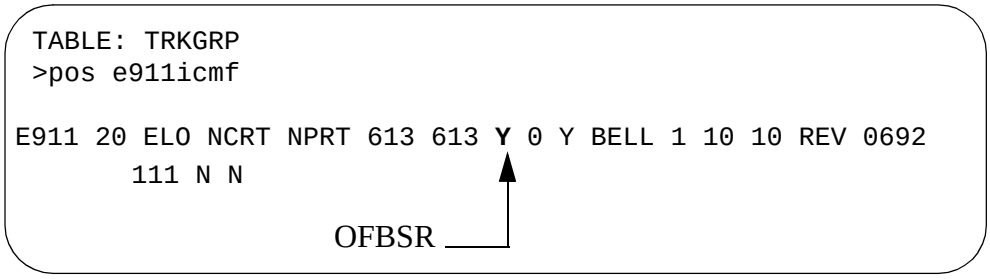


Table history

SN06 (DMS)

Feature A89007692 added option E911 ESCO expansion.

NA015

Added subfield OFBSR for E911 trunks.

NA013

Added subfields ECPHTIME and ORIGHOLD to IT ISUP trunk functionality.

Added subfield ACKWINK.

NA011

Added subfield PRTNM.

NA010

Added subfield EXTSIG.

NA007

Subfield ECPHTIME option activated.

NA006

Added field ECPHTIME (currently an inactive option).

BCS36

Field DIRECTSZ was removed and replaced by field ANIREQSG.

Outgoing to emergency service bureau trunk group type

When feature package NTX019AA (Civic Services) is present in a DMS-100 end office, outgoing trunk group type ES connects to an emergency service bureau (ESB) to provide emergency services (ES).

Depending on the ESB setup, the trunk group can have automatic number identification (ANI) spill, outpulsing of the called number, or both ANI spill and called number outpulsing.

Datafill

The following table lists the datafill for table TRKGRP type ES.

Field descriptions (Sheet 1 of 8)

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 common language location identifier (CLLI) code assigned to the trunk group in table CLLI.
GRPINFO		see subfields	*Variable group data* This field consists of subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, DIR, AUDRING, TRAFCLS, SELSEQ, FDISCTIM, ROHTT, DISCTON, INTTT, SWST, SWSTTN, RNGBK, CLI, ANI, ABNHLDTM, BILLDN, and SPBDN. Refer to section “General field information" in table TRKGRP for information on an alternate structure for this field that results from the datafill of table CUSTFLDS.
	GRPTYP	ES	*Trunk group type* Enter ES to specify the emergency service trunk group type.

TRKGRP type ES (continued)

Field descriptions (Sheet 2 of 8)

Field	Subfield or refinement	Entry	Explanation and action
	TRAFSNO	numeric(0 to 127)	*Traffic separation number* Enter the incoming and outgoing traffic separation number assigned to the trunk group. If a traffic separation number is not required, enter 0 (zero). For switches with software package NTX085AA (Traffic Separation Peg Count), enter a value from 1 to the value of office parameter TFAN_OUT_MAX_NUMBER in table OFCENG. For switches without software package NTX085AA, enter a value from 1 to 15. Incoming and outgoing traffic separation numbers 1 to 9 should be reserved for generic traffic separation numbers. For more information, refer to table TFANINT.
	PADGRP	alphanumeric (1 to 5 characters)	*Pad group* Enter the name of the pad group assigned to the trunk group in table PADDATA. For more information, refer to table PADDATA.
	NCCLS	NCBN, NCID, NCIM, NCIT, NCLT, NCOF, NCON, NCOT, NCRT, NCTC, or NOSC	*No circuit class type*Enter the operational measurements (OM) no-circuit class (NCCLS) to indicate which OM register is incremented if treatment GNCT (generalized no circuit) occurs. The initial value for this trunk group type is NCRT (no circuit). For more information, refer to table TRKGRP and the *Operational Measurements Reference Manual*.

TRKGRP type ES (continued)

Field descriptions (Sheet 3 of 8)

Field	Subfield or refinement	Entry	Explanation and action
	DIR	OG	*Direction* Enter OG to specify that the trunk group direction is outgoing. If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y, all trunks in the group must be busy before the value of this field can be changed by data modification order (DMO).
	AUDRING	Y or N	*Audible ringing* Enter Y if the switch is to return audible ring to the originator. Otherwise, enter N.
	TRAFCLS	alphabetic (2-9 characters)	*Traffic class* Enter the traffic usage class assigned to the trunk group. For more information, refer to table TRKGRP.

TRKGRP type ES (continued)

Field descriptions (Sheet 4 of 8)

Field	Subfield or refinement	Entry	Explanation and action
	SELSEQ	MIDLLIDLCWCTH CCWCTH ASEQorDSEQ	*Select sequence* If the traffic direction of the trunk group is outgoing (OG) and feature package NTX244AB (Enhanced Sequential Trunk Hunting) is present, base the selection order on the order of the trunks in table TRKMEM, and enter: • CWCTH or CCWCTH for clockwise or counterclockwise circular trunk hunting from the most recently released trunk in the trunk group or • ASEQ or DSEQ for ascending or descending sequential selection If the traffic direction of the trunk group is outgoing (OG) and sequential selection does not apply, enter MIDL. ***Note 1:*** For additional information on field SELSEQ, refer to table TRKGRP. ***Note 2:*** The selection sequence for an existing trunk group can be changed from ASEQ to DSEQ, or from DSEQ to ASEQ, if all the members are made installation busy (INB) or unequipped (UNEQ). The selection method for an existing trunk group cannot be changed. To change the selection method for an existing trunk group from ASEQ or DSEQ to CWCTH or CCWCTH, or to MIDL or LIDL, define a new trunk group, as follows: Create a new trunk group with the required trunk selection method, delete the individual trunks from the old trunk group, and add the trunks to the new trunk group.
	FDISCTIM	numeric (0 to 255)	*Forced disconnect time type* Enter the on-hook duration time, in 160-ms intervals, that must elapse prior to a disconnect being declared.

TRKGRP type ES (continued)

Field descriptions (Sheet 5 of 8)

Field	Subfield or refinement	Entry	Explanation and action
	ROHTT	numeric (1 to 1000)	*Rering off-hook tone time type* Enter a numeric value to specify the time duration, in 10-ms intervals, that rering off-hook (ROH) tone is given. If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y, all trunks in the group must be busy before the value of this field can be changed by data modification order (DMO).
	DISCTON	HI or RO	*Disconnect tone type* Enter HI for high, or RO for reorder, to specify the type of tone that is sent to the emergency service bureau when the originator disconnects.
	INTTT	numeric (1 to 1000)	*Integrity tone time type* Enter a numeric value to specify the time duration, in 1 s intervals, that integrity tone (disconnect tone) is provided before a fault is declared. If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y, all trunks in the group must be busy before the value of this field can be changed by data modification order (DMO).
	SWST	AC DC orADC	*Switchhook status type* Enter the type of switchhook signal. Selecting audible digital control (ADC) signal provides the tones capability that is associated with AC signaling, and the disconnect functionality that is associated with DC signaling.

TRKGRP type ES (continued)

Field descriptions (Sheet 6 of 8)

Field	Subfield or refinement	Entry	Explanation and action
			Note: The ADC feature does not function if ES trunks are provisioned on a remote cluster controller (RCC) or a remote switching center (RSC) that connects to a 911 emergency service bureau serviced by a private branch exchange (PBX) switch. If value ADC is datafilled, use E&M signaling type trunk interface cards for the ES trunks. Also use E&M signaling type transmission equipment on the PBX for the 911 service bureau. Use E&M signaling handling equipment for ES trunks located on digital carrier modules (DCM), digital test sequences (DTC), or line trunk controllers (LTC).
	SWSTTN	LO or BY	*Switchhook status tone* Enter LO for tone type low, or BY for tone type busy, to specify the tone that is sent to the emergency service bureau if the originator disconnects.
	RNGBK	Y or N	*Ringback signal* Enter Y if ringback signal is required. Otherwise, enter N.
	CLI	Y or N	*Calling line identification* Enter Y if calling line identification is required. Otherwise enter N.

TRKGRP type ES (continued)

Field descriptions (Sheet 7 of 8)

Field	Subfield or refinement	Entry	Explanation and action
	ANI	ANISPILL, OUTPULSE or NOANI	*Automatic number identification type* This field specifies the ANI type. Enter a value for this field as follows: • If the translated dialed digits (for example, 911) followed by the ANI digits (the originator's number) are to be outpulsed, enter ANISPILL. • If only ANI digits are to be outpulsed, enter OUTPULSE. • If only the translated dialed digits are to be outpulsed, enter NOANI. ***Note:*** For ANI to be outpulsed correctly, the type of call (field TYPCALL) must be operator assisted (OA) or direct dial (DD), except for calls originated by Meridian Digital Centrex (MDC) lines (for example, line class codes of IBN or PSET) that need a field TYPCALL value of OA. The call type is determined by the call originator (subscriber or incoming trunk group type) and can be redefined during digit translations. If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y, all trunks in the group must be busy before the value of this field can be changed by data modification order (DMO).

TRKGRP type ES (continued)

Field descriptions (Sheet 8 of 8)

Field	Subfield or refinement	Entry	Explanation and action
	ABNHLDTM	0 to 15 s	*Abandon Hold Time* This field determines the amount of time after a 911 caller's line is disconnected abruptly, either intentionally or intentionally, that the ES Trunk ANI Spill On Call Abandon feature (AN0349) suspends supervision on the line, delays in order to allow the ANI to be completely outpulsed to the Public Safety Answering Point (PSAP), and then returns line supervision back to normal. To turn on this feature, enter a value greater than zero. The recommended range of this parameter is 5 to 10. To turn off this feature, enter 0 (zero). The absolute range is 0 to 15. The default is 0 seconds (or 5 when patch RDG64 was active on the old load). These defaults are decided during IPL.
	BILLDN	Y or N	*Billing directory number* Enter Y to spill the PRI trunk group'sBILLDN over the ES trunk. Otherwise, enter N.
	SPBDN	Y or N	*Special billing directory number* Enter Y to spill the Calling DN'sSPBDN over the ES trunk. Otherwise, enter N.

Datafill example

The following example shows sample datafill for table TRKGRP type ES.

MAP display example for table TRKGRP type ES

```
GRPKEY   GRPINFO
_____________________________________________________________________
EMGY   ES 0 ELO NCRT OG N NIL MIDL 63 1000 HI 60 DC LO Y Y ANISPILL 5
       Y Y
```

Supplementary information

When a T1 (off of a DCM) is terminated on a two-wire circuit, tones are audible. While outpulsing or during an ANI spill, the DCM is incapable of disabling the return speech path.

TRKGRP type GER2W

Two-way 1TR7 ISUP Trunk Group Type

Trunk group type GER2W is required for the German Intelligent Network field trial in order to handle the requirements of 1TR7 ISDN user part (ISUP) signaling when the direction of the trunk group is two-way.

Table TRKGRP defines the data associated with each trunk group interface. The GER2W refinements of type GRPTYP in table TRKGRP contain service and translation related data for two-way German 1TR7 ISUP trunks.

Datafill sequence and implications

Table PXHEAD must be datafilled before table TRKGRP is datafilled for group type GER2W.

Refer to the overview section of table TRKGRP for additional datafill sequence information.

Datafill

The following table lists the datafill for table TRKGRP type GER2W.

Field descriptions (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
GRPKEY		see subfield	*Group key* This field consists of subfield CLLI.
	GRPINFO	see subfields	*Variable group data* This field consists of subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, and refinements PRTNM, PFXDIGS, and SELSEQ.
GRPTYP		GER2W	*Group type* Enter GER2W. This is the trunk group type for two-way 1TR7 trunks.

TRKGRP type GER2W (continued)

Field descriptions (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	TRAFSNO	0 to 127	*Traffic separation number* Enter the outgoing traffic separation number assigned to the trunk group. If a traffic separation number is not required, enter 0 (zero). If the switching unit has software package NTX085AA (Traffic Separation Peg Count), enter a number between 1 and the value of office parameter TFAN_OUT_MAX_NUMBER in table OFCENG. For switching units without package NTX085AA, enter 1 to 15. Incoming and outgoing traffic separation numbers 1 to 9 should be reserved for generic traffic separation numbers. Refer to table TFANINT for additional information.
	PADGRP	alphanumeric	*Pad group* Enter the name of the pad group assigned to the trunk group in table PADDATA. Refer to table PADDATA for additional information.
	NCCLS	NCBN NCID NCIM NCIT NCLT NCOF NCON NCOT NCRT NCTC or NOSC	*Operational measurement no-circuit class* Enter the operational measurement no-circuit class to indicate which OM register requires incrementing when treatment GNCT occurs. Refer to table TRKGRP and the *Operational Measurements Reference Manual*, for additional information.
	PRTNM	alphanumeric (1 to 8 characters) or NIL	*Standard pretranslator table name* The PX translation system, which consists of tables PXHEAD, PXCODE, and PXRTE, is used for ITR7 trunks. Enter a table name to specify the entry point into this pretranslation system. Enter NIL if the trunk is not usable for call processing.

TRKGRP type GER2W (end)

Field descriptions (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	PFXDIGS	numeric (1 to 4 digits)	*Digits to prefix* Enter any additional digits that are to be prefixed to the received digits.
	SELSEQ	LIDL or MIDL	*Select sequence* This field specifies the sequence in which trunks are selected for call processing. Enter LIDL to specify selection of the least idle trunk. Enter MIDL to specify selection of the most idle trunk. On two-way trunks, use MIDL if the far end has LIDL and use LIDL if the far end has MIDL. Any entry outside the range indicated for this field is invalid.

Datafill example

The following example shows sample datafill for table TRKGRP type GER2W.

MAP display example for table TRKGRP type GER2W

```
GRPKEY                    GRPINFO
_____________________________________________________

GIS2W                   GER2W 0 STDTK NCRT P58 N MIDL
```

TRKGRP type GERIC

Incoming 1TR7 ISUP Trunk Group Type

Trunk group type GERIC is required for the German Intelligent Network field trial in order to handle the requirements of 1TR7 ISDN user part (ISUP) signaling when the direction of the trunk group is incoming.

Table TRKGRP defines the data associated with each trunk group interface. The GERIC refinements of type GRPTYP in table TRKGRP contain service and translation related data for incoming German 1TR7 ISUP trunks.

Datafill sequence and implications

Table PXHEAD must be datafilled before table TRKGRP is datafilled for group type GERIC.

Refer to the overview section of table TRKGRP for additional datafill sequence information.

Datafill

The following table lists the datafill for table TRKGRP type GERIC.

Field descriptions (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)	*CLLI* Enter the common language location identifier (CLLI) code assigned to the trunk group in table CLLI.
GRPINFO		see subfields	*Variable group data* This field consists of subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, and refinements PRTNM and PFXDIGS.
	GRPTYP	GERIC	*Group type* Enter GERIC. This is the trunk group type for incoming 1TR7 trunks.

TRKGRP type GERIC (continued)

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	TRAFSNO	0 to 127	*Traffic separation number* Enter the traffic separation number assigned to the trunk group. If a traffic separation number is not required, enter 0 (zero). If the switching unit has software package NTX085AA (Traffic Separation Peg Count), enter a number between 1 and the value of office parameter TFAN_OUT_MAX_NUMBER in table OFCENG. For switching units without package NTX085AA, enter 1 to 15. Incoming and outgoing traffic separation numbers 1 to 9 should be reserved for generic traffic separation numbers. Refer to table TFANINT for additional information.
	PADGRP	alphanumeric	*Pad group* Enter the name of the pad group assigned to the trunk group in table PADDATA. Refer to table PADDATA for additional information.
	NCCLS	NCBN NCID NCIM NCIT NCLT NCOF NCON NCOT NCRT NCTC or NOSC	*Operational measurement no-circuit class* Enter the operational measurement no-circuit class to indicate which OM register requires incrementing when treatment GNCT occurs. Refer to table TRKGRP and the *Operational Measurements Reference Manual*, for additional information.
	PRTNM	alphanumeric (1 to 8 characters) or NIL	*Standard pretranslator table name* The PX translation system, which consists of tables PXHEAD, PXCODE, and PXRTE, is used for ITR7 trunks. Enter a table name to specify the entry point into this pretranslation system. Enter NIL if the trunk is not usable for call processing.
	PFXDIGS	numeric (1 to 4 digits) or N	*Digits to prefix* Enter any additional digits to be prefixed to the received digits.

TRKGRP type GERIC (end)

Datafill example

The following example shows sample datafill for table TRKGRP type GERIC.

MAP display example for table TRKGRP type GERIC

```
GRPKEY          GRPINFO
_____________________________________________________

GISIC           GERIC 0 STDTK NCRT P58 N
```

TRKGRP type GEROG

Outgoing 1TR7 ISUP Trunk Group Type

Trunk group type GEROG is required for the German Intelligent Network field trial in order to handle the requirements of 1TR7 ISDN user part (ISUP) signaling when the direction of the trunk group is outgoing.

Table TRKGRP defines the data associated with each trunk group interface. The GEROG refinements of type GRPTYP in table TRKGRP contain service and translation related data for outgoing German 1TR7 ISUP trunks.

Datafill

The following table lists the datafill for table TRKGRP type GEROG.

Field descriptions (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)	*CLLI* Enter the common language location identifier (CLLI) code assigned to the trunk group in table CLLI.
GRPINFO		see subfields	*Variable group data* This field consists of subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, and refinement SELSEQ.
	GRPTYP	GEROG	*Group type* Enter GEROG. This is the trunk group type for outgoing 1TR7 trunks.

TRKGRP type GEROG (continued)

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	TRAFSNO	0 to 127	*Traffic separation number* Enter the outgoing traffic separation number assigned to the trunk group. If a traffic separation number is not required, enter 0 (zero). If the switching unit has software package NTX085AA (Traffic Separation Peg Count), enter a number between 1 and the value of parameter TFAN_OUT_MAX_NUMBER in table OFCENG. For switching units without package NTX085AA, enter 1 to 15. Incoming and outgoing traffic separation numbers 1 to 9 should be reserved for generic traffic separation numbers. Refer to table TFANINT for additional information.
	PADGRP	alphanumeric	*Pad group* Enter the name of the pad group assigned to the trunk group in table PADDATA. Refer to table PADDATA for additional information.
	NCCLS	NCBN NCID NCIM NCIT NCLT NCOF NCON NCOT NCRT NCTC or NOSC	*Operational measurement no-circuit class* Enter the operational measurement no-circuit class to indicate which OM register requires incrementing when treatment GNCT occurs. Refer to table TRKGRP and the *Operational Measurements Reference Manual* for additional information.
	SELSEQ	LIDL or MIDL	*Select sequence* This field specifies the sequence in which trunks are selected for call processing. Enter LIDL to specify selection of the least idle trunk. Enter MIDL to specify selection of the most idle trunk. Any entry outside the range indicated for this field is invalid.

TRKGRP type GEROG (end)

Datafill example

The following example shows sample datafill for table TRKGRP type GEROG.

MAP display example for table TRKGRP type GEROG

```
GRPKEY          GRPINFO
_____________________________________________________________

GISOG           GEROG 0 STDTK NCRT MIDL
```

Gateway Trunk Group Type

This is a description of formats in table TRKGRP for the following gateway trunk groups:

- gateway R1 and R1-no.5 hybrid
- gateway R2 multifrequency compelled (MFC)
- gateway CCITT no.5
- gateway CCITT no.6
- gateway CCITT no.7

The switching unit dependent data required for each of the trunk groups described in this section is listed below:

- the common language location identifier (CLLI) name assigned to the trunk group in table CLLI
- the trunk group type
- the traffic separation number assigned to the trunk group
- the name of the pad group assigned to the trunk group

  Note: Field PADGRP contains the name of the pad group in table PADDATA that lists the value of the pad circuits that can be switched into the network if one of the members of the group is involved in a call. Different values for the pad circuits can be specified if the circuit connects to an agent with a different pad group. Network pad switching is only applicable if the circuit is connected to a new network.

- the no-circuit class assigned to the trunk group

  Note: If the trunk group is the last route in a route list and a line or trunk encounters an all-trunks-busy condition in this list, the no-circuit class NXXX is incremented (OFZ2 NXXX), the originating line or trunk is routed to generalized no-circuit treatment (GNCT) in the appropriate table, and treatment GNCT is incremented. See table TRKGRP for the values of the no-circuit class.

- the trunk group direction (incoming, outgoing, or two-way)
- the true country code of the originating country on an incoming or two-way trunk group
- whether digit manipulation (specified in table GWDIGMAN) must be done before outpulsing

TRKGRP type GW (continued)

- for incoming and two-way trunks, whether service screening by destination is done or not

  Note: This is available on the international integrated services switching unit (ISSU).

- for incoming and two-way trunks, the new value to which the common calling party category (CCPC) must be updated

  Note: The CCPC can be used to determine the routing of the call.

- for incoming and two-way trunks, whether call progress tones are applied to incoming trunks of group type GW on the DMS-300 for Australia

  Note: Incoming calls to the DMS-300 from Australian telephone user part (ATUP) or T3MFC trunks check field PROGTONE to determine whether insertion of the call progress tone is required following call setup and prior to answer. This audible comfort tone provides the subscriber with an indication that the call is proceeding normally prior to receiving audible ringback tone.

- the bearer capability name for trunks that do not carry this bearer capability information in their signaling system
- whether a received ISDN user part (ISUP) preference indicator is to be used
- connected office information
- NETINFO information
- the path of entry symbol name for the trunk group
- whether the trunk group is long haul or not
- the select sequence assigned to the trunk group
- the class of service screening assigned to the trunk group
- whether the discrimination digit is received or not
- the international pretranslators assigned to the trunk group
- the country code translator assigned to the trunk group
- the call detail recorder class assigned to the trunk group
- the connecting office code assigned to the trunk group
- the incoming trunk class assigned to the trunk group

- the traffic class assigned to the trunk group

  Note: The entry in field TRAFCLS determines whether the DMS must request automatic number identification (ANI) information from an incoming CCITT Register Signaling System No.2 (R2) trunk.

- whether the trunk group is intergateway or not

Data modification orders

If office parameter TRK_OOS_CHK_ON in table OFCENG is set to Y, all trunks in the group must be busied prior to changing the value of fields through a data modification order (DMO).

Traffic class

Field TRAFCLS of the trunk group data can take one of the two following values:

CAMA This value indicates that the incoming trunk on the DMS-300 collects ANI information from the previous switching unit.

NONE This value indicates that a trunk has no specific type of traffic flowing over it. Use the value NONE if the traffic class is not known or if the assignment of a traffic class is not applicable.

Gateway R1 and R1-no.5 hybrid trunk groups

The gateway R1 and R1-no.5 hybrid trunk groups are associated with a specific gateway trunk group having R1 or R1-no.5 hybrid signaling capabilities. These trunk groups originate and terminate on the North American national switching network.

An incoming call that does not access a pretranslator (fields KP1PRT and KP2PRT with value NPRT) or for which the received digits are not found in the pretranslator table, routes as follows:

- If field CCTRNSL has a value of NCTR (no country code translator), the call routes to table OVNTRNSL with a country code specified by office parameter NATIONAL_COUNTRY_CODE in table OFCENG.
- If field CCTRNSL has a value that is not equal to NCTR, the call routes to table CCTRNSL.

Gateway R2 multifrequency compelled (MFC) trunk groups

The gateway R2 MFC trunk groups are associated with a specific gateway trunk group having R2 MFC signaling capabilities. These trunk groups generally originate and terminate on the international switching network.

TRKGRP type GW (continued)

An incoming call is routed as follows:

- If the first signal received is I_10, access the pretranslator specified in field KP1PRT. If field KP1PRT has a value of NPRT, or if the received digits are not in the pretranslator table specified, the call is national and routes to table OVNTRNSL with a country code specified by office parameter NATIONAL_COUNTRY_CODE in table OFCENG.
- If the first signal received is I_11, I_12, or I_14, access the pretranslator specified in field KP2PRT. If the field KP2PRT has a value of NPRT, or if the received digits are not in the pretranslator table specified, the call is international and routes to table CCTRNSL.
- If the first signal received is I_13, which indicates a test call, the pretranslator R2TS is accessed to determine the routing of this test call.

Gateway CCITT no.5 trunk groups

The gateway CCITT no.5 trunk groups are associated with a specific gateway trunk group having CCITT No.5 Signaling (N5) capabilities. These trunk groups generally originate and terminate on the international switching network.

An incoming call is routed as follows:

- If the call receives KP1 and the pretranslator table is not accessed (field KP1PRT has a value of NPRT) or if the table is accessed but the received digits are not in the pretranslator table, the call is national and routes to table OVNTRNSL with a country code specified by office parameter NATIONAL_COUNTRY_CODE in table OFCENG.
- If the call receives KP2 and the pretranslator table is not accessed (field KP2PRT has a value of NPRT) or if the table is accessed but the received digits are not in the pretranslator table, the call is international and routes to table CCTRNSL.

Gateway CCITT no.6 trunk groups

The gateway CCITT no.6 trunk groups are associated with a specific gateway trunk group having CCITT No.6 Signaling (N6) capabilities. These trunk groups generally originate and terminate on the international switching network.

An incoming call is routed as follows:

- If the trunk group type is CCITT no.6, datafill field KP1PRT with the name of the international pretranslator to access if the country code is not included in the initial address message (IAM). If the entry in field KP1PRT is NPRT, or if the received digits are not in the pretranslator table specified, the call is national and routes to table OVNTRNSL with a

country code specified by office parameter NATIONAL_COUNTRY_CODE in table OFCENG.

- If the trunk group type is CCITT no.6, datafill field KP2PRT with the name of the international pretranslator to access if the country code is included in the IAM. If the entry in field KP2PRT is NPRT, or if the received digits are not in the pretranslator table specified, the call is international and routes to table CCTRNSL.
- If the trunk group type is CCITT no.6, and a bit in N6 IAM indicates that this is a test call, the pretranslator N6TS is accessed to determine the routing of the test call.

Gateway CCITT no.7 trunk groups

The gateway CCITT no.7 trunk groups are associated with a specific gateway trunk group having CCITT No.7 Signaling (N7) capabilities. These trunk groups generally originate and terminate on the international switching network.

An incoming call is routed as follows:

- If the trunk group type is CCITT no.7, datafill field KP1PRT with the name of the international pretranslator to access if the nature of address indicator, included in the IAM, is other than international. If the entry in field KP1PRT is NPRT, or if the received digits are not in the pretranslator table specified, the call is assumed to be national and routes to table OVNTRNSL with a country code that is specified by office parameter NATIONAL_COUNTRY_CODE in table OFCENG.
- If the trunk group type is CCITT no.7, datafill field KP2PRT with the name of the international pretranslator to access if the nature of address indicator, included in the IAM, is international. If the entry in field KP2PRT is NPRT, or if the received digits are not in the pretranslator table specified, the call is international and routes to table CCTRNSL.
- If the trunk group type is CCITT no.7 and a bit in the N7 IAM indicates that this is a test call, the pretranslator N7TS is accessed to determine the routing of this test call.

TRKGRP type GW (continued)

Datafill

The following table lists the datafill for table TRKGRP type GW.

Field descriptions (Sheet 1 of 3)

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 common language location identifier (CLLI) code assigned to the trunk group in table CLLI.
GRPINFO		see subfields	*Variable group data* This field consists of subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, GWINFO, LONGHAUL, SELSEQ, SCRNCL, DISDRCVD, KP1PRT, KP2PRT, CCTRNSL, CDRCLASS, COFFCD, INTRKCLS, TRAFCLS, CROUTING, ARN, DCD, FWDXMT, and OPTIONS. Refer to section “General field information" in table TRKGRP for information concerning an alternate structure for this field that results from the datafill of table CUSTFLDS.
	GRPTYP	GW	*Trunk group type* Enter GW for the gateway trunk group type.

TRKGRP type GW (continued)

Field descriptions (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	TRAFSNO	numeric (0 to 127)	*Traffic separation number* Enter a numeric value to specify the incoming or outgoing traffic separation number assigned to the trunk group. If no traffic separation number is required, enter 0 (zero). If the switching unit has software package NTX085AA (Traffic Separation Peg Count), the range of values for the incoming and outgoing traffic separation numbers is dependent upon the value of office parameters TFAN_IN_MAX_NUMBER and TFAN_OUT_MAX_NUMBER in table OFCENG. For switching units without software package NTX085AA, the range of values for traffic separation numbers is 0 to 15. Incoming and outgoing traffic separation numbers 1 to 9 should be reserved for generic traffic separation numbers. See table TFANINT for the assignment of incoming to outgoing traffic separation numbers. With the traffic separation feature, a count of all calls by type of call can be accumulated between an originating source (incoming trunk or an originating line attribute) and a terminating destination (outgoing trunk, terminating line attribute, tone or announcement). Supported call types are direct dial (DD), operator assisted (OA), and no prefix (NP).
	PADGRP	alphanumeric (1 to 5 characters) or NPDGP	*Pad group* Enter the name of the pad group assigned to the trunk group in table PADDATA. If a pad group name is not required, enter NPDGP (no pad group). For more information, refer to table PADDATA.

TRKGRP type GW (continued)

Field descriptions (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	NCCLS	NCBN NCID NCIM NCIT NCLT NCOF NCON NCOT NCRT NCTC or NOSC	*Operational measurements no-circuit class* If the trunk direction is outgoing (OG) or two-way (2W), enter the operational measurements (OM) no-circuit class to indicate which OM register, in OM groups OFZ2 and SOTS, requires incrementing when generalized no-circuit treatment (GNCT) occurs. If the trunk direction is incoming (IC), this field is not required. Enter NCRT (no circuit). Refer to table TRKGRP and the *Operational Measurements Reference Manual* for additional information.
	GWINFO	see subfield	*Variable group data* This field consists of subfield DIR and refinements.
	DIR	ICOG or 2W	*Trunk direction* If the direction of traffic flow is incoming, enter IC and datafill refinements ITCC, SERVSCRN, CCPC, PROGTONE, BCNAME, ISUPREF, COFFINFO, NETINFO, and POEC. Then datafill the additional fields that apply for all trunk group directions. If the direction of traffic flow is two-way, enter OG and datafill refinements GWMAN, BCNAME, COFFINFO, and NETINFO. Then datafill the additional fields that apply for all trunk group directions. If the direction of traffic flow is outgoing, enter 2W and datafill refinements ITCC, GWMAN, SERVSCRN, CCPC, PROGTONE, BCNAME, ISUPREF, COFFINFO, NETINFO, and POEC. Then datafill the additional fields that apply for all trunk group directions.

DIR = IC

If the value in field DIR is IC, datafill refinements ITCC, SERVSCRN, CCPC, PROGTONE, BCNAME, ISUPREF, COFFINFO, NETINFO, and POEC as described below.

Field descriptions for conditional datafill (Sheet 1 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	ITCC	vector of up to 3 digits (0 to 9) or N	*True country code of originating country* Enter the true country code of the originating country. Datafill preceding zeros if they are required for outpulsing. The default value is 0 (zero).
	SERVSCRN	Y or N	*Services screening by destination* If call screening by destination is performed, enter Y (yes). Otherwise, enter N (no). See table SERVPROF for additional information on call screening by destination. This service is available on the international integrated services switching unit (ISSU).
	CCPC	numeric (0 to 15) or N	*Common calling party category* If the common calling party category (CCPC) requires changing, enter the required new value for CCPC. If the CCPC value does not require changing, enter N. An entry of N means that field CCPC in table TRKGRP is not used for routing.
	PROGTONE	Y or N	*Call progress tone* If call progress tones are provided to the subscriber, enter Y. Otherwise, enter N. Incoming calls to the DMS-300 from Australian telephone user part (ATUP) or T3MFC trunks check this field to determine whether the call progress tone requires insertion following call setup and prior to answer. The audible comfort tone, which occurs prior to the subscriber receiving audible ringback tone, indicates to the subscriber that the call is proceeding normally.

TRKGRP type GW (continued)

Field descriptions for conditional datafill (Sheet 2 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	BCNAME	SPEECH	*Bearer capability name* Enter SPEECH to specify bearer capability for an incoming trunk that does not carry bearer capability information in its signaling information.
	ISUPREF	Y or N	*ISUP preference* This field specifies whether a received ISDN user part (ISUP) preference indicator is to be taken into account for the routing of incoming ISUP calls on the trunk group. If the ISUP preference indicator is to be taken into account, enter Y. Otherwise, enter N.
	COFFINFO	see subfields	*Connected office information* This field consists of subfield COFFTYP and refinements.
	COFFTYP	INTL NATL or TIEROUTE	*Connected office type* Enter the type of switching office at the connecting end of the trunk. If the connecting end exchange is owned by the same administration as the gateway office and if special accounting procedures are required, enter TIEROUTE and datafill refinement IRI. For an international switching office connection, enter INTL and datafill refinement ARI. For a national switching office connection, enter NATL and datafill refinement ARI. The default value for this selector is INTL.

Field descriptions for conditional datafill (Sheet 3 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	IRI	Y or N	*Incoming route index* Datafill this field if the value in field COFFTYP is IRI. Enter Y if a call set up on an incoming trunk is expected to send an incoming route index with the call. Otherwise, enter N. A log is generated if an IRI is not sent if this field is set to Y. The default value is N.
	ARI	numeric (0 to 65535)	*Accounting route index* Datafill this field if the value in field COFFTYP is INTL or NATL. Enter the required accounting route index.
	NETINFO	see subfield	*Network information data area* This field consists of subfield NETINFO and refinements.
	NETINFO	Y or N	*Network information* This field specifies whether network information is present in the IAM. If network information is present, enter Y and datafill refinements CUSTGRP, NCOS, and NETXLA. Otherwise, enter N to specify that the network information is not present. For incoming trunks, this refinement signifies the presence of a NETINFO in the IAM. For outgoing trunks, this refinement specifies that a NETINFO is to be inserted in the outgoing NETINFO.
	CUSTGRP	alphanumeric (1 to 16 characters)	*Customer group name* Datafill this field if the value in field NETINFO is Y. Enter the name assigned to the customer group. This name must exist in table GWCUENG.

TRKGRP type GW (continued)

Field descriptions for conditional datafill (Sheet 4 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	NCOS	numeric (0 to 511)	*Network class of service number* Datafill this field if the value in field NETINFO is Y. Enter the network class of service (NCOS) number associated with trunk group.
	NETXLA	Y or N	*NETINFO translation indicator* Datafill this field if the value in field NETINFO is Y. Enter Y to specify that translations uses the NETINFO parameter to determine entries in tables GWNCOS and GWCUENG. Otherwise, enter N.
	POEC	alphanumeric (up to 16 characters)	*Path of entry characteristic* Enter a symbolic name to specify the path of entry screening and routing characteristic for calls that originate on the trunk group. This name must exist in field SYMBOL of table POECNM.

Dir = OG

If the value in field DIR is OG, datafill refinements GWMAN, BCNAME, COFFINFO, and NETINFO as described below.

Field descriptions for conditional datafill (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	GWMAN	Y or N	*Gateway digit manipulation* If digit manipulation (through table GWDIGMAN) is required, enter Y (yes). Otherwise, enter N (no). All outgoing trunk groups used on international service calls must have this refinement set to Y. Outgoing trunk groups to the DMS-250 that support facility codes on normal calls must have refinement GWMAN set to Y. The default value is N.
	BCNAME	SPEECH	*Bearer capability name* Enter SPEECH to specify bearer capability for an outgoing trunk that does not carry bearer capability information in its signaling information.
	COFFINFO	see subfield	*Connected office information* This field consists of subfield COFFTYP and refinement.
	COFFTYP	INTL NATL or TIEROUTE	*Connected office type* Enter the type of switching office at the connecting end of the trunk. If the connecting end exchange is owned by the same administration as the gateway office and if special accounting procedures are required, enter TIEROUTE and datafill refinement IRI. For an international switching office connection, enter INTL. For a national switching office connection, enter NATL. The default value is INTL.

TRKGRP type GW (continued)

Field descriptions for conditional datafill (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	IRI	Y or N	*Incoming route index* Datafill this field if the value in field COFFTYP is TIEROUTE. Enter Y if a call set up on an incoming trunk is expected to send an incoming route index with the call. Otherwise, enter N. An IRI is not sent and a log is generated if this refinement is set to Y. The default value is N.
	NETINFO	see subfield	*Network information data area* This field consists of subfield NETINFO and refinements.
	NETINFO	Y or N	*Network information* This field specifies whether network information is to be inserted into the outgoing network information. If network information is to be inserted, enter Y and datafill refinements CUSTGRP and NCOS. Otherwise, enter N. For incoming trunks, this refinement signifies the presence of a NETINFO in the IAM. For outgoing trunks, this refinement specifies that a NETINFO is to be inserted in the outgoing NETINFO.
	CUSTGRP	alphanumeric (1 to 16 characters)	*Customer group name* Datafill this field if the value in field NETINFO is Y. Enter the name assigned to the customer group. This name must exist in table GWCUENG.
	NCOS	numeric (0 to 511)	*Network class of service number* Datafill this field if the value in field NETINFO is Y. Enter the network class of service (NCOS) number associated with trunk group.

DIR = 2W

If the value in field DIR is 2W, datafill refinements ITCC, GWMAN, SERVSCRN, CCPC, PROGTONE, BCNAME, ISUPREF, COFFINFO, NETINFO, and POEC as described below.

Field descriptions for conditional datafill (Sheet 1 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	ITCC	vector of up to 3 digits (0 to 9) or N	*True country code of originating country* Enter the true country code of the originating country. Datafill preceding zeros if they are required for outpulsing. The default value is 0 (zero).
	GWMAN	Y or N	*Gateway digit manipulation* If digit manipulation (through table GWDIGMAN) is required, enter Y (yes). Otherwise, enter N (no). All two-way trunk groups used on international service calls (ISC) must have this refinement set to Y. Two-way trunk groups to the DMS-250 that support facility codes on normal calls must have refinement GWMAN set to Y. The default value is N.
	SERVSCRN	Y or N	*Services screening by destination* If call screening by destination is performed, enter Y. Otherwise, enter N. See table SERVPROF for additional information on call screening by destination. This service is available on the international integrated services switching unit (ISSU).
	CCPC	numeric (0 to 15) or N	*Common calling party category* If the common calling party category (CCPC) requires changing, enter the required new value for CCPC. If the CCPC value does not require changing, enter N. An entry of N means that refinement CCPC in table TRKGRP is not used for routing.

TRKGRP type GW (continued)

Field descriptions for conditional datafill (Sheet 2 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	PROGTONE	Y or N	*Call progress tone* If call progress tones are provided to the subscriber, enter Y. Incoming calls to the DMS-300 from Australian telephone user part (ATUP) or T3MFC trunks check this refinement to determine whether the call progress tone requires insertion following call setup and prior to answer. This audible comfort tone, which occurs prior to the subscriber receiving audible ringback tone, indicates to the subscriber that the call is proceeding normally.
	BCNAME	SPEECH	*Bearer capability name* Enter SPEECH to specify bearer capability for a two-way trunk that does not carry bearer capability information in its signaling information.
	ISUPREF	Y or N	*ISUP preference* This field specifies whether a received ISDN user part (ISUP) preference indicator is to be taken into account for the routing of incoming ISUP calls on the trunk group. If the ISUP preference indicator is to be taken into account, enter Y. Otherwise, enter N.
	COFFINFO	see subfield	*Connected office information* This field consists of subfield COFFTYP and refinements.

Field descriptions for conditional datafill (Sheet 3 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	COFFTYP	INTL NATL or TIEROUTE	*Connected office type* Enter the type of switching office at the connecting end of the trunk. If the connecting end exchange is owned by the same administration as the gateway office and if special accounting procedures are required, enter TIEROUTE and datafill refinement IRI. For an international switching office connection, enter INTL and datafill refinement ARI. For a national switching office connection, enter NATL and datafill refinement ARI. The default value for this selector is INTL.
	IRI	Y or N	*Incoming route index* Datafill this field if the value in field COFFTYP is IRI. Enter Y if a call set up on an incoming trunk is expected to send an incoming route index with the call. Otherwise, enter N. A log is generated if an IRI is not sent if this field is set to Y. The default value is N.
	ARI	numeric (0 to 65535)	*Accounting route index* Datafill this field if the value in field COFFTYP is INTL or NATL. Enter the required accounting route index.
	NETINFO	see subfield	*Network information data area* This field consists of subfield NETINFO and refinements.

TRKGRP type GW (continued)

Field descriptions for conditional datafill (Sheet 4 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	NETINFO	Y or N	*Network information* This field specifies whether network information is present in the IAM. If network information is present, enter Y and datafill refinements CUSTGRP, NCOS, and NETXLA. Otherwise, enter N to specify that the network information is not present. For incoming trunks, this field signifies the presence of a NETINFO in the IAM. For outgoing trunks, this field specifies that a NETINFO is to be inserted in the outgoing NETINFO.
	CUSTGRP	alphanumeric (1 to 16 characters)	*Customer group name* Datafill this field if the value in field NETINFO is Y. Enter the name assigned to the customer group. This name must exist in table GWCUENG.
	NCOS	numeric (0 to 511)	*Network class of service number* Datafill this field if the value in field NETINFO is Y. Enter the network class of service (NCOS) number associated with trunk group.
	NETXLA	Y or N	*NETINFO translation indicator* Datafill this field if the value in field NETINFO is Y. Enter Y to specify that translations uses the NETINFO parameter to determine entries in tables GWNCOS and GWCUENG. Otherwise, enter N.
	POEC	alphanumeric (up to 16 characters)	*Path of entry characteristic* Enter a symbolic name to specify the path of entry screening and routing characteristic for calls that originate on the trunk group. This name must exist in field SYMBOL of table POECNM.

All trunk groups

For all gateway trunk groups, datafill the following additional fields as described below.

TRKGRP type GW (continued)

Field descriptions for conditional datafill (Sheet 1 of 7)

Field	Subfield or refinement	Entry	Explanation and action
	LONGHAUL	Y or N	*Long haul* This field identifies whether the trunk group is classified as long haul for echo suppressor switching purposes. A group is usually considered long haul if the distant office is more than 2500 km away. If the trunk group is classified as long haul, enter Y. Otherwise, enter N.

Field descriptions for conditional datafill (Sheet 2 of 7)

Field	Subfield or refinement	Entry	Explanation and action
	SELSEQ	ASEQ CCWCTH CNTLEVN CNTLODD CWCTH DSEQ LIDL MIDL or blank	*Select sequence* If the trunk group is two-way and the far end is a link list switcher with a most idle select sequence, enter LIDL (least idle). If the far end is a link list switcher with a least idle select sequence, or the far end is not a link list switcher and sequential selection does not apply, enter MIDL (most idle). If the trunk group is two-way, the far end is not a link list switcher and feature package NTX244AB (Sequential Trunk Selection) is present, enter • CWCTH for clockwise or CCWCTH for counterclockwise circular trunk hunting from the most recently released trunk in the trunk group, based on the order of trunk members in table TRKMEM, where the far end switch is CCWCTH or CWCTH respectively • ASEQ or DSEQ for ascending or descending sequential selection, based on the order of trunk members in table TRKMEM, where the far end is DSEQ or ASEQ respectively If sequential selection does not apply, enter MIDL. If the trunk group is incoming, leave this field blank. If trunks with odd-numbered circuit identification codes (CIC) constitute the controlling trunk group in an office, enter CNTLODD (control odd). If trunks with even-numbered CICs constitute the controlling trunk group in an office, enter CNTLEVN (control even).

TRKGRP type GW (continued)

Field descriptions for conditional datafill (Sheet 3 of 7)

Field	Subfield or refinement	Entry	Explanation and action
			Both CNTLODD and CNTLEVN use MIDL as the selection algorithm for the controlling group of circuits, and LIDL for the non-controlling group of circuits. Refer to table TRKGRP for additional information on field SELSEQ. ***Note:*** A trunk group trunk selection method cannot be changed. If a change in the selection method is required, a new trunk group must be created with the required trunk selection method. The individual trunks with the old selection sequence must be deleted from the old trunk group and then added to the new trunk group. For an existing trunk group, the selection sequence may be changed to ASEQ from DSEQ or from DSEQ to ASEQ if all the trunk members are installation busy (INB) or unequipped (UNEQ). Refer to table TRKGRP for additional information concerning field SELSEQ.
	SCRNCL	alphanumeric (1 to 4 characters) or NSCR	*Class of service screening table* If screening by origination is required on incoming or two-way trunk groups, enter the name of the screening class assigned to the trunk group. If screening by origination is not required or the trunk group is outgoing, enter NSCR (no screening). In table DESTCTL, this field is used to route the call.

Field descriptions for conditional datafill (Sheet 4 of 7)

Field	Subfield or refinement	Entry	Explanation and action
	DISDRCVD	Y or N	*Discrimination digit received* If the trunk group type is R1, R1-no.5 hybrid, or CCITT no.5, and the discrimination (language) digit is received as a suffix to the country code, enter Y. If the discrimination (language) digit is not received, enter N. If the trunk group type is CCITT no.6, CCITT no.7, or gateway R2 MFC, enter Y to indicate that the calling party category indicator (CPCI) is present in the IAM.
	KP1PRT	alphanumeric (4 characters) or NPRT	*KP1 pretranslator* If the trunk group type is R1, R1-no.5 hybrid, or CCITT no.5, enter the name of the international pretranslator that must be accessed on receipt of a KP1 control signal. If the trunk type is R2 MFC, enter the name of the international pretranslator that must be accessed if the first signal received is I_10, a terminating call. If the trunk group type is CCITT no.6, enter the name of the international pretranslator that must be accessed if the country code is not included in the IAM. If the trunk group type is CCITT no.7, enter the name of the international pretranslator that must be accessed if the nature of address indicator, included in the IAM, is not international. If no pretranslator access is required, enter NPRT (no pretranslator).

TRKGRP type GW (continued)

Field descriptions for conditional datafill (Sheet 5 of 7)

Field	Subfield or refinement	Entry	Explanation and action
	KP2PRT	alphanumeric (4 characters) or NPRT	*KP2 pretranslator* If the trunk group type is R1, R1-no.5 hybrid, or CCITT no.5, enter the name of the international pretranslator that must be accessed on receipt of a KP2 control signal. If the trunk type is R2 MFC, enter the name of the international pretranslator that must be accessed if the first signal received is I_11, I_12, or I_14, a transit call. If the trunk group type is CCITT no.6, enter the name of the international pretranslator that must be accessed if the country is included in the IAM. If the trunk group type is CCITT no.7, enter the name of the international pretranslator that must be accessed if the nature of address indicator, included in the IAM, is international. If no pretranslator access is required, enter NPRT.
	CCTRNSL	alphanumeric (4 characters) or NCTR	*Country code translator* Enter a name defined by the operating company to represent the country code translator that requires association with the gateway trunk group. If no country code translator is required, enter NCTR.
	CDRCLASS	alphanumeric (4 characters)	*Call data recorder class* Enter a name defined by the operating company to represent a specific call data recorder index. See table CDRCLSNM for additional information.
	COFFCD	numeric (3 digits)	*Connecting office code* Enter the connecting office numbering plan area (NPA) code for overseas domestic trunks or the country code for international outgoing trunks.

Field descriptions for conditional datafill (Sheet 6 of 7)

Field	Subfield or refinement	Entry	Explanation and action
	INTRKCLS	numeric (0 to 15)	*Incoming trunk class* Enter one of the values specified in the "Definitions of incoming trunk groups" section. If the trunk group has no class, enter 15. Incoming trunk class is used for digit manipulation. If digit manipulation is specified in the route chosen, the digit manipulation shown in the route takes precedence over the incoming trunk class.
	TRAFCLS	CAMA or NONE	*Traffic class* Enter CAMA if the incoming trunk on the DMS-300 must collect automatic number identification (ANI) information from the previous switching unit. Enter NONE if the trunk has no specific type of traffic flowing over it. Use this traffic class as a default value if the traffic class is not known or if the assignment of a traffic class is not applicable. No ANI information is collected. ***Note:*** Only CCITT Register Signaling System No.2 (R2) trunks currently use this field to determine whether ANI must be collected from the previous switching unit. T3MFC is the R2 variant signaling system used in the Australian national network.
	CROUTING	Y or N	*Intergateway trunk* If the trunk group is intergateway (between gateway switches), enter Y. Otherwise, enter N. The default value is N. The value in this field is used for DMS-300 CCITT No.6 Signaling reroute control.

TRKGRP type GW (continued)

Field descriptions for conditional datafill (Sheet 7 of 7)

Field	Subfield or refinement	Entry	Explanation and action
	ARN	numeric (0 to 999)	*Accounting route number* For incoming, outgoing, and two-way gateway trunks, enter the accounting route index for the trunk. The default value is 0 (zero).
	DCD	Y or N	*Dialed category digit* If the incoming digit string contains a dialed category digit, enter Y. The default value is N.
	FWDXMT	STD or ANS	*Forward transmission connection type* This field indicates how the forward speech path is connected for calls on this trunk group. Enter STD if the forward speech path is connected in the standard manner (that is, after the address digits are transmitted). Enter ANS if the forward speech path is suppressed until the answer signal is received.
	OPTIONS	see subfield	*Options* This field consists of subfield OPTSEL and refinement.
	OPTSEL	TRI	*Option selector* For the transit routing information (TRI) option, enter TRI and datafill refinement TRI. If no options apply, leave this field blank.
	TRI	numeric (4 digits)	*Transit routing information* Datafill this field if the value in field OPTSEL is TRI. Enter a numeric value to specify the TRI value.

Datafill example

The following example shows sample datafill for table TRKGRP type GW.

This example consists of datafill for two gateway CCITT R1 trunk groups, two gateway CCITT no.5 trunk groups, and two gateway CCITT no.6 trunk groups.

MAP display example for table TRKGRP type GW

```
   GRPKEY           GRPINFO
_____________________________________________________________________________

   HAM03BER         GW 0 NPDGP NCRT OG N N N N SPEECH N NATL 2222 N
NIL Y MIDL NSCR N NPRT NPRT NCTR CC1D 809 15 NONE N 989 Y STD

   HAM04BER         GW 0 NPGDP NCRT IC 49 N N N N SPEECH N INTL 4444 N
NIL Y MIDL SC1C Y IP24 IP02 CC01 CC1D 809 15 NONE N 555 N STD

   ATH01GRC         GW 0 NPGDP NCRT 2W 30 N N N N SPEECH N INTL 6666 N
NIL Y MIDL SC3B Y IP25 IP08 CC01 ES2N 030 15 NONE N 111 N STD

   ATH03GRC         GW 0 NPGDP NCRT IC 30 N N N SPEECH N INTL 202 N
NIL Y MIDL SC3B Y IP25 IP08 CC01 ES1N 030 15 NONE N 888 Y STD

   SYD10AUS         GW 0 NPGDP NCRT 2W 61 N N N N SPEECH N INTL 044 N
NIL Y MIDL SC6B Y IP24 IP13 CC01 WS2N 061 15 NONE N 669 N STD

   SYD11AUS         GW 0 NPGDP NCRT OG N N N N SPEECH N TIEROUTE Y N
NIL Y MIDL NSCR N NPRT NPRT NCTR WS1N 061 15 NONE N 555 N STD
```

Table history

BCS36

Description of incoming trunk class 1 in “Supplementary information" section was corrected. Entry values CLTLEVEN and CNTLODD in field SELSEQ were documented.

Supplementary information

This section provides information on datafilling table TRKGRP (GW) for specific applications, and product descriptive information related to table TRKGRP (GW).

Definitions of incoming trunk groups

Definitions for incoming trunk group classes are provided below.

TRKGRP type GW (continued)

Incoming trunk class 0
This class is not used by CCITT no.6 or CCITT no.7 trunk groups.

Outgoing or transit calls
For standard and nonstandard routing on a direct route, the following sequence occurs:

1. KP1 is outpulsed.
2. The country code is not outpulsed.
3. Discrimination digit manipulation is performed.
4. There is no operator code conversion.
5. The remaining digits are outpulsed as received.

For standard and nonstandard routing on an alternate route, the following sequence occurs:

1. KP2 is outpulsed.
2. The true country code is outpulsed.
3. Discrimination digit manipulation is performed.
4. There is no operator code conversion.
5. The remaining digits are outpulsed as received.

Note: For nonstandard routing, no prefixing or deletion of digits is done even if specified in the route.

Terminating calls
This trunk class is not used for terminating calls.

Incoming trunk class 1
This class is not used by CCITT no.6 trunk groups. It is used on CCITT no.7 routes to prevent #11 or #12 expansion as defined in table OFCENG.

Incoming trunk class 1 is the same as incoming trunk class 15 except that operator code conversion is performed only if a pseudo country code is received and the call is not a transit call. Operator code conversion converts code 121 or 131 to code 11 and converts code 11 (followed by up to four digits) to code 12 (followed by up to four digits). If code 121 or 131 is followed by any digits or code 11 is followed by more than four digits, operator code conversion is not done.

Incoming trunk classes 2 to 14
These trunk classes default to incoming trunk class 15.

Incoming trunk class 15

Outgoing calls

For standard routing on a direct route, the following occurrences take place:

- For gateway R1 and R1-no.5 hybrid and gateway CCITT no.5 trunk groups, KP1 is outpulsed.
- For gateway R1 and R1-no.5 hybrid and gateway CCITT no.5 trunk groups, the country code is not outpulsed.
- For gateway CCITT no.6 trunk groups, “country code not included" is inserted into the IAM.
- For gateway CCITT no.7 trunk groups, the nature of address indicator is inserted into the IAM.
- For gateway R1 and R1-no.5 hybrid and gateway CCITT no.5 trunk groups, discrimination digit manipulation is performed.
- For gateway CCITT no.6 and CCITT no.7 trunk groups, common calling party category (CCPC) indicator manipulation is performed.
- For all gateway trunk groups, operator code conversion is not done.
- For all gateway trunk groups where replace international code is used, all digits specified in the overseas number table are replaced by the digits specified in field REPLCODE in table MMAX. In this case, operator code conversion must be done using field REPLCODE.
- For all gateway trunk groups, all remaining digits are outpulsed as received.

For standard routing on an alternate route, the following occurrences take place:

- For gateway R1 and R1-no.5 hybrid and gateway CCITT no.5 trunk groups, KP2 is outpulsed.
- For gateway R1 and R1-no.5 hybrid and gateway CCITT no.5 trunk groups, the true country code is outpulsed.
- For gateway CCITT no.6 trunk groups, “country code included" and the true country code are inserted into the IAM.
- For gateway CCITT no.7 trunk groups, the nature of address indicator is inserted into the IAM.
- For gateway R1 and R1-no.5 hybrid and gateway CCITT no.5 trunk groups, discrimination digit manipulation is performed.
- For gateway CCITT no.6 and CCITT no.7 trunk groups, CCPC indicator manipulation is performed.

TRKGRP type GW (continued)

- For all gateway trunk groups, operator code conversion is not done.
- For all gateway trunk groups where replace international code is used, all digits specified in table OVNTRNSL are replaced by the digits specified in field REPLCODE in table MMAX. In this case, operator code conversion must be done using field REPLCODE.
- For all gateway trunk groups, all remaining digits are outpulsed as received.

For nonstandard routing, all digits are outpulsed according to the route information.

Transit calls

For gateway R1 and R1-no.5 hybrid trunk groups, transit calls can have an alternate route only. They are treated the same as outgoing calls except that no operator code conversion is done.

For gateway CCITT no.5 trunk groups, KP2 and the country code are received for transit calls. These calls are treated the same as outgoing calls except that no operator code conversion is done.

For gateway CCITT no.6 and CCITT no.7 trunk groups, a country code is received for transit calls. These calls are treated the same as outgoing calls except that no operator code conversion is done.

Terminating calls

For terminating calls with standard routing, the following occurrences take place:

- For gateway R1 and R1-no.5 hybrid trunk groups, KP1 is received.
- For all gateway trunk groups, KP1 is outpulsed.
- For all gateway trunk groups, no country code is received, therefore no country code manipulation is done.
- For gateway R1 and R1-no.5 hybrid trunk groups, a discrimination digit is received but not outpulsed.
- For gateway CCITT no.6 and CCITT no.7 trunk groups, calling party category indicator (CPCI) is received but not sent.
- For all gateway trunk groups, operator code conversion is performed. Operator code conversion converts code 11 to xxx and code 12 to yyy, where the actual values of xxx and yyy are determined by office parameters C11_EXPANSION and C12_EXPANSION in table OFCENG.

- For all gateway trunk groups, replace international code is not used.
- For all gateway trunk groups, all remaining digits are outpulsed as received.

For all gateway trunk groups that terminate calls with nonstandard routing, all digits are outpulsed according to the route information.

TRKGRP type IBNT2

IBN Two-way Trunk Group Type

For related information, refer to table TRKGRP type IBNTI.

Datafill sequence and implications

The following tables must be datafilled before table TRKGRP type IBNT2:

- BCDEF
- TRIGGRP

Field BCGRPNUM (bulk calling line identification group number) must first be defined in table BCLIDGRP before it can be used in table TRKGRP for this group type.

Refer to the "Datafill sequence" section of table TRKGRP (which precedes the group type specific sections) for additional information concerning datafill sequence.

Datafill

The following table lists the datafill for table TRKGRP type IBNT2.

Field descriptions (Sheet 1 of 11)

Field	Subfield	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, INTRAGRP, DIGIT0, DIGIT1, DTI, TES, CDR, SMDR, TRC, ALTNCOS, TRKDSR, LSCFN, ALTLSCFN, LSCINCPT, ALSCINCP, IGA, FDN, FDV, FLASH, DPX, PREEMPT, AIODOPT, REORIG, OFFNETOPT, COFFTYP, and OPTIONS.

TRKGRP type IBNT2 (continued)

Field descriptions (Sheet 2 of 11)

Field	Subfield	Entry	Explanation and action
	GRPTYP	IBNT2	*Trunk group type* Enter IBNT2 to specify the two-way Integrated Business Network (IBN) trunk group type.
	TRAFSNO	numeric (10 to 127 or 0)	*Traffic separation number* Enter the traffic separation number, 10 to 127, assigned to the trunk group in table TFANINT. If not required, enter 0 (zero). It is recommended that incoming and outgoing traffic separation numbers 1 to 9 be reserved for generic traffic separation numbers. Refer to table TFANINT for more information.
	PADGRP	alphabetic (1 to 5 characters)	*Pad group* Enter the name of the pad group assigned to the trunk group in table PADDATA.
	NCCLS	NCBN, NCID, NCIM, NCIT, NCLT, NCOF, NCON, NCOT, NCRT, NCTC, or NOSC	*Operational measurements no-circuit class* Enter the operational measurements (OM) no-circuit class to indicate which OM register, in OM groups OFZ2 and SOTS, is to be incremented when treatment GNCT (generalized no-circuit class) occurs. Enter the no-circuit class assigned to the trunk group. Refer to table TRKGRP and the *Operational Measurements Reference Manual* for additional information.
	CUSTNAME	alphanumeric (1 to 16 characters)	*Customer group name* Enter the name assigned to the customer group to which the trunk group belongs.
	SUBGRPNO	numeric (0 to 7)	*Subgroup number* Enter the subgroup number of the attendant consoles to which all attendant calls must be routed.

TRKGRP type IBNT2 (continued)

Field descriptions (Sheet 3 of 11)

Field	Subfield	Entry	Explanation and action
	SELSEQ	ASEQ, DSEQ, CCWCTH, CWCTH, CNTLEVN, CNTLODD, LIDL, MIDL, or WIDEBAND	*Select sequence* If the far end is not a link list switch and the sequential selection feature is provided, enter ASEQ if sequential selection is in ascending order and DSEQ if it is in descending order of trunk member numbers in table TRKMEM. If the far end is not a link list switch and circular trunk hunting (CTH) applies, enter CWCTH or CCWCTH for clockwise or counterclockwise circular trunk hunting from the most recently released trunk in the trunk group, based on the order of trunk members in table TRKMEM. Enter CNTLODD if the odd-numbered circuit identification codes (CIC) are to be the controlling group. Enter CNTLEVN if the even-numbered CICs are to be the controlling group. CNTLODD and CNTLEVN use MIDL (most idle) for the controlling group of circuits in the trunk group and LIDL (least idle) for the noncontrolling group. Changing the selection algorithm to or from either CNTLODD or CNTLEVN is not allowed. The tuple must be deleted and added again in order to change the selection algorithm. ***Note:*** CNTLODD or CNTLEVN are only used for Japan ISDN user part (ISUP). Enter LIDL (least idle), if the far end is a link list switch with most-idle select sequence. Enter MIDL (most idle), if the far end is a link list switch with least-idle select sequence or far end is not a link list switch and sequential selection does not apply.

Field descriptions (Sheet 4 of 11)

Field	Subfield	Entry	Explanation and action
			If wideband trunk selection is allowed for primary rate access (PRI) ISUP trunks, enter WIDEBAND and datafill refinements WBSELSEQ, WBGRPING, and WBSEARCH. The WIDEBAND entry value is valid only if feature package NTXX34AA, (IBN DWS ISUP-T1), was purchased. ***Note:*** The selection sequence for an existing trunk group can be changed from ASEQ to DSEQ, or from DSEQ to ASEQ, if all the members are made installation busy (INB) or unequipped (UNEQ). The selection method for an existing trunk group cannot be changed. To change the selection method for an existing trunk group from ASEQ or DSEQ to MIDL or LIDL, define a new trunk group, as follows: create a new trunk group with the required trunk selection method, delete the individual trunks from the old trunk group, and add the trunks to the new trunk group.
	WBSELSEQ	ASEQ or DSEQ	*Wideband selection sequence* If the entry in field SELSEQ is WIDEBAND, datafill this field to specify the wideband selection sequence. Enter ASEQ to specify that the wideband trunks are selected in ascending order from the first idle trunk on the search list, or enter DSEQ to specify that they are selected in descending order from the last idle trunk on the search list. The order of trunks in the search list is determined by the order in which the trunk groups are datafilled in table TRKMEM.

TRKGRP type IBNT2 (continued)

Field descriptions (Sheet 5 of 11)

Field	Subfield	Entry	Explanation and action
	WBGRPING	FIXED or FLOATING	*Wideband boundary preference* If the entry in field SELSEQ is WIDEBAND, datafill this field to specify the wideband boundary sequence. Enter the wideband boundary preference. The value FIXED specifies that only the idle trunks within a specific time period are selected. This value is only valid for local exchange carriers (LEC). The value FLOATING specifies that any number of consecutive idle trunks in a trunk group are selected.
	WBSEARCH	BESTFIT or FIRSTFIT	*Wideband search* If the entry in field SELSEQ is WIDEBAND, datafill this field to specify the wideband search algorithm. The value BESTFIT finds the smallest segment of idle channels (DS-0s) among trunks (DS-1s) within a trunk group to accommodate a wideband call, according to the boundary preference (FIXED or FLOATING) specified. FIRSTFIT finds the first segment of idle DS 0s that can accommodate a wideband call, according to the boundary preference specified.
	NCOS	numeric (0 to 255)	*Network class of service* Enter the network class of service (NCOS) number assigned to the trunk group.

Field descriptions (Sheet 6 of 11)

Field	Subfield	Entry	Explanation and action
	BILLDN	numeric (maximum 11 digits) or N	*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. (For advanced business services (ABSK) only) For analog channel-associated signaling (CAS) trunks, the directory number (DN) datafilled in field BILLDN is used as the originating DN to perform all screening functions provided by table DNSCRN and the FEATINFO VALIDATE selector in universal translations. In addition, the DN datafilled in field BILLDN is used as the originating DN in the calling party number (CPN) that is sent to the terminating office. The outpulsing of this CPN is available on only NCCI#7 V2 and ANSI7+ trunks. Presentation of the DN to the called party is controlled by the Calling Line Identification Presentation (CLIP) option. See “Calling Line Identification Presentation” in this section for more details.
	SUPV	ANSDISC, DISCONLY, FAKEANS, or NODISC	*Supervision* Enter the type of supervision required: ANSDISC (answer disconnect), DISCONLY (disconnect only), FAKEANS (fake answer), or NODISC (no disconnect).
	DISCTSEL	numeric (0 to 3)	*Disconnect timing selector* Enter the disconnect timing for the trunk group: 0 (200 ms), 1 (400 ms), 2 (600 ms), or 3 (800 ms).

TRKGRP type IBNT2 (continued)

Field descriptions (Sheet 7 of 11)

Field	Subfield	Entry	Explanation and action
	INTRAGRP	Y or N	*Intragroup* Enter Y (yes) if the call is intragroup; otherwise, enter N (no).
	DIGIT0	0 to 9, B, C, D, E, F, or N	*Digit 0* If one or two digits are to be prefixed to the incoming digits, enter the first (least significant) digit to be prefixed to the incoming digits. If no digits are to be prefixed to the incoming digits, enter N.
	DIGIT1	0 to 9, B, C, D, E, F, or N	*Digit 1* If two digits are to be prefixed to the incoming digits, enter the second (most significant) digit to be prefixed to the incoming digits. If only one or no digits are to be prefixed to the incoming digits, enter N.
	DTI	Y or N	*Dial tone incoming* If a second dial tone is to be sent to the originator of an incoming call, enter Otherwise, enter N. ***Note:*** If field ISTARTSG in table TRKSGRP is set to value IM, the value of field DTI cannot be changed from Y to N.
	TES	Y or N	*Toll essential service* If the trunk group is toll essential, enter Y. Otherwise, enter N.
	CDR	Y or N	*Call detail recording* If all incoming calls are to be recorded using the Call Detail Recording (CDR) format, enter Y. Otherwise, enter N
	SMDR	Y or N	*Station Message Detail Recording* If the SMDR records are to be generated for incoming calls, enter Y. Otherwise, enter N.

Field descriptions (Sheet 8 of 11)

Field	Subfield	Entry	Explanation and action
	TRC	numeric (0 to 7)	*Terminating restriction code* Enter the terminating restriction code assigned to the incoming side of the trunk group.
	ALTNCOS	numeric (0 to 255)	*Alternate class of service* Enter the alternate NCOS number that is used when the feature BV0490 (Attendant Control of Trunk Group Access) is activated.
	TRKDSR	Y or N	*Trunk distinctive ringing* If the trunk is to provide distinctive ringing, enter Y. Otherwise, enter N.
	LSCFN	numeric (0 to 255)	*Line screening code flag number* Enter the line screening code flag number assigned to the trunk group.
	ALTLSCFN	numeric (0 to 255)	*Alternate line screening code flag number* Enter the alternate line screening code flag number assigned to the trunk group.
	LSCINCPT	numeric (0 to 63)	*Line screening code flexible intercept* Enter the treatment number in table IBNTREAT to which a station is routed when the call is blocked by line screening.
	ALSCINCP	numeric (0 to 63)	*Alternate line screening code flexible intercept* Enter the treatment number in table IBNTREAT to which a station routes, when the feature BV0490 (Attendant Control of Trunk Group Access) is activated and the call is blocked by alternate line screening.
	IGA	Y or N	*Ignore answer* This field is not required for table TRKGRP(IBNT2). Enter N.

TRKGRP type IBNT2 (continued)

Field descriptions (Sheet 9 of 11)

Field	Subfield	Entry	Explanation and action
	FDN	Y or N	*Automatic flexible routing toll denied* If a toll call is to be routed to toll denied treatment upon receipt of a reversal from the far end, enter Y. Otherwise, enter N.
	FDV	Y or N	*Automatic flexible routing toll diverted* If a toll call is to be routed to the intercept key and lamp on the attendant console upon the receipt of a reversal from the far end, enter Y. Otherwise, enter N.
	FLASH	Y or N	*Flash* Enter Y for the Attendant Recall Flash Trunks feature (non ISUP). On trunk-to-trunk connections, the incoming trunk flash message is treated as a request to be queued for the first available attendant console in the customer group. A Y entry does not allow an outgoing trunk to flash. Otherwise, enter N.
	DPX	Y or N	*Datapath loop extension* If the trunk group is associated with the DPX (datapath loop extension) line, enter Y. Otherwise, enter N.
	PREEMPT	N	*Preempt* Enter N. This field is for Nortel Networks use only.
	AIODOPT	see subfield	*Automatic identification of outward dialing options* This field consists of subfield AIOD and refinement AIODGRP (if applicable).
	AIOD	Y or N	*Automatic identification of outward dialing* If the AIOD service is required, enter Y. If the AIOD service is not required, enter N.

TRKGRP type IBNT2 (continued)

Field descriptions (Sheet 10 of 11)

Field	Subfield	Entry	Explanation and action
	AIODGRP	alphanumeric (1 to 16 characters)	*Automatic identification of outward dialing CLLI* If field AIOD is equal to Y, enter the common language location identifier (CLLI) of the datalink for the Integrated Business Network (IBN) trunk group as datafilled in table AIODGRP. If field AIOD is equal to N, leave this field blank.
	REORIG	Y or N	*Reorigination* Enter Y if call origination is allowed on calls incoming on this trunk group. Otherwise, enter N.
	OFFNETOPT	see subfield	*Offnet options* This field consists of subfield OFFNET and refinements.
	OFFNET	Y or N	*Offnet* If the trunk is to be used for offnet access, enter Y and datafill refinement OFFNTACC. Otherwise, enter N.

TRKGRP type IBNT2 (continued)

Field descriptions (Sheet 11 of 11)

Field	Subfield	Entry	Explanation and action
	OFFNTACC	FGA, FGB, FGD, IBN, NSSFGD, or VPN	*Offnet access* If the entry in field OFFNET is Y, datafill this field and associated refinements to specify the signaling protocol. For feature group A protocol, enter FGA and datafill refinements DIALPLAN and OFNTOPT as described in this section. For feature group B protocol, enter FGB and datafill refinements ANIDIGS, DIALPLAN, and OFNTOPT as described in this section. For feature group D protocol, enter FGD and datafill refinements ANIDIGS and ANISCREN as described in this section. Meridian SuperNode uses FGD stand-alone software. Fields ANIDIGS and ANISCREN are not prompted if FGD is specified for VPN or ISUP configurations. For Integrated Business Network protocol, enter IBN and datafill refinements DIALPLAN and OFNTOPT as described in this section. An entry of IBN allows non-FGA, and -FGB trunks to have access to Network Services Software (NSS), and the various trunk features specific to NSS. For BCS31, an entry of IBN can be used to associate the trunk with a specific dialing plan. Field DIALPLAN must be datafilled for the entry of IBN to implement this feature. Datafill field DIALPLAN for FGB, FGA, or IBN. For Network Services Software feature group D protocol, enter NSSFGD and datafill refinements ANIDIGS, CASUAL, IDPRTRAN, and OFNTOPT as described in this section. For virtual private network protocol, enter VPN. There are no refinements for this entry value; continue datafill with field COFFTYP.

OFFNTACC = FGA

If the entry in field OFFNTACC is FGA, datafill refinements DIALPLAN and OFNTOPT as described in the following table.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	DIALPLAN	alphanumeric (1 to 16 characters) or DEFAULT	*Dial plan* Enter dial plan names associated with this incoming trunk.
	OFNTOPT	ANIDELV, CONNGNPA, or REGION	*Offnet options* This vector consists of the required OFFNET options and associated refinements. To allow terminating agents to use automatic number identification (ANI) information, enter ANIDELV. The datafill of refinement values for this entry value is not required; continue datafill with field COFFTYP. For the connecting numbering plan area (NPA) option, enter CONNGNPA and datafill refinement CONNGNPA. For the region option, enter REGION and datafill refinement REGION. If additional information for this tuple is contained in the next record, enter + and continue on the next line. Otherwise, enter $ to terminate the vector.
	CONNGNPA	numeric (3 digits)	*Connecting numbering plan area* If the value in field OFNTOPT is CONNGNPA, enter the NPA of the connecting switch adjoining the NSS PTS agent. For FGB agents, field CONNGNPA is used to pad the seven-digit ANI received by the FGB protocol with a three-digit NPA, resulting in a complete ten-digit calling party number (ANI).
	REGION	numeric (0 to 2047)	*Region* If the value in field OFNTOPT is REGION, enter the region code of the trunk.

TRKGRP type IBNT2 (continued)

OFFNTACC = FGB

If the entry in field OFFNTACC is FGB, datafill refinements ANIDIGS, DIALPLAN, and OFNTOPT as described in the following table.

Field descriptions for conditional datafill (Sheet 1 of 2)

Field	Subfield	Entry	Explanation and action
	ANIDIGS	Y or N	*Automatic number identification digits* If an automatic number identification (ANI) is to be received, enter Y. Otherwise, enter N.
	DIALPLAN	alphanumeric (1 to 16 characters) or DEFAULT	*Dial plan* Enter dial plan names associated with this incoming trunk.
	OFNTOPT	ANIDELV, CONNGNPA, or REGION	*Offnet options* This vector consists of the required OFFNET options and associated refinements. To allow terminating agents to use ANI information, enter ANIDELV. The datafill of refinement values for this entry value is not required; continue datafill with field COFFTYP. For the connecting numbering plan area (NPA) option, enter CONNGNPA and datafill refinement CONNGNPA. For the region option, enter REGION and datafill refinement REGION. If additional information for this tuple is contained in the next record, enter + and continue on the next line. Otherwise, enter $ to terminate the vector.

Field descriptions for conditional datafill (Sheet 2 of 2)

Field	Subfield	Entry	Explanation and action
	CONNGNPA	numeric (3 digits)	*Connecting numbering plan area* If the value in field OFNTOPT is CONNGNPA, enter the NPA of the connecting switch adjoining the NSS PTS agent. For FGB agents, field CONNGNPA is used to pad the seven-digit ANI received by the FGB protocol with a three-digit NPA, resulting in a complete ten-digit calling party number (ANI).
	REGION	numeric (0 to 2047)	*Region* If the value in field OFNTOPT is REGION, enter the region code of the trunk.

OFFNTACC = FGD

If the entry in field OFFNTACC is FGD, datafill refinements ANIDIGS and ANISCREN as described in the following table.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	ANIDIGS	Y or N	*Automatic number identification digits* If an automatic number identification (ANI) is to be received, enter Y. Otherwise, enter N.
	ANISCREN	Y or N	*Automatic number identification screening* If ANI screening is required for calls placed across IBN PTS FGD trunks, enter Y. Otherwise, enter N.

TRKGRP type IBNT2 (continued)

OFFNTACC = IBN

If the entry in field OFFNTACC is IBN, datafill refinements DIALPLAN and OFNTOPT as described in the following table.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	DIALPLAN	alphanumeric (1 to 16 characters) or DEFAULT	*Dial plan* Enter dial plan names associated with this incoming trunk.
	OFNTOPT	ANIDELV, CONNGNPA, or REGION	*Offnet options* This vector consists of the required OFFNET options and associated refinements. To allow terminating agents to use automatic number identification (ANI) information, enter ANIDELV. The datafill of refinement values for this entry value is not required; continue datafill with field COFFTYP. For the connecting numbering plan area (NPA) option, enter CONNGNPA and datafill refinement CONNGNPA. For the region option, enter REGION and datafill refinement REGION. If additional information for this tuple is contained in the next record, enter + and continue on the next line. Otherwise, enter $ to terminate the vector.
	CONNGNPA	numeric (3 digits)	*Connecting numbering plan area* If the value in field OFNTOPT is CONNGNPA, enter the NPA of the connecting switch adjoining the NSS PTS agent. For FGB agents, field CONNGNPA is used to pad the seven-digit ANI received by the FGB protocol with a three-digit NPA, resulting in a complete ten-digit calling party number (ANI).
	REGION	numeric (0 to 2047)	*Region* If the value in field OFNTOPT is REGION, enter the region code of the trunk.

OFFNTACC = NSSFGD

If the entry in field OFFNTACC is NSSFGD, datafill refinements ANIDIGS, CASUAL, IDPRTRAN, OFNTOPT, and DIALPLAN as described in the following table.

Field descriptions for conditional datafill (Sheet 1 of 2)

Field	Subfield	Entry	Explanation and action
	ANIDIGS	Y or N	*Automatic number identification digits* If an automatic number identification (ANI) is to be received, enter Y. Otherwise, enter N.
	CASUAL	Y or N	*Casual calls* If casual calls are allowed on this trunk, enter Y. Otherwise, enter N.
	IDPRTRAN	alphanumeric (4 characters) or NPRT	*Identification pretranslator* Enter the pretranslator name used in translation of the ANI information digits. Enter NPRT for no pretranslation.
	OFNTOPT	ANIDELV, CONNGNPA, or REGION	*Offnet options* This vector consists of the required OFFNET options and associated refinements. To allow terminating agents to use ANI information, enter ANIDELV. For the connecting numbering plan area option, enter CONNGNPA and datafill refinement CONNGNPA. For the region option, enter REGION and datafill refinement REGION. If additional information for this tuple is contained in the next record, enter + and continue on the next line. Otherwise, enter $ to terminate the vector.

TRKGRP type IBNT2 (continued)

Field descriptions for conditional datafill (Sheet 2 of 2)

Field	Subfield	Entry	Explanation and action
	CONNGNPA	numeric (3 digits)	*Connecting numbering plan area* If the value in field OFNTOPT is CONNGNPA, enter the NPA of the connecting switch adjoining the NSS PTS agent. For FGB agents, field CONNGNPA is used to pad the seven-digit ANI received by the FGB protocol with a three-digit NPA, resulting in a complete ten-digit calling party number (ANI).
	REGION	numeric (0 to 2047)	*Region* If the value in field OFNTOPT is REGION, enter the region code of the trunk.
	DIALPLAN	alphanumeric (1 to 16 characters) or DEFAULT	*Dial plan* Enter dial plan names associated with this incoming trunk.

For all tuples

For all tuples, datafill fields COFFTYP and OPTIONS as described in the following table.

Field descriptions

Field	Subfield	Entry	Explanation and action
	COFFTYP	NATL	*Connected office type* Enter NATL for national trunks.
	OPTIONS	see subfield	*Options* This field consists of subfield OPTION and refinements. Enter the list of options and associated refinements assigned to the trunk group. See the appropriate option and refinement name for its definition. Each option and its refinement must be separated by a blank space. Use as many records as required to complete the list of options and associated refinements. If the option is not provided, no input is required for that option. Enter $ to indicate the end of the vector.

Trunks as SCAI ACD agents

If the trunk group is assigned as a switch computer application interface (SCAI) Automatic Call Distribution (ACD) agent, datafill field OPTION as described in the following table. This option applies only to foreign exchange signaling (FXS) trunks with loop start. If this option is datafilled, field CARDCODE in table TRKSGRP must be datafilled as DS1FXSLS.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	OPTION	ACD	*Option* Enter ACD to assign the trunk group as SCAI ACD agents.

ANI failure (ANIFAIL)

If the trunk group has the automatic number identification (ANI) failure option, datafill field OPTION and refinements ANIFAIL and TRMT as described in the following table.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	OPTION	ANIFAIL	*Option* Enter ANIFAIL.
	ANIFAIL	CONT or NOCONT	*Automatic number identification failure* If the call is to continue when no ANI digits are received on the trunk, enter CONT. If the call is to discontinue when no ANI digits are received on the trunk, enter NOCONT and datafill refinement TRMT.
	TRMT	alphanumeric (1 to 4 characters)	*Treatment* If the entry in field ANIFAIL is NOCONT, enter the treatment name found in field TREATMT of table TMTCNTL.TREAT.

TRKGRP type IBNT2 (continued)

ANI received (ANIREC)

If the trunk group has option ANIREC, datafill field OPTION and refinement ANIREC as described in the following table.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	OPTION	ANIREC	*Option* Enter ANIREC.
	ANIREC	ALLOWED, ALWAYS, or NEVER	*ANI received* Enter ALLOWED if the calling number must always be requested on the trunk when required. Enter ALWAYS if the calling number must always be requested on the trunk. Enter NEVER if the calling number must never be requested on the trunk. ***Note:*** The ANIREC option can be datafilled in table TRKGRP for any IBN trunk, but it is valid only for IBN trunks using FST as a signaling data selector in table TRKSGRP.

ANI send (ANISEND)

If the trunk group has option ANISEND, datafill fields OPTION and ANISEND as described in the following table.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	OPTION	ANISEND	*Option* Enter ANISEND.
	ANISEND	ALLOWED, ALWAYS, or NEVER	*Automatic number identification send* Enter ALLOWED if the calling number must be sent on the trunk when required. Enter ALWAYS if the calling number is must always be sent on the trunk. Enter NEVER if the calling number must never be sent on the trunk. ***Note:*** The ANISEND option can be datafilled in table TRKGRP for any IBN trunk, but it is valid only for IBN trunks using FST as a signaling data selector in table TRKSGRP.

Bulk calling line identification (BCLID)

If the trunk group has option BCLID, datafill field OPTION and refinement BCGRPNUM as described in the following table.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	OPTION	BCLID	*Option* Enter BCLID.
	BCGRPNUM	numeric (0 to 2047)	*Bulk calling line identification group number* Enter the BCLID group number.

Bearer capability name (BCNAME)

If the trunk group is to be assigned option BCNAME, datafill field OPTION according to the description in the following table. If a bearer capability (BC) is not datafilled for an IBNTI type trunk group, the office default BC defined by parameter DEFAULT_BEARER_CAPABILITY (either SPEECH or 3_1KHZ) applies. Refer to table OFCENG for more information on this

TRKGRP type IBNT2 (continued)

parameter. If the datafilled BC is the actual office default (SPEECH or 3_1KHZ), the BC option does not appear when listing the TRKGRP tuple. An office default BC is not listed by the TRKGRP read procedures.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	OPTION	BCNAME	*Option* Enter the bearer capability option BCNAME.
	BCNAME	DATAUNIT, SPEECH, VOICE_DATA, 3_1KHZ, 56KDATA, 64KDATA, 64KRES, 64KX25, or 7_KHZ	*Bearer capability name* Enter a bearer capability name previously datafilled in field BCNAME of table BCDEF. The entry can be one of the default entries listed or a user-defined entry.

Broadcast call remote (BCREMOTE)

If the trunk group has option BCREMOTE, datafill field OPTION as described in the following table. This option applies only to ISDN user part (ISUP) trunks.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	OPTION	BCREMOTE	*Option* Enter BCREMOTE.

Block Serving Carrier ID (BLK_SCI)

If the trunk group requires option BLK_SCI, datafill subfield OPTION as described in the following table. This option prevents the serving carrier optional parameter from being sent over ANSI ISUP trunks.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	OPTION	BLK_SCI	*Option* Enter the block serving carrier ID option BLK_SCI.

Call characteristic (CALLCHR)

If the trunk group has option CALLCHR, datafill field OPTION and refinement CALLCHR as described in the following table.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	OPTION	CALLCHR	*Option* Enter the call characteristic option CALLCHR.
	CALLCHR	DIGDATA or SAT	*Call characteristic* Enter the call characteristic. Enter DIGDATA for the digital data call characteristic. Enter SAT for the satellite call characteristic.

Calling line identification (CLID)

IBN trunks provide the CLID option. The CLID option allows the customer premise equipment (CPE) to know the telephone number of the calling party.

TRKGRP type IBNT2 (continued)

When the user enters this option, the system prompts for one of the following control values: CPNONLY, CPNREST, CPNPREF, and CHGONLY.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	CLID	*Option* Enter CLID or $.
	CLID	CPNONLY, CPNREST, CPNPREF, CHGONLY	Enter CPNONLY for the calling party to populate the outgoing CLID regardless of the Presentation Indicator (PI). If a calling party number is not available, no CLID digits are outpulsed. Enter CPNREST for the calling party number to populate the outgoing CLID when the PI for the calling party number is set to ALLOWED. If a calling party number is not available, or the PI is set to RESTRICTED or UNAVAILABLE, then no CLID digits are outpulsed. Enter CPNPREF for the calling party number to populate the outgoing CLID regardless of the PI. If a calling party number is not available, the received or derived charge number is used to populate the outgoing CLID digits. If neither a calling party number or a charge number is available, no CLID digits are outpulsed. Enter CHGONLY for the received or derived charge number to populate the outgoing CLID digits. If the charge number is not available, no CLID digits are outpulsed.

Calling Line Identification Presentation (CLIP)

If the trunk group requires option CLIP, datafill field OPTION as described in the following table. This option provides Calling Line Identification Presentation (CLIP) and Calling Line Identification Restriction (CLIR) in the Australian Telephone User Part (ATUP) protocol on the DMS-100 and DMS-200 switches. It also provides CLIP and CLIR in the European market for the British Telephony User Part (BTUP) protocol on the DMS-100 switch.

At the terminating office, option CLIP enables calls routed over ATUP or BTUP trunks to display the calling party address digits at a terminating station.

If the option CLIP is not datafilled, CLI presentation is disabled by default. The originating office does not support the transmission of CLIP/CLIR signaling over ATUP.

For the Japan market, incoming analog CAS trunks, because they use analog signaling, do not supply an originating DN, but for ABSK the DN entered in subfield BILLDN in this table is used as the originating DN, and is sent over the outgoing ISUP trunk (ANSI7+ and NCCI#7 V2). More specifically, the contents of subfield BILLDN are used to set the Address Information (AI) field of the CPN.

Datafilling the CLIP option sets the Address Presentation Restriction Indicator (APRI) field of the CPN to Presentation Allowed. This allows the terminating office to present the contents of the AI field to the called party as the originating DN. If the CLIP option is not datafilled, then the APRI field of the CPN is set to Presentation Restricted and the terminating office cannot present the contents of the AI field to the called party. If BILLDN is datafilled with N (no DN), no CPN is sent, and the CLIP option has no effect.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	OPTION	CLIP	*Option* Enter CLIP.

Default directory number (DEFLTDN) or default CLI (DEFLTCLI)

If the trunk group has option DEFLTDN, datafill field OPTION and refinement DEFLTDN as described in the following table. This option is supported on IBNT2 trunks on a DMS-100 or DMS-200 switch for the Australian market. (Option DEFLTDN is visible only when subsystem DEFDNSUB is present in the load.)

Note: This option is also supported in the European market on a DMS-100 switch. In the European market, this option appears as DEFLTCLI for

TRKGRP type IBNT2 (continued)

IBNT2, IBNTI, and IBNTO trunks. (Subsystem UKCLISB must be present in the load.)

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	OPTION	DEFLTDN	*Option* Enter the default directory number (DN) option DEFLTDN. ***Note:*** In the European market, datafill this option as DEFLTCLI instead of DEFLTDN.
	DEFLTDN	numeric (maximum 10 digits, 0 to 9)	*Default directory number* Enter the default DN.

Blocking Indicator for calling line identification (BI_UNAVAIL)

BI_UNAVAIL indicates whether the caller is able to withhold presentation of their Calling Line Identity (CLI) for incoming Channel Associated Signalling (CAS) and Digital Private Network Signalling System (DPNSS) trunks interworking to BTUP trunks. If BI_UNAVAIL is datafilled for an incoming DPNSS or CAS trunk, CLI is unavailable on the outgoing BTUP trunk provided that the CBI field of table TRKSGRP is set to Y.

The CBI field of table TRKSGRP determines whether the issued CLI will be available or unavailable on the outgoing BTUP trunk. CBI must be set to Y for BI_UNAVAIL to function. If it is set to N, CLI is automatically unavailable regardless of the BI_UNAVAIL setting.

This option is supported on IBNTI and IBNT2 trunks only. If the trunk group requires option BI_UNAVAIL, datafill OPTION as described in the following table.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	OPTION	BI_UNAVAIL	*Option* Enter BI_UNAVAIL.

Dialed number identification service (DNIS)

IBN trunks offer the DNIS option. The DNIS option delivers additional call information to the CPE when a call requires DNIS.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	DNIS	*Option* Enter DNIS or $.

Facility type (FACTYPE)

If the trunk group has option FACTYPE, datafill field OPTION and refinement FACTYPE as described in the following table.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	OPTION	FACTYPE	*Option* Enter the facility type option FACTYPE.
	FACTYPE	CCSA, ETS, FX, or TDMTT	*Facility type* Datafill this field to specify the facility type. Enter CCSA for the common control switching arrangement facility type. Enter ETS for the electronic tandem switched call facility type. Enter FX for the automatic flexible routing facility type. Enter TDMTT for the tandem tie trunk facility type.

TRKGRP type IBNT2 (continued)

Internet protocol (IP)

Enter this option to allow calls on IBNT2 type trunks to access the IP network. Field GWTYPE must also be datafilled in table IPINV.

Field	Subfield	Entry	Explanation and action
	OPTION	IP	*Internet protocol* Datafill this field to allow calls on IBNT2 type trunks to access the IP network. ***Note:*** The selection sequence must be MIDL when the IP option is added to an IBNT2 trunk.

Logical terminal identifier (LTID)

If the value of field SIGTYPE in table TRKSGRP is equal to LTID, field OPTION and refinements LTGRP and LTNUM are automatically datafilled.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	OPTION	LTID	*Option* The system enters LTID.
	LTID	see subfields	*Logical terminal ID* Field LTID consists of subfields LTGRP and LTNUM.
	LTGRP	alphanumeric (1 to 8 characters)	*Logical terminal group* Enter the name of a group of logical terminals. This name must be datafilled in field GROUP of table LTGRP. For ISDN terminals, the name of the group is ISDN.
	LTNUM	numeric (1 to 1022)	*Logical terminal number* Enter a number to identify the logical terminal within the group.

Malicious call hold (MCH)

This option is supported on DC5 and TS14 trunks for the Australian market. If MCH is activated on this trunk group, datafill field OPTION as described in the following table.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	OPTION	MCH	*Option* Enter MCH.

Network information translations (NETXLA)

If the trunk group requires the NETINFO translations option NETXLA, datafill field OPTION as described in the following table. This option is applicable only to ISUP trunks.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	OPTION	NETXLA	*Option* Enter NETXLA.

No modem pool access (NOACCMP)

If the trunk group is not allowed access to the modem pool, datafill subfield OPTION as described in the following table.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	OPTION	NOACCMP	*No modem pool access* Enter NOACCMP.

Digits to be outpulsed (OUTSCHM)

IBN trunks offer the OUTSCHM option. When the user enters this option, the system prompts for a control value from one to eight. The range contains

TRKGRP type IBNT2 (continued)

formatting to allow table control prompting to provide assistance in selecting the outpulsing scheme value.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	OUTSCHM	*Option* Enter OUTSCHM or $.
	OUTSCHM	1 = *CLID ADDR*, 1 2 = *ADDR*, 2 3 = * II CLID* ADDR, 3 4 = II*CLID*ADDR*, 4 5 = KP II CLID ST KP ADDR ST, 5 6 = KP II CLID ST, 6 7 = KP ADDR ST, 7 8 = KP ADDR ST KP II CLID ST, 8 ***Note:*** 1 to 4 are DTMF (dual tone multi-frequency) and 5 to 8 are MF (multi-frequency).	The user must choose an OUTSCHM control value from one to eight.

Audio tone detector answer propagation (PROPANS)

If the trunk group has option PROPANS, datafill subfield OPTION as described in the following table.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	OPTION	PROPANS	*Option* Enter PROPANS.

Serving Carrier ID (SCI)

If the trunk group requires option SCI, datafill subfield OPTION and refinement SCI as described in the following table. This option applies only to the following signaling systems:

- AISUP
- ANSI
- ATUP

- DC5
- ETSI PRI
- I-ISUP
- TS14 PRI

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	OPTION	SCI	*Option* Enter SCI.
	SCI	numeric (1000 to 30000)	*Serving carrier ID* Enter the trunk group serving carrier identification code.

Station Message Detail Recording for inbound toll calls (SMDRITC)

If the trunk group requires option SMDRITC, datafill subfield OPTION as described in the following table. If option SMDRITC is datafilled for a trunk group, then for each terminating station involved with the call, a separate station message detail recording (SMDR) extension record is generated detailing the duration of the call or the amount of time the call was present at that station.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	OPTION	SMDRITC	*Option* Enter SMDRITC.

Trunk line screening code (TRKLSC)

If the trunk group requires option TRKLSC, datafill subfield OPTION as described in the following table. This option allows for the overriding of the line screening codes in order to use the customer group of the originator, instead of the customer group of the terminator.

Field descriptions for conditional datafill

Field	Subfield	Entry	Explanation and action
	OPTION	TRKLSC	*Option* Enter TRKLSC.

TRKGRP type IBNT2 (continued)

Datafill example

An example of datafill for a two-way IBN trunk group follows. This example was datafilled in accordance with the following requirements:

- The trunk group is represented by the code NTLAUR in table CLLI.
- The trunk group type is IBNT2.
- The Traffic Separation feature is not provided (TRAFSNO = 0).
- ACO is the name of the pad group assigned to the trunk group in table PADDATA.
- NCBN is the no-circuit class.
- The trunk group is assigned to subgroup 0 of customer group BNRMC.
- The select sequence is most idle (MIDL).
- NCOS number 4 and alternate NCOS number 5 are assigned to the trunk group.
- The billing directory number of the trunk group is 613-226-5400.
- The type of supervision is answer disconnect (ANSDISC).
- The disconnect timing for the outgoing side of the trunk group is 400 ms (entered as 1).
- The call is an intragroup call.
- The digits 78 are prefixed to the incoming digits.
- Second dial tone is sent to the originator on an incoming call.
- The trunk group is not toll essential.
- The entry for field CDR is N and for field SMDR is Y. SMDR records are generated for incoming calls.
- Terminating restriction code 0 is assigned to the incoming side of the trunk group.
- The trunk group provides distinctive ringing.
- The line screening code flag and alternate flag numbers are 5.
- Calls blocked by line screening or alternate line screening are routed to treatment number 4 or 5 in table IBNTREAT.
- Field IGA is datafilled N.
- Toll calls are routed to toll denied treatment upon receipt of a reversal from the far end.
- Flash is not expected.

- The trunk group is not associated with a datapath loop extension (DPX) line.
- Field PREEMPT is datafilled N.
- Field MTR is blank (not datafilled).
- Automatic identification of outward dialing is not required.
- Reorigination is not allowed on calls incoming on this trunk group.
- The trunk is not to be used for offnet access.
- The connected office has national (NATL) trunks.
- The facility type option FACTYPE with facility type common control switching arrangement (CCSA) is assigned.

MAP display example for table TRKGRP type IBNT2

```
GRPKEY
                                        GRPINFO
_____________________________________________________________

NTLAUR
   IBNT2 0 ACO NCBN BNRMC 0 MIDL 4 6132265400
   ANSDISC 1 Y 7 8 Y N N Y 0 5 Y 5 5 4 5 N Y N N
   N N N N N NATL FACTYPE CCSA $
```

Table history

NA014

Added the CLID, DNIS, and OUTSCHM options to the OPTION subfield.

NA012

Added option IP to subfield OPTION.

EUR008

Removed selector PRESEL from subfield OPTION in table TRKGRP type IBNT2, and datafilled in table TRKOPTS.

APC008

Added selector PRESEL to subfield OPTION.

Added options BLK_SCI and SCI to subfield OPTION.

EUR006

Added option BI_UNAVAIL.

TRKGRP type IBNT2 (end)

APC006

Added value MCH to subfield OPTION in accordance with functionality AR1748 (Malicious Call Trace on TS14 and DC5) for the Australian market.

NA004

Removed option AIN; table TRKAIN is used instead.

UK002

Enabled options DEFLTDN (DEFLTCLI) and CLIP in the European market (design activity AE1383, “UK CLI Handling”).

NA002

Added option DEFLTDN and associated refinement DEFLTDN.

Added option CLIP. This option provides Calling Line Identification Presentation (CLIP) and Calling Line Identification Restriction (CLIR) in the Australian Telephone User Part (ATUP) protocol on the DMS-100 and DMS-200.

BCS36

Added option AIN.

IBN Incoming Trunk Group Type

Overview of Integrated Business Network (IBN) trunk groups

This section describes the general datafill requirements related to Integrated Business Network (IBN) trunk groups. The “Functional description of table TRKGRP (IBNTI)" section, which follows, provides table TRKGRP datafill information for group type IBNTI. Group type IBNTI is used for incoming IBN trunks.

There are three types of IBN trunk group: incoming (IBNTI), outgoing (IBNTO), and two-way (IBNT2). Each trunk group is assigned a code in table CLLI.

If digital trunks are used by digital data, they must have the pad group set to 0 (zero) in both directions.

Each trunk group must be assigned to one of the customer groups.

If calls are routed to the attendant consoles (AC), the subgroup number of the ACs to which attendant calls are routed must be specified.

Refer to the “General field information" section of table TRKGRP for detailed information concerning traffic separation, traffic classes, pad groups, and no-circuit class.

Selection sequence

If the trunk is an outgoing or two-way trunk group, the sequence for selection of trunks must be specified as one of the following:

- least idle (LIDL)
- most idle (MIDL)
- ascending sequence (ASEQ)
- descending sequence (DSEQ)
- clockwise circular trunk hunt (CWCTH)
- counterclockwise circular trunk hunt (CCWCTH)

The MIDL and LIDL processes are based on the length of time a trunk member is idle. One switching unit selects from a trunk group the trunk that has been idle for the longest period of time. The opposite end switching unit selects the trunk that has been idle for the shortest period of time. The selection order of trunks is, therefore, not fixed.

TRKGRP type IBNTI (continued)

In an LIDL switching unit, some types of killer trunk move to the head of the list, where they become the least idle trunks and are repeatedly seized. All calls routed to these killer trunks fail to complete. The MIDL and LIDL selection methods minimize glare by preventing chances for simultaneous seizure until the last idle trunk.

Sequential trunk selection (ASEQ or DSEQ) minimizes the occurrence of glare and reduces reseizure of killer trunks encountered with the MIDL and LIDL trunk selection methods when used for two-way trunks. In sequential trunk selection, the trunk selection order and selection starting point are fixed. The beginning of the list for one switching unit is the end of the list for the opposite end switching unit. This list is searched sequentially by each switching unit, starting from the beginning of the list for the first idle trunk. One switching unit selects the first idle trunk, searching the list in ascending order. The opposite end switching unit selects the first idle trunk, searching the list in descending order.

The position of a killer trunk in the sequential list determines its impact on trunk selection. A killer trunk in the middle of the list has minimal impact, but one near either end has significant impact. This impact is due to all searches starting at one end or the other of the trunk member list. If the traffic is such that an idle trunk is found near the end of the list for most searches, then a killer trunk is seized more often than a killer trunk in the middle of the list. The ASEQ and DSEQ processes minimize glare by preventing the chance for simultaneous seizure until the last idle trunk in the trunk group.

Like ASEQ and DSEQ, the circular trunk hunting (CTH) selection strategy is based on a fixed, ordered list of trunks. The two switching units search the list in opposite directions, similar to the ASEQ and DSEQ methods. However, the trunk selected is the first idle trunk in the trunk group. The CTH selection method substantially reduces the impact of killer trunks.

Repeatedly seized killer trunks are not reseized as often in two-way trunk groups under the CTH selection method as with the MIDL, LIDL, ASEQ, and DSEQ selection methods. In the CTH selection method, the selection starting point changes each time a trunk is released (the most recently released (MRR) trunk). If the MRR trunk is a killer trunk, the next trunk seized is a trunk to either side of the killer trunk. CTH selection has no effect on other types of killer trunk.

Glare occurs when there are one or two idle trunks left in the trunk group. CTH selection does not affect the occurrence of glare. Glare occurrence during CTH selection is the same as glare occurrence during the two existing trunk selection methods.

A trunk group trunk selection method cannot be changed. If a change is required, a new trunk group is created with the required trunk selection method. The individual trunks are deleted from the old trunk group and added to the new trunk group.

For an existing trunk group the selection sequence can be changed to ASEQ from DSEQ or to DSEQ from ASEQ if all the members are installation busy (INB) or unequipped.

The CTH feature requires software package NTX244AB (Enhanced Sequential Trunk Hunting).

Network class of service

Each incoming or incoming side of a two-way trunk group must be assigned a network class of service (NCOS) number in table NCOS.

An NCOS number can be shared by one or more incoming or two-way trunk groups. The code assigned to the customer group and the NCOS number are the indexes into table NCOS.

The NCOS number specifies the NCOS name, line screening code, and NCOS options assigned to the incoming or two-way trunk group.

If the customer group has feature BV0490 or BV0557 (Attendant Control of Trunk Group Access), the trunk group must be assigned an alternate NCOS number. The alternate NCOS number is used when the Attendant Control of Trunk Group Access feature is activated.

Directory number routing and billing

If the trunk group is seizure only and has no incoming digits, the number to which a call is to be routed must be specified. The number can be a seven-digit directory number (DN), a two- to five-digit station number, or the attendant access code.

If incoming digits are received and a local automatic message accounting (LAMA) record is required for all calls that tandem through the switch, the ten-digit DN to which the calls are to be billed must be specified.

Trunk supervision types and disconnect timing

The trunk supervision types (answer disconnect, disconnect only, fake answer, and no disconnect) must be specified.

TRKGRP type IBNTI (continued)

Answer disconnect (ANSDISC) indicates that electrical signals can be received by the trunk from the far end to signify that the call has been answered or disconnected.

Disconnect only (DISCONLY) indicates that an electrical signal can be received from the far end by the trunk to signify that the call has been disconnected. An electrical signal is not received to indicate answer.

No disconnect (NODISC) indicates that a disconnect signal is not received from the far end. An electrical signal is not received to indicate either answer or disconnect.

Fake answer (FAKEANS) supervision is required when the trunk group at the far end has fake answer supervision.

Unless trunks at the far end of the trunk group have fake answer supervision, no-disconnect and disconnect-only supervision must be used for NT5X25 and digital automatic flexible routing (FX) only. For these trunks, true answer is never returned from the far end. Audible tone detection (ATD) can be used for answer detection for these types of trunk.

If the trunk type is other than NT5X25 or digital FX, and the trunks at the far end of the trunk group have other than fake answer supervision, the recommended supervision type is ANSDISC.

If trunks at the distant end of the trunk group have fake answer supervision, the recommended value is FAKEANS.

The Call Transfer feature is not applicable to trunk groups with no-disconnect supervision.

The trunk supervision must be accurate for the desired operation, otherwise trunk hangup can occur. For example, two no-disconnect trunks are nailed together until detected by operating company personnel.

The disconnect timing must be specified.

Customer groups and intragroup calls

For a public customer group or a member of a family of customer groups, it is necessary to specify whether calls are considered as intragroup when the originating and terminating members are assigned as intergroup. Calls are not considered as intragroup if a private customer group or originating and terminating members are not assigned as intragroup.

See tables CUSTENG and CUSTFAM for the assignment of customer groups Family, Private, or Public and for the tables (in addition to this one) that define the calls as intragroup.

Digit-prefix digits, dial tone incoming, and toll essential service

If required, one or two digits (field DIGIT0 or DIGIT1) can be prefixed to the incoming digit stream. If field DIGIT0 or DIGIT1 is datafilled with anything other than N and the field IPULSTYP in table TRKSGRP is set to DT, there can be a delay of 12 to 14 s before call completion.

It must be specified whether the trunk group is incoming or the incoming side of a two-way trunk group, for which a dial tone must be returned upon seizure.

Whether the trunk group has toll essential service must be specified.

Call detail recording, station message recording, and tone detection

Whether the trunk group has the Call Detail Recording (CDR) or Station Message Detail Recording (SMDR) feature must be specified. The SMDR feature can be provided only if the switching unit has the option SMDR_OFFICE set to Y (yes) in table OFCOPT. If SMDR is specified, an SMDR record is generated. If SMDR is not specified, an SMDR record is not generated.

If CDR is specified, a CDR record is generated.

SMDR records are created if the SMDR field in table IBNXLA is set to Y or field SMDR in table TRKGRP is set to Y. Only one of the two SMDR fields needs to be set to Y for output of SMDR records.

Option ANSTIM in table CUSTSMDR is used for SMDR purposes. If the terminator was an IBN trunk with NODISC or DISONLY supervision at disconnect time, the system makes a comparison between the elapsed time of the call and the option ANSTIMAL threshold time. If the elapsed time is greater than the threshold time, the call is considered answered. Otherwise, the call is considered as not answered.

If the tone detector is used to detect answers on all trunks with NODISC or DISONLY supervision, option ANSTIMAL is not required because voice answer is detected by the tone detector.

Terminating restriction codes

The terminating restriction code (TRC) assigned to the incoming trunk group and the incoming side of the two-way trunk groups must be specified.

TRKGRP type IBNTI (continued)

The TRC determines whether the trunk group is allowed to terminate to the number dialed if the station has the denied incoming (DIN) option.

The trunk is allowed to terminate to a station with option DIN if the TRC assigned to the trunk matches one of the TRCs assigned to the station.

Each station that has option DIN has its TRCs assigned in table IBNFEAT.

The assignment of the terminating restriction codes is the responsibility of the operating company.

Distinctive ringing

Selected incoming and two-way trunk groups owned by the customer group can provide distinctive ringing (for example, coded ringing, code 3). This feature can be assigned to incoming or two-way IBN trunk groups only if the customer group has option DRING assigned in table CUSTSTN.

Line screening

If screening by trunk group or origination and termination on the same two-way trunk group is not allowed, a line screening flag number must be assigned to the outgoing trunk group or the outgoing side of a two-way trunk group.

If the customer group has the Attendant Control of Trunk Group Access feature, the trunk group must be assigned an alternate line screening flag number. The alternate line screening flag number is used when Attendant Control of Trunk Group Access feature is activated.

The line screening flag number, which is an index into table LSCFLAGS, specifies whether a line screening code has access to it.

If screening by trunk group or origination and termination on the same two-way trunk group is not allowed, a line screening number must be assigned to the NCOS or alternate NCOS assigned to an incoming trunk group or incoming side of a two-way trunk group.

If line screening is assigned to the trunk groups, the IBN treatment numbers to which calls are routed when they fail line screening or alternate line screening must be specified.

Toll call routing on reversal

Whether a toll call is to be routed to the toll denied treatment, or to the intercept key and lamp on the AC, on receipt of a reversal from the far end, must be specified.

Flash privileges

For an outgoing trunk group or the outgoing side of a two-way trunk group which is intragroup, it is necessary to specify whether the far end of the trunk group has flash privileges.

Meter reception on Spanish SOCOTEL trunks

If the trunk group type is IBNTO, it is necessary to specify whether meter reception is required on outgoing Spanish SOCOTEL trunks.

Call characteristics

For an incoming IBN trunk group or the incoming side of a two-way trunk group, it is necessary to specify whether the call characteristics SAT or DIGDATA are required for the trunk group.

Call characteristics are assigned in table CALLCHR. Call characteristic SAT is required if all incoming calls are by way of satellite link.

If the trunk group has two subgroups and only one of the subgroups is by way of satellite link, do not assign call characteristic SAT. Set field SAT to Y for the appropriate subgroup in table TRKSGRP.

Call characteristic DIGDATA is required only if the incoming trunk group is a tandem type digital trunk connected to an electronic tandem network (ETN) switching unit.

Facility types

Facility types CCSA, TDMTT, FX, or ETS can be assigned to trunk group types IBNTO, IBNTI, and IBNT2 using the facility type (FACTYPE) option. These facility types are mutually exclusive; only one of them can be assigned to a trunk group.

These facility types can be provided only in switching units with enhanced IBN Bellcore automatic message accounting (AMA) software and require the basic IBN and Bellcore AMA software to function properly.

The FACTYPE option provides the operating company with the capability of designating a two-way, incoming, or outgoing trunk group as being a common control signaling arrangement (CCSA) trunk group, a tandem tie trunk (TDMTT) trunk group, an automatic flexible routing (FX) trunk group, or an electronic tandem switched (ETS) trunk group.

If the trunk group is assigned the CCSA facility type, AMA data for calls routed over that facility is recorded with call code 021.

TRKGRP type IBNTI (continued)

If the trunk group is assigned the TDMTT facility type, AMA data for calls routed over that facility is recorded with call code 032. A TDMTT trunk group can support up to 24 dialed digits.

If the trunk group is assigned the FX facility type, AMA data for calls routed over that facility is recorded with call code 011.

If the trunk group is assigned the ETS facility type, AMA data for calls routed over that facility is recorded with call code 085.

CCSA, TDMTT, FX, and ETS are facility type designations that an operating company can associate with new or existing IBN outgoing, incoming, and two-way trunk groups. Functionally, there is no difference between a CCSA, TDMTT, FX, or ETS trunk group and an outgoing, incoming, or two-way trunk group.

Interaction with parameters and other tables

If parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y (yes), all trunks in the group must be busied before changing the value of fields CUSTNAME, SUBGRPNO, NCOS, SUPV, INTRAGRP, DIGIT0, DIGIT1, DTI, TES, TRC, ALTNCOS, LSCFN, ALTLSCFN, LSCINCPT, and ALSCINCP by data modification order (DMO).

Table IBNFXDS1 is automatically updated when a user creates an IBNTO or IBNT2 trunk group with a card code of DS1FXO in the trunk subgroup table TRKSGRP.

When an IBNTO or IBNT2 trunk group that has a DS1FXO card code in table TRKSGRP is created, examine table IBNFXDS1 to alter the trunk seize sequence.

ISDN user part (ISUP) IBN trunks are datafilled in the same manner as basic IBN trunks.

An ISUP IBN trunk group must have the values for the fields as listed in the following table.

(Sheet 1 of 2)

Field name	Value	Notes
DISCTSEL	0	ISUP trunks currently use 200-ms disconnect filter timing.
DTI	N	Digit collection is not supported.

(Sheet 2 of 2)

Field name	Value	Notes
TES	N	Toll essential service is not supported.
FDN	N	FX toll denied service is not supported.
FDV	N	FX toll diverted service is not supported.
FLASH	N	Flash capability is not supported.
DPX	N	Data path loop extension is not supported.
PREEMPT	N	For Northern Telecom use only.
MTR	N	Meter reception is not supported.
AIODOPT	N	Automatic identification of outward dialing (AIOD) is not supported

After table TRKSGRP is datafilled, the Digital Multiplex System (DMS) switch rejects any changes made to the above fields for the corresponding entry in table TRKGRP.

The entry in table TRKSGRP associated with the ISUP IBN trunk group must have field SIGDATA datafilled with a value of ISUP that identifies the trunk group as being an ISUP IBN trunk group.

For a specific trunk group, it is not permitted to have one trunk subgroup datafilled with ISUP signaling and the other datafilled with non-ISUP signaling.

The DMS switch rejects the TRKSGRP tuple for ISUP IBN trunks that do not have appropriate data in table TRKGRP.

The following error message is output to indicate any datafill errors in tables TRKGRP and TRKSGRP:

```
TUPLE IS NOT ACCEPTABLE FOR ISUP SIGNALING
```

After table TRKSGRP is datafilled, table ISUPDEST must be datafilled in order to identify the routeset associated with the ISUP IBN trunk subgroup.

After table ISUPDEST is datafilled, trunks can be added to table TRKMEM in the normal manner.

TRKGRP type IBNTI (continued)

Table C7TRKMEM must be datafilled to associate the ISUP IBN trunks with a circuit identification code.

See table TRKGRP for trunk group types that describe the other formats.

Primary rate access (PRA) ISDN trunks are datafilled in much the same manner as trunk group type IBNT2.

The entry in table TRKSGRP associated with the PRA IBN trunk group must have field SIGDATA datafilled with a value of ISDN that identifies the trunk group as being an ISUP IBN trunk group.

The trunk group entry for a PRA IBN trunk group has the option logical terminal identifier (LTID) datafilled automatically. Option LTID is a read-only field used to display the logical terminal group (LTGRP) and logical terminal number (LTNUM) that have been mapped to this trunk group through table LTMAP.

The following error message appears if an attempt is made to change option LTID:

```
LTID IS READ ONLY AND UPDATED BY LTMAP
```

When deleting a PRA trunk group, the following error message appears if LTID is still mapped to table LTMAP:

```
TUPLE REFERRED TO BY ANOTHER TABLE
```

When changing an IBN PRA tuple, the following error message appears if unsupported fields are changed after ISDN has been set as the signaling type in table TRKSGRP:

```
DATAFILL IN TABLE TRKGRP IS NOT ACCEPTABLE FOR ISDN SIGNALING
```

A PRA IBN trunk group must have the values for the fields as listed in the following table.

PRA IBN trunk group field values (Sheet 1 of 2)

Field name	Value	Notes
SELSEQ	ASEQ or DESQ	ASEQ and DSEQ are the only selection sequences supported.
SUPV	ANSDISC	Only answer disconnect service is supported.

PRA IBN trunk group field values (Sheet 2 of 2)

Field name	Value	Notes
DISCTSEL	0	PRA trunks currently use 20-ms disconnect filter timing.
DIGIT0	N	Regenerated digits are not supported.
DIGIT1	N	Regenerated digits are not supported.
DTI	N	Digit collection is not supported.
TES	N	Toll essential service is not supported.
IGA	N	No longer used.
FDN	N	FX toll denied service is not supported.
FDV	N	FX toll diverted service is not supported.
FLASH	N	Flash capability is not supported.
DPX	N	Data path loop extension is not supported.
PREEMPT	N	For Northern Telecom use only.
AIODOPT	N	AIOD is not supported.

NETINFO translations (NETXLA)

This feature provides enhancements to IBN ISUP signaling between a DMS-250 switch and a Meridian SL-100 switch, and between two Meridian SL-100 switches.

Such enhancements include:

- the mapping of satellite information into and out of the Nature-of-connection indicators parameter of the initial address message (IAM)
- the use of parameter NETINFO of the IAM by translations
- NCOS mapping
- the generation of parameter NETINFO for calls originating over IBN offnet access trunks

TRKGRP type IBNTI (continued)

Functional description

This section provides table TRKGRP datafill information for group type IBNTI. Group type IBNTI is used for incoming Integrated Business Network (IBN) trunks.

Refer to the previous section, “Overview of Integrated Business Network (IBN) trunk groups", for related information.

Datafill sequence and implications

Tables BCDEF and TRIGGRP must be datafilled before table TRKGRP type IBNTI.

Refer to the “Datafill sequence" section of table TRKGRP (prior to the group type specific sections) for additional information concerning datafill sequence.

Datafill

The following table lists datafill for table TRKGRP type IBNTI.

Field descriptions (Sheet 1 of 7)

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 the following subfields: GRPTYP, TRAFSNO, PADGRP, NCCLS, CUSTNAME, SUBGRPNO, NCOS, BILLDN, SUPV, DISCTSEL, INTRAGRP, DIGIT0, DIGIT1, DTI, TES, CDR, SMDR, TRC, ALTNCOS, TRKDSR, PREEMPT, AIODOPT, REORIG, OFFNETOPT, CALLCHR, COFFTYP, and OPTIONS.
	GRPTYP	IBNTI	*Trunk group type* Enter IBNTI to specify that the trunk group type is incoming Integrated Business Network (IBN).

Field descriptions (Sheet 2 of 7)

Field	Subfield or refinement	Entry	Explanation and action
	TRAFSNO	numeric (10 to 12 or 0)	*Traffic separation number* Enter the traffic separation number (10 to 127) assigned to the trunk group in table TFANINT. If not required, enter 0 (zero). Incoming and outgoing traffic separation numbers 1 to 9 should be reserved for generic traffic separation numbers. Entries outside the indicated range are not valid. Refer to table TFANINT for more information.
	PADGRP	alphanumeric (1 to 5 characters)	*Pad group* Enter the name of the pad group assigned to the trunk group in table PADDATA.
	NCCLS	NCBN, NCID, NCIM, NCIT, NCLT, NCOF, NCON, NCOT, NCRT, NCTC, or NOSC	*Operational measurements no-circuit class* Enter the operational measurements (OM) no-circuit class to indicate which OM register, in OM groups OFZ2 and SOTS, is to be incremented when treatment GNCT (generalized no-circuit) occurs. Enter NCRT as the no-circuit class. Refer to table TRKGRP and the *Operational Measurements Reference Manual* for additional information.
	CUSTNAME	alphanumeric (1 to 16 characters)	*Customer group name* Enter the name assigned to the customer group to which the trunk group belongs.
	SUBGRPNO	numeric (0 to 7)	*Subgroup number* Enter the subgroup number of the attendant consoles (AC) to which all attendant calls must be routed.
	NCOS	numeric (0 to 255)	*Network class of service* Enter the network class of service (NCOS) number assigned to the trunk group.

TRKGRP type IBNTI (continued)

Field descriptions (Sheet 3 of 7)

Field	Subfield or refinement	Entry	Explanation and action
	BILLDN	numeric (maximum 11 digits) or N	*Billing directory number* If no incoming digits are to be received (seizure only), enter the directory number (DN), station number, or attendant access code to which translation is to be routed. If the trunk group is configured 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 to be billed. If the trunk group is configured to receive incoming digits and no billing is required, enter N (no). (For advanced business services (ABSK) only) For analog channel-associated signaling (CAS) trunks, the directory number (DN) datafilled in field BILLDN is used as the originating DN to perform all screening functions provided by table DNSCRN and the FEATINFO VALIDATE selector in universal translations. In addition, the DN datafilled in field BILLDN is used as the originating DN in the calling party number (CPN) that is sent to the terminating office. The outpulsing of this CPN is available only on NCCI#7 V2 and ANSI7+ trunks. Presentation of the DN to the called party is controlled by the Calling Line Identification Presentation (CLIP) option. See “Calling Line Identification Presentation" in this section for more details.
	SUPV	ANSDISC DISCONLY FAKEANS or NODISC	*Supervision* Enter the type of supervision required: ANSDISC (answer disconnect), DISCONLY (disconnect only), FAKEANS (fake answer) or NODISC (no disconnect).
	DISCTSEL	numeric (0 to 3)	*Disconnect timing selector* Enter the disconnect timing for the trunk group: 0 (200 ms), 1 (400 ms), 2 (600 ms) or 3 (800 ms).

TRKGRP type IBNTI (continued)

Field descriptions (Sheet 4 of 7)

Field	Subfield or refinement	Entry	Explanation and action
	INTRAGRP	Y or N	*Intragroup* Enter Y (yes) if the call is intragroup. Otherwise, enter N (no).
	DIGIT0	alphanumeric (0 to 9, B, C, D, E, F, or N)	*Digit 0* If one or two digits are to be prefixed to the incoming digits, enter the first (least significant) digit to be prefixed. If no digits are to be prefixed to the incoming digits, enter N.
	DIGIT1	alphanumeric (0 to 9, B, C, D, E, F, or N)	*Digit 1* If two digits are to be prefixed to the incoming digits, enter the second (most significant) digit to be prefixed. If only one or no digits are to be prefixed to the incoming digits, enter N.
	DTI	Y or N	*Dial tone incoming* If a second dial tone is to be sent to the originator of an incoming call, enter Y. Otherwise, enter N. ***Note:*** If field ISTARTSG in table TRKSGRP is set to value IM, the value of field DTI cannot be changed from Y to N.
	TES	Y or N	*Toll essential service* If the trunk group is toll essential, enter Y. If the trunk group is not toll essential, enter N.
	CDR	Y or N	*Call detail recording* If all incoming calls are to be recorded using the CDR format, enter Y. If calls are not to be recorded, enter N.
	SMDR	Y or N	*Station message detail recording* If the SMDR records are to be generated for incoming calls, enter Y. If records are not required, enter N.

TRKGRP type IBNTI (continued)

Field descriptions (Sheet 5 of 7)

Field	Subfield or refinement	Entry	Explanation and action
	TRC	numeric (0 to 7)	*Terminating restriction code* Enter the terminating restriction code assigned to the incoming side of the trunk group.
	ALTNCOS	numeric (0 to 255)	*Alternate class of service* Enter the alternate network class of service number that is used when feature BV0557 (Attendant Control of Trunk Group Access) is activated.
	TRKDSR	Y or N	*Trunk distinctive ringing* If the trunk is required to provide distinctive ringing, enter Y. If distinctive ringing is not required, enter N.
	PREEMPT	N	Enter N in this field (Northern Telecom use only).
	AIODOPT	see subfield	*Automatic identification of outward dialing options* This field consists of subfield AIOD.
	AIOD	Y or N	*Automatic identification of outward dialing* If the AIOD service is required, enter Y and datafill refinement AIODGRP. Otherwise, enter N.
	AIODGRP	alphanumeric (1 to 16 characters) or blank	*Automatic identification of outward dialing CLLI* If field AIOD contains Y, enter the CLLI of the datalink for the IBN trunk group as datafilled in table AIODGRP. If field AIOD contains N, leave this field blank.
	REORIG	Y or N	*Reorigination* Enter Y if call origination is allowed on incoming calls on this trunk group. Otherwise, enter N.

TRKGRP type IBNTI (continued)

Field descriptions (Sheet 6 of 7)

Field	Subfield or refinement	Entry	Explanation and action
	OFFNETOPT	see subfield	*OFFNET options* This field consists of subfield OFFNET.
	OFFNET	Y or N	*OFFNET* If the trunk is used for offnet access, enter Y and datafill refinement OFFNTACC. Otherwise, enter N.
	OFFNTACC	FGA, FGB, FGD, IBN, NSSFGD, or VPN	*OFFNET access* If the entry in field OFFNET is Y, datafill this field and associated refinements to specify the signaling protocol. For feature group A protocol, enter FGA and datafill refinements DIALPLAN and OFNTOPT. For feature group B protocol, enter FGB and datafill refinements ANIDIGS, DIALPLAN, and OFNTOPT. For feature group D (FGD stand-alone software loaded) protocol, enter FGD and datafill refinements ANIDIGS and ANISCREN. Meridian SuperNode uses FGD stand-alone software. Fields ANIDIGS and ANISCREN are not prompted when FGD is specified for VPN or ISDN user part (ISUP) configurations. For Integrated Business Network protocol, enter IBN and datafill refinements DIALPLAN and OFNTOPT. An entry of IBN allows non-FGA, and -FGB trunks to have access to Network Services Software (NSS) and the various trunk features specific to NSS.

TRKGRP type IBNTI (continued)

Field descriptions (Sheet 7 of 7)

Field	Subfield or refinement	Entry	Explanation and action
			For BCS31, an entry of IBN can be used to associate the trunk with a specific dialing plan. Field DIALPLAN must be datafilled for the entry of IBN to implement this feature. For Network Services Software feature group D protocol, enter NSSFGD and datafill refinements ANIDIGS, CASUAL, IDPRTRAN, and OFNTOPT. For virtual private network protocol, enter VPN. There are no refinements for this entry value. An entry of VPN is valid for only Australian telephone user part (ATUP) trunks.
	CALLCHR	alphanumeric (1 to 16 characters) or blank	*Call characteristic* For all tuples, enter up to eight characteristic names that are assigned to the trunk group, and end the vector with $. For valid entry values, refer to field CALLCHR in table CALLCHR. If no call characteristics are required, leave this field blank.
	COFFTYP	NATL	*Connected office type* For all tuples, enter NATL for national trunks.
	OPTIONS	ANIFAIL, ANIREC, BCNAME, CLIP, DEFLTCLI, BI_UNAVAIL, FACTYPE, NETXLA, NOACCMP, SMDRITC, TRKLSC, or WIDEBAND	*Options* For all tuples, this field consists of up to 15 multiples of subfield option and refinements. Enter the list of options and associated subfields assigned to the trunk group. See the appropriate option and refinement name in table 10 and subsequent tables for more information for its definition. Each option and its refinement must be separated by a blank space. Use as many records as required to complete the list of options and associated refinements. If the option is not provided, no input is required for that option. Enter a $ (dollar sign) to indicate the end of the tuple.

OFFNTACC = FGA

If the entry in field OFFNTACC is FGA, datafill refinements DIALPLAN and OFNTOPT as described in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	DIALPLAN	alphanumeric (1 to 16 characters) or DEFAULT	*Dial plan* Enter dial plan names associated with this incoming trunk.
	OFNTOPT	ANIDELV CONNGNPA orREGION	*OFFNET options* Enter the offnet option. To allow terminating agents to use automatic number identification (ANI) information, enter ANIDELV. No additional datafill is required for this option. For the connecting numbering plan area (NPA) option, enter CONNGNPA and datafill refinement CONNGNPA. For the region option, enter REGION and datafill refinement REGION.
	CONNGNPA	numeric (3 digits)	*Connecting numbering plan area* If the value in field OFNTOPT is CONNGNPA, enter the NPA of the connecting switch adjoining the NSS PTS agent. For FGB agents, field CONNGNPA is used to pad the seven-digit ANI received by the FGB protocol with a three-digit NPA, resulting in a complete ten-digit calling party number (ANI).
	REGION	numeric (0 to 2047)	*Region* If the value in field OFNTOPT is REGION, enter the region code of the trunk.

TRKGRP type IBNTI (continued)

OFFNTACC = FGB

If the entry in field OFFNTACC is FGB, datafill refinements ANIDIGS, DIALPLAN, and OFNTOPT as described in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	ANIDIGS	Y or N	*Automatic number identification digits* Enter Y (yes) if an automatic number identification (ANI) is to be received. Otherwise, enter N (no).
	DIALPLAN	alphanumeric (1 to 16 characters) or DEFAULT	*Dial plan* Enter dial plan names associated with this incoming trunk.
	OFNTOPT	ANIDELV CONNGNPA orREGION	*OFFNET options* Enter the OFFNET option. To allow terminating agents to use ANI information, enter ANIDELV. For the connecting numbering plan area (NPA) option, enter CONNGNPA and datafill refinement CONNGNPA. For the region option, enter REGION and datafill refinement REGION.
	CONNGNPA	numeric (3 digits)	*Connecting numbering plan area* If the value in field OFNTOPT is CONNGNPA, enter the NPA of the connecting switch adjoining the NSS PTS agent. For FGB agents, field CONNGNPA is used to pad the seven-digit ANI received by the FGB protocol with a three-digit NPA, resulting in a complete ten-digit calling party number (ANI).
	REGION	numeric (0 to 2047)	*Region* If the value in field OFNTOPT is REGION, enter the region code of the trunk.

OFFNTACC = FGD

If the entry in field OFFNTACC is FGD, datafill refinements ANIDIGS and ANISCREN as described in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	ANIDIGS	Y or N	*Automatic number identification digits* Enter Y (yes) if an automatic number identification (ANI) is to be received. Otherwise, enter N (no).
	ANISCREN	Y or N	*Automatic number identification screening* Enter Y if ANI screening is required for calls placed across IBN PTS FGD trunks. Otherwise, enter N.

OFFNTACC = IBN

If the entry in field OFFNTACC is IBN, datafill refinements DIALPLAN and OFNTOPT as described in the following table.

Field descriptions for conditional datafill (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	DIALPLAN	alphanumeric (1 to 16 characters) or DEFAULT	*Dial plan* Enter dial plan names associated with this incoming trunk.
	OFNTOPT	ANIDELV CONNGNPA orREGION	*OFFNET options* Enter the OFFNET option. To allow terminating agents to use automatic number identification (ANI) information, enter ANIDELV. For the connecting numbering plan area (NPA) option, enter CONNGNPA and datafill refinement CONNGNPA. For the region option, enter REGION and datafill refinement REGION.

TRKGRP type IBNTI (continued)

Field descriptions for conditional datafill (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	CONNGNPA	numeric (3 digits)	*Connecting numbering plan area* If the value in field OFNTOPT is CONNGNPA, enter the NPA of the connecting switch adjoining the NSS PTS agent. For FGB agents, field CONNGNPA is used to pad the seven-digit ANI received by the FGB protocol with a three-digit NPA, resulting in a complete ten-digit calling party number (ANI).
	REGION	numeric (0 to 2047)	*Region* If the value in field OFNTOPT is REGION, enter the region code of the trunk.

OFFNTACC = NSSFGD

If the entry in field OFFNTACC is NSSFGD, datafill refinements ANIDIGS, CASUAL, IDPRTRAN, OFNTOPT, and DIALPLAN as described in the following table.

Field descriptions for conditional datafill (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	ANIDIGS	Y or N	*Automatic number identification digits* Enter Y (yes) if an automatic number identification (ANI) is to be received. Otherwise, enter N (no).
	CASUAL	Y or N	*Casual calls* Enter Y if casual calls are allowed on this trunk. Otherwise, enter N.
	IDPRTRAN	alphanumeric (4 characters)	*Identification pretranslator* Enter the pretranslator name used in translation of the ANI information digits.

Field descriptions for conditional datafill (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	OFNTOPT	ANIDELV CONNGNPA orREGION	*OFFNET options* Enter the OFFNET option. To allow terminating agents to use ANI information, enter ANIDELV. For the connecting numbering plan area (NPA) option, enter CONNGNPA and datafill refinement CONNGNPA. For the region option, enter REGION and datafill refinement REGION.
	CONNGNPA	numeric (3 digits)	*Connecting numbering plan area* If the value in field OFNTOPT is CONNGNPA, enter the NPA of the connecting switch adjoining the NSS PTS agent. For FGB agents, field CONNGNPA is used to pad the seven-digit ANI received by the FGB protocol with a three-digit NPA, resulting in a complete ten-digit calling party number (ANI).
	REGION	numeric (0 to 2047)	*Region* If the value in field OFNTOPT is REGION, enter the region code of the trunk.
	DIALPLAN	alphanumeric (1 to 16 characters) or DEFAULT	*Dial plan* Enter dial plan names associated with this incoming trunk.

TRKGRP type IBNTI (continued)

For all tuples

For all tuples, datafill fields CALLCHR, COFFTYP, and OPTIONS as described in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	CALLCHR	alphanumeric (1 to 16 characters) or blank	*Call characteristic* Enter up to eight characteristic names that are assigned to the trunk group, and end the vector with $. For valid entry values, refer to field CALLCHR in table CALLCHR. If no call characteristics are required, leave this field blank.
	COFFTYP	NATL	*Connected office type* Enter NATL for national trunks.
	OPTIONS	see subfield	*Options* This field consists of up to 15 multiples of subfield option and refinements. Enter the list of options and associated subfields assigned to the trunk group. See the appropriate option and refinement name for its definition. Each option and its refinement must be separated by a blank space. Use as many records as required to complete the list of options and associated refinements. If the option is not provided, no input is required for that option. Enter a $ (dollar sign) to indicate the end of the tuple.

ANI failure (ANIFAIL)

If the trunk group has the automatic number identification (ANI) failure option, datafill subfield OPTION and refinements ANIFAIL and TRMT as described in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	ANIFAIL	*Option* Enter ANIFAIL.
	ANIFAIL	CONT or NOCONT	*Automatic number identification failure* If the call is to continue when no ANI digits are received on the trunk, enter CONT. If the call is to discontinue when no ANI digits are received on the trunk, enter NOCONT and datafill refinement TRMT.
	TRMT	alphanumeric (1 to 4 characters)	*Treatment* If the entry in field ANIFAIL is NOCONT, enter the treatment name found in field TREATMT of table TMTCNTL.TREAT.

TRKGRP type IBNTI (continued)

ANI received (ANIREC)

If the trunk group requires option ANIREC, datafill subfield OPTION and refinement ANIREC as described in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	ANIREC	*Option* Enter ANIREC.
	ANIREC	ALLOWED, ALWAYS, or NEVER	*Automatic number identification received* Enter ALLOWED if the calling number must always be requested on the trunk, if required. Enter ALWAYS if the calling number must always be requested on the trunk. Enter NEVER if the calling number must never be requested on the trunk. ***Note:*** The ANIREC option can be datafilled in table TRKGRP for any IBN trunk, but it is valid only for IBN trunks using FST as a signaling data selector in table TRKSGRP.

Bearer capability name (BCNAME)

If the trunk group is to be assigned option BCNAME, datafill subfield OPTION according to the description in the following table. If a bearer capability (BC) is not datafilled for an IBNTI type trunk group, the office default bearer capability defined by parameter DEFAULT_BEARER_CAPABILITY (either SPEECH or 3_1KHZ) applies. Refer to table OFCENG for more information on this parameter. If the datafilled BC is the actual office default (SPEECH or 3_1KHZ) the BC option

does not appear when listing the TRKGRP tuple. An office default BC is not listed by the TRKGRP read procedures.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	BCNAME	*Option* Enter the bearer capability option BCNAME.
	BCNAME	DATAUNIT SPEECH VOICE_DAT A3_1KHZ 56KDATA 64KDATA 64KRES 64KX25 or 7_KHZ	*Bearer capability name* Enter a bearer capability name previously datafilled in field BCNAME of table BCDEF. The entry can be one of the default entries listed or a user-defined entry.

Block Serving Carrier ID (BLK_SCI)

If the trunk group requires option BLK_SCI, datafill subfield OPTION as described in the following table. This option prevents the serving carrier optional parameter from being sent over ANSI ISUP trunks.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	BLK_SCI	*Option* Enter the block serving carrier ID option BLK_SCI.

Calling Line Identification Presentation (CLIP)

If the trunk group requires option CLIP, datafill field OPTION as described in the following table. This option provides Calling Line Identification Presentation (CLIP) and Calling Line Identification Restriction (CLIR) in the Australian Telephone User Part (ATUP) protocol on the DMS-100 and DMS-200 switches. It also provides CLIP and CLIR in the European market for the British Telephony User Part (BTUP) protocol on the DMS-100 switch. At the terminating office, option CLIP enables calls routed over ATUP or BTUP trunks to display the calling party address digits at a terminating station. If the option CLIP is not datafilled, CLI presentation is disabled by default.

TRKGRP type IBNTI (continued)

The originating office does not support the transmission of CLIP/CLIR signaling over ATUP.

For the Japan market, incoming analog CAS trunks, because they use analog signaling, do not supply an originating DN, but for ABSK the DN entered in subfield BILLDN in this table is used as the originating DN, and is sent over the outgoing ISUP trunk (ANSI7+ and NCCI#7 V2). More specifically, the contents of subfield BILLDN are used to set the Address Information (AI) field of the CPN.

Datafilling the CLIP option sets the Address Presentation Restriction Indicator (APRI) field of the CPN to Presentation Allowed. This allows the terminating office to present the contents of the AI field to the called party as the originating DN. If the CLIP option is not datafilled, then the APRI field of the CPN is set to Presentation Restricted and the terminating office cannot present the contents of the AI field to the called party. If BILLDN is datafilled with N (no DN), no CPN is sent, and the CLIP option has no effect.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	CLIP	*Option* Enter CLIP.

Default calling/called line identification (DEFLTCLI)

If the trunk group has option DEFLTCLI, datafill field OPTION as described in the following table. This option is supported on IBNTI trunks on a DMS-100 or DMS-200 switch for the European market. (Option DEFLTCLI is visible only when subsystem DEFCLISB is present in the load.)

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	DEFLTCLI	*Option* Enter the default directory number (DN) option DEFLTCLI.
	DEFLTCLI	numeric (maximum 10 digits, 0 to 9)	*Default calling/called line identification* Enter the default CLI.

Blocking Indicator for calling line identification (BI_UNAVAIL)

BI_UNAVAIL indicates whether the caller is able to withhold presentation of their Calling Line Identity (CLI) for incoming Channel Associated Signalling (CAS) and Digital Private Network Signalling System (DPNSS) trunks interworking to British Telephony User Part (BTUP) trunks. If BI_UNAVAIL is datafilled for an incoming DPNSS or CAS trunk, CLI is unavailable on the outgoing BTUP trunk provided that the CBI field of table TRKSGRP is set to Y.

The CBI field of table TRKSGRP determines whether the issued CLI will be available or unavailable on the outgoing BTUP trunk. CBI must be set to Y for BI_UNAVAIL to function. If it is set to N, CLI is automatically unavailable regardless of the BI_UNAVAIL setting.

This option is supported on IBNTI and IBNT2 trunks only. If the trunk group requires option BI_UNAVAIL, datafill OPTION as described in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	BI_UNAVAIL	*Option* Enter BI_UNAVAIL.

TRKGRP type IBNTI (continued)

Facility type (FACTYPE)

If the trunk group requires option FACTYPE, datafill subfield OPTION and refinement FACTYPE as described in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	FACTYPE	*Option* Enter the facility type option FACTYPE.
	FACTYPE	CCSA , ETS, FX, orTDMTT	*Facility type* Enter the facility type. Enter CCSA for the common control switching arrangement facility type. Enter ETS for the electronic tandem switched call facility type. Enter FX for the automatic flexible routing facility type. Enter TDMTT for the tandem tie trunk facility type.

Network information translations (NETXLA)

If the trunk group requires the NETINFO translations option NETXLA, datafill field OPTION as described in the following table. This option is applicable only to ISUP trunks.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	NETXLA	*Option* Enter NETXLA.

No modem pool access (NOACCMP)

If the trunk group is not allowed access to the modem pool, datafill subfield OPTION as described in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	NOACCMP	*No modem pool access* Enter NOACCMP.

Serving Carrier ID (SCI)

If the trunk group requires option SCI, datafill subfield OPTION and refinement SCI as described in the following table. This option applies only to the following signaling systems:

- AISUP
- ANSI
- ATUP
- DC5
- ETSI PRI
- I-ISUP
- TS14 PRI

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	SCI	*Option* Enter SCI.
	SCI	numeric (1000 to 30000)	*Serving carrier ID* Enter the trunk group serving carrier identification code.

Station Message Detail Recording for inbound toll calls (SMDRITC)

If the trunk group requires option SMDRITC, datafill subfield OPTION as described in the following table. If option SMDRITC is datafilled for a trunk group, then for each terminating station involved with the call, a separate station message detail recording (SMDR) extension record is generated

TRKGRP type IBNTI (continued)

detailing the duration of the call or the amount of time the call was present at that station.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	SMDRITC	*Option* Enter SMDRITC.

Trunk line screening code (TRKLSC)

If the trunk group requires option TRKLSC, datafill subfield OPTION as described in the following table. This option allows for the overriding of the line screening codes in order to use the customer group of the originator, instead of the customer group of the terminator.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	TRKLSC	*Option* Enter TRKLSC.

Wideband capability (WIDEBAND)

This option applies only if feature package NTXX34AA (IBN DWS ISUP-T1) is active. If the trunk group requires option WIDEBAND, datafill subfield OPTION and refinement WBGRPING as described in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	WIDEBAND	*Option* Enter WIDEBAND.
	WBGRPING	FIXED or FLOATING	*Wideband boundary preference* Datafill this field if the entry in field OPTION is WIDEBAND. Enter the wideband boundary preference. The value FIXED specifies that only the idle trunks within a specific time period are selected. This value is only valid for local exchange carriers (LEC). The value FLOATING specifies that any number of consecutive idle trunks in a trunk group are selected.

Datafill example

The following example shows sample datafill for table TRKGRP type IBNTI.

This example was datafilled in accordance with the following requirements:

- The trunk group is represented by the code NTBRAM in table CLLI.
- Traffic separation is not provided (TRAFSNO = 0).
- ACO is the name of the pad group assigned to the trunk group in table PADDATA.
- NCRT is the no-circuit class.
- The trunk group is assigned to subgroup 0 of customer group BNRMC.
- NCOS number 6 and alternate NCOS number 7 are assigned to the trunk group.
- LAMA recordings are not required on tandem calls.
- Answer disconnect supervision is required.
- 400-ms (entered as 1) disconnect timing is required
- The call is not an intragroup call.

TRKGRP type IBNTI (continued)

- The digit 7 is prefixed to the incoming digits.
- Only one or no digits are prefixed to the incoming digits.
- Dial tone is to be sent to the originator.
- Toll essential service is provided.
- A CDR record is required for all calls; field CDR is equal to Y and field SMDR is equal to N.
- Terminating restriction code 1 is assigned to the trunk group.
- The trunk group does not provide distinctive ringing.
- N is entered for field PREEMPT.
- AIOD is not required.
- Call origination is not allowed on calls incoming on this trunk group.
- The trunk is not to be used for offnet access.
- The call characteristic SAT is assigned.
- The connected office type is national (NATL).
- The facility type option FACTYPE with facility type tandem tie trunk (TDMTT) is assigned.

MAP display example for table TRKGRP type IBNTI

```
GRPKEY
            GRPINFO
_____________________________________________________

NTBRAM
            IBNTI 0 ACO NCRT BNRMC 0 6 N ANSDISC 1 N 7 N
             Y Y Y N 1 7 N N N N N SAT $ NATL FACTYPE
             TDMTT $
```

Table history

EUR008

Removed selector PRESEL from subfield OPTION in table TRKGRP type IBNTI, and datafilled in table TRKOPTS.

APC008

Added selector PRESEL to subfield OPTION.

Added options BLK_SCI and SCI to subfield OPTION.

EUR006

Added option BI_UNAVAIL.

NA004

Removed option AIN; table TRKAIN is used instead.

UK002

Added option DEFLTCLI and enabled option CLIP for the European market (design activity AE1383, “UK CLI Handling").

NA002

Added option CLIP. This option provides Calling Line Identification Presentation (CLIP) and Calling Line Identification Restriction (CLIR) in the Australian Telephone User Part (ATUP) protocol on the DMS-100 and DMS-200 switches.

CSP02

Removed option ISMDI (ISN Simplified Message Desk Interface).

BCS36

Added option AIN.

TRKGRP type IBNTO

IBN Outgoing Trunk Group Type

This section describes the table TRKGRP datafill for group type IBNTO. Group type IBNTO is used for outgoing Integrated Business Network (IBN) trunks.

Datafill sequence and implications

For group type IBNTO, field BCGRPNUM in table BCLIDGRP must be datafilled before table TRKGRP.

Refer to the section “Datafill sequence" in table TRKGRP for additional information concerning datafill sequence.

Datafill

The following table lists the datafill for table TRKGRP type IBNTO.

Field descriptions (Sheet 1 of 7)

Field	Subfield or refinement	Entry	Explanation and action
GRPKEY		see subfields	*Group key* This field consists of subfield CLLI.
	CLLI	alphanumeric (1 to 16 characters)	*Common language location identifier* Enter the common language location identifier (CLLI) 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, SUBGRP, SELSEQ, SUPV, DISCTSEL, INTRAGRP, LSCFN, ALTLSCFN, LSCINCPT, ALSCINCP, IGA, FDN, FDV, FLASH, PREEMPT, MTR, COFFTYP, and OPTIONS. Refer to section “General field information" in table TRKGRP for information on an alternate structure for this field that results from the datafill of table CUSTFLDS.
	GRPTYP	IBNTO	*Trunk group type* Enter IBNTO to specify that the trunk group type is outgoing Integrated Business Network (IBN).

TRKGRP type IBNTO (continued)

Field descriptions (Sheet 2 of 7)

Field	Subfield or refinement	Entry	Explanation and action
	TRAFSNO	numeric (10 to` 127 or 0)	*Traffic separation number* Enter the traffic separation number (10 to 127) assigned to the trunk group in table TFANINT. If a traffic separation number is not required, enter 0 (zero). Incoming and outgoing traffic separation numbers 1 to 9 should be reserved for generic traffic separation numbers. Refer to table TFANINT for more information.
	PADGRP	alphanumeric (1 to 5 characters)	*Pad group* Enter the name of the pad group assigned to the trunk group in table PADDATA.
	NCCLS	NCBN, NCID, NCIM, NCIT, NCLT, NCOF, NCON, NCOT, NCRT, NCTC, or NOSC	*Operational measurements no-circuit class* Enter the operational measurements (OM) no-circuit class to indicate which OM register, in OM groups OFZ2 and SOTS, is to be incremented when treatment GNCT (generalized no-circuit) occurs. Enter NCRT as the no-circuit class. Refer to table TRKGRP and the *Operational Measurements Reference Manual*, for additional information.
	CUSTNAME	alphanumeric (1 to 16 characters)	*Customer group name* Enter the name assigned to the customer group to which the trunk group belongs.
	SUBGRP	numeric (0 to 7)	*Subgroup number* Enter the subgroup number of the attendant consoles (AC) to which all attendant calls must be routed.

TRKGRP type IBNTO (continued)

Field descriptions (Sheet 3 of 7)

Field	Subfield or refinement	Entry	Explanation and action
	SELSEQ	ASEQ, CCWCTH, CNTLEVN, CNTLODD, CWCTH, DSEQ, LIDL, MIDL, or WIDEBAND	*Select sequence* If the trunk group type is IBNTO and the sequential selection feature is provided, enter ASEQ if sequential selection is in ascending order and DSEQ if it is in descending order of trunk member numbers in table TRKMEM. CCWCTH and CWCTH are not valid entries for trunk group IBNTO. CNTLEVN or CNTLODD are only used for Japan ISDN user part (ISUP). Enter CNTLEVN if the even-numbered circuit identification codes (CIC) are the controlling group. Enter CNTLODD if the odd-numbered CICs are the controlling group. CNTLODD and CNTLEVN use MIDL (most idle) for the controlling group of circuits in the trunk group and LIDL (least idle) for the noncontrolling group. Changing the selection algorithm to or from either CNTLEVN or CNTLODD is not allowed. The tuple, along with corresponding tuples in dependent tables, must be deleted and re-added in order to change the selection algorithm. If wideband trunk selection is allowed for primary rate interface (PRI) ISUP trunks, enter WIDEBAND and datafill refinements WBSELSEQ, WBGRPING, and WBSEARCH. The WIDEBAND entry value is only valid if feature package NTXX34AA (IBN DWS ISUP-T1) was purchased. Enter MIDL if sequential selection does not apply.

Field descriptions (Sheet 4 of 7)

Field	Subfield or refinement	Entry	Explanation and action
			Note: The selection sequence for an existing trunk group can be changed from ASEQ to DSEQ, or from DSEQ to ASEQ, if all the members are made installation busy (INB) or unequipped (UNEQ). The selection method for an existing trunk group cannot be changed. To change the selection method for an existing trunk group from ASEQ or DSEQ to MIDL or LIDL, define a new trunk group, as follows: create a new trunk group with the required trunk selection method, delete the individual trunks from the old trunk group, and add the trunks to the new trunk group.
	WBSELSEQ	ASEQ or DSEQ	*Wideband selection sequence* Datafill this field if the entry in field SELSEQ is WIDEBAND. Enter ASEQ to specify that the wideband trunks are selected in ascending order from the first idle trunk on the search list, or enter DSEQ to specify that they are selected in descending order from the last idle trunk on the search list. The order of trunks in the search list is determined by the order in which the trunk groups are datafilled in table TRKMEM.
	WBGRPING	FIXED or FLOATING	*Wideband boundary preference* Datafill this field if the entry in field SELSEQ is WIDEBAND. Enter the wideband boundary preference. The value FIXED specifies that only the idle trunks within a specific time slot frame are selected. This value is only valid for local exchange carriers (LEC). The value FLOATING specifies that any number of consecutive idle trunks in a trunk group are selected.

TRKGRP type IBNTO (continued)

Field descriptions (Sheet 5 of 7)

Field	Subfield or refinement	Entry	Explanation and action
	WBSEARCH	BESTFIT or FIRSTFIT	*Wideband search* Datafill this field if the entry in field SELSEQ is WIDEBAND. Enter the wideband search algorithm. The value BESTFIT finds the smallest segment of idle channels (DS-0s) among trunks (DS-1s) within a trunk group to accommodate a wideband call, according to the boundary preference (FIXED or FLOATING) specified. FIRSTFIT finds the first segment of idle DS-0s that can accommodate a wideband call, according to the boundary preference specified.
	SUPV	ANSDISC, DISCONLY, FAKEANS, or NODISC	*Supervision* Enter the type of supervision required: ANSDISC (answer disconnect), DISCONLY (disconnect only), FAKEANS (fake answer), or NODISC (no disconnect).
	DISCTSEL	numeric (0 to 3)	*Disconnect timing selector* Enter the disconnect timing for the trunk group: 0 (200 ms), 1 (400 ms), 2 (600 ms), or 3 (800 ms).
	INTRAGRP	Y or N	*Intragroup* Enter Y (yes) if call is intragroup. Otherwise, enter N (no).
	LSCFN	numeric (0 to 255)	*Line screening code flag number* Enter the line screening code flag number assigned to the trunk group.
	ALTLSCFN	numeric (0 to 255)	*Alternate line screening code flag number* Enter the alternate line screening code flag number assigned to the trunk group.
	LSCINCPT	numeric (0 to 255)	*Line screening code flexible intercept* Enter the treatment number in table IBNTREAT to which a station, incoming trunk, or two-way trunk is routed when the call is blocked by line screening.

TRKGRP type IBNTO (continued)

Field descriptions (Sheet 6 of 7)

Field	Subfield or refinement	Entry	Explanation and action
	ALSCINCP	numeric (0 to 63)	*Alternate line screening code flexible intercept* Enter the treatment number in table IBNTREAT to which a station, incoming trunk, or two-way trunk is routed when the feature BV0490 (Attendant Control of Trunk Group Access) is activated and the call is blocked by alternate line screening.
	IGA	Y or N	*Ignore answer* This field is not required for group type IBNT0. Enter N.
	FDN	Y or N	*Feature expansion toll denied* If a toll call is to be routed to toll denied treatment on receipt of a reversal from the far end, enter Y. Otherwise, enter N.
	FDV	Y or N	*Feature expansion toll diverted* If a toll call is to be routed to the intercept key and lamp on the attendant console (AC) on receipt of a reversal from the far end, enter Y. Otherwise, enter N.
	FLASH	Y or N	*Flash* Enter Y for the Attendant Recall Flash Trunks feature (non-ISUP). On trunk-to-trunk connections, the incoming trunk flash message is treated as a request to be queued for the first available attendant console in the customer group. A Y entry does not allow an ougoing trunk to flash. Otherwise, enter N.
	PREEMPT	N	*Preempt* Enter N. This field is for Nortel use only.

TRKGRP type IBNTO (continued)

Field descriptions (Sheet 7 of 7)

Field	Subfield or refinement	Entry	Explanation and action
	MTR	Y or N	*Meter reception* If meter reception is required on outgoing trunks that have entry MFESCP in field CARDCODE of table TRKSGRP, enter Y. If meter reception is not required on outgoing trunks that have entry MFESCP in field CARDCODE, or the trunk card code is other than MFESCP in field CARDCODE of table TRKSGRP, enter N.
	COFFTYP	NATL	*Connected office type* Enter NATL for national trunks.
	OPTIONS	see subfield	*Options* This field is a vector that consists of up to eleven multiples of subfield OPTION and refinements. Datafill this vector to specify the list of options and associated refinements that are assigned to the trunk group. See the appropriate option and refinement name (if applicable) for its definition. Each option and associated refinement must be separated by a blank space. Use as many records as required to complete the list of options and associated refinements. If an option is not provided, no input for that option is required. Enter $ to indicate the end of the tuple.

Automatic number identification send (ANISEND)

If the trunk group requires option ANISEND, datafill field OPTION and refinement ANISEND described in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	ANISEND	*Option* Enter ANISEND.
	ANISEND	ALLOWED, ALWAYS, or NEVER	*Automatic number identification send* Enter ALLOWED if the calling number is sent when required. Enter ALWAYS if the calling number is always sent on the trunk. Enter NEVER if the calling number is never sent on the trunk. ***Note:*** The ANISEND option can be datafilled in table TRKGRP for any IBN trunk, but it is only valid for IBN trunks using FST as a signaling data selector in table TRKSGRP.

Bulk calling line identification (BCLID)

If the trunk group requires option BCLID, datafill field OPTION and refinement BCGRPNUM as described in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	BCLID	*Option* Enter BCLID.
	BCGRPNUM	numeric (0 to 2047)	*Bulk calling line identification group number* Enter the BCLID group number.

TRKGRP type IBNTO (continued)

Broadcast call remote (BCREMOTE)

If the trunk group requires option BCREMOTE, datafill field OPTION as described in the following table. This option applies only to ISDN user part (ISUP) trunks.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	BCREMOTE	*Option* Enter BCREMOTE.

Block Serving Carrier ID (BLK_SCI)

If the trunk group requires option BLK_SCI, datafill subfield OPTION as described in the following table. This option prevents the serving carrier optional parameter from being sent over ANSI ISUP trunks.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	BLK_SCI	*Option* Enter the block serving carrier ID option BLK_SCI.

Call characteristic (CALLCHR)

If the trunk group requires option CALLCHR, datafill field OPTION and refinement CALLCHR as described in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	CALLCHR	*Option* Enter CALLCHR.
	CALLCHR	DIGDATA or SAT	*Call characteristic* This field specifies the call characteristic. Enter DIGDATA for the digital data call characteristic. Enter SAT for the satellite call characteristic.

Calling line identification (CLID)

IBN trunks provide the CLID option. The CLID option allows the customer premise equipment (CPE) to know the telephone number of the calling party. When the user enters this option, the system prompts for one of the following control values: CPNONLY, CPNREST, CPNPREF, and CHGONLY.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	CLID	*Option* Enter CLID or $.
	CLID	CPNONLY, CPNREST, CPNPREF, CHGONLY	Enter CPNONLY for the calling party to populate the outgoing CLID regardless of the Presentation Indicator (PI). If a calling party number is not available, no CLID digits are outpulsed. Enter CPNREST for the calling party number to populate the outgoing CLID when the PI for the calling party number is set to ALLOWED. If a calling party number is not available, or the PI is set to RESTRICTED or UNAVAILABLE, then no CLID digits are outpulsed. Enter CPNPREF for the calling party number to populate the outgoing CLID regardless of the PI. If a calling party number is not available, the received or derived charge number is used to populate the outgoing CLID digits. If neither a calling party number or a charge number is available, no CLID digits are outpulsed. Enter CHGONLY for the received or derived charge number to populate the outgoing CLID digits. If the charge number is not available, no CLID digits are outpulsed.

Calling line identification presentation (CLIP)

If the trunk group requires option CLIP, datafill field OPTION as described in the following table. This option provides Calling Line Identification Presentation (CLIP) and Calling Line Identification Restriction (CLIR) in the Australian Telephone User Part (ATUP) protocol on the DMS-100 and DMS-200 switches. It also provides CLIP and CLIR in the European market for BTUP (UK variant of national user part) protocol for on the DMS-100

TRKGRP type IBNTO (continued)

switch. At the terminating office, option CLIP enables calls routed over ATUP or BTUP trunks to display the calling party address digits at a terminating station. If the option CLIP is not datafilled, CLI presentation is disabled by default. The originating office does not support the transmission of CLIP/CLIR signalling over ATUP.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	CLIP	*Option* Enter CLIP.

Default directory number (DEFLTDN) or default CLI DEFLTCLI

If the trunk group has option DEFLTDN, datafill field OPTION and refinement DEFLTDN as described in the following table. This option is supported on IBNTO trunks on a DMS-100 or DMS-200 switch for the Australian market. (Option DEFLTDN is visible only when subsystem DEFDNSUB is present in the load.)

Note: In the European market, datafill this option as DEFLTCLI for IBNTO, IBNT2, and IBNTI trunks. (Subsystem UKCLISB must be present in the load.)

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	DEFLTDN	*Option* Enter the default directory number (DN) option DEFLTDN. ***Note:*** In the European market, datafill DEFLTCLI instead of DEFLTDN.
	DEFLTDN	numeric (up to 10 digits, 0 to 9)	*Default directory number* Enter the default DN.

Dialed number identification service (DNIS)

IBN trunks offer the DNIS option. The DNIS option delivers additional call information to the CPE when a call requires DNIS.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	DNIS	*Option* Enter DNIS or $.

Facility type (FACTYPE)

If the trunk group requires option FACTYPE, datafill field OPTION and refinement FACTYPE as described in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	FACTYPE	*Option* Enter the facility type option FACTYPE.
	FACTYPE	CCSA , ETS, FX, or TDMTT	*Facility type* This field specifies the facility type. Enter CCSA for the common-control-switching-arrangement facility type. Enter ETS for the electronic-tandem-switched-call facility type. Enter FX for the automatic-flexible-routing facility type. Enter TDMTT for the tandem-tie-trunk facility type.

TRKGRP type IBNTO (continued)

Malicious call hold (MCH)

This option is supported on DC5 and TS14 trunks for the Australian market. If MCH is activated on this trunk group, datafill field OPTION as described in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	MCH	*Option* Enter MCH.

Network information translation (NETXLA)

This option is only applicable to United Kingdom (UK) variants of national user part (BTUP) trunks and is market specific. Addition of this option to non-BTUP trunks has no effect on calls made over those trunks. If the trunk group requires option NETXLA, datafill field OPTION as described in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	NETXLA	*Option* Enter NETXLA.

Digits to be outpulsed (OUTSCHM)

IBN trunks offer the OUTSCHM option. When the user enters this option, the system prompts for a control value from one to eight. The range contains

formatting to allow table control prompting to provide assistance in selecting the outpulsing scheme value.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	OUTSCHM	*Option* Enter OUTSCHM or $.
	OUTSCHM	1 = *CLID ADDR*, 1 2 = *ADDR*, 2 3 = * II CLID* ADDR, 3 4 = II*CLID*ADDR*, 4 5 = KP II CLID ST KP ADDR ST, 5 6 = KP II CLID ST, 6 7 = KP ADDR ST, 7 8 = KP ADDR ST KP II CLID ST, 8 Note: 1–4 are DTMF (dual tone multi-frequency) and 5–8 are MF (multi-frequency).	The user must choose an OUTSCHM control value from one to eight.

Preselection (PRESEL)

If the trunk group requires option PRESEL, datafill field OPTION as described in the following table.

Field descriptions for conditional datafill (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	PRESEL	*Option* Enter PRESEL.
	PRESEL	see subfields	*Preselection* Field PRESEL consists of subfields CARRID and OVERRIDE.

TRKGRP type IBNTO (continued)

Field descriptions for conditional datafill (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	CARRID	numeric (4 digits, 1000 to 9999)	*Carrier identification* Enter the four-digit carrier identification code.
	OVERRIDE	Y or N	*Override* Enter Y to enable the use of override numbers, or enter N to disable the use of override numbers.

Audio tone detector answer propagation (PROPANS)

If the trunk group requires option PROPANS, datafill field OPTION as described in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	PROPANS	*Option* Enter PROPANS.

Serving Carrier ID (SCI)

If the trunk group requires option SCI, datafill subfield OPTION and refinement SCI as described in the following table. This option applies only to the following signaling systems:

- AISUP
- ANSI
- ATUP
- DC5
- ETSI PRI
- I-ISUP
- TS14 PRI

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	SCI	*Option* Enter SCI.
	SCI	numeric (1000 to 30000)	*Serving carrier ID* Enter the trunk group serving carrier identification code.

Trunk line screening code (TRKLSC)

This option allows for the overriding of the line screening codes in order to use the customer group of the originator instead of the customer group of the terminator. If the trunk group requires option TRKLSC, datafill field OPTION as described in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	TRKLSC	*Option* Enter TRKLSC.

Datafill example

An example of datafill for table TRKGRP (IBNTO) follows. This example was datafilled in accordance with the following requirements:

- The trunk group is represented by the code NTBELL in table CLLI.
- The trunk group type is IBNTO.
- Traffic separation is not required (TRAFSNO = 0).
- ACO is the pad group assigned to the trunk group in table PADDATA.
- NCBN is the no-circuit class.
- The trunk group is assigned to subgroup 0 of customer group BNRMC.
- The select sequence is in ascending order (ASEQ).
- Supervision is answer disconnect (ANSDISC).
- The disconnect timing is 600 ms (2).
- The call is intragroup.

TRKGRP type IBNTO (continued)

- The line screening and alternate line screening flag number is 5.
- Calls blocked by line screening or alternate line screening are routed to treatment numbers 4 and 5 in table IBNTREAT.
- Field IGA is datafilled N.
- For a toll call, the call is routed to the intercept key and lamp on the attendant console on receipt of a reversal from the far end.
- Flash is not expected.

MAP display example for table TRKGRP type IBNTO

```
GRPKEY
                                                    GRPINFO
_____________________________________________________________________
NTBELL
    IBNTO 0 ACO NCBN BNRMC 0 ASEQ ANSDISC 2 Y 5 5 4 5 N N
Y N N N          NATL FACTYPE TDMTT $
```

Table history

NA014

Added the CLID, DNIS, and OUTSCHM options to the OPTION subfield.

APC008

Added selector PRESEL to subfield OPTION.

Added options BLK_SCI and SCI to subfield OPTION.

APC006

Added value MCH to subfield OPTION in accordance with functionality AR1748 (Malicious Call Trace on TS14 and DC5).

UK002

Enabled options DEFLTDN (DEFLTCLI) and CLIP in the European market (design activity AE1383, “UK CLI Handling").

NA002

Option DEFLTDN and associated refinement DEFLTDN were added to field OPTIONS in accordance with functionality AR0931.

TRKGRP type IBNTO (end)

Added option CLIP. This option provides Calling Line Identification Presentation (CLIP) and Calling Line Identification Restriction (CLIR) in the Australian Telephone User Part (ATUP) protocol on the DMS-100 and DMS-200.

BCS36

Added datafill information for field COFFTYP. Added field SELSEQ entry value WIDEBAND and associated refinement subfields WBSELSEQ, WBGRPING, and WBSEARCH. Removed description for OPTION WB, which only applies to incoming IBN trunk groups.

TRKGRP type IET

Inter-Exchange Trunk Group Type

General purpose tandem trunk group type IET is used for trunks that operate with send and receive multi-frequency (SRMF) signaling.

Inter-exchange trunk (IET) digit collection is supported for universal tone receiver (UTR) only. Multi-frequency (MF) receiver digit collection is not supported for IET trunks.

IET digit collection supports the collection of up to 13 address digits (for a total of 15 with KP and ST).

Datafill

The following table lists the datafill for table TRKGRP type IET.

Field descriptions (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 common language location identifier (CLLI) code assigned to the trunk group in table CLLI.
GRPINFO		see subfields	*Variable group data* This field consists of subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, and DIRDATA. Refer to section “General field information" in table TRKGRP for information concerning an alternate structure for this field that results from the datafill of table CUSTFLDS.
	GRPTYP	IET	*Group type* Enter IET to specify the inter-exchange trunk group type.
	TRAFSNO	numeric (0 to 127)	*Traffic separation number* Enter 0 (no separation) for the incoming or outgoing traffic separation number assigned to the trunk group. For more information, refer to table TFANINT.

TRKGRP type IET (continued)

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	PADGRP	alphanumeric (1 to 5 characters)	*Pad group* Enter the name of the pad group assigned to the trunk group in table PADDATA. For more information, refer to table PADDATA.
	NCCLS	NCBN NCID NCIM NCIT NCLT NCOF NCON NCOT NCRT NCTC or NOSC	*Operational measurements no-circuit class* Enter the operational measurements (OM) no-circuit class (NCCLS) to indicate which OM register is incremented if treatment GNCT (generalized no circuit) occurs. If the trunk group direction is incoming, this field is not required. Enter NCRT (no circuit). For more information, refer to table TRKGRP and the *Operational Measurements Reference Manual*.
	DIRDATA	see subfields	*Direction and direction specific data* This field consists of subfield DIR and refinements.
	DIR	IC or OG	*Direction* If the direction of traffic flow is incoming, enter IC and datafill refinement XLAD. If the direction of traffic flow is outgoing, enter OG and datafill refinement SELSEQ.

TRKGRP type IET (continued)

DIR = IC

If the value in field DIR is IC, datafill refinement XLAD as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	XLAD	see subfield	*Translation data* This field consists of subfield XLADSEL and refinements.
	XLADSEL	UNIV	*Translation selector* Enter UNIV to specify that the universal translation system is used, and datafill refinements XLASYS and XLANAME.
	XLASYS	AC AM CT FA FT NIL NSC OFC o r PX	*Translation system* Enter the universal translator system to be used for translation of the call.
	XLANAME	alphanumeric (1 to 8 characters) or NIL	*Translation name* Enter a name from the code table that belongs to the head table referenced by field XLASYS.

DIR = OG

If the value in field DIR is OG, datafill field SELSEQ as described below

TRKGRP type IET (continued)

Field descriptions for conditional datafill (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	SELSEQ	ASEQ CCWCTH CWCTH DSEQ LIDL or MIDL	*Select sequence* If the trunk group direction is outgoing (OG) or two-way (2W) and far end is a link list switcher, enter LIDL or MIDL (least or most idle) if the far end is MIDL or LIDL respectively. If the trunk group direction is outgoing or two-way, the far end is not a link list switcher, and sequential selection does not apply, enter MIDL. If the trunk group is outgoing or two-way, the far end is not a link list switcher, and feature package NTX244AB (Enhanced Sequential Trunk Hunting) is present, base the selection order on the order of the trunks in table TRKMEM, and enter • CWCTH or CCWCTH for clockwise or counterclockwise circular trunk hunting from the most recently released trunk in the trunk group, if the far end is CCWCTH or CWCTH respectively, or • ASEQ or DSEQ for ascending or descending sequential selection, if far end is DSEQ or ASEQ respectively. If the trunk group direction is incoming (IC), sequential selection does not apply. Enter MIDL.

Field descriptions for conditional datafill (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
			MIDL is the recommended value for IET trunks. Entries outside this range are not valid. For more information, refer to the general information section of table TRKGRP. ***Note:*** A trunk group trunk selection method cannot be changed. If a change in the selection method is required, a new trunk group must be created with the required trunk selection method. The individual trunks with the old selection sequence must be deleted from the old trunk group and then added to the new trunk group. For an existing trunk group, the selection sequence can be changed to the opposite select sequence type (for example, ASEQ to DSEQ, LIDL to MIDL, or CCWCTH to CWCTH) if all the trunk members are installation busy (INB) or unequipped (UNEQ). Refer to table TRKGRP for additional information concerning field SELSEQ.

Datafill example

The following example shows sample datafill for table TRKGRP type IET.

- The code in table CLLI for the trunk group is NTTGRPIC.
- The trunk group type is IET.
- The traffic separation number is 0 (zero).
- TLD is the pad group assigned to the trunk group.
- NCRT is the no-circuit class.
- The direction is incoming (IC).
- Select sequence is not required and is set to MIDL to satisfy table editor.
- The translation type is universal.
- PX is the universal translator system used for translation of the call.
- MYPXXLA is the translator name.

TRKGRP type IET (end)

MAP display example for table TRKGRP type IET

```
GRPKEY      GRPINFO
_____________________________________________________________

NTTGRPIC    IET 0 TLD NCRT IC MIDL UNIV PX MYPXXLA
```

An example of datafill for an outgoing trunk group of type IET in table TRKGRP is shown below. This example has been datafilled as follows:

- The code in table CLLI for the trunk group is NTTGRPIC.
- The trunk group type is IET.
- The traffic separation number is 0 (zero).
- TLD is the pad group assigned to the trunk group.
- NCRT is the no circuit class.
- The direction is outgoing (OG).
- The select sequence is not required. Set to MIDL to satisfy table editor.

MAP display example for table TRKGRP type IET

```
GRPKEY      GRPINFO
_____________________________________________________________

NTTGRPIC    IET 0 TLD NCRT OG MIDL
```

Table history

BCS34

Group type IET was introduced for table TRKGRP.

International 101 Test Trunk Group Type

The switching unit dependent data required for each Gateway 101 test trunk group is listed below:

- the common language location identifier (CLLI) code assigned in table CLLI
- the trunk group type (INT101)
- the traffic separation number
- the name of the pad group
- the no-circuit class
- the country code translator name
- the class of service screening
- the international pretranslator
- the call detail recorder class
- the select sequence
- the trunk group direction (incoming or outgoing)
- the common calling party category (must be specified when the trunk group direction is incoming)

Requirement to busy trunks

If parameter TRK_OOS_CHK_ON in table OFCENG is set to Y, all trunks in the group must be busied prior to changing the value of fields by data modification order (DMO).

Dialing types allowed

Dial pulse (DP), DIGITONE (DT) and multifrequency (MF) dialing are allowed on incoming Gateway 101 test trunk groups and Private Line trunk groups.

A switching unit must be equipped with DT or MF Receivers for DT or MF reception respectively.

Related tables

For description of other formats in the Trunk Group table, see the general information section of table TRKGRP.

For trunk subgroup data for Gateway 101 test trunk groups and Private Line trunk groups, see table TRKSGRP.

TRKGRP type INT101 (continued)

For trunk member data for Gateway 101 test trunk groups and Private Line trunk groups, see table TRKMEM.

Datafill

The following table lists the datafill for table TRKGRP type INT101.

Field descriptions (Sheet 1 of 6)

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 common language location identifier (CLLI) code that represents the Gateway 101 test trunk group in table CLLI.
GRPINFO		see subfields	*Variable group data* This field consists of subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, CCTRNSL, SCRNCL, PRTNUM, CDRCLASS, SELSEQ, and DIR_DEP. Refer to section “General field information" in table TRKGRP for information concerning an alternate structure for this field that results from the datafill of table CUSTFLDS.
	GRPTYP	INT101	*Trunk group type* Enter INT101 for the Gateway 101 test trunk group type.

Field descriptions (Sheet 2 of 6)

Field	Subfield or refinement	Entry	Explanation and action
	TRAFSNO	numeric (0 to 127)	*Traffic separation number* Enter the incoming and outgoing traffic separation number assigned to the trunk group. If a traffic separation number is not required, enter 0 (zero). For switches with software package NTX085AA (Traffic Separation Peg Count), enter a value from 1 to the value of office parameter TFAN_OUT_MAX_NUMBER in table OFCENG. For switches without software package NTX085AA, enter a value from 1 to 15. If the switching unit has software package NTX085AA, the range of values for the incoming and outgoing traffic separation numbers is dependent upon the value of office parameters TFAN_IN_MAX_NUMBER and TFAN_OUT_MAX_NUMBER in table OFCENG. For switching units without software package NTX085AA, the range of values for the traffic separation numbers is 0 to 15. Incoming and outgoing traffic separation numbers 1 to 9 should be reserved for generic traffic separation numbers. With the traffic separation feature, a count of all calls by type of call (direct dial [DD], operator assisted [OA] or no prefix [NP]) can be accumulated between an originating source (incoming trunk or an originating line attribute) and a terminating destination (outgoing trunk, terminating line attribute, tone, or announcement. See table TFANINT for the assignment of incoming to outgoing traffic separation numbers.

TRKGRP type INT101 (continued)

Field descriptions (Sheet 3 of 6)

Field	Subfield or refinement	Entry	Explanation and action
	PADGRP	alphanumeric (1 to 5 characters) or NPDGP	*Pad group* Enter the name of the pad group assigned to the trunk group in table PADDATA. If a pad group name is not required, enter NPDGP (no pad group). Field PADGRP contains the name of the pad group in table PADDATA that lists the value of the pad circuits that can be switched into the network when one of the members of the group is involved in a call. Different values for the pad circuits can be specified when the circuit connects to an agent with a different pad group. Network pad switching is only applicable when the circuit is connected to a new network. For more information, refer to table PADDATA.

TRKGRP type INT101 (continued)

Field descriptions (Sheet 4 of 6)

Field	Subfield or refinement	Entry	Explanation and action
	NCCLS	NCBN NCID NCIM NCIT NCLT NCOF NCON NCOT NCRT NCTC or NOSC	*Operational measurements no-circuit class* Enter the operational measurements (OM) no-circuit class (NCCLS) to indicate which OM register, in OM groups OFZ2 and SOTS, is incremented if treatment GNCT (generalized no circuit) occurs. The no-circuit class NCRT count is incremented (OFZ2 NCRT) when the trunk group is the last route in a route list and a line or trunk encounters an all trunks busy condition on this list. If the trunk group is the last route in a route list and an all trunks busy condition is encountered on the list, the originating line or trunk is routed to the Generalized No Circuit treatment (GNCT) in the appropriate treatment table. In addition, the treatment GNCT count is incremented. If the trunk group direction is incoming, this field is not required. Enter NCRT (no circuit). The initial value for this trunk group type is NCRT. For more information, refer to table TRKGRP and the *Operational Measurements Reference Manual*.
	CCTRNSL	alphanumeric (1 to 4 characters)	*Country code translator name* If trunk direction is incoming and country code translation is required, enter the country code translator name assigned to the International 101 test trunk group by the operating company. Otherwise enter NCTR for no country code translation.

TRKGRP type INT101 (continued)

Field descriptions (Sheet 5 of 6)

Field	Subfield or refinement	Entry	Explanation and action
	SCRNCL	alphanumeric (1 to 4 characters)or NSCR	*Class-of-service screening table name* If the trunk group direction is incoming and class-of-service screening is required, enter the name of the class-of-service screening table (datafilled in table SCRNCLAS) to which digit translation routes. If class-of-service screening is not required, enter NSCR (no screening).
	PRTNUM	alphanumeric (1 to 4 characters) or NPRT	*Standard pretranslator name* If the trunk group is incoming and standard pretranslation is required, enter the name of the standard pretranslator defined in table STDPRTCT to which digit translation is to route after the receipt of the first digit. If pretranslation is not required, enter NPRT (no pretranslation).
	CDRCLASS	alphanumeric (1 to 4 characters)	*Call detail recorder class* Enter the call detail recorder class of the Gateway 101 test trunk group, as defined by the operating company. Up to 31 different classes can be assigned. Each class is represented by a name. If no call detail recorder class is required, enter NCDR (no call detail recording).
	SELSEQ	MIDL	*Select sequence* This field not required for this trunk group. Enter MIDL.
	DIR_DEP	see subfield	*Direction dependent refinements* This field consists of subfield DIR and (for incoming trunk groups) refinement CCPC.

Field descriptions (Sheet 6 of 6)

Field	Subfield or refinement	Entry	Explanation and action
	DIR	IC or OG	*Direction* This field specifies the trunk group direction. For incoming traffic, enter IC and datafill refinement CCPC. For outgoing traffic, enter OG (no refinements apply).
	CCPC	alphanumeric (0 to 15 or N)	*Common calling party category* Datafill this field if the value in field DIR is IC. Enter the common calling party category for the T101 test line or enter N (no) if no common calling party category is applicable.

Datafill example

An example of datafill for table TRKGRP and group type INT101 is shown below.

- An incoming Gateway 101 test trunk has a CLLI of IC101.
- The trunk group has no traffic separation and no pad group.
- The country code translator name is CC02.
- The class of service screening name is SCOM.
- The pretranslator name is IP22.
- The call detail recorder name is ZX1Z.
- The common calling party category is not required.

MAP display example for table TRKGRP type INT101

```
GRPKEY GRPINFO
_____________________________________________________

IC101  INT101 0 NPDGP NCRT CC02 SCOM IP22 ZX1Z MIDL IC N
```

TRKGRP type IR

Outgoing No Outpulsing Trunk Group Type

In a DMS end office, outgoing trunk group type IR connects with an intercept, information, or repair desk.

No digits are outpulsed on an IR trunk.

Datafill

The following table lists the datafill for table TRKGRP type IR.

Field descriptions (Sheet 1 of 3)

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)	Enter the common language location identifier (CLLI) code assigned to the trunk group in table CLLI.
GRPINFO		see subfields	*Variable group data* This field consists of subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, TRAFCLS and AUDRING. Refer to section “General field information" in table TRKGRP for information concerning an alternate structure for this field that results from the datafill of table CUSTFLDS.
	GRPTYP	IR	*Group type* Enter IR to specify the trunk group type for an outgoing trunk group with no outpulsing.

TRKGRP type IR (continued)

Field descriptions (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	TRAFSNO	numeric (0 to 127)	*Traffic separation number* Enter the incoming and outgoing traffic separation number assigned to the trunk group. If a traffic separation number is not required, enter 0 (zero). For switches with software package NTX085AA (Traffic Separation Peg Count), enter a value from 1 to the value of office parameter TFAN_OUT_MAX_NUMBER in table OFCENG. For switches without software package NTX085AA, enter a value from 1 to 15. Incoming and outgoing traffic separation numbers 1 to 9 should be reserved for generic traffic separation numbers. For more information, refer to table TFANINT.
	PADGRP	alphanumeric (1 to 5 characters)	*Pad group* Enter the name of the pad group assigned to the trunk group in table PADDATA. For more information, refer to table PADDATA.
	NCCLS	NCBN NCID NCIM NCIT NCLT NCOF NCON NCOT NCRT NCTC orNOSC	*Operational measurements no-circuit class* Enter the operational measurements (OM) no-circuit class (NCCLS) to indicate which OM register is incremented if treatment GNCT (generalized no circuit) occurs. The initial value for this trunk group type is NCOT (no circuit other trunk). For more information, refer to table TRKGRP and the *Operational Measurements Reference Manual.*

TRKGRP type IR (end)

Field descriptions (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	TRAFCLS	alphabetic (2 characters)	*Traffic usage class* Enter the traffic usage class assigned to the trunk group. For more information, refer to table TRKGRP.
	AUDRING	Y or N	*Audible ring* Enter Y (yes) if the the switch is to return audible ringing to the originator. Otherwise, enter N (no).

Datafill example

The following example shows sample datafill for table TRKGRP type IR.

MAP display example for table TRKGRP type IR

```
GRPKEY                                      GRPINFO
________________________________________________________________________

OTWAON23T05O              IR 15 ELO NCOT RS Y
```

TRKGRP type IS

Tandem Switching No Digits Incoming Trunk Group Type

In a DMS toll or end office, incoming trunk group type IS is used to route calls, upon seizure, to an outgoing trunk group.

Calls are routed through table OFRT at the route index specified for the trunk group. Table OFRT permits digit prefixing where appropriate.

Calls from a number of incoming trunk groups of type IS can be datafilled to go out on one common trunk group.

Datafill

The following table lists the datafill for table TRKGRP type IS.

Field descriptions (Sheet 1 of 5)

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 common language location identifier (CLLI) code assigned to the trunk group in table CLLI.
GRPINFO		see subfields	*Variable group data* This field consists of subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, TRAFCLS, SELSEQ, DIR, SNPA, TUPID, and J. Refer to section “General field information" in table TRKGRP for information on an alternate structure for this field that results from the datafill of table CUSTFLDS.
	GRPTYP	IS	*Group type* Enter IS to specify the tandem switching no digits incoming trunk group type.

TRKGRP type IS (continued)

Field descriptions (Sheet 2 of 5)

Field	Subfield or refinement	Entry	Explanation and action
	TRAFSNO	numeric (0 to 127)	*Traffic separation number* Enter the incoming and outgoing traffic separation number assigned to the trunk group. If a traffic separation number is not required, enter 0 (zero). For switches with software package NTX085AA (Traffic Separation Peg Count), enter a value from 1 to the value of office parameter TFAN_OUT_MAX_NUMBER in table OFCENG. For switches without software package NTX085AA, enter a value from 1 to 15. Incoming and outgoing traffic separation numbers 1 to 9 should be reserved for generic traffic separation numbers. For more information, refer to table TFANINT.
	PADGRP	alphanumeric (1 to 5 characters)	*Pad group* Enter the name of the pad group assigned to the trunk group in table PADDATA. For more information, refer to table PADDATA.
	NCCLS	NCBN, NCID, NCIM, NCIT, NCLT, NCOF, NCON, NCOT, NCRT, NCTC, or NOSC	*Operational measurements no-circuit class* Enter the operational measurements (OM) no-circuit class (NCCLS) to indicate which OM register is incremented if treatment GNCT (generalized no circuit) occurs. The initial value for this trunk group type is NCRT (no circuit). For more information, refer to table TRKGRP and the *Operational Measurements Reference Manual*.
	TRAFCLS	alphabetic (2 characters)	*Traffic usage class* Enter the traffic usage class assigned to the trunk group. For more information, refer to table TRKGRP.

TRKGRP type IS (continued)

Field descriptions (Sheet 3 of 5)

Field	Subfield or refinement	Entry	Explanation and action
	SELSEQ	MIDL, LIDL, CWCTH, CCWCTH, ASEQ, or DSEQ	*Select sequence* If the trunk group direction is two-way (2W) and far end is a link list switcher, enter LIDL or MIDL (least or most idle) if far end is MIDL or LIDL respectively. If the trunk group direction is two-way, the far end is not a link list switcher and sequential selection does not apply, enter MIDL. If the trunk group direction is incoming (IC), sequential selection does not apply. Enter MIDL. If the trunk group is two-way, the far end is not a link list switcher, and feature package NTX244AB (Enhanced Sequential Trunk Hunting) is present, base the selection order on the order of the trunks in table TRKMEM, and enter CWCTH or CCWCTH for clockwise or counterclockwise circular trunk hunting from the most recently released trunk in the trunk group, if the far end is CCWCTH or CWCTH respectively, or ASEQ or DSEQ for ascending or descending sequential selection, if far end is DSEQ or ASEQ respectively.

TRKGRP type IS (continued)

Field descriptions (Sheet 4 of 5)

Field	Subfield or refinement	Entry	Explanation and action
			Entries outside this range are invalid. For more information, refer to table TRKGRP. ***Note:*** The selection sequence for an existing trunk group can be changed from ASEQ to DSEQ, or from DSEQ to ASEQ, if all the members are made installation busy (INB) or unequipped (UNEQ). The selection method for an existing trunk group cannot be changed. To change the selection method for an existing trunk group from ASEQ or DSEQ to CWCTH or CCWCTH, or to MIDL or LIDL, define a new trunk group, as follows: Create a new trunk group with the required trunk selection method, delete the individual trunks from the old trunk group, and add the trunks to the new trunk group.
	DIR	IC or 2W	*Trunk direction* Datafill this field to specify the trunk group direction. If the trunk direction is incoming, enter IC. If the trunk direction is two-way, enter 2W. If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y (yes), busy all trunks in the group before changing the value of this field by data modification order (DMO).
	SNPA	numeric(3 digits)	*Serving numbering plan area* Enter the serving numbering plan area (NPA) code to which the trunk group belongs.
	TUPID	see subfields	*Tuple identification* This field consists of subfields TABID and KEY.

Field descriptions (Sheet 5 of 5)

Field	Subfield or refinement	Entry	Explanation and action
	TABID	OFRT, OFR2, OFR3, OFR4, IBNRTE, IBNRT2, IBNRT3, IBNRT4, AOSS, AOSSAMA, TOPSAMA, RRTE, TOPS, or TTL4	*Table name* Enter the name of the table to which translation is to route.
	KEY	0 to 1023or0 to 7	*Key* Enter the route reference index within the table to which translation is to route. For all tables except TTL4, enter a value from 0 to 1023. For table TTL4, the valid entry range is 0 to 7. Entries outside this range are not valid for TTL4.
	J	Y or N	*Joint control* Enter Y (yes) if joint party control is required (that is, if both parties must disconnect to disconnect the call). Otherwise, enter N (no), to specify calling party control.

Datafill example

The following example shows sample datafill for table TRKGRP type IS.

This example is datafilled as follows:

- The code in table CLLI for the trunk group is OTWAON23SG11.
- The trunk group type is IS.
- The incoming traffic separation number is 21.
- ELO is the name of the pad group assigned in table PADDATA.
- NCRT is the no-circuit class.
- The traffic class is originating tandem (TO).
- The select sequence field is set to MIDL.
- The direction is incoming (IC).

TRKGRP type IS (end)

- The serving NPA is 613.
- All incoming calls are routed to route reference index number 10 in table OFRT.
- For disconnect, the calling party controls the calls.

MAP display example for table TRKGRP type IS

```
GRPKEY          GRPINFO
_____________________________________________________________

OTWAON23SG11    IS 21 ELO NCRT TO MIDL IC 613 OFRT 10 N $
```

TRKGRP type IT

Intertoll Trunk Group Type

In a DMS toll or end office, two-way, incoming, or outgoing trunk group type intertoll (IT) interfaces with another toll or end office to carry toll connecting traffic including toll access, toll completing, and toll tandem.

In offices without software package NTX052AB (Remote Office Test Line [ROTL]) that do not have trunk group type T105, the 105 test line can be datafilled as an IT trunk group type.

If overlap outpulsing is required on incoming or two-way dial pulse (DP) trunk groups, field OVLP in table TRKSGRP must be set to Y (yes).

Overlap outpulsing can only apply between incoming and two-way intertoll trunk groups and outgoing and two-way intertoll, local, and Integrated Business Network (IBN) trunk groups.

The standard digit manipulation defined for selector S in the route reference subtables is applicable to outgoing and two-way intertoll trunk groups, except when a call is routed from table STDPRTCT.

If no outpulsing is required, fields OPULSTYP and OSTARTSG in table TRKSGRP have the values of DP (dial pulse) and IM (immediate dial) respectively. The route reference index for this trunk group is required to use the nonstandard format (N) and delete all digits.

If the trunk group has Common Channel Interoffice Signaling (CCIS) supplementary information for the trunk, members are assigned in table C6TRKMEM.

Option BCNAME is only valid for incoming and two-way trunk group types.

Option CELL is not compatible with option E911.

Equal Access for DMS-100 Wireless

When datafilling equal access (EA) on the DMS-100 Wireless switch, the wireless portion of an ISUP integrated service link (ISL) trunk must be datafilled as a DID trunk group type with refinement RTEVIAAT set to Y.

The wireline portion of the ISUP ISL trunk must be datafilled as an IT trunk type. Option CELL must be set to 2A to support North American EA ISL terminations. A distinct billable number must be designated for option BILLNO for the downstream processor to distinguish the AMA records generated by the wireless DID ISL and non-ISL trunks.

TRKGRP type IT (continued)

E911 ISUP trunking

Option E911 provides the ability to route Enhanced 911 Emergency Service (E911) calls directly over Integrated Services Digital Network User Part (ISUP) trunks. Incoming trunks with this option can process E911 calls by selecting the appropriate route to the public safety answering point (PSAP) using the normal E911 selective routing database (SRDB) or an Off-Board Selective Routing database (OFBSR).

End office and outgoing trunk datafill of E911 option

Offices that are not E911 tandems should not datafill option E911 on any IT trunks. All incoming calls on an IT trunk with option E911 perform an SRDB lookup to determine the caller's ESN. Since there are no valid ESNs in an office that is not an E911 tandem, these calls are routed to treatment. If a 'dummy' PSAP and ESN is datafilled, this allows the calls to complete, but does add an unnecessary step to all incoming calls (the SRDB lookup).

Datafilling option E911 has no effect on outgoing calls.

Datafill of E911 option on non-dedicated trunks

The following should be considered when data is entered for the E911 option on non-dedicated trunks.

- Datafilling option E911 on IT trunks in an E911 tandem office is not recommended if the trunk is not dedicated to E911 traffic for the following reasons:
  - — All incoming calls on this trunk perform an SRDB lookup to determine the caller's ESN. This step is not necessary on non-E911 calls and increases the time it takes to process these calls.
  - — Additional logs are generated, such as E911201 (Abnormal Called Digits) and E911203 (Calling Party Has No ESN) reports for all calls that do not have an entry for the calling DN in table E911SRDB, or when the called digits are not 911, 11, or 1.
  - — If no valid ESN is found for the calling DN, calls that normally would complete are routed to treatment.
- In NA015, the Off-Board Selective Routing Database (OFBSR) suboption and the Tandem Prefix Value (TDMPRFX) suboption were added to the E911 option for IT TRKGRP types.
- In NA013 this feature supports interactions with all other E911 features. Before NA013 E911 calls through ISUP IT trunks did not support originator hold (ORIGHOLD), enhanced party hold (ECPH), and RINGBACK.

- The E911 option is allowed only when the SGRPVAR field in table TRKSGRP for the trunk is C7UP.
- Option CELL is not compatible with option E911.
- E911 ISUP Trunking is also under SOC control.

Datafill sequence and implications

Table TRIGGRP must be datafilled before table TRKGRP type IT.

Calls using the default emergency service number (ESN) do not complete if the ESN is not datafilled in table E911ESN.

Standard table control error messages are produced as well as the following warning messages:

DANGER

The following warning message is generated if an ESN is datafilled for an E911 trunk group and is not datafilled in table E911ESN, and if office parameter E911_CHECK_DEFAULT_ESN is set to N:

ESN NOT PRESENT IN TABLE E911ESN. THIS ESN MUST BE DATAFILLED IN TABLE E911ESN FOR 911 CALLS TO COMPLETE.

With the following message, no tuple is added to table TRKGRP.

DANGER

The following error message is generated if an attempt is made to datafill an ESN for an E911 trunk group and it is not datafilled in table E911ESN, and if office parameter E911_CHECK_DEFAULT_ESN is set to Y:

ESN MUST BE IN TABLE E911ESN.

For additional datafill dependencies, refer to section “Datafill sequence” in the general section of table TRKGRP.

TRKGRP type IT (continued)

Datafill (Incoming intertoll)

The following table lists datafill for table TRKGRP type IT.

Field descriptions

Field	Subfield	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 common language location identifier (CLLI) name assigned to the trunk group in table CLLI.
GRPINFO		see subfields	*Variable group information* This field consists of subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, DIRDATA, TRAFCLS, SELSEQ, CONNGNPA, PRTNM, SCRNCL, SNPA, TERMTC, TOLLCOMP, CCWKVLD, and OPTIONS. Refer to section "General field information" in table TRKGRP for information on an alternate structure for this field that results from the datafill of table CUSTFLDS.
	GRPTYP	IT	*Group type* Enter IT for the intertoll trunk group type.
	TRAFSNO	numeric (0 to 127)	*Traffic separation number* Enter the incoming traffic separation number assigned to the trunk group. If it is not required, enter 0 (zero). If switching unit has feature package NTX085AA (Traffic Separation Peg Count), enter a number between 1 and the value of office parameter TFAN_IN_MAX_NUMBER in table OFCENG. For switching units without feature package NTX085AA, enter 0 to 15. Incoming and outgoing traffic separation numbers 1 to 9 should be reserved for generic traffic separation numbers. Refer to the description of table TFANINT for additional information.

TRKGRP type IT (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
	PADGRP	alphanumeric (1 to 5 characters)	*Pad group* Enter the name of the pad group assigned to the trunk group in table PADDATA. Refer to the description of table PADDATA for additional information.
	NCCLS	NCRT	*Operational measurements no-circuit class* This field is not required for incoming trunk groups; enter NCRT (no circuit).
	DIRDATA	see subfield	*Direction data* This field consists of subfield DIR.
	DIR	IC	*Direction* Enter IC to specify that the direction of traffic flow is incoming. If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y (yes), all trunks in the group must be busy before changing the value of this field by data modification order (DMO).
	TRAFCLS	alphabetic	*Traffic usage class* Enter the traffic usage class assigned to the trunk group. Refer to the description of table TRKGRP for information.
	SELSEQ	MIDL	*Select sequence* Enter MIDL to specify the most idle trunk group selection method. Entries other than MIDL are not valid (sequential selection does not apply to incoming trunk groups).
	CONNGNPA	000	*Connecting numbering plan area* This field is not required for incoming trunk groups. Enter 000.

TRKGRP type IT (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
	PRTNM	alphanumeric (1 to 4 characters) or NPRT	*Standard pretranslator name* If standard pretranslation is required, enter the name of the standard pretranslator to which digit translation routes after the receipt of one digit. If pretranslation is not required, enter NPRT. If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y, all trunks in the group must be busy before changing the value of this field by DMO.
	SCRNCL	alphanumeric (1 to 32 characters) or NSCR	*Class-of-service screening name* If screening by class-of-service is required, enter the name of the class-of-service screening to which digit translation routes. If class-of-service screening is not required, enter NSCR.
	SNPA	numeric(3 digits)	*Serving numbering plan area* Enter the serving numbering plan area (NPA) code to which the trunk group belongs. If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y, all trunks in the group must be busy before changing the value of this field by DMO.
	TERMTC	000	*Terminating toll center* Terminating toll center is not applicable to incoming trunk groups. Enter 000.
	TOLLCOMP	Y or N	*Toll completing* If toll completing is required, enter Y (yes); otherwise, enter N (no).

TRKGRP type IT (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
	CCWKVLD	Y or N	*Carrier connect wink valid* Enter Y if carrier connect winks in equal access international calls are regenerated. Otherwise, enter N. Since most non-DMS equal access end offices (EAEO) and access tandems (AT) cannot handle this wink, the value N should be datafilled in these cases.
	OPTIONS	see subfield	*Options* Datafill up to three multiples of subfield OPTION and the corresponding refinements for the desired trunk option. Enter $ (dollar sign) to indicate the end of the options vector.
	OPTION	AIN, BCNAME, BILLNO, BLOCKNB, CELL, DEDICATED, E911, CHGNUM, LNP	*Option* The following options can be datafilled: • AIN - Advanced intelligent network. This option allows specifying an AIN group identification. Datafill refinement AINGRP. • BCNAME - Bearer-capability-name. Datafill refinement BCNAME. • BILLNO - This option allows specifying the billing number. Datafill refinement BILLNO. • BLOCKNB • CELL - This option allows specifying the configuration of the intertoll trunk type. Datafill refinement CELL_SS7_TYPE. This option is valid only for North America. ***Note:*** Option CELL is not compatible with option E911.
	DEDICATD	Y or N	• DEDICATED. This field determines whether or not the IT trunk is dedicated to E911 traffic only. Default is Yes (Y).

TRKGRP type IT (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
			• E911 - This option consists of refinements ESCO, ESN, E911SIG, OFBSR, and TDMPRFX. To specify the default ESCO for this trunk, type ESCO. To enter the default ESN for this trunk, type ESN. To enter the type of signalling to be used by this trunk, type E911SIG. This option is valid only for North America. To indicate that OFBSR is used, type Y. To enter the default TDMPRFX, type 0. • CHGNUM - Charge-number-delivery. This option, sends a charge number and originating line information (OLI) parameter with the initial address message (IAM). No refinements are required. LNP - Local number portability. This option allows datafilling a default location routing number (LRN) against the trunk group. Datafill refinement LRN. ***Note:*** If no options apply, leave this field blank.
	AINGRP		*Advanced intelligent network identifier* If field OPTION = AIN, datafill an AIN group identifier.
	BCNAME	alphanumeric (1 to 16 characters)	*Bearer capability name* If field OPTION = BCNAME, enter the bearer capability to be used by this trunk group. Refer to table BCDEF for the current list of available bearer capabilities. If field OPTION and refinement BCNAME are left blank, the default bearer capability of the central office is used.
	BILLNO	up to an 11-digit billing number	*Billing number* If field OPTION = BILLNO, enter the billing number that is used to populate the originating number field in the cellular mobile carrier (CMC) AMA record and the associated equal access AMA record. This option is valid only for North America.

TRKGRP type IT (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
	CELL_SS7_ TYPE	2A, 2B, or NILCELL	*Cell* If field OPTION = CELL, enter the configuration of the intertoll trunk type. Datafilling this option as 2A indicates that the intertoll trunk is configured as a CELL Type 2A SS7 trunk. Datafilling this option as 2B indicates that the intertoll trunk is configured as a CELL Type 2B SS7 trunk. This option is valid only for North America.
	ESCO	0000 to 9999	*Emergency service central office* If the entry in subfield OPTION is E911, enter the default ESCO number representing the end office at which the E911 trunk originated. This option is valid only for North America.
	ESN	0 to 15999	*Emergency service number* If the entry in subfield OPTION is E911, enter the default ESN associated with the emergency service zone that is used to obtain the DN of the primary PSAP to which this call is to be default routed. This option is valid only for North America.

TRKGRP type IT (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
	E911SIG	E911_STD, E911_CHG, WRLS_STD, WRLS_CLD	*Enhanced 911 signaling.* This entry determines whether the DMS switch uses the calling party number or the charge number to obtain the callback or routing number or both. The first attempt to enter E911_STD uses the calling party number. The second attempt uses the charge number. The first attempt to enter E911_CHG uses the charge number. The second attempt uses the calling party number. The first attempt to enter WRLS_STD uses the calling party number. There is no second attempt. ***Note:*** The WRLS_STD entry applies to incoming trunks that handle only wireless emergency calls. The first attempt to enter WRLS_CLD uses the calling party number. There is no second attempt. ***Note 1:*** The WRLS_CLD entry applies to incoming trunks that handle only wireless emergency calls directly from a mobile switching center. The mobile switching center sends the pseudo automatic number identifier (pANI) and callback number in a non-standard format. ***Note 2:*** The E911SIG option is valid only for North America.
	OFBSR	N or Y	*Off-Board Selective Routing database.* This subfield indicates that the facility uses the OFBSR or dual OFBSR for selective routing. The default is N.

TRKGRP type IT (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
	TDMPRFX	0 to 15	*Tandem Prefix Value.* If datafilled with a non-zero value, this suboption indicates the originating E911 tandem in a dual super tandem-tandem network. A new Generic Digits Parameter (GDP) is built in the IAM to transport the TDMPRFX to table E911TDRT. The delivery of the TDMPRFX value in the new GDP behaves as follows: • If a non-zero TDMPRFX is datafilled against an ISUP IT trunk with the E911 option, then a GDP is built containing the TDMPRFX and sent on outgoing 911 calls. • If the TDMPRFX datafill against an ISUP IT trunk has the default value of '0', and if no TDMPRFX is received via a GDP, then outgoing 911 calls do not build the GDP containing the TDMPRFX. • If a GDP containing the TDMPRFX is received at an E911 tandem, the value is stored. It takes precedence over any datafilled TDMPRFX values if the TDMPRFX datafilled in Table TRKGRP is non-zero. If datafilled value is '0', the TDMPRFX from GDP is dropped and not used for further processing. • If the TDMPRFX datafill against an ISUP IT trunk has a default value of '0' and no GDP is received, the TDMPRFX is ignored. • On an ONP, if a non-zero TDMPRFX is not datafilled, a default value of '0' is transferred. The TDMPRFX field should be datafilled in the Super E911 tandems for incoming ISUP IT trunks with the E911 option. The TDMPRFX field in other E911 tandems should not be datafilled, rather the value should be left at the default of zero.
	LRN	10-digit directory number	*Location routing number* If field OPTION = LNP, datafill the default 10-digit LRN. This field indicates the originating service provider, used for billing purposes, if one is not signalled on the incoming trunk.

TRKGRP type IT (continued)

Datafill example

An example of datafill for table TRKGRP and incoming trunk group type IT is shown below. This example was datafilled in accordance with the following datafill requirements:

- The code in table CLLI for the trunk group is OTWAON0202T0. The trunk group type is IT.
- The incoming traffic separation number 20 is assigned to the trunk group. TLD is the pad group assigned to the trunk group.
- The no-circuit class is NCRT.
- The direction is incoming (IC).
- The traffic class is intertoll (IT).
- The select sequence is not required; set to MIDL.
- The connecting NPA is not required; set to 000.
- No pretranslation (NPRT) or class-of-service screening (NSCR) is required. The trunk group is assigned to serving NPA 613.
- The terminating toll center code is not required, set to 000.
- Toll completing is not required.
- Option BCNAME with 56KDATA and option CHGNUM are assigned.
- The carrier connect wink in equal access international calls is not regenerated.

MAP display example for table TRKGRP type IT

```
GRPKEY
                                        GRPINFO
_____________________________________________________________

OTWAO11MG00
    IT 20 TLD NCRT IC IT MIDL 000 NPRT NSCR 613 613
    000 N N BCNAME 56KDATA CHGNUM $
```

Datafill example

An example of datafill for table TRKGRP with an incoming trunk group type of IT is shown below. This example is valid only for North America, and is datafilled in accordance with the following datafill requirements:

- The code in table CLLI for the trunk group is SUP2WITEA. The trunk group type is IT.
- The incoming traffic separation number 0 is assigned to the trunk group. ELO is the pad group assigned to the trunk group.
- The no-circuit class is NCRT.
- The traffic flow is incoming (IC).
- The traffic class is intertoll (IT).
- The select sequence is not required; set to MIDL.
- The connecting NPA is 519.
- The pretranslator name is PEA. No class-of-service screening (NSCR) is required. The trunk group is assigned to serving NPA 919.
- The terminating toll center code is not required, set to 000.
- Toll completing is not required.
- The carrier connect wink in equal access international calls is not regenerated.
- The billing number is (919) 848-0833.
- The Intertoll trunk is configured as a CELL Type TWO_A SS7 trunk.

MAP display example for table TRKGRP type IT

```
GRPKEY
                                        GRPINFO
_____________________________________________________________

SUP2WITEA
    IT 0 ELO NCRT IC NIL MIDL 519 PEA NSCR 919
    000 N N (BILLNO 9198480833) (CELL TWO_A)$
```

Datafill example

An example of datafill for table TRKGRP with an incoming trunk group type of IT is shown in the following figure. This example is valid only for North

TRKGRP type IT (continued)

America, and is datafilled in accordance with the following datafill requirements:

- The code in table CLLI for the trunk group is E911ICS7. The trunk group type is IT.
- The incoming traffic separation number 0 is assigned to the trunk group. ELO is the pad group assigned to the trunk group.
- The no-circuit class is NCRT.
- The traffic flow is incoming (IC).
- The traffic class is NIL.
- The select sequence is not required; set to MIDL.
- The connecting NPA is 613.
- The pretranslator name is AT1. No class-of-service screening (NSCR) is required. The trunk group is assigned to serving NPA 613.
- The terminating toll center code is not required; set to 000.
- Toll completing is not required.
- The carrier connect wink in equal access international calls is not regenerated.
- The IT trunk option is E911.
- The default ESCO number for this trunk is 0747.
- The default ESN for this trunk is 113.
- The type of signalling to be used by this trunk is E911_STD.
- The OFBSR is used.
- The TDMPRFX is 0.

MAP display example for table TRKGRP type IT

```
TABLE: TRKGRP
>pos e911ics7
     E911ICS7
    IT 0 ELO NCRT IC NIL MIDL 613 613 AT1 NSCR 613 000 N N
    (E911 0747 113 E911_STD Y N 0 0) $
```

Datafill example

An example of datafill for table TRKGRP and incoming trunk group type IT is shown in the following figure. This example is valid only for North

TRKGRP type IT (continued)

America, and is datafilled in accordance with the following datafill requirements:

- The code in table CLLI for the trunk group is E911ICS7. The trunk group type is IT.
- The incoming traffic separation number 0 is assigned to the trunk group. ELO is the pad group assigned to the trunk group.
- The no-circuit class is NCRT.
- The traffic flow is incoming (IC).
- The traffic class is NIL.
- The select sequence is not required; set to MIDL.
- The connecting NPA is 613.
- The pretranslator name is AT1. No class-of-service screening (NSCR) is required. The trunk group is assigned to serving NPA 613.
- The terminating toll center code is not required; set to 000.
- Toll completing is not required.
- The carrier connect wink in equal access international calls is not regenerated.
- The IT trunk option is E911.
- The default ESCO number for this trunk is 0747.
- The default ESN for this trunk is 113.
- The type of signalling to be used by this trunk is E911_STD.
- The OFBSR is used.
- The TDMPRFX is 15.

TRKGRP type IT (continued)

MAP display example for table TRKGRP type IT

```
> Table TRKGRP
> POS E911ICS7
> ADD
GRPTYP: IT
>
TRAFSNO: 0
.........................
.........................
OPTION: E911
>
ESCO: 0747
>
ESN: 113
>
E911SIG: E911_STD
>
ORIGHOLD: N
>
ECPHTIME: 0
>
 OFBSR
 > Y
TDMPRFX:
>15
OPTION:
>$
WARNING: THE E911 OPTION SHOULD BE ASSIGNED ONLY TO TRUNKS
         WHICH ARE DEDICATED TO EMERGENCY TRAFFIC.
TUPLE TO BE CHANGED:
   E911ICS7 IT 0 ELO NCRT IC NIL MIDL 613 613 AT1 NSCR 613 000 N N
             (E911 0747 113 E911_STD N N 0 15) $
     ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
```

Datafill (Outgoing intertoll)

The following table lists datafill for table TRKGRP type IT.

Field descriptions

Field	Subfield	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 assigned to trunk group in table CLLI.

TRKGRP type IT (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
GRPINFO		see subfields	*Variable group information* This field consists of subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, DIRDATA, TRAFCLS, SELSEQ, CONNGNPA, PRTNM, SCRNCL, SNPA, TERMTC, TOLLCOMP, CCWKVLD, and OPTIONS. Refer to section "General field information" in table TRKGRP for information on an alternate structure for this field that results from the datafill of table CUSTFLDS.
	GRPTYP	IT	*Group type* Enter IT for trunk group type intertoll.
	TRAFSNO	numeric (0 to 127)	*Traffic separation number* Enter the outgoing traffic separation number assigned to the trunk group. If it is not required, enter 0 (zero). If the switching unit has feature package NTX085AA (Traffic Separation Peg Count), enter a number between 1 and the value of office parameter TFAN_OUT_MAX_NUMBER in table OFCENG. For switching units without feature package NTX085AA, enter 1 to 15. Incoming and outgoing traffic separation numbers 1 to 9 should be reserved for generic traffic separation numbers. Refer to the description of table TFANINT for additional information.
	PADGRP	alphanumeric (1 to 5 characters)	*Pad group* Enter the name of the pad group assigned to the trunk group in table PADDATA. Refer to the description of table PADDATA for additional information.

TRKGRP type IT (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
	NCCLS	NCBN, NCID, NCIM, NCIT, NCLT, NCOF, NCON, NCOT, NCRT, NCTC, or NOSC	*Operational measurements no-circuit class* Enter the operational measurements (OM) no-circuit class to indicate which OM register is incremented if treatment GNCT (generalized no-circuit) occurs. Refer to the description of table TRKGRP and the *Operational Measurement Reference Manual*, for additional information.
	DIRDATA	see subfield	*Direction data* This field consists of subfield DIR.
	DIR	OG	*Direction* Enter OG to specify that the direction of traffic flow is outgoing. If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y (yes), all trunks in the group must be busy before changing the value of this field by data modification order (DMO).
	TRAFCLS	alphabetic	*Traffic usage class* Enter the traffic usage class assigned to the trunk group. Refer to the description of table TRKGRP for information.

TRKGRP type IT (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
	SELSEQ	ASEQ, CWCTH, CCWCTH, DSEQ, LIDL, MIDL, or WIDEBAND	*Select sequence* If the trunk group is outgoing (field DIR has value OG) and feature package NTX244AB (Enhanced Sequential Trunk Hunting) is present, then sequential selection applies; enter • CWCTH for clockwise or CCWCTH for counterclockwise circular trunk hunting from the most recently released trunk in the trunk group, based on the order of trunk members in table TRKMEM • ASEQ for ascending or DSEQ descending sequential selection, based on the order of trunk members in table TRKMEM • WIDEBAND and datafill refinements WBSELSEQ, WBGRPING, and WBSEARCH to specify DS-0s selection sequence, timelist arrangement types, and time slot search method. If the trunk group is outgoing and sequential selection does not apply, enter MIDL for most idle trunk group selection. ***Note:*** Refer to the description of table TRKGRP for information on field SELSEQ. ***Note:*** The selection sequence for an existing trunk group can be changed from ASEQ to DSEQ, or from DSEQ to ASEQ, if all the members are made installation busy (INB) or unequipped (UNEQ). The selection method for an existing trunk group cannot be changed. To change the selection method for an existing trunk group from ASEQ or DSEQ to CWCTH or CCWCTH, or to MIDL or LIDL, define a new trunk group, as follows: create a new trunk group with the required trunk selection method, delete the individual trunks from the old trunk group, and add the trunks to the new trunk group.

TRKGRP type IT (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
	WBSELSEQ	ASEQ or DSEQ	*Wideband selection sequence* Datafill this field if the entry in field SELSEQ is WIDEBAND. Enter ASEQ to specify that the wideband trunks are selected in ascending order from the first idle trunk on the search list, or enter DSEQ to specify that they are selected in descending order from the last idle trunk on the search list. The order of trunks in the search list is determined by the order in which the trunk groups are datafilled in table TRKMEM.
	WBGRPING	FIXED or FLOATING	*Wideband boundary preference* Datafill this field if the entry in field SELSEQ is WIDEBAND. Enter the wideband boundary preference. The value FIXED specifies that only the idle trunks within a specific time slot frame are selected. This value is only valid for local exchange carriers (LEC). The value FLOATING specifies that any number of consecutive idle trunks in a trunk group are selected.
	WBSEARCH	BESTFIT or FIRSTFIT	*Wideband search* Datafill this field if the entry in field SELSEQ is WIDEBAND. Enter the wideband search algorithm. The value BESTFIT finds the smallest segment of idle channels (DS-0s) among trunks (DS-1s) within a trunk group to accommodate a wideband call, according to the boundary preference (FIXED or FLOATING) specified. FIRSTFIT finds the first segment of idle DS-0s that can accommodate a wideband call, according to the boundary preference specified.
	CONNGNPA	numeric (3 digits)	*Connecting numbering plan area* Enter the numbering plan area (NPA) code of the switching unit where the outpulsed digits are translated.

TRKGRP type IT (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
	PRTNM	NPRT	*Standard pretranslator name* If standard pretranslation is not required on outgoing trunk groups, enter NPRT. If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y, all trunks in the group must be busy before changing the value of this field by DMO.
	SCRNCL	NSCR	*Class-of-service screening table name* If class-of-service screening is not required on outgoing trunk groups, enter NSCR.
	SNPA	numeric (3 digits)	*Serving numbering plan area* Enter the serving NPA code to which the trunk group belongs. If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y, all trunks in the group must be busy before changing the value of this field by DMO.
	TERMTC	numeric (3 digits)	*Terminating toll center* If the switching unit where the outpulsed digits are translated is assigned a terminating toll center code, enter the terminating toll center code. If there is no terminating toll center code, enter 000.
	TOLLCOMP	Y or N	*Toll completing* Enter Y if the trunk group is toll completing; otherwise, enter N.
	CCWKVLD	Y or N	*Carrier connect wink valid* Enter Y if carrier connect winks in equal access international calls are regenerated. Otherwise, enter N. Since most non-DMS equal access end offices (EAEO) and access tandems (AT) cannot handle this wink, the value N should be datafilled in these cases.

TRKGRP type IT (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
	OPTIONS	see subfield	*Options* Datafill up to three multiples of subfield OPTION and the corresponding refinements for the desired trunk option. Enter a $ (dollar sign) to indicate the end of the options vector.
	OPTION	BCNAME or CHGNUM	*Option* To specify the bearer-capability-name option, enter BCNAME and datafill refinement BCNAME. To specify the charge number delivery option, which sends a charge number (CN) and originating line information (OLI) parameter with the initial address message (IAM), enter option CHGNUM. Subfield CHGNO_TRAFTYPE has the values PBX or ALL. The default is PBX. If no options apply, leave this field blank. ***Note:*** The operator services signaling 7 (OSS7) option operator services network capability (OSNC) assigned through table TRKOPTS requires the CHGNUM ALL option.
	BCNAME	alphanumeric (1 to 16 characters)	*Bearer capability name* If the entry in field OPTION is BCNAME, enter the bearer capability to be used by this trunk group. Refer to table BCDEF for the current list of available bearer capabilities. If field OPTION and refinement BCNAME are left blank, the default bearer capability of the central office is used.

TRKGRP type IT (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
	CHGNO_TRAFTYPE	PBX or ALL	*Charge number traffic type* If the entry in field OPTION is CHGNUM, select refinement PBX to provide the CN and OLI parameters for calls originating on private branch exchange (PBX) trunks. Select ALL to provide the CN and OLI parameters for outgoing calls on the following originating agents: POTS, RES, IBN, or basic rate interface (BRI) lines; primary rate interface (PRI) and ISUP trunks; IBNT2, IBNTI, and PBX trunks; attendant consoles, or a supported agent routed through a virtual facility group (VFG). Select ALL to provide OSS7 option OSNC assigned through table TRKOPTS.
	OPTION	BILLNO or CELL	*Options* This subfield consists of refinements BILLNO and CELL. To specify the billing number, enter BILLNO. To enter the configuration of the intertoll trunk type, enter CELL. This option is valid only for North America.
	BILLNO	up to an 11-digit billing number	*Billing number* If the entry in subfield OPTION is BILLNO, enter the billing number that is used to populate the originating number field in the cellular mobile carrier (CMC) AMA record and the associated equal access AMA record. This option is valid only for North America.
	CELL	2A, 2B, or NILCELL	*Cell* If the entry in subfield OPTION is CELL, enter the configuration of the intertoll trunk type. Datafilling this option as 2A indicates that the intertoll trunk is configured as a CELL Type 2A SS7 trunk. Datafilling this option as 2B indicates that the intertoll trunk is configured as a CELL Type 2B SS7 trunk. This option is valid only for North America.

TRKGRP type IT (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
	OPTION	E911	*Option* This subfield consists of refinements ESCO, ESN, E911SIG, ORIGHOLD, and ECPHTIME. To specify the default ESCO for this trunk, enter ESCO. To enter the default ESN for this trunk, enter ESN. To enter the type of signalling to be used by this trunk, enter E911SIG. This option is valid only for North America.
	ESCO	0000 to 9999	*Emergency Service Central Office* If the entry in subfield OPTION is E911, enter the default ESCO number representing the end office at which the E911 trunk originated. This option is valid only for North America.
	ESN	0 to 15999	*Emergency service number* If the entry in subfield OPTION is E911, enter the default ESN associated with the emergency service zone that is used to obtain the DN of the primary PSAP to which this call is to be default routed. This option is valid only for North America.

TRKGRP type IT (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
	E911SIG	E911_STD, E911_CHG, WRLS_STD, WRLS_CLD	*Enhanced 911 signaling.* This entry determines whether the DMS switch uses the calling party number or the charge number to obtain the callback or routing number or both. If you enter E911_STD, the first attempt uses the calling party number. The second attempt uses the charge number. If you enter E911_CHG, the first attempt uses the charge number. The second attempt uses the calling party number. If you enter WRLS_STD, the first attempt uses the calling party number. There is no second attempt. ***Note:*** The WRLS_STD entry applies only to incoming trunks that handle only wireless emergency calls. If you enter WRLS_CLD, the first attempt uses the calling party number. There is no second attempt. ***Note 1:*** The WRLS_CLD entry applies only to incoming trunks that handle only wireless emergency calls directly from a mobile switching center. The mobile switching center sends the pANI and callback number in a non-standard format. ***Note 2:*** The E911SIG option is valid only for North America.

TRKGRP type IT (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
	TDMPRFX	0 to 15	*Tandem Prefix Value.* If datafilled with a non-zero value, this suboption indicates the originating E911 tandem in a dual super tandem-tandem network. A new Generic Digits Parameter (GDP) is built in the IAM to transport the TDMPRFX to table E911TDRT. The delivery of the TDMPRFX value in the new GDP behaves as follows: • If a non-zero TDMPRFX is datafilled against an ISUP IT trunk with the E911 option, then a GDP is built containing the TDMPRFX and sent on outgoing 911 calls. • If the TDMPRFX datafill against an ISUP IT trunk has the default value of '0', and if no TDMPRFX is received via a GDP, then outgoing 911 calls do not build the GDP containing the TDMPRFX. • If a GDP containing the TDMPRFX is received at an E911 tandem, the value is stored. It takes precedence over any datafilled TDMPRFX values if the TDMPRFX datafilled in Table TRKGRP is non-zero. If datafilled value is '0', the TDMPRFX from GDP is dropped and not used for further processing. • If the TDMPRFX datafill against an ISUP IT trunk has a default value of '0' and no GDP is received, the TDMPRFX is ignored. • On an ONP, if a non-zero TDMPRFX is not datafilled, a default value of '0' is transferred. The TDMPRFX field be datafilled in the Super E911 tandems for incoming ISUP IT trunks with the E911 option. The TDMPRFX field in other E911 tandems should not be datafilled, rather the value should be left at the default of zero.

Field descriptions

Field	Subfield	Entry	Explanation and action
	ORIGHOLD	Y or N	Originator hold. Enter Y (yes) if the end office at which this trunk originated supports the operator hold function. When ORIGHOLD is active, the originator of an E911 call cannot disconnect the call. Enter N to make ORIGHOLD inactive.
	ECPHTIME	0 to 255	Enhanced call party hold. This subfield indicates the number of seconds that ECPH remains active. ECPHTIME prevents a caller from disconnecting a call before the call is answered and before the timer expires. Zero (0) deactivates ECPH.

Datafill example

An example of datafill for table TRKGRP and outgoing trunk group type IT is shown below. This example was datafilled in accordance with the following datafill requirements:

- The code in the CLLI table for the trunk group is OTWAON11MG00.
- The trunk group type is IT.
- The outgoing traffic separation number 21 is assigned to the trunk group.
- TLD is the pad group assigned to the trunk group.
- The no-circuit class is NCTC.
- The direction is outgoing (OG).
- The traffic class is toll completing (TC).
- The select sequence is set to MIDL.
- The connecting NPA is 613.
- Pretranslation and class-of-service screening are not required for outgoing trunk groups; set to NPRT and NSCR respectively.
- The trunk group is assigned to serving NPA 613.
- The terminating toll center code is 000.
- Trunk group is toll completing.
- The charge number delivery option (CHGNUM) is ALL.
- The carrier connect wink in equal access international calls is not regenerated.

TRKGRP type IT (continued)

MAP display example for table TRKGRP type IT

```
GRPKEY
                                        GRPINFO
_____________________________________________________________

OTWAO11MG00
   IT 21 TLD NCTC OG TC MIDL 613 NPRT NSCR 613
   000 Y N CHGNUM ALL $
```

Datafill (Two-way intertoll)

The following table lists datafill for table TRKGRP type IT.

Field descriptions

Field	Subfield	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 assigned to the trunk group in table CLLI.
GRPINFO		see subfields	*Variable group information* This field consists of subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, DIRDATA, TRAFCLS, SELSEQ, CONNGNPA, PRTNM, SCRNCL, SNPA, TERMTC, TOLLCOMP, CCWKVLD, and OPTIONS. Refer to section “General field information” in table TRKGRP for information on an alternate structure for this field that results from the datafill of table CUSTFLDS.
	GRPTYP	IT	*Group type* Enter IT for the intertoll trunk group type.

TRKGRP type IT (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
	TRAFSNO	numeric (0 to 127)	*Traffic separation number* Enter the incoming and outgoing traffic separation number assigned to the trunk group. If it is not required, enter 0 (zero). If the switching unit has feature package NTX085AA (Traffic Separation Peg Count), enter a number between 1 and the lower value of office parameters TFAN_IN_MAX_NUMBER and TFAN_OUT_MAX_NUMBER in table OFCENG. For switching units without feature package NTX085AA, enter 1 to 15. Incoming and outgoing traffic separation numbers 1 to 9 should be reserved for generic traffic separation numbers. Refer to the description of table TFANINT for information.
	PADGRP	alphanumeric (1 to 5 characters)	*Pad group* Enter the name of the pad group assigned to the trunk group in table PADDATA. Refer to the description of table PADDATA for information.
	NCCLS	NCBN, NCID, NCIM, NCIT, NCLT, NCOF, NCON, NCOT, NCRT, NCTC, or NOSC	*Operational measurements no-circuit class* Enter the operational measurements (OM) no-circuit class to indicate which OM register is to be incremented when treatment GNCT (generalized no-circuit) occurs. Refer to table TRKGRP and the *Operational Measurements Reference Manual,* for information.
	DIRDATA	see subfield	*Direction data* This field consists of subfield DIR.

TRKGRP type IT (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
	DIR	2W	*Direction* Enter 2W to specify that the direction of traffic flow is two-way. If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y (yes), all trunks in the group must be busy before changing the value of this field by data modification order (DMO).
	TRAFCLS	alphabetic	*Traffic usage class* Enter the traffic usage class assigned to the trunk group. Refer to the general section of table TRKGRP for additional information.

TRKGRP type IT (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
	SELSEQ	ASEQ, CCWCTH, CWCTH, DSEQ, LIDL, MIDL, or WIDEBAND	*Select sequence* If the far end is a link list switcher with MIDL (most idle) or LIDL (least idle) trunk selection, enter LIDL or MIDL respectively. If the far end is not a link list switcher and sequential selection does not apply, enter MIDL. If the far end is not a link list switcher and sequential selection applies (feature package NTX244AB [Enhanced Sequential Trunk Hunting] must be present), enter • CWCTH for clockwise or CCWCTH for counterclockwise circular trunk hunting from the most recently released trunk in the trunk group, based on the order of trunk members in table TRKMEM, when the far end is CCWCTH or CWCTH respectively • ASEQ for ascending or DSEQ for descending sequential selection, based on the order of trunk members in table TRKMEM, when far end is DSEQ or ASEQ respectively • WIDEBAND and datafill refinements WBSELSEQ, WBGRPING, and WBSEARCH to specify DS-0's selection sequence, time slot arrangement types, and time slot search method. ***Note:*** Refer to the description of table TRKGRP for information on field SELSEQ.

TRKGRP type IT (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
			Note: The selection sequence for an existing trunk group can be changed from ASEQ to DSEQ, or from DSEQ to ASEQ, if all the members are made installation busy (INB) or unequipped (UNEQ). The selection method for an existing trunk group cannot be changed. To change the selection method for an existing trunk group from ASEQ or DSEQ to CWCTH or CCWCTH, or to MIDL or LIDL, define a new trunk group, as follows: create a new trunk group with the required trunk selection method, delete the individual trunks from the old trunk group, and add the trunks to the new trunk group.
	WBSELSEQ	ASEQ or DSEQ	*Wideband selection sequence* Datafill this field if the entry in field SELSEQ is WIDEBAND. Enter ASEQ to specify that the wideband trunks are selected in ascending order from the first idle trunk on the search list, or enter DSEQ to specify that they are selected in descending order from the last idle trunk on the search list. The order of trunks in the search list is determined by the order in which the trunk groups are datafilled in table TRKMEM.
	WBGRPING	FIXED or FLOATING	*Wideband boundary preference* Datafill this field if the entry in field SELSEQ is WIDEBAND. Enter the wideband boundary preference. The value FIXED specifies that only the idle trunks within a specific time slot frame are selected. This value is only valid for local exchange carriers (LEC). The value FLOATING specifies that any number of consecutive idle trunks in a trunk group are selected.

TRKGRP type IT (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
	WBSEARCH	BESTFIT or FIRSTFIT	*Wideband search* Datafill this field if the entry in field SELSEQ is WIDEBAND. Enter the wideband search algorithm. The value BESTFIT finds the smallest segment of idle channels (DS-0s) among trunks (DS-1s) within a trunk group to accommodate a wideband call, according to the boundary preference (FIXED or FLOATING) specified. FIRSTFIT finds the first segment of idle DS-0s that can accommodate a wideband call, according to the boundary preference specified.
	CONNGNPA	numeric (3 digits)	*Connecting numbering plan area* Enter the numbering plan area code of the switching unit at which the outpulsed digits are translated.
	PRTNM	alphanumeric (1 to 4 characters) or NPRT	*Standard pretranslator name* If standard pretranslation is required on the incoming side of the trunk group, enter the name of the standard pretranslator to which digit translation routes after the receipt of one digit. If standard pretranslation is not required, enter NPRT. If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y, all trunks in the group must be busy before changing the value of this field by DMO.
	SCRNCL	alphanumeric (1 to 32 characters) or NSCR	*Class-of-service screening name* If class-of-service screening is required on the incoming side of the trunk group, enter the name of the class-of-service screening to which digit translation is routed. If class-of-service screening is not required, enter NSCR.

TRKGRP type IT (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
	SNPA	numeric (3 digits)	*Serving numbering plan area* Enter the serving NPA code to which the trunk group belongs. If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y, all trunks in the group must be busy before changing the value of this field by DMO.
	TERMTC	numeric (3 digits)	*Terminating toll center* If the switching unit where the outpulsed digits are translated is assigned a terminating toll center code, enter the terminating toll center code. If there is no terminating toll center code, enter 000.
	TOLLCOMP	Y or N	*Toll completing* Enter Y if the trunk group is toll completing; otherwise, enter N.
	CCWKVLD	Y or N	*Carrier connect wink valid* Enter Y if carrier connect winks in equal access international calls are regenerated. Otherwise, enter N. Since most non-DMS equal access end offices (EAEO) and access tandems (AT) cannot handle this wink, the value N should be datafilled in these cases.
	OPTIONS	see subfield	*Options* Datafill subfield OPTION and the corresponding refinements for the desired trunk option. Enter a $ (dollar sign) to indicate the end of the options vector.

TRKGRP type IT (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
	OPTION	AIN, BCNAME, BILLNO, BLOCKNB, CELL, E911, CHGNUM, LNP	*Option* The following options can be datafilled: • AIN - Advanced intelligent network. This option appears on the MAP display but is not supported. This functionality is moved to table TRKAIN. • BCNAME - Bearer capability name. Datafill refinement BCNAME. • BILLNO - Billing number. This option allows datafilling a billing number for the trunk group. Datafill refinement BILLNO • BLOCKNB - This option specifies whether narrow band calls are blocked on the trunk group. This option can only be set when field SELSEQ = WIDEBAND. No refinements require datafill. • CELL - This option allows specifying the configuration of the intertoll trunk type. Datafill refinement CELL_SS7_TYPE. This option is valid only for North America. ***Note:*** Option CELL is not compatible with option E911. • E911 - This subfield consists of refinements ESCO, ESN, E911SIG, ORIGHOLD, ECPHTIME, OFBSR, and TDMPRFX. To specify the default ESCO for this trunk, enter ESCO. To enter the default ESN for this trunk, enter ESN. To enter the type of signalling to be used by this trunk, enter E911SIG. This option is valid only for North America. To indicate that the OFBSR is used, type Y. To enter the default TDMPRFX, type 0.

TRKGRP type IT (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
			Option *(continued)* The following options can be datafilled: • CHGNUM - This option specifies the charge-number-delivery option and contains subfield CHGNO_TRAFTYPE with the values of PBX or ALL. The CHGNUM option sends a charge number and originating line information (OLI) parameter with the initial address message (IAM). Select the refinements PBX or ALL. • LNP - Local number portability. This option allows specifying a default location routing number (LRN) for the trunk group. Datafill refinement LRN. ***Note 1:*** If no options apply, leave this field blank. ***Note 2:*** The OSS7 option OSNC assigned through table TRKOPTS requires the CHGNUM ALL option.
	BCNAME	alphanumeric (1 to 16 characters)	*Bearer capability name* If the entry in field OPTION is BCNAME, enter the bearer capability to be used by this trunk group. Refer to table BCDEF for the current list of available bearer capabilities. If field OPTION and refinement BCNAME are left blank, the default bearer capability of the central office is used.
	BILLNO	up to an 11-digit billing number	*Billing number* If field OPTION = BILLNO, enter the billing number that is used to populate the originating number field in the cellular mobile carrier (CMC) AMA record and the associated equal access AMA record. This option is valid only for North America.

TRKGRP type IT (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
	BCNAME	alphanumeric (1 to 16 characters)	*Bearer capability name* If the entry in field OPTION is BCNAME, enter the bearer capability to be used by this trunk group. Refer to table BCDEF for the current list of available bearer capabilities. If field OPTION and refinement BCNAME are left blank, the default bearer capability of the central office is used.
	BILLNO	up to an 11-digit billing number	*Billing number* If field OPTION = BILLNO, enter the billing number that is used to populate the originating number field in the cellular mobile carrier (CMC) AMA record and the associated equal access AMA record. This option is valid only for North America.
	CELL_SS7_ TYPE	2A, 2B, or NILCELL	*Cell* If field OPTION = CELL, enter the configuration of the intertoll trunk type. Datafilling this option as 2A indicates that the intertoll trunk is configured as a CELL Type 2A SS7 trunk. Datafilling this option as 2B indicates that the intertoll trunk is configured as a CELL Type 2B SS7 trunk. This option is valid only for North America.
	ESCO	0000 to 9999	Emergency Service Central Office. If the entry in subfield OPTION is E911, enter the default ESCO number representing the end office at which the E911 trunk originated. This option is valid only for North America.
	ESN	0 to 15999	Emergency Service Number. Subfield OPTION entry E911 requires the default ESN for the emergency service zone of the primary PSAP DN where the call is default routed. This option is valid only for North America.

TRKGRP type IT (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
	E911SIG	E911_STD, E911_CHG, WRLS_STD, WRLS_CLD	*Enhanced 911 signaling.* This entry determines whether the DMS switch uses the calling party number or the charge number to obtain the callback or routing number or both. If you enter E911_STD, the first attempt uses the calling party number. The second attempt uses the charge number. If you enter E911_CHG, the first attempt uses the charge number. The second attempt uses the calling party number. If you enter WRLS_STD, the first attempt uses the calling party number. There is no second attempt. ***Note:*** The WRLS_STD entry applies only to incoming trunks that handle only wireless emergency calls. If you enter WRLS_CLD, the first attempt uses the calling party number. There is no second attempt. ***Note 1:*** The WRLS_CLD entry applies only to incoming trunks that handle only wireless emergency calls directly from a mobile switching center. The mobile switching center sends the pANI and callback number in a non-standard format. ***Note 2:*** The E911SIG option is valid only for North America.
	ORIGHOLD	Y or N	Originator hold. Enter Y (yes) if the end office at which this trunk originated supports the operator hold function. When ORIGHOLD is active, the originator of an E911 call cannot disconnect the call. Enter N to make ORIGHOLD inactive.

TRKGRP type IT (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
	ECPHTIME	0 to 255	Enhanced call party hold. This subfield indicates the number of seconds that ECPH remains active. ECPHTIME prevents a caller from disconnecting a call before the call is answered and before the timer expires. Zero (0) inactivates ECPH.
	OFBSR	Y or N	Off-Board Selective Routing database. Enter Y if facility uses the OFBSR for translations and routing of both MF and ISUP E911 trunks.

TRKGRP type IT (continued)

Field descriptions

Field	Subfield	Entry	Explanation and action
	TDMPRFX	0 to 15	*Tandem Prefix Value.* If datafilled with a non-zero value, this suboption indicates the originating E911 tandem in a dual super tandem-tandem network. A new Generic Digits Parameter (GDP) is built in the IAM to transport the TDMPRFX to table E911TDRT. The delivery of the TDMPRFX value in the new GDP behaves as follows: • If a non-zero TDMPRFX is datafilled against an ISUP IT trunk with the E911 option, then a GDP is built containing the TDMPRFX and sent on outgoing 911 calls. • If the TDMPRFX datafill against an ISUP IT trunk has the default value of '0', and if no TDMPRFX is received via a GDP, then outgoing 911 calls do not build the GDP containing the TDMPRFX. • If a GDP containing the TDMPRFX is received at an E911 tandem, the value is stored. It takes precedence over any datafilled TDMPRFX values if the TDMPRFX datafilled in Table TRKGRP is non-zero. If datafilled value is '0', the TDMPRFX from GDP is dropped and not used for further processing. • If the TDMPRFX datafill against an ISUP IT trunk has a default value of '0' and no GDP is received, the TDMPRFX is ignored. • On an ONP, if a non-zero TDMPRFX is not datafilled, a default value of '0' is transferred. The TDMPRFX field be datafilled in the Super E911 tandems for incoming ISUP IT trunks with the E911 option. The TDMPRFX field in other E911 tandems should be left at the default of zero.

Field descriptions

Field	Subfield	Entry	Explanation and action
	CHGNO_TRAF TYPE	PBX or ALL	*Charge number traffic type* If the entry in field OPTION is CHGNUM, select refinement PBX to provide the CN and OLI parameters for calls originating on PBX trunks. Select ALL to provide the CN and OLI parameters for outgoing calls on the following originating agents: POTS, RES, IBN, or BRI lines; PRI and ISUP trunks; IBNT2, IBNTI, or PBX trunks; attendant consoles, or a supported agent routed through a virtual facility group (VFG). Select ALL to provide OSS7 option OSNC assigned through table TRKOPTS.
	LRN	10-digit directory number	*Location routing number.* If field OPTION = LNP, datafill a 10-digit directory number that identifies the adjacent incoming office and is used in recording AMA module 720 of the calling number. This option is used if the LRN is not signalled. Exactly 10 digits must be datafilled.

Datafill example

An example of datafill for table TRKGRP and two-way trunk group type IT is shown below. This example was datafilled in accordance with the following datafill requirements:

- The code in table CLLI for the trunk group is OTWAON2301T0.
- The trunk group type is IT.
- The incoming and outgoing traffic separation number is 23.
- TLD is the pad group assigned to the trunk group.
- The no-circuit class is NCIT.
- The direction is two-way (2W).
- The traffic class is intertoll (IT).
- The select sequence is WIDEBAND.
- The DS-0s are chosen in ascending order (ASEQ).
- The search method used to find a group of time slots is FIRSTFIT.

TRKGRP type IT (continued)

- The time slot arrangement type chosen is FIXED.
- The connecting NPA is 613.
- No pretranslation (NPRT) or class-of-service screening (NSCR) is required.
- The serving NPA is 613.
- The terminating toll center code is 025.
- Trunk group is not toll completing.
- The carrier connect wink in equal access international calls is not regenerated.
- Option BCNAME with 56KDATA is assigned.
- Option CHGNUM is assigned with ALL selected.

MAP display example for table TRKGRP type IT

```
GRPKEY
                                        GRPINFO
_____________________________________________________________

OTWAON2301T0
   IT 23 TLD NCIT 2W IT WIDEBAND ASEQ FIRSTFIT
   613 NPRT NSCR 613 025 N N BCNAME 56KDATA
   CHGNUM ALL $
```

Datafill example

An example of datafill for table TRKGRP and incoming trunk group type IT is shown in the following figure. This example is valid only for North America, and is datafilled in accordance with the following datafill requirements:

- The code in table CLLI for the trunk group is E911ICS7. The trunk group type is IT.
- The incoming traffic separation number 0 is assigned to the trunk group. ELO is the pad group assigned to the trunk group.
- The no-circuit class is NCRT.
- The traffic flow is two way (2W).
- The traffic class is NIL.
- The select sequence is not required; set to MIDL.
- The connecting NPA is 613.

TRKGRP type IT (continued)

- The pretranslator name is AT1. No class-of-service screening (NSCR) is required. The trunk group is assigned to serving NPA 613.
- The terminating toll center code is not required; set to 000.
- Toll completing is not required.
- The carrier connect wink in equal access international calls is not regenerated.
- The IT trunk option is E911.
- The default ESCO number for this trunk is 0747.
- The default ESN for this trunk is 113.
- The type of signalling to be used by this trunk is E911_STD.
- The OFBSR is off.
- The TDMPRFX is 15.

TRKGRP type IT (continued)

MAP display example for table TRKGRP type IT

```
> Table TRKGRP
> POS E911ICS7
> ADD
GRPTYP: 2W
>
TRAFSNO: 0
.........................
.........................
OPTION: E911
>
ESCO: 0747
>
ESN: 113
>
E911SIG: E911_STD
>
ORIGHOLD: N
>
ECPHTIME: 0
>
OFBSR: N
>
TDMPRFX:
>15
OPTION:
>$
WARNING: THE E911 OPTION SHOULD BE ASSIGNED ONLY TO TRUNKS
         WHICH ARE DEDICATED TO EMERGENCY TRAFFIC.
TUPLE TO BE CHANGED:
    E911ICS7 IT 0 ELO NCRT IC NIL MIDL 613 613 AT1 NSCR 613 613 000
              N N (E911 0747 113 E911_STD N N 0 15) $
      ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
```

Table history

SN06 (DMS)

Feature A89007692 added option E911 ESCO expansion to four digits.

NA017

Added subfield DEDICATD for E911 Trunk Group Data (TRKGRP). DEDICATD: A boolean value to indicate if the IT ISUP with the E911 option will allow for non-E911 traffic.

NA015

Added subfield OFBSR to IT ISUP trunk functionality for feature A59021993.

Added subfield TDMPRFX to IT ISUP trunk functionality for feature A59022437.

NA013

Added subfields ECPHTIME and ORIGHOLD to IT ISUP trunk functionality.

Added error messages for dynamic trunks for feature A59007550.

NA011

Added subfield CHGNO_TRAFTYPE to option CHGNUM for feature AF7479.

NA010

Added E911SIG options WRLS_STD and WRLS_CLD.

NA009

Added E911SIG option E911_CHG.

NA008

The following changes were made:

- Added feature-specific datafill information about datafilling Equal Access for DMS-100 Wireless (switch).
- Added option E911 and subfields ESCO, ESN, and E911SIG to provide the ability to route Enhanced 911 (E911) calls directly over Integrated Services Digital Network User Part (ISUP) trunks.

NA007

Value LNP added to field OPTION by feature AN1954.

NA004

The following changes were made:

- Added the refinement fields for BILLNO and CELL in subfield OPTION, and added datafill examples with the BILLNO and CELL examples. These changes are valid only for North America.
- Removed option AIN; table TRKAIN is used instead. Refer to feature AR1276.

TRKGRP type IT (end)

Supplementary information

The table that follows explains the error messages that can occur if you enter data incorrectly in table TRKGRP.

Error message table

Error message	Explanation and action
`Table TRKOPTS DYNAMIC OC option is assigned. The trunk group direction must be OG or 2W.`	The table TRKOPTS option DYNAMIC OC can only be assigned to trunk groups that have a DIRDATA of IC or OG. Select another trunk group with a DIRDATA of IC or OG.
`Table TRKOPTS DYNAMIC OC option is assigned. No options are allowed in Table TRKGRP.`	For the OC-IP application, TRKGRP options are incompatible with the TRKOPTS DYNAMIC option and must not be added. Do not add options to a trunk with the table TRKOPTS option DYNAMIC.

International 102 Test Trunk Group Type

International 102 test trunks (ITL2) are used for test calls in switches configured for ITL2 groups with a milliwatt supply of 1020 Hz and balance termination test.

Each ITL2 consists of a trunk circuit with PEC NT1X00AF, and is represented in table CLLI by pseudo-CLLI INTL102T.

The trunk group members assigned to this trunk group are listed in table TRKMEM with CLLI INTL102T.

Note: If using PMTYPE DTM in table TRKMEM, the NT1X80 (enhanced digital recorded announcement machine) card provides the milliwatt tone according to the datafill in field MWDBLEVEL. For example, if MWDBLEVEL is datafilled as 1X00AF, the milliwatt source of 1020 Hz comes from the NT1X80 card. Similarly, if this field is datafilled as 1X00AH, then the NT1X80 provides the -15 dB tone.

For related information, refer to TRKGRP type MAINT.

Datafill

The following table lists the datafill for table TRKGRP type ITL2.

Field descriptions (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
GRPKEY		see subfield	*Group key* This field consists of subfield CLLI.
	CLLI	INTL102T	*Common language location identifier* Enter INTL102T to specify the common language location identifier (CLLI) code for international 102 test trunks.
GRPINFO		see subfields	*Variable group data* This field consists of subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, MWSPRVSN and MWDBLEVL. Refer to section “General field information" in table TRKGRP for information concerning an alternate structure for this field that results from the datafill of table CUSTFLDS.

TRKGRP type ITL2 (continued)

Field descriptions (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	GRPTYP	ITL2	Enter ITL2 to specify the group type for international 102 test trunks.
	TRAFSNO	numeric (0 to 127)	*Traffic separation number* Enter the incoming and outgoing traffic separation number assigned to the trunk group. If a traffic separation number is not required, enter 0 (zero). For switches with software package NTX085AA (Traffic Separation Peg Count), enter a value from 1 to the value of office parameter TFAN_OUT_MAX_NUMBER in table OFCENG. For switches without software package NTX085AA, enter a value from 1 to 15. Incoming and outgoing traffic separation numbers 1 to 9 should be reserved for generic traffic separation numbers. For more information, refer to table TFANINT.
	PADGRP	alphanumeric (1 to 5 characters)	*Pad group* Enter the name of the pad group assigned to the trunk group in table PADDATA. For more information, refer to table PADDATA.
	NCCLS	NCBN NCID NCIM NCIT NCLT NCOF NCON NCOT NCRT NCTC or NOSC	*Operational measurements no-circuit class* Enter the operational measurements (OM) no-circuit class (NCCLS) to indicate which OM register is incremented if treatment GNCT (generalized no circuit) occurs. The initial value for this trunk group type is NCRT (no circuit). For more information, refer to table TRKGRP and the *Operational Measurements Reference Manual*.

Field descriptions (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	MWSPRVSN	BMW LMW SMW or TMW	*Milliwatt supervision* Datafill this field to specify the required milliwatt supervision type as outlined below: • Enter BMW for 100 balance supervision. • Enter LMW for 102 local supervision. • Enter SMW for 102 steady supervision. • Enter TMW for 102 toll supervision.
	MWDBLEVL	1X00AF or 1X00AH	*Milliwatt dB level* Enter 1X00AF or 1X00AH. Entries other than this value are not valid.

Datafill example

The following example shows sample datafill for table TRKGRP type ITL2.

MAP display example for table TRKGRP type ITL2

```
GRPKEY      GRPINFO
_____________________________________________________

TERM102T    ITL2 0 TLD NCOT TMW 1X00AF
TERM102L    ITL2 0 TLD NCOT LMW 1X00AF
TERM100Q    ITL2 0 TLD NCOT BMW 1X00AF
```

TRKGRP type LOOPA

Line Loop Test Unit Trunk Group Type

Trunk group type LOOPA is used in switches that are configured for loop-around testing.

Each loop-around test unit consists of a trunk card with product engineering code (PEC) NT2X75AA (loop around test line).

Each A-law loop-around test line consists of a trunk card with PEC NT2X75BA.

The trunk card consists of two circuits. The even-numbered circuit is assigned to the loop port 1 trunk group and is represented in table CLLI by the pseudo-common language location identifier (pseudo-CLLI) LOOPA1. The odd-numbered circuit is assigned to the loop-around port 2 trunk group and is represented in table CLLI by the pseudo-CLLI LOOPA2.

Provision only one of these circuits in a switch.

Datafill

The following table lists the datafill for table TRKGRP type LOOPA.

Field descriptions (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
GRPKEY		see subfield	*Group key* This field consists of subfield CLLI.
	CLLI	LOOPA1 or LOOPA2	*Common language location identifier* Enter the pseudo-common language location identifier (pseudo-CLLI) code for the line loop test unit trunk group.
GRPINFO		see subfields	*Variable group data* This field consists of subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, and CARDCODE. Refer to section “General field information" in table TRKGRP for information concerning an alternate structure for this field that results from the datafill of table CUSTFLDS.

TRKGRP type LOOPA (continued)

Field descriptions (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	GRPTYP	LOOPA	*Group type* Enter LOOPA to specify the line loop test unit trunk group type.
	TRAFSNO	numeric (0 to 127)	*Traffic separation number* Enter the incoming and outgoing traffic separation number assigned to the trunk group. If a traffic separation number is not required, enter 0 (zero). For switches with software package NTX085AA (Traffic Separation Peg Count), enter a value from 1 to the value of office parameter TFAN_OUT_MAX_NUMBER in table OFCENG. For switches without software package NTX085AA, enter a value from 1 to 15. Incoming and outgoing traffic separation numbers 1 to 9 should be reserved for generic traffic separation numbers. For more information, refer to table TFANINT.
	PADGRP	alphanumeric (1 to 5 characters)	*Pad group* Enter the name of the pad group assigned to the trunk group in table PADDATA. For more information, refer to table PADDATA.

TRKGRP type LOOPA (continued)

Field descriptions (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	NCCLS	NCBN NCID NCIM NCIT NCLT NCOF NCON NCOT NCRT NCTC or NOSC	*Operational measurements no-circuit class* Enter the operational measurements (OM) no-circuit class (NCCLS) to indicate which OM register is incremented if treatment GNCT (generalized no circuit) occurs. The initial value for this trunk group type is NCRT (no circuit). For more information, refer to table TRKGRP and the *Operational Measurements Reference Manual.*
	CARDCODE	2X75AA or 2X75BA	*Card code* Enter the PEC for the LOOPA trunk group as outlined below. • Enter 2X75AA for the line loop test unit. • Enter 2X75BA for the A-law loop-around test line. If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y, busy all trunks in the group before changing the value of this field by data modification order (DMO).

Datafill example

The following example shows sample datafill for table TRKGRP type LOOPA.

MAP display example for table TRKGRP type LOOPA

```
GRPKEY     GRPINFO
_____________________________________________________

LOOPA1     LOOPA 0 TLD NCRT 2X75AA
LOOPA2     LOOPA 0 TLD NCRT 2X75AA
```

Supplementary information

This section provides additional information concerning table TRKGRP and group type LOOPA.

Diagnostic test

A diagnostic test on an A-law looparound test line is run to verify that the card is in an operational condition. This test performs the following functions:

- The software pad is stepped from 0 dB to 7 dB in steps of 1 dB.
- The transmission characteristics of the card are tested to verify that they are within acceptance tolerance levels, as outlined in the following table..

Diagnostic test parameters

Tone frequency (Hz)	Tone level (dBm)	Tone tolerance (dB)
1004	0	-3
910	0	less than -4
985	0	greater than -4
1020	0	less than -4
1200	0	greater than -4

TRKGRP type LP4W

Four-wire Digital Loop Test Line Trunk Group Type

The four-wire digital loop test line (LP4W) trunk group is used for performing terminating and originating loop-around tests on CCITT No.7 ISDN user part (ISUP) trunks in a DMS-300 switch.

The figure "Terminating digital loop-around test line test protocol" illustrates the terminating digital loop-around test line test protocol. It illustrates the CCITT No.7 ISUP messages involved in the setting up and clearing down of the test call.

The CCITT No.7 ISUP trunk at the terminating DMS-300 gateway switching unit can be either an incoming or two-way trunk. Test access is permitted if the trunk is in either one of the following trunk states: IDL (idle), MB (manual busy), RMB (remote manual busy), or SB (system busy).

The NT1X00 test trunk located in a maintenance trunk module (MTM) is used as the test equipment for generating the milliwatt tone, and for providing the 60 Ω balanced termination. The NT1X00 test trunk satisfies the CCITT Red Book Volume IV section 3.0 specifications for tone source characteristics and impedance.

Terminating test line test protocol

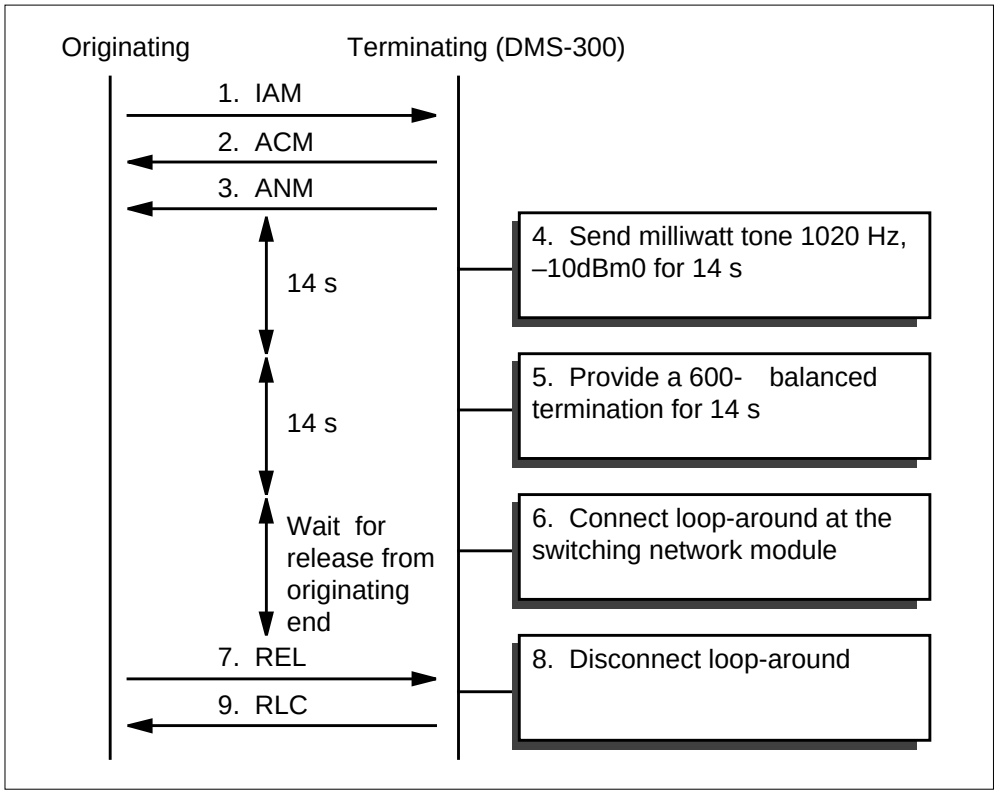
The figure "Terminating digital loop-around test line test protocol" illustrates the following terminating test line test protocol:

1. When the ISUP trunk under test (TUT) receives an initial address message (IAM), it acknowledges it with an address complete message (ACM) followed by an answer message (ANM).
2. The ISUP TUT is then connected through the DMS switch network to a free NT1X00 test trunk. The NT1X00 test trunk provides a 60 Ω balanced termination to the receive (RX) direction of the four-wire digital trunk and transmits a milliwatt tone of 1020 Hz at -10dBm0 (decibels at the zero transmission level point) out on the transmit (TX) direction. The milliwatt tone lasts for 14 s.
3. The milliwatt tone is terminated at the end of the 14-s interval, and the NT1X00 test trunk presents a 600 Ω balanced termination to the TX direction for the next 14 s.
4. At the end of the second interval, the 600 Ω terminations at both the TX and RX direction of the ISUP trunk is disconnected. Finally, the TX and the RX directions is connected (looped around) with the switching

network digital pad set to 0dBr (relative decibel) level. The loopback point is at the DMS-300 network module (NM).

5. The looped around condition is maintained until the ISUP TUT receives a release message (REL) from the originating switch. When this message is received, the looped around is released and the ISUP TUT is idled. A release complete message (RLC) is also returned to the originating switching unit.

Terminating digital loop-around test line test protocol



Error handling - terminating test line occupied

When access is gained to the terminating digital loop-around test line, an ANM message is returned to the originating switch as illustrated in figure 1. If the terminating test line is occupied, a busy indication is returned to the originating end. For the ISUP TUT here, based on datafillable options in a DMS-300 switching unit, either a REL message, with cause indicator being equal to USER BUSY `00010001', or a tone or an announcement is returned to the far-end switching unit.

TRKGRP type LP4W (continued)

Error handling - terminating test line unequipped

When a digital loop-around test line access code is received at a DMS-300 terminating switching unit, it is expected to be routed to a terminating digital loop-around test line. However, if the translation datafill for the test line is either missing or incomplete, an unallocated number signal is returned to the far-end switching unit. As for the ISUP TUT considered here, based on user datafillable options in a DMS-300 switch, a REL message, with cause indicator being equal to UNALLOCATED (UNASSIGNED) NUMBER `00000001', or a tone or an announcement is returned to the far-end switch.

Force releasing the terminating digital loop-around test line

While the terminating digital loop-around test line is carrying out its test protocol, and in call processing busy (CPB) state, the test line can be forced release from the TTP (trunk test position) level of the MAP (maintenance and administration position) using the TTP command FRLS (force release).

Automatic loop-around timeout

In the ISUP TUT loop-around mode, the call can be taken down by the terminating switch when the time-out expires.

The timeout is datafilled as a switching unit parameter LOOP_AROUND_TIMEOUT_IN_MIN in table OFCVAR.

Calling party's category

The calling party's category parameter field of the incoming IAM message is expected to be set to 00001101 (ISUP CALLING PARTY'S CATEGORY TEST CALL).

Trunk group type for the terminating digital loop-around test line

A trunk group type, LP4W, is introduced for the terminating digital loop-around test line to a DMS-300 gateway switch.

Field GRPINFO for the LP4W trunk group type consists of two fields that enable maintenance personnel to specify the tone cadence and tone characteristics (that is, both frequency and level) of the milliwatt tone. Field field MWSPRVSN enables maintenance personnel to specify the type of supervision to be used for the milliwatt tone. This translates itself directly to the tone cadence.

The following is a list of the possible supervision types that can be selected:-

- BMW
- TMW
- LMW

- IMW
- NMW

The supervision type IMW satisfies the CCITT Red Book specification of milliwatt tone.

The supervision type NMW allows for applications at the originating switch that do not require milliwatt tone or quiet termination before going into loop-around mode.

If one of the supervision types BMW, TMW, or LMW is chosen, loop-around of the ISUP TUT is not carried out. Loop-around of the ISUP TUT is only carried out if IMW or NMW supervision type is chosen.

If the terminating digital loop-around test line is used in combination with the originating digital loop-around test line, the IMW supervision type is used. However, for other applications at the originating switch, maintenance personnel have the freedom to use other supervision types.

The other field is the MWTTCLLI that contains one of the fixed CLLI pseudo codes of the NT1X00 test trunks. This enables the incoming test call to be routed to the correct test equipment (that is, a NT1X00 circuit). For the example illustrated, the pseudo CLLI code MWTTAE is used because it that satisfies the CCITT Red Book specifications.

There is no need to enter the DLPATL CLLI into the TRKSGRP and TRKMEM tables. However, the same CLLI name must be used in the translation if the incoming test call is to be routed to the terminating digital loop-around test line.

It is recommended to choose value 0 (zero) for field TRKGRSIZ in table CLLI for the terminating digital loop-around test line because there are no trunk members associated with the test line, and system memory need not be allocated for the individual trunk member. This helps to conserve system memory.

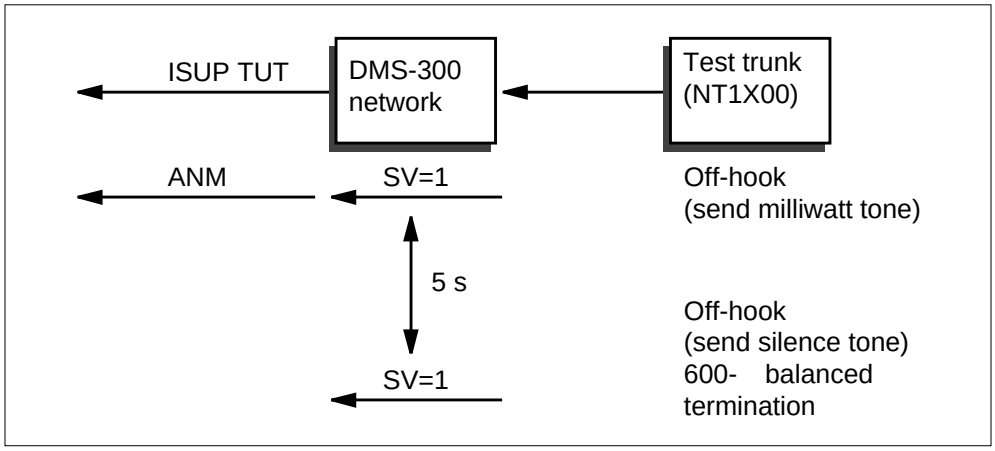
The following figures illustrate the tone cadence of each of the supervision types, and also the relation between the test line responder terminal state and the CCITT No.7 ISUP messages.

Note: For LMW supervision, the pattern is repeated indefinitely. As shown in the figures, on-hook and off-hook represent the terminal state of the terminating test line as seen by the peripheral module (PM). This does not cause the originator and terminator to become idle. Actual on-hook or

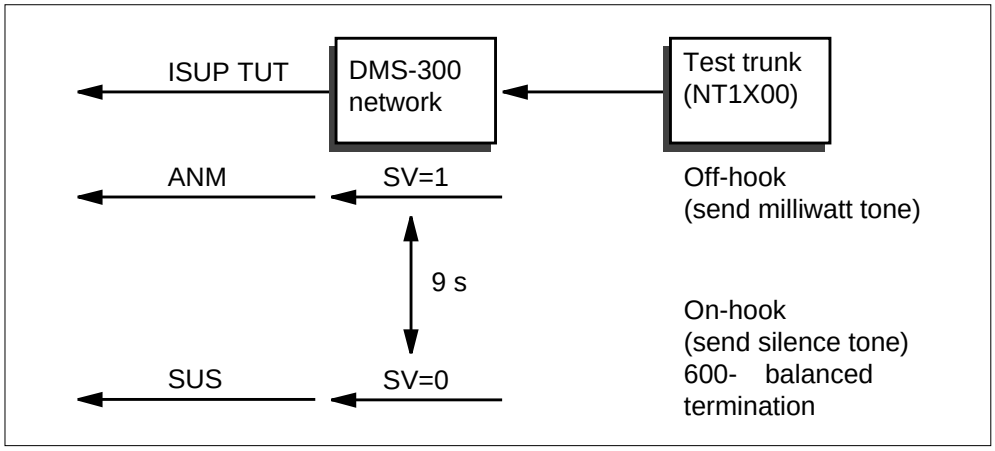
TRKGRP type LP4W (continued)

disconnect that can cause both originator and terminator to become idle, can be brought about by the originating trunk going on-hook.

Tone cadence for BMW supervision type

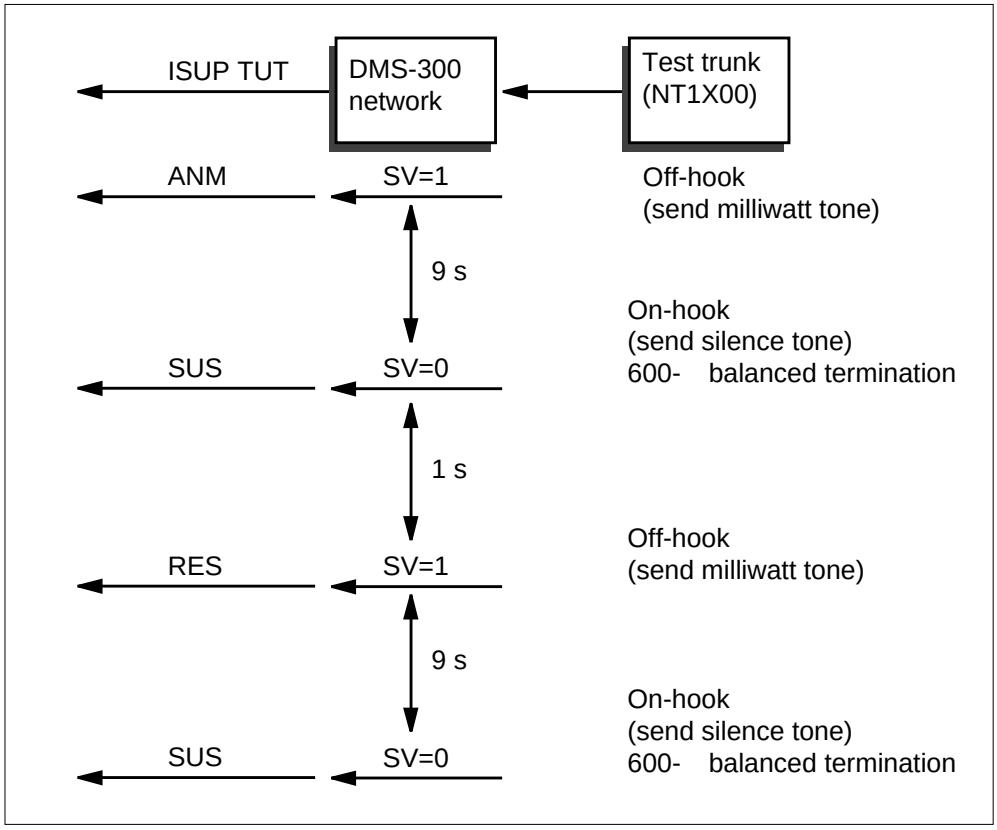


Tone cadence for TMW supervision type



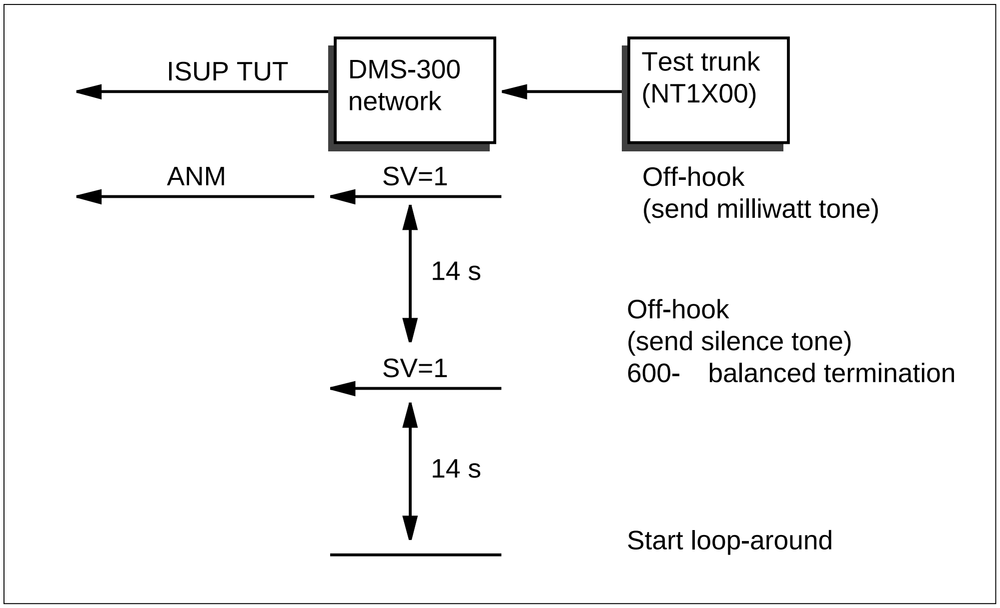
TRKGRP type LP4W (continued)

Tone cadence for LMW supervision type



TRKGRP type LP4W (continued)

Tone cadence for IMW supervision type



Address information

According to the CCITT Red Book Volume IV Fascicle IV.4 Rec.O.11 section 2.4.2, the test line access code for the digital loop-around test line is 66. The two-digit test line access code is expected to be found in the address parameter field of the received IAM message.

Translation datafill

For incoming CCITT #7 ISUP test call, the N7TS international pretranslator is used for routing calls to the terminating test line.

An example of the datafill required for translation is shown below.

MAP display example for table INATLPRT

VALUE	SYMBOL
1	N7TS

MAP display example for table INPRTRNS

```
                INPRTICD     POS
TMTCCNRR
TRANSYS NOPREDIG NOCCDIGS MINDIGSR MAXDIGSR LONGHAUL OPTIONS
_____________________________________________________________________
IP00               999   NONE                T     OVR7   2 N  N N  NIL
     NO         0         0         2        15         N        $
```

MAP display example for table OVR0

```
 RTE                                                        RTELIST
_____________________________________________________________________
   2 (S D TERM102T $) $
```

Terminating digital loop-around test line responder

The NT1X00 test trunk (digital loop-around test line responder) located in a maintenance trunk module (MTM) is used for providing the milliwatt tone and the 600 Ω balance impedance. There are several versions of this test trunk. Each version of this test trunk corresponds to a specific milliwatt tone characteristic. This is listed in the following table.

Versions of the NT1X00 test trunk card

Version	Frequency	Level
NT1X00AA and AB	1004 Hz ±0.02 Hz	0 dBm ± 0.01 dB
NT1X00AE	1020 Hz ± 0.02 Hz	-10 dBm ± 0.01 dB
NT1X00AF	1004 Hz ± 0.02 Hz	-10 dBm ± 0.01 dB
NT1X00AG	1004 Hz ± 0.02 Hz	-20 dBm ± 0.01 dB
NT1X00AH	1004 Hz ± 0.02 Hz	-15 dBm ± 0.01 dB

TRKGRP type LP4W (continued)

In order to satisfy the CCITT Red Book recommendation, card NT1X00AE is used. However, this feature provides the flexibility by allowing other NT1X00 card versions to be used. This is achieved by proper datafilling of the switch to be described in the following sections.

For a given version of the NT1X00 test trunk, an equipment pool is set up by datafilling the trunk circuit in tables CLLI, CLLIMTCE, TRKGRP, TRKSGRP, and TRKMEM.

This feature specifies fixed pseudo CLLI codes for each version of the NT1X00 test trunk. The same pseudo code must be used in each of the tables as listed in the previous paragraph if the equipment pool is to be set up.

The following table lists the fixed CLLI pseudo codes and their card versions.

Fixed CLLI pseudo cards and NT1X00 card versionse

Fixed pseudo CLLI code	NT1X00 card version
MWTTAA	NT1X00AA
MWTTAB	NT1X00AB
MWTTAE	NT1X00AE
MWTTAF	NT1X00AF
MWTTAG	NT1X00AG
MWTTAH	NT1X00AH

An example of the datafill requirement for setting up NT1X00 equipment pool in a DMS-300 gateway switch is shown below.

MAP display example for table CLLI

```
          CLLI ADNUM TRKGRSIZ                          ADMININF
-------------------------------------------------------------------
        MWTTAA   160        10       NT1X00AA_TEST_TRUNK_GROUP
        MWTTAA   161        10       NT1X00AB_TEST_TRUNK_GROUP
        MWTTAA   162        10       NT1X00AE_TEST_TRUNK_GROUP
        MWTTAA   163        10       NT1X00AF_TEST_TRUNK_GROUP
        MWTTAA   164        10       NT1X00AG_TEST_TRUNK_GROUP
        MWTTAA   165        10       NT1X00AH_TEST_TRUNK_GROUP
```

TRKGRP type LP4W (continued)

MAP display example for table CLLIMTCE

```
     CLLI  SCLLI MINALM MAJALM CRITALM SYNCTYPE TSTNOIND MWIDX SIGTST
          PRFXDIGS DIAGDATA
_____________________________________________________________________
   MWTTAA   MWAA      5      10       15       NSS         0      0       N
               N  (    0)
   MWTTAB   MWAB      5      10       15       NSS         0      0       N
               N  (    0)
   MWTTAE   MWAE      5      10       15       NSS         0      0       N
               N  (    0)
   MWTTAF   MWAF      5      10       15       NSS         0      0       N
               N  (    0)
   MWTTAG   MWAG      5      10       15       NSS         0      0       N
               N  (    0)
   MWTTAH   MWAH      5      10       15       NSS         0      0       N
               N  (    0)
```

MAP display example for table TRKGRP

```
          GRPKEY
                                                          GRPINFO
_____________________________________________________________________
          MWTTAA
                                       MAINT 0 NPDGP NCRT 1X00AA
          MWTTAB
                                       MAINT 0 NPDGP NCRT 1X00AB
          MWTTAE
                                       MAINT 0 NPDGP NCRT 1X00AE
          MWTTAF
                                       MAINT 0 NPDGP NCRT 1X00AF
          MWTTAG
                                       MAINT 0 NPDGP NCRT 1X00AG
          MWTTAH
                                       MAINT 0 NPDGP NCRT 1X00AH
```

TRKGRP type LP4W (continued)

MAP display example for table TRKSGRP

```
           SGRPKEY   CARDCODE
SGRPVAR
                                                              SGRPVAR
_____________________________________________________________________
          MWTTAA 0    1X00AA
    STD
                      OG    NP     WK    0  0 NO     NO N N N  17
          MWTTAB 0    1X00AB
    STD
                      OG    NP     WK    0  0 NO     NO N N N  17
          MWTTAE 0    1X00AE
    STD
                      OG    NP     WK    0  0 NO     NO N N N  17
          MWTTAF 0    1X00AF
    STD
                      OG    NP     WK    0  0 NO     NO N N N  17
          MWTTAG 0    1X00AG
    STD
                      OG    NP     WK    0  0 NO     NO N N N  17
          MWTTAH 0    1X00AH
    STD
                      OG    NP     WK    0  0 NO     NO N N N  17
```

MAP display example for table TRKMEM

```
            CLLI      EXTRKNM SGRP              MEMVAR
_____________________________________________________________________
          MWTTAA            0    0          MTM    6  2
          MWTTAA            1    0          MTM    6  3
          MWTTAB            0    0          MTM    6  4
          MWTTAB            1    0          MTM    6  5
          MWTTAE            0    0          MTM    6  6
          MWTTAE            1    0          MTM    6  7
          MWTTAF            0    0          MTM    6  8
          MWTTAF            1    0          MTM    6  9
          MWTTAG            0    0          MTM    6 10
          MWTTAG            1    0          MTM    6 11
          MWTTAH            0    0          MTM    6 12
          MWTTAH            1    0          MTM    6 13
```

The above example illustrates an equipment pool is set up for each version of the NT1X00 test trunk group. The fixed pseudo CLLI for each version of the test trunk group must first be datafilled in table CLLI. Since the trunk group

size is datafilled as 10 in the example above, it is possible to have a maximum of 10 test trunk circuits for a given version of the NT1X00 test trunk group.

In table TRKGRP, the trunk group type for the NT1X00 test trunk is MAINT. This is consistent with other test equipment in the switches such as transmission test trunk (TTT), and transmission test unit (TTU). The card code entered in table TRKGRP is checked against the fixed pseudo CLLI code. If the card code is not a valid one for the given fixed pseudo CLLI, the table control rejects the data tuple entry request.

The data in table TRKSGRP is automatically datafilled by the system table control once the CLLI is entered in table TRKGRP.

In the example above, there are two NT1X00 test trunk circuits for each NT1X00 test trunk group.

Originating digital loop-around test line

The CCITT Red Book does not specify precisely what facilities must be provided at the calling end of a digital loop-around test line test. However, this feature provides the facilities at the originating switch to perform automatic measurements of far-to-near loss and noise, as well as near-to-far loss and noise of a CCITT No.7 ISUP TUT.

Digital loop-around test line code

A new test line code is introduced by this feature for accessing the digital loop-around test line at the far end switching unit. The new test line code is: TL01.

Test line access methods

1. *Manual access from the TTP level of the MAP* The access procedure is as follows:
2. Go to the TTP level of the MAP.
3. Post the CCITT #7 ISUP TUT at the control position of the MAP. The ISUP trunk can be either a two-way or an outgoing trunk.
4. Enter TST command followed by the digital loop-around test line code TL01. The test results are displayed at the MAP.

Scheduled test from the ATT level of the MAP Digital loop-around test line test can be requested manually from the ATT (automatic trunk test) level of the MAP by using the TESTREQ (test request) command for a gateway CCITT No.7 ISUP trunk group, or it can be scheduled to run automatically in table ATTSCHED using table control. Refer to *Automatic Trunk Testing*

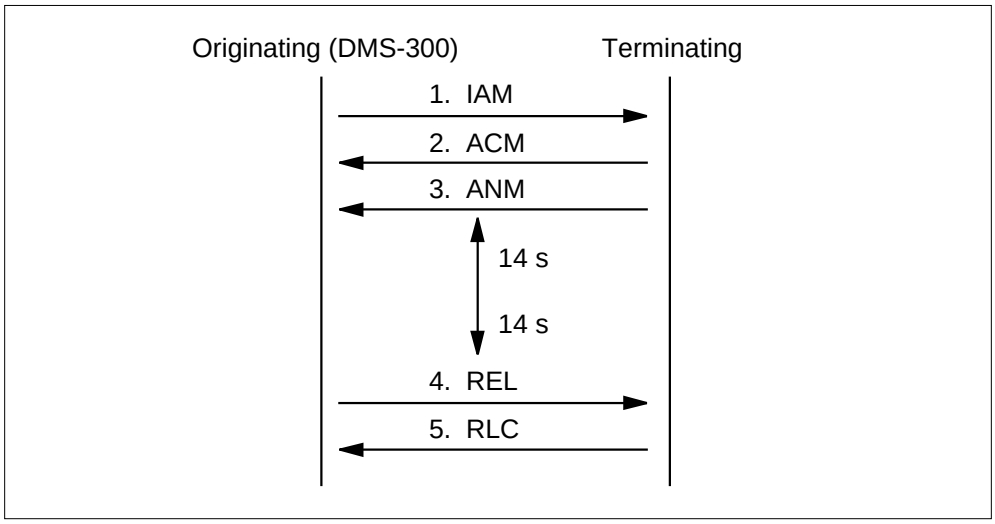
TRKGRP type LP4W (continued)

Description, 297-1001-121, *Trunks Maintenance Guide*, 297-1001-595, *Commands Reference Manual*, 297-1001-822, and *Log Report Reference Manual* for more details on the scheduling of test line tests.

Originating digital loop-around test line test protocol

The figure called "Common procedures of an IUSP test call" illustrates the CCITT No.7 ISUP messages involved in the setting up and clearing down of the test call.

Common procedures of an ISUP test call

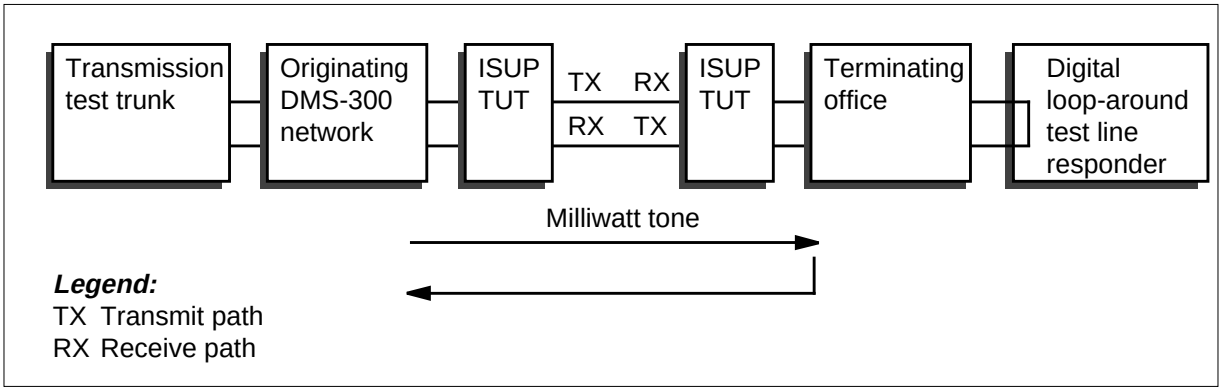


After the ANM is received from the far-end switch, the terminating digital loop-around test line then sends a milliwatt tone for 14 s followed by 14 s of quiet termination. The originating switch uses TTTS for far-to-near transmission loss measurements during the first 14-s interval, and carries out far-to-near noise measurements during the second 14-s interval. The DMS-300 originating switch makes reference to table MWDATA for the expected milliwatt tone frequency and level to be transmitted from the terminating switch. The far-to-near transmission loss measurements is illustrated in the figure "Far-to-near transmission loss measurement"..

After 14 s of sending out milliwatt tone and then another 14 s of quiet termination provided by the terminating digital loop-around test line, the test line responder connects its receive path to the transmit path (loop-around). During this interval, the originating switch uses a TTT to send out a milliwatt tone for 5 s on its transmit path and measures the milliwatt tone on its receive path. The originating DMS-300 switching unit makes reference to table MWDATA for the frequency and level of the milliwatt tone to be transmitted. The same milliwatt tone as that from the terminating switch is used. Please refer to section 2.2.7.2 for the use of table MWDATA at the originating switch.

After 5 s of milliwatt tone, the TTT provides 5 s of quiet termination at its transmit path, and measures the noise level at its receive path. The fiigure "Transmission loss measurement over the loop-ed back trunk" illustrates the transmission loss measurements during this period. The transmission loss measurements over the looped-back ISUP TUT enables the near-to-far loss and noise to be calculated.

Transmission loss measurement over the loop-ed back trunk



The TTT is used for transmission loss and noise measurement as shown in the figure "Far-to-near transmission loss measurement". The measured far-to-near loss is compared against the expected measured loss (EML) value of the ISUP TUT. The EML value is stored in subtable CLLIMTCE.DIAGDATA against the ISUP TUT. The deviation of the far-to-near loss from the EML value is compared against fixed Q1 and Q2 thresholds. If the deviation exceeds either one of the thresholds, the transmission loss test is considered as failure. The

TRKGRP type LP4W (continued)

originating digital loop-around test line stops and provides a log report of the measured results at the TTP level of the MAP.

- Referring to the figures “Far-to-near transmission loss measurement” and “Far-to-near transmission loss calculation”, the far-to-near transmission loss value is calculated with the following equation:
- L = S - R - P
- D = L - EML

  where

  R
  is the measured milliwatt power level in dBm

  S
  is transmitted milliwatt power level in dBm

  L
  is far-to-near loss in dBr

  D
  is deviation of the far-to-near loss from EML

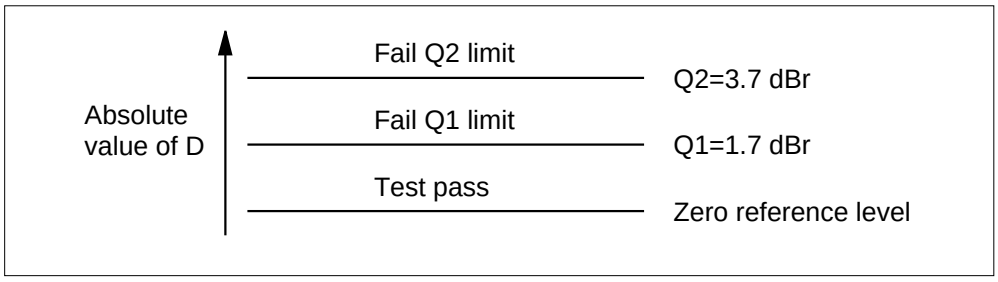
  EML
  is expected measured loss

  Q1
  is 1.7 dBr

  Q2
  is 3.7 dBr

  P
  switching network pad loss in the receive direction (that is, from the originating ISUP TUT to the TTT)

Far-to-near transmission loss calculation



The nominal value of the transmitted milliwatt signal power level is obtained from table MWDATA at the originating switch.

TRKGRP type LP4W (continued)

The TTT is used for far-to-near noise power measurement. The measured noise power level is compared against the thresholds found in subtable CLLIMTCE.DIAGDATA. (These values are the noise level maintenance limit (NML) and the noise immediate action limit (NIAL); both limits are stored against the ISUP TUT.) If the measured noise power levels exceeded either one of the two thresholds, the test stops, and a log is reported at the TTP MAP level.

In the figure “Far-to-near transmisssion loss measurement”, the TTT is used for transmitting the milliwatt tone in its transmit path, and for measuring the transmitted milliwatt tone at its receive path. This is during the interval when the ISUP TUT is looped-around at the far-end switch. The measured transmitted milliwatt power level is the sum of near-to-far loss and far-to-near

TRKGRP type LP4W (continued)

loss. Since the far-to-near loss was already obtained from the previous interval, the near-to-far loss can be calculated with the following equation:

- LT = S - R - P12 - P21

  but

- LT = {LNF + LFN}

  therefore

- LNF = {LT - LFN}
- D = {LNF - EML}

  where:

  D
  is deviation from the EML

  EML
  is expected measured loss

  LFN
  is far-to-near loss

  LNF
  is near-to-far loss

  LT
  is total looped around circuit loss

  P12
  is switching network loss in the transmit direction

  P21
  is switching network loss in the receive direction

  Q1
  is 1.7 dBr

  Q2
  is 3.7 dBr

  R
  is measured transmitted milliwatt signal power

  S
  is transmitted milliwatt signal power

The absolute value of deviation D is again compared with the Q1 and Q2 thresholds to determine the pass or failure of the looped-around transmission test.

In the figure “Noise measurement over looped-back trunk”, the TTT is used for providing 600 Ω balanced termination as well as for measuring the noise power in the looped-back circuit. The near-to-far noise power is compared against the NML and NIAL limits to determine the success or failure of the looped-around noise test.

TRKGRP type LPBK

Loopback Trunk Group Type

In a DMS ISDN office, incoming and outgoing trunk group type LPBK provides a means of connecting two agents in the same office in situations where a call between the two agents is not possible using other loopback facilities. The call between the two agents is split into two legs, as outlined below.

- The first leg of the call selects an outgoing LPBK trunk to terminate the original call. The outgoing trunk loops back to the same office to come in as an incoming trunk of trunk group type LPBK.
- The second leg of the call connects the incoming LPBK trunk to the terminating agent.

Certain restrictions are imposed on the data that can be specified in table TRKSGRP for subgroups associated with loopback (LPBK) trunk groups. These restrictions are outlined below.

1. Field SIGDATA (signaling data) must be set to STD to indicate that standard signaling is used. Any other type of signaling specified in this field causes the tuple to be rejected and an error message to be output.
2. Field DIR (trunk direction) must be set to correspond with the direction (either OG or IC) specified for the loopback trunk group in table TRKGRP. Entries other than DIR = OG or DIR = IC are not valid. If a different direction is specified, the tuple is rejected and an error message is output.
3. All other fields, with the exception of TRKGDTIM (trunk guard time), default to appropriate values. If values other than those expected are specified in any of these fields, the tuple is still accepted, but the entries are changed to their default values and a warning message is output. For outgoing trunk subgroups, the value of field TRKGDTIM is left for the customer to specify.

The following tables provide a description of the default datafill for LPBK trunks in table TRKSGRP.

Defaults for incoming (IC) LPBK trunk subgroups (Sheet 1 of 2)

Field name	Description	Entry	Meaning
IPULSETYP	incoming type of pulsing	DP	dial pulse
ISTARTSG	incoming start dial tone	IM	immediate dial
OVLP	overlap outpulsing	N	no overlap outpulsing

Defaults for incoming (IC) LPBK trunk subgroups (Sheet 2 of 2)

Field name	Description	Entry	Meaning
PSPDSEIZ	PSPD on seizure timing	2	2 seconds
PARTDIAL	partial dial timing	2	2 seconds
CCONT	coin control	NO	no coin control
RNGBCK	ringback	NO	no ringback
ESUPR	echo suppressor	N	no echo suppression
SAT	satellite	N	no satellite switching
REMBSY	remote make busy	Y	remote make busy assigned
DIALMODE	dial mode	C	customer dialed

Defaults for outgoing (OG) LPBK trunk subgroups

Field name	Description	Entry	Meaning
OPULSETYP	outgoing type of pulsing	DP	dial pulse
OSTARTSG	outgoing start dial signal	IM	immediate dial
IDIGTIME	inter-digital timing	0	set to 0 (zero)
NUMSTOPS	number of stops/goes	0	set to 0 (zero)
CCONT	coin control	NO	no coin control
RNGBCK	ringback	NO	no ringback
ESUPR	echo suppressor	N	no echo suppression
SAT	satellite	N	no satellite
REMBSY	remote make busy	Y	remote make busy assigned

TRKGRP type LPBK (continued)

Datafill

The following table lists the datafill for table TRKGRP type LPBK.

Field descriptions (Sheet 1 of 3)

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 common language location identifier (CLLI) code assigned to the trunk group in table CLLI.
GRPINFO		see subfields	*Variable group data* This field consists of subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, and LPBKINFO. Refer to section “General field information" in table TRKGRP for information concerning an alternate structure for this field that results from the datafill of table CUSTFLDS.
	GRPTYP	LPBK	*Group type* Enter LPBK to specify the loopback trunk group.
	TRAFSNO	numeric (0 to 127)	*Traffic separation number* Enter the incoming and outgoing traffic separation number assigned to the trunk group. If a traffic separation number is not required, enter 0 (zero). For switches with software package NTX085AA (Traffic Separation Peg Count), enter a value from 1 to the value of office parameter TFAN_OUT_MAX_NUMBER in table OFCENG. For switches without software package NTX085AA, enter a value from 1 to 15. Incoming and outgoing traffic separation numbers 1 to 9 should be reserved for generic traffic separation numbers. For more information, refer to table TFANINT.

TRKGRP type LPBK (continued)

Field descriptions (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	PADGRP	alphanumeric (1 to 5 characters)	*Pad group* Enter the name of the pad group assigned to the trunk group in table PADDATA. For more information, refer to table PADDATA.
	NCCLS	NCBN NCID NCIM NCIT NCLT NCOF NCON NCOT NCRT NCTC or NOSC	*Operational measurements no-circuit class* Enter the operational measurements (OM) no-circuit class (NCCLS) to indicate which OM register is incremented if treatment GNCT (generalized no circuit) occurs. If the trunk group direction is incoming, this field is not required. Enter NCRT (no circuit). For more information, refer to the general section of table TRKGRP and the *Operational Measurements Reference Manual*.
	LPBKINFO	see subfields	*Loopback group data* This field consists of selector DIR and refinements.
	DIR	IC or OG	*Trunk group direction* This field specifies the direction of the loopback trunks in this trunk group. If the group consists of the incoming ends of loopback trunk, enter IC and datafill refinements PRTNM and SNPA. If the group consists of the outgoing ends of loopback trunks, enter OC (no refinements are applicable). Any entry value other than IC or OG is not valid.

TRKGRP type LPBK (end)

Field descriptions (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	PRTNM	alphanumeric (1 to 4 characters) or NPRT	*Standard pretranslator name* If standard pretranslation is required, enter the name of the standard pretranslator defined in table STDPRTCT to which digit translation is to route after the receipt of the first digit. If pretranslation is not required, enter NPRT (no pretranslation). If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y (yes), all trunks in the group must be busy before the value of this field can be changed by data modification order (DMO).
	SNPA	numeric (3 digits)	*Serving NPA* Enter the serving NPA code for the trunk group. This code, which is specified in table HNPACODE, specifies routing for digit translation. If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y, all trunks in the group must be busy before the value of this field can be changed by data modification order (DMO).

Datafill example

The following example shows sample datafill for table TRKGRP type LPBK.

MAP display example for table TRKGRP type LPBK

```
GRPKEY              GRPINFO
_____________________________________________________

OTWAONLPOG01        LPBK 14 ELO NCRT OG
OTWAONLPIC02        LPBK 15 ELO NCRT IC INC2 613
```

Maintenance Trunk Group Type

The trunk group types that are used for maintenance and test purposes are listed in the table ” Maintenance and test trunk group types”. The maintenance (MAINT) trunk group types are described in this section. Trunk group types ITL2, LOOPA, SOCKT and TTL2 are described under their own separate headings in this document.

An Enhanced Digital Test Unit (EDTU) NT4X45AA, when installed, will emulate the TTT, TTU and DTU trunk groups according to the test to be performed and the datafill. Each EDTU virtual channel will be equivalent to a TTT or a TTU or a virtual DTU channel. When datafilling the trunk tables, each EDTU channel will be designated as one TTT, TTU and DTU and the EDTU will act correspondingly.

Maintenance and test trunk group types (Sheet 1 of 2)

Trunk group type	Pseudo CLLI	Title
ITL2	INTL192T	International 102 test trunk
LOOPA	LOOPA1LOOPA2	Line loop test unit and A-law loop-around test line
MAINT	DCLTONE	Dialable cable-locator tone
MAINT	DTU	Digital test unit
MAINT	ESADGTR	Emergency stand-alone Digitone receivers
MAINT	HSET	Position headset
MAINT	JACK	Position jack
MAINT	LTU	Line test unit
MAINT	MONTALK	Monitor-and-talk
MAINT	MTU	Metallic (or multiline) test unit
MAINT	TERM108	108 test line
MAINT	TTT	Trunk test transmission
MAINT	TTU	Terminating transmission test unit
MAINT	SPARExxxxxx	Spare trunk groups
SOCKT	OCKT	Transmission terminating trunk group

TRKGRP type MAINT (continued)

Maintenance and test trunk group types (Sheet 2 of 2)

Trunk group type	Pseudo CLLI	Title
SOCKT	SCKT	Transmission terminating trunk group
TTL2	—	Terminating 102 test line

The trunk subgroup data for the trunk groups, excluding subgroup 1 of the trunk group with pseudo-common language location identifier (CLLI) TTU, is produced automatically by the trunk group datafill. This data is shown in table "Automatically produced trunk subgroup data".

Automatically produced trunk subgroup data (Sheet 1 of 2)

Field	Value
CLLI	(see note)
SGRP	0
CARD CODE	(see note)
SIGDATA	(see note)
DIR	OG
OPULSTYP	NP
OSTARTSG	WK
IDGTIME	2
NUMSTOPS	0
CCONT	MW
RNGBCK	IB
ESUPR	N
SAT	N
REMBSY	N
Note: The values for these fields are defined in the description of field names for table TRKSGRP. If the value in field CLLI is SOCKT, field OSTARTSG in table TRKSGRP has value IM. If the value in field CLLI is TERM102T, fields OPULSETYP and OSTARTSG in table TRKSGRP have values MF and WK respectively.	

Automatically produced trunk subgroup data (Sheet 2 of 2)

Field	Value
DIALMODE	blank
TRKGDTIM	16
Note: The values for these fields are defined in the description of field names for table TRKSGRP. If the value in field CLLI is SOCKT, field OSTARTSG in table TRKSGRP has value IM. If the value in field CLLI is TERM102T, fields OPULSETYP and OSTARTSG in table TRKSGRP have values MF and WK respectively.	

Pseudo-CLLI DCLTONE (dialable cable-locator tone)

A dialable cable-locator tone trunk (pseudo-CLLI DCLTONE) is physically connected to a tone generator and is used to locate a specific tip-and-ring cable pair among the bunch of cables in a pedestal.

DTU (digital test unit trunk group)

The digital test unit (DTU) is used for Bit Error rate Tests (BERT) and Offhook Balnet Tests (OHBT). The DTU is located on a NT4X23AA or NT4X45AA card.

ESADGTR (emergency stand-alone Digitone receivers)

An emergency stand-alone Digitone receiver is used in a switch with remote operation and the Emergency Stand-alone (ESA) feature.

Each emergency stand-alone Digitone receiver consists of a trunk circuit with PEC NT2X48AB (digital four-channel receiver).

A maximum of four circuits can be assigned on each remote service module (RSM), and they must be assigned to circuits 2, 3, 4, and 5.

The trunk group is represented in table CLLI by pseudo-CLLI ESADGTR and in table TRKGRP with the trunk group type MAINT.

Use card code ESADGT for this trunk group.

Note: Digitone receivers in the RSM must always be in the installation busy (INB) state. This is necessary for the ESA option.

TRKGRP type MAINT (continued)

HSET (position headset trunk group)

The position headset trunk group is required in switches with test or maintenance positions, and is represented in table CLLI by pseudo-CLLI HSET, and in table TRKGRP with trunk group type MAINT.

Each member of the trunk group consists of a trunk circuit with PEC NT2X72AA (four-wire E&M type 1 interface, 600-Ω trunk circuit), NT2X88AA (four-wire E&M interface, 600-Ω trunk circuit) or NT5X30AA (101 communication test line circuit).

Trunk circuit NT2X72AA or NT2X88AA must be used if this trunk group is used for service analysis or if the trunk circuit connects directly to the network.

If service analysis is not provided or the trunk circuit is connected to a 1A2 key set, a trunk circuit with PEC NT5X30AA (101 communication test line circuit) can be used.

One circuit is required for each MAP (maintenance and administration position) or terminal test position (TTP). External trunk number 0 is automatically assigned to the first entry in table TERMDEV (MAP), trunk number 1 is automatically assigned to the second entry in table TERMDEV (TTP01), and so on.

Refer to table SAUSERS for information relating to the assignment of headset circuits to the Service Analysis feature, NTX065.

JACK (position jack trunk group)

The position jack trunk group is required in switches with test or maintenance positions, and is represented in table CLLI by pseudo-CLLI JACK and in table TRKGRP by trunk group type MAINT.

For a local or combined local and toll switches, each member of the trunk group consists of a trunk circuit with PEC NT1X54AA (jack ended trunk circuit pack).

For a toll switch, each member of the trunk group consists of a trunk circuit with PEC NT2X72AA (four-wire E&M type 1 interface, 600-ohm trunk circuit), which is preferred, or PEC NT2X88AA (four-wire E&M interface, 600-Ω trunk circuit).

Three circuits are required for each TTP or MAP. External trunk members 0 to 2 are automatically assigned to the first entry in table TERMDEV (MAP), trunk numbers 3 to 5 are automatically assigned to the second entry in table TERMDEV (TTP01), and so on.

Three circuits are required for each TTP or MAP, external trunk numbers 0 to 2 for position 0, 3 to 5 for position 1, and so on.

Trunk group type MAINT and PEC NT2X72AA (four-wire E&M type 1 interface, 600-Ω trunk circuit) is required as input for this trunk group.

No subgroup data is required from the operating company; the trunk subgroup data is automatically produced with default values.

If a digital trunk group is datafilled in table TRKGRP, the default value JACK 1 is automatically datafilled in table TRKSGRP, field SGRPKEY.

LTU (line test unit trunk group)

The line test unit (LTU) trunk group is used in for switches with LTU trunk groups, and is represented in table CLLI by the pseudo-CLLI LTU and in table TRKGRP with the trunk group type MAINT.

Each member of the trunk group consists of an odd-numbered line loop test unit (LTU) with PEC NT2X10AA (line test unit analog) and its associated even-numbered line loop test unit with PEC NT2X11AA (line test unit digital).

Since these two cards always reside in adjacent slots in the remote service or maintenance trunk module and function as one unit, specify only PEC 2X11AA in table TRKGRP.

In a stand-alone switch or host, provision one circuit for each 6400 lines or fraction thereof, plus one. For example, in a switch with 9600 lines, provision 3 circuits.

At each remote site, provision a minimum of one circuit for each 6400 lines.

The LTUs are assigned to horizontals of the metallic test access minibar switch in table MTAHORIZ.

For the NT2X90AB trunk circuit associated with the line test unit, refer to the monitor-and-talk (MONTALK) trunk group.

MONTALK (monitor-and-talk trunk group)

The monitor-and-talk trunk group is required in switches equipped with line test units (LTUs). Refer to TRKGRP(MAINT) pseudo-CLLI LTU. One monitor-and-talk trunk circuit with PEC NT2X90AB (incoming and outgoing test trunk) is used for each line test unit at the stand-alone switch or remote site.

TRKGRP type MAINT (continued)

The monitor-and-talk trunk group has a pseudo-CLLI of MONTALK.

Make the trunk circuit number in table TRKMEM the same as its associated LTU number.

MTU (metallic [or multiline] test unit trunk group)

The metallic or multi-line test unit (MTU) is similar to the line test unit (LTU).

If used in a North America switch, the name of the MTU is multi-line test unit and the PEC is NT2X11BA. If used in a non-North American switch, the name of the MTU is metallic test unit controller and the PEC is NT4X97AA.

TERM108 (108 test line trunk group)

The 108 test line is used in switches that are configured for testing echo suppressors.

Each 108 test line circuit consists of two trunk circuits with PEC NT2X88AA (four-wire E&M interface, 600-Ω trunk circuit), and is represented in table CLLI by pseudo-CLLI TERM108.

TTT (trunk test transmission trunk group)

The trunk test transmission (TTT) trunk group is used in switching units with trunk test transmission trunk groups, and is represented in table CLLI by the pseudo-CLLI TTT and in table TRKGRP by trunk group type MAINT.

Each member of the trunk group consists of a test signal generator with PEC NT1X90AA (test signal generator) and its associated PCM-level meter with PEC NT2X96AA (PCM level meter).

Since these two cards always reside in adjacent slots in the maintenance trunk module and function as a single unit, only PEC 2X96AA is specified in table TRKGRP.

No trunk subgroup data is required from the operating company. The trunk subgroup data is automatically produced with default values.

TTU (terminating transmission test unit trunk group)

The terminating transmission test unit (TTU) trunk group is used in switches with terminating transmission test unit trunk groups, and is represented in table CLLI by pseudo-CLLI TTU and in table TRKGRP by trunk group type MAINT.

Each member of the trunk group consists of a control and signal generator, with a PEC of NT2X47AA (transmission test module control signal generator)

or NT2X47AC (transmission test unit controller), and the associated digital filter with PEC NT2X56AA/AB (transmission test module digital filter).

Since these two cards always reside in adjacent slots in the maintenance trunk module and function as a single unit, only PEC 2X47AA/AC is specified in table TRKGRP.

The NT2X47AC and NT2X56AB cards developed for the Automatic Transmission Measurement System (ATMS) can functionally replace the existing NT2X47AA and NT2X56AA cards. Both pairs of cards can exist in the same switch, however NT2X47AA must be paired with NT2X56AA and NT2X47AC must be paired with NT2X56AB.

Optional feature NTX136AA (Automatic Transmission Measurement System [ATMS]) can be provided in existing switches by adding sufficient cards (NT2X47AC and NT2X56AB) for the ATMS feature.

Existing cards (NT2X47AA and NT2X56AA) do not need to be retrofitted in order to provide the ATMS feature.

Although the ATMS cards can be selected for regular TTU functions, this should be done only if non-ATMS TTU cards are not available.

The ATMS feature can only be provided in switches with feature Automatic Trunk Test.

If the switch has a mixture of NT2X47AA and AC, specify card code NT2X47AA in table TRKGRP.

The trunk subgroup data for subgroup 0 in table TRKSGRP is automatically produced for card NT2X47AA by table control.

All members with card code NT2X47AA are assigned to subgroup 0 (zero) in table TRKMEM.

The CLLI TTU, trunk group type MAINT, and PEC NT2X47AA are required as input for this trunk group.

No subgroup data is required from the operating company. The trunk subgroup data is automatically produced with default values.

TRKGRP type MAINT (continued)

Datafill trunks with card code NT2X47AC as follows:

- Assign card NT2X47AC to subgroup 1 and provide the data for table TRKSGRP.
- Assign all members with card code NT2X47AC to subgroup 1 in table TRKMEM.
- Specify the odd-numbered circuit for the trunk card with PEC NT2X47AA or NT2X47AC in table TRKMEM (Although this type of trunk card has only one circuit, with an even circuit number, software requires the odd-numbered circuit [even circuit number + 1] to be specified).

EDTU (enhanced digital test unit)

The enhanced digital test unit (EDTU) NT4X45AA provides a four-channel digital test facility statically allocated to the DTU, TTU and TTU application groups, with no restrictions to any possible combination of these groups.

The EDTU will emulate the DTU, TTU, and TTU groups according to the test that has to be performed and to the datafill. Each EDTU virtual channel will be equivalent to a TTT or a TTU or a virtual DTU channel.

SPARE (spare trunk groups)

All spare trunks in the switch must be listed against a pseudo-CLLI of SPAREXXXXXX, where XXXXXX is the card code of the spare trunk group. For example, if there are spare trunks with a card code of 2X83AA, the CLLI for these spare trunks is SPARE2X83AA in table CLLI.

To change a trunk member from a working group to a spare group, or from a spare group to a working group, see table TRKMEM.

Datafill

The following table lists the datafill for table TRKGRP type MAINT.

Field descriptions (Sheet 1 of 5)

Field	Subfield or refinement	Entry	Explanation and action
GRPKEY		see subfield	*Group key* This field consists of subfield CLLI.
	CLLI	DCLTONE DTU ESADGTR HSET JACK LTU MONTALK MTU TERM108 TTT TTU or alphanumeric (1 to 16 characters)	*Common language location identifier* Enter one of the following pseudo-CLLIs to specify the maintenance trunk group type required. DCLTONE - dialable cable-locator tone DTU - digital test unit ESADGTR - emergency stand-alone Digitone receiver HSET - position headset JACK - position jack LTU - line test unit MONTALK - monitor-and-talk circuit MTU - multiline test unit (for North American switches) or metallic test unit (for non-North American switches) TERM108 - 108 test line TTT - trunk test transmission TTU - terminating transmission test unit For spare trunk groups, enter the CLLI of the trunk group.
GRPINFO		see subfields	This field consists of subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, and CARD. Refer to section “General field information" in table TRKGRP for information on an alternate structure for this field that results from the datafill of table CUSTFLDS.

TRKGRP type MAINT (continued)

Field descriptions (Sheet 2 of 5)

Field	Subfield or refinement	Entry	Explanation and action
	GRPTYP	MAINT	*Group type* Enter MAINT to specify the maintenance group type.
	TRAFSNO	numeric (0 to 127)	*Traffic separation number* Enter the incoming and outgoing traffic separation number assigned to the trunk group. If a traffic separation number is not required, enter 0 (zero). For switches with software package NTX085AA (Traffic Separation Peg Count), enter a value from 1 to the value of office parameter TFAN_OUT_MAX_NUMBER in table OFCENG. For switches without software package NTX085AA, enter a value from 1 to 15. Incoming and outgoing traffic separation numbers 1 to 9 should be reserved for generic traffic separation numbers. For more information, refer to table TFANINT.
	PADGRP	alphanumeric (1 to 5 characters)	*Pad group* Enter the name of the pad group assigned to the trunk group in table PADDATA. For more information, refer to table PADDATA.
	NCCLS	NCBN NCID NCIM NCIT NCLT NCOF NCON NCOT NCRT NCTC or NOSC	*Operational measurements no-circuit class* Enter the operational measurements (OM) no-circuit class (NCCLS) to indicate which OM register is incremented if treatment GNCT (generalized no circuit) occurs. The initial value for this trunk group type is NCRT (no circuit). For pseudo-CLLIs DTU, HSET, JACK, LTU, MTU, TTT, and TTU, there is no generalized no-circuit (GNCT) treatment. Enter NCRT. For more information, refer to the general section of table TRKGRP and the *Operational Measurements Reference Manual*.

TRKGRP type MAINT (continued)

Field descriptions (Sheet 3 of 5)

Field	Subfield or refinement	Entry	Explanation and action
	CARD	1X54AA 2X11AA 2X11BA 2X47AA 2X47AC 2X72AA 2X88AA 2X90AB 2X96AA 4X23AA 4X45AA 4X97AA 5X30AA ESADGT or alphanumeric (1 to 6 characters)	*Card code* This field contains the product engineering code (PEC) of the card required for the specified maintenance trunk group type. Datafill this field as described below: For dialable cable-locator tone, enter 2X90AB (or equivalent). For digital test unit trunk group members, enter 4X23AA.For enhanced digital test unit group members, enter 4X45AA. For emergency stand-alone Digitone receivers, enter ESADGT. For position headset trunk group members, enter 2X72AA, 2X88AA, or 5X30AA. For position jack trunk group members, enter 2X72AA, 1X54AA, or 2X88AA. For line test unit trunk group members, enter 2X11AA. For members of the monitor-and-talk trunk group, enter 2X90AB. For members of the metallic (or multi-line) test unit trunk group, enter 2X11BA if the switch is North American, or 4X97AA if the switch is not North American. For members of the 108 test line trunk group, enter 2X88AA.

TRKGRP type MAINT (continued)

Field descriptions (Sheet 4 of 5)

Field	Subfield or refinement	Entry	Explanation and action
			For members of the trunk test transmission trunk group, enter 2X96AA. Each member of the trunk group consists of a test signal generator with PEC NT1X90AA and its associated PCM-level meter with PEC NT2X96AA. As these two cards always reside in adjacent slots in the maintenance trunk module, and function as one unit, only PEC 2X96AA is specified in table TRKGRP. For members of trunk subgroup 0 of the terminating transmission test unit trunk group, enter 2X47AA or 2X47AC. Each member of the trunk group consists of a control and signal generator with PEC NT2X47AA and its associated digital filter with PEC NT2X56AA. As these two cards always reside in adjacent slots in the maintenance trunk module, and function as one unit, only PEC 2X47AA is specified in table TRKGRP

Field descriptions (Sheet 5 of 5)

Field	Subfield or refinement	Entry	Explanation and action
			For members of the trunk test transmission trunk group, enter 4X45AA. Each EDTU virtual channel will be equivalent to a TTT, TTU and or a virtual DTU channel. An EDTU may be installed in any slot number on a MTM shelf. The slot to the immediate RIGHT of the EDTU on the MTM shelf must either be left vacant or be equipped with a circuit pack that seizes no trunk enables, such as an EDRAM (NT1X80AA or NT1X80BA) or CTM (NT1X81AA or NT1X81BA). An EDTU may be installed in any slot number higher than 6 on an ISM shelf. The slot to the immediate LEFT of the EDTU on ISM shelf must either be left vacant or be equipped with a circuit pack that seizes no trunk enables, such as an EDRAM (NT1X80AA or NT1X80BA) or CTM (NT1X81AA or NT1X81BA). For members of a spare trunk group, enter the PEC that applies to the trunk group. If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y (yes), all trunks in the group must be busy before the value of this field can be changed by data modification order (DMO).

Datafill example

The following example shows sample datafill for table TRKGRP type MAINT.

TRKGRP type MAINT (continued)

MAP display example for table TRKGRP type MAINT

```
GRPKEY                              GRPINFO
_____________________________________________________

TTT               MAINT 0 IAO   NCRT 2X96AA
JACK              MAINT 0 IAO   NCRT 1X54AA
HSET              MAINT 0 IAO   NCRT 2X72AA
DTU               MAINT 0 IAO   NCRT 4X23AA
TTU               MAINT 0 IAO   NCRT 2X47AA
LTU               MAINT 0 IAO   NCRT 2X11AA
MONTALK           MAINT 0 IAO   NCRT 2X90AB
TERM108           MAINT 0 TLD   NCRT 2X88AA
DCLTONE           MAINT 0 NPDGP NCRT 2X90AB
ESADGTR           MAINT 0 TLD   NCRT ESADGT
SPARE2X83AA       MAINT 0 TLD   NCRT 2X83AA
DTU               MAINT 0 IAO   NCRT 4X45AA
TTU               MAINT 0 IAO   NCRT 4X45AA
LTU               MAINT 0 IAO   NCRT 4X45AA
```

Supplementary information

A dialable cable-locator tone trunk (pseudo-CLLI DCLTONE) is physically connected to a tone generator and uses the following procedure to locate a specific tip-and-ring cable pair:

1. Connect a telephone to any tip-and-ring cable pair.
2. Dial an access code plus the seven-digit directory number (DN) of the line if tone is to be applied.
3. Wait for a busy or confirmation tone.
4. If there is confirmation tone, look for the cable-locator tone on various wire pairs.

The translations to achieve the above result are as follows:

1. Enter the selected access code that applies to the originating line in subtable STDPRTCT.STDPRT.
2. Set field NOPREDIG equal to the number of digits in the access code.

3. Set translation to proceed either directly to CLLI DCLTONE, using PRERTSEL = S, or using table OFRT selector PRTESEL = S and PRERTSEL = T.
4. The switch then uses the seven digits dialed following the access code and if dialed DN is idle, the switch
   a. returns confirmation tone
   b. applies the cable-locator tone for the time specified by office parameter CABLE_LOCATE_TIMEOUT in table OFCENG
   c. sends the call to the appropriate subtable TMTCNTL.TREAT at treatment busy if the dialed DN is busy.

TRKGRP type MTR

International Trunk Group Type

One of the trunk group types used by international extended multiprocessor system (XMS)-based (XPM) peripheral module (IXPM) trunks is metering trunk (MTR). The direction of this trunk group is incoming, outgoing, or two-way. Metering is supported as an option. This trunk group is intended for local or national network traffic.

Translation types

MTR trunk groups have a provision that selects the translation type (for example, North American or universal translations) from the trunk group data.

One of the translation data selectors is an index into table NETATTR. When this selector is used, translation data is datafilled in table NETATTR instead of table TRKGRP.

End-to-end connections

Under certain conditions, an office only needs to collect enough digits to route a call. Once the call has been routed, the outgoing trunk to the next office is seized. A speech path between the incoming and outgoing trunk is connected and a signal is sent back to the previous office, instructing it to resend the digits. The outgoing register of the previous office can then signal to the incoming register of the next office. This situation is shown in the figure “End to end connections”..

If an end-to-end connection cannot be established through an office, the incoming trunk must collect all signals from the previous office and then send the signals out after the connection has been routed to the next office. This mode of operation is referred to as link-by-link or transfer. End-to-end connections set up toll calls faster than link-by-link connections. Whenever possible, the DMS-100I attempts to establish end-to-end connections.

The following list describes when end-to-end connections cannot be established for switching units in China.

- In the automatic toll network, inter-register signals cannot be sent to transit toll exchanges or terminating toll exchanges directly from an originating local exchange. They must be sent from the originating toll exchange.
- In general, inter-register signals cannot be sent to the local terminating exchange by transit toll or originating toll exchanges. They must be sent from the terminating toll exchange.

- In the local network, there are situations when tandem exchanges use transfer mode for transmission quality reasons.
- In the automatic toll network, there are situations when incoming registers of a transit toll exchange must transfer all inter-register signals for transmission quality reasons.

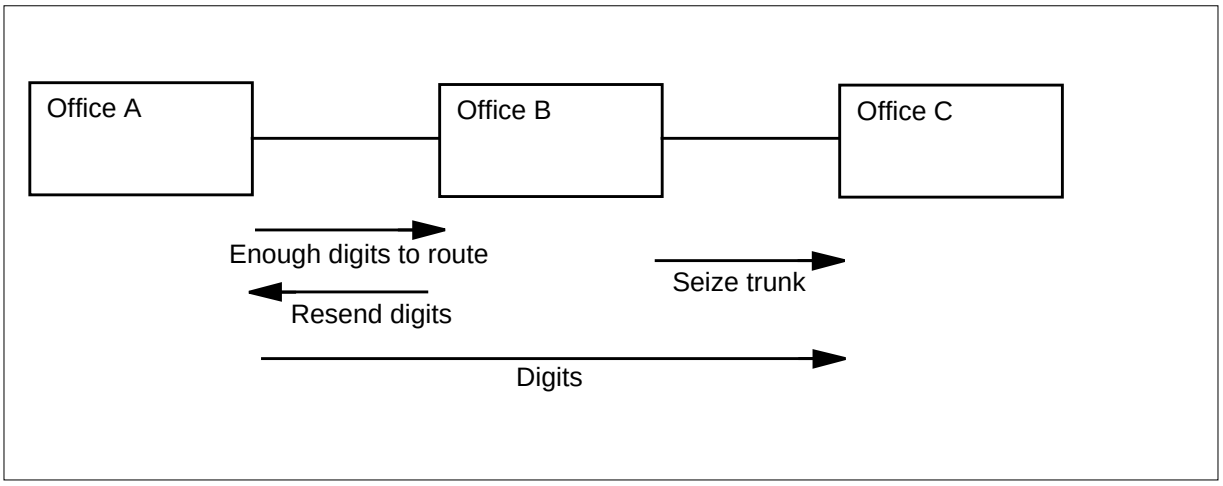
These restrictions mean that end-to-end connections cannot be established at originating toll or terminating toll offices. If an incoming trunk group on a DMS-100I is datafilled with a traffic class of either CAMA (originating toll) or TLLC (terminating toll), then no attempt to establish an end-to-end connection is made.

For other incoming trunks that must not establish end-to-end connections, field TANDEM in table TRKGRP must be set to LNK. With this field value, all incoming trunk circuits belonging to the trunk group (regardless of their traffic class) do not establish end-to-end connections.

End-to-end connections can only be established on incoming trunks with field TRFC in table TRKGRP set to either ITLL, EASV, or NONE, and with field TANDEM set to EEND.

The figure “End to end connections” shows an example of how an end-to-end connection is established. Once office B collects enough digits to route the call, the outgoing trunk from office B to office C is seized. Office B then connects a speech path and tells office A to resend the digits. At this point, the outgoing register at office A is signaling to the incoming register at office C.

End-to-end connections



TRKGRP type MTR (continued)

Traffic class

On a DMS100I, field TRFC of the trunk group data can take one of the traffic class values outlined below.

CAMA

Centralized automatic message accounting (CAMA) is used for trunk groups between offices in which the calling subscriber number and KA information can be signaled.

Trunk groups must be datafilled with a traffic class of CAMA whenever the calling subscriber information can be sent or received over a trunk group. In China, it can be used for trunk groups between:

- an originating local office and an originating toll office
- an originating local office and a local/toll office

An outgoing trunk group only sends the calling subscriber information forward in response to an A6 backwards signal if that outgoing trunk group is datafilled with a traffic class of CAMA. If an outgoing trunk group that is datafilled with a traffic class of CAMA receives an A6 backwards signal, it sends forward the following information:

- KA signal (contains calling subscriber category)
- calling subscriber number (office code + station number)
- end-of-digits (I15) signal

Note: In the C1 MFC signaling system, an A6 backwards signal indicates that the outgoing register must send forward a KA signal and the calling subscriber number.

If an outgoing trunk group with a traffic class not datafilled as CAMA receives an A6 backwards signal, then the outgoing trunk group is not able to send the KA signal and calling subscriber number forward. In this situation, only the end-of-digits (I15) signal is sent forward.

If an incoming trunk group is datafilled with a traffic class of CAMA, it does not necessarily send back an A6 signal. It is possible (from a stored program control [SPC] office, for example) to handle local calls over a trunk group datafilled as CAMA.

If an incoming trunk group with a traffic class of CAMA is handling a toll call, then once digit analysis indicates that enough digits have been collected (and translations has enough digits to determine an outgoing route), an A6 signal is sent backwards to the previous office. After the incoming trunk sends the A6

signal, it collects the KA information and the calling subscriber number. Once that information has been collected, the remaining called subscriber number is collected.

Note: If translations is not able to determine a route after the first few digits have been reported, more digits are collected until a route can be determined. It is important to datafill the digit analysis and digit translation systems together. If the first few digits that are reported by digit analysis cannot be translated into an outgoing route, the call capacity is affected due to the additional time required to collect enough digits to route the call.

Outgoing trunk groups with a traffic class of CAMA are required to provide extra information to the outgoing register for sending to the next office. Calls made over these trunk groups are slower than calls made over trunk groups with a traffic class other than CAMA.

EASV

Extended area service (EASV) is used for trunk groups that handle local (non-toll) traffic only. Local traffic is traffic that does not go through the toll network.

ITLL

Intertoll (ITLL) is used for trunk groups that carry toll traffic between toll offices. In the C1 MFC signaling system, a KC signal (indicating the priority of the calling subscriber) is sent between offices in the toll network. Some offices use this information for special routing. A traffic class of ITLL on an incoming trunk group indicates to the DMS-100I that a KC signal can be expected in the flow of inter-register signals from the previous office.

If an outgoing trunk group is datafilled with a traffic class of ITLL, it sends the KC information along with the outpulsed digits to the next office (if this office has not established an end-to-end connection). If an incoming trunk group is datafilled with a traffic class of ITLL, then the DMS-100I attempts to establish an end-to-end connection through the office. Both end-to-end and link-by-link connections are described later in this document.

Note: This feature does not provide the ability to perform priority routing at a toll office based upon the KC information.

Incoming trunk groups with this traffic class do not attempt to establish end-to-end connections.

TLLC

Toll completion (TLLC) is used for trunk groups that carry traffic from a toll office to a terminating toll office.

TRKGRP type MTR (continued)

TNCA

The tandem CAMA (TNCA) traffic class enables a call to collect the calling party information. It does not enable the call to perform toll billing. A tandem office between a local and a toll office can pass the calling party information without billing occurring at the tandem office. This feature is used in China for malicious call identification.

NONE

Trunk groups must be datafilled with a traffic class of NONE if none of the other traffic classes are applicable. For example, for trunk groups that carry traffic between local offices, use a traffic class of NONE. Similarly, for trunk groups that carry traffic from a terminating toll office to a terminating local office, use a traffic class of NONE.

Digit analysis

On a DMS-100I, digit analysis can be performed on both a trunk group and a line attribute basis.

There are two main tables used for specifying digit analysis: DGHEAD and DGCODE. Each tuple in table DGCODE specifies the type of analysis that is carried out for the digit range given in the key to that tuple. The key for each tuple consists of an instance name and a digit range. The digit range is composed of “from" digits and “to" digits. These digits can be either one or two digits in length. Flexibility is achieved by allowing several separate instances. The names of all instances must be in table DGHEAD. Table DGHEAD is used to associate default values with each instance. The values in DGHEAD are only used if the instance does not appear in table DGCODE.

To associate an incoming trunk with a particular type of analysis, the name of the required instance in table DGHEAD is entered in field DGNAME of table TRKGRP.

By providing digit analysis on a trunk group basis, the DMS-100I is flexible enough to enable trunks coming from one office to use different digit analysis than trunks coming from another office. This system also enables trunks carrying different classes of traffic to use different digit analysis schemes.

Digit regeneration

Field DIGREGEN is used by the incoming and two-way international trunk group MTR to enable the prefixing of incoming digits with up to four numbers. This field contains the digits (maximum four) that require regeneration so that the number dialed in the distant office can be regenerated. If no digits require regeneration, the entry is N (no).

Office parameters

If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y (yes), all trunks in the group must be busied prior to changing the value of this field through a data modification order (DMO).

Restarts

The software meters used for trunk metering can survive WARM and COLD restarts. On a RELOAD from image, potential mismatches can occur if the software meter assignment on the image tape differs from that of the switch before the RELOAD occurred. If there is no difference, the software meters survive the RELOAD. If there is a difference, the meter audit logs all meters that do not match the datafill.

Calls do not survive COLD and RELOAD restarts, and are automatically taken down. The software meters are not updated for these calls.

Calls survive WARM restarts. Those calls that terminate after the restart have their software meters updated properly. Those calls that terminate during the restart have their meters updated upon the next usage of the trunk. Since the exact disconnect time is not known, the restart time is used as the disconnect time.

Datafill

The following table lists the datafill for table TRKGRP type MTR.

Field descriptions (Sheet 1 of 4)

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 common language location identifier (CLLI) code assigned to the trunk group in table CLLI.

TRKGRP type MTR (continued)

Field descriptions (Sheet 2 of 4)

Field	Subfield or refinement	Entry	Explanation and action
GRPINFO		see subfields	*Variable group data* This field consists of subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, SAT, ESUPR, IAA, TANDEM, TRFC, DIR, and refinements of field DIR. Refer to section “General field information" in table TRKGRP for information on an alternate structure for this field that results from the datafill of table CUSTFLDS.
	GRPTYP	MTR	*Group type* Enter MTR to specify the international trunk group type.
	TRAFSNO	numeric (0 to 127)	*Traffic separation number* Enter the incoming and outgoing traffic separation number assigned to the trunk group. If a traffic separation number is not required, enter 0 (zero). For switches with software package NTX085AA (Traffic Separation Peg Count), enter a value from 1 to the value of office parameter TFAN_OUT_MAX_NUMBER in table OFCENG. For switches without software package NTX085AA, enter a value from 1 to 15. Incoming and outgoing traffic separation numbers 1 to 9 should be reserved for generic traffic separation numbers. For more information, refer to table TFANINT.
	PADGRP	alphanumeric (1 to 5 characters)	*Pad group* Enter the name of the pad group assigned to the trunk group in table PADDATA. For more information, refer to table PADDATA.

TRKGRP type MTR (continued)

Field descriptions (Sheet 3 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	NCCLS	NCBN NCID NCIM NCIT NCLT NCOF NCON NCOT NCRT NCTC or NOSC	*Operational measurements no-circuit class* Enter the operational measurements (OM) no-circuit class (NCCLS) to indicate which OM register is incremented if treatment GNCT (generalized no circuit) occurs. If trunk direction is incoming (IC), this field is not required. Enter NCRT. The initial value for this trunk group type is NCRT (no circuit). For more information, refer to the general section of table TRKGRP and the *Operational Measurements Reference Manual* .
	SAT	Y or N	*Satellite* Enter Y (yes) if the trunk group is set up to switch through satellite. Otherwise, enter N (no).
	ESUPR	Y or N	*Echo suppressor* If the trunk sub-group has echo suppressors, enter Y. Otherwise, enter N.
	IAA	Y or N	*Inter-administration accounting* Inter-administration accounting (IAA) provides the operating company with the call details to facilitate revenue accounting back to the originating administration. Enter Y if IAA recording is required for this trunk group. Otherwise, enter N to indicate that no IAA recording is required. If the office parameter IAA_REQUESTED in table OFCVAR is set to Y, only calls over trunks with IAA equal to Y are recorded. If the parameter is set to N, no IAA records are generated.

TRKGRP type MTR (continued)

Field descriptions (Sheet 4 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	TANDEM	EEND or LNK	*Tandem mode* Enter EEND (end-to-end operation), if end-to-end connections are enabled over the trunk group. Enter LNK (link-by-link operation), if end-to-end connections are not enabled over the trunk group. End-to-end connections are only applicable to R2 MFC signaling trunk groups. For non-R2 MFC signaling trunk groups, this field is not used by the system.
	TRFC	CAMA, EASV, ITLL, TLLC, TNCA, or NONE	*International traffic class* Enter the type of traffic that is expected to flow through this trunk group. The types of traffic classes are: CAMA - Centralized automatic message accounting is the traffic class for trunk groups if the calling subscriber digits are signaled between switching units. EASV - Extended area service is the traffic class for trunk groups that handle local (non-toll) traffic only. ITLL - Intertoll is the traffic class for trunk groups that carry traffic in the toll network. TLLC - Toll-completion is the traffic class for trunk groups that carry traffic between a toll switching unit and a terminating toll switching unit. TNCA - Tandem CAMA is the traffic class used to collect the calling party information, but not to perform toll billing. It is used in China for malicious call identification. NONE - is the traffic class used for trunk groups that do not belong to one of the other traffic classes, or for a trunk group to which traffic class is not applicable.

Incoming international trunk groups

For incoming international trunk groups, datafill field DIR and refinements as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	DIR	IC	*Direction* Enter IC to specify the trunk group direction as incoming.
	MCTANI	Y or N	*Forward ANI enable* Enter Y to indicate that on malicious call trace (MCT) calls connected to trunks that do not already send DN and CATEGORY, a backwards request for DN or CATEGORY is required. Enter N to indicate that on MCT calls connected to trunks that do not already send DN and CATEGORY, a backwards request for DN or CATEGORY is not required. This option is applicable for R2 calls only.
	XLAD	see subfield	*Variable translation data* This field consists of subfield XLADSEL and (dependent on the entry in XLADSEL) appropriate translation data as described below.
	XLADSEL	UNIV NETATTR or NALT	*Translation selector* If the universal translation system is used, enter UNIV and datafill subfields XLASYS and XLANAME. If this table indexes into table NETATTR, enter NETATTR and datafill subfield NETINDX. If the North American translation system is used, enter NALT and datafill subfields PRTNM, SCRNCL, SNPA, and ORIGSRC.

DIR = IC and XLADSEL = UNIV

For incoming trunk groups with a value of UNIV in field XLADSEL, datafill subfields XLASYS and XLANAME as described below, then datafill fields

TRKGRP type MTR (continued)

MTRIC, DIGREGEN, and DGNAME as described in "DIR = IC and XLADSEL = UNIV, NETATTR, or NALT" on page -846.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	XLASYS	AC, CT, CTY, DN, FA, FT, NSC, OFC, PX, or NIL	*Translation system* Enter the head table name from which translations begin. Entry values other than those listed are not valid.
	XLANAME	alphanumeric (1 to 8 characters) or NIL	*Translation name* Enter a name from the code table that belongs to the head table referenced by field XLASYS.

DIR = IC and XLADSEL = NETATTR

For incoming trunk groups with a value of NETATTR in field XLADSEL, datafill subfield NETINDX as described below, then datafill fields MTRIC, DIGREGEN, and DGNAME as described in "DIR = IC and XLADSEL = UNIV, NETATTR, or NALT" on page -846..

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	NETINDX	numeric (0 to 1023)	*Network attribute index* Enter a valid network attribute index from table NETATTR. No other translation data is required, since it is available in table NETATTR.

DIR = IC and XLADSEL = NALT

For incoming trunk groups with a value of NALT in field XLADSEL, datafill subfields PRTNM, SCRNCL, SNPA, and ORIGSRC as described below, then

datafill fields MTRIC, DIGREGEN, and DGNAME as described in "DIR = IC and XLADSEL = UNIV, NETATTR, or NALT" on page -846..

Field descriptions for conditional datafill (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	PRTNM	alphanumeric (1 to 4 characters) or NPRT	*Standard pretranslator name* If standard pretranslation is required, enter the name of the standard pretranslator defined in table STDPRTCT to which digit translation is to route after the receipt of the first digit. If pretranslation is not required, enter NPRT (no pretranslation). If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y (yes), all trunks in the group must be busy before the value of this field can be changed by data modification order (DMO).
	SCRNCL	alphanumeric (1 to 32 characters) or NSCR	*Class-of-service screening table name* If class-of-service screening is required, enter the name of the class-of-service screening table (datafilled in table SCRNCLAS) to which digit translation routes. If class-of-service screening is not required, enter NSCR (no screening).

TRKGRP type MTR (continued)

Field descriptions for conditional datafill (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	SNPA	numeric (3 digits)	*Serving numbering plan area* Enter the code in table HNPACODE to which translation routes for digit translation. If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y, all trunks in the group must be busy before the value of this field can be changed by DMO.
	ORIGSRCE	LCL or NLCL	*Originating source* Enter the originating source of the call, LCL (local) or NLCL (non-local). The originating source determines, for the code dialed, whether the call is routed or blocked by the code type in the HNPACODE subtable. For more information, refer to the “Notes on originating source" section in table HNPACONT.HNPACODE.

DIR = IC and XLADSEL = UNIV, NETATTR, or NALT

For all incoming trunk groups, datafill subfields MTRIC, DIGREGEN, and DGNAME as described below, then datafill fields PROTIDX and TRTMTIDX as described in "Incoming, outgoing, and two-way trunks" on page -856.

Field descriptions for conditional datafill (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	MTMTRIC	see subfields	*Meter incoming information* This field consists of subfields METERIC and MDI.
	METERIC	Y or N	*Meter option* If metering is desired, enter Y (yes) and datafill subfield MDI. If metering is not required, enter N (no). The value in field METERIC cannot be changed to N once it has the value Y.

TRKGRP type MTR (continued)

Field descriptions for conditional datafill (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	MDI	numeric (0 to 1023)	*Metering data index* If the entry in field METERIC is Y, enter an appropriate metering data index from table MSRCDATA. If the entry in field METERIC is N, leave field MDI blank.
	DIGREGEN	0 to 9 (up to 4 digits) or N	*Digit regeneration* Enter the digits (maximum four) to prefix to the incoming digits so that the number in the distant office can be regenerated. If no prefix digits are required, enter N (none).
	DGNAME	alphanumeric (1 to 8 characters) or NIL	*Digit collection name* Enter the digit analysis instance required for an incoming trunk group. The digit analysis instance must have been previously defined in table DGHEAD. Enter NIL if no digit analysis is required.

TRKGRP type MTR (continued)

Two-way international trunk groups

For two-way international trunk groups, datafill field DIR and refinements as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	DIR	2W	*Direction* Enter 2W to specify the trunk group direction as two-way.
	MCTANI	Y or N	*Forward ANI enable* Enter Y to indicate that on malicious call trace (MCT) calls connected to trunks that do not already send DN and CATEGORY, a backwards request for DN or CATEGORY is required. Enter N to indicate that on MCT calls connected to trunks that do not already send DN and CATEGORY, a backwards request for DN or CATEGORY is not required. This option is applicable for R2 calls only.
	XLAD	see subfield	*Variable translation data* This field consists of subfield XLADSEL and (dependent on the entry in XLADSEL) appropriate translation data as described below.
	XLADSEL	UNIV NETATTR or NALT	*Translation selector* If the universal translation system is used, enter UNIV and datafill subfields XLASYS and XLANAME. If this table indexes into table NETATTR, enter NETATTR and datafill subfield NETINDX. If the North American translation system is used, enter NALT and datafill subfields PRTNM, SCRNCL, SNPA, and ORIGSRC.

DIR = 2W and XLADSEL = UNIV

For two-way trunk groups with a value of UNIV in field XLADSEL, datafill subfields XLASYS and XLANAME as described below, then datafill fields MTRIC, SELSEQ, MTROG, DIGREGEN, ANIIDX, and DGNAME as

described in "DIR = IC and XLADSEL = UNIV, NETATTR, or NALT" on page -846.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	XLASYS	AC, CC, CT, CTY, DN, FA, FT, NSC, OFC, PX, or NIL	*Translation system* Enter the head table name from which translations begin. Entry values other than those listed are not valid.
	XLANAME	alphanumeric (1 to 8 characters) or NIL	*Translation name* Enter a name from the code table that belongs to the head table referenced by field XLASYS.

DIR = 2W and XLADSEL = NETATTR

For two-way trunk groups with a value of NETATTR in field XLADSEL, datafill subfield NETINDX as described below, then datafill fields MTRIC, SELSEQ, MTROG, DIGREGEN, ANIIDX, and DGNAME as described in "DIR = 2W and XLADSEL = UNIV, NETATTR, or NALT" on page -851.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	NETINDX	numeric (0 to 1023)	*Network attribute index* Enter a valid network attribute index from table NETATTR. No other translation data is required, since it is available in table NETATTR.

DIR = 2W and XLADSEL = NALT

For two-way trunk groups with a value of NALT in field XLADSEL, datafill subfields PRTNM, SCRNCL, SNPA, and ORIGSRC as described below, then datafill fields MTRIC, SELSEQ, MTROG, DIGREGEN, ANIIDX, and

TRKGRP type MTR (continued)

DGNAME as described in "DIR = 2W and XLADSEL = UNIV, NETATTR, or NALT" on page -851.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	PRTNM	alphanumeric (1 to 4 characters) or NPRT	*Standard pretranslator name* If standard pretranslation is required, enter the name of the standard pretranslator defined in table STDPRTCT to which digit translation is to route after the receipt of the first digit. If pretranslation is not required, enter NPRT (no pretranslation). If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y (yes), all trunks in the group must be busy before the value of this field can be changed by data modification order (DMO).
	SCRNCL	alphanumeric (1 to 32 characters) or NSCR	*Class-of-service screening table name* If class-of-service screening is required, enter the name of the class-of-service screening table (datafilled in table SCRNCLAS) to which digit translation routes.
	SNPA	numeric (3 digits)	*Serving numbering plan area* Enter the code in table HNPACODE to which translation routes for digit translation. If office parameter TRK_OOS_CHK_ON in table OFCVAR is set to Y, all trunks in the group must be busy before the value of this field can be changed by DMO.
	ORIGSRCE	LCL or NLCL	*Originating source* Enter the originating source of the call, LCL (local) or NLCL (nonlocal). The originating source determines, for the code dialed, whether the call is routed or blocked by the code type in the HNPACODE subtable. For more information, refer to the “Notes on originating source" section in table HNPACONT.HNPACODE.

DIR = 2W and XLADSEL = UNIV, NETATTR, or NALT

For all two-way trunk groups, datafill subfields MTRIC, SELSEQ, MTROG, DIGREGEN, ANIIDX, and DGNAME as described below, then datafill fields PROTIDX and TRTMTIDX as described in "Incoming, outgoing, and two-way trunks" on page -856..

Field descriptions for conditional datafill (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	MTMTRIC	see subfields	*Meter incoming information* This field consists of subfields METERIC and MDI.
	METERIC	Y or N	*Meter option* If metering is desired, enter Y (yes) and datafill subfield MDI. If metering is not required, enter N (no). The value in field METERIC cannot be changed to N once it has the value Y.
	MDI	numeric (0 to 1023)	*Metering data index* If the entry in field METERIC is Y, enter an appropriate metering data index from table MSRCDATA. If the entry in field METERIC is N, leave field MDI blank.

TRKGRP type MTR (continued)

Field descriptions for conditional datafill (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	SELSEQ	ASEQ CCWCTH CWCTH DSEQLIDL or MIDL	*Select sequence*If the trunk is two-way and the far end is a link list switcher, enter LIDL (least idle) or MIDL (most idle) if the far end is MIDL or LIDL respectively. If the trunk is two-way, the far end is not a link list switcher, and sequential selection does not apply, enter MIDL to satisfy the table editor. If the trunk group is two-way, the far end is not a link list switcher, and sequential selection applies (feature package NTX244AB (Enhanced Sequential Trunk Hunting) must be present), enter • CWCTH for clockwise or CCWCTH for counter clockwise circular trunk hunting (starting from the most recently released trunk in the trunk group and based on the order of trunk members in table TRKMEM) for a far end of CCWCTH or CWCTH respectively, or • ASEQ or DSEQ for ascending or descending sequential selection (based on the order of trunk members in table TRKMEM) for a far end of DSEQ or ASEQ respectively. ***Note:*** Refer to the general section of table TRKGRP for additional information on field SELSEQ and for information on changing a trunk group selection method and sequence.
Note: The selection sequence for an existing trunk group can be changed from ASEQ to DSEQ, or from DSEQ to ASEQ, if all the members are made installation busy (INB) or unequipped (UNEQ). The selection method for an existing trunk group cannot be changed. To change the selection method for an existing trunk group from ASEQ or DSEQ to CWCTH or CCWCTH, or to MIDL or LIDL, define a new trunk group, as follows: Create a new trunk group with the required trunk selection method, delete the individual trunks from the old trunk group, and add the trunks to the new trunk group.			
	MTROG	see subfields	*Mete r outgoing information* This field consists of subfields METEROG and MDI.

Field descriptions for conditional datafill (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	METEROG	N	*Meter option* Enter N. Metering is not allowed on two-way MTR trunks.
	MDI	leave blank	*Metering data index* This field is left blank. Datafill for subfield MDI is only required if the entry in METEROG is Y.
	DIGREGEN	0 to 9 (up to 4 digits) or N	*Digit regeneration* Enter the digits to prefix to the incoming digits so that the number in the distant office can be regenerated. If no digits are to be prefixed, enter N (none).
	ANIIDX	alphanumeric (1 to 8 characters)or NIL	*Fixed automatic number identification index* Enter the index into table FIXEDANI for this trunk group. If datafilled, automatic number identification (ANI) is taken from table FIXEDANI rather than the calling party. For trunks with a traffic class other than CAMA or TNCA, enter the value NIL.
	DGNAME	alphanumeric (1 to 8 characters) or NIL	*Digit collection name* Enter the digit analysis instance required for an incoming trunk group. The digit analysis instance must have been previously defined in table DGHEAD. Enter NIL if no digit analysis is required.

TRKGRP type MTR (continued)

Outgoing international trunk groups

For outgoing international trunk groups, datafill field DIR and refinements as described below, and then datafill fields PROTIDX and TRTMTIDX as described in "Incoming, outgoing, and two-way trunks" on page -856.

Field descriptions for conditional datafill (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	DIR	OG	*Direction* Enter OG to specify the trunk group direction as outgoing.
	SELSEQ	ASEQ CCWCTH CWCTH DSEQLIDL or MIDL	*Select sequence* If the trunk is two-way and the far end is a link list switcher, enter LIDL (least idle) or MIDL (most idle) if the far end is MIDL or LIDL respectively. If the trunk is two-way, the far end is not a link list switcher, and sequential selection does not apply, enter MIDL to satisfy the table editor. If the trunk group is two-way, the far end is not a link list switcher, and sequential selection applies (feature package NTX244AB (Enhanced Sequential Trunk Hunting) must be present), enter • CWCTH for clockwise or CCWCTH for counter clockwise circular trunk hunting (starting from the most recently released trunk in the trunk group and based on the order of trunk members in table TRKMEM) for a far end of CCWCTH or CWCTH respectively, or • ASEQ or DSEQ for ascending or descending sequential selection (based on the order of trunk members in table TRKMEM) for a far end of DSEQ or ASEQ respectively. ***Note:*** Refer to the general section of table TRKGRP for additional information on field SELSEQ and for information on changing a trunk group selection method and sequence.

Field descriptions for conditional datafill (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
Note: The selection sequence for an existing trunk group can be changed from ASEQ to DSEQ, or from DSEQ to ASEQ, if all the members are made installation busy (INB) or unequipped (UNEQ). The selection method for an existing trunk group cannot be changed. To change the selection method for an existing trunk group from ASEQ or DSEQ to CWCTH or CCWCTH, or to MIDL or LIDL, define a new trunk group, as follows: Create a new trunk group with the required trunk selection method, delete the individual trunks from the old trunk group, and add the trunks to the new trunk group.			
	MTROG	see subfields	*Meter outgoing information* This field consists of subfields METEROG and MDI.
	METEROG	N	*Meter option* Enter N. Metering is not allowed on outgoing MTR trunks.
	MDI	leave blank	*Metering data index* This field is left blank. Datafill for subfield MDI is only required if the entry in METEROG is Y.
	ANIIDX	alphanumeric (1 to 8 characters) or NIL	*Fixed automatic number identification index* Enter the index into table FIXEDANI for this trunk group. If datafilled, automatic number identification (ANI) is taken from table FIXEDANI rather than the calling party. For trunks with a traffic class other than CAMA or TNCA, enter the value NIL.

TRKGRP type MTR (continued)

Incoming, outgoing, and two-way trunks

For all incoming, outgoing, or two-way trunks, datafill fields PROTIDX and TRTMTIDX as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	PRPROTIDX	BELR2 BRAR2 CHILER2 CHIR2 GUYR2 HAITIR2 IRER2L IRER2T MEXR2 MEXR2B MORR2L MORR2T PERU1R2 SOCR24 SOCR26 SOCR26A SOCR27 or NIL	*R2 protocol index* This field references table indices in table R2PROT that are required by this trunk group for R2 signal/activity mappings and control. All valid entries are five to eight alphanumeric characters in length, with the characters prior to R2 corresponding to the target area. T or L after the characters R2 indicates that the protocol is for toll or local calls respectively. Enter the required R2 protocol for the trunk, or enter NIL if the trunk group does not use R2 signaling. Entry values other than those listed are not valid.
	TRTMTIDX	BELTRT BRATRT CHILETRT CHITRT GUYTRT HAITITRT MEXTRT MORTRTL MORTRTT PERUTRT SOCTRTL SOCTRTT or NIL	*R2 treatment index* This field references table indices in tables TRTMTACT (treatment to activity) and TRTTRTMT (activity to treatment) required by this trunk group. All valid entries are six to eight alphanumeric characters in length, with the characters prior to TRT corresponding to the target area. T or L after the characters TRT indicates that the treatment is for toll or local calls respectively. Enter the required R2 treatment for the trunk, or enter NIL if the trunk group does not use R2 signaling. Entry values other than those listed are not valid.

Datafill example

An example of datafill for table TRKGRP and trunk group type MTR is shown below. This example consists of datafill for one incoming trunk group and one outgoing trunk group with the following characteristics:

- The code in table CLLI for the outgoing trunk group is OGTOBKA and the code for the incoming trunk group is ICFRBKA.
- The traffic separation number for the outgoing trunk group is 10 and for the incoming trunk group is 0.
- ELOA is the pad group assigned to both trunk groups.
- NCRT is the no circuit class for both trunk groups.
- Neither trunk group is set up to switch through satellite.
- Neither trunk group has echo suppressors.
- Both trunks require inter-administration accounting.
- End-to-end connections are enabled.
- International traffic class is not used (NONE is entered).
- The direction for the outgoing trunk group is OG and for the incoming trunk group is IC.
- Backward requests for DN and CATEGORY are not made on the incoming trunk group.
- Both trunk groups use the universal translator.
- The translation for the incoming trunk group starts in the prefix translation table.
- The translation name for the incoming trunk group is ICTOLLCN.
- Neither trunk group uses metering.
- No digit prefixing is done for the incoming trunk group.
- The outgoing trunk group selection sequence is most idle.
- The fixed ANI index option is not used for the outgoing trunk group.
- Digit collection name is not required.
- For both trunk groups, the protocol index is MEXR2 and the treatment index is MEXTRT.

TRKGRP type MTR (end)

MAP display example for table TRKGRP type MTR

```
GRPKEY            GRPINFO
_____________________________________________________________________________
OGTOBKA           MTR 10 ELOA NCRT N N Y EEND NONE OG UNIV
 N MIDL N NIL NIL MEXR2 MEXTRT $
ICFRBKA           MTR 0 ELOA NCRT N N Y EEND NONE IC N UNIV
 PX ICTOLLCN N N NIL MEXR2 MEXTRT $
```

TRKGRP type NFA

Network Facility Access Trunk Group Type

Trunk group type NFA is used to assign network facility access (NFA) trunks that connect a subscriber line to an intelligent peripheral (IP) processor. This provides a subscriber with access to services provided directly by the IP.

Datafill

The following table lists the datafill for table TRKGRP type NFA.

Field descriptions (Sheet 1 of 4)

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 common language location identifier (CLLI) code assigned to the trunk group in table CLLI.
GRPINFO		see subfields	*Variable group data* This field consists of subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, TRAFCLS, SELSEQ, and ANSTOUT. Refer to section “General field information" in table TRKGRP for information concerning an alternate structure for this field that results from the datafill of table CUSTFLDS.
	GRPTYP	NFA	*Group type* Enter NFA to specify the group type for network facility access trunks.

TRKGRP type NFA (continued)

Field descriptions (Sheet 2 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	TRAFSNO	numeric (0 to 127)	*Traffic separation number* Enter the incoming and outgoing traffic separation number assigned to the trunk group. If a traffic separation number is not required, enter 0 (zero). For switches with software package NTX085AA (Traffic Separation Peg Count), enter a value from 1 to the value of office parameter TFAN_OUT_MAX_NUMBER in table OFCENG. For switches without software package NTX085AA, enter a value from 1 to 15. Incoming and outgoing traffic separation numbers 1 to 9 should be reserved for generic traffic separation numbers. For more information, refer to table TFANINT.
	PADGRP	alphanumeric (1 to 5 characters)	*Pad group* Enter the name of the pad group assigned to the trunk group in table PADDATA. For more information, refer to table PADDATA.
	NCCLS	NCBN NCID NCIM NCIT NCLT NCOF NCON NCOT NCRT NCTC or NOSC	*Operational measurements no-circuit class* Enter the operational measurements (OM) no-circuit class (NCCLS) to indicate which OM register is incremented if treatment GNCT (generalized no circuit) occurs. If the trunk group direction is incoming, this field is not required. Enter NCRT (no circuit). For more information, refer to the general section of table TRKGRP and the *Operational Measurements Reference Manual*.
	TRAFCLS	alphabetic (2 characters)	*Traffic usage class* Enter the traffic usage class assigned to the trunk group. For more information, refer to the general section of table TRKGRP.

TRKGRP type NFA (continued)

Field descriptions (Sheet 3 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	SELSEQ	ASEQ CCWCTH CWCTH DSEQ LIDL or MIDL	*Select sequence* If the trunk group direction is two-way (2W) and far end is a link list switcher, enter LIDL or MIDL (least or most idle) if the far end is MIDL or LIDL respectively. If the trunk group direction is two-way, the far end is not a link list switcher, and sequential selection does not apply, enter MIDL. If the trunk group direction is incoming (IC), sequential selection does not apply. Enter MIDL. If the trunk group is outgoing or two-way, the far end is not a link list switcher (requirement for two-way trunks only), and feature package NTX244AB (Enhanced Sequential Trunk Hunting) is present, base the selection order on the order of the trunks in table TRKMEM, and enter • CWCTH or CCWCTH for clockwise or counterclockwise circular trunk hunting from the most recently released trunk in the trunk group, if the far end is CCWCTH or CWCTH respectively, or • ASEQ or DSEQ for ascending or descending sequential selection, if far end is DSEQ or ASEQ respectively. Entries outside this range are not valid. For more information, refer to the general section of table TRKGRP.

TRKGRP type NFA (end)

Field descriptions (Sheet 4 of 4)

Field	Subfield or refinement	Entry	Explanation and action
Note: A trunk group trunk selection method cannot be changed. If a change in the selection method is required, a new trunk group must be created with the required trunk selection method. The individual trunks with the old selection sequence must be deleted from the old trunk group and then added to the new trunk group. For an existing trunk group, the selection sequence may be changed to ASEQ from DSEQ or from DSEQ to ASEQ if all the trunk members are installation busy (INB) or unequipped (UNEQ). Refer to table TRKGRP for additional information concerning field SELSEQ.			
	ANSTOUT	numeric (5 to 15)	*Answer timeout* Enter the time, in seconds, within which the trunk much respond with answer supervision after seizure.

Datafill example

The following example shows sample datafill for table TRKGRP type NFA.

MAP display example for table TRKGRP type NFA

```
GRPKEY          GRPINFO
_____________________________________________________________

NFATKG1         NFA 0 ELO NCRT NIL MIDL 12
```

Table history

BCS34

Trunk group type NFA was introduced.

Nailed-up Connection Trunk Group Type

In a toll or end office, an incoming trunk of group type NU can be permanently connected (nailed-up) to an outgoing trunk of group type NU.

Table NLUPCLLI lists trunk connections that have been nailed-up. Each nailed-up connection consists of one incoming and one outgoing trunk of group type NU.

Pulsing over the trunk group is not allowed if the trunk is digital and pulsing format is dial pulse.

Table TRKSGRP lists the code, card code subgroup, and trunk direction for each of the trunk groups. All other fields must be set to the default values listed in table “Default key settings”. .

Default key settings

Incoming Field	Entry	Outgoing Field	Entry
IPULSETYP	NP	OPULSTYP	NP
ISTARTSG	IM	OSTARTSG	IM
OVLP	N	IDIGTIME	7
PSPDSEIZ	2	NUMSTOPS	0
PARTDIAL	2		
CCONT	NO	CCONT	NO
RNGBCK	NO	RNGBCK	NO
ESUPR	N	ESUPR	N
SAT	N	SAT	N
REMBSY	N	REMBSY	N
DIALMODE	C	TRKGDTIM	70

TRKGRP type NU (continued)

Datafill

The following table lists the datafill for table TRKGRP type NU.

Field descriptions (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 common language location identifier (CLLI) code assigned to the trunk group in table CLLI.
GRPINFO		see subfields	*Variable group data* This field consists of subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, DIR, and BCNAME. Refer to section “General field information" in table TRKGRP for information concerning an alternate structure for this field that results from the datafill of table CUSTFLDS.
	GRPTYP	NU	*Group type* Enter NU to specify the group type for nailed-up connections.
	TRAFSNO	numeric (0 to 127)	*Traffic separation number* Enter the incoming and outgoing traffic separation number assigned to the trunk group. If a traffic separation number is not required, enter 0 (zero). For switches with software package NTX085AA (Traffic Separation Peg Count), enter a value from 1 to the value of office parameter TFAN_OUT_MAX_NUMBER in table OFCENG. For switches without software package NTX085AA, enter a value from 1 to 15. Incoming and outgoing traffic separation numbers 1 to 9 should be reserved for generic traffic separation numbers. For more information, refer to table TFANINT.

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	PADGRP	alphanumeric (1 to 5 characters)	*Pad group* Enter the name of the pad group assigned to the trunk group in table PADDATA. For more information, refer to table PADDATA.
	NCCLS	NCBN NCID NCIM NCIT NCLT NCOF NCON NCOT NCRT NCTC or NOSC	*Operational measurements no-circuit class* Enter the operational measurements (OM) no-circuit class (NCCLS) to indicate which OM register is incremented if treatment GNCT (generalized no circuit) occurs. If the trunk group direction is incoming, this field is not required. Enter NCRT (no circuit). The initial value for this trunk group type is NCRT. For more information, refer the general information section of to table TRKGRP and the *Operational Measurements Reference Manual* .
	DIR	IC or OG	*Trunk group direction* Datafill this field to specify the trunk group direction. For incoming trunks, enter IC. For outgoing trunks, enter OG. Entries other than IC or OG are not valid.
	BCNAME	alphanumeric (1 to 16 characters)	*Bearer capability name* Enter the bearer capability to be used by nailed-up trunks in this trunk group. Refer to table BCDEF for the current list of available bearer capabilities. All values defined in table BCDEF are valid except those that require a transfer capability of AU_7KHZ. The default value is 64KDATA.

TRKGRP type NU (end)

Datafill example

The following example shows sample datafill for table TRKGRP type NU.

MAP display example for table TRKGRP type NU

```
GRPKEY            GRPINFO
_____________________________________________________

OTWAON52CG02      NU 15 ELO NCRT IC 64KDATA
HULLPQ1077X0      NU 16 ELO NCRT OG 56KDATA
```

DMS-100 Family

North American DMS-100

Customer Data Schema Reference Manual

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Data Schema TODHEAD-TRKGRP type NU

Product Documentation - Dept. 3423
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Publication number: 297-8021-351
Product release: LET0015 and up
Document release: Standard 05.02
Date: May 2001
Printed in the United States of America

NORTEL NETWORKS™