Critical Release Notice

Publication number: 297-8021-350
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The content of this customer NTP supports the SN07 (DMS) software release.

Bookmarks used in this NTP highlight the changes between the NA015 baseline and the current 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 for the current 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.

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.*

December 2004

Standard release 18.02 for software release SN07 (DMS). Updates made for this release are shown below:

Volume 1-12
No changes

Volume 13
Added Virtual Office Worker (VOW) by A00002011

Volume 14-16
No changes

Volume 17
Universal Access to Call Forwarding (UCFW) changes to AMA billing by CR Q00982215

Volume 18-23
No changes

Volume 24
Added OSSAIN XA-Core Data Messaging Capacity Enhancements by A00005160

Volume 25
No changes

September 2004

Preliminary release 18.01 for software release SN07 (DMS). Updates made for this release are shown below:

Volume 1
Modified – Introduction to trunk tables (ES trunk groups) by CR Q00838215-1

Volume 2-3
No changes

Volume 4
Modified – Datafilling Trunk Signaling (ISUP Hop Counter) by CR Q00760514-10

Volume 5-10
No changes

Volume 11
Modified – Datafilling MDC Minimum (Call Pickup) by CR Q00879738

Volume 12
Modified – Datafilling MDC MSAC (Do Not Disturb) by A00002196

Volume 13-15
No changes

Volume 16
Modified – Datafilling ACD Base (Base automatic call distribution) by CR Q00812364

Volume 17
Modified – Datafilling RES Advanced Custom Calling (900 FP) by CR Q00834222
Modified – Datafilling RES Advanced Custom Calling (CSMI) by CR Q00683891
Modified – Datafilling RES Advanced Custom Calling (CWAS) by CR Q00891675-01
Modified – Datafilling RES Advanced Custom Calling (Enhanced CSMI) by CR Q00683891

Volume 18
No changes

Volume 19
Modified – Datafilling RES Service Enablers (SLE) by CR Q00760256

Volume 20
Modified – Datafilling Emergency Number Services (E911 Wireless ALI Interface) by CR Q00856825

Volume 21-24
No changes

Volume 25
Modified – Datafilling Unbundling (UNBN OPTRANS and EA) by A00002765

March 2004

Standard release 17.03 for software release SN06 (DMS). Updates made for this release are shown below:

Volume 1- 9
No changes

Volume 10
Changes due to CR Q00757372, which clarifies the applicability of the AUDTRMT option. The changes are in sections:

7 Datafilling NI0 NI-2 PRI, PRI Call Screening
8 Datafilling NI0 ISDN PRI Base, Flexible Digit Analysis
8 Datafilling NI0 ISDN PRI Base, PRI ISDN Treatments
9 Datafilling NI0 ISDN PRI CNAM, PRI SUSP for CNAME

Volume 11-16
No changes

Volume 17
Modified - Call Screening, Monitoring, and Intercept (CSMI) for Q00659151
Modified - RES Simultaneous Ringing for Q00715967.
Modified - Usage Sensitive Three-way Calling (U3WC) for Q00703423-03.

Volume 18
Changes to Chapter 1 - Datafilling RES Display Functionality and Privacy, Anonymous Caller Rejection (ACRJ) as follows:

change to description of interaction with Call Forwarding Don't Answer (CFDA) for CR Q00773476

change to description of interaction with SOC RES00011 for CR Q00735537.

Volume 19
Changes due to CR Q00735537, which shows the interaction of various services with SOC RES00011. The changes are in Chapter 1 – Datafilling RES non-display services, and the affected services are:

Distinctive Ringing/Call Waiting (DRCW)
Selective Call Acceptance (SCA)
Selective Call Forwarding (SCF)
Selective Call Rejection (SCJ)

Volume 20
Changes due to CR Q00757372, which clarifies the applicability of the AUDTRMT option. The changes are in section:

2 Datafilling Emergency Number Services, E911 PRI PSAP Delivery

Volume 21-25
No changes

September 2003

Standard release 17.02 for software release SN06 (DMS). Updates made for this release are shown below:

Volume 1
New - Panther support for third-party RMs
Modified - E911 trunk groups

Volume 2-11
No changes

Volume 12
Modified - Query Functional Station Grouping

Volume 13-14
No changes

Volume 15
Modified - VMX Interface

Volume 16
No changes

Volume 17
Modified - Call Screening, Monitoring, and Intercept (CSMI)
Modified - Enhanced CSMI
Modified - Long Distance Alerting
Modified - Long Distance Alerting Enhancement (LDAE)
Modified - Service Order Simplification for MADN Extension Bridging

Volume 18
Modified - Call Logging (CALLOG) Modified - Universal Voice Messaging
Modified - Voice Mail Easy Access (VMEA)

Volume 19
Modified - CMS AR Screening of Private Calls (CASOP)
Modified - In-Session Activation (ISA)

Volume 20
Modified - DMS Integrated E911 PSAP Functionality
Modified - E911 Incoming Wireless Calls
Modified - E911 Incoming Wireless Calls (MF)
Modified - E911 ISUP Parameter Enhancements

Volume 20 (continued)
Modified - E911 ISUP Trunking
Modified - E911 Tandem
Modified - E911 Translations Robustness
Modified - VFG Support for E911 (LOC and/or ISUP/ANI Call)

Volume 21-25
No changes

June 2003

Preliminary release 17.01 for software release SN06 (DMS). Updates made for this release are shown below.

New Critical Release Notice added.

Volume 1-25
No changes

297-8021-350

DMS-100 Family

North American DMS-100

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Competitive Services Part 1 of 2

LET0015 and up Standard 14.02 May 2001

NORTEL NETWORKS™

DMS-100 Family

North American DMS-100

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1 Introduction to LNP translations

Local Number Portability allows subscribers to change service providers, within a rate center, and retain their directory number. This type of Local Number Portability (LNP) service is Service Provider Portability within a rate center.

LNP translations

LNP changes call translation and routing on a service switching point (SSP).

The SSP can no longer examine the NPA-NXX digits to determine the switch that owns a DN.

LNP uses location routing numbers (LRN) to route calls to or from ported DNs.

The recipient switch owns the NPA-NXXs that the LRNs contain. Normal routing procedures route the call to the recipient switch.

When the call reaches the recipient switch, LNP uses the Generic Address Parameter (GAP) to route the call to its final destination. The GAP contains the terminating DN.

Note: For an explanation of GAP, forward call indicator (FCI), and jurisdiction information parameter (JIP) refer to the “Signaling" section.

LNP also uses new routing procedures to route calls to ported DNs after the call reaches the terminating switch.

LNP translations

- terminates calls to ported DNs at the recipient switch, without requiring changes in the datafill of the operating company
- associates an office code (NXX) with a numbering plan area (NPA) for a seven-digit dialing plan
- allows service providers to identify home LRNs
- designates home LRNs as JIPs

- specifies LRNs that associate with remote switches
- shows calls that terminate at resident DNs as ported from another switch
- uses LRNs to route calls to ported numbers on other switches
- terminates calls to ported numbers on the same switch

Foreign LRN Enhancement

The service switching point (SSP) preserves the values of call classification parameters determined during pre-LNP trigger processing. Call classification parameters include local/toll call type for routing and billing. Post-LNP trigger routing, billing, and LCABILL option processing use these parameter values.

Foreign LRN Enhancement provides the following functionality:

- Pre-LNP trigger translations determines a call type value. FLRN translations use the value for routing and billing purposes.
- Local Call Area (LCA) screening uses the call type (local/toll) that the pre-LNP trigger translations determines. Foreign LRN Enhancement cancels standard LCA screening during FLRN translations. FLRN translations uses the LCA screening result obtained by the pre-LNP trigger LCA screening based on the CalledPartyDN.

Tables

LNP modifies or adds the following tables.

Table 1-1 Tables (Sheet 1 of 3)

Table	Description
ADJNODE	Signal ported number (SPN) option added. For outgoing trunks, the SPN option signals the ported number as the called party address (CdPA) in the initial address message (IAM). NOJIP option added. The option prevents the JIP from passing into the outgoing IAM to the following switch.
AMAOPTS	LNP added the following billing options: • LNP_Module_719 to append module code 719 to AMA records • LNP_721 to enable call code 721 records • LNP_721_USE_SC0500 to enable call code 721 records with Bellcore structure code 500 • LNP_721_PortedDNOnly to enable call code 721 records only when the dialed DN is ported • LNP_722 to enable call code 722 records
AMATKOPT	Connecting Network Access Record (CNAR) option added. The option generates a CNAR record. Operating companies use the record to bill calls to ten-digit numbers.
DNFEAT	PORT option added. The option creates a 10-digit unconditional trigger. The operating company assigns the option to a DN on a donor switch after the number ported. This assignment occurs as the DN moves from the donor switch to the recipient switch. The table also allows the operating company to datafill DNs at the recipient switch before putting the number into service.
DNROUTE	PODN treatment added to field TRMT.
FNPA7DIG	Table added. This table allows the operating company to datafill the switch to determine a foreign numbering plan area for seven-digit cross-NPA dialing or signaling.

Note 1: For more information on how to provision LNP, refer to *Location Routing Number - Local Number Portability Service Implementation Guide*, 297-8981-021.

Note 2: For information on AIN Response Translations or AIN tables related to LNP, refer to *Advanced Intelligent Network Essentials Service Implementation Guide*, 297-5161-021 or *Advanced Intelligent Network Service Enablers Service Implementation Guide*, 297-5161-022.

Table 1-1 Tables (Sheet 2 of 3)

Table	Description
HOMELRN	Table added. This table • allows service providers to identify home LRNs • designates a home LRN as a JIP • specifies LRNs associated with remote switches
IBNLINES	LNPTST entry added for the LNP test call option. The entry supports the LNP test call feature. Use SERVORD to assign the LNP test call option to a single-party residential line (1FR-RES line).
IBNXLA	LNPTST entry added for the LNP test call option. The entry permits the use of access code datafill. The access code activates LNP test calls.
LNPCODE	Table added. This table allows the operating company to specify special routing for directory numbers that port into the switch.
LNPOPTS	A table with four entries added. Entry LNPTCT applies the LNP trigger criteria type to Info Analyzed messages. Entry BLOCKLNP blocks calls where the previous switch did not perform a necessary LNP query. Entry QPARMS specifies the parameters to send in an LNP query message. Entry ACG_10D_TRMT specifies the treatment assigned to calls encountering 10-Digit Automatic Call Gapping (10D ACG).
LNPRTE	Table added. This table indexes into office and IBN routing tables. Types of office routing tables are OFRT, OFR2, OFR3, and OFR4. Types of routing tables are IBNRTE, IBNRT2, IBNRT3, and IBNRT4. The pointers point to routes where, if a call is routing out of tables STDPRTCT or CLSVSCRC, the call may encounter LNP trigger criteria checking.
NPDIGMAP	This table maps the NPANXX of the GAP to a new area code and office code combination, if the original GAP in the IAM message is not resident.
OFCTIID	This table manages assignments of office-wide trigger items. See Note. ***Note:*** To use this datafill, the operating company sets office parameter AIN_OFFICE_TRIGGRP in table OFCVAR to TIID. Table OFCTIID depends on table TRIGITM.
PXLAMAP	Entry PREFIX added. The entry indicates when software digit conversion for AIN response translation takes place.

Note 1: For more information on how to provision LNP, refer to *Location Routing Number - Local Number Portability Service Implementation Guide*, 297-8981-021.

Note 2: For information on AIN Response Translations or AIN tables related to LNP, refer to *Advanced Intelligent Network Essentials Service Implementation Guide*, 297-5161-021 or *Advanced Intelligent Network Service Enablers Service Implementation Guide*, 297-5161-022.

Table 1-1 Tables (Sheet 3 of 3)

Table	Description
TMTCNTL	Treatment LNP misrouted (LNPM) added to subtable TREAT. The treatment relates to a tone or announcement that indicates the LNP call did not complete.
TMTMAP	Treatment LNPM added with message MISROUTED_CALL_TO_PORTED_NUMBER, cause value 26. Option MISRLNP added to field CAUSE to support LNP treatment Misrouted_LNP_Number. Treatment PODN added to field TMTMAP_KEY.TMT.
TOFCNAME	Option field NONNATIVE added. The field identifies the NPA-NXXs that port to the switch. Table capacity through SOC options NPE00001 and NPE00002 increased. This functionality allows the operating company to • expand table TOFCNAME to 8171 tuples when the company sets ACTIVE_DN_SYSTEM to UNIVERSAL • use duplicate office codes
TRIGDIG	LNP trigger added to subfield TRIGGER of field KEY.
TRIGGRP	LNP trigger added. The trigger supports all the escape information for the LNP trigger.
TRIGITM	This table provisions office-wide LNP trigger items. ***Note:*** To use this datafill, the operating company sets office parameter AIN_OFFICE_TRIGGRP in table OFCVAR to TIID.
TRKGRP	Option LNP added to provision an LRN for trunk types IT, TI, T2, SC, PRA, OC, and ATC for identification in LNP routing.
TRKOPTS	Option BLOCKLNP added to block calls where the previous switch did not perform a necessary LNP query.

Note 1: For more information on how to provision LNP, refer to *Location Routing Number - Local Number Portability Service Implementation Guide*, 297-8981-021.

Note 2: For information on AIN Response Translations or AIN tables related to LNP, refer to *Advanced Intelligent Network Essentials Service Implementation Guide*, 297-5161-021 or *Advanced Intelligent Network Service Enablers Service Implementation Guide*, 297-5161-022.

TRAVER

LNP translations also modifies the TRAVER tool for LNP translation verification. These modifications include the addition of the following optional parameters:

- FLRN_CALLTYPE
- LNP Analyze_Route (LNPAR)
- Translated Called Number Indicator (TCNI)

LNP Query Enhancements and TRAVER

The LNP Query Enhancements feature affects TRAVER. The TRAVER reflects call processing (CallP) changes on inter-network calls that did not query through the BLOCKLNP functionality.

Foreign LRN Enhancement and TRAVER

The Foreign LRN Enhancement feature adds parameter CallType to TRAVER to enforce the pre-LNP trigger call type for the post-LNP trigger TRAVER trace generation (FLRN translations). This enforcement occurs because pre-LNP trigger and post-LNP trigger TRAVERs are two separate TRAVERs.

The operating company can enter a desired pre-LNP trigger call type (No Prefix [NP] for local calls, or Direct Dialed [DD] for toll calls) on the CI command line to verify FLRN translations. If the operating company does not enter a value for the call type parameter, the TRAVER tool uses the default value of NP.

During FLRN translations, TRAVER performs LCA screening on the CalledPartyDN parameter to get the pre-LNP trigger LCA screening result value.

TRAVER also shows BLOCKLNP information.

Signaling for Local Number Portability

LNP must transport a special routing number that identifies the switch of the ported DN and the directory number of the ported DN.

LNP introduces the concept of originating, donor, and recipient switches. The DN can port

- from the donor switch
- to the recipient switch

When an originator makes a call, a series of translations occur in the originating switch to determine if the call

- terminates on the current switch, or
- routes out of the switch based on the dialed number, or
- routes out of the switch based on another routing number

The SSP stores the results of the translations. If the call needs to route out of the switch, signaling takes this information and builds the Initial Address Message (IAM) that signals the next switch.

ISUP IAM parameters

LNP modifies the IAM to allow for changed parameters. A description of these parameters follows.

Called Party Number parameter

LNP signaling retrieves the LRN and uses it to fill the CalledPartyNumber (CdPN) parameter. The LRN is the ten-digit (NPA-NXX-XXXX) special routing number that identifies the recipient switch for the LNP call. The Forward Call Indicator-to-Number Translated setting identifies the LRN and the presence of a ported number Generic Address Parameter. Foreign LRNs or FLRNs are LRNs that are not datafilled on the querying switch.

Ported number GAP parameter

LNP uses the GAP to preserve the directory number of the called party. The GAP parameter

- is the existing parameter type
- is always a ten-digit (NPA-NXX-XXXX) number
- uses a new type of address of Ported_Dialed_Number
- includes a new Test Call indicator. This indicator can be set for any GAP type. The indicator tells the next office that the call is a test call.

FCI parameter

LNP reserves an unused bit, the FCI parameter. This LNP-specific bit, the translated called number indicator (TCNI), is the M bit. The TCNI setting includes

- Number Not Translated
- Number Translated
  - — shows that the SSP performed an LNP query for the call

JIP parameter

The JIP is an existing ISUP parameter. LNP uses the JIP for service provider identification. The JIP consists of the LRN datafilled as HOST to the switch

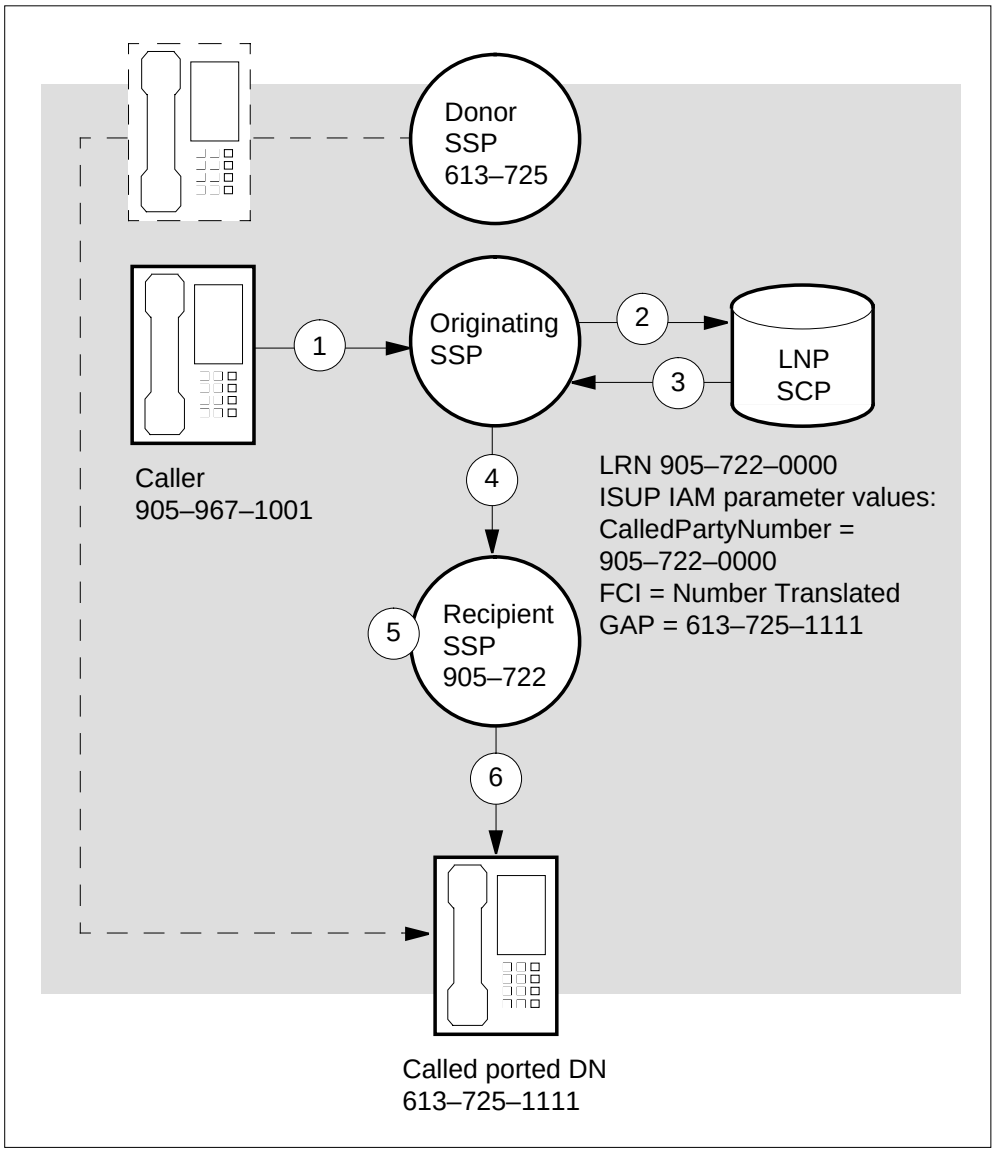
in table HOMELRN. LNP created table HOMELRN for this purpose. The JIP identifies the service provider for connecting access billing purposes through all parts of the call.

Signaling configurations

The figures in this section show the following signaling configurations:

1. a call to a nonresident DN that ported from the donor SSP to a recipient switch
2. a call to a DN that ported from the donor switch to the originating switch
3. a call that originates from the donor switch to a ported DN resident on the recipient switch
4. a call from an originating switch through an intermediate tandem switch to the donor switch
5. a call from an originating switch through an intermediate tandem switch to a recipient switch

Figure 1-1 Call to a nonresident DN that ported from the donor SSP to a recipient switch



The following steps describe Figure 1:

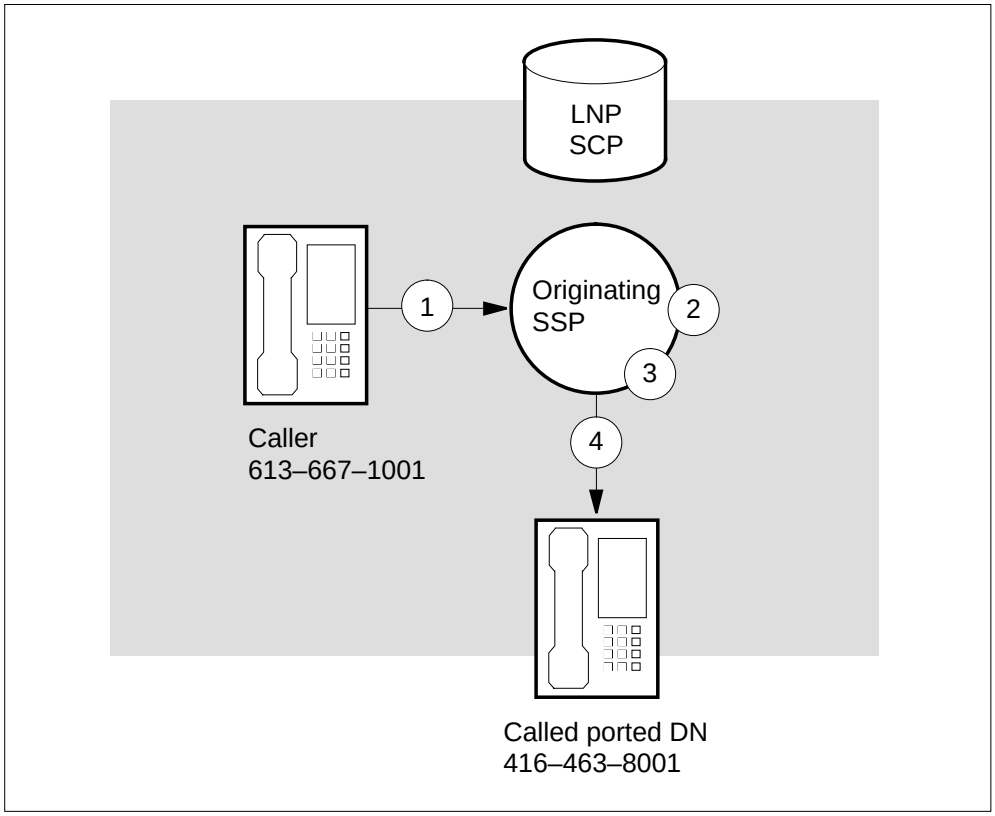
1. The caller dials 613-725-1111.
2. The originating SSP analyzes the dialed digits in table HNPACODE or table FNPACODE. The number has a portable NPA-NXX. The originating SSP posts a query to the LNP SCP to determine if the DN ported.
3. The LNP SCP returns an LRN of 905-722-0000. This is the LRN of the recipient switch on which the ported DN resides.

4. The originating SSP analyzes the LRN in table HNPACODE or table FNPACODE. The originating SSP routes the call to the recipient SSP because this switch owns the 905-722 exchange. The originating switch sends an IAM over the ISUP trunk. The IAM contains
   a. the LRN in the CdPN parameter
   b. the dialed DN in the GAP parameter
   c. the FCI bit M = 1 (Number Translated)
5. The recipient SSP recognizes the LRN as one of its home LRNs. The recipient SSP retrieves the dialed ported DN from the GAP parameter because the SSP owns the LRN in the CdPN parameter.

   Note: The recipient SSP does not analyze the DN in table HNPACODE or table FNPACODE because it received one of its home LRNs. Analysis by tables HNPACODE or FNPACODE can route the call to the incorrect (donor) switch.

6. The SSP completes the call to the ported DN.

Figure 1-2 Call to a DN that ported from the donor switch to the originating switch

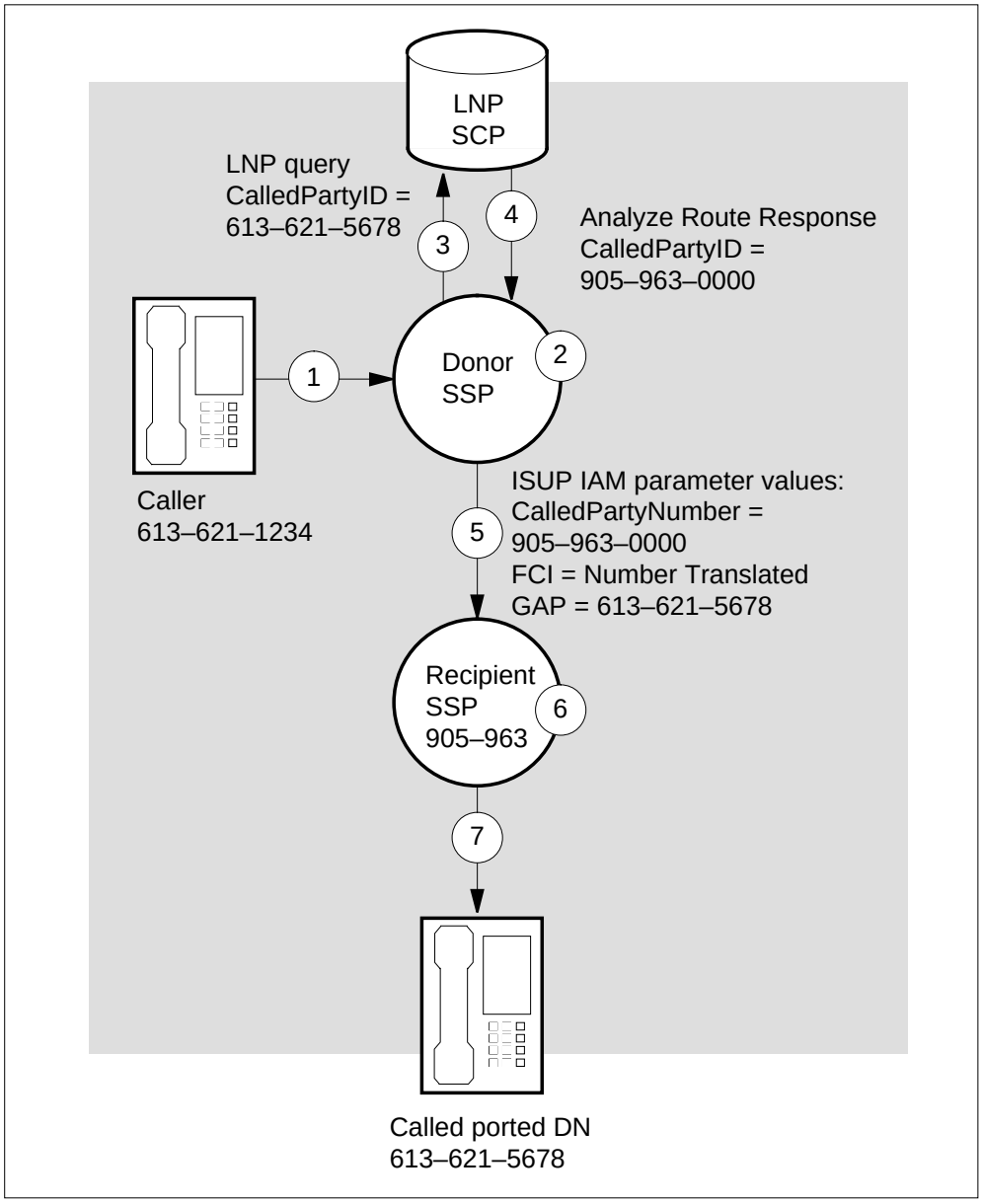


The following steps describe Figure 2:

1. The caller dials 416-463-8001.
2. The originating SSP analyzes the dialed digits in table HNPACODE or table FNPACODE.
3. The originating switch checks if the dialed digits (with a nonnative NPA-NXX) reside on its switch. The originating switch finds that the DN resides on its switch. The originating switch ignores the route provided by table HNPACODE or table FNPACODE.
4. The SSP completes the call on the originating switch to the ported (called) DN.

Note: An LNP SCP query does not occur if the LNP trigger includes the escape DN (ESCDN) option.

Figure 1-3 Call that originates from the donor switch to a ported DN resident on the recipient switch



The following steps describe Figure 3:

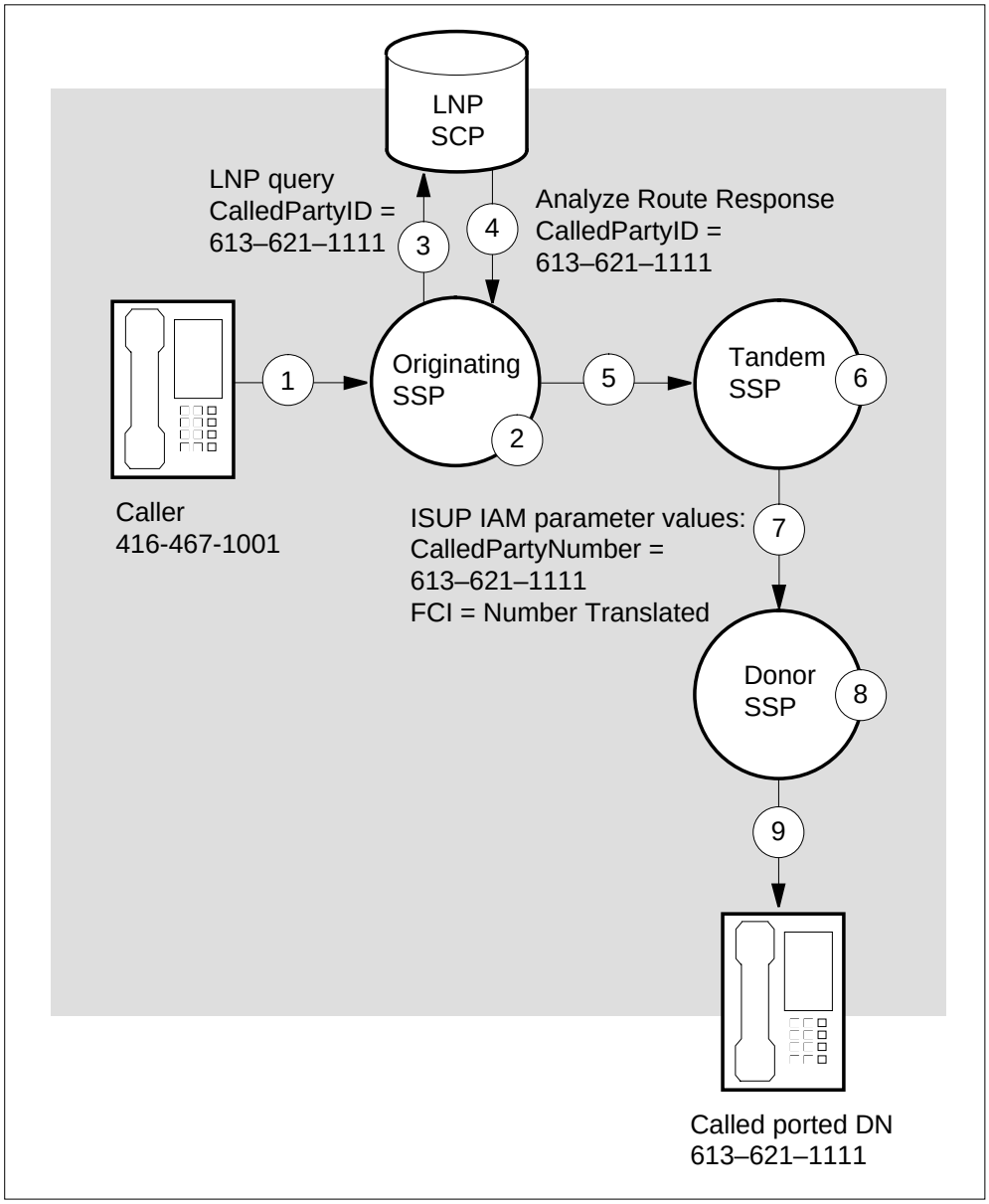
1. The caller dials 613-621-5678.
2. The originating SSP analyzes the dialed digits in table HNPACODE or table FNPACODE. The SSP obtains a DN 613-621 selector because this switch owns the 613-621 exchange.

3. The originating SSP checks if the called DN (portable NPA-NXX) resides on its switch. The originating switch finds that the DN does not reside on its switch and queries the LNP SCP.
4. The LNP SCP returns an LRN of 905-963-0000. This is the LRN of the recipient switch on which the ported DN resides.
5. The originating SSP analyzes the LRN in table HNPACODE or FNPACODE and routes the call to the recipient SSP. This switch owns the 905-963 exchange. The originating switch sends an IAM over the ISUP trunk. The IAM contains
   a. the LRN in the CdPN
   b. the dialed DN in the GAP
   c. the FCI bit M = 1 (Number Translated)
6. The recipient SSP recognizes the LRN as one of its home LRNs. The recipient SSP retrieves the dialed ported DN from the GAP parameter because it owns the LRN in the CdPN parameter.

   Note: The recipient SSP does not analyze the DN in table HNPACODE or FNPACODE because it received one of its home LRNs. Analysis by HNPACODE or table FNPACODE would route the call to the incorrect (donor) switch.

7. The SSP completes the call to the ported (called) DN.

Figure 1-4 Call from an originating switch through an intermediate tandem switch to the donor switch



The following steps describe Figure 4:

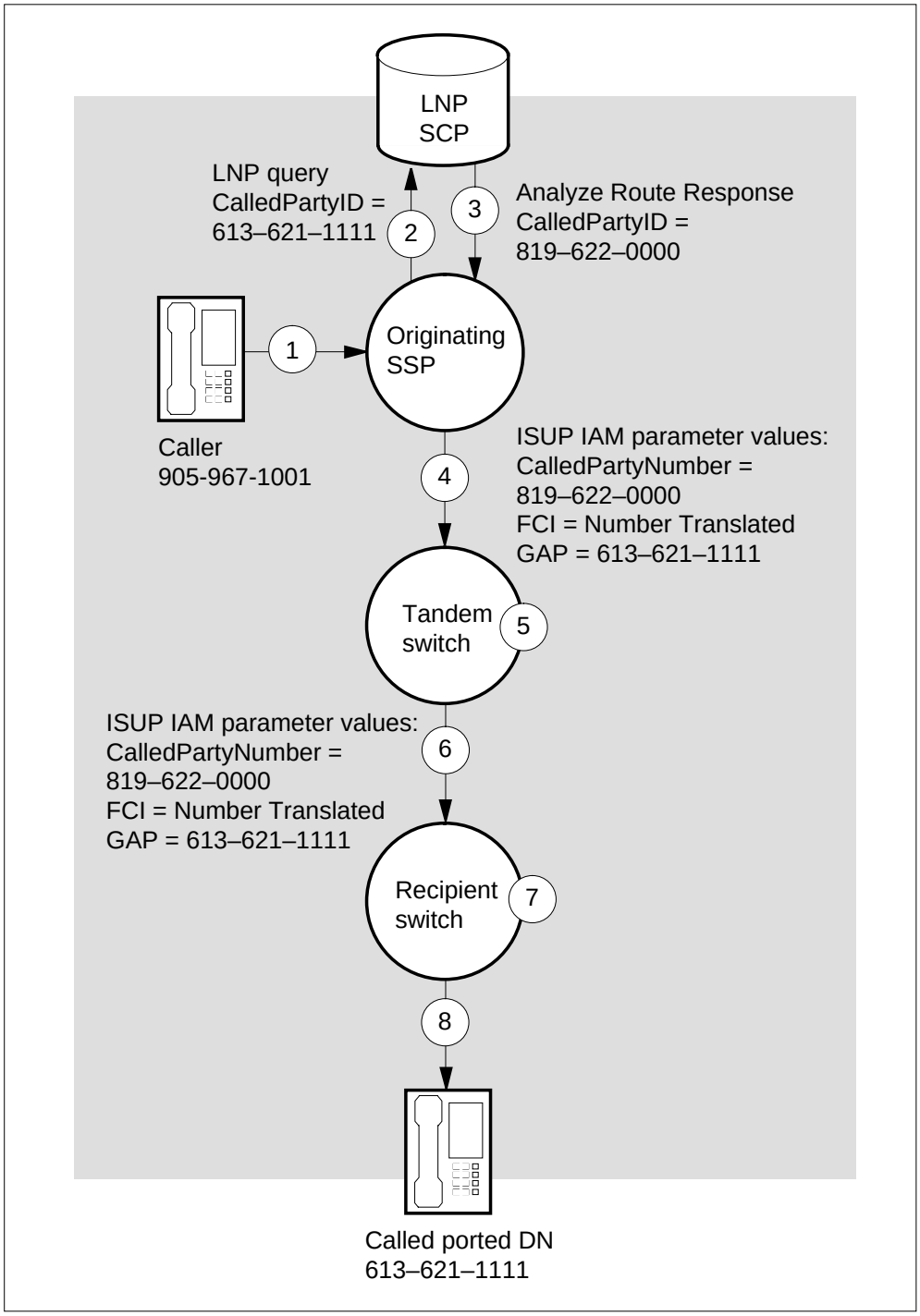
1. The caller dials 613-621-1111.
2. The originating SSP analyzes the dialed digits in table HNPACODE or table FNPACODE and selects a route to the intermediate tandem switch.
3. The originating SSP checks if the called DN resides on its switch. The originating switch does not find the DN and queries the LNP SCP.

4. The LNP SCP does not respond with an LRN because the DN did not port. The SCP responds with the same CalledPartyID.
5. The originating switch uses the original routing of table HNPACODE or table FNPACODE and routes the call to the intermediate tandem SSP. The originating switch sends an IAM over the ISUP trunk. The IAM contains
   a. the called DN in the CdPN parameter
   b. the FCI bit M = 1 (Number Translated)

   Note: There is no GAP parameter.
6. The intermediate SSP retrieves the dialed DN from the CdPN parameter. Analysis in table HNPACODE or FNPACODE selects a route to the donor switch. The intermediate switch does not check if the DN is resident. The intermediate switch also does not query the LNP SCP because the FCI bit M = 1 (Number Translated) indicates that an LNP query occurred.
7. The intermediate SSP routes the call to the donor switch and the IAM over the ISUP trunk. The IAM contains
   a. the called DN in the CdPN parameter
   b. an FCI bit M = 1 to indicate that an LNP query occurred

   Note: There is no GAP parameter.
8. The donor SSP analyzes the DN in the CdPN parameter in table HNPACODE or table FNPACODE. The donor SSP obtains a DN 613-621 selector because the resident switch owns the 613-621 exchange.
9. The SSP completes the call to the ported DN, which did not port on the donor switch.

Figure 1-5 Call from an originating switch through an intermediate tandem switch to a recipient switch



The following steps describe Figure 5:

1. The caller dials 613-621-1111.
2. The SSP queries the LNP SCP.
3. The LNP SCP returns an LRN of 819-622-0000.
4. The originating switch analyzes the LRN in table HNPACODE or table FNPACODE. The SSP routes the call to the intermediate tandem SSP between the originating switch and the recipient switch. The originating switch sends an IAM over the ISUP trunk. The IAM contains
   a. the LRN in the CdPN parameter
   b. the called DN in the GAP parameter
   c. the FCI bit M = 1 (Number Translated)
5. The intermediate switch determines that it does not own the LRN. Analysis in table HNPACODE or table FNPACODE selects a route to the recipient switch. The intermediate switch does not check if the DN is resident. The intermediate switch also does not query the LNP SCP because the FCI bit M=1 (Number Translated) indicates that an LNP query occurred.
6. The intermediate SSP routes the call to the recipient switch. The IAM over the ISUP trunk contains
   a. the LRN in the CdPN parameter
   b. the called DN in the GAP
   c. an FCI bit M = 1 to indicate that an LNP query occurred
7. The recipient SSP retrieves the dialed ported DN from the GAP parameter because the SSP recognizes the LRN as one of its home LRNs in the CdPN parameter.

   Note: The recipient SSP does not analyze the DN in table HNPACODE or FNPACODE because the FCI bit M = 1 (Number Translated) in the IAM indicates that an LNP query occurred. Analysis by HNPACODE or table FNPACODE would route the call to the incorrect (donor) switch.

8. The SSP completes the call to the ported DN on the recipient switch.

LNP Base Services

Ordering codes

Local Number Portability (LNP) functional group ordering code: LNP00100

LNP GR-2936 compliance functional group ordering code: LNP00200

LNP Canadian Requirements functionality group ordering code: LNP00300

Note 1: Activate LNP00100 before you activate LNP00300. For activation requirements, refer to *Location Routing Number-Local Number Portability Service Implementation Guide*, 297-8981-021.

Note 2: Activate LNP00200 before you activate LNP00300. For activation requirements, refer to *Location Routing Number-Local Number Portability Service Implementation Guide*, 297-8981-021.

Note 3: LNP00300 controls the LNP functionality that is specific to the requirements of the Canadian market, for example, LNP/800Plus Interworking.

Release applicability

NA010 and up

Prerequisites

To operate, LNP Base Services requires the following:

- AIN Essentials, AIN00002
- Call Management, AIN00006
- Call Model Control, AIN00007
- AIN Services Supporting, AIN00009

Description

- configures the service switching point (SSP) for LNP translations
- deals with the translations that take place during call processing to ported directory numbers (DN)

LNP Base Services (continued)

Operation

During call processing, LNP translations sends a query to a database. The query determines the status of the call. One of the following occurs:

- The called party number (the DN) ports. When the called party number ports, it retains the DN when it moves from the donor switch to the recipient switch.
- The called party number resides on the originating switch.

LNP translations also does the following tasks:

- determines when to send an LNP query message to an LNP service control point (SCP)
- creates and sends query messages

The system administers LNP query messages depending on the following circumstances:

- If an LNP test call is in progress, the LNP query is prevented.
- If an LNP query or response happens, the switch that performs the query or response is identified by the system.
- If the ten-digit unconditional LNP trigger line option (PORT) is assigned to a DN on the SSP and there is an LNP digit criteria pattern in table TRIGDIG or TRIGITM that matches the CalledPartyID, then the system performs an LNP query.
- If there is a digit criteria pattern in table TRIGDIG or TRIGITM that matches the digits or a subset of the digits of the CalledPartyID, then the system performs an LNP query.
- Unless the PORT option is assigned against the CalledPartyID, the system prevents the launching of an LNP query when all these conditions are met
  - — the CalledPartyID is resident on the querying switch
  - — the ESCDN criteria is datafilled against the LNP trigger
  - — there is a digit criteria pattern in table TRIGDIG or TRIGITM that matches the digits or a subset of the digits of the CalledPartyID

Note: The PORT option always takes precedence over the ESCDN criteria.

LNP Base Services (continued)

- If the system determines the call routes to an Inter-Exchange Carrier due to caller presubscription, or the user dials a carrier access code, then the call routes to the dialed carrier and an LNP query is prevented.
- If the call routes to an operator, operator-assisted, or toll coin, then the LNP trigger is prevented.

Note: The checked information depends on the type of switch and originating agency. Types of switches are triggering, intermediate, or terminating. Types of agents are line, ISUP trunk, or non-ISUP trunk. A triggering switch means that an LNP trigger did not occur on previous switches. The triggering switch performs the LNP query attempt.

Translations table flow

The following list describes LNP Base Services translations tables. The tables are listed in the order in which they are to be datafilled.

- OFCENG
- TOFCNAME
- HOMELRN
- ADJNODE
- TRKGRP
- OFRT
- STDPRTCT
- LNPRTE
- HNPACONT
- LNPCODE
- FNPA7DIG
- TRIGDIG
- TRIGGRP
- TRKOPTS
- TRIGITM
- OFCTIID
- OFCVAR
- LNPOPTS
- AMATKOPT
- AMAOPTS

LNP Base Services (continued)

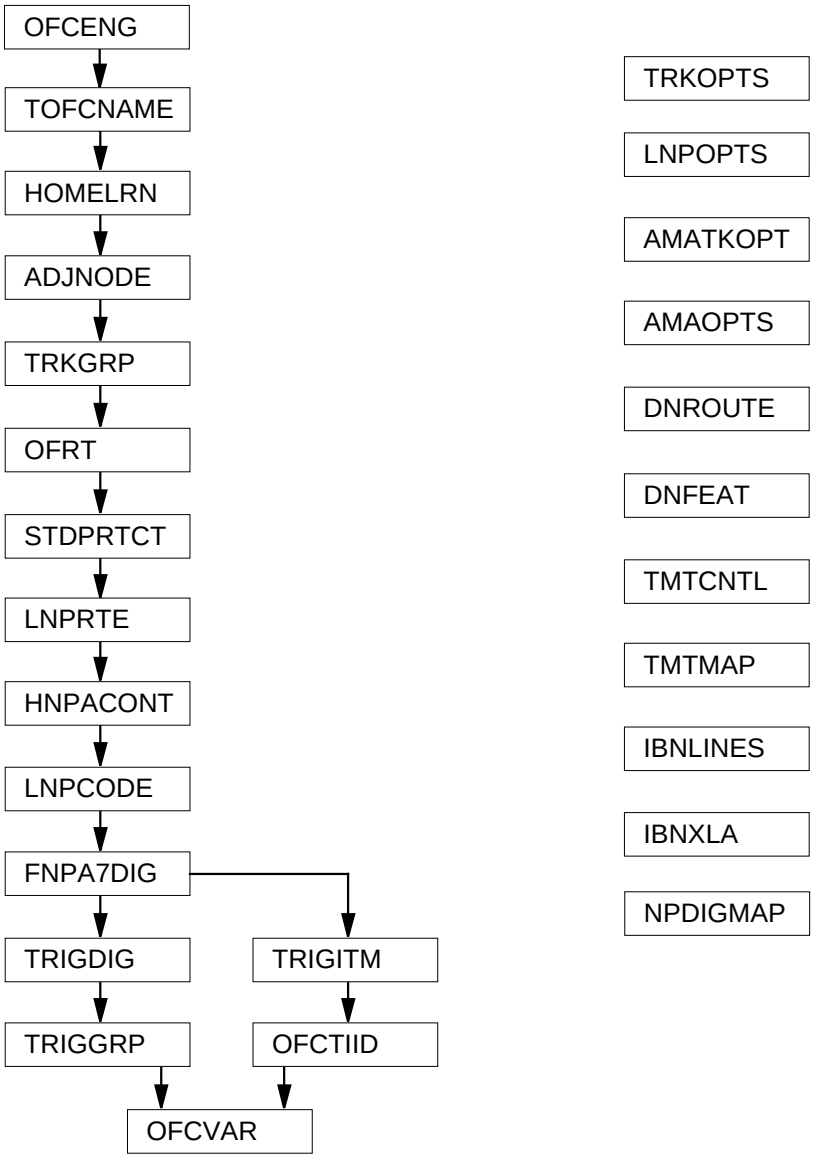
- DNROUTE
- DNFEAT
- TMTCNTL
- TMTMAP
- IBNLINES
- IBNXLA
- TRKOPTS
- NPDIGMAP

Note: Tables STDPRTCT, HNPACONT, and OFRT are key references into LNP tables.

The following figure shows the datafill dependencies for LNP Base Services.

LNP Base Services (continued)

Datafill dependencies for LNP Base Services



Note 1: Table STDPRTCT, Table HNPACONT, and Table OFRT are key references in tables.

Note 2: Only one trigger model may be active at any time.

LNP Base Services (continued)

The following table lists the datafill content of the flowchart.

Datafill examples for LNP Base Services (Sheet 1 of 2)

Datafill table	Example data
OFCENG	ACTIVE_DN_SYSTEM NORTH_AMERICAN PSTN_GT_SIZE 10
TOFCNAME	200 234 $
HOMELRN	200 234 $ (SITE (HOST)) $)
ADJNODE	DMS31 ISUP DMS (NOJIP) $
TRKGRP	IT 0 ELO NCRT IC NIL MIDL 909 ATI NSCR 501 000 N N (LNP 9198513361) $
LNPRTE	OFRT 22 30
LNPCODE	613 722 726 T OFRT 24
FNPA7DIG	613 762 764 819
TRIGDIG	LNPDIG LNP 613 621 LNP EVENT TCAP R01 SS7 AINJAZZ DFLT $
TRIGGRP	OFCTRIG INFOANAL (LNP (DG LNPDIG) (ESCEA) (ESCOP) (ESCDN) (ESCCN DD_OA) $ NIL)$
TRKOPTS	ISUPITIC BLOCKLNP BLOCKLNP TREAT
TRIGITM	4 LNPTRIG1 LNP (DG 919991) (ESCDN) (ESCEA) (ESCOP) (ESCCN DD_OA) $ ULK EVENT RO1 SS7 AINJAZZ $
OFCTIID	4 LNPTRIG1 ON
OFCVAR	AIN_OFFICE_TRIGGRP OFCTRIG
LNPOPTS	QPARMS QPARMS (LATA N) (CHARGNUM Y) (CLGPTYID Y) (CLGPBGID N) (CHGPTYST Y)(PRIMCARR N) (TCM N) (OCLDPTID N) (REDIRPID N) (REDIRINF N) $
AMATKOPT	ISUPITIC CNAR Y 6136218900
AMAOPTS	LNP_721_USE_SC0500 ON
DNROUTE	905 963 7001 D PODN
DNFEAT	613 621 1000 (PORT) (AINDN TERMATT) $
TMTCNTL	UNDT N S T120
TMTMAP	0764 RTEE ALLBC ISUP NOLOCAL XLAFAIL LOCLNET Y

LNP Base Services (continued)

Datafill examples for LNP Base Services (Sheet 2 of 2)

Datafill table	Example data
IBNLINES	HOST 05 1 03 17 0 DT STN RES 7228900 COMKODAK 0 0 613 (LNPTST) $
IBNXLA	CXDK 76 FEAT N Y N LNPTST
NPDIGMAP	519313 613 663

Limitations and restrictions

The following limitations and restrictions apply to LNP:

- For incoming local and FGC trunks, LNP translations bases the translations of the originating trunk on the ten-digit translation format. For successful seven-digit translation, the exception pretranslator of the local trunk must hold ten-digit translation datafill.
- LNP translations does not support the TRNSLVF subcommand at the TTP level of the MAP display.

Interactions

Interactions between LNP and other functionalities are

- Calls that route to a resident, nonnative DN terminate on that DN. These calls do not use routing features, because the call routes within the originating office.
- When the routing number is a resident nonnative DN, the call does not use the loop-around trunk datafilled in table HNPACONT.
- LNP translations do not affect private calls.

Activation/deactivation by end user

LNP Base Services does not require activation or deactivation by the user.

Billing

For billing information relating to LNP, refer to *Location Routing Number - Local Number Portability Service Implementation Guide*, 297-8981-021.

Station Message Detail Recording

LNP Base Services does not affect Station Message Detail Recording.

Datafilling office parameters

The following table shows the office parameters used by LNP Base Services.

Office parameters used by LNP Base Services

Table name	Parameter name	Explanation and action
OFCENG	ACTIVE_DN_SYSTEM	Active directory numbering system. Office parameter ACTIVE_DN_SYSTEM in table OFCENG designates the DN system in use. Set ACTIVE_DN_SYSTEM to UNIVERSAL or NORTH_AMERICAN. ***Note:*** The ENHANCED_NORTH_AMERICAN DN parameter does not support LNP.
OFCENG	PSTN_GT_SIZE	Public switched telephone network global title size. This parameter allows Custom Local Area Signaling Service (CLASS) global title address to vary from 6 to 10 digits. Set PSTN_GT_SIZE to 10.
OFCVAR	AIN_OFFICE_ TRIGGRP	AIN Office Trigger Group. Datafill table OFCVAR with the name of the office-wide trigger group. Set AIN_OFFICE_TRIGGRP to the name of the trigger group in which the LNP trigger is provisioned. Operating company personnel can use either the trigger group data model or the trigger item data model. Datafill TIID to select the trigger item data model.

For more information about office parameters, refer to *Location Routing Number-Local Number Portability Service Implementation Guide*, 297-8981-021.

Datafill sequence

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

Datafill tables required for LNP Base Services (Sheet 1 of 3)

Table	Purpose of table
OFCENG	OFCENG allocates resources (memory) for switch activities such as call throughput and custom calling.
TOFCNAME	TOFCNAME lists all the terminating offices in the switch.
HOMELRN	HOMELRN specifies location routing numbers (LRN) in an office.

LNP Base Services (continued)

Datafill tables required for LNP Base Services (Sheet 2 of 3)

Table	Purpose of table
ADJNODE	ADJNODE contains information about the type of software that is present in an adjacent node.
TRKGRP	TRKGRP contains customer defined data associated with each trunk group in the switching unit.
LNPRTE	LNPRTE checks LNP criteria for calls that route from pretranslation by table STDPRTCT and class of service screening by table CLSVSCRC.
LNPCODE	LNPCODE allows operating company personnel to specify special routing to a virtual facility group (VFG).
FNPA7DIG	FNPA7DIG allows operating company personnel to specify the NPA for a 7-digit dialing plan for foreign NPA numbers.
TRIGDIG	TRIGDIG specifies trigger digit criteria based on the dialed digits. This table indicates the action required when a match occurs between the dialed digits and the digits datafilled in the corresponding tuple.
TRIGGRP	TRIGGRP is the main table for defining AIN operation.
TRKOPTS	TRKOPTS provisions options on trunk groups.
TRIGITM	TRIGITM and OFCTIID define the trigger items for an office and trigger item. The subscription context for a new DMS trigger item provisioning interface (IPI) supports this context.
OFCTIID	OFCTIID stores assignments to office wide trigger items.
OFCVAR	OFCVAR stores office parameters in the generic group (categorized as office variables). LNP uses this table to select the type of data model.
LNPOPTS	LNPOPTS implements options operating companies apply to LNP.
AMATKOPT	AMATKOPT allows the user to apply Bellcore-format automatic message accounting (AMA) options to separate trunk groups.
AMAOPTS	AMAOPTS controls the activation and scheduling of recording options for automatic message accounting (AMA).
DNROUTE	DNROUTE lists information for writable DNs instead of line equipment numbers (LENs).
DNFEAT	DNFEAT allows the user to trigger behaviors for a DN, as opposed to for an agent or for a group.

Datafill tables required for LNP Base Services (Sheet 3 of 3)

Table	Purpose of table
TMTCNTL	TMTCNTL subtable TREAT defines the tone, announcement state, or combinations returned to the caller, if call translation encounters a specified treatment code.
TMTMAP	TMTMAP relates DMS treatments to call failure messages supported by certain signaling system 7 protocols.
IBNLINES	IBNLINES contains the line assignments for each 500/2500 set assigned to an Integrated Business Network (IBN), Residential Enhanced Services (RES), and Multiple Appearance Directory Number (MADN) station number. This table also contains line assignments for the IBN attendant consoles (AC).
IBNXLA	IBNXLA stores information for the digit translation of calls from an Integrated Business Network (IBN) station, an AC, an incoming trunk, or an incoming side of a two-way IBN trunk group.
NPDIGMAP	NPDIGMAP maps the NPANXX of the GAP to a new area code and office code combination, when the original GAP is nonresident.

Datafilling table TOFCNAME

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

The size of table TOFCNAME depends on the value of office parameter ACTIVE_DN_SYSTEM and the state of SOC option NPE00002.

If ACTIVE_DN_SYSTEM is NORTH_AMERICAN, table TOFCNAME has a maximum size of 100 tuples.

If the ACTIVE_DN_SYSTEM is UNIVERSAL and SOC option NPE00002 is inactive, table TOFCNAME has a maximum size of 1024 tuples.

If the ACTIVE_DN_SYSTEM is UNIVERSAL and SOC option NPE00002 is active, table TOFCNAME has a maximum size of 8171 tuples.

SOC option NPE00001 allows operating company personnel to provision Duplicate NXX patterns. If NPE00001 is idle, then Duplicate NXX patterns

LNP Base Services (continued)

are not allowed. If NPE00001 is active, then Duplicate NXX patterns are allowed.

Datafilling table TOFCNAME (Sheet 1 of 2)

Field	Subfield	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 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.

Datafilling table TOFCNAME (Sheet 2 of 2)

Field	Subfield	Entry	Explanation and action
			Note: Service interruption can occur if you enter an office code that is an area code. The switch can route a call 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.

Datafill example for table TOFCNAME

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

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 sample datafill for table TOFCNAME with datafilled ported-in DNs.

LNP Base Services (continued)

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 )  $
```

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

Error messages for table TOFCNAME

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

Datafilling table HOMELRN

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

Datafilling table HOMELRN

Field	Subfield	Entry	Explanation and action
AREACODE		3-digit code	Enter the area code of the Home LRN.
OFCCODE		3-digit code	Enter the NXX of the Home LRN.
STNCODE		4-digit code or empty	Enter the station code of the Home LRN. For a 6-digit home LRN, enter a $ (dollar sign).
OPTIONS	SITE	SITE	The OPTIONS field consists of subfield SITE and its subfields. Enter SITE to • assign the Home LRN identified as the HOST for the office • allow service providers to specify remote switching units ***Note:*** The SITE option can contain up to 10 site names. Operating company personnel may datafill the site name HOST once. For example, one tuple can have HOST and up to nine remote switching units. Another tuple can have up to ten remote switching units.
		HOST and, or <SITE_NAME> <vector>	Enter HOST to indicate that the home LRN is host to the switch. Enter a vector of up to ten site indexes to specify remote switching units. ***Note 1:*** To conform to Bellcore requirement GR2936, you must provision the SITE HOST option. ***Note 2:*** You must datafill site names in table SITE before you datafill these names in table HOMELRN.

Datafill example for table HOMELRN

The following example shows sample datafill for table HOMELRN.

LNP Base Services (continued)

MAP display example for table HOMELRN

```
 AREACODE    OFCCODE   STNCODE            OPTIONS
-------------------------------------------------------
      613       722      1234   (SITE (HOST) $) $
      613       741         $   (SITE (REM5) $) $
```

Datafilling table ADJNODE

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

Datafilling table ADJNODE (Sheet 1 of 3)

Field	Subfield	Entry	Explanation and action
ADJ-NODEK		ISUP	*Adjacent node key* Enter ISUP for ISDN user part and datafill field SIGDATA and subfields PRODUCT and OPTIONS.
SIGDATA		see subfields	*Signaling data* This field consists of subfields PRODUCT and OPTIONS and their subfields.

Datafilling table ADJNODE (Sheet 2 of 3)

Field	Subfield	Entry	Explanation and action
	PRODUCT	BELLCORES-TD DEX DMS DMS31 DMSISN DMSNCS DMS250 DMS300 DSC ERICSSON ESS1A ESS4 ESS5 FUJITSU GTE IBMROLM NEC OTHER ROCKWELL SIEMENS SL1 SL100 STROMBER-G CARLSON SYSTEMX or SYS85 AUSTPRA DMS DMS31 ESS4 ESS5 ETSIPRA INS1500 OTHER SL1 or SYS85	*Product type* Enter the type of product that is in the adjacent switch. If the entry in field SIGDATA is ISUP, enter any PRODUCT value and datafill subfield PRODUCT.

LNP Base Services (continued)

Datafilling table ADJNODE (Sheet 3 of 3)

Field	Subfield	Entry	Explanation and action
	OPTIONS	NOJIPSPN	OPTIONS consist of AUTOCON, BLUEBOOK, NOCQT, NOGRPBLK, NOCVT, NOJIP, NON-ACDNTP, NON-STDREDIR, NOPNET, NOVNET, and SPN. Enter NOJIP for No jurisdiction information parameter (JIP). This entry disables the signaling of the jurisdiction information parameter to the adjacent node. Enter SPN for Signal Ported Number. This entry allows the signaling of the ported number to the adjacent node.

Datafill example for table ADJNODE

The following example shows sample datafill for table ADJNODE.

MAP display example for table ADJNODE

```
ADJNODEK SIGDATA
                                                        SIGDATA
_____________________________________________________________________
   DMS31    ISUP                    DMS
                                                      ( SPN) $
   DMS31    ISUP                    DMS
                                                    ( NOJIP) $
```

Datafilling table TRKGRP

The following table shows the datafill specific to LNP Base Services for table TRKGRP, trunk group types IT, TI, T2, and SC. Only those fields that apply directly to LNP Base Services are shown. For a description of the other fields, refer to the data schema section of this document.

Note 1: To enable LNP for an incoming trunk from a scrambler circuit, set the traffic class field for the trunk to BLV. Trunks with traffic class set to BLV must be dedicated to BLV calls.

Note 2: When you provision Equal Access on the DMS-100 Wireless switch, the system designates a separate billable number for option

BILLNO. This name allows the processor to distinguish between the AMA records generated by the wireless DID ISL and non-ISL trunks.

Datafilling table TRKGRP

Field	Subfield	Entry	Explanation and action
GRPKEY		see subfield	Group key. This field contains subfield CLLI.
	CLLI	alphanumeric (1 to 16 characters)	Common language location identifier. The trunk group name that subscribes to an AIN trigger group. The trunk group name is from table CLLI.

Datafilling table TRKGRP type IT

Field	Subfield	Entry	Explanation and action
OPTIONS			Options. Datafill up to three multiples of subfield OPTION and the corresponding subfields for the desired trunk option. The corresponding subfields consist of AIN, BCNAME, CHGNUM, and LNP. Enter $ (dollar sign) to indicate the end of the options vector.
GRPINFO		OPTIONS	*Group Information* This field consists of up to two multiples of subfield OPTION and its subfields. Subfields consist of AIN, BCNAME, and LNP.
	OPTION	LNP	To provision the Location Routing Number (LRN) against the trunk group, enter LNP (for Local Number Portability). This option onlyapplies to trunk group types IT, SC, TI, T2, OC, ATC, and PRA.Option LNP consists of subfield LRN. A Location Routing Number indicates the direction in which to route an LNP call. An LRN consists of the Home NPA-NXX dialing pattern associated with the switch to which it routes.
	LRN	ten-digit DN	This entry is a ten-digit DN that denotes a default LRN for the trunk group. The DN generates a jurisdiction information parameter (JIP) if a JIP is not present on the incoming initial address message (IAM) of the trunk group. ***Note:*** Enter a dollar sign ($) to indicate that no default LRN is present for the trunk group.

LNP Base Services (continued)

Datafilling table TRKGRP type T2

Field	Subfield	Entry	Explanation and action
GRPINFO		OPTIONS	*Group Information* Datafill up to four multiples of subfield OPTION and its subfields. Subfield OPTION consists of AIN, BCNAME, CHGNUM, and LNP.
	OPTION	LNP	To provision the Location Routing Number against the trunk group, enter LNP. Option LNP consists of subfield LRN. This option applies only to trunk group types IT, SC, TI, T2, OC, ATC, and PRA. A Location Routing Number (LRN) indicates the direction in which to route an LNP call. The LRN consists of the Home NPA-NXX dialing pattern that associates the switch to which it routes. Enter a dollar sign ($) if no options apply.
	LRN	ten-digit DN	This entry is a ten-digit DN that denotes a default LRN for the trunk group. The DN generates a jurisdiction information parameter (JIP) if a JIP is not present on the incoming initial address message of the trunk group. ***Note:*** Enter a dollar sign ($) to indicate that no default LRN is present for the trunk group.

Datafilling table TRKGRP type SC (Sheet 1 of 2)

Field	Subfield	Entry	Explanation and action
GRPINFO		OPTIONS	*Group Information* This field consists of subfield OPTION and its subfields. Three options can be datafilled. If less than three options are required, end the list with a $ dollar sign. Subfields consist of BCNAME, LNP, NOUTR, and PIA.
	OPTION	LNP	To specify the Local Number Portability option, enter option LNP. This entry provisions the Location Routing Number against the trunk group. This option applies only to trunk group types IT, SC, TI, T2, OC, ATC, and PRA. Option LNP consists of subfield LRN.

Datafilling table TRKGRP type SC (Sheet 2 of 2)

Field	Subfield	Entry	Explanation and action
			A Location Routing Number (LRN) indicates the direction in which to route an LNP call. The LRN consists of the Home NPA-NXX dialing pattern that associates the switch to which it routes. Enter $ (dollar sign) if no options apply.
	LRN	ten-digit DN	This entry is a ten-digit DN that denotes a default LRN for the trunk group. The DN generates a jurisdiction information parameter (JIP) if a JIP is not present on the incoming initial address message (IAM) of the trunk group. ***Note:*** Enter $ (dollar sign) to indicate that no default LRN is present for the trunk group.

Datafilling table TRKGRP type OC (Sheet 1 of 2)

Field	Subfield	Entry	Explanation and action
GRPINFO		OPTIONS	*Group Information* Datafill up to four multiples of subfield OPTION and its subfields. Subfield OPTION consists of AIN, BCNAME, CHGNUM, and LNP.
	OPTION	LNP	To provision the Location Routing Number against the trunk group, enter LNP. Option LNP consists of subfield LRN. This option applies only to trunk group types IT, SC, TI, T2, OC, ATC, and PRA.

LNP Base Services (continued)

Datafilling table TRKGRP type OC (Sheet 2 of 2)

Field	Subfield	Entry	Explanation and action
			A Location Routing Number (LRN) indicates the direction in which to route an LNP call. The LRN consists of the Home NPA-NXX dialing pattern that associates the switch to which it routes. Enter a dollar sign ($) if no options apply.
	LRN	ten-digit DN	This entry is a ten-digit DN that denotes a default LRN for the trunk group. The DN generates a jurisdiction information parameter (JIP) if a JIP is not present on the incoming initial address message of the trunk group. ***Note:*** Enter a dollar sign ($) to indicate that no default LRN is present for the trunk group.

Datafilling table TRKGRP type ATC (Sheet 1 of 2)

Field	Subfield	Entry	Explanation and action
GRPINFO		OPTIONS	*Group Information* This field consists of subfield OPTION and its subfields. Three options can be datafilled. If less than three options are required, end the list with a $ dollar sign. Subfields consist of BCNAME, LNP, NOUTR, and PIA.
	OPTION	LNP	To specify the Local Number Portability option, enter option LNP. This entry provisions the Location Routing Number against the trunk group. This option applies only to trunk group types IT, SC, TI, T2, OC, ATC, and PRA. Option LNP consists of subfield LRN.

Datafilling table TRKGRP type ATC (Sheet 2 of 2)

Field	Subfield	Entry	Explanation and action
			A Location Routing Number (LRN) indicates the direction in which to route an LNP call. The LRN consists of the Home NPA-NXX dialing pattern that associates the switch to which it routes. Enter $ (dollar sign) if no options apply.
	LRN	ten-digit DN	This entry is a ten-digit DN that denotes a default LRN for the trunk group. The DN generates a jurisdiction information parameter (JIP) if a JIP is not present on the incoming initial address message (IAM) of the trunk group. ***Note:*** Enter $ (dollar sign) to indicate that no default LRN is present for the trunk group.

Datafilling table TRKGRP type OC (Sheet 1 of 2)

Field	Subfield	Entry	Explanation and action
GRPINFO		OPTIONS	*Group Information* Datafill up to four multiples of subfield OPTION and its subfields. Subfield OPTION consists of AIN, BCNAME, CHGNUM, and LNP.
	OPTION	LNP	To provision the Location Routing Number against the trunk group, enter LNP. Option LNP consists of subfield LRN. This option applies only to trunk group types IT, SC, TI, T2, OC, ATC, and PRA.

LNP Base Services (continued)

Datafilling table TRKGRP type OC (Sheet 2 of 2)

Field	Subfield	Entry	Explanation and action
			A Location Routing Number (LRN) indicates the direction in which to route an LNP call. The LRN consists of the Home NPA-NXX dialing pattern that associates the switch to which it routes. Enter a dollar sign ($) if no options apply.
	LRN	ten-digit DN	This entry is a ten-digit DN that denotes a default LRN for the trunk group. The DN generates a jurisdiction information parameter (JIP) if a JIP is not present on the incoming initial address message of the trunk group. ***Note:*** Enter a dollar sign ($) to indicate that no default LRN is present for the trunk group.

Datafill example for table TRKGRP

The following example shows sample datafill for table TRKGRP option LNP.

MAP display example for table TRKGRP option LNP

```
GRPKEY
                                                                GRPINFO
------------------------------------------------------------------------

AL7ITICS7
 IT 0 ELO NCRT IC NIL MIDL 909 ATI NSCR 501 000 N N (LNP 9198513361) $
```

Datafilling table LNPRTE

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

Datafilling table LNPRTE

Field	Subfield	Entry	Explanation and action
RTETABID			*Routing table identification* This field contains routing information for LNP translation. This field consists of subfields TABID, FROMIDX, TOIDX, and their subfields.
	TABID	OFRT OFR2 OFR3 OFR4 IBNRTE IBNRT2 IBNRT3 IBNRT4	Table identification. Datafill the name of the routing table.
	FROMIDX	Integer from 1 to 1023	*From index* Datafill the pointer to the first tuple in the desired range in the route table named by TABID.
	TOIDX	Integer from1 to 1023	*To index* Datafill the pointer to the last tuple in the desired range in the route table named by TABID.

Datafill example for table LNPRTE

The following example shows sample datafill for table LNPRTE.

LNP Base Services (continued)

MAP display example for table LNPRTE

```
                                                        RTETABID
_____________________________________________________________

                                                      OFRT   1  3
                                                      OFRT   5  5
                                                    IBNRT2 16 20
```

Datafilling table LNPCODE

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

Datafilling table LNPCODE (Sheet 1 of 2)

Field	Subfield	Entry	Explanation and action
STS		3 digits	*Serving translation scheme* This field corresponds to the current STS of the call.
FROMDIGS		1 to 10 digits	*From digits* Datafill the start of the range of the terminating NPANXXXXXX that uses the routing information provided in this table. ***Note:*** Datafill field FROMDIGS using the format (N, NP, NPA, NPAX, NPAXX, ..., NPANXXXXXX).
TODIGS		1 to 10 digits	*To digits* Datafill the end of the range of the terminating NPANXXXXXX that uses the routing information provided in this table. ***Note:*** Datafill field TODIGS using the format (N, NP, NPA, NPAX, NPAXX, ..., NPANXXXXXX).

Datafilling table LNPCODE (Sheet 2 of 2)

Field	Subfield	Entry	Explanation and action
RTE		see subfields	*Route* This field contains routing information for the LNP translation and consists of subfields RTESEL, EXTRTEID, TABID, KEY, and RTETRMT.
	RTESEL	T or TRMT	*Route selector* This field gives the ported-in routing information for the calls made to the DNs that are in the range of the FROMDIGS to TODIGS field. The datafill in the STS field matches the STS of the originating call. Datafill this field with either a T selector or TRMT selector. Enter T to datafill routing information. Enter TRMT to datafill a call treatment.
	EXTRTEID		*External route identification* This field contains routing information for LNP translations. Fields EXTRTEID contains subfields TABID and KEY.
	TABID	OFRT OFR2 OFR3 OFR4 IBNRTE IBNRT2 IBNRT3 IBNRT4 RRTE TTL4	*Table identification* Datafill the name of the routing table to use.
	KEY	1 to 1023	Key. Datafill the key for the routing table.
	RTETRMT	4 characters	*Route treatment* Enter a treatment name from the office treatment subtable TMTCNTL.TREAT.

Datafill example for table LNPCODE

The following example shows sample datafill for table LNPCODE.

LNP Base Services (continued)

MAP display example for table LNPCODE

```
STS     FROMDIGS      TODIGS                          RTE
_____________________________________________________________

416       514663      514663             T  IBNRTE   5
416   5142265432  5142265432                  TRMT ANCT
```

Datafilling table FNPA7DIG

The following table shows the datafill specific to LNP Base Services for table FNPA7DIG. Only those fields that apply directly to LNP Base Services are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table FNPA7DIG

Field	Subfield	Entry	Explanation and action
ORIGSTS		3-digit STS	*Origination serving translations system* Enter the STS of the originator.
FROMNXX		1-3-digit code	*From NXX* Enter the start of the range of dialed NXX of the TERMNPA datafill.
TONXX		1-3-digit code	*To NXX* Enter the range of dialed NXX of the TERMNPA datafill.
TERMNPA		3-digit NPA	*Terminating numbering plan area* Enter the end of the NPA of the dialed NXX within the specified range.

Datafill example for table FNPA7DIG

The following example shows sample datafill for table FNPA7DIG.

MAP display example for table FNPA7DIG

```
ORIGSTS
          FROMNXX          TONXX         TERMNPA

_____________________________________________________

    613
                762            764             819
```

Datafilling table TRIGDIG

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

Datafilling table TRIGDIG (Sheet 1 of 5)

Field	Subfield	Entry	Explanation and action
KEY		see subfields	*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. The system will accept a maximum of 2048 translator names.
	TRIGGER	alphanumeric (up to 8 characters)	*Trigger* Enter a name that represents a subscribed trigger. Valid entries are CDPCODE, INTEROFF, GENTRIG, LNP, N11, PODP, PODPFEAT and SFC.
	DIGITS	0 to 9, B or C (up to 18 characters)	*Digits* Enter the digits the system will match against the digits specified for the trigger. Use B to represent an asterisk (*) and C to represent an octothorpe (#).

LNP Base Services (continued)

Datafilling table TRIGDIG (Sheet 2 of 5)

Field	Subfield	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. The entry must match the entry in subfield TRIGGER. If the trigger is CDPCODE, datafill subfield RPRTDIGS.
ACTION			*Action* This field consists of subfield ACTION.
	ACTION	EVENT ESCAPE	*AIN action type* Enter the action the SSP executes 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 subfields 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 operating company personnel set field ACTION to ESCAPE, there are no further subfields (PROTOCOL, MSGSET, and TRANSPRT are not datafilled).
	PROTOCOL	TCAP	*AIN protocol* Enter the name of the protocol to use to communicate with the SCP or adjunct. Enter TCAP for the transaction capabilities application part.
	MSGSET	RO1RO2	*Message set* Enter the name of the protocol version to use to communicate with the SCP or adjunct. The range for this field is symbolic; each application binds in its own symbol.

Datafilling table TRIGDIG (Sheet 3 of 5)

Field	Subfield	Entry	Explanation and action
	TRANSPRT	SS7	*AIN transport* Enter SS7, the transport medium used to communicate with the SCP or adjunct. Datafill subfields GTT and GTSOURCE.
	GTT	alphanumeric (up to 16 characters)	*Global title translator* If the entry in subfield TRANSPRT is SS7, datafill this subfield. This field is an index into table C7GTTYPE. Enter a global title translation (GTT) name previously datafilled in table C7GTTYPE.
	GTSOURCE	CALLED CHARGE DFLT	*Global title source* If the entry in subfield TRANSPRT is SS7, datafill this subfield. This subfield determines the source of the global title value in the SCCP called party address. Enter CALLED if the source of the global title value in the SCCP called party address is the called party number. The CALLED value is valid only for the Called Party Number or the SPC criteria. Enter CHARGE if the source of the global title value in the SCCP called party address is the charge number. Enter DFLT if the source of the global title value in the SCCP called party address is the service key value.
OPTIONS		see subfield	*Options* This field contains subfield OPTION.

LNP Base Services (continued)

Datafilling table TRIGDIG (Sheet 4 of 5)

Field	Subfield	Entry	Explanation and action
	OPTION	DFLTRT POTUSE 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 subfields. Enter POTUSE to specify the AIN 0.1 PODP trigger for a specific service or potential use. Datafill the POTUSE subfield. 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 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 subfield ANNIDX for selectors ANN and ANNDN. Complete subfield DN for selectors ANNDN and DN.
	ANNIDX	1 to 65535	*Announcement index* Enter the voice announcement index (from table AINANNS) of the announcement to play.
	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.
	POTUSE	TFS	*Potential use indicator* TFS identifies Toll-Free service on AIN Service Enablers calls. The TFS attribute can be datafilled for MSGSET=R02 only.

Datafilling table TRIGDIG (Sheet 5 of 5)

Field	Subfield	Entry	Explanation and action
	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 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 in a single SERVINFO tuple. This field permits multiple service profiles against multiple service keys with identical service profiles in a single SERVINFO tuple.

Datafill example for table TRIGDIG

The following example shows sample datafill for table TRIGDIG option LNP.

MAP display example for table TRIGDIG option LNP

```
                  KEY    TRIGGER
                                              ACTION
                                                    OPTIONS
-------------------------------------------------------------
LNPDIG LNP 4164639029        LNP
                          EVENT TCAP R01 SS7 AINJAZZ
                                                     DFLT $
LNPDIG LNP 416463           LNP
                          EVENT TCAP R01 SS7 AINJAZZ
                                                     DFLT $
```

Datafilling table TRIGGRP

The following table shows the specific datafill for LNP Base Services for table TRIGGRP. The table shows only those fields that apply directly to LNP Base Services. For a description of the other fields, refer to the data schema section of this document.

LNP Base Services (continued)

LNP triggers are datafilled using the same method 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 the ESCCN, ESCOP, ESCDN, ESCEA, CT, DG escape criteria.

Note: Set the ESCEA, ESCOP, ESCDN, and ESCCN escape criteria to the trigger group when datafilling an LNP trigger group in table TRIGGRP.

Datafilling table TRIGGRP (Sheet 1 of 5)

Field	Subfield	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 defines 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 binds against a type, an AIN group identifier, used in subscription tables.
	TDP	alphanumeric (up to 8 characters)	*Trigger detection points* Enter a symbolic name that represents a TDP. The range of values that can be datafilled to include 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).

Datafilling table TRIGGRP (Sheet 2 of 5)

Field	Subfield	Entry	Explanation and action
	TRIGGER	alphanumeric (up to 8 characters)	*Trigger* Enter a symbolic name that represents 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, OFFHKDEL, OFFHKIMM, PODP, PODPFEAT, TERMATT, SFC, OCPB and ONOA.
	CRITERIA	See subfields	*Criteria types* The CRITERIA subfields consists of subfields CT, CDPN, DG, ESC, ESCCN, ESCEA, ESCOP, ESCDN, FTC, MDC, and SPC. Enter up to four criteria selectors. If fewer than four selectors are required, end the list with a $ (dollar sign).

LNP Base Services (continued)

Datafilling table TRIGGRP (Sheet 3 of 5)

Field	Subfield	Entry	Explanation and action
		CT, CDPN, DG, ESC, ESCCN, ESCEA, ESCOP, ESCDN, FTC, MDC, SPC	Enter CT for call type and datafill subfield CALLTYPE. Enter DG for digit and datafill DIGNAME. Enter ESC to trigger on calls in which an escape code is not 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 dial tone first (CDF), coin coin-first (CCF), and coin semi-postpay (CSP) agent calls (both POTS and RES) from triggering at the PODP trigger. The option only applies on the originating switch. Datafill subfield TYPECALL and its subfields. For LNP, the following subfields apply for subfield TYPECALL: DD, OA, DD_OA, NP, DD_NP, OA_NP, ALL Enter ESCEA to escape the PODP trigger when the call is an equal access call.

Datafilling table TRIGGRP (Sheet 4 of 5)

Field	Subfield	Entry	Explanation and action
			Enter ESCGP to escape the PODP trigger when the GAP is present for Escape Generic Address Parameter (applied to PODP trigger type). Enter ESCOP to escape the PODP trigger when the call is an operator call. Enter ESCDN to escape the LNP trigger when the dialed DN is resident on the switch. Enter CDPN for called party number criterion. Datafill subfield DIGNAME. 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 be entered. Enter MDC to allow calls to trigger at TDP-2 by Minimum Digit Criterion. Datafill subfield 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, operating company personnel are required to datafill subfield INFONAME with NIL.
	CALLTYPE	VBINFO or CMDATA	*AIN call type* Enter VBINFO for voice-band information. Enter CMDATA for circuit mode data.

LNP Base Services (continued)

Datafilling table TRIGGRP (Sheet 5 of 5)

Field	Subfield	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 available. If field DIGNAME contains datafill, the entry in subfield INFONAME must be NIL. If the operating company is using trigger AFR, the entry in subfield INFONAME must be NIL. If trigger MDC 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 the service key to use if the call triggers at TDP-2 with the MDC criterion.

Datafill example for table TRIGGRP

The following example shows sample datafill for table TRIGGRP.

MAP display example for table TRIGDIG option LNP

```
                  KEY
                                                        TRIGDATA
_____________________________________________________________________

     OFCTRIG    INFOANAL
(LNP (DG NPDIG)(ESCEA)(ESCOP)(ESCDN)(ESCCN DD_OA)$ NIL)$
```

Datafilling table TRKOPTS

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

Datafilling table TRKOPTS (Sheet 1 of 3)

Field	Subfield	Entry	Explanation and action
OPTKEY		see subfields	Option key. This field consists of subfields CLLI and OPTION.
	CLLI	1 to 16 alphanumeric characters	Common language location identifier. This subfield indicates the CLLI code of the trunk group to which the option is assigned.

LNP Base Services (continued)

Datafilling table TRKOPTS (Sheet 2 of 3)

Field	Subfield	Entry	Explanation and action
	OPTION	BLOCKLNP, CPT, CFWOPT, DLYFWDXMT, HPCTQ, ICDS, LSPAO, LSPFE OFFNET_CARRID, PRESEL, TXICD	This subfield specifies the name of the option assigned to the CLLI specified in subfield CLLI. Enter BLOCKLNP to block calls where the previous switch did not perform a necessary LNP query. Activate option BLOCKLNP in table LNPOPTS before you add option BLOCKLNP in table TRKOPTS. When you datafill table TRKOPTS first, the switch does not use the BLOCKLNP information in table TRKOPTS. Refer to OPTION=BLOCKLNP for additional information. Enter CPT to assign the Call Progress Tone feature to the trunk CLLI specified in subfield CLLI. Refer to OPTION=CPT for additional information. Enter CFWOPT to make the system substitute the original calling number with the DN that activates the Call Forward feature. Refer to OPTION=CFWOPT for additional information. Enter DLYFWDXMT to select option Delay Forward Transmission. Option DLYFWDXMT blocks the forward speech path of an outgoing or two-way trunk until answer supervision is received or a specified time-out value is exceeded. Enter HPCTQ to select the GETS HPC feature “Trunk Queuing". See the note marked “Attention" under Option=HPCTQ and the additional information.

Datafilling table TRKOPTS (Sheet 3 of 3)

Field	Subfield	Entry	Explanation and action
			Enter ICDS for the Inter-network Call Diversion feature. Refer to OPTION=ICDS for additional information. Enter LSPAO to indicate that the traffic on a trunk is dedicated to a particular LSP and context only. Enter LSPFE to identify the switch owner on the far end of the trunk. Provision LSPFE when the far-end switch has a different SO value from the switch you are provisioning. A different SO indicates that the switch is from another network. Enter OFFNET_CARRID to assign the Carrier ID of the connected Network. Enter PRESEL to assign the Preselected Carrier ID to the trunk CLLI specified in subfield CLLI. Refer to OPTION=PRESEL for additional information. Enter TXICD for the Transmit Inhibit Call Diversion feature. Refer to OPTION=TXICD for additional information.
OPTINFO		see subfield	Option information. This field consists of subfield OPTION.

LNP Base Services (continued)

OPTION=BLOCKLNP

If the option entry in the key is BLOCKLNP, datafill subfield OPTION as described in the following table.

Field Descriptions OPTION=BLOCKLNP

Field	Subfield	Entry	Explanation and action
	OPTION	BLOCKLNP	Enter BLOCKLNP to send the call to treatment or default routing. This option consists of subfield BLOCK_CHOICE. ***Note:*** The following ISUP trunk types support BLOCKLNP: T1, IT, T2, and ATC.
	BLOCK_ CHOICE	TREAT, DFLTRT	BLOCK_CHOICEThis subfield specifies where to send the call. The subfield consists of entries TREAT and DFLTRT. ***Note:*** The operating company decides the type of block for each trunk group. Enter TREAT to send the call to treatment. Enter DFLTRT to send the call to default routing.

Datafill example

The following example shows sample datafill for table LNP Base Services.

MAP display example for table LNP Base Services, option BLOCKLNP

```
                OPTKEY                                OPTINFO
-------------------------------------------------------------
   ISUPITIC   BLOCKLNP                    BLOCKLNP   TREAT
```

Datafilling table TRIGITM

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

Datafilling table TRIGITM (Sheet 1 of 3)

Field	Subfield	Entry	Explanation and action
TDP		4	*Trigger detection point* The TDP field supports Info_Analyzed (4) for LNP.
TINAME		Vector of up to 8 characters	*Trigger name* Enter the name of the trigger item.
TRIGGER		LNP	*Trigger type* Enter the trigger type. ***Note:*** After you enter a trigger item tuple into table TRIGITM, you cannot change its corresponding TYPE field.
CRITERIA	See subfields		*Criteria types* Enter the criteria type. The applicable criteria types for LNP are DG (required), CT, ESCCN, ESCEA, ESCOP and ESCDN. Enter up to six criteria selectors. If fewer than four selectors are required, end the list with a $ (dollar sign).
	CT, DG, ESCCN, ESCEA, ESCOP, ESCDN		Enter CT for call type and datafill subfield CALLTYPE. Enter DG for digit and datafill digits (mandatory). 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 at the PODP trigger. The option only applies on the originating switch. Datafill subfield TYPECALL and its subfields. For Local Number Portability (LNP), the following CN options apply: DD, OA, DD_OA, NP, DD_NP, OA_NP, ALL. Enter ESCEA to escape the LNP and SDS trigger when the call is an equal access call.

LNP Base Services (continued)

Datafilling table TRIGITM (Sheet 2 of 3)

Field	Subfield	Entry	Explanation and action
	DIGITS	alphanumeric (up to 10 characters)	*Digits* Enter the digits. 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.
	CAN_CALL_ TYPE	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.
STATE		ULK, LK	*Administrative state code* This field allows and disables a trigger item. Entry ULK (unlocked) activates a trigger item. Entry LK (locked) deactivates a trigger item.
ACTION		EVENT ESCAPE	*Action* This field consists of subfields EVENT and ESCAPE and their subfields and subfields.
	EVENT	Up to 8 characters	When the ACTION field state is EVENT, datafill service logic host route (SLHR) information. SLHR fields are R01 (AIN Essentials), R02 (AIN Service Enablers), Transport, and global title translation (GTT).

Datafilling table TRIGITM (Sheet 3 of 3)

Field	Subfield	Entry	Explanation and action
SLHR		R01, R02	*Message set* This field indicates the functionality of the trigger that refers to this tuple. R01 (AIN Essentials trigger and functionality), or R02 (AIN Service Enablers trigger and functionality). ***Note:*** Although the switch displays RO2, LNP does not support RO2.
	TRANSPORT	SS7, TCPIP	*Transport* This subfield supports NORTH AMERICAN signaling system 7 (SS7).
	GTT	C7_GT_ TYPE_NAME	*Global title type*The Global Title name determines the translator used on the node to perform translations related to the global title address. ***Note:*** Datafill the GTT in table C7GTTYPE first. *Global title source* This subfield determines the source of the global title address for the query.
OPTIONS		DFLTRT POTUSE	*Options* This field lists the optional attributes for the trigger. ***Note:*** POTUSE only applies to the SDS trigger.

Datafill example for table TRIGITM

The following example shows sample datafill for table TRIGITM.

LNP Base Services (continued)

MAP display example for table TRIGITM

```
TDP  TINAME
TRIGGER  REPTDIGS                                        CRITERIA
 STATE ACTION                            SLHR          OPTIONS
_____________________________________________________________
4   LNPTRIG1
     LNP (DG 919991)(ESCDN)(ESCEA)(ESCOP)(ESCCN DD_OA)  $
     ULK EVENT R01   SS7      AINJAZZ                   $
```

Datafilling OFCTIID

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

Datafilling table OFCTIID

Field	Subfield	Entry	Explanation and action
KEY		see subfields	*Key* A two-part key to table OFCTIID with a trigger detection point (TDP) consisting of a two-digit number and a NAME (8 character alphanumeric string).
	TDP	4,17	*Trigger detection point* The TDP field is restricted to Info_Analyzed (4) and NetBusy (17), as only office-wide triggers are supported for NA009.
	NAME	8 character alphanumeric string	*Name* Enter a TRIGITM LNP tuple name from table TRIGITM.
TRIGACT		ON, OFF	*Activation state* ON indicates an active trigger item identified by the TIID. OFF indicates a deactivated trigger item assignment.

Datafill example for table OFCTIID

The following example shows sample datafill for table OFCTIID.

MAP display example for table OFCTIID

```
        KEY                                        TRIGACT
_____________________________________________________________
4  N11TRG1                                          ON
4  LNPTRG1                                          OFF
17 AFRTRG2                                          ON
```

Datafilling table LNPOPTS

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

Note: Operating companies cannot change table LNPOPTS tuples with SOC option LNP00200 in the IDLE state. Refer to *Location Routing Number-Local Number Portability Service Implementation Guide*, 297-8981-021.

Datafill BLOCKLNP and LNPTCT to activate the following LNP query parameters:

- add an AIN trigger criteria type (TCT).
- analyze 10-digit (10D) automatic call gapping (ACG) controls.
- block undipped inter-network calls.

Datafilling table LNPOPTS (Sheet 1 of 4)

Field	Subfield	Entry	Explanation and action
KEY		see subfields	Key. This field consists of subfields BLOCKLNP, LNPTCT, and QPARMS.
	BLOCKLNP		BLOCKLNP. This subfield blocks calls when the previous switch did not perform a necessary LNP query.
	LNPTCT		LNPTCT. This subfield applies the LNP trigger criteria type to Info Analyzed messages.
Note: DMS software always sends user identification, bearer capability and called party identification (UserID, BC and CalledParty) in an LNP query.			

LNP Base Services (continued)

Datafilling table LNPOPTS (Sheet 2 of 4)

Field	Subfield	Entry	Explanation and action
	QPARMS		QPARMS. This subfield specifies query parameters.
ACG_10D_TRMT		see subfields	ACG_10D_TRMT. Multiple with EXTENDED_TREATMENT. See subfield under OPTIONS. Default datafill is AIN Final (AINF).
OPTIONS		see subfields	*Options* This field consists of subfields BLOCKLNP, LNPTCT, and QPARMS.
	ACG_10D_TRMT		ACG_10D_TRMT This option affects the call processing behavior of LNP calls blocked by 10-digit automatic call gapping (ACG) controls. ACG behavior depends on the state of the LNP00200 and LNP00202 software optionality control (SOC) states. LNP00200 must be ON before LNP00202 can be set to ON. When LNP00202 is ON, 10-digit ACG calls are routed to the treatment datafilled in EXTENDED_TREATMENT. When LNP00202 is IDLE and LNP00200 is either ON or OFF, calls are routed to the default treatment, AINF (AIN Final).
	BLOCKLNP		BLOCKLNP. Enter BLOCKLNP to activate the BLOCKLNP feature. The option consists of values ACTIVE and INACTIVE. The default is INACTIVE. INACTIVE applies normal call processing. ***Note:*** Datafill table TRKOPTS to block calls.
		ACTIVE INACTIVE	Enter ACTIVE to specify a treatment. Value ACTIVE consists of suboption TREATMENT.

Note: DMS software always sends user identification, bearer capability and called party identification (UserID, BC and CalledParty) in an LNP query.

Datafilling table LNPOPTS (Sheet 3 of 4)

Field	Subfield	Entry	Explanation and action
	TREATMENT	EXTENDED_ TREATMENT	Enter the treatment for the call. The treatment must match the treatment in Table TMTMAP or Table TMTCNTL. The operating company decides how to apply the treatment to the call through these tables. ***Note:*** The system prints a warning message when the operating company selects value ACTIVE and option TREATMENT. The message states that this option can prevent completion of some LNP calls.
	LNPTCT	LNP,PODP	Local Number Portability Trigger Criteria Type. Option LNPTCT consists of values LNP and PODP. The default is PODP. Enter LNP to apply the Local Number Portability Trigger Criteria Type to Info analyzed messages for LNP calls. ***Note:*** Default value PODP uses the normal trigger criteria type. For example: NPA, NPAXXX, and NPAXXXXXX.
	QPARMS	see subfields	Query Parameter. Enter QPARMS to specify query parameters and their subfields. Subfields consist of LATA, CHARGNUM, CLGPTYID, CLGPBGID, CHGPTYST, PRIMCARR, TCM, OCLDPTID, REDIRPID, REDIRINF.
	LATA	Y or N	Local access and transport area. Enter Y to include the parameter or N to ignore it. The default value is N.
Note: DMS software always sends user identification, bearer capability and called party identification (UserID, BC and CalledParty) in an LNP query.			

LNP Base Services (continued)

Datafilling table LNPOPTS (Sheet 4 of 4)

Field	Subfield	Entry	Explanation and action
	CHARGNUM	Y or N	Charge number. Enter Y to include the parameter or N to ignore it. The default value is Y.
	CLGPTYID	Y or N	Calling party ID. Enter Y to include the parameter or N to ignore it. The default value is Y.
	CLGPBGID	Y or N	Calling party business group ID. Enter Y to include the parameter or N to ignore it. The default value is N.
	CHGPTYST	Y or N	Charge party station type. Enter Y to include the parameter or N to ignore it. The default value is Y.
	PRIMCARR	Y or N	Primary carrier. Enter Y to include the parameter or N to ignore it. The default value is N.
	TCM	Y or N	Trigger criteria model, Enter Y to include the parameter or N to ignore it. The default value is N.
	OCLDPTID	Y or N	Original called party ID, Enter Y to include the parameter or N to ignore it. The default value is N.
	REDIRPID	Y or N	Redirecting party ID. Enter Y to include the parameter or N to ignore it. The default value is N.
	REDIRINF	Y or N	Redirection information. Enter Y to include the parameter or N to ignore it. The default value is N.
Note: DMS software always sends user identification, bearer capability and called party identification (UserID, BC and CalledParty) in an LNP query.			

Datafill examples for Table LNPOPTS

The following examples show sample datafill for Table LNPOPTS.

LNP Base Services (continued)

MAP display example for Table LNPOPTS option QPARMS

```
   KEY
                                                    OPTIONS
-------------------------------------------------------------
QPARMS
QPARMS (LATA N)(CHARGNUM Y)(CLGPTYID Y)(CLGPBGID N)
(CHGPTYST Y)(PRIMCARR N)(TCM N)(OCLDPTID N)(REDIRPID N)
(REDIRINF N) $
```

MAP display example for Table LNPOPTS option LNPTCT

```
   KEY
                                                  OPTIONS
-----------------------------------------------------------
 LNPTCT                                       LNPTCT  PODP
```

MAP display example for Table LNPOPTS option BLOCKLNP

```
    KEY
                                                  OPTIONS
-----------------------------------------------------------
BLOCKLNP                                BLOCKLNP  ACTIVE BLDN
```

MAP display example for Table LNPOPTS option ACG_10D_ACG

```
    KEY
                                                  OPTIONS
-----------------------------------------------------------
ACG_10D_TRMT                             ACG_10D_TRMT AINF
```

LNP Base Services (continued)

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

Error messages for

Message	Explanation	User action
`ERROR: BLOCKLNP tuple may not be changed while Software Optionality Control option LNP00200 is IDLE`	SOC option LNP00200 is in IDLE state.	Activate SOC option LNP00200. Enter the tuple again.
`ERROR: QPARMS tuple may not be changed while Software Optionality Control option LNP00200 is IDLE`	SOC option LNP00200 is in IDLE state.	Activate SOC option LNP00200. Enter the tuple again.
`ERROR: LNPTCT tuple may not be changed while Software Optionality Control option LNP00200 is IDLE`	SOC option LNP00200 is in IDLE state.	Activate SOC option LNP00200. Enter the tuple again.

Datafilling Table AMATKOPT

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

Datafilling Table AMATKOPT (Sheet 1 of 2)

Field	Subfield	Entry	Explanation and action
CLLI		alphanumeric (1 to 16 characters)	*Common language location identifier* Enter the code that represents the trunk group in Table CLLI (common language location identifier).
OPTIONS		see subfield	*Options* This field consists of subfield OPTION and its subfields.

Datafilling Table AMATKOPT (Sheet 2 of 2)

Field	Subfield	Entry	Explanation and action
	OPTION		*Option* Enter the options and subfields for the trunk group. Each option and its subfield are separated by a space. End the option list with a $ (dollar sign).
		CNAR	Enter CNAR for connecting network access record. This prompts the operating company personnel to datafill subfields LCNAR and BILLNO. ***Note 1:*** This option allows the connecting network access record generation for the specified trunk group. ***Note 2:*** Option CNAR applies to the following trunk groups: IT (MF, DT, DP, Q764), TI (MF, DT, DP, Q764), T2 (MF, DT, DP, Q764), SC, OC, OP, OI
	BILLNO	10-digit vector(0,1,2,3,4,5,6, 7,8,9)	Enter a 10-digit billing number. This field is mandatory and binds against option CNAR. The billing number populates the originating billing number field in the CNAR Automatic Message Accounting (AMA) record. ***Note:*** he CNAR record uses BILLNO and does not affect other billing records.
	LCNAR	Y or N	Enter Y or N. If the value is Y, the system generates a connecting network access record when the SSP performs an LNP query for the call originated by the specified CLLI. If the value is N, the system generates a CNAR value for all calls originated by the specified CLLI.

Datafill example for Table AMATKOPT

The following example shows sample datafill for Table AMATKOPT.

LNP Base Services (continued)

MAP display example for Table AMATKOPT

```
      CLLI                              OPTIONS
 ------------------------------------------------------

  ISUPITIC    CNAR          Y        6136218900
 ISUPITIC2    CNAR          N        6136218900
```

Datafilling Table AMAOPTS

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

Note: The LNP billing options may not be transitioned to the ON state when SOC option LNP00200 is IDLE. Please refer to *Local Routing Number-Local Number Portability Service Implementation Guide*, 297-8981-021.

Datafilling Table AMAOPTS (Sheet 1 of 2)

Field	Subfield	Entry	Explanation and action
OPTION		LNP_721, LNP_721_ Use_SC0500, LNP_721_ PortedDN Only, LNP_722, LNP_MODULE _719	Option LNP_721 creates an LNP record for Bellcore call code 721. The option has values of ON, OFF, and DEFAULT. The default is OFF. Option LNP_721_Use_SC0500 enables the local number portability (LNP) record for Bellcore call type code 721 with structure code 500. The default is OFF. LNP_721_PortedDNOnly creates an LNP record for Bellcore call code 721 when the dialed DN is not ported. The default is OFF. Option LNP_722 enables the ``last resort'' local number portability (LNP) record, Bellcore call type code 722. Last resort AMA is generated when “last resort'' routing to a recipient switch occurs at a donor switch and an AMA record is not already being generated at the donor switch. The default is OFF.

Datafilling Table AMAOPTS (Sheet 2 of 2)

Field	Subfield	Entry	Explanation and action
			Option LNP_MODULE_719 controls the type of module that LNP appends to an AMA record. The default is OFF, which means that LNP stores portability information in module 720.
SCHEDULE		ON, OFF	Field SCHEDULE enables activation of the options. Datafill field schedule with ON to activate an option. Datafill field SCHEDULE with OFF to deactivate an option.

Datafill example for Table AMAOPTS

The following example shows sample datafill for Table AMAOPTS.

MAP display example for Table AMAOPTS

```
   OPTION                        SCHEDULE
  ------------------------------------------------------------

  LNP_721                           OFF
```

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

Turn Software Optionality Control option LNP00200 ON to activate LNP Billing options.

Message	Explanation	User action
`ERROR: LNP Billing options may not be activated unless Software Optionality Control option LNP00200 is ON.`	SOC option LNP00200 is in the IDLE state.	Activate SOC option LNP00200.

Datafilling Table DNROUTE

The following table shows the datafill specific to LNP Base Services for Table DNROUTE. Only those fields that apply directly to LNP Base Services are

LNP Base Services (continued)

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

Datafilling Table DNROUTE

Field	Subfield	Entry	Explanation and action
AREACODE		0 to 9999999 (1 to 7 digits)	*Area code* The area code identifies a major geographical area served by the switch. If office parameter ACTIVE_DN_SYSTEM in Table OFCENG is NORTH AMERICAN, the area code must be three digits long.
OFCCODE		0 to 9999999 (0 to 7 digits)	*Office code digit register* The office code is a subregion of the area code. If office parameter ACTIVE_DN_SYSTEM in Table OFCENG is to NORTH AMERICAN, the area code must be three digits long. Specify the office code in Table TOFCNAME. Add tuples if the value of field OFCCODE is $ as specified in Table TOFCNAME. Tuples cannot contain STNCODEs whose leading digits are an OFCCODE in the same area code.
STNCODE		0 to 99999999 (up to 8 digits)	*Station code* The station code identifies a unique station within the terminating office (TOFC). If office parameter ACTIVE_DN_SYSTEM in Table OFCENG is NORTH AMERICAN, the area code must be one or four digits in length. If one digit is entered, it is treated as a D-digit, where the D-digit represents the fourth digit in the format ABC-DEFG. Ambiguity within the STNCODEs of one TOFC is not permitted. For example, 8594 and 859 are not specified as STNCODEs within one TOFC. ***Note:*** STNCODE is in DEFG format.

Datafill example for Table DNROUTE

The following example shows sample datafill for Table DNROUTE.

MAP display example for Table DNROUTE

```
AREACODE  OFCCODE     STNCODE                        DNRESULT
----------------------------------------------------------------
     819      622        1096                         D PODN
```

Note: If the SOC option LNP00200 is in the IDLE state, you cannot datafill the PODN extended treatment in Table DNROUTE or assign a DN with the SERVORD tool.

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

PODN may not be assigned when Software Optionality Control option LNP00200 is IDLE.

Message	Explanation	User action
`ERROR: PODN may not be assigned when Software Optionality Control option LNP00200 is IDLE.`	SOC option LNP00200 is in the IDLE state.	Activate SOC option LNP00200. Assign the PODN again.

LNP Base Services (continued)

Datafilling Table DNFEAT

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

Datafilling Table DNFEAT (Sheet 1 of 2)

Field	Subfield	Entry	Explanation and action
AREACODE		0 to 9 (3 digits)	*Area code* Enter the service numbering plan area (SNPA) of the DN. The entry in field AREACODE must correspond to an area code in tables SNPANAME and TOFCNAME.
OFCCODE		0 to 9 (up to 7 digits)	*Office code* Enter the office code of the DN. The entry in field OFCCODE must correspond to an office code in Table TOFCNAME. If using the North American dial plan, limit this field to three digits.
STNCODE		0 to 9 (up to 8 digits)	*Station code* Enter the station code of the DN. The entry in this field corresponds to the remaining digits in the DN after the area code and office code. If using the NORTH AMERICAN dial plan, the entry in this field is the last four digits of the DN.
OPTLIST		see subfield	*Options list* This field consists of subfield DNOPT.
	DNOPT	vector of up to 8 characters	*Directory number option* This subfield consists of subfields AINDN, PORT, and CLNT900.
		AINDN	Enter AINDN for the advanced intelligent network DN option and subfield AINGRP.

Datafilling Table DNFEAT (Sheet 2 of 2)

Field	Subfield	Entry	Explanation and action
		PORT	Enter PORT for the local number portability (LNP) 10-digit unconditional trigger. This entry causes an LNP query to the SCP database. ***Note:*** Lines Class Codes, Feature DNs and DN selectors that support the PORT option in NA009 cannot have the PORT option assigned to them if the LNP00200 SOC option is in the IDLE state. Please refer to Local Routing Number-Local Number Portability Service Implementation Guide, 297-8981-021 for a list of supported Line Class Codes, Feature DNs, and DN selectors.
		CLNT900	For 900 fraud prevention (900FP), enter CLNT900 to identify a 900 client for validation.
	AINGRP	alphanumeric (up to 16 characters)	*Advanced intelligent network group* This field is the index into a group of triggers in Table TRIGGRP. Enter the AIN group. The entry in this field must correspond to the entry in field TRIGNAME in Table TRIGGRP.

Datafill example for Table DNFEAT

The following example shows sample datafill for Table DNFEAT.

MAP display example for Table DNFEAT option PORT

```
AREACODE OFCCODE  STNCODE                          OPTLIST
_____________________________________________________________

    613     621     1000                       (PORT) $
```

LNP Base Services (continued)

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

Message	Explanation	User action
`ERROR: PORT option may not be assigned to a RCF DN when Software Optionality Control option LNP00200 is IDLE.`	SOC option LNP00200 is in the IDLE state.	Activate SOC option LNP00200. Assign the option again.
`ERROR: PORT option may not be assigned to this selector when Software Optionality Control option LNP00200 is IDLE`	SOC option LNP00200 is in the IDLE state.	Activate SOC option LNP00200. Assign the option again.

Datafilling Table TMTCNTL.TREAT

The following table shows the datafill specific to LNP Base Services for Table TRMTCNTL.TREAT. Only those fields that apply directly to LNP Base Services are shown. For a description of the other fields, refer to the data schema section of this document.

This section details the datafill for LNP Base Services for LNP Misrouted (LNPM) Call to a Ported Number and Ported Out Directory Number (PODN) treatments. The LNPM treatment indicates that an LNP call to a ported number is misrouted. LNPM maps to a DRAM announcement that indicates the call did not complete. The PODN treatment indicates that a directory number, whose office code (NPANXX) is native, has ported to another switch. PODN maps to a tone or announcement.

Datafilling Table TMTCNTL.TREAT (Sheet 1 of 2)

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

Datafilling Table TMTCNTL.TREAT (Sheet 2 of 2)

Field	Subfield	Entry	Explanation and action
FSTRTE		see subfields	First route. This field consists of subfields FSTRTSEL, TABID, and KEY.
	FSTRTSEL	T	First route selector. Enter the first route selector T.
	TABID	OFRT, OFR2, OFR3, or OFR4	Table name. Enter the office route table name.
	KEY	1 to 1023	Key. Enter the index into the office route table which defines the route list for the treatment. The entry zero (0) cannot be datafilled by the operating company.

Datafill example for Table TRMTCNTL.TREAT

The following example shows sample datafill for Table TRMTCNTL.TREAT.

MAP display example for Table TMTCNTL subtable TREAT treatment LNPM

```
TREATMT LOG                                          FSTRTE
-------------------------------------------------------------
   LNPM   Y S                                         120TO
```

MAP display example for Table TMTCNTL subtable TREAT treatment PODN

```
TREATMT LOG                                          FSTRTE
-------------------------------------------------------------
   PODN   Y T                                      OFRT  50
```

LNP Base Services (continued)

Datafilling table TMTMAP

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

Datafilling table TMTMAP (Sheet 1 of 5)

Field	Subfield	Entry	Explanation and action
TMTMPKEY		see subfields	*Key to Table TMTMAP* This field consists of subfields PROTOCOL, TMT, and BC_CT.
	PROTOCOL	Q764	*Protocol* Enter Q764 if this tuple applies to type IBN7 trunks that are datafilled in Table TRKSGRP with SIGDATA(C7UP) and PROTOCOL(Q764).
	TMT	alphanumeric (1 to 4 characters)	*Treatment code* Enter LNPM. The system applies this treatment to the specific ISUP cause value indicated in field CAUSE.
	BC_CT	ALLBC SPEECH VOICE DATA 64KDATA 56KDATA 3_1KHZ or 7_KHZ	*Bearer capability call type* Enter the specific bearer capability call type that is mapped differently from other bearer capability call types. The default value is ALLBC, all bearer capability call types to be mapped to the same treatment. Bearer capability types must be datafilled in Table BCDEF before they can be datafilled in field BC_CT. ***Note:*** Changing the value of this subfield on BTUP or DPNSS trunks may not have any effect.
TMTMPVAR		see subfield	*Treatment MAP* This field consists of selector field FORMAT.

Datafilling table TMTMAP (Sheet 2 of 5)

Field	Subfield	Entry	Explanation and action
	FORMAT	alphanumeric	*Protocol format* Enter one of the following values:
		ATUP	ATUP for PROTOCOL(ATUP)
		BTUP	BTUP for PROTOCOL(BTUP)
		TUPPLUS	TUPPLUS for PROTOCOL(TUPPLUS)
		R2	R2 for PROTOCOL(R2)
		IBNISUP	IBNISUP for PROTOCOL(IBNISUP)
		TUPE	TUPE for PROTOCOL(TUPE)
		DPNSS	DPNSS for PROTOCOL(DPNSS)
		ISUP	PROTOCOL(AISUP), PROTOCOL(CCITT7), PROTOCOL(ISUP), PROTOCOL(JPNISUP), PROTOCOL(NCCI7),PROTOCOL(Q764) orPROTOCOL(Q767)
		PRI	PRI for PROTOCOL(PRI).
	ISUPPROC	see subfield	*ISUP procedure* This field consists of selector subfield TMTPROC.
	TMTPROC		*Treatment procedure selector* Enter one of the following values:
		INTLOCAL	Enter INTLOCAL (interworking local) and datafill subfields CAUSE and LOG if the system applies treatment locally. The other conditions required for the use of INTLOCAL are: • Opearting company personnel must set the ISDNUP indicator bit to NOT_ISUP_ALL_THE_WAY. • The treatment is mapped to a cause and included in a release message if the ISDNUP indicator bit is set to other than NOT_ISUP_ALL_THE_WAY.

LNP Base Services (continued)

Datafilling table TMTMAP (Sheet 3 of 5)

Field	Subfield	Entry	Explanation and action
		ISDNLCL	Enter ISDNLCL (ISDN local) and datafill subfields CAUSE and LOCATION for the treatment that sends a correctly coded ACM (ISUP address complete message) to the originating switch when: • The originating agent is a basic rate access functional (BRAF) set. • The connection is ISUP_ALL_THE_WAY. • The system applies a treatment at the local switch.
		ISDNRTE	Enter ISDNRTE (ISDN remote) and datafill subfields CAUSE and LOCATION for the treatment that sends a correctly coded ACM (ISUP address complete message) to the originating switch when: • The originating agent is a BRAF.set. • The connection is ISUP_ALL_THE_WAY. • The system applies a treatment at a remote switch over per-trunk signaling (PTS) facilities.
		ISLOCAL	Enter ISLOCAL (ISUP local) and complete subfield fields CAUSE, LOCATION, and LOG if the system applies the treatment locally. The other conditions required for the use of ISLOCAL are: • The ISDNUP indicator bit is set to ISUP_ALL_THE_WAY. • The treatment is mapped to a cause and included in a release message if the ISDNUP indicator bit is set to other than ISUP_ALL_THE_WAY.
		LOCAL	Enter LOCAL and leave subfields CAUSE and LOG blank if the the system applies the treatment locally.

Datafilling table TMTMAP (Sheet 4 of 5)

Field	Subfield	Entry	Explanation and action
		NOLOCAL	Enter NOLOCAL and datafill subfields CAUSE, LOCATION and LOG if the treatment is mapped to a cause and always included in a release message.
	LOCATION		*Cause indicator location* Enter the LOCATION value included in the cause indication parameter (CIP) included in ISUP ACMs (CCS7 address complete message) and RELs (CCS7 Release message), if the message is part of a treatment. The LOCATION field is a unique 4-bit value in the CIP. The value of the LOCATION field varies with call scenarios, but the common denominator of all these scenarios are that the public network is serving the local user. This field is only applicable if TMTPROC is not LOCAL. The default value is LOCLNET.
		INTLNET	Enter INTLNET if the cause value in the release message is to reference an international switching office.
		LICBS	Enter LICBS if the cause value in the release message is to reference a local interface controlled by a signaling link.
		LOCLNET	Enter LOCLNET if the cause value in the release message is to reference a local public switching office.
		PRIVNET	Enter PRIVNET if the cause value in the release message is to reference an local private switching office.
		RLOCLNET	Enter RLOCLNET if the cause value in the release message is to reference a remote public switching office.
		RPRIVNET	Enter RPRIVNET if the cause value in the release message is to reference a remote private switching office.

LNP Base Services (continued)

Datafilling table TMTMAP (Sheet 5 of 5)

Field	Subfield	Entry	Explanation and action
		SP1	Reserved for future use
		SP2	Reserved for future use
		TRANSNET	Enter TRANSNET if the cause value in the release message is to reference a transit network switching office.
		UNKNOWN	Enter UNKNOWN if the cause value in the release message is to indicate that the switching office location is unknown.
		USER	Enter USER if the cause value in the release message is to reference the user's switching office.
	LOG	Y or N	*Generate log* Enter Y (yes) to generate a TRK138 log if the system sends a release with cause. Otherwise, enter N (no). For TMTPROC(LOCAL) leave this field blank.

Datafill example for Table TMTMAP

The following example shows sample datafill for Table TMTMAP, treatment LNPM.

MAP display example for Table TMTMAP, treatment LNPM

```
                          TMTMPKEY                                  TMTMPVAR
_____________________________________________________________________________
Q764     LNPM         ALLBC    ISUP     NOLOCAL      CSE_26   LOCLNET   N
```

Datafilling Table IBNLINES option LNPTST

The following table shows the specific datafill for LNP Base Services for Table IBNLINES option LNPTST. The table shows only those fields that apply

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

Datafilling Table IBNLINES option LNPTST

Field	Subfield	Entry	Explanation and action
LEN		see explanation	Line equipment numberThis field defines the physical location of theequipment that is connected to a specifictelephone line. Because field LEN is common to more than60 tables, it is documented in a singlesection to avoid unnecessary duplication.Please refer to Local Routing Number-Local Number Portability Service Implementation Guide, 297-8981-021 for a complete description of field LEN andassociated subfields. Field LEN consists of subfields SITE,FRAME, UNIT, DRAWER or LSG, SHELF,SLOT, and CIRCUIT.
DNNO		0 to 6	Directory number numberEnter the directory number (DN) number tospecify which DN on the LEN is beingreferenced.
RESULT	OPTLIST	LNPTST	Enter LNPTST for Local Number Portability Test Call. This entry allows operating company personnel to assign option LNPTST to single-party residential lines (1FR-RES lines), using the SERVORD utility.

Datafill example for Table IBNLINES option LNPTST

The following example shows sample datafill for Table IBNLINES option LNPTST.

MAP display example for Table IBNLINES option LNPTST

```
                LEN
                     DNNO                                RESULT
-------------------------------------------------------------------

HOST 05 1 03 17
                   0 DT STN RES 7228900 COMKODAK 0 0 613
(LNPTST)$
```

LNP Base Services (continued)

Datafilling Table IBNXLA

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

Datafilling Table IBNXLA (Sheet 1 of 2)

Field	Subfield	Entry	Explanation and action
KEY		see subfields	Key. This field consists of subfields XLANAME and DGLIDX.
	XLANAME	alphanumeric (1 to 8 characters)	Translator name. Enter the name of the translator.
	DGLIDX	vector of up to 18 digits	Digilator index. Enter the digit or digits assigned as an ambiguous code. The range of this field depends on field MAXDIG in Table XLANAME. The DGLIDX can accept overdecadic digits. The permitted values for the digilator part of DGLIDX of Table IBNXLA are as follows: MAXDIG value — IBNXLA digilator values 9 — digits 0 to 9 C — digits 0 to 9 and B to C F — digits 0 to 9 and B to F The permitted digit range for Table IBNXLA digilator values for each translator.
RESULT		see subfields	Result. This field consists of subfields TRSEL, ACR, SMDR, and FEATURE.
	TRSEL	FEAT	Translation selector. Enter the translation selector FEAT.
	ACR	Y or N	Account code entry. Enter Y (yes) if an account code entry is required for all calls to the special feature access code. Otherwise, enter N (no). Enter N when the feature is equal to SCPL or SCPS (see field FEATURE).

Datafilling Table IBNXLA (Sheet 2 of 2)

Field	Subfield	Entry	Explanation and action
			The Station Message Detail Recording fields (SMDR and SMDRB [TRKSEL= NET]) can only be set to Y if the switching unit has the option SMDR_OFFICE set to Y in Table OFCOPT. SMDR bills each leg of the call. The option must be turned on in IBN translations to generate SMDR billing. Turning on the option for one leg of the call does not carry over to another leg of the call.
	FEATURE	LNPTST	Enter LNPTST for Local Number Portability Test Call. This entry allows operating company personnel to assign option LNPTST to single-party residential lines (1FR-RES lines), using the SERVORD utility.

Datafill example for Table IBNXLA

The following example shows sample datafill for Table IBNXLA.

MAP display example for Table IBNXLA

```
                        KEY                                RESULT
-------------------------------------------------------------------

CKDK                    76

                                                FEAT N Y  LNPTST
```

LNP Base Services (continued)

Datafilling Table NPDIGMAP

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

Datafilling Table NPDIGMAP

Field	Subfield	Entry	Explanation and action
NPANXX		numeric (six digits)	*Serving Numbering Plan Area* Enter an NPANXX.
AREACODE		numeric (three digits)	*Area code* Enter an area code. ***Note:*** Table TOFCNAME must index the same area code.
OFCCODE		numeric (three digits)	*Office code* Enter an office code.

Datafill example for Table NPDIGMAP

The following example shows sample datafill for Table NPDIGMAP.

MAP display example for Table NPDIGMAP

```
NPANXX     AREACODE     OFCCODE
-------------------------------------------------------------------------

519313          613          663
```

Translation verification tools

The following TRAVER shows an output example for LNP Base Services.

Note: AIN (and LNP) TRAVER is enhanced to display Tables LCASCRCN and CLSVSCRC before displaying AIN (and LNP) trigger tables.

LNP Base Services (continued)

TRAVER output example for LNP Base Services

```
traver l 4164671001 9639929 b
TABLE LINEATTR
400 1FR NONE NT NSCR 0 416 PUB L416
TSPS 10 NIL NILSFC LATA1 0 NIL NIL
00 N $
LCABILL OFF – BILLING DONE ON BASIS
OF CALLTYPE
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE LENFEAT
TUPLE NOT FOUND
TABLE OFCVAR
AIN_OFFICE_TRIGGRP OFCTRIG
AIN Orig Attempt TDP: no subscribed
trigger.
TABLE STDPRTCT
PUB ( 1) (65021) 0
 . SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT
MAY ALTER OFFICE
BILLING.  CALL TYPE DEFAULT IS NP.
PLEASE REFER TO
DOCUMENTATION.
 . KEY NOT FOUND
 . DEFAULT VALUE IS:   N NP 0 NA
 . SUBTABLE AMAPRT
 . KEY NOT FOUND
 . DEFAULT VALUE IS:   NONE OVRNONE
N
TABLE HPCPATTN
TUPLE NOT FOUND

continued...
```

LNP Base Services (continued)

TRAVER output example for LNP Base Services (continued)

```
TABLE HNPACONT
416 Y 772 1 ( 90) ( 1) ( 4) ( 0) 0 $
 . SUBTABLE HNPACODE
 . 9639929 9639929 LRTE 747
 . SUBTABLE RTEREF
 .  747 T OFRT 747
 .  . TABLE OFRT
 .  .  747 S D C1S1_ISUPITOG
 .  . EXIT TABLE OFRT
 . EXIT TABLE RTEREF
EXIT TABLE HNPACONT
LNP Info: Called DN is not resident.
LNP Info: HNPA results are used.
TABLE LCASCRCN
416 L416 ( 27) OPTL N N
 . SUBTABLE LCASCR
 . 963 963
TABLE PFXTREAT
OPTL NP Y NP UNDT
AIN Info Collected TDP: no subscribed trigger.
TABLE FNPA7DIG
416 963 963 905
TABLE TRIGGRP
OFCTRIG INFOANAL
 . N11 ( DG N11DIG)$ NIL
Trigger AIN N11 is applicable to office.
 . PODP ( DG PODPDIG)$ NIL
Trigger AIN PODP is applicable to office.
 . N11 ( DG N11TRAF)$ NIL
Trigger AIN N11 is applicable to office.
 . PODP ( DG PODPTRAF)$ NIL
Trigger AIN PODP is applicable to office.
 . LNP ( DG LNPDIG) ( ESCEA ) ( ESCOP ) ( ESCDN
) ( ESCQR )$ NIL
Trigger AIN LNP is applicable to office.

continued...
```

LNP Base Services (continued)

TRAVER output example for LNP Base Services (continued)

```
 .  . TABLE TRIGDIG
 .  . LNPDIG LNP 905963 LNP EVENT TCAP R01 SS7 AINJAZZ
DFLT $
 .  .  . TABLE C7GTTYPE
 .  .  . AINJAZZ ANSI7 11 $
 .  .  . TABLE C7GTT
 .  .  . AINJAZZ 9059639929 9059639929 PCSSN
(SIMTOOL_RTESET SIMTOOL 0) $ SSN
AIN Info Analyzed TDP: trigger criteria met.
Querying the database.
LNP Info:  Displaying pre-query translations result.
LNP Info:  It is used if the database indicates the
called dn is non-ported.
+++ TRAVER: SUCCESSFUL CALL TRACE +++


AIN Info Analyzed TDP: trigger criteria met.
Querying the database.

DIGIT TRANSLATION ROUTES

1 C1S1_ISUPITOG         9639929            ST

TREATMENT ROUTES.  TREATMENT IS: GNCT
1 *OFLO
2 LKOUT

+++ TRAVER: SUCCESSFUL CALL TRACE +++

END
```

Note: To see a complete set of TRAVERS relating to LNP, refer to *Location Routing Number - Local Number Portability Service Implementation Guide*, 297-8981-021.

LNP Base Services (continued)

SERVORD

LNP Base Services adds three SERVORD options. The PORT option allows ten-digit unconditional LNP triggering for a DN. The LNPTST option enables operating company personnel to make LNP test calls on a single-party residential line. The PODN option identifies ported-in and ported-out DNs in a DN listing.

SERVORD limitations and restrictions

Line Class Codes, DN Features, and DN Selectors that support the PORT option may not have the PORT option assigned to them if SOC option LNP00200 is in the IDLE state. PODN may not be assigned using the SERVORD tool if SOC option LNP00200 is in the IDLE state.

SERVORD prompts

The following table shows the SERVORD prompts used to assign LNP Base Services to a DN.

SERVORD prompts for LNP Base Services

Prompt	Valid input	Explanation
OPTION	PORT	Enter PORT to assign the PORT option to the DN
	LNPTST	Enter LNPTST to assign the LNPTST option to a single-party residential line.
	PODN	Enter PODN to list all the ported directory numbers and ensure that no services are assigned to native ported-out directory numbers.

SERVORD examples for adding LNP Base Services

The following SERVORD example shows how to add the LNP Base Services Port option to a DN using the SERVORD command.

LNP Base Services (continued)

SERVORD example for LNP Base Services in prompt mode (PORT option)

```
>ADO
$ 6631001
> OPTION:
> port
OPTION:
> $
COMMAND AS ENTERED:
ADO NOW 98 1 27 AM 6631001 (PORT) $
ENTER Y TO CONFIRM, N TO REJECT, OR E TO EDIT
> Y
```

SERVORD example for LNP Base Services in no-prompt mode (PORT option)

```
> ADO  6631001 (PORT) $
```

The following SERVORD example shows how to add the LNP Base Services LNPTST option to a DN using the SERVORD command.

LNP Base Services (continued)

SERVORD example for LNP Base Services in prompt mode (LNPTST option)

```
> ADO
  SONUMBER:  NOW 96 8 19 AM
  DN_OR_LEN:
>6214567
  OPTION:
> LNPTST
  OPTION:
>$
COMMAND AS ENTERED:
ADO NOW 98 1 27 AM 6631001 (PORT) $
ENTER Y TO CONFIRM, N TO REJECT, OR E TO EDIT
>Y
```

SERVORD example for LNP Base Services in no-prompt mode (LNPTST option)

```
> ADO  6214567  (LNPTST) $
```

The following SERVORD example shows how to add the LNP Base Services PODN option to a DN using the SERVORD command.

LNP Base Services (continued)

SERVORD example for LNP Base Services in prompt mode (PODN option)

```
>ADO
$ 6631001
> OPTION:
> PODN
OPTION:
> $
COMMAND AS ENTERED:
ADO NOW 98 1 27 AM 6631001 (PODN) $
ENTER Y TO CONFIRM, N TO REJECT, OR E TO EDIT
> Y
```

SERVORD example for LNP Base Services in no-prompt mode (PODN option)

```
> ADO  6631001 (PODN)) $
```

LNP Base Services (end)

The following table explains error messages that can occur when you attempt to use SERVORD.

Message	Explanation	User action
`ERROR: PORT option may not be assigned to a RCF DN when Software Optionality Control option LNP00200 is IDLE.`	SOC option LNP00200 is in the IDLE state.	Activate SOC option LNP00200. Assign the option again.
`ERROR: PORT option may not be assigned to this selector when Software Optionality Control option LNP00200 is IDLE`	SOC option LNP00200 is in the IDLE state.	Activate SOC option LNP00200. Assign the option again.

2 Introduction to Equal Access

Understanding Equal Access translations

This chapter provides information on how to enter data for Equal Access (EQA). The EQA is a group of software features. These features allow an operating company to offer subscribers an option of carriers each time subscribers make a long distance call. Subscribers dial a carrier access code to reach a specified carrier, or subscribe earlier to choose long distance carriers.

Several plans are available to help the operating companies and interexchange carriers convert gradually to a complete implementation of EQA. The six basic access plans, appear in the following list:

- feature group (FG) A
- FGB
- FGC
- FGD interim
- FGD transitional
- FGD EQA.

The FGD EQA plan provides end offices with access to interexchange and international carriers. The access allows end offices to implement the Modification of Final Judgement requirements.

Functional groups for Equal Access

The EQA functional groups require the digital multiplex system (DMS) SuperNode Platform—BASE0001, TEL00001, and BAS00003. The functional group name, ordering code and additional requirements for EQA appear in the following paragraph.

EQA Local, EQA00001

The EQA Local does not have requirements.

EQA Toll, EQA00002

The EQA Toll does not have requirements.

3 Datafilling EQA Local

The following chapter describes the EQA Local, EQA00001, functionality.

CCS7 ISUP Inter-LATA Connection EAEO

Ordering codes

Functional group ordering code: EQA00001

Functionality ordering code: EQA00006

Release applicability

NA009 and up

Prerequisites

To operate, CCS7 ISUP Inter-LATA Connection EAEO has the following prerequisites:

- Base ISUP, ISP70001
- BAS Generic, BAS00003

Description

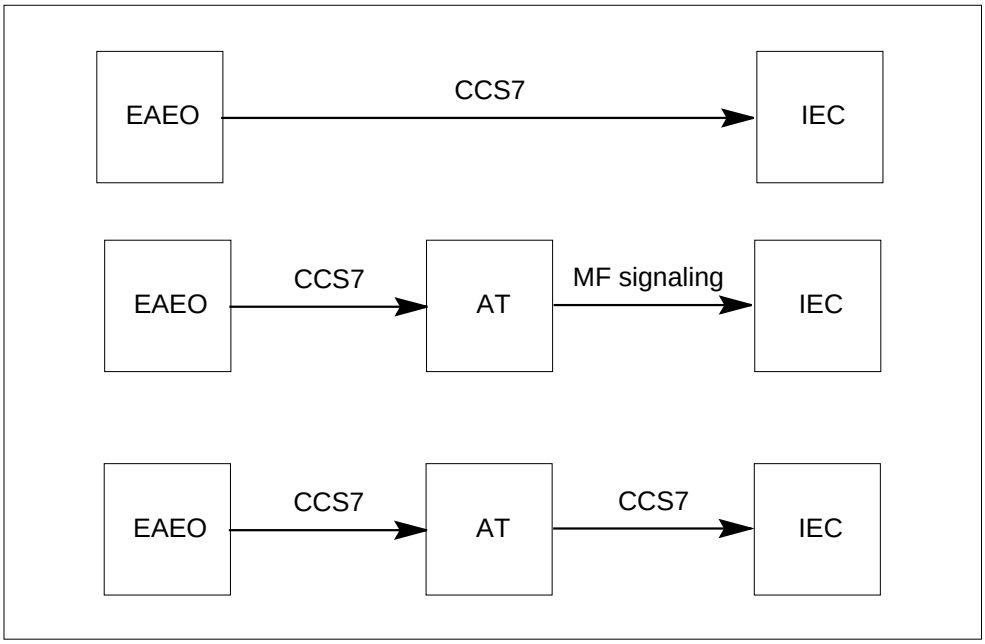
Feature package Equal Access End Office implemented Equal Access connections using MF signaling, also known as inband signaling. This feature package implements EAEO connections to an AT and to an IEC using common channel signaling 7 (CCS7). This feature package also provides the capability to interwork CCS7 with FGB and FGC signaling.

Operation

The three FGD CCS7 configurations supported by this feature package are shown in the next figure. This figure shows how the EAEO connects to the IEC either directly or via an AT. In the direct access configuration, the trunks between the EAEO and the IEC use CCS7. In the indirect configurations, the trunks between the EAEO and the AT use CCS7, while the trunks between the AT and the IEC use either MF or CCS7.

CCS7 ISUP Inter-LATA Connection EAEO (continued)

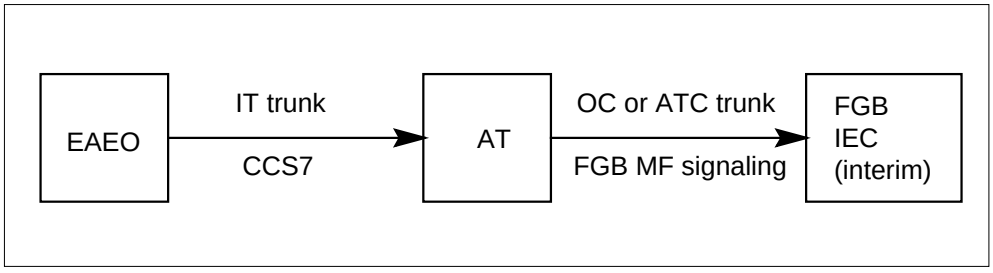
FGD CCS7 configurations



FGB interworking with CCS7

This feature package provides the capability to interwork CCS7 with FGB signaling for the 950-XXXX dialing plan. An EAEO can then complete a 950-XXXX call origination over a CCS7 IT trunk to the AT, where the call completes to an interim IEC using FGB MF signaling. This feature is an enhancement to the CCS7-to-MF internetwork interworking capabilities presently supported by the DMS switch. The following figure shows this configuration.

FGB interworking with CCS7 configuration



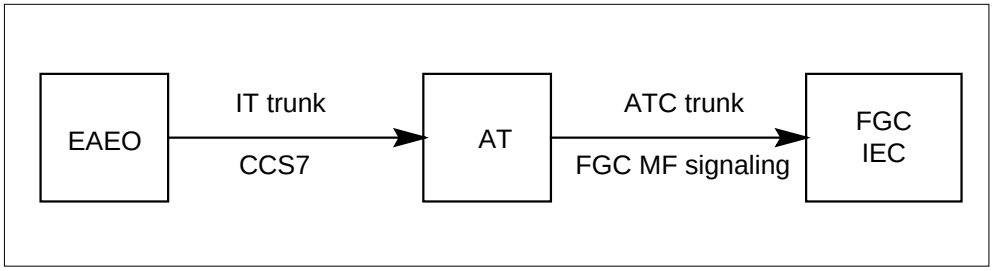
The translations datafill required to terminate a 950-XXXX call to an AT over a CCS7 IT trunk are the same as those required to terminate a similar call over an MF IT trunk.

CCS7 ISUP Inter-LATA Connection EAEO (continued)

FGC interworking with CCS7

This feature package provides the capability to interwork CCS7 with FGC signaling. An EAEO can then complete a call origination over a CCS7 IT trunk to the AT, where the call completes to an FGC IEC. The following figure shows this configuration.

FGC interworking with CCS7 configuration



The translations datafill required to terminate an FGC call to an AT over a CCS7 IT trunk are the same as those required to terminate a similar call over an MF IT trunk.

Note: As of BCS36, FGC calls sent over CCS7 IT trunks include the calling party number (CPN) parameter if field INCCPN in table OCCINFO is set to Y for the FGC carrier.

Limitations and restrictions

The following limitations and restrictions apply to CCS7 ISUP Inter-LATA Connection EAEO:

- This package implements a subset of FGD CCS7 as specified in Bellcore publication TR-TSY-000394 (issue 2, May 1988). It does not implement the signaling specified by this Bellcore publication between the AT and the IEC if MF signaling is used between the EAEO and the AT.
- Equal Access calls from operators are not supported. To support operator originations, some Equal Access trunks must use MF signaling.
- Dual seizure of a trunk during an Equal Access call is resolved by the method outlined in Bellcore publication TR-TSY-000317 (issue 1, August 1987). The additional method described in Bellcore publication TR-TSY-000394, where one end office can control all or none of the circuits within a single trunk group, is not supported.
- If the called party address of the IAM fails screening at the terminating LATA, a release message is sent back to the EAEO. Connecting the originator to a tone or announcement from the terminating LATA is not supported.

- A configuration that includes an Emergency Alternate Switching Point (EASP) between the EAEO and the AT is not supported.
- If the CCS7 trunk between the AT and the IEC fails continuity, the connection is reattempted on another trunk. If that trunk is an MF trunk, the carrier connect time at the EAEO will be wrong; it will contain the time of arrival of the exit message (EXM) of the failed connection.

The following limitation applies to FGB interworking with CCS7:

- The FGB originating billing record (call code 134) produced for the FGB CCS7-to-MF interworking call is not supported in the Northern Telecom format billing.

The following limitations applies to FGC interworking with CCS7:

- International FGC CCS7-to-MF and MF-to-CCS7 interworking calls are not supported. There are currently no specifications for these calls in Bellcore publication TR-TSY-000394.

Interactions

The following paragraphs describe the interactions between CCS7 ISUP Inter-LATA Connection EAEO and other functionalities.

ISUP AT FGD Signaling (AG1254)

The EAEO-to-IEC call configuration interacts with E800 services as outlined in feature AG1254. The only difference is that an EXM message (indicating initiation of the database query) is not generated.

ISUP Intermediate Tandem (IMT)

The EAEO to IT trunk configuration interacts with feature ISUP Intermediate tandem (IMT) as defined in feature AF7127.

Activation/deactivation by the end user

CCS7 ISUP Inter-LATA Connection EAEO requires no activation or deactivation by the end user.

Billing

This feature package implements the required originating and terminating billing for Equal Access calls using CCS7. Billing for FGD calls is implemented as it has been implemented for FGD calls over trunks using MF signaling.

CCS7 ISUP Inter-LATA Connection EAEO (continued)

FGD originating billing

Originating access records are created for all outgoing Equal Access calls routed either directly to an IEC or indirectly through an AT. If the IEC provides OUTWATS service, an inter-LATA WATS access record (call code 114) is created. Otherwise, an inter-LATA station paid record (call code 110) is used.

The carrier connect time for an indirect connection (CCS7 between the EAEO and the AT, and MF signaling between the AT and the IEC) is determined at the EAEO by the receipt of the address complete message. The carrier connect time for a direct connection (CCS7 between the EAEO and the IEC) is defined as the time that the IAM is sent to the IEC.

FGD terminating billing

Terminating access records (call code 119) are created for all completed Equal Access calls routed directly to the EAEO from an IEC or INC. A second billing record, the terminating INWATS record (call code 008), may be produced at a terminating EAEO if the terminating line is marked for INWATS. This record is produced even if the call is routed indirectly from the IEC, through an AT first; however, it will be produced at the AT office. It is possible to turn on or off the terminating access recording by setting entry OCCTERM in table AMAOPTS; the default value is N.

Description of FGD AMA record

This feature package does not modify the AMA record; it is primarily concerned with the trunk group number field contained in structure codes 625 and 627.

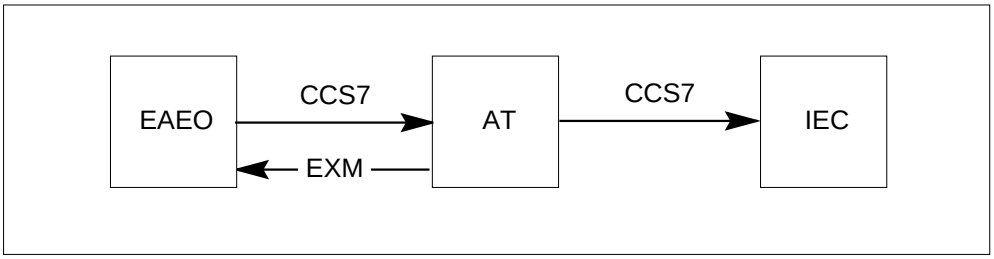
The AMA trunk group number field is separated into three parts. The first character contains the coding of the route selected to the IEC, and characters two to five contain the actual trunk group number. The last character is the sign. The values of the first character are as follows:

- 0 - default
- 1 - Non CCS7 direct trunk group number
- 2 - Non CCS7 common trunk group number (trunk group number is used to route from EAEO to AT)
- 3 - CCS7 direct trunk group number
- 4 - CCS7 AT trunk group number (trunk group number is used to route from AT to IEC)
- 5 - CCS7 end office trunk group number (trunk group number is used to route from EAEO to AT with CCS7-to-MF interworking)

Values 1 and 2 used in the first character would not be used at a CCS7 EAEO and can be considered reserved. Values 0 to 3 are identical for both originating and terminating billing purposes. Values 4 and 5 are unique to originating billing.

For the call configuration described in the following figure (full CCS7 interworking scenario), the trunk group number in the AMA record generated at the EAEO indicates the trunk group number of the outgoing trunk from the AT. The EXM, which is sent back from the AT to the EAEO (as specified by Bellcore publication TR-TSY-000394), supplies this trunk group number. Receipt of the EXM at the EAEO also indicates the carrier connect time and date.

EXM from AT to EAEO



For the other call configurations implemented by this feature, the trunk group number in the originating AMA records is determined in the existing manner; the common language location identifier (CLLI) of the outgoing trunk from the EAEO is used as an index in table CLLI to get the trunk group number.

FGB originating billing record

A 134 FGB originating billing record is required when a 950-XXXX call origination terminates to an FGB IEC. This billing record is produced for a 950-XXXX call origination that terminates to a CCS7 IT trunk when the FGB selector is used in subtable STDPRTCT.STDPRT.

The following structure codes (unchanged by this feature) are associated with the 134 FGB originating billing record:

- 00625 inter-LATA
- 00627 inter-LATA, long duration

CCS7 ISUP Inter-LATA Connection EAEO (continued)

The information recorded in each structure code when terminating to a CCS7 IT trunk is the same information recorded when terminating to an MF IT trunk, with the following exceptions:

- When the facility used between the EAEO and the AT is a CCS7 IT trunk, the carrier connect time in the 134 billing record is defined as the time the answer message is received at the EAEO.
- The trunk group number field of the 134 billing record is recorded as follows:
  - character 1 - coded as a 5 = CCS7 end office trunk group number
  - characters 2 to 5 - coded as the CCS7 IT trunk group number used to terminate the call from the EAEO to the AT

FGC originating billing record

A 110 Equal Access originating billing record is produced for an FGC origination that terminates to a CCS7 IT trunk when the EA selector is used in table STDPRTCT. The trunk group number field of the 110 FGC billing record is recorded like the 134 FGB billing record.

Station Message Detail Recording

CCS7 ISUP Inter-LATA Connection EAEO does not affect Station Message Detail Recording.

Datafilling office parameters

CCS7 ISUP Inter-LATA Connection EAEO does not affect office parameters.

Datafill sequence

The following table lists the tables that require datafill to implement CCS7 ISUP Inter-LATA Connection EAEO. The tables are listed in the order in which they are to be datafilled.

Datafill tables required for CCS7 ISUP Inter-LATA Connection EAEO (Sheet 1 of 2)

Table	Purpose of table
OCCINFO	Table OCCINFO (other common carrier information) defines the attributes for the carriers serving a DMS switch and screens calls for carrier compatibility.

Datafill tables required for CCS7 ISUP Inter-LATA Connection EAEO (Sheet 2 of 2)

Table	Purpose of table
STDPRTCT. STDPRT	Each standard pretranslator (STDPRTCT.STDPRT) subtable sets up the translation for a specific call type. It is the first subtable to be indexed by the received leading digits if table LINEATTR or table TRKGRP specifies a standard pretranslator subtable name.
CKTDIGIT	Table CKTDIGIT (circuit digit) allows the combination of the TNS and circuit code to be mapped into a particular 0ZZ, 1NX, or 1N'X circuit digit value.

Datafilling table OCCINFO

Table OCCINFO defines the attributes for carriers serving the end office and screens calls for carrier compatibility. For example, table OCCINFO allows international traffic to be sent only to carriers capable of handling such traffic.

The following table shows the datafill specific to CCS7 ISUP Inter-LATA Connection EAEO for table OCCINFO. Only those fields that apply directly

CCS7 ISUP Inter-LATA Connection EAEO (continued)

to CCS7 ISUP Inter-LATA Connection EAEO are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table OCCINFO

Field	Subfield or refinement	Entry	Explanation and action
ACCESS		TRANS or EAP, FGC, INTERIM	Access arrangement. Enter one of the following access types accepted by the carrier to handle a call: • TRANS or EAP for EAEO calls that complete directly to the IEC over trunks using CCS7 or for calls that complete over CCS7-supported circuits to the AT and from the AT to the IEC. • FGC for CCS7-to-MF FGC IEC interworking calls. • INTERIM for CCS7-to-MF FGB IEC interworking calls.
NOA950		Y or N	Nature of address indicator. Enter Y to show that the nature of address indicator in the calling party number parameter is set to 1111110. This binary values means that the call is a network specific, 950+ call from public station or hotel/motel line or non-EAEO. Enter N to show that the nature of address indicator in the calling party number parameter is set to the usual value. ***Note:*** The default value of N will cause no change in the existing operation of the switch.
INCCPN		Y or N	Include calling party number. Enter N to indicate that the calling party number parameter is to be removed from any IAM sent to this carrier. Otherwise enter Y, the default value.

Datafill example for table OCCINFO

The following example shows sample datafill for table OCCINFO.

MAP display example for table OCCINFO

```
CARRNAME CARRNUM ACCESS ORIGCARR INTER INTNTL INTRA ANI FANI
ONISCRN AD1 OVERLAP INTERS INTRAS TERMREC OCCSEPNO OPSIG PICIND
NOA950 INCCPN DTMFIND OPSERV CACBLOCK CTDOA CMCMON SCRNWATS
CRMCRA ATPINCL INTRAOPR
_____________________________________________________________
 C111    0111   EAP     Y      Y      Y     N   Y    N
 N     Y      Y     Y      Y    LONG       0    FGRPC    Y
   N      N     N       N       N      N      N       N
      Y    N        N
 C222    0222   EAP     Y      Y      N     Y   N    N
 N    N       Y     Y      N    SHORT      0    FGRPC    N
   N    N       N       N       N      N      N       N
     Y    N        N
```

Datafilling subtable STDPRTCT.STDPRT

Subtable STDPRTCT.STDPRT is the first table to be indexed by the received leading digits when the originating line attribute (from table LINEATTR) or trunk (from table TRKGRP) specifies a pretranslator name.

The following table shows the datafill specific to CCS7 ISUP Inter-LATA Connection EAEO for subtable STDPRTCT.STDPRT. Only those fields that apply directly to CCS7 ISUP Inter-LATA Connection EAEO are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling subtable STDPRTCT.STDPRT for PRERTSEL = FGB (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
FROMDIGS		From digits	From digits. Enter the digit(s) to be translated. If the entry is a block of consecutive numbers, enter the first number in the block.
TODIGS		To digits	To digits. If FROMDIGS is a block of consecutive numbers, enter the last number in the block. Otherwise, this field equals FROMDIGS.
PRETRTE		see subfields	Pretranslation route. For the FGB selector, this field is composed of subfields PRERTSEL, TYPCALL, NOPREDIG, CARRNAME, and RTEAREA, RTEPRSNT, EXTRTEID, TABID, KEY, MINIDIGSR, and MAXDIGSR.

CCS7 ISUP Inter-LATA Connection EAEO (continued)

Datafilling subtable STDPRTCT.STDPRT for PRERTSEL = FGB (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	PRERTSEL	FGB	Pretranslator route selector. Enter FGB to originate FGB calls.
	TYPCALL	DD, NP, or OA	Type of call. Enter the type of call: direct dial (DD), no prefix (NP), or operator assisted (OA). ***Note:*** TYPCALL must be set to DD to enable call billing.
	NOPREDIG	0 to 7	Number of prefix digits. Enter the number of prefix digits (0 to 7).
	CARRNAME	Carrier name	Carrier name. Enter the name of the carrier, as defined in table OCCNAME, to which the call is offered.
	RTEAREA	see subfield	Route area. This field is composed of subfield RTEPRSNT.
	RTEPRSNT	Y or N	Route present. Enter Y to datafill subfields EXTRTEID, TABID, KEY, MINDIGSR and MAXDIGSR. Otherwise, enter N.
	EXTRTEID	see subfields	External route ID. This field is composed of subfields TABID and KEY.
	TABID	OFRT	Table identifier. Enter OFRT. This table contains the routes for FGB calls.
	KEY	0 to 1023	Index. Enter the office route index (0 to 1023) that the translation is routed to.
	MINDIGSR	1 to 15	Minimum digits received. Enter the minimum number of digits (1 to 15) to be collected before routing the call.
	MAXDIGSR	1 to 24	Maximum digits received. Enter the maximum number of digits (1 to 24) to be collected before routing the call.

The following procedure shows the datafill for subtable STDPRTCT.STDPRT to implement FGD-to-CCS7 interworking. This procedure contains only those

CCS7 ISUP Inter-LATA Connection EAEO (continued)

fields that apply to this package. For a description of other fields, see the data schema section of this document.

Datafilling subtable STDPRTCT.STDPRT for PRERTSEL = EA (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
FROMDIGS			From digits. Enter the digit(s) to be translated. If the entry is a block of consecutive numbers, enter the first number in the block.
TODIGS			To digits. If FROMDIGS is a block of consecutive numbers, enter the last number in the block. Otherwise this field equals FROMDIGS.
PRETRTE		see subfields	Pretranslation table. For Equal Access calls, this field is composed of subfields PRERTSEL, TYPCALL, NOPREDIG, XLA_INFO, CARRNAME, and RTEAREA.
	PRERTSEL	EA	Pretranslator route selector. Enter EA, the pretranslator route selector for Equal Access calls.
	TYPCALL	DD, NP, or OA	Type of call. Enter the type of call: DD, NP, or OA. ***Note:*** TYPCALL must be set to DD to enable call billing.
	NOPREDIG	0 to 7	Number of digits. Enter the number of prefix digits (0 to 7).
	XLA_INFO	see subfield	Equal Access translation information. This field is composed of subfield XLATYPE.

CCS7 ISUP Inter-LATA Connection EAEO (continued)

Datafilling subtable STDPRTCT.STDPRT for PRERTSEL = EA (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	XLATYPE	N, P, or T	Equal Access translation type. Enter one of the following values: • N when no further digit translation or screening is required. A route must then be specified in field RTEAREA. • P when further pretranslation is required. A pretranslator subtable name must be entered in field PRTNM. • T when no further pretranslation is required. Translation then proceeds as determined by field TRANSYS.
	PRTNM		Pretranslator subtable name. Enter the name of the pretranslator subtable that translation routes to for pretranslation of the remaining digits. This field is displayed when XLATYPE = P.
	TRANSYS	NA, IN, NO	Translation system. Enter one of the following values: • NA when translation is to proceed to North American digit translations and screening. • IN when translation is to proceed to international translations. • NO when no further translation or screening is required. This field is displayed when XLATYPE = T.
	CARRNAME	name of carrier	Carrier name. Enter the name of the carrier, as defined in table OCCNAME, to which the call is offered.

CCS7 ISUP Inter-LATA Connection EAEO (continued)

Datafilling subtable STDPRTCT.STDPRT for PRERTSEL = EA (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	RTEAREA	see subfield	Route area. This field is composed of subfield RTEPRSNT.
	RTEPRSNT	Y or N	Route present. Enter Y to datafill fields EXTRTEID, TABID, KEY, MINDIGSR, MAXDIGSR, and OCS. Otherwise, enter N.
	EXTRTEID	see subfields	External route ID. This field is composed of subfields TABID and KEY.
	TABID	Table name	Table identifier. Enter an office route table name (OFRT, OFR2, OFR3, OFR4).
	KEY	0 to 1023	Index. Enter the office route index (0 to 1023) that the translation is routed to.
	MINDIGSR	1 to 18	Minimum digits received. Enter the minimum number of digits (1 to 18) to be collected before routing the call.
	MAXDIGSR	1 to 24	Maximum digits received. Enter the maximum number of digits (1 to 24) to be collected before routing the call.
OCS			Overlap carrier selection. If this field is set to Y and the carrier has field OVERLAP set to Y in table OCCINFO, then the call uses OCS. Otherwise, OCS is not used.

Datafill example for subtable STDPRTCT.STDPRT

The following example shows sample datafill for subtable STDPRTCT.STDPRT.

MAP display example for subtable STDPRTCT.STDPRT

```
          FROMDIGS        TODIGS
                                                PRETRTE
_____________________________________________________________________
          950WXXX         950WXXX
                  FGB DD 0    OFRT      100    7   7
```

CCS7 ISUP Inter-LATA Connection EAEO (continued)

Datafilling subtable CKTDIGIT

Table CKTDIGIT is required whenever there is a CCS7 trunk between an EAEO and an AT. In the EAEO, this table is used to map the 0ZZ or 1N/N'X digits into the circuit code field of the TNS parameter. This table is indexed by the carrier name and the circuit code fields, so for each carrier serving the AT, there should be a tuple per 0ZZ or 1N/N'X code passed to this carrier.

The following table shows the datafill specific to CCS7 ISUP Inter-LATA Connection EAEO for table CKTDIGIT. Only those fields that apply directly to CCS7 ISUP Inter-LATA Connection EAEO are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table CKTDIGIT

Field	Subfield or refinement	Entry	Explanation and action
CARRIER_ NAMES		name of carrier	Carrier names. Enter the name of the carrier serving the EAEO.
CKT_CODE		circuit code	Circuit code. Enter the circuit code mapped in the TNS parameter of the IAM sent to the AT.
CKTDIGITS		3 digits	Circuit digits. Enter the first three digits in the Equal Access signaling digit sequences 0ZZ XXX, 1N/N'X XXX CCC, or 1N/N'X XXX 01R transmitted on MF trunks. These digits are used to single out one of the outgoing circuits in the carrier group. This field is always composed of 3 digits. The first digit should be 0 or 1. The remaining two digits can be any value from 00 to 99.

Datafill example for table CKTDIGIT

The following example shows sample datafill for table CKTDIGIT.

MAP display example for table CKTDIGIT

```
 CARRNAME          CKTCODE                          CKTDIGITS
_____________________________________________________________
CARR1                  1                                138
```

Translation verification tools

CCS7 ISUP Inter-LATA Connection EAEO does not use translation verification tools.

CCS7 ISUP Inter-LATA Connection EAEO (end)

SERVORD

CCS7 ISUP Inter-LATA Connection EAEO does not use SERVORD.

Cellular AMA

Ordering codes

Functional group ordering code: EQA00001

Functionality ordering code: EQA00004

Release applicability

The BCS30 and later versions

Requirements

To operate, Cellular AMA has the following requirements:

- the BAS Generic, BAS00003
- the EQA Toll, EQA00002

Description

Cellular Mobile Carriers (CMCs) provide telephone service to mobile customers. The CMCs use radio cell sites that connect to a CMC switching office to provide this telephone service. Bellcore defines three interconnection designs for a CMC to access the operating company network and the IC and INC networks. See the section “Operation" in this description for a discussion of the three interconnection types.

MF monitor for type 2A cellular interconnect (AF1451)

This feature provides an multifrequency (MF) monitor for the connection between a CMC and an AT. The MF monitor allows the AT to detect the second stage of outpulsing from the CMC. This action allows billing for the IC to include the called directory number (DN).

Before the AF1451 feature, the AT received only the first stage of signaling from the CMC. This stage established a connection with the IC. The second stage of outpulsing included the called DN. The second stage passed directly from the CMC to an IC. The AT did not detect the outpulse. The called number was not included in the originating IC billing record, call code 110. This number was also not included in the terminating CMC billing record, call code 066.

User perspective

The operating company can use current MF receivers, universal tone receivers, or current MF receivers and universal tone receivers.

The additional time to hold a receiver is approximately 4 seconds for a national call. The additional time to hold a receiver is 5.5 seconds for an international call.

Cellular AMA (continued)

Subscriber/system interactions

The CMC feature interacts with the different types of carrier access. The carrier types include FGA, FGB, FGC and FGD. The system generates a CMC access record in addition to other records for carrier access. The system normally makes these access records when the system considers the CMC as a line-side connection.

Type 2A cellular interconnection (AL0380)

This feature allows a Type 2A interconnection from a CMC to an AT. Calls can route to an IC, another CMC, or to a termination in the local access transport area (LATA). A cellular (CELL) trunk group type is an addition for a type 2A interconnection. The signaling that the system receives from the CMC is like the signaling from an EAEO.

The system produces special billing records for call codes 064 and 066 when these calls originate from CMC or terminate to CMC.

Operation

A description of the operations of the feature package in the DMS appears in this section. These operations include hardware and software activity, interface operations, automatic DMS actions, and actions that require manual interaction.

Hardware description

This package does not introduce or modify hardware.

Software operation

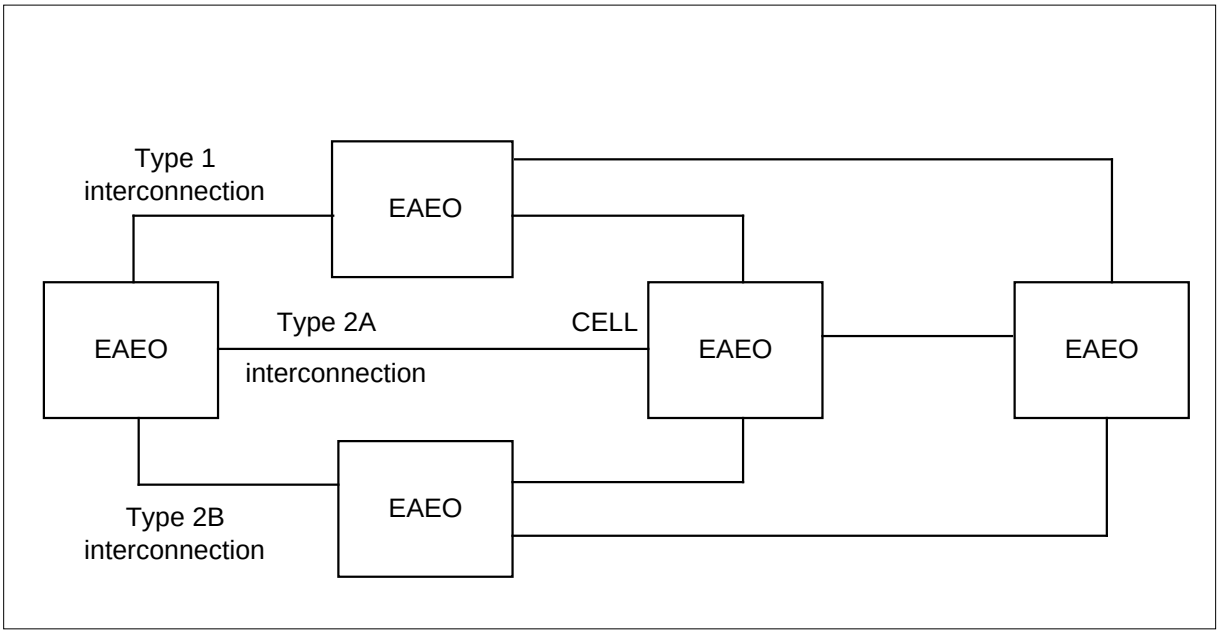
The NTX843AA feature package allows a type 2A cellular interconnection from a CMC to an AT. Bellcore defines three interconnection designs for a CMC to access the operating company network and the IC and INC networks.

- Type 1 applies to an EAEO or an office that is not an EAEO. Type 1 uses a trunk connection but the dialing plan is like that of a line.
- Type 2A applies to an AT. The signals the system receives from the CMC are like the signals from an EAEO.
- Type 2B is a form of type 1. The CMC can terminate calls to lines with single end office.

Interconnection for CMC connections appear in the following figure.

Cellular AMA (continued)

Interconnection for CMC



Type2A signaling

Type 2A signaling between the CMC switch and the AT is the same as signaling between an EAEO and an AT. The billing is different. A description of the billing appears “Billing" in this description.

TRKGRP (group type CELL)

Table TRKGRP contains the added trunk type cellular (CELL). Trunks that require a type 2A interconnection to a CMC must contain an entry of CELL trunks in table TRKGRP.

Note: If the Feature Group B (FGB) carrier requests an ANI, the system uses BILLNO field in this table.

Call codes 064 and 066

The addition of two call codes occurs for originating and terminating CMC calls.

- The system makes a call code 064 record for each call that originates from a CMC. This condition occurs when the system receives a wink from the CMC.
- The system makes call code 066 records for each call that terminates from a CMC. This condition occurs when the system detects a seizure on the incoming CMC trunk.

Fields CMCORIG, CMCTERM, AND CMCICWK

The AL0380 modifies table AMAOPTS to generate call code 064 and 066 records. Fields CMCORIG and CMCTERM must be ON to record call codes 064 and 066. Field CMCICWK is an addition to table AMAOPTS. This field controls the carrier connect time on a CMC to a Feature Group D (FGD) carrier. If CMCICWK is ON, the connect time is the time of billing wink from the FGD carrier. The connect time is not the normal time the system services incoming CMC trunk.

Making records of unanswered calls

If unanswered call records are necessary, enter table BCCODES with the necessary information.

Including the called DNs in the IC billing records

For calls from a CMC to a FGD carrier, the system generates a CMC terminating record, call code 66. The system also generates an originating IC/INC billing record, call code 110. The AF1451 detects the called DN. The AF1451 includes the DN in these billing records for the IC.

Detection of the called DN occurs by bridging an MF digit monitor to the connection between the CMC and the IC. The AT determines the called number, this process does not affect signals to the carrier.

To detect the called DN the system bridges an MF digit monitor to the connection between the CMC and the IC. While the AT determines the called number the system does not interrupt the carrier signals.

Field CMCMON in table OCCINFO gives the operating company the option to monitor the connection. Also the operating company can choose to include the called number in the billing records. This field provides this option for each carrier.

- When CMCMON is Y, the company monitors the connection between the CMC and the IC/INC to determine the called DN. The system places this DN is in the billing records for call codes 066 and 110.
- When CMCMON is N, the company does not monitor the connection.

The operating company can monitor the connection and include the called number in the billing records for each carrier.

Internal system controls

This feature does not affect any of the internal system controls.

Cellular AMA (continued)

Activation sequence

Use the following procedure to activate feature package NTX843AA.

- Make sure that BCS27 or later versions have a current software load.
- Set field CMCMON to Y in table OCCINFO. This action detects and records the called DN in the originating IC billing record, call code 110. This action also detects and records the called DN in the terminating CMC billing record, call code 066.
- Set the trunk type field GRPTYP to CELL. Set other fields as each application requires.
- In table AMAOPTS:
  - Set CMCICWK to ON if carrier connect time is the amount of time for reception of the billing wink from the FGD carrier. The carrier connect time is for a CMC to FGD carrier call.
  - Set CMCORIG to ON to generate the originating CMC billing records, call code 064.
  - Set CMCTERM to ON to generate terminating CMC billing records, call code 066.
  - Set other fields as required for each application.

Verification sequence

The following procedure verifies the use of feature package NTX843AA.

- Test the following calls to make sure the billing records for call codes 066 and 110 include the called DN.
  - — national FGD call from CMC to an IC with the use of an MF monitor
  - — international FGD call from CMC to INC with the use of an MF monitor
  - — national FGD call from CMC to an IC with the use of a universal tone receiver
  - — international FGD call from CMC to INC with the use of a universal tone receiver
- Set the CMCMON field to N in table OCCINFO.
- Test the following calls. Make sure that the billing records for call codes 066 and 110 do not include the called DN.
  - — international FGD call from CMC to INC when using an MF monitor
  - — national FGD call from CMC to an IC with the use of a universal tone receiver
  - — international FGD call from CMC to an INC with the use of a universal tone receiver

Translations table flow

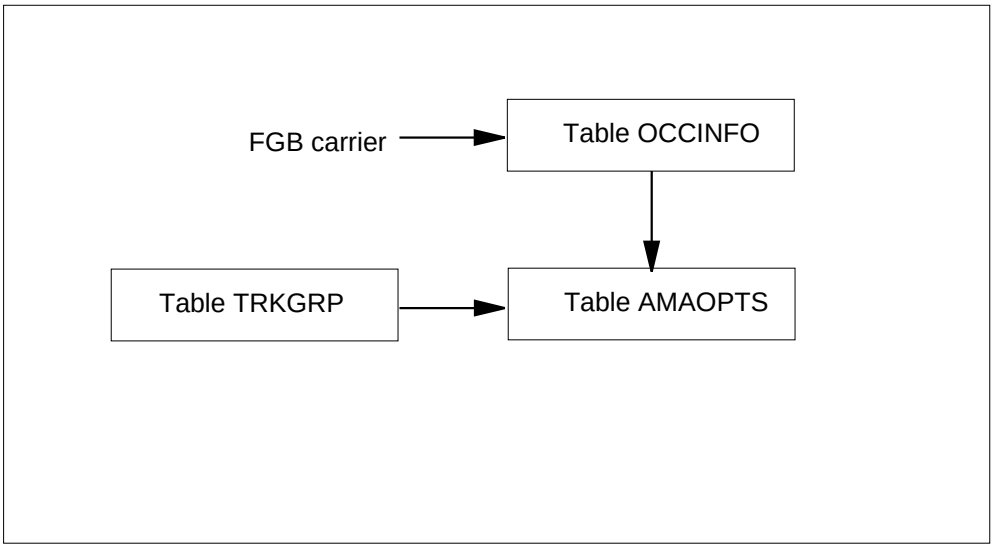
The following paragraphs describe the Cellular AMA translation tables.

- Table OCCINFO allows the operating company to monitor the CMC and IC/INC connection. This table also allows the operating company to include the called number in the billing records.
- Table AMAOPTS allows the generation of call code 64 and 66 records.
- Table TRKGRP allows type 2A interconnection to a CMC.

While the system performs Cellular AMA translation, the system accesses the tables in the following order.

Cellular AMA (continued)

Accessed table flow while the system performs Cellular AMA translation



The datafill content flowchart appears in the following table.

Datafill example for Cellular AMA package

Item	Example data
Call code	064 and 066

Datafill example for Cellular AMA package

Datafill table	Example data
OCCINFO	CAR1 777 EAP Y Y Y N Y Y Y Y N Y N N Y Y N Y N N
AMAOPTS	CMCORIG ON
	CMCICWK ON
	CMCTERM ON
TRKGRP	CMCABCAT
	CELL 0 TLA NCRT IC NIL MIDL 613 PEA NSCR 613 6211234 N

Limits

The AL0380 and AF1451 features have the following limits:

- These features do not support the following:
  - — operator access on a terminating CMC call
  - — operator hold
  - — equal access exchange operator service (EAOSS)
- An originating CMC call does not normally require support from an operator. A DMS-200 TOPS office can receive an operator-assisted call to a cellular carrier. This call must route to an Intertoll (IT) trunk before the call can reach the CELL trunk. These features do not support direct connections from a TOPS position to a CELL trunk.
- The AF1451 only applies to FGD calls. These calls are national, international, and 950.

Interactions

Cellular AMA interacts with feature ISUP Intermediate Tandem (IMT), AF7127.

Activation/deactivation by the end user

Cellular AMA does not require end user activation or deactivation.

Billing

This section describes the format of billing records and changes to AMA. These changes are a result of the addition of feature package NTX843AA.

The AL0380 allows a call to route from a CMC switch through a DMS-200 AT. The system provides billing records. The system can charge the CMC for switch access.

The following are the two additional new call codes available for originating and terminating CMC calls:

- The system makes a call code 064 record for each call that originates from a CMC. This action occurs when the system receives a wink from the CMC.
- The system makes a call code 066 record for each call that terminates from a CMC. This action occurs when the system detects a seizure on the incoming CMC trunk. A possible exception is a CMC call to a FGD carrier. If option CMCICWK is on in table AMAOPTS and the call is to a FGD carrier, the billing record does not occur. This record only occurs if the system receives a billing wink from the FGD carrier.

Cellular AMA (continued)

Calls in the AT produce the call codes that appear in the following table.

SERVORD prompts for Station Specific Authcode - CDC Enhancement

Call type	Call codes produced
CMC to FGA carrier	066, 131
CMC to FGB carrier	066, 134
CMC to FGC carrier	066, 110
CMC to FGD carrier	066, 110
CMC to Toll Trunk (to EAEO)	066
CMC to Line	066
CMC to CMC	066, 064
FGA carrier to CMC	132, 064
FGB carrier to CMC	135, 064
FGC carrier to CMC	119, 064
FGD carrier to CMC	119, 064
Line to CMC	064
Toll trunk from EAEO to CMC	064

The calling and called digits in FGD signaling must pass through to the carrier on a speech path. The system does not collect these digits in the AT.

The AL0380 takes the calling number from trunk group data for the cellular trunk group. The AL0380 and uses the number in the billing record the AL0380 produces.

The called number field is blank for CMC to FGD calls. The absence of the calling number makes sure downstream billing does not detect this event as an error.

Call code 064

Call code 064 is a Bellcore format code for an originating call to a CMC. Structure codes and conditions appear in the following table:

Structure codes and conditions for call code 064

Structure Code	Conditions
00653	standard originating CMC call
00654	long duration call
Note: The 653 and 654 codes are current equal access structure codes.	

An example of a call code 064 record appears in the following figure.

MAP example for Call code 064

```
HEX ID:AA STRUCT CODE:00653C CALL TYPE: 064C SENSOR
TYPE:036C
SENSOR ID:0000000C  REC OFC TYPE:036C  REC OFC ID: 0000000C
DATE:80107C TIMING IND: 00000C STUDY IND:00C ANSWER: 0
SERV OBSERVED:0C OPER ACTION:0C SERV FEAT:000C
OVERSEAS IND:1C TERM NPA:00613C TERM NO:6211901C
TIME:2256209C
ELAPSED TIME: 000000024C  IC/INC PREFIX:02222C CC
DATE:80107C
CC TIME:2256136C  ELAPSED CC:000000098C  IC/INC EVENT:010C
TRK GRP:00293C  ROUTING:0C
```

Call code 066

Call code 066 is a Bellcore format code for a terminating call from a CMC. Structure codes and conditions appear in the following table:

Structure codes and conditions for call code 066

Structure Code	Conditions
00625	standard originating CMC call
00627	long duration call
Note: Both 625 and 627 are current equal access structure codes.	

An example of a call code 066 record appears in the following figure.

Cellular AMA (continued)

MAP example for Call code 066

```
HEX ID:AA STRUCT CODE:00625C CALL TYPE:066C SENSOR TYPE:036C
SENSOR ID:0000000C  REC OFC TYPE:036C  REC OFC ID: 0000000C
DATE:80107C TIMING IND: 00000C STUDY IND:0000000C ANSWER: 0C
SERV OBSERVED:0C OPER ACTION:0C SERV FEAT:000C ORIG NPA:613C
ORIG NO:6211901C OVERSEAS IND:1C TERM NPA:00613C
TERM NO:8881234C TIME:2255337C ELAPSED TIME: 000000038C
IC/INC PREFIX:02221C CC DATE:80107C  CC TIME:2255283C
ELAPSED CC:000000091C  IC/INC EVENT:010C TRK GRP:00293C
ROUTING:0C  DIALING:7C  ANI:0C
```

Datafilling office parameters

Office parameters do not apply to this package.

Datafill sequence

The following tables require datafill to implement the Cellular AMA package. The tables appear in the correct entry order.

Datafilling tables the Cellular AMA package requires

Table	Form	NTP	Purpose of table
OCCINFO	2355A,B	297-1001-451	Allows the operating company to monitor the CMC and IC/INC connection. Allows the operating company to include the called number in the billing records.
TRKGRP (group type CELL)	2156BG/none	297-1001-451	Allows Type 2A interconnection to a CMC.
AMAOPTS	2333A,B	297-1001-451	Allows the generation of call code 64 and 66 records.

Datafilling table OCCINFO

Feature MF Monitor for Type 2A Cellular Interconnect (AF1451) modifies table other common carrier information (OCCINFO).

This tables contains the addition of field CMCMON. This field allows the operating company to monitor the CMC and IC/INC connection. The CMCMON field also allows the originating IC/INC and terminating CMC billing records to include the called directory number.

Datafill for table OCCINFO appears in the following procedure. The fields that apply to Cellular AMA appear in this procedure. For a description of the

other fields. See the data schema section of this document for a description of the other fields.

Datafilling table OCCINFO

Field	Subfield	Explanation and action
CMCMON	Y or N	Cellular mobile carrier monitor. Enter Y to monitor the connection between the CMS and IC/INC. The Y also places the called directory number in the originating IC/INC and terminating CMC billing records. In other events, enter N.

Datafill example for table OCCINFO

Sample datafill for table OCCINFO appears in the following example. Set field CMCMON to Y to include the called DN in the billing records for the carrier.

Datafill example for table OCCINFO

```
CARRNAME CARRNUM ACCESS  ORIGCARR INTER INTNTL INTRA ANI
 FANI   ONISCRN AD1 OVERLAP  INTERS INTRAS TERMREC OCCSEPNO
 OPSIG PICIND  NOA950  INCCPN DTMFIND OPSERV
 CACBLOCK CTDOA    CMCMON SCRNWATS  CRMCRA ATPINCL INTRAOPR
 ------------------------------------------------------
 CAR1    777     EAP     Y        Y     Y      Y    N
 Y       Y       Y   Y         Y     Y     LONG     0
 FGRPC N        N        N     Y       N
 N         Y       Y       N         Y      N        N
```

Datafilling table TRKGRP (group type CELL)

The datafill for table TRKGRP group type CELL appears in the following procedure. The fields that apply to Cellular AMA appear in this procedure. For a description of the other fields, refer to the data schema section of this document.

Datafilling table TRKGRP (group type CELL) (Sheet 1 of 3)

Field	Subfield	Explanation and action
GRPKEY	Refer to subfield	Group key. This field contains subfield CLLI.
	CLLI	Common language location identifier. Enter the code that represents the trunk group in table CLLI.

Cellular AMA (continued)

Datafilling table TRKGRP (group type CELL) (Sheet 2 of 3)

Field	Subfield	Explanation and action
GRPINFO	Refer to subfield	Variable group data. This field contains subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, DIR, TRAFCLS, SELSEQ, CONNGNPA, PRTNM, SCRNCL, SNPA, BILLNO and CCWKVLD.
	GRPTYP	Group type. Enter CELL for trunk group type cellular.
	TRAFSNO	Traffic separation number. Enter the incoming traffic separation number (0-127) assigned to the trunk group. If this number is not required, enter 0 (zero). If the DMS-100/200 has software package NTX085AA, enter 1 to value of parameter TFAN_IN_MAX_NUMBER in table OFCENG. For a DMS-100/200 without software package NTX085AA, enter a value from 0-15. For traffic that is incoming and outgoing use separation numbers 1-9. These numbers are only for generic traffic separation. Refer to the data design section of this document for a description of the other fields.
	PADGRP	Pad group. Enter the name of the pad group assigned to the trunk group in table PADDATA. Refer to table PADDATA, in data design for more information.
	NCCLS	Operational measurements no circuit class. Enter NCRT (no circuit) to satisfy table editor.
	DIR	Direction. Enter IC (incoming), which is the direction of the traffic flow. ***Note:*** If parameter TRK_OOS_CHK_ON in the variable office parameter table is Y, every trunk in the group must be busied out. The trunks must be busied out before a data modification order can change the value of this field.
	TRAFCLS	Traffic usage class. Enter the traffic use class assigned to the trunk group. Refer to table TRKGRP for more information.
	SELSEQ	Select sequence. Enter MIDL to satisfy the table editor. The trunk group is incoming, when the DIR is IC. When this condition occurs, sequential selection does not apply.
	CONNGNPA	Connecting NPA. Enter 000 to satisfy the table editor. Incoming trunk groups do not require this field.

Datafilling table TRKGRP (group type CELL) (Sheet 3 of 3)

Field	Subfield	Explanation and action
	PRTNM	Standard pretranslator table name. For translation enter the name of the table where the system can route digit translation after the reception of one digit. If translation is not required, enter NPRT. ***Note:*** If parameter TRK_OOS_CHK_ON in the variable office parameter table is Y, every trunk in the group must busy out. The trunks must busy out before a data modification order can change the value of this field.
	SCRNCL	Class of service screening table name. You can use class of service to screen the datafill. To route the datafill, enter the name of the table for digit translation. If class of service screening is not required, enter NSCR.
	SNPA	Serving NPA. Enter the three-digit SNPA code. This code indicates the location of the trunk group. ***Note:*** If parameter TRK_OOS_CHK_ON in the variable office parameter table is Y, every trunk in the group must be busied out. Every trunk must be busied out before data modification order can change the value of this field.
	BILLNO	Billing number. Enter the number that the system can use to bill the call.
	CCWKVLD	Carrier connect wink. Enter N to indicate that the carrier connect wink in EA international calls must not regenerate. Most systems that are not DMS EAEOs and ATs cannot handle this wink. If other than listed here, enter Y.

Datafill example for table TRKGRP (group type CELL)

Sample datafill for table TRKGRP (group type CELL) appears in the following example of a cellular trunk to line call.

The following is only an example. Do not use this datafill to enter a switch.

Cellular AMA (continued)

Datafill example for table TRKGRP (group type CELL)

```
GRPKEY                                                    GRPINFO

CMCABCAT
CELL 0 TLA NCRT IC NIL MIDL 613 PEA NSCR 613 6211234 N
```

Datafilling table AMAOPTS

Datafill for table AMAOPTS appears in the following procedure. The fields that apply to Cellular AMA appear in this procedure. See the data schema section of this document for a description of the other fields.

Table AMAOPTS contains three additional parameters. Theses parameters are CMCICWK, CMCORIG and CMCTERM. These parameters control the generation of call code 064 and 066 records. See “Operation" in this description for more information on these fields.

Datafilling table AMAOPTS

Field	Subfield	Explanation and action
OPTION	CMCICWK, CMCORIG, or CMCTERM	Option. Enter the following options: CMCICWK, CMCORIG,or CMCTERM.
SCHEDULE	Refer to subfield	Schedule. This field contains the following subfields: AMASEL, ONDATE, ONTIME, OFFDATE, OFFTIME, SCHED, TV, and TU. A description of subfield AMASEL follows.
	AMASEL	AMA selector. Enter ON to activate CMCICWK, CMCORIG, or CMCTERM.

Datafill example for table AMAOPTS

The following is only an example. Do not use the datafill in this example to enter the switch.

Datafill example for table AMAOPTS

```
OPTION                                  SCHEDULE


CMCICWK                                   ON
CMCORIG                                   ON
CMCTERM                                   ON
```

Tools for verifying translations

The Cellular AMA feature does not use the TRAVER tool to verify translations.

SERVORD

Cellular AMA does not use SERVORD.

Cellular Interconnect

Ordering codes

Functional group ordering code: EQA00001

Functionality ordering code: EQA00004

Release applicability

The BCS35 and later versions

Requirements

To operate Cellular Interconnect requires EQA Toll EQA00002.

Description

This feature package provides the ability to generate an originating and terminating AMA record. These records are for type 2A cellular interconnections. Bellcore defines three interconnection designs. The designs allow a cellular mobile carrier (CMC) to access the operating company, the (IEC) and the (INC) networks. The interconnection designs are as follows:

- Type 1 is a trunk connection through an equal access end office (EAEO) or a non-EAEO.

  The CMC sends the signals. These signals are like line signals.

- Type 2A is a connection through an AT.

  The CMC sends the signals. These signals are like EAEO signals.

- Type 2B is a connection from a CMC to a local end office.

  Type 2B is a form of type 1 interconnection.

Operation

This feature package allows a type 2A interconnection from a CMC to an AT. Calls can route to an IEC, another CMC, or to a termination in the LATA. This feature package also provides two of the call code records for type 2A cellular interconnections. The system can produce a call code 64 AMA record for an originating CMC call. The system produces this record when the system receives a wire from the CMC. An originating CMC call is a call from an AT to a CMC trunk group.

The system can produce a call code 66 AMA record for a terminating CMC call. The system produces this record when the system detects a seizure on the incoming CMC trunk. A terminating CMC call is a call from a CMC trunk to a connecting AT. If a call occurs from a CMC to another CMC, the call is the originating and the terminating CMC call.

Options CMCICWK, CMCORIG, and CMCTERM in table AMAOPTS control the production of the AMA records.

MF monitor for type 2A cellular interconnect

Before this feature package, the AT only received the first stage of signaling from the CMC. This stage established the connection to the IEC. The second stage of outpulsing passed from the CMC to the IEC and the AT did not detect the outpulsing. The second stage included the called directory number (DN). The called number was not available to include in the originating or terminating billing record.

This feature package provides an (MF) monitor for the connection between a CMC and an AT. The MF monitor allows the AT to detect the second stage of outpulsing from the CMC. The billing system provides to the IEC can include the called DN. This feature package does not affect signaling to the carrier.

Field CMCMON in table OCCINFO provides the operating company with an option to monitor the connection of a carrier. This field also allows the company to include the called number in the billing records. When field CMCMON is Y, the operating company monitors the connection between the CMC and the IEC or INC. This action determines the called DN. The system places this DN in the billing records for call codes 66 and 110. When field CMCMON is N, the operating company does not monitor the connection.

Translations

Enter the CMC type 2A interconnections as CELL trunk groups in the DMS-200 switch. For calls from a CMC to an FGD carrier, the system generates a CMC terminating record and an originating record. The AT detects the called DN. The AT includes the DN in the billing records for the IEC. The CMC sends the signals. The signals are like EAEO signals.

Translations for Equal Access and offices that do not have Equal Access calls are like translations for POTS lines. The calls are from a PX trunk. Refer to feature package NTX386AB - Access Tandem Switch in this guide for additional information about POTS Equal Access translations.

Making records of unanswered calls

If you require call records for unanswered calls, you must enter table BCCODES. The datafill for table BCCODES appears in the data design section of this document. Office parameter NUM_OF_BC_AMA_UNITS in table OFCENG must increase to reflect this feature.

Cellular Interconnect (continued)

Treatments for 10XXX intra-LATA calls

Equal Access calls failed when the carrier can not complete according to table OCCINFO datafill. The system routed these calls to vacant code (VACT). The treatment now depends on the call type and the carrier datafill in table OCCINFO. Type 2A CMC call treatment appears in the following table.

Failure conditions - new treatments

Failure condition	Treatment	Disposition
Inter-LATA limit (INTER = N (no) in table OCCINFO for carrier)	CACE	A CAC in error announcement
Intra-LATA limit (INTRA = N in table OCCINFO for carrier)	NACD	Do not dial 10XXX announcement
Interstate limit (INTERS = N in table OCCINFO for carrier)	CACE	A CAC in error announcement
Intrastate limit (INTRAS = N in table OCCINFO for carrier)	CACE	A CAC in error announcement
International limit (INTNTL = N in table OCCINFO for carrier)	CACE	A CAC in error announcement
AD1 dialed (AD = N in table OCCINFO for carrier)	CACE	A CAC in error announcement

Updates of the TRAVER reflects the changes in Equal Access treatments. When you use TRAVER and the trace option, TRAVER provides the reason for failed carrier checks. For example, a reason can indicate that the carrier does not handle inter-LATA traffic. The TRAVER provides a list of the treatment in table TMTCNTL. When TRAVER uses the no trace option, TRAVER shows the treatment route for failed calls.

CELL-to-CCS7 interworking

Before this BSC, the MF CELL-to-CCS7 ATC calls in the AT failed and generated a DFIL126 log. The log indicated that MF-to-CCS7 interworking

did not support the originating trunk group type (CELL). This feature package now supports the following:

- calls that come in on MF CELL trunks with FGD signaling and terminate to CCS7 ATC trunks
- calls that come in on CCS7 ATC trunks and terminate to MF CELL trunks
- calls that are not IEC intra-LATA calls that come in on MF CELL trunks and terminate to CCS7 IT trunks

This feature package also supports the following FGD call types when the calls route to a CCS7 ATC trunk:

- domestic DD or OA:
  - KP + 0ZZXXX + ST
  - KP + (II + ANI) + ST
  - KP + (0) + 7/10 digits + ST
- cut-through:
  - KP + 0ZZXXX + ST
  - KP + (II + ANI) + STP
- cut-through to IEC operator:
  - KP + 0ZZXXX + ST
  - KP + (II + ANI) + ST
  - KP + 0 + ST
- FGD 950:
  - KP + 0ZZXXX + ST
  - KP + (II + ANI) + ST2/3P
- international DD or OA:
  - KP + 1N/N'X + XXX + CCC/01R+ ST
  - KP + (II + ANI) + ST
  - KP + (0) + CC + NN + ST
- international cut-through:
  - KP + 1NX + XXX + 000 + ST
  - KP + (II + ANI) + STP

Cellular Interconnect (continued)

- international cut-through to INC operator:
  - — KP + 1N'X + XXX + 000 + ST
  - — KP + (II + ANI) + ST
  - — KP + 0 + ST
- international 950:
  - — KP + 1NX + XXX + 000 + ST
  - — KP + (II + ANI) + ST2/3P
- terminating FGD calls incoming on CCS7 ATC trunks outgoing to MF CELL trunks
- the CCS7 IT termination and origination for calls that are not IEC intra-LATA CMC calls

Every CELL-to-CCS7 ATC interworking call uses the same signaling as MF IT-to-CCS7 ATC interworking calls. The message fields do not change.

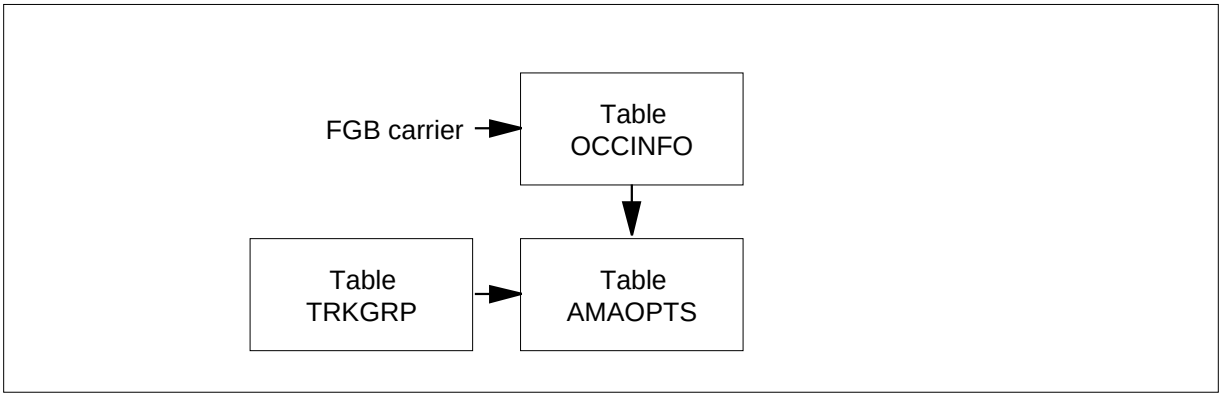
Translations table flow

The the Cellular Interconnect translations tables are as follows:

- Table OCCINFO allows the operating company to monitor the CMC and IEC/INC connection. This table allows the operating company to include the called number in the billing records.
- Table AMAOPTS allows generation of call code 64 and 66 records.
- Table TRKGRP allows type 2A interconnection to a CMC.

The Cellular Interconnect translation process appears in the following flowchart.

Table flow for Cellular Interconnect



The datafill content in the flowchart appears in the following table. The call code is 064 and 066.

Datafill example for Cellular Interconnect

Datafill table	Example data
OCCINFO	CAR1 777 EAP Y Y Y N Y Y Y Y N Y N N Y Y N Y N N
AMAOPTS	CMCORIG ON
	CMCICWK ON
	CMCTERM ON
TRKGRP	CMCABCAT
	CELL 0 TLA NCRT IC NIL MIDL 613 PEA NSCR 613 6211234 N

Limits

Cellular Interconnect has the following limits:

- The system does not allow operator access on a terminating CMC call. The system does not support operator hold and EAOSS.
- An originating CMC call does not normally require operator support. If a DMS-200 TOPS office receives an OA call to a cellular carrier, the call must route to an IT trunk. This action must occur before the call can reach the CELL trunk. The system does not support direct connections from a TOPS position to a CELL trunk.
- The MF monitoring applies to FGD calls. These calls are national, international and 950.
- The system does not support the CCS7 ATC trunk termination for FGB or FGC calls incoming on MF CELL trunks.
- The system does not support Tandem Equal Access CMC calls to another AT with CCS7 IT trunks.
- Option CMCICWK does not affect the carrier connect time for MF CELL-to-CCS7 ATC calls. The system sets the carrier connect time to the time the system sends the IAM to the FGD carrier.
- Field CMCMON in table OCCINFO does not affect the call code 66 and 110 billing records. The system generates these records for MF CELL-to-CCS7 ATC calls. The system always collects and places the called number in the TERM NPA and TERM NUMBER fields of the billing records. This action occurs if the called number is available. Refer to the billing section for details.

Cellular Interconnect (continued)

- The system does not support the selection of an outgoing MF ATC trunk as the secondary route. The system does not support this selection after a continuity check fails for the original CCS7 ATC trunk.
- The system does not support 800 calls incoming on a MF CELL trunk to a E800 SSP.

Interactions

The following paragraphs describe the association between Cellular Interconnect and other functionalities.

The operating company can use current MF receivers, universal tone receivers, or present MF receivers and universal tone receivers.

The additional time to hold a receiver is approximately 4 seconds for a national call and 5.5 seconds for an international call.

The CMC feature can associate with different types of carrier access. Carrier access types can include FGA, FGB, FGC, and FGD. The system produces a CMC access record for every CMC. The system produces other carrier access records are when the CMC is a line-side connection.

Activation/deactivation by the end user

Cellular Interconnect does not require end user activation or deactivation.

Billing

This feature package allows a call to originate from a CMC switch through a DMS-200 AT. The system provides billing records to charge the CMC for switch access. The CMC calls have call codes, these codes appear in the following table.

Call codes for CMC calls (Sheet 1 of 2)

Call type	Call codes produced
CMC to FGA carrier	66, 131
CMC to FGB carrier	66, 134
CMC to FGC carrier	66, 110
CMC to FGD carrier	66, 110
CMC to toll trunk (to EAEO)	66
CMC to line	66

Call codes for CMC calls (Sheet 2 of 2)

Call type	Call codes produced
CMC to CMC	66, 64
FGA carrier to CMC	132, 64
FGB carrier to CMC	135, 64
FGC carrier to CMC	119, 64
FGD carrier to CMC	119, 64
Line to CMC	64
Toll trunk from EAEO to CMC	64

The calling and called digits in FGD signaling route to the carrier on a speech path. The system does not collect the digits at the AT. This feature package takes the calling number from the trunk group data for the CELL trunk group. This feature package uses this calling number in the billing record. The called number field is blank for CMC-to-FGD calls. The absence of the calling number makes sure that downstream billing does not detect this occurrence as an error.

Two new additional call codes are added to originate and terminate the CMC calls. The following sections describe these codes.

Call code 64

Call code 64 is a Bellcore format code for an originating call to a CMC. This call code uses current structure codes 00653 and 00654. For a standard originating CMC call, the code is 00653. Code 00654 is a call with long duration.

An example of an AMA record for call code 64 appears in the following figure.

Cellular Interconnect (continued)

Call code 64

```
HEX ID:
AA  STRUCT CODE:00653C  CALL TYPE:064C SENSOR TYPE:036C
SENSOR ID:
0000000C  REC OFC TYPE:036C REC OFC ID:0000000C
DATE:
80107C  TIMING IND:00000C STUDY IND:00C ANSWER:0
SERV OBSERVED:
0C OPER ACTION:0C SERV FEAT:000C OVERSEAS IND:1C
TERM NPA:
00613C TERM NO:6211901C  TIME:2256209C
ELAPSED TIME:
000000024C IC/INC PREFIX:02222C CC DATE:80107C
CC TIME:
2256136C  ELAPSED CC:000000098C IC/INC EVENT:010C
TRK GRP:
00293C  ROUTING:0C
```

Call code 66

Call code 66 is a Bellcore format code for a terminating call from a CMC. A possible exception is a CMC call to an FGD carrier. In table AMAOPTS, if option CMCICWK is ON, the system does not make the billing record. The system makes the billing record if the system receives a billing wink from the FGD carrier.

An example of an AMA record for call code 66 appears in the following figure.

Call code 66

```
HEX ID:
AA  STRUCT CODE:00625C  CALL TYPE:066C SENSOR TYPE:036C
SENSOR ID:
0000000C  REC OFC TYPE:036C  REC OFC ID:0000000C
DATE:
80107C  TIMING IND:00000C  STUDY IND:0000000C ANSWER:0C
SERV OBSERVED:
0C  OPER ACTION:0C SERV FEAT:000C  ORIG NPA:613C
ORIG NO:
6211901C  OVERSEAS IND:1C  TERM NPA:00613C
TERM NO:
8881234C  TIME:2255337C  ELAPSED TIME:000000038C
IC/INC PREFIX:
02221C  CC DATE:80107C  CC TIME:2255283C
ELAPSED CC:
000000091C  IC/INC EVENT:010C TRK GRP:00299C
ROUTING:
0C  DIALING:7C  ANI:0C
```

Billing for CELL-to-CCS7 calls

The system supports the following call codes for FGD calls to the CMC:

- call code 64 is an originating CMC call

  The system generates a call code record for outgoing calls to CELL trunks. A field change occurs when an incoming call terminates on MF CELL trunks. The incoming call is on a CCS7 ATC or CCS7 IT trunk. These changes affect the following fields:

  — ORIG NPA: If calling NPA is available from the charge number or calling number parameter of the incoming IAM. The system sets this field to the NPA. If the NPA is not available the system sets this field to 00000.

  — ORIG NUMBER: If calling number is available from the charge number or calling number parameter of the incoming IAM. The system sets this field to the number. If the calling number is not available, the system sets this field to 0000000.

  — TERM NPA: If available from IAM, the system sets this field to dialed NPA. If the NPA is not available the system sets this field to NPA for incoming trunk group data.

  — TERM NUMBER: The system sets this field. This field contains the last seven digits of called number for the incoming IAM.

- call code 66 is a terminating CMC call

Cellular Interconnect (continued)

A change occurs for outgoing calls to CCS7 ATC and CCS7 IT trunks. The calls that are not IEC intra-LATA calls. These changes affect the following fields:

— ORIG NPA: If calling number is available on an FGD call from the CMC, the system takes this field from the 10-digit calling number. If the calling number is not available, the system takes this field from table TRKGRP (CELL), field BILLNO if 10-digit BILLNO. If the 7 digit BILLNO is available. the system takes this field from SNPA.

— ORIG NPA: The system determines if the calling number is available on an FGD call from the CMC. If the number is available, the system takes the field from the 10-digit calling number. If the number is not available, the system takes the field from table TRKGRP (CELL). This table contains field BILLNO and field SNPA. The system uses field BILLNO when the 10 digit BILLNO is available. The system uses field SNPA when the 7-digit BILLNO is available.

— ORIG NUMBER: If calling number is available on an FGD call from the CMC, the system sets this field. This field contains the last seven digits of the calling number. If the calling number is not available, the system takes this field from table TRKGRP (CELL), field BILLNO.

— TERM NPA: For domestic calls, the system sets this field to the NPA of the called number that outpulses from the CMC. The called number outpulses from the CMC when the caller dials the NPA. If the caller does not dial the NPA, the system sets this field to the same value as the ORIG NPA. For international calls this field does not change. For cut-through and 950 calls the system sets this field to 00000.

— TERM NUMBER: For domestic calls, the system sets this field. This field contains the last seven digits of the called number as outpulsed from the CMC. For cut-through and 950 calls, the system sets this field to 0000000. This field does not change for international calls.

— CARRIER CONNECT TIME: The system sets this field to the time the IAM outpulses to IEC.

- call code 110 is an originating Equal Access call

  Changes occur to the following fields CMC calls outgoing to CCS7 ATC trunks:

  — ORIG NPA: The system determines if the calling number is available on an FGD call from the CMC. If the number is available, the system takes the field from the 10-digit calling number. If the number is not available, the system takes the field from table TRKGRP (CELL). This table contains field BILLNO and field SNPA. The system uses field

BILLNO when the 10 digit BILLNO is available. The system uses field SNPA when the 7-digit BILLNO is available.

— ORIG NUMBER: If calling number is available on an FGD call from the CMC. The system sets this field. This field contains the last seven digits of the calling number. If the calling number is not available the system takes this field from table TRKGRP (CELL), field BILLNO.

— TERM NPA: For domestic calls, the system sets this field to the NPA of the called number outpulsed from the CMC. The called number outpulses from the CMC when the caller dials the NPA. If the caller does not dial the NPA the system sets this field to the same value as the ORIG NPA. For international calls, this field does not change. For cut-through and 950 calls, this field has the value 00000.

— TERM NUMBER: For domestic calls, the system sets this field. This field contains the last seven digits of the called number as outpulsed from the CMC. For cut-through and 950 calls, the system sets this field to 0000000. This field does not change for international calls.

— CARRIER CONNECT TIME: The system sets this field to the time the IAM outpulses to IEC.

— TRUNK GROUP NUMBER: The system sets the first character of the BCD to 4. This action indicates a CCS7 ATC trunk group routes from the AT to the IEC. The system sets the BCD characters 2 to 5 to the CCS7 ATC trunk group number.

- call code 119 is terminating Equal Access call

  This record is the same as the record the system generated on a CCS7 ATC-to-MF IT call in the AT.

Station Message Detail Recording

Cellular Interconnect does not affect Station Message Detail Recording.

Cellular Interconnect (continued)

Datafilling office parameters

The office parameters for Cellular Interconnect appear in the following table. Refer to the *Office Parameters Reference Manual* for more information about office parameters.

Office parameters for Cellular Interconnect

Table name	Parameter name	Explanation and action
OFCENG	NUM_OF_BC_AMA_UNITS	An originating CMC call requires a minimum of one Bellcore AMA unit. A terminating CMC call can require a Bellcore AMA unit. Provision the parameter NUM_OF_BC_AMA_UNITS. Every CELL trunk in the office that routes to a carrier, must have two Bellcore AMA units

Note: To calculate the number of CAMA recording units required, use the following provisioning rule:

UNITS = the current provisioned number

+the average number of CAMA calls per second that generate a GENERIC AMA record (call codes 800 to 999)

+ the average number of CAMA calls per second that generate a service feature field with table STDPRTCT and subtable STDPRTCT.AMAPRT.

Bellcore AMA units

Call type	Number of units
CELL trunk to CELL trunk	1
CELL trunk to FGC/FGD carrier	2
CELL trunk to FGB carrier	2
CELL trunk to end office (IT trunk)	1
CELL trunk to line (DMS-100/200 switch)	1

Datafill sequence

The tables that require datafill to implement Cellular Interconnect appears in the following table. The tables appear in the correct entry order.

Datafill requirements for Cellular Interconnect

Table	Purpose of table
OFCENG	Office Engineering. This table contains data on engineering parameters for the office. See “Datafilling office parameters" for how Cellular Interconnect affects office parameters.
OCCINFO	Table OCCINFO contains other common carrier information. This table defines the attributes for the carriers that serve a DMS switch. This table screens calls for carrier compatibility.
TRKGRP (CELL)	Table TRKGRP (CELL) contains the cellular trunk groups. This table defines the trunks with traffic. The system uses trunks to route cellular traffic. This table allows type 2A interconnections between a CMC and an AT.
AMAOPTS	Table AMAOPTS contains AMA option. The tables controls the activation and schedules of the recording options for local, toll, and high-revenue calls.

Datafilling table CMCMON

Field CMCMON is an additional field. This field allows the operating company to monitor the CMC and IEC/INC connection. The CMCMON field also allows the originating and terminating billing records to include the called DN.

Datafill for Cellular Interconnect for table CMCMON appears in the following table. The fields that apply to Cellular Interconnect appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table CMCMON

Field	Subfield or refinement	Entry	Explanation and action
CMCMON		Y or N	Cellular mobile carrier monitor. Enter Y to monitor the connection between the CMC and the IEC/INC. Enter Y to place the called DN in the originating and terminating billing records. Enter N if you do not want to monitor the connection. Enter N if you do not want the DN in the originating and terminating billing records.

Cellular Interconnect (continued)

Datafill example for table CMCMON

Sample datafill for table CMCMON appears in the following example.

MAP example for table CMCMON

```
CARRNAME CARRNUM ACCESS INTER INTNTL INTRA ANI FANI
ONISCRN AD1 OVERLAP INTERS INTRAS TERMREC OCCSEPNO OPSIG
PICIND NOA950 INCCPN DTMFIND OPSERV CACBLOCK CTDOA CMCMON
SCRNWATS CRMCRA ATPINCL INTRAOPR
_____________________________________________________
   C111    111   EAP    Y    Y     N   Y    N        N  Y
     Y       Y      Y    LONG   O  FGRPC   Y      N
      N       N      N       N     N    N      N      Y
        N       N
```

Datafilling table TRKGRP (CELL)

Datafill for Cellular Interconnect for table TRKGRP (CELL) appears in the following table. The fields that apply to Cellular Interconnect appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table TRKGRP (CELL)

Field	Subfield or refinement	Entry	Explanation and action
	BILLNO	Billing number	Billing number. The number that the system bills for the call. ***Note:*** If the FGB carrier requests ANI, the system uses this field.
	CCWKVLD	Y or N	Carrier connect wink. Enter N to indicate that the carrier connect wink in Equal Access international calls must not generate again. To allow the wink to generate again, enter Y. This field is present because most offices, that are not EAEOs and ATs cannot handle this wink.

Datafill example for table TRKGRP (CELL)

Sample datafill for table TRKGRP (CELL) appears in the following example.

MAP example for table TRKGRP (CELL)

```
GRPKEY
                                                GRPINFO
_____________________________________________________________________
CMCABCAT
   CELL 0 TLA NCRT 2W NIL MIDL 613 PEA NSCR 613 8910000 N
```

Datafilling table AMAOPTS

Table AMAOPTS controls the activation and scheduling of the recording options for local, toll, and high-revenue calls. This table contains one tuple for every option. A schedule associates with the option. The schedule defines the activity of an option. An option can be active all of the time, active some of the time or not active.

Datafill for Cellular Interconnect for table AMAOPTS appears in the following table. The fields that apply to Cellular Interconnect appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table AMAOPTS (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
OPTION		Option code	Option. Enter an alphanumeric option code. The following subfields describe options associated with Equal Access.
	CMCORIG		This option controls the generation of originating CMC billing records (call code 64).
	CMCTERM		This option controls the generation of terminating CMC billing records (call code 66).
	CMCICWK		For a terminating CMC call, the carrier connect time is normally the time the system seizes the incoming CMC trunk. If CMCICWK is ON, carrier connect time is the amount of time for reception of the billing wink from the FGD carrier. The carrier connect time refers to a CMC-to-FGD carrier call. When the system receives a billing wink from the FGD carrier the system produces a CMC access record.

Cellular Interconnect (continued)

Datafilling table AMAOPTS (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
SCHEDULE		refer to subfields	Schedule. This field contains the following subfields.
	AMASEL	ON, OFF, DEFAULT, PERIODIC,	AMA selector. Enter one of the following values: • ON Activate the option immediately. • OFF Deactivate the option immediately. • DEFAULT Use the default schedule for the option. • PERIODIC Activate the option at the specified date and time. Perform the periodic activity at specified hours or minutes. Complete subfields ONDATE and ONTIME to specify the date and time for activation. Complete field SCHED for the time intervals to perform the activity. • TIMED Activate the option between the specified dates and times. For the CMCORIG option, the correct AMA selectors are ON, OFF, TIMED and DEFAULT. Default is OFF. For the CMCTERM option, the correct AMA selectors are ON, OFF, TIMED and DEFAULT. Default is OFF. For the CMCICWK option, the correct AMA selectors are ON, OFF, TIMED and DEFAULT. Default is OFF.
	ONDATE	YYMMDD	Activation on date. If AMASEL = TIMED, enter the year, the month, and the day that the activation of the option is set to ON. The format is YYMMDD. If AMASEL does not equal TIMED, this field does not have a prompt.

Datafilling table AMAOPTS (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	ONTIME	HHMM	Activation on time. If AMASEL = TIMED, for activation, enter the hour and minute that you want to activate the option. The format is HHMM. If AMASEL does not equal TIMED, this field does not have a prompt.
	OFFDATE	YYMMDD	Activation off date. If AMASEL = TIMED, enter the year, the month, and the day that the activation of the option is set to OFF. The format is YYMMDD. If AMASEL does not equal TIMED, this field does not have a prompt.
	OFFTIME	HHMM	Activation off time. If AMASEL = TIMED, for deactivation, enter the hour and minute that you want to deactivate the option. The format is HHMM. If AMASEL does not equal TIMED, this field does not have a prompt.

Datafill example for table AMAOPTS

Sample datafill for table AMAOPTS appears in the following example.

MAP example for table AMAOPTS

```
      OPTION                        SCHEDULE
_____________________________________________________________
       CMCORIG                        ON
```

Tools for verifying translations

Cellular Interconnect does not use tools to verify translations.

SERVORD

Cellular Interconnect does not use SERVORD.

Cellular Interconnect—End Office

Ordering codes

Functional group ordering code: EQA00001

Functionality ordering code: EQA00003

Release applicability

BCS35 and later versions

Requirements

To operate Cellular Interconnect—End Office requires BAS Generic BAS00003.

Description

This feature package provides the ability to produce originating and terminating automatic message accounting (AMA) records. The AMA records are for type 1 and 2B cellular interconnections. Bellcore defines three interconnection designs for a cellular mobile carrier (CMC) to access the operating company, the IEC and the INC networks. The interconnection designs are as follows:

- Type 1 is a trunk connection through an EAEO or a non-EAEO.

  The signaling received from the CMC is like the signaling from a line.

- Type 2A is a connection through an AT.

  The signaling received from the CMC is like the signaling from an EAEO.

- Type 2B is a connection from a CMC to a local end office.

  Type 2B is a form of type 1 interconnection.

Operation

This feature package provides two call code records for type 1 and 2B cellular interconnections. The system generates a call code 63 AMA record for an originating CMC call. The system produces a call code if the system receives a wink from the CMC. An originating CMC call is a call from an EAEO or a non-EAEO to a CMC trunk group.

The system produces a call code 65 AMA record for a terminating CMC call. The system produces a call code when the system detects a seizure on the incoming CMC trunk. A terminating CMC call is a call from a CMC trunk to a connected EAEO, or a non-EAEO. If a call occurs from a CMC to another CMC, the call is an originating and a terminating CMC call.

Options CMCICWK, CMCORIG and CMCTERM in table AMAOPTS control the production of the AMA records.

Translations

Enter the CMC type 1 and 2B interconnections as PX trunk groups on the DMS-100 switch. The PX trunk provides the direct dialing and translation ability the interconnections require.

This feature package adds field LOCALCMC to table TRKGRP for the PX trunk group. Field LOCALCMC specifies if the trunk acts as a type 1 or 2B interconnection. Field LOCALCMC drives the production of the originating (call code 63) and terminating (call code 65) type 1 interconnection AMA records.

Translations for Equal Access and non-Equal Access calls from a PX trunk are like translations for plain old telephone service (POTS) lines. See feature package NTX186AB - Equal Access End Office in this guide for additional information about POTS Equal Access translations.

For non-Equal Access calls, the system uses the standard pretranslator from table TRKGRP (PX) with the ZEROMPOS field. This action occurs if the system receives zero minus dialing. The DMS switch for PX trunks supports the following two non-Equal Access call types that follow:

- 0/1 + 3 to 10 digits
- 11/01 + country code + national number + ST

For an Equal Access call, the system uses the standard pretranslator with the PIC, CHOICE and LATANM subfields. The DMS switch for PX trunks supports the following Equal Access call types:

- 10XXX 1 + 7/10 digits - DD national
- 10XXX 0 + 7/10 digits - OA national
- 10XXX 011 + country code + national number - DD international
- 10XXX 01 + country code + national number - OA international
- 00 - carrier 00- call
- 10XXX + # - cut through dialing, Digitone only
- 10XXX + 0(0) - carrier 0- call
- 1 N0/1X + 7 digits - SAC, like 800 and 900
- 950-WXXX - interim 950 call, FGD

Cellular Interconnect—End Office (continued)

Type 2B interconnections require local call termination. To prevent terminations other than local calls, enter the standard pretranslator for the trunk group. This action allows only the NPA-NXX codes that the connected DMS-100 end office serves.

Treatments for 10XXX intra-LATA calls

Before this release when Equal Access calls failed, the system routed the calls to vacant code (VACT). Equal Access calls failed because the carrier did not complete the calls according to table OCCINFO datafill. The treatment that occurs depends on the call type and the carrier datafill in table OCCINFO. The treatments that apply to type 1 and 2B CMC calls, appear in the following table.

Failure conditions - new treatments

Failure condition	Treat-ment	Disposition
Inter-LATA restriction INTER = N (no) in table OCCINFO for carrier	CACE	CAC in error announcement
Intra-LATA restriction INTRA = N in table OCCINFO for carrier	NACD	Do not dial 10XXX announcement
Interstate restriction INTERS = N in table OCCINFO for carrier	CACE	CAC in error announcement
Intrastate restriction INTRAS = N in table OCCINFO for carrier	CACE	CAC in error announcement
International restriction INTNTL = N in table OCCINFO for carrier	CACE	CAC in error announcement
AD1 dialed AD = N in table OCCINFO for carrier	CACE	CAC in error announcement

The updated TRAVER reflects the changed Equal Access treatments. When in use with the trace option, TRAVER provides the reason for a failure of carrier checks. An example of a failure reason is, This carrier does not handle

inter-LATA traffic. The TRAVER provides a lookup of the treatment in table TMTCNTL. When in use with the no trace option, TRAVER provides the treatment route for calls that fail.

Limits

The following limits apply to Cellular Interconnect—End Office:

- The system supports only MF outpulsing for outgoing or two-way type 1 and 2B cellular interconnections.
- For PX trunks, tables TRKGRP and CXGRP can contain only 7-digit or 10-digit billing numbers.

Interactions

Cellular Interconnect—End Office does not have functionality interactions.

Activation/deactivation by the end user

Cellular Interconnect—End Office does not require activation or deactivation by the end user.

Billing

Cellular Interconnect—End Office does not affect billing.

Station Message Detail Recording

Cellular Interconnect—End Office does not affect Station Message Detail Recording.

Datafilling office parameters

The office parameters that the Cellular Interconnect—End Office feature uses appear in the following table. Refer to *Office Parameters Reference Manual* for additional information about office parameters.

Office parameters for Cellular Interconnect—End Office

Table name	Parameter name	Explanation and action
OFCENG	NUM_OF_BC_AMA_UNITS	Each originating CMC call and specified terminating CMC calls, require a minimum of one Bellcore AMA unit. When you provision parameter NUM_OF_BC_AMA_UNITS, two Bellcore AMA units must be available for each CELL trunk in the office. The CELL trunks route to a carrier. See Bellcore AMA units table for more information.

Cellular Interconnect—End Office (continued)

Note: To calculate the number of CAMA recording units required, use the following provisioning rule:
UNITS= the current provisioned number
+ the average number of CAMA calls for each second that generate a GENERIC AMA record, call codes 800 to 999
+ the average number of CAMA calls for each second that generate a service feature field through table STDPRTCT and subtable STDPRTCT.AMAPRT.

Bellcore AMA units

Call type	Number of units
CELL trunk to CELL trunk	1
CELL trunk to FGC/FGD carrier	2
CELL trunk to FGB carrier	2
CELL trunk to end office (IT trunk)	1
CELL trunk to line (DMS-100/200 switch)	1

Datafill sequence

The tables that require datafill to implement the Cellular Interconnect—End Office feature appear in the following table. The tables appear in the correct entry order.

Datafill requirements for Cellular Interconnect—End Office

Table	Purpose of table
OFCENG	Office Engineering. This table contains data on engineering parameters for the office. See “Datafilling office parameters" for additional information on how Cellular Interconnect - End Office affects office parameters.
TRKGRP (PX)	Table TRKGRP (PX) (PX trunk group) contains information on each PX trunk group.
TRKSGRP	Additional information for each subgroup assigned to one of the trunk groups table TRKGRP (PX) lists, appears in table TRKSGRP (trunk subgroup).
AMAOPTS	Table AMAOPTS (AMA options) controls the activation and schedule of the recording options for local, tool and high-revenue calls.

Datafilling table TRKGRP (PX)

Datafill for Cellular Interconnect—End Office for table TRKGRP (PX) appears in the following table. The fields that apply to Cellular Interconnect—End Office appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table TRKGRP (PX)

Field	Subfield or refinement	Entry	Explanation and action
	LOCALCMC	Y or N	Local cellular mobile carrier. Enter Y to specify that the trunk acts as a type 1 or 2B interconnection. The trunk drives the production of the originating (call code 63) and terminating (call code 65) type 1 interconnection AMA records. Set field OPULSTYP in table TRKSGRP to MF. Enter N to specify that the trunk is not a type 1 or 2B interconnection. The system does not produce type 1 AMA records.
	EA	Y or N	Equal Access. Enter Y for EAEO. If you enter Y, enter the PIC, CHOICE, and LATANM subfields with data. Enter N (default) for a non-EAEO. You can set this field to N and the end office can be an EAEO. If these events occur the system treats outgoing calls as non-Equal Access calls. The system routes calls according to standard translations (HNPACODE). The system uses Non-Equal Access billing.
	PIC	IEC or INC name, blank	Primary inter-LATA carrier. If field EA = Y, enter an IEC or INC name, as table OCCNAME defines. If EA=N, leave this field blank.
	CHOICE	Y, N, blank	Choice. If EA = Y, enter Y if 10XXX dialing can occur. If dialling cannot occur, enter N. If EA=N, leave this field blank.
	LATANM	LATA name, blank	LATA name. If EA=Y, enter a LATA name table LATANAME specifies. If EA=N, leave this field blank.

Datafill example for table TRKGRP (PX)

Sample datafill for table TRKGRP (PX) appears in the following example.

Cellular Interconnect—End Office (continued)

MAP example for table TRKGRP (PX)

```
        GRPKEY
                                                          GRPINFO
_____________________________________________________________________
RCC1PX
PX 0 ELO NCRT 2W NIL MIDL N POT1 NSCR 619 LCL NONE NONE
NLCA      N N 32 NIL 5409999 DIALTN N N N $
```

Datafilling table TRKSGRP

Datafill for Cellular Interconnect—End Office for table TRKSGRP appears in the following table. The fields that apply to Cellular Interconnect—End Office appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table TRKSGRP

Field	Subfield or refinement	Entry	Explanation and action
	OPULSTYP	MF	Outgoing type of pulsing. If subfield LOCALCMC in table TRKGRP (PX) is Y, enter MF.

Datafill example for table TRKSGRP

Sample datafill for table TRKSGRP appears in the following example.

MAP example for table TRKSGRP

```
SGRPKEY   CARDCODE
                                                          SGRPVAR
_____________________________________________________________________
DAC 0     DS1SIG
  STD OG     MF       WK    7 0 NO      NO N N N   70    UNEQ
```

Datafilling table AMAOPTS

Table AMAOPTS controls the activation and schedule of the recording options for local, toll and high-revenue calls. This table contains one tuple for each option. Each option has an schedule option. The schedule defines if an option is active, active at specified times or not active.

Datafill for Cellular Interconnect—End Office for table AMAOPTS appears in the following table. The fields that apply to Cellular Interconnect—End Office

appear in this table. Refer to the data schema section of this document for a description of the other fields.

Datafilling table AMAOPTS (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
OPTION		see subfields	Option. Enter an alphanumeric option code. The options that apply to Equal Access appear in the following subfields.
	CMCORIG		This option controls the generation of originating CMC billing records, call code 6.
	CMCTERM		This option controls the generation of terminating CMC billing records, call code 65.
	CMCICWK		For a terminating CMC call, the carrier connect time is normally the time the incoming CMC trunk is seized. Option CMCICWK can be ON. If this event occurs the carrier connect time is the time the system receives the billing wink. This connect time is for CMC-to-FGD carrier calls. The billing wink comes from the FGD carrier. The system only produce a CMC access record if the system receives a billing wink from the FGD carrier.
SCHEDULE		see subfields	Schedule. This field contains the following subfields.

Cellular Interconnect—End Office (continued)

Datafilling table AMAOPTS (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	AMASEL	ON, OFF, DEFAULT, PERIODIC, TIMED	AMA selector. Enter one of the following values: • ON Activate the option immediately. • OFF Deactivate the option immediately. • DEFAULT Use the default schedule for the option. • PERIODIC Activate the option at the specified date and time. Perform the periodic activity regularily. Complete subfields ONDATE and ONTIME to specify the date and time for activation. Complete field SCHED for the time intervals to perform the activity. • TIMED Activate the option between the specified dates and times. For the CMCORIG option, the correct AMA selectors are ON, OFF, TIMED and DEFAULT. Default is OFF. For the CMCTERM option, the correct AMA selectors are ON, OFF, TIMED and DEFAULT. Default is OFF. For the CMCICWK option, the correct AMA selectors are ON, OFF, TIMED and DEFAULT. Default is OFF.
	ONDATE	YYMMDD	Activation on date. If AMASEL=TIMED, enter the year, the month and the day on which the activation of the option is set to ON. The format is YYMMDD. If AMASEL does not equal TIMED, this field does not have a prompt.
	ONTIME	HHMM	Activation on time. If AMASEL=TIMED, enter the hour and minute the option must activate. The format is HHMM. If AMASEL does not equal TIMED, this field does not have a prompt.

Datafilling table AMAOPTS (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	OFFDATE	YYMMDD	Activation off date. If AMASEL=TIMED, enter the year, the month, and the day on which the activation of the option is set to OFF. The format is YYMMDD. If AMASEL does not equal TIMED, this field does not have a prompt.
	OFFTIME	HHMM	Activation off time. If AMASEL=TIMED, enter the hour and minute the option must deactivate. The format is HHMM. If AMASEL does not equal TIMED, this field does not have a prompt.

Datafill example for table AMAOPTS

Sample datafill for table AMAOPTS appears in the following example.

MAP example for table AMAOPTS

```
      OPTION                  SCHEDULE
_____________________________________________________
       CMCORIG                   ON
```

Tools for verifying translations

Cellular Interconnect—End Office does not use tools to verify translations.

SERVORD limits

Cellular Interconnect—End Office does not have SERVORD limits.

EA Presubscription Reports on IBN

Ordering codes

Functional group ordering code: EQA00001

Functionality ordering code: does not apply

Release applicability

The BCS24 and later versions

Requirements

The EA Presubscription Reports on IBN requires BAS Generic, BAS00003 to operate.

Description

The EA Presubscription Reports on IBN creates a new command interpreter (CI) command, IBNPICLIST. The IBNPICLIST provides the ability to generate equal access (EA) presubscription reports for IBN lines and private branch exchange (PBX) trunks. Before this ability the system generated these reports only for POTS lines.

Note: The PBX trunks include lines with line class code (LCC) PBX and trunks of types P2 and private exchange (PX).

Operation

The EA Presubscription Reports for Meridian Digital Centrex (MDC) include hunt group members. The system uses a separate DN to display each member of a directory number hunt (DNH) group. The system uses the same pilot DN to display members of distributed line hunt (DLH) groups and multi-line hunt (MLH) groups. The LEN differs for each member. The system ignores bridged night number (BNN) DNs. The system accounts for BNNs under the DNH, DLH, or MLH group to which the BNNs belong.

Translations table flow

The EA Presubscription Reports on IBN does not affect translations table flow.

Limits

The following limits apply to EA Presubscription Reports on IBN:

- for standard MDC 500/2500 sets, the EA Presubscription Report includes only individual line PICs entered in Table IBNFEAT. The report for Meridian business sets (MBS) and data units includes PICs entered in Table KSETFEAT. The report does not include PICs present on a customer

group translator or network class of service (NCOS) preliminary translator in Table IBNXLA.

- The following conditions can determine the length of time that the system requires for report generation. You must perform the IBNPICLIST command when the traffic load is at a minimum.
  - — traffic load
  - — the number of MDC lines and PBX trunks that you enter in the office
  - — the specified output device
- To make sure of report accuracy, do not make changes to the following tables during report generation. Do not make these changes directly or through the Service Order System (SERVORD):
  - — table LENFEAT
  - — table IBNFEAT
  - — table KSETFEAT
  - — table TRKGRP
  - — table OCCNAME
  - — table LATANAME

Interactions

The EA Presubscription Reports on IBN does not have functionality interactions.

Activation/deactivation by the end user

The IBNPICLIST command generates a list of numbers that primary inter-LATA carriers (PIC) and LATA names group:

- MDC and PBX directory numbers DNs
- line equipment numbers (LEN)
- P2/PX billing numbers (BILLNUM)
- common language location identifiers (CLLI)

A summary of the total number of DNs each carrier serves is available. The system can generate summary reports without listing the DNs.

The following is an example of a MAP display of the IBNPICLIST command.

EA Presubscription Reports on IBN (continued)

MAP example of the IBNPICLIST command

```
CI:
>IBNPICLIST ALL
_____________________________________________________
*** IBN EQUAL ACCESS PRESUBSCRIPTION REPORT ***

CARRIER:  NETEAP
DN/BILLNUM  LEN/CLLI
-------------------------------------
9062261914  HOST 01 0 17 26
CARRIER:  NETFGC
DN/BILLNUM  LEN/CLLI
-------------------------------------
CARRIER:  NETINT
DN/BILLNUM  LEN/CLLI
-------------------------------------
TOTALS
NETEAP  INTERLATA  COUNT = 1
NETFGC  INTERLATA  COUNT = 0
NETINT  INTERLATA  COUNT = 0
NETTRA  INTERLATA  COUNT = 0
VAPN    INTERLATA  COUNT = 0
REG234  INTERLATA  COUNT = 0
REG222  INTERLATA  COUNT = 0
REG228  INTERLATA  COUNT = 4
REG444  INTERLATA  COUNT = 0
REG333  INTERLATA  COUNT = 0
REG777  INTERLATA  COUNT = 0
REG220  INTERLATA  COUNT = 0
REG488  INTERLATA  COUNT = 0
REG120  INTERLATA  COUNT = 0
QUIT    INTERLATA  COUNT = 0
SSP     INTERLATA  COUNT = 0
REG867  INTERLATA  COUNT = 0
REG241  INTERLATA  COUNT = 0
REG231  INTERLATA  COUNT = 0
REG232  INTERLATA  COUNT = 0
REG233  INTERLATA  COUNT = 0
UWATS   INTERLATA  COUNT = 0
NILC    INTERLATA  COUNT = 2
-------------------------------------
TOTAL INTERLATA PRESUBSCRIBER = 7
INTERLATA DEFAULT COUNT = 718

*** END OF IBN EQUAL ACCESS PRESUBSCRIPTIN REPORT ***
```

EA Presubscription Reports on IBN (end)

Billing

The EA Presubscription Reports on IBN does not affect billing.

Station Message Detail Recording

The EA Presubscription Reports on IBN does not affect Station Message Detail Recording.

Datafilling office parameters

The EA Presubscription Reports on IBN does not affect office parameters.

Datafill sequence

The EA Presubscription Reports on IBN does not affect datafill.

Tools for verifying translations

The EA Presubscription Reports on IBN does not use tools to verify translations.

SERVORD

The EA Presubscription Reports on IBN does not use SERVORD.

Enhanced WATS Operation (POTS)

Ordering codes

Functional group ordering code: EQA00001

Functionality ordering code: EQA00010

Release applicability

BCS30 and later versions

Requirements

To operate the Enhanced WATS Operation (POTS) has the following requirements:

- BAS Generic, BAS00003
- UDDD Services, UDD00001

Description

The Enhanced WATS Operation (POTS) feature package provides expanded abilities to outward WATS (OUTWATS). The Enhanced WATS Operation (POTS) feature package provides greater flexibility of OUTWATS band arrangements. These enhancements allow the central office to provide better service to WATS subscribers and to carriers that offer WATS.

This feature package does not alter or replace the current WATS feature package. This feature is present with the original WATS package to allow a smooth change from one package to the other package. This feature depends on inward WATS (INWATS) abilities. The current WATS package provides these capabilities. The original WATS package remains in offices that do not offer Equal Access (EA).

Operation

The OUTWATS subscriber can access a WATS line. The subscriber goes off-hook and dials the correct number to perform this action. The DMS switch verifies if the system allows this call. When the system allows this call, the DMS switch routes the call to the correct trunk group. The call can be inter-LATA. When this event occurs, the system selects a trunk group. The system selects a trunk group from the primary WATS interexchange carrier (IEC), or WIC of the subscriber. The DMS switch routes out-of-band calls to a recorded announcement or treatment. Out-of-band calls can be calls that the subscriber dials outside a designated area of service. Out-of-band calls can be calls to a code that the system does not allow.

The enhancements this feature package provides appear in the following sections.

Enhanced WATS Operation (POTS) (continued)

Establishing band arrangements

This feature package provides the ability to establish the unique band arrangements. The system requires these arrangements to serve the IECs that request WATS. With enhanced WATS, table WATSBAND defines a maximum of 127 bands. These bands are band 0 to band 126. Table BANDSETS defines 1024 band arrangements. Band set assignments are more flexible because the band sets are assigned to keys the user defines. The band sets are not assigned to serving numbering plan area (SNPA) codes.

Jurisdiction

This feature package can allow the following types of service:

- pure intrastate (jurisdictional)
- pure interstate (jurisdictional)
- combined interstate/intrastate (multijurisdictional)

This feature allows the assignment of multijurisdictional WATS to a single line. A different carrier can provide each jurisdiction. A subscriber must dial 10XXX to reach one of the jurisdictions, because one carrier can be the WIC.

Screening

Sets of NPA-NXX codes or access dialing arrangements can define the associated band of service or call-type screening. These sets of NPA-NXX codes or dialing access arrangements require an enhanced WATS access line to perform this definition. The areas of service can be different for each IEC that requests WATS. The operating company defines the validation translation tables for each band and call types that code interpretation requires. Normal procedures allow data entry and change to datafill in these tables. Tables STDPRT and OCCINFO activate or deactivate the access to international direct distance dialing (IDDD) from enhanced WATS lines.

Enhanced WATS provides screening to associated bands or call-type screening for intra-LATA/inter-LATA service. This ability applies to call originations from WATS access lines as a part of enhanced OUTWATS and two-way WATS. The system can deactivate this screening when the carrier does not require the originating office to screen the traffic of the carrier. When this event occurs, the system forwards inter-LATA WATS calls to the carrier. This event occurs when a block on the calls is not present. The system does not perform band screening on intra-LATA or international calls.

For enhanced OUTWATS or two-way WATS, a direct dial (DD) call origination can pass the associated band or call-type screening. When this event occurs, the DMS switch routes the call to the correct transporting carrier.

Enhanced WATS Operation (POTS) (continued)

The DMS switch can route all service access code (SAC) calls from the pretranslator or handle SAC calls like a national call. When you set field SAC in table LENFEAT or CXGRP, you determine how the system screens the calls.

The switch routes directory assistance (DA) calls other than 411 calls to table STDPRT. This route allows the call to bypass enhanced WATS screening. This route allows the entry of a NON_DA555 inter-LATA call as NIL in table WATSBAND. When the system sets up the calls as national, the screening procedures apply to the calls. Calls that the DMS switch routes from the pretranslator table that do not have a translation design are special calls. The translation design can be NA or IN. The system does not perform enhanced WATS screening for these calls. The three exceptions to these conditions are N11, SAC, and Feature Group B (FGB) calls.

Line class codes

This feature introduces the following line class codes (LCC):

- EOW (enhanced outward WATS)
- ETW (enhanced two-way WATS)

You can assign code EOW to lines with enhanced OUTWATS. This condition occurs in offices with the NTX186AB - Equal Access End Office feature package and the enhanced WATS software package. Code EOW is like LCC OWT (OUTWATS), but the use of EOW can occur with or without a hunt group. You can assign code OWT to lines that are not hunt-type.

Calls can terminate on enhanced OUTWATS lines. Apply the Denied Termination (DTM) option to the line to disable this feature.

You can assign code ETW to lines with enhanced OUTWATS. This condition occurs in offices with the NTX186AB - Equal Access End Office feature package and the enhanced WATS feature package. Code ETW is like the LCC two-way WATS (2WW). The use of ETW can occur with or without a hunt group. You can assign code 2WW to hunt-type lines. Code ETW is a group of the LCCs inward WATS (INW) and EOW.

Line options

The use of a new line option occurs with the LCC values of EOW and ETW. This new option, enhanced WATS access line (EWAL), allows the assignment of a maximum of five carriers to a line. A bandset name provides the ability to screen WATS calls associated with each carrier. The first carrier assigned to the line is the WIC. A subscriber must dial 10XXX to access all other carriers assigned to the line. This process allows a subscriber to select different providers for different bands. When a subscriber dials 10XXX for a provider

that is not assigned to the line, the system blocks the call. The EWAL line option appears in table LENFEAT. This line option is not compatible with the primary inter-LATA carrier (PIC) line option.

The EWAL line option provides new fields. Fields INTRALAT and SAC allow or disable the ability to make intra-LATA and SAC calls. Intra-LATA and SAC calls operate separately. The same separate operation occurs when SAC calls can be intra-LATA calls. A SAC call can occur from a line on which field SAC allows SAC calling. For this condition to occur, field INTRALAT must disable intra-LATA calling. The system blocks SAC calls when field SAC disables SAC calling. This same event occurs when intra-LATA calling is active. Entries in table EASAC determine a SAC. The band number that the EWAL option provides is for billing use. This number appears in the billing records for the line. The system does not use this number to screen calls.

Assign multiple carriers to private exchange (PX) trunks in table CXGRP. This action allows multiple OUTWATS carriers for private branch exchange (PBX) customers.

Limits

The following limits apply to Enhanced WATS Operation (POTS):

- This feature does not change the range of INWATS band numbers. This feature does not provide enhancement to INWATS. This feature makes sure that INWATS calls function with enhanced two-way WATS.
- Band screening is not in effect for SAC, intra-LATA, FGB and N11 calls. Band screening is not in effect for calls that the DMS switch routes from pretranslation without an identified translation system.
- Pretranslations can allow or not allow international calls. Band screening does not occur for international calls.
- The DMS switch must route calls that do not require screening directly from the pretranslator.
- You can enter the first 127 carriers in table OCCNAME in table WATSBAND. You cannot enter the carrier NILC in table WATSBAND.
- This feature does not provide for NT format billing of enhanced WATS calls.
- Original overload procedures apply to enhanced WATS and OUTWATS in the same way.

Interactions

Enhanced WATS Operation (POTS) has no functionality interactions.

Enhanced WATS Operation (POTS) (continued)

Activation/deactivation by the end user

Enhanced WATS Operation (POTS) does not require activation or deactivation by the end user.

Billing

This feature package expands the correct band range in Bellcore format AMA WATS billing records. Billing records with call codes 068 (intra-LATA) and 114 (inter-LATA) reflect this expansion. The range increases from 0 through 12 to 0 through 126. The format of the records does not change.

The routing and billing that can occur on calls from an EOW or ETW line appear in the following table. Bellcore requirements can change the billing for these calls.

(Sheet 1 of 2)

Call type	Billing	Route
0-	TOPS billing	to TOPS through field ZEROMPOS in table LINEATTR
00-	CC 114	to IEC operator through table STDPRT
0+ intra-LATA	TOPS billing	to TOPS through standard translations
0+ inter-LATA	CC 114	to IEC operator
01+	CC 114	to IEC operator
011+	CC 114	to IEC international direct distance dialing (IDDD)
411	CC 009	to DA through tables STDPRT and AMAPRT
5551212	CC 033	to DA through tables STDPRT and AMAPRT
555XXXX	CC 088	to DA through tables STDPRT and AMAPRT
911	no billing	to Emergency Service Bureau (ESB)
611	CC 068	to repair through table STDPRT
800 intra-LATA	CC 068	route/screen through regular translations

Note: Call codes 007 and 111 do not appear in the table because these codes apply to Meridian Digital Centrex (MDC).

(Sheet 2 of 2)

Call type	Billing	Route
800 inter-LATA	CC 114	route/screen through regular translations
E800	CC 141	to IEC
	CC 142	operating company handles this call
900 intra-LATA	CC 068	route/screen through regular translations
900 inter-LATA	CC 114	route/screen through regular translations
950 Equal Access	CC 114	route through table STDPRT
950 FGB	CC 134	route through table STDPRT
976 intra-LATA	CC 068	route/screen through regular translations
10XXX+	CC 114	route/screen through regular translations
(1)+ intra-LATA	CC 068	route/screen through regular translations
(1)+ inter-LATA	CC 114	route/screen through regular translations

Note: Call codes 007 and 111 do not appear in the table because these codes apply to Meridian Digital Centrex (MDC).

An FGB call that uses the FGB selector in the standard pretranslator generates call code 134 billing records. The billing records include the WATS module code. The system does not screen these calls. The system always generates a 134 call code billing record with a WATS module code (023).

Calls that generate call code 071 records (INWATS overflows) use INWATS overflow data from enhanced two-way WATS lines. This ability is available with Bellcore format AMA.

Calls that terminate on an enhanced two-way WATS line generate an INWATS termination record. This event occurs when the required office parameters and table AMAOPTS tuples are active.

The use of the AMADUMP utility can obtain records. Examples of these records appear in the following section.

Examples of records

Sample records that the use of the AMADUMP utility obtains appear in examples 1 to 8.

Enhanced WATS Operation (POTS) (continued)

Example 1:

```
HEX ID:$col.AA  STRUCTURE CODE:$col.40028C  CALL CODE:$col.
009C
SENSORTYPE:036C SENSOR ID:$col.0000000C  REC OFFICE TYPE:$col
036C
REC OFFICE ID:$col.0000000C  DATE:$col.90114C TIMING IND:$col
00000C
STUDY IND:$col.0020000C ANSWER:$col.0C
SERVICE OBSERVED:$col.0C  OPER ACTION:$col.0C  SERVICE FEATUR
$col.000C
ORIG NPA:$col.613C ORIG NUMBER:$col.6211926C  CONNECT TIME:
$col.0258522C
MODULE CODE:$col.023C WATS INDICATOR:$col.2C  WATS BAND OR
MBI:$col.008C
WATS ADMINISTRATION:$col.FFFFFF MODULE CODE:$col.000C
```

Example 2:

```
HEX ID:$col.AA  STRUCTURE CODE:$col.40028C  CALL CODE:$col.
033C
SENSORTYPE:036C SENSOR ID:$col.0000000C  REC OFFICE TYPE:
$col.036C
REC OFFICE ID:$col.0000000C  DATE:$col.90114C  TIMING IND:
$col.00000C
STUDY IND:$col.0200000C ANSWER:$col.0C
SERVICE OBSERVED:$col.0C  OPER ACTION:$col.0C  SERVICE
FEATURE:$col.000C
ORIG NPA:$col.613C ORIG NUMBER:$col.6211926C  CONNECT TIME:
$col.0307570C
MODULE CODE:$col.023C  WATS INDICATOR:$col.2C  WATS BAND OR
MBI:$col.008C
WATS ADMINISTRATION:$col.FFFFFF MODULE CODE:$col.000C
```

Enhanced WATS Operation (POTS) (continued)

Example 3:

```
HEX ID:$col.AA  STRUCTURE CODE:$col.00501C  CALL CODE:$col.
068C
SENSORTYPE:036C  SENSOR ID:$col.0000000C  REC OFFICE TYPE:
$col.036C

REC OFFICE ID:$col.0000000C  DATE:$col.81207C  ANSWER:$col.
0C
SERVICE FEATURE:$col.000C  ORIG NPA:$col.613C
ORIG NUMBER:$col.6211926C  OVERSEAS IND:$col.1C  TERM NPA:
$col.00613C
TERM NUMBER:$col.8881234C  CONNECT TIME:$col.1144092C
ELAPSED TIME:$col.000000068C WATS INDICATOR:$col.2C
WATS BAND OR MBI:$col.006C
```

Example 4:

```
HEX ID:$col.AA  STRUCTURE CODE:$col.40500C  CALL CODE:$col.
088C
SENSOR TYPE:036C  SENSOR ID:$col.0000000C  REC OFFICE TYPE:
$col.036C
REC OFFICE ID:$col.0000000C  DATE:$col.90114C  ANSWER:$col.
0C
SERVICE FEATURE:$col.000C  ORIG NPA:$col.613C
ORIG NUMBER:$col.6211926C  OVERSEAS IND:$col.0C
TERM NPA:$col.00613C  TERM NUMBER:$col.5551234C
CONNECT TIME:$col.030933C  ELAPSED TIME:$col.00000059C
MODULE CODE:$col.23C  WATS INDICATOR:2C  WATS BAND OR MBI:
$col.008C
WATS ADMINISTRATION:$col.FFFFFF MODULE CODE:$col.000C
```

Enhanced WATS Operation (POTS) (continued)

Example 5:

```
HEX ID:$col.AA  STRUCTURE CODE:$col.10629C  CALL CODE:$col.
114C
SENSORTYPE:036C  SENSOR ID:$col.0000000C  REC OFFICE TYPE:$
col.036C
REC OFFICE ID:$col.0000000C DATE:$col.00000C  TIMING IND:$
col.00000C
STUDY IND:$col.0200000C ANSWER: $col.1C SERVICE OBSERVED:$
col.0C
OPER ACTION:$col.0C SERVICE FEATURE:$col.000C ORIG NPA:$
col.613C
ORIG NUMBER:$col.6211926C OVERSEAS IND:$col.1C
TERM NPA:$col.00000C TERM NUMBER:$col.0000000C
ANSWER TIME:$col.0000000C  ELAPSED TIME:$col.000000000C
IC/INC PREFIX:$col.02222C  CC DATE:$col.81207C
CC TIME:$col.1132333C  ELAPSED CC:$col.000000077C
IC/INC EVENT STATUS:$col.002C TRUNK GROUP NUMBER:$col.
00299C
ROUTING INDICATOR:$col.0C DIALING INDICATOR:$col.6C
ANI INDICATOR:$col.1C  WATS INDICATOR:$col.2C
WATS BAND OR MBI:$col.006C  TNN:$col.0000181C
```

Enhanced WATS Operation (POTS) (continued)

Example 6:

```
HEX ID:$col.AA  STRUCTURE CODE:$col.40625C CALL CODE:
$col.134C
SENSORTYPE:036C SENSOR ID:$col.0000000C REC OFFICE TYPE:
$col.036C
REC OFFICE ID:$col.0000000C DATE:$col.81207C
TIMING IND:$col.00000C STUDY IND:$col.0000030C ANSWER:
$col.0C
SERVICE OBSERVED:$col.0C  OPER ACTION:$col.0C
SERVICE FEATURE:$col.000C ORIG NPA:$col.613C
ORIG NUMBER:$col.6211926C OVERSEAS IND:$col.1C
TERM NPA:$col.00000C  TERM NUMBER:$col.0000000C
ANSWER TIME:$col.1119092C  ELAPSED TIME:$col.000000054C
IC/INC PREFIX:$col.04882C  CC DATE:$col.81207C
CC TIME:$col.1119092C  ELAPSED CC:$col.000000054C
IC/INC EVENT STATUS:$col.010C TRUNK GROUP NUMBER:$col.
00230C
ROUTING INDICATOR:$col.1C  DIALING INDICATOR:$col.6C
ANI INDICATOR:$col.0C  MODULE CODE:$col.023C WATS
INDICATOR:$col.2C
WATS BAND OR MBI:$col.006C WATS ADMINISTRATION:$col.
FFFFFF
MODULE CODE:$col.000C
```

Enhanced WATS Operation (POTS) (continued)

Example 7:

```
HEX ID:$col.AA  STRUCTURE CODE:$col.40361C  CALL CODE:$col.
141C SENSOR
TYPE:$col.036C SENSOR ID:$col.0619351C  REC OFFICE TYPE:
$col.036C
REC OFFICE ID:$col.0619351C DATE:$col.90306C  TIMING IND:
$col.00000C
STUDY IND:$col.0000000C  ANSWER:$col.0C SERVICE OBSERVED:
$col.0C
OPER ACTION:$col.0C  SERVICE FEATURE:$col.555C ORIG NPA:
$col.619C
ORIG NUMBER:$col.5206010C  DIALED NPA:$col.800C
DIALED NUMBER:$col.5467500C OVERSEAS IND:$col.0C  TERM NPA:
$col.00619C
TERM NUMBER:$col.5202100C ANSWER TIME:$col.0958287C
ELAPSED TIME:$col.000000030C IC/INC PREFIX:$col.08881C CC
DATE:$col.90306C  CC TIME:$col.0958266C ELAPSED CC:$col.
000000051C
IC/INC EVENT STATUS:$col.010C TRUNK GROUP NUMBER:$col.
00116C
ROUTING INDICATOR:$col.0C DIALING INDICATOR:$col.7C
ANI INDICATOR:$col.1C  RAO NUMBER:$col.000C ORIGINATING LATA:
$col.123C
ALTERNATE BILLING NUMBER:$col.06195210100C MODULE CODE:$col.
023C
WATS INDICATOR:$col.2C  WATS BAND OR MBI:$col.010C
WATS ADMINISTRATION:$col.FFFFFF  MODULE CODE:$col.000C
```

Example 8:

```
HEX ID:$col.AA  STRUCTURE CODE:$col.40365C  CALL CODE:$col.
142C SENSOR
TYPE:$col.036C SENSOR ID:$col.0619351C  REC OFFICE TYPE:$col.
036C
REC OFFICE ID:$col.0619351C DATE:$col.90306C  TIMING IND:
$col.00000C
STUDY IND:$col.0000000C  ANSWER:$col.0C SERVICE OBSERVED:
$col.0C
OPER ACTION:$col.0C  SERVICE FEATURE:$col.555C
ORIG NPA:$col.619C  ORIG NUMBER:$col.5206010C  DIALED NPA:
$col.800C
DIALED NUMBER:$col.5467500C  OVERSEAS IND:$col.0C  TERM NPA:
$col.00619C
TERM NUMBER:$col.5202100C  ANSWER TIME:$col.0912000C
ELAPSED TIME:$col.000000055C  RAO NUMBER:$col.000C
ORIGINATING LATA:$col.000C  ALTERNATE BILLING NUMBER:$col.
06195210100C
MODULE CODE:$col.023C  WATS INDICATOR:$col.2C
WATS BAND OR MBI:$col.010C WATS ADMINISTRATION:$col.FFFFFF
MODULE CODE:$col.000C
```

Station Message Detail Recording

Enhanced WATS Operation (POTS) does not affect Station Message Detail Recording.

Datafilling office parameters

The office parameters that Enhanced WATS Operation (POTS) uses appear in the following table. Refer to *Office Parameters Reference Manual* for more information about office parameters.

Office parameters for Enhanced WATS Operation (POTS)

Table name	Parameter name	Explanation and action
OFCENG	INWATS_LOCAL_TERMINATION	This office parameter determines when local calls can to terminate on an enhanced two-way WATS line.
	INWATS_ON_AMA	Set this office parameter to Y to generate Bellcore format INWATS termination billing records. Note that you must set the INWATS tuple in table AMAOPTS to ON.

Enhanced WATS Operation (POTS) (continued)

Datafill sequence

Datafill for Enhanced WATS Operation (POTS) appear in the following table. The tables appear in the correct entry order.

Datafill requirements for Enhanced WATS Operation (POTS)

Table	Purpose of table
OFCENG	Office Engineering. This table contains data on engineering parameters for the office. See “Datafilling parameters" for how Enhanced WATS Operation (POTS) affects office parameters.
LINEATTR	Table LINEATTR (line attribute). This table defines the line attribute indexes that apply to an office. Table LENLINES assign line attributes to normal lines in table LENLINES. Table IBNXLA assigns line attributes to MDC lines and attendant consoles.
WATSBAND	Table WATSBAND (WATS band). This table allows specified patterns of digits to group into bands. This table allows carriers to define different bands.
BANDSETS	Table BANDSETS (band sets). This table allows bands to group to form acceptable calling areas.
LENFEAT	Table LENFEAT (line feature). This table contains the features assigned to a specified line in table LENLINES.
OCCINFO	Table OCCINFO (other common carrier information). This table defines the attributes for the carriers that serve a DMS switch. This table screens calls for carrier compatibility.
CXGRP	Table CXGRP (customer group options). Local or combined local/toll switching units require this table to define options. These options are associated with a PX digital trunk group.

Datafilling table LINEATTR

Datafill for Enhanced WATS Operation (POTS) for table LINEATTR appears in the following table. The fields that apply to Enhanced WATS Operation

(POTS) appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table LINEATTR

Field	Subfield or refinement	Entry	Explanation and action
LNATTIDX		0 to 31 999	Line attribute index. Enter the line attribute index.
LCC		EOW or ETW	Line class code. Enter the line class code (LCC) of the line attribute index. This LCC can be EOW or ETW. You cannot change the LCC of a current tuple.

Datafill example for table LINEATTR

Sample datafill for table LINEATTR appears in the following example.

Example of MAP for table LINEATTR

```
LNATTIDX  LCC CHGCLSS COST SCRNCL LTG STS PRTNM LCANAME
                                                ZEROMPOS
TRAFSNO MRSA SFC  LATANM MDI IXNAME DGCLNAME FANIDIGS
          RESINF
_____________________________________________________OPTIONS
 180   EOW    WAT0   NT   NSCR   0  919  EWAT    NLCA
                                              TOPS   N
10      NIL NILSFC LATA1   0  NIL      NIL     00
            N
```

Datafilling table WATSBAND

Datafill for Enhanced WATS Operation (POTS) for table WATSBAND appears in the following table. The fields that apply to Enhanced WATS Operation (POTS) appear in this table. See the data schema section of this document for a description of the other fields.

Table WATSBAND allows specified patterns of digits to group into bands. These bands define geographical areas, which form circles with a common

Enhanced WATS Operation (POTS) (continued)

center around the local area. This table allows carriers to define different bands.

Datafilling table WATSBAND

Field	Subfield or refinement	Entry	Explanation and action
SVGNPA		3-digit code	Serving numbering plan area. Enter the three-digit code of the home NPA to which the system provides the WATS.
WIC		DEFAULT	WATS interexchange carrier. Enter the WATS carrier that can be in use with this band. Enter DEFAULT for the carriers that assign the same band to a digit pattern. The DEFAULT is a reserved carrier.
DIGITS		a maximum of 18 digits	Digits. Enter the digits associated with the band. This field is a vector of a maximum of 18 digits. Enter a dollar sign to indicate the end of the vector.
BAND		0 to 126	Band. Enter the band number assigned to the digits. The band number can be 0 to 126.

Datafill example for table WATSBAND

Sample datafill for table WATSBAND appears in the following example.

MAP example for table WATSBAND

```
                                    WATSCODE          BAND
-------------------------------------------------------------
497       CARRIER_A                   604               6
497       DEFAULT                     204               5
497       DEFAULT                     604               3
```

Datafilling table BANDSETS

Datafill for Enhanced WATS Operation (POTS) for table BANDSETS appears in the following table. The fields that apply to Enhanced WATS Operation (POTS) appear in this table. See the data schema section of this document for a description of the other fields.

Table BANDSETS allows bands to group to form acceptable calling areas. These groups of bands are assigned to symbolic keys that the customer defines. Table WATSBAND defines these groups of bands. Assign the symbolic keys

to WATS access lines, like a line attribute index. This BANDSET key defines the set of bands that a specified line can dial.

Datafilling table BANDSETS

Field	Subfield or refinement	Entry	Explanation and action
BANDSET		a maximum of 8 characters	Bandset. Enter the key that defines the acceptable calling area. The key can be a maximum of eight characters.
BANDS		0 to 126	Bands. Enter the set of bands that group as a vector. The set of bands can be 0 to 126. This vector determines the WATS calling area assigned to the key. Enter a dollar sign to indicate the end of the vector.

Datafill example for table BANDSETS

Sample datafill for table BANDSETS appears in the following example. In the first tuple, bandset INTRASTA contains bands 0, 8, and 9. In the second tuple, bandset EXTWATS contains bands 0, 1 ,2 ,3, 4, and 17.

MAP example for table BANDSETS

```
BANDSET                                                    BANDS
_____________________________________________________________________
INTRASTA                                                 (0 8 9)$

EXTWATS                                              (0 1 2 3 4 17)$
```

Datafilling table LENFEAT

Datafill for Enhanced WATS Operation (POTS) for table LENFEAT appears in the following table. The fields that apply to Enhanced WATS Operation (POTS) appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table LENFEAT (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
DF		EWAL	Feature. Enter EWAL, the feature assigned to the line.
DATA		see subfields	Data. This field has subfields DF, TREAT, INTRALAT, SAC, BAND and WICLIST.

Enhanced WATS Operation (POTS) (continued)

Datafilling table LENFEAT (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	DF	EWAL	Feature. Enter EWAL, the feature assigned to the line.
	TREAT	UNOW	Treatment. Enter the unauthorized OUTWATS call treatment (UNOW).
	INTRALAT	Y or N	Intra-LATA. Enter Y when the customer group allows intra-LATA calls. For other conditions, enter N.
	SAC	Y or N	Service access code. Enter Y when the customer group allows SAC calls. For other conditions, enter N.
	BAND	0 to 126	Band. Enter the band assigned to the facility to use in the billing record. The band can be 0 to 126.
	WICLIST	see subfields	WATS interexchange carrier list. This field is a vector that has subfields WIC and BANDSET. You must pair field BANDSET with a carrier. You can enter a maximum of five pairs. The first pair is the primary WIC. Enter a dollar sign to indicate the end of the vector.
	WIC	name	WATS interexchange carrier. Enter the WATS interexchange carrier to use with this facility.
	BANDSET	calling area	Bandset. Enter the acceptable calling area that table BANDSETS defines.

Datafill example for table LENFEAT

Sample datafill for table LENFEAT appears in the following example. The system does not allow line HOST 00 0 00 26 to access carriers CARR1 and CARR2.

MAP example for table LENFEAT

```
     LEN PTY       DF                                        DATA
HOST 00 0 00 26   S      EWAL  EWAL UNOW  Y Y 009
                 (CARR1 INTRASTA) (CARR 2 INTRASTA)   $
```

Datafilling table OCCINFO

Datafill for Enhanced WATS Operation (POTS) for table OCCINFO appears in the following table. The fields that apply to Enhanced WATS Operation (POTS) appear in this table. Refer to the data design section of this document for a description of the other fields.

Table OCCINFO defines the attributes for carriers that serve the end office and screens calls for carrier compatibility. For example, table OCCINFO allows the system to send international traffic to carriers that can handle international traffic.

Datafilling table OCCINFO

Field	Subfield or refinement	Entry	Explanation and action
SCRNWATS		Y or N	Enhanced WATS screening. Enter Y to allow band screening on digits an enhanced WATS line dials. For other conditions, enter N.

Datafill example for table OCCINFO

Sample datafill for table OCCINFO appears in the following example.

MAP example for table OCCINFO

```
CARRNAME CARRNUM ACCESS ORIGCARR INTER INTNTL INTRA ANI FANI
ONISCRN AD1 OVERLAP INTERS INTRAS TERMREC OCCSEPNO OPSIG PICIND
NOA950 INCCPN DTMFIND OPSERV CACBLOCK CTDOA CMCMON SCRNWATS
CRMCRA ATPINCL INTRAOPR
_____________________________________________________________
   C111    0111   EAP     Y      Y      Y     N   Y    N
N     Y      Y     Y      Y    LONG       0    FGRPC  Y
  N      N     N       N       N      N      N      N
    Y    N        N
 C222    0222   EAP     Y      Y      N     Y   N    N
N    N       Y     Y      N    SHORT      0    FGRPC    N
  N    N       N       N       N      N      N      N
    Y    N        N
```

Datafilling table CXGRP

Datafill for Enhanced WATS Operation (POTS) for table CXGRP appears in the following table. The fields that apply to Enhanced WATS Operation (POTS) appear in this table. Refer to the data design section of this document for a description of the other fields.

Enhanced WATS Operation (POTS) (continued)

Local or combined local/toll switching units require table CXGRP to define the options associated with PX trunks.

Datafilling table CXGRP (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
EWATS		Y or N	Enhanced WATS. Enter Y to allow enhanced WATS for this customer group. For other conditions, enter N.
EWATTYPE		EOWATS, WATS	Enhanced WATS type. When you set the EWATS field to Y, enter EOWATS for enhanced outward WATS or ETWATS for enhanced two-way WATS.
TREAT		OUTWATS call treatment	Treatment. When you set the EWATS field to Y, enter the unauthorized OUTWATS call treatment. An example of unauthorized OUTWATS call treatments is UNOW.
INTRALAT		Y or N	Intra-LATA. When you set the EWATS field to Y, enter Y when the customer group allows intra-LATA calls. For other conditions, enter N.
SAC		Y or N	Service access code. When you set the EWATS field to Y, enter Y when the customer group allows SAC calls. For other conditions, enter N.
BAND		0 to 126	Band. When you set the EWATS field to Y, enter the band assigned to the facility to use in the billing record. The band can be 0 to 126.
LATANM		LATA name	LATA name. When you set the EWATS field to Y, enter the LATA name that the EA translations requires.
WICINFO		see subfields	WATS interexchange carrier information. This field is a vector that contains subfields WIC and BANDSET. You must pair field BANDSET with a carrier. You can enter a maximum of five pairs. The first pair is the primary WIC. Enter a dollar sign to indicate the end of the vector.
	WIC	WATS interexchange carrier	WATS interexchange carrier. When you set the EWATS field to Y, enter the WATS interexchange carrier to use with this facility.

Enhanced WATS Operation (POTS) (continued)

Datafilling table CXGRP (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	BANDSET	calling area	Bandset. When you set the EWATS field to Y, enter the calling area that table BANDSETS defines.
PXOPTION		ATC, CLI, CPH, FANI, FNT, HOT, LCDR, LPIC, ONI, RMR, RMT, TDN, TDV, WATS	Customer group options. Enter a maxmimum of 12 options for each group as follows: • ATC for automatic time and charge • CLI for calling line identification • CPH for called party hold • FANI for flexible automatic number identification • FNT for free number terminating • HOT for hotel/motel • LCDR for local call detail recording • LPIC for local PIC • ONI for operator number identification • RMR for answer supervision local calls • RMT for answer supervision toll calls • TDN for toll denied • TDV for toll diverted • WATS for WATS service
TYPEWATS		WATS type	Type of WATS. When PXOPTION is WATS, enter the required type of WATS.
TREAT		unauthorized OUTWATS call treatment	Treatment. When type of WATS is TWWATS or OUTWATS, enter the unauthorized OUTWATS call treatment. An unauthorized call treatment can be UNOW.
OWATZONE		zone assigned	OUTWATS zone. When type of WATS is TWWATS or OUTWATS, enter the zone assigned to this WATS trunk group.

Datafill example for table CXGRP

Sample datafill for table CXGRP appears in the following example.

Enhanced WATS Operation (POTS) (continued)

MAP example for table CXGRP

```
CUSTKEY
             SPB
                                BILLNO          CTD
                                               EWATS
 EWATTYPE    TREAT    INTRALAT  SAC    BAND    LATANM
                                              WICINFO
                                             PXOPTION
_____________________________________________________
100
              Y
                             5058881234            N
                                                   Y
   EAWATS    UNOW          Y      Y    9  LOCAL_LATA
      (CARRIER_A INTRASTA) (CARRIER_B INTERSTA) $
                            (LPIC CARRA) (TDV)  $
```

Tools for verifying translations

How the system generates a call code 009 (DA 411) record appears in the following TRAVER example.

A 411 call can route to DA through tables STDPRT and AMAPRT. In this example, DN 621-1926 dials 411. The line attribute index references table LINEATTR from table LENLINES. The leading digits (411) index table STDPRTCT. The originating line attribute contains the index into table STDPRTCT. The tuple in table STDPRT contains the route list that 411 calls take. In this example, 411 calls route to trunk group OTDP1. Table AMAPRT is indexed after subtable STDPRTCT.STDPRT with the first pretranslator name. This pretranslator name is specified as the index into STDPRTCT. Band screening is not in effect for N11 calls.

The TRAVER command syntax appears in the following list:

- L - indicates the originator is a line
- 6211926 - is the DN that originates the call
- 411 - is the DN that receives the call
- B - indicates that a report on the two table entries and results must occur

The output from TRAVER when TRAVER verifies Enhanced WATS Operation (POTS) appears in the following example.

Enhanced WATS Operation (POTS) (continued)

Example of TRAVER output for Enhanced WATS Operation (POTS)

```
TRAVER L 6211926 411 B
TABLE LINEATTR
180     EOW WAT0 NT NSCR 0 613 EWAT NLCA TOPS N 10 NIL NILSFC LATA1
    0 NIL NIL 00 N
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE STDPRTCT
EWAT ( 1) ( 1)
   .    SUBTABLE STDPRT
    .   411 411 T NP 0 OFRT 90 3 3 NONE
    .   .TABLE OFRT
    .   .       90 S D OTDP1
    .   .   EXIT TABLE OFRT
    . SUBTABLE AMAPRT
    . 411 411 DA411 N
Band screening is not done for N11 calls.

+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

1 OTDP1                 411               ST

TREATMENT ROUTES.  TREATMENT IS: GNCT
1 T120

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

SERVORD

The system supports the two new LCCs, EOW and ETW in the POTS environment. The SERVORD prompts to add a WATS line appear in the following table. The fields that apply to this feature package appear in this table. For more information about service orders, see *SERVORD Reference Manual*.

SERVORD limits

Enhanced WATS Operation (POTS) does not have SERVORD limits.

Enhanced WATS Operation (POTS) (continued)

SERVORD prompts

The SERVORD prompts to add a WATS line appear in the following table.

SERVORD prompts for Enhanced WATS Operation (POTS)

Prompt	Correct input	Explanation
LCC	EOW or ETW	Enter EOW for an enhanced OUTWATS line. Enter ETW for an enhanced two-way WATS line.
INTRALAT	Y or N	Enter Y when the customer group allows intra-LATA calls. For other conditions, enter N.
SAC	Y or N	Enter Y when the customer group allows SAC calls. For other conditions, enter N.
BAND		Enter the band assigned to the facility for billing record use.
WICLIST	0 to 126	This field is a vector that has subfields WIC and BANDSET. The system prompts these subfields when you enter a value that is not correct. You must pair subfield BANDSET with a carrier. You can enter a maximum of five pairs. The first pair is the primary WIC. Enter a $ sign to indicate the end of the vector.
WIC	carrier name table OCCINFO defines	Enter the WATS interexchange carrier to use with this facility.
BANDSET	8 characters from table BANDSETS	Enter the acceptable calling area that table BANDSETS defines.

SERVORD example for adding Enhanced WATS Operation (POTS)

The SERVORD example for adding Enhanced WATS Operation (POTS) to a line with the NEW command appears in the following example.

Enhanced WATS Operation (POTS) (end)

Example of SERVORD for Enhanced WATS Operation (POTS) in prompt mode

```
>NEW
SONUMBER:  NOW 93 09 10 AM
>
DN:
>6211899
LCC:
>EOW
INTRALAT:
>N
SAC:
>Y
BAND:
>9
WICLIST:
>NTI
BANDSET:
>INTRAST
WICLIST:
>
LATANAME:
>LATA1
LTG:
>0
LEN:
>0 0 19 26
OPTION
>$
```

Example of SERVORD for Enhanced WATS Operation (POTS) in no-prompt mode

```
NEW $ 6211899 EOW N Y 9 NTI INTRAST $ LATA1 0 0 0 19 26 $
```

Equal Access Alternate Switching Point

Ordering codes

Functional group order code: EQA00001

Functionality order code: EQA00007

Release applicability

BCS30 and later versions

Requirements

To operate, Equal Access Alternate Switching Point requires BAS Generic, BAS00003.

Description

The Equal Access Alternate Switching Point establishes a special EAEO. Th name of this EAEO is EASP. This EAEO is for use in emergency conditions. This EAEO passes FGC and FGD calls from a normal EAEO to an AT or IEC. Damage to the transmission facilities between the EAEO and the AT can occur. The system can require an alternate route to pass these calls. When this condition occurs, Equal Access calls can route through the EASP.

An EASP can pass FGC and FGD calls from a large business remote (LBR) to an AT or directly to an IEC. With the involvement of an LBR in an Equal Access call, the configuration of the LBR host is as an EASP. The LBR host is an EAEO.

Operation

This section describes the following configurations that this feature package provides:

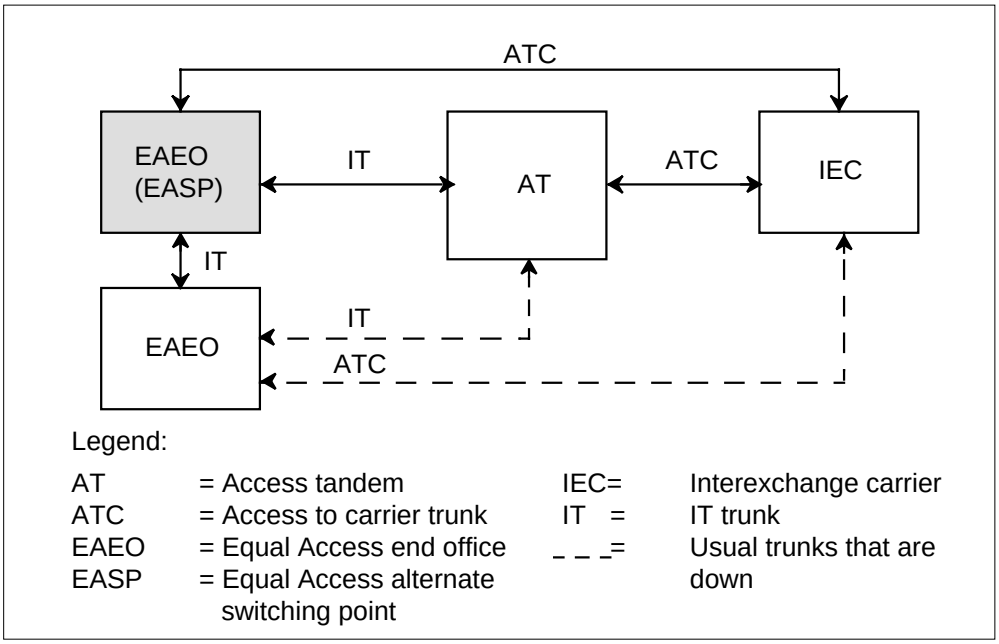
- EASP to route FGD calls
- LBR to route FGD calls
- EASP to route FGC calls
- LBR to route FGC calls

EASP to route FGD calls

The FGD call configuration changes when the addition of an EASP occurs as an optional EAEO for use in emergency conditions. The possible EASP FGD switching configurations appear in the following figure.

Equal Access Alternate Switching Point (continued)

EASP (FGD configuration)



When the direct IT trunks between the EAEO and the AT are down, an FGD call can route through the EASP. When this condition occurs, the FGD call leaves the EAEO on an IT trunk. The call enters the EASP on an IT trunk. The trunk connection between the EASP and the AT is IT to IT. When the FGD call leaves the AT for the IEC, the call leaves on an ATC trunk.

When the direct ATC trunks between the EAEO and the IEC are down, an FGD call can route through the EASP. Direct trunking can occur from the EASP to the IEC. When this trunking occurs, when the call enters EASP from EAEO, the call routes to IEC over an ATC trunk.

Use of the Equal Access tandem (ET) selector in subtable STDPRTCT.STDPRT provides the correct routing of an FGD call through an EASP. The ET selector identifies the call as an FGD Equal Access call and routes the call. The pretranslator of the IT trunk groups between the EASP and the next EAEO has datafill. The datafill allows the pretranslator to recognize the new ET selector and the carrier selection digits from the next EAEO.

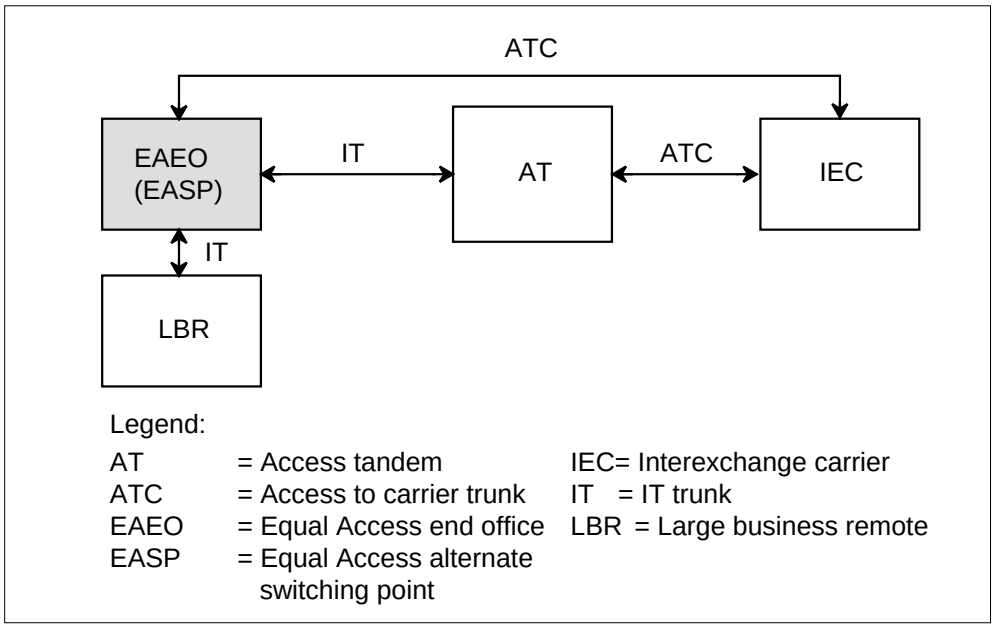
Datafill of direct trunks from the EASP to the carrier must be as feature package NTX186AB - Equal Access End Office describes.

Equal Access Alternate Switching Point (continued)

LBR to route FGD calls

The configuration for an FGD call with the involvement of an LBR is different from the previous situations. The possible LBR FGD switching configurations appears in the following figure.

LBR (FGD configuration)



The FGD calls that originate in an LBR pass through an EASP. This condition occurs before the calls go through an AT or to an IEC.

An FGD call leaves the LBR over an IT trunk and enters the EASP on an IT trunk. The call can proceed in one of the two following ways:

- The call can leave the EASP on an IT trunk and enter the AT on an IT trunk. The call leaves the AT on an ATC trunk that connects to an IEC.
- The call can leave the EASP over an ATC trunk that connects to an IEC.

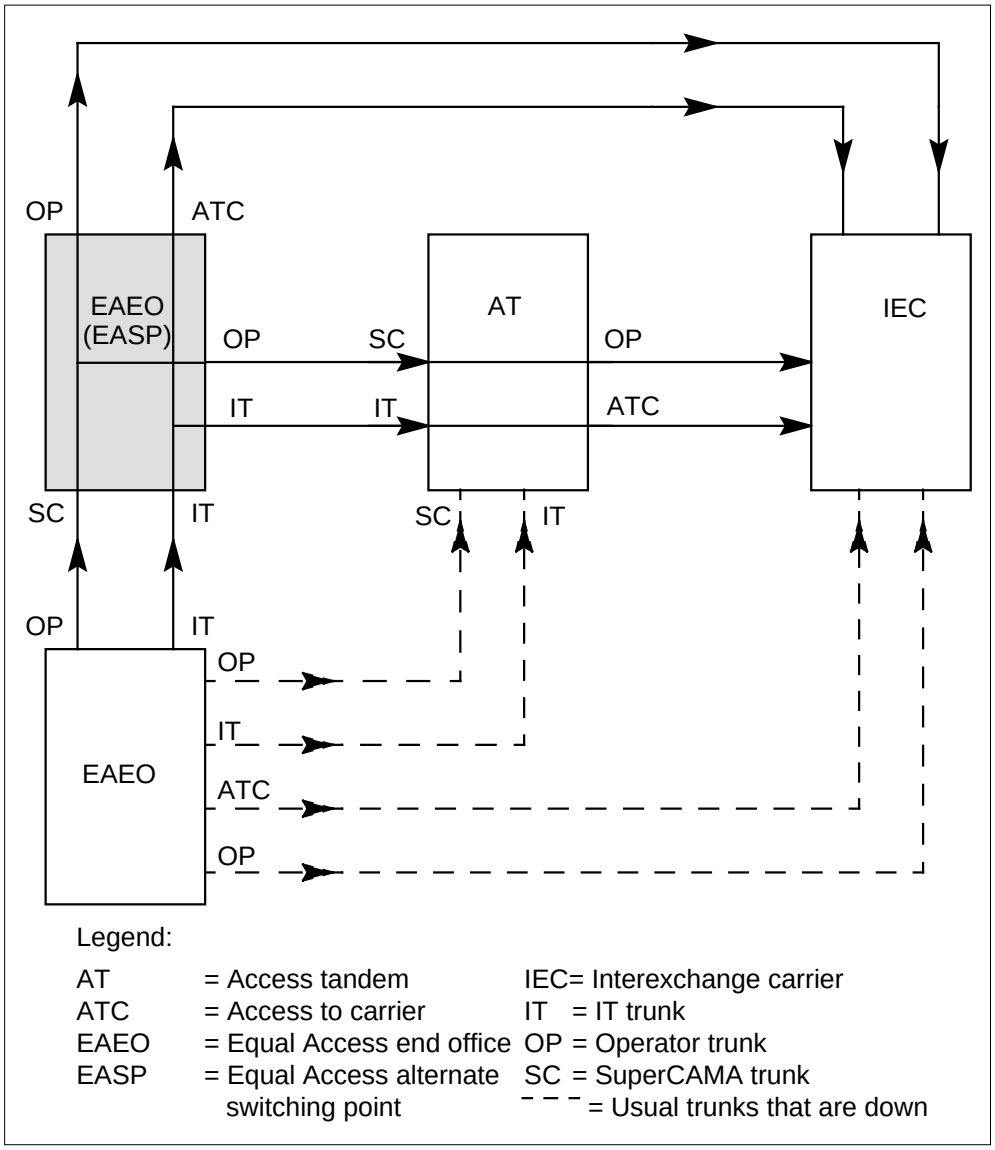
In an Equal Access environment, an LBR connects to a host EAEO. The configuration of the EAEO must be as an EASP. This configuration allows FGD calls to pass through the AT.

EASP to route FGC calls

There are changes to the FGC call configuration when the addition of an EASP occurs as an optional EAEO. The possible EASP FGC switching configurations appear in the following figure.

Equal Access Alternate Switching Point (continued)

EASP (FGC configuration)



The two types of FGC calls are operator and IT. An FGC IT call enters the EASP on an IT trunk. The call can leave the EASP in one of the two following ways:

- When the call routes through an AT, the call leaves the EASP on an IT trunk. When the call leaves the AT, the call routes over an ATC trunk.
- When the call routes to an IEC, the call leaves the EASP on an ATC trunk.

Equal Access Alternate Switching Point (continued)

For an FGC operator call, the call leaves the EAEO on an operator trunk and enters the EASP on an SC trunk. The call can leave the EASP in one of the two following ways:

- The call can route through an AT. When this condition occurs, the call leaves the EASP on an operator trunk and enters the AT on an SC trunk. When the call leaves the AT, the call routes over an operator trunk.
- When the call routes to the IEC, the call leaves the EAEO on an operator trunk.

The FGC operator calls in an EASP route to an outgoing operator trunk without special treatment in subtable STDPRTCT.STDPRT.

The use of double information digits can occur The SC trunk that enters the EASP has datafill in table TRKGRP (SC). When double information digits are in use, set field SIGFMT to BELL. When double information digits are in use, set field GRPTYPE to OSS. Refer to table TRKGRP (SC) for more information.

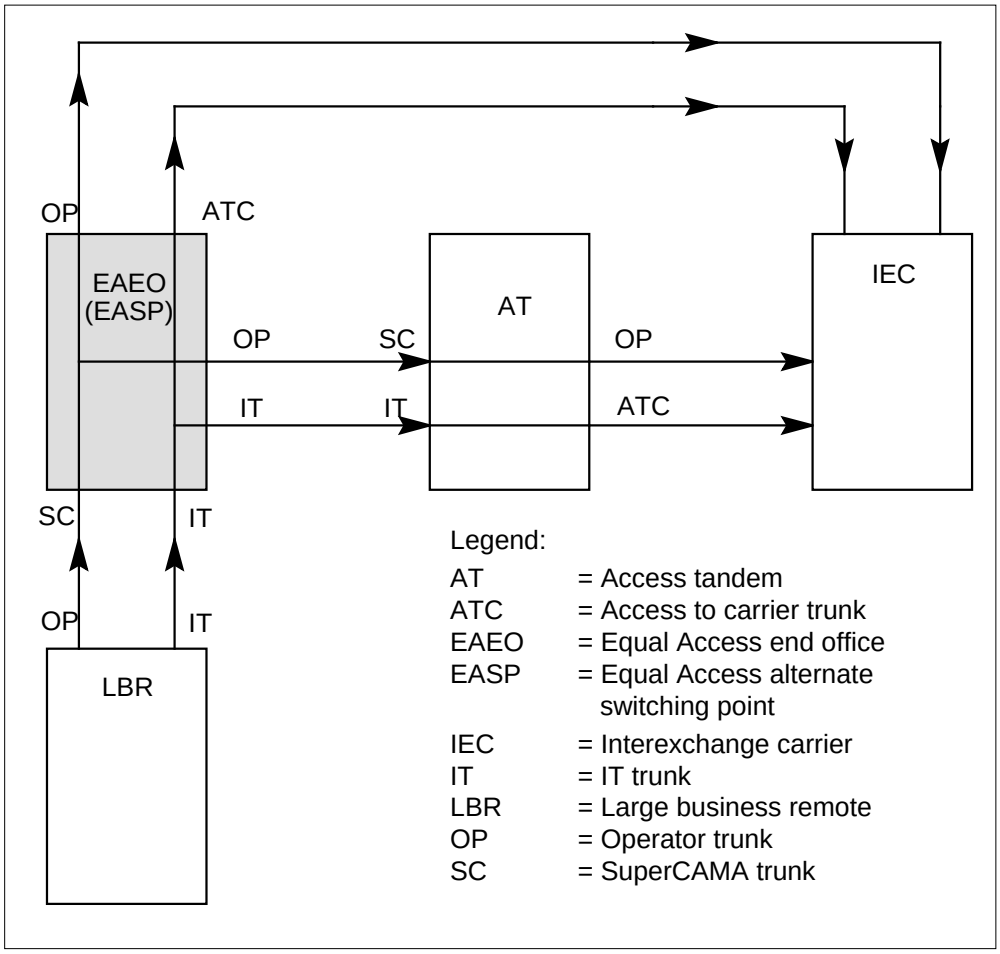
Datafill for the IT and ATC trunk groups for FGC calls must be as feature package NTX186AB - Equal Access End Office describes.

LBR to route FGC calls

The configuration for an FGC call with the involvement of an LBR is different than the previous FGC call situations. The possible LBR FGC switching configurations appear in the following figure.

Equal Access Alternate Switching Point (continued)

LBR (FGC configuration)



The FGC operator and IT calls that originate in an LBR pass through an EASP. This condition occurs before the calls go through an AT or to an IEC. An FGC IT call enters the EASP on an IT trunk. The call can leave the EASP in one of the two following ways:

- When the call routes through an AT, the call leaves the EASP on an IT trunk. When the call leaves the AT, the call routes over an ATC trunk.
- When the call routes to an IEC, the call leaves the EASP on an ATC trunk.

Equal Access Alternate Switching Point (continued)

For an FGC operator call, the call leaves the LBR on an operator trunk and enters the EASP on an SC trunk. The call can leave the EASP in one of the two following ways.

- The call can route through an AT. When this event occurs, the call leaves the EASP on an operator trunk and enters the AT on an SC trunk. When the call leaves the AT, the call routes over an operator trunk.
- When the call routes to the IEC, the call leaves the EAEO on an operator trunk.

Limits

The following limits apply to Equal Access Alternate Switching Point:

- For some conditions, a single trunk group between an EAEO and an EASP carries local and Equal Access calls. This traffic must combine on an IT trunk group because local trunks do not support Equal Access calls. Local trunks are TI, TO, and T2. The originator and the terminator of a call determine the pad values in use. The pad values must have the same value in the EAEO as in the EASP for local and Equal Access calls. This limit applies in an LBR environment.
- On FGC OSS calls, the system does not support the outpulse of a single ANI information digit.

Interactions

Equal Access Alternate Switching Point does not have functionality interactions.

Activation/deactivation by the end user

Equal Access Alternate Switching Point does not require activation or deactivation by the end user.

Billing

Equal Access Alternate Switching Point does not affect billing.

Station Message Detail Recording

Equal Access Alternate Switching Point does not affect Station Message Detail Recording.

Datafilling office parameters

Equal Access Alternate Switching Point does not affect office parameters.

Equal Access Alternate Switching Point (continued)

Datafill sequence

The tables that require datafill to implement Equal Access Alternate Switching Point appear in the following table. The tables appear in the correct entry order.

Datafill requirements for Equal Access Alternate Switching Point

Table	Purpose of table
TRKGRP (IT)	Table TRKGRP (IT) (IT trunk group) contains information on each IT trunk group in the office.
TRKGRP (OP)	Table TRKGRP (OP) (outgoing and two way from local or toll to TOPS/TSPS trunk group) contains information on each operator trunk group.
TRKGRP (SC)	Toll or combined local/toll switching units for SC trunk groups require table TRKGRP (SC) (two way or incoming from North AMR5 and CAMA trunk group).
STDPRTCT.STDPRT	Subtable STDPRTCT.STDPRT (standard pretranslator) is the first table that the received leading digits index. This condition occurs when the originating line attribute (from table LINEATTR) or trunk (from table TRKGRP) specifies a pretranslator name.

Datafilling TRKGRP (IT)

Datafill for Equal Access Alternate Switching Point for table TRKGRP (IT) appears in the following table. The fields that apply to Equal Access Alternate Switching Point appear in this table. See the data schema section of this document, for a description of the other fields.

Datafilling table TRKGRP (IT) (Sheet 1 of 4)

Field	Subfield or refinement	Entry	Explanation and action
GRPKEY		refer to subfield	Group key. This field has subfield CLLI.
	CLLI	Common language location identifier	Common language location identifier. Enter the code that represents the trunk group in table CLLI.
GRPINFO		refer to subfields	Variable group data. When GRPTYP=IT, this field has the following subfields.
	GRPTYP	IT	Group type. Enter IT, the trunk group type.

Equal Access Alternate Switching Point (continued)

Datafilling table TRKGRP (IT) (Sheet 2 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	TRAFSNO	Traffic separation number or 0 if not required	Traffic separation number. For two-way IT, enter the incoming and outgoing traffic separation number (0 to 127) assigned to the trunk group. For incoming IT, enter the incoming traffic separation number (0 to 127). When you do not require traffic separation, enter 0 (zero). The two-way IT switching unit can have the Traffic Separation Peg Count feature package. When this condition occurs, enter 1 to the lower value of parameters TFAN_IN_MAX_NUMBER and TFAN_OUT_MAX_NUMBER in table OFCENG. For an incoming lT unit, enter 1 to the value of parameter TFAN_IN_MAX_NUMBER in table OFCENG. For two-way IT switching units without the Traffic Separation Peg Count feature package, enter a number from 1 to 15. For incoming IT units, enter 0 to 15. Reserve incoming and outgoing traffic separation numbers 1 to 9 for generic traffic separation numbers.
	PADGRP	Pad group name	Pad group. Enter the name of the pad group assigned to the trunk group in table PADDATA.
	NCCLS	Operational measurements no circuit class or NCRT	Operational measurements no circuit class. For two-way IT units, enter the operational measurements no circuit class. This entry indicates the OM register that increases when treatment GNCT occurs. The correct entries are NCBN, NCID, NCIM, NCIT, NCLT, NCOF, NCON, NCOT, NCTC, or NOSC. For incoming IT units, this field is not required. Enter NCRT (no circuit). The first value is NCRT.

Equal Access Alternate Switching Point (continued)

Datafilling table TRKGRP (IT) (Sheet 3 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	DIR	2W or IC	Direction. Enter the direction of traffic flow, two way (2W) or incoming (IC). You can set parameter TRK_OOS_CHK_ON in the variable office parameter table to Y. When this condition occurs, busy out the trunks in the group. This action must occur before data modification order changes the value of this field.
	TRAFCLS	Traffic usage class	Traffic usage class. Enter the traffic use class assigned to the trunk group.
	SELSEQ	MIDL or selection sequence	Select sequence. For incoming trunks, enter MIDL. For two-way trunks, enter the selection sequence.
	CONNGNPA	3-digit NPA	Connecting NPA. Enter the three-digit NPA code of the switching unit where the system translates the outpulsed digits.
	PRTNM	Standard pretranslator table name, NPRT	Standard pretranslator table name. Enter the name of the standard pretranslator table when you require standard pretranslation. For other conditions, enter NPRT. You can set parameter TRK_OOS_CHK_ON in the variable office parameter table to Y. When this condition occurs, busy out the trunks in the group. This action must occur before data modification order changes the value in this field.
	SCRNCL	Class of service screening table name, NSCR	Class of service screening table name. Enter the name of the screening table when you require class of service screening. For other conditions, enter NSCR.

Equal Access Alternate Switching Point (continued)

Datafilling table TRKGRP (IT) (Sheet 4 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	SNPA	3-digit NPA	Serving NPA. Enter the three-digit serving NPA code for the trunk group. You can set parameter TRK_OOS_CHK_ON in the variable office parameter table to Y. When this condition occurs, busy out the trunks in the group. This action must occur before data modification order changes the value of this field.
	TERMTC	000 or terminating toll center code	Terminating toll center. This field does not apply to incoming IT trunks. Enter 000. For two-way trunks, the end office where the system tranlates the outpulsed digit can be assigned a terminating toll center code. When this condition occurs, enter this code. For other conditions, enter 000.
	TOLLCOMP	N	Toll completing. This field does not apply to incoming IT trunks. Enter N. For two-way trunks, enter Y when the trunk group is toll completing. For other conditions, enter N.
	CCWKVLD	Y or N	Carrier connect wink. Enter N to indicate the system must not regenerate the carrier connect wink in Equal Access international calls. For other conditions, enter Y.
	OPTION	Option	Option. When this option applies, enter the option assigned to this trunk group.

Datafill example for table TRKGRP (IT)

Sample datafill for table TRKGRP (IT) appears in the following example.

MAP example for table TRKGRP (IT)

```
GRPKEY
                                                        GRPINFO
_____________________________________________________________________
TVEROG
    IT O TLA NCRT IC NIL MIDL 619 PEA NSCR 619 000 N N $
```

Datafilling table TRKGRP (OP)

Datafill for Equal Access Alternate Switching Point for table TRKGRP (OP) appear in the following table. The fields that apply to Equal Access Alternate Switching Point appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table TRKGRP (OP)

Field	Subfield or refinement	Entry	Explanation and action
EADATA		see subfields	Equal Access data. This field has the following subfields.
	EA	Y or N	Equal Access selector. Enter Y when you require Equal Access signaling (double ANI digits). For other conditions, enter N.
	EAOSS	Y or N	Exchange access operator services signaling. Enter Y for EAOSS use on the trunk. For other conditions, enter N. This field appears when EA = Y.
	RTEVIAAT	Y or N	Route via access tandem. Enter Y when the trunk is between an EAEO and a TOPS AT. For other conditions, enter N. This field appears when EA = Y.

Datafill example for table TRKGRP (OP)

Sample datafill for table TRKGRP (OP) appears in the following example. Trunk LNTOPS2 is between an EAEO and a TOPS AT (RTEVIAAT = Y). Trunk LNTOPS2 requires Equal Access signaling. The last three entries show the EA, EAOSS, and RTEVIAAT fields.

MAP example for table TRKGRP (OP)

```
GRPKEY
                                                        GRPINFO
_____________________________________________________________
LNTOPS2
OP 11 TLD NCRT SP MIDL NCN MIX REV TERMHOLD N OG Y Y Y $
```

Datafilling table TRKGRP (SC)

Datafill for Equal Access Alternate Switching Point for table TRKGRP (SC) appears in the following table. The fields that apply to Equal Access Alternate

Equal Access Alternate Switching Point (continued)

Switching Point appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table TRKGRP (SC) (Sheet 1 of 5)

Field	Subfield or refinement	Entry	Explanation and action
GRPKEY		refer to subfield	Group key. This field contains subfield CLLI.
	CLLI	Common language location identifier	Common language location identifier. Enter the code that represents the trunk group in table CLLI.
GRPINFO		refer to subfields	Variable group data. When GRPTYP=SC, this field has the following subfields.
	GRPTYP	SC	Group type. Enter SC, the trunk group type.
	TRAFSNO	Traffic separation number or 0	Traffic separation number. Enter the incoming or incoming and outgoing traffic separation number (0 to 127) assigned to the trunk group. When you do not require traffic separation, enter 0 (zero). The switching unit can have the Traffic Separation Peg Count feature package. When this condition occurs, enter 1 to the lower value of parameters TFAN_IN_MAX_NUMBER and TFAN_OUT_MAX_NUMBER in table OFCENG. For switching units without the Traffic Separation Peg Count feature package, enter a number from 1 to 15. Reserve incoming and outgoing traffic separation numbers 1-9 for generic traffic separation numbers.
	PADGRP	Pad group	Pad group. Enter the name of the pad group assigned to the trunk group in table PADDATA.
	NCCLS	NCRT	Operational measurements no circuit class. Enter NCRT (no circuit). Incoming trunk calls do not require this field.
	TRAFCLS	Traffic usage class	Traffic usage class. Enter the traffic use class assigned to the trunk group.

Equal Access Alternate Switching Point (continued)

Datafilling table TRKGRP (SC) (Sheet 2 of 5)

Field	Subfield or refinement	Entry	Explanation and action
	ONI	Y or N	Operator number identification. Enter Y when traffic on the trunk group is 100% ONI traffic. For other conditions, enter N.
	SNPA	3-digit NPA	Serving NPA. Enter the three-digit serving NPA code to which the trunk group belongs. You can set parameter TRK_OOS_CHK_ON in the variable office parameter table to Y. When this condition occurs, busy out the trunks in the group before data modification order changes the value of this field.
	PRTNM	Standard pretranslator table or NPRT	Standard pretranslator table name. When you require standard pretranslation, enter the name of the standard pretranslator table to which digit translation routes. This event occurs after the receipt of one digit. When you do not require pretranslation, enter NPRT. You can set parameter TRK_OOS_CHK_ON in the variable office parameter table to Y. When this condition occurs, busy out the trunks in the group. This action must occur before data modification order changes the value of this field.
	NODIGRTE	OA position or NONE	No digit route. Enter the position (RTE1, RTE2, RTE3, or RTE4) in table POSITION to which OA calls route. When the entry is NONE, OA calls route to the position CAMA in table POSITION.
	NODIGCTP	NP, DD, or OA	No digit call type. Enter the type of call to assign to calls without incoming digits, for seizure. The call types are no prefix NP, DD, or OA.
	TRTMTSUP	OFFHOOK, ONHOOK, or OFFHKWK	Treatment supervision. Enter the type of supervision required when translation routes to a treatment, tone, or announcement. The types of supervision are off-hook (OFFHOOK), on-hook (ONHOOK) or off-hook wink (OFFHKWK).

Equal Access Alternate Switching Point (continued)

Datafilling table TRKGRP (SC) (Sheet 3 of 5)

Field	Subfield or refinement	Entry	Explanation and action
	NPRETSUP	OFFHOOK, ONHOOK, or OFFHKWK	No prefix return supervision. Enter the return supervision required on no prefix type of calls. The return supervision can be off-hook (OFFHOOK), on-hook (ONHOOK), or off-hook wink (OFFHKWK).
	NOBILLCD	Number of bill codes	Number of bill codes. Enter the number of bill codes and spares to reserve in table BILLCODE.
	ANISEIZ	initial ANI signal reception timing	ANI seizure timing. Enter the time that the trunk waits to receive the first ANI digit or signal. This time is in seconds. The range of this time is 2 to 30 s. You can set parameter TRK_OOS_CHK_ON in the variable office parameter table to Y. When this condition occurs, busy out the trunks in the group. This action must occur before data modification order changes the value of this field.
	ANIPDIAL	ANI signal reception timing	ANI partial dialing. Enter the time that the trunk waits to receive each ANI signal or digit after the first digit. This time is in seconds. The range of this time is 2 to 30 s. You can set parameter TRK_OOS_CHK_ON in the variable office parameter table to Y. When this condition occurs, busy out the trunks in the group. This action must occur before data modification order changes the value of this field.
	DIR	IC	Direction. Enter IC, the direction of the traffic flow. You can set parameter TRK_OOS_CHK_ON in the variable office parameter table to Y. When this condition occurs, busy out the trunks in the group. This action must occur before data modification order changes the value of this field.
	SELSEQ	MIDL	Select sequence. Enter MIDL. When the trunk group is incoming, sequential selection does not apply. The trunk group is incoming when DIR=IC.
	DIGSOUT	0	Digits outpulsed. Enter 0. This subfield is reserved for future use.

Equal Access Alternate Switching Point (continued)

Datafilling table TRKGRP (SC) (Sheet 4 of 5)

Field	Subfield or refinement	Entry	Explanation and action
	SDATA	see subfields	Signaling data. This subfield has the following subfields.
	SIGFMT	BELL	Signaling format. Enter BELL, the signaling formation in use for this feature package. You can set parameter TRK_OOS_CHK_ON in the variable office parameter table to Y. When this condition occurs, busy out the trunks in the group. This action must occur before data modification order changes the value of this field.
	GRPTYPE	Group type or OSS	Group type. Enter OSS when the start signal for DD calls is ST and the system expects two information digits.
	DEFANIFL	CAMA, TSPS, or TREAT	Default ANI fail. This field determines the route translations takes when the receipt of ANI (ANI FAIL) does not occur. When the translation is to route to position CAMA in table POSITION, enter CAMA. When the translation is to route to position TSPS in table POSITION, enter TSPS. When the translation is to route to a hard-coded toll denied treatment, enter TREAT. This treatment routes originator to reorder.
	IC_ROUTE	Position	Independent carrier route. When GRPTYPE=OSS, enter the position to specify the correct route. Enter this information when the start signal identifies the call as an independent IEC Equal Access call. Table POSITION field POS must know the position.
	ANITYPE	WK or REV	ANI request signal. Enter the type of ANI request signal. This signal is wink (WK) or reversal (REV). You can set parameter TRK_OOS_CHK_ON in the variable office parameter table to Y. When this condition occurs, busy out the trunks in the group must be busied out. This action must occur before data modification order changes the value of this field.

Equal Access Alternate Switching Point (continued)

Datafilling table TRKGRP (SC) (Sheet 5 of 5)

Field	Subfield or refinement	Entry	Explanation and action
	RECORDNP	NP	Record calls of type NP. This feature package does not require this field. Enter NP.
	SPLOOKUP	Y or N	Special lookup. The non-EAEO cannot always outpulse the correct ANI information digit, and the incoming calls on the trunk group can require a lookup in table SPLANIN. When this condition occurs, enter Y. For other conditions, enter N.

Datafill example for table TRKGRP (SC)

Sample datafill for table TRKGRP (SC) appears in the following example.

MAP example for table TRKGRP (SC)

```
GRPKEY
                                                        GRPINFO
_____________________________________________________________________
SCTRK
 SC 44 NPDGP NCRT NIL N 619 TCA3 TSPS DD ONHOOK ONHOOK 30
5 5 IC
    LIDL 0 BELL OSS CAMA NONE RTE2 REV Y NP N $
```

Datafilling subtable STDPRTCT.STDPRT

Subtable STDPRTCT.STDPRT is the first table that the received leading digits index. This condition occurs when the originating line attribute from table LINEATTR or trunk from table TRKGRP specifies a pretranslator name.

Datafill for Equal Access Alternate Switching Point for subtable STDPRTCT.STDPRT appears in the following table. The fields that apply to

Equal Access Alternate Switching Point (continued)

Equal Access Alternate Switching Point appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling subtable STDPRTCT.STDPRT (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
FROMDIGS		From digits	From digits. Enter the digit(s) to translate. When the entry is a block of consecutive numbers, enter the first number in the block.
TODIGS		To digits	To digits. When FROMDIGS is a block of consecutive numbers, enter the last number in the block. For other conditions, this field equals FROMDIGS.
PRETRTE		see subfields	Pretranslation route. This field has the following subfields.
	PRERTSEL	ET	Pretranslator route selector. Enter ET, the pretranslator route selector for FGD calls in an EASP.
	TYPCALL	NP	Type of call. Enter NP, because no billing occurs in the EASP.
	NOPREDIG	0 to 7	Number of prefix digits. Enter the number of prefix digits (0 to 7).
	CARRNAME	Carrier name	Carrier name. Enter the name of the carrier to which the system offers the call. Table OCCNAME defines the name of the carrier.
	RTEAREA	see subfields	Route area. This subfield has subfield RTEPRSNT.
	RTEPRSNT	Y or N	Route present. Enter Y in subfields EXTRTEID, TABID, KEY, MINDIGSR and MAXDIGSR. For other subfields, enter N.
	EXTRTEID	see subfields	External route ID. This subfield has subfields TABID and KEY.
	TABID	Table identifier	Table identifier. Enter an office route table name for additional call routing.
	KEY	0 to 1023	Index. Enter the office route index (0 to 1023) that to which the translation routes.

Equal Access Alternate Switching Point (end)

Datafilling subtable STDPRTCT.STDPRT (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	MINDIGSR	1 to 18	Minimum digits received. Enter the minimum number of digits (1 to 18) to collect before the system routes the call.
	MAXDIGSR	1 to 24	Maximum digits received. Enter the maximum number of digits (1 to 24) to collect before the system routes the call.

Datafill example for subtable STDPRTCT.STDPRT

Sample datafill for subtable STDPRTCT.STDPRT appears in the following example.

MAP example for subtable STDPRTCT.STDPRT

```
      FROMDIGS        TODIGS
                                        PRETRTE
-------------------------------------------------------------------
099777        099777
                 ET NP 0  CARR1  Y   OFRT 777  6 6
```

Tool for verifying translations

Equal Access Alternate Switching Point does not use tools to verify translations.

SERVORD

Equal Access Alternate Switching Point does not use SERVORD.

Equal Access End Office

Ordering code

Functional group ordering code: EQA00001

Functionality ordering code: not applicable

Release applicability

BCS35 and later versions

Requirements

To operate, Equal Access End Office has the following requirements:

- BAS Generic, BAS00003
- UDDD Services, UDD00001

Description

The Equal Access End Office feature package allows DMS-100 switches end offices to originate, route and bill calls to interexchange carriers (IEC) and international carriers (INC). This action is in agreement with the Equal Access plan (EAP). The system supports Equal Access calls on the Plain Ordinary Telephone Service (POTS) and the Meridian Digital Centrex (MDC).

Operation

The Equal Access End Office package provides abilities that appear in the following list:

- translations and carrier screening in the POTS environment
- translations and carrier screening in the MDC environment
- originating and terminating billing
- treatments
- signaling
- dialing
- features
- carrier identification code (CIC) expansion

Equal Access End Office (continued)

Translations and carrier screening in the POTS environment

The Equal Access End Office feature package implements the translations and carrier screening for Equal Access calls in the POTS environment. To perform the necessary digit translation and carrier screening, the switch must

- identify incoming Equal Access traffic
- determine the type of Equal Access traffic and the switching arrangement. Equal Access traffic can be interstate or intrastate, interexchange or local exchange, domestic or international. Switching procedures can be temporary, Equal Access, transitional, feature group C (FGC), or none.
- add the Equal Access prefix for calls the system routes to the subscriber primary inter-LATA carrier (PIC)
- select the IEC or INC based on the Equal Access prefix present, EAP or temporary plan
- determine if the carrier can handle the call
- select an outgoing trunk based on the call type, carrier requirements and trunk availability
- create the digit stream that outpulses to the next office or carrier based on the call type and carrier requirements
- handle Equal Access operator assisted (OA) calls

Translations and carrier screening in the MDC environment

The Equal Access End Office feature package implements Equal Access for MDC stations and incoming trunks. The MDC stations that support Equal Access include

- attendant console
- data unit
- P-phone set
- standard MDC 500/2500 set

These stations are in a dedicated private branch exchange (PBX) or are part of a centrex configuration. Two Equal Access translation and routing methods can apply in the environment. Application depends on the method of operation. The PBX and the combined centrex/Equal Access end office (EAEO) methods are examples of operation methods.

PBX mode of operation

PBX subscriber groups are in one of the following:

- stand-alone PBX with trunks that connect to the EAEO
- centrex system with virtual facility groups (VFG) that connect to the EAEO

Equal Access traffic that originates from these types of groups cannot access the EAEO directly. The system must first route traffic over a real trunk or a VFG. The system treats each outgoing Equal Access call to an interexchange carrier (IEC) or INC as two separate calls in the MDC.

A description of the first call, from the calling party through the MDC, appears in the following steps:

- The calling party dials the called number.
- The digits enter the PBX where the system translates and screens the digits.
- The PBX selects an outgoing trunk to the connected EAEO.

A description of the second call, from the PBX through the EAEO to the carrier, appear in the following steps:

- The PBX outpulses the dialed digits to the EAEO. If you enter the PBX for complete translation and the EAP prefix is not in the dialed digits, the following action occurs. System software determines the correct EAP prefix. The system outpulses the EAP prefix with the dialed digits. This condition also occurs when the calling party wants the call to route to the station PIC or the PBX default carrier.
- The digits enter the EAEO for translation and screening.
- The EAEO selects an outgoing trunk to the IEC or INC.
- The EAEO outpulses the appropriate digits to the carrier. The system routes the call to the called party.

Combined centrex and EAEO mode of operation

The Equal Access traffic that originates from a combined centrex and EAEO mode of operation accesses the EAEO directly. The interaction between the centrex and EAEO POTS environments appears in the following list:

- The calling party dials the called number.
- The digits enter the centrex part of the EAEO where the system translates and screens the digits.
- The access of the EAEO POTS environment directly occurs with the line attribute index the MDC translation table IBNXLA assigns.

Equal Access End Office (continued)

- The digits enter the EAEO POTS environment for called number verification and carrier screening.
- The EAEO selects an outgoing trunk to the IEC or INC.
- The EAEO outpulses the appropriate digits to the carrier. The system routes the call to the called party.

Note: Intervening trunks, real or VFG, are not present between the centrex and the EAEO.

Assigning PICs for MDC subscribers

An MDC subscriber group can have a PIC assigned in the MDC or the EAEO POTS environment. The system assigns the PIC in the EAEO if the EAP prefix is not in the incoming digit stream. If the PBX connects to the EAEO by a real trunk group, use table LENFEAT for PIC assignment. If the PBX connects to the EAEO by a VFG, use table VIRTGRPS.

The MDC subscriber can choose one or both of the following MDC PIC options. The assignment of the options in the MDC environment occurs before EAEO POTS translation:

- line PIC (LPIC), where the specified line has an assigned PIC
- group PIC (GPIC), where the specified line group has an assigned PIC

If the subscriber chooses an LPIC for a line that has a GPIC assigned, the LPIC overrides the GPIC. The LPIC and GPIC options are in the preliminary and subscriber group translators, in that order. If the dialed digits are not in the preliminary translator, the system searches the subscriber group translator.

Originating and terminating billing

This feature package implements originating and terminating billing for Equal Access calls. The creation of originating access records can occur. This creation occurs for all outgoing Equal Access calls the system routes directly to an IEC or INC, or indirectly through an access tandem (AT). The creation of terminating access records can occur for all completed Equal Access calls. This creation occurs for all Equal Access calls that the system routes directly to the EAEO from an IEC or INC. The billing records the system produces are in the standard automatic message accounting (AMA) format. A description of originating and terminating billing appears in the billing section of this document.

Treatments

This feature package implements the new treatments required when Equal Access calls fail. A treatment is a reaction that software generates to a call failure condition. A description of some Equal Access failure conditions that

can use the current treatments appear in the following table. The features this feature package implements require new treatments. A description of the treatments appear in the “Failure conditions - new treatments" table.

Failure conditions - current treatments

Failure condition	Treatment	Disposition
EAEO does not get AT wink after two attempts.	STOC	Signal time-out announcement
EAEO does not get IEC/INC wink after two attempts.	STOC	Signal time-out announcement
All trunks busy from EAEO to AT or IEC/INC.	GNCT	All circuits busy announcement

Failure conditions - new treatments (Sheet 1 of 2)

Failure condition	Treatment	Disposition
Inter-LATA restriction (INTER = N (no) in table OCCINFO for carrier)	CACE	Carrier access code (CAC) in error announcement
Intra-LATA restriction (INTRA = N in table OCCINFO for carrier)	NACD	Do not dial 10XXX announcement
Interstate restriction (INTERS = N in table OCCINFO for carrier)	CACE	CAC in error announcement
Intrastate restriction (INTRAS = N in table OCCINFO for carrier)	CACE	CAC in error announcement
International restriction (INTNTL = N in table OCCINFO for carrier)	CACE	CAC in error announcement
AD1 dialed (AD = N in table OCCINFO for carrier)	CACE	CAC in error announcement
10XXXQSAC dialed	CACE	CAC in error announcement
Not assigned or modified CAC or ACCESS = NONE in table OCCINFO for carrier	CACE	CAC in error announcement

Equal Access End Office (continued)

Failure conditions - new treatments (Sheet 2 of 2)

Failure condition	Treatment	Disposition
Equal Access prefix not dialed. Line does not have a PIC. The OFCENG Default Carrier is set to a treatment	DACD	Dial CAC announcement
EAP prefix dialed, must be interim, ACCESS = EAP in OCCINFO for carrier	D950	Dial 950 announcement
Interim prefix dialed, must be EAP, ACCESS = EAP in OCCINFO for carrier	N950	Do not dial 950 announcement
The EAP prefix dialed. Carrier is not PIC. Subscriber does not have CHOICE to select carrier	NACD	Do not dial 10XXX announcement
BCS17: Either IELRES = Y (yes) in OCCINFO or OPTLIST = TDN in LENLINES ***Note:*** The deletion of the IELRES field in table OCCINFO occurs in BCS21.	ILRS	Dialing restriction announcement
BCS18 and releases that follow: line does not have access to carrier (carrier toll denied)	ILRS	Dialing restriction announcement
Incorrect inter-LATA corridor call	IVCC	Invalid corridor call

The DMS-100 switch uses the digital recorded announcement machine (DRAM) to deliver announcements to subscribers. This machine is flexible and allows the operating company to record customized announcements. Service announcements for some of the treatments that this package provides appears in the following table.

Service announcements associated with treatments (Sheet 1 of 2)

Treatment	Service announcement
D950	We're sorry, the carrier access code you dialed must be preceded by the digits 950. Please hang up and dial your call again.
N950	We're sorry, it is not necessary to dial the digits 950 before dialing your carrier access code. Please hang up and dial your call again.
ILRS	We're sorry, your call cannot be completed as dialed. Please read your instruction card or call your operator for assistance. Please hang up and dial your call again.
NACD	We're sorry, it is not necessary to dial a carrier access code for the number you have dialed. Please hang up and dial your call again.

Service announcements associated with treatments (Sheet 2 of 2)

Treatment	Service announcement
CACE	We're sorry, the number you have dialed cannot be reached with the carrier access code you dialed. Please check the code and dial again or call your carrier for assistance.
DACD	We're sorry, it is necessary to dial a carrier access code for the number you have dialed. Please hang up and dial your call again.

Signaling that NTX186AB supports

Equal Access End Office uses feature group D (FGD) dialing plan and signaling. The NTX186AB supports feature group B (FGB) and FGC signaling.

FGB on access to carrier trunks

Without this feature package, the system only supports FGB signaling on outgoing CAMA (OC) trunks to FGB carriers. The system only supports FGB signaling on access to carrier (ATC) trunks to FGB carriers in Traffic Operator Position System (TOPS) offices. The DMS switch waits 4 to 8 s for off-hook on all outgoing trunks to FGB carriers.

This feature package implements FGB signaling on all ATC trunks by changing table TRKGRP. Field SIGTYPE now accepts FGB as a correct signaling type, if you enter TOPS in the end office. Field SIGTYPE also accepts FGB as a correct signaling type if you do not enter TOPS in the end office.

The DMS switch now waits for an off-hook from the FGB carrier for 5 s after the switch outpulses the called digits. If the system does not receive an off-hook, an attempt on a second carrier trunk occurs. If the second trunk fails, the system takes the call down. After each call attempt, the system generates log TRK121 to record the failure of each trunk.

The system supports timing for the following FGB calls:

- line to ATC trunk
- SuperCAMA (SC) trunk to ATC trunk
- intertoll (IT) trunk to ATC trunk
- attendant console to ATC trunk
- three-way calling to ATC trunk
- P2/PX trunk to ATC trunk

Equal Access End Office (continued)

FGC signaling on ATC, IT, and operator trunks

The NTX186AB feature package allows the DMS-100 switch to access an FGC carrier through FGC signaling. The ATC, IT, and operator trunks use this signaling. Note that the system retains FGD dialing plan and billing method.

Dialing that Equal Access supports

In addition to the standard Equal Access dialing procedures, the Equal Access End Office feature package supports the following types of dialing.

Abbreviated dialing

This feature implements new types of abbreviated dialing for Equal Access calls.

00 - dialing

With the Equal Access End Office feature package, an operating company can provide subscribers different abilities. Subscribers can dial 00- to access PIC operator services, and not 10XXX+00- or 10XXX+0-.

This feature package allows an operating company to determine the class of service of the line that originates a 00- call. Examples of these lines are coin lines or single party lines. The operating company can use different routes to route 00- calls. This action depends on the line type of the calling party.

This feature is available in the POTS and MDC environments. If an MDC subscriber does not have a PIC, the system uses a group PIC instead. The system routes the call to the default carrier or to an announcement machine if the following conditions are present:

- a POTS subscriber does not have a PIC
- a group PIC is not specified for an MDC subscriber

To implement 00- dialing, set to 00 the FROMDIGS and TODIGS fields in the first and second pretranslators in subtable STDPRTCT.STDPRT. Set the NOPREDIG fields in both pretranslators to 1. One zero can outpulse.

Operating companies can decide to not provide the 00- dialing option. The operating company must make sure the FROMDIGS and TODIGS fields in the first pretranslator are not set to 00. The FROMDIGS and TODIGS fields of the second pretranslator must always be 00 to allow 10XXX+0- dialing.

The 00- dialing feature supports FGC and FGD signaling. Note that the user must route FGC calls to an IEC operator service. The user does not route FGC calls to the AT. The switch does not know which carrier handles these calls.

The EXTRTEID field of the second pretranslator specifies the route that a 00-, 10XXX+0-, or 10XXX+00- call takes out of table OFRT. The route the second pretranslator defines overrides the route the EXTRTEID field of the first pretranslator defines.

The signaling information the system outpulses for calls made with the 00-, 10XXX+00-, and 10XXX+0- dialing sequences appears in the following table. The codes to use appear in the table.

Signaling information outpulsed for 00- calls

Call type	Signaling information	Automatic number identification (ANI)
FGC calls	KP + 0 + ST	
FGD calls over direct trunks to a carrier	KP + II + ANI + ST + KP + 0 + ST	Yes
	KP + ST + KP + 0 + ST	No
FGD calls to an AT	KP + 0ZZXXX + ST	
	KP + II + ANI + ST + KP + 0 + ST	Yes
	KP + 0ZZXXX + ST	
	KP + ST + KP + 0 + ST	No

Equal Access outpulsing definitions

Digits Sent	Definition
0ZZ	The AT receives the domestic identification digits from the EAEO for local or interexchange Equal Access calls. The digits indicate the call type for direct dialed (DD) and OA calls, like 080.
ANI	The EAEO outpulses the ANI digits to the AT as part of the ANI spill. This action occurs for Equal Access calls to carriers that require ANI spill. Table OCCINFO indicates carriers that require ANI spill. The ANI spill contains the information digits and the calling number.
II	The AT receives the information digits from the EAEO for Equal Access calls.
KP	A key-pulse indicates the start of the digit stream.
ST	A start pulse indicates the end of a digit stream.
XXX	The AT receives the CAC digits from the EAEO for all Equal Access calls. The subscriber dials the CAC or the EAEO adds the CAC to the called number for presubscription, like 222.

Equal Access End Office (continued)

Calls supported by Equal Access

In addition to the standard Equal Access calls, the NTX186AB feature package supports the following types of dialing.

Corridor calls

A corridor call is an interexchange call that routes through a local exchange carrier, operating company. The call does not route through an IEC.

A corridor call can route through the operating company if the subscriber dials the 10XXX digits of the operating company. This condition also applies if the subscriber defines the company as a PIC. The system screens each call to determine that the call is an interexchange call in the corridor. If the call is an interexchange call outside the corridor, the system routes the call to invalid corridor call (IVCC) treatment. Local exchange calls complete normally with the facilities of the operating company.

Equal access supports the following corridor calls:

- 00 -
- 0 + 7 digits
- 0 + 10 digits
- 1 + 7 digits
- 1 + 10 digits
- 10XXX + 0
- 10XXX + 00
- 10XXX + 0 + 7 digits
- 10XXX + 0 + 10 digits
- 10XXX + 1 + 7 digits
- 10XXX + 1 + 10 digits

Enter OTC in the ACCESS field of table OCCINFO to define the operating company as an OTC carrier access type. An OTC carrier access type is a company that can handle corridor calls. The operating company specifies the EATYPE as CORRIDOR in table LATAXLA for each LATACODE defined as a corridor call. The system bills corridor calls as local exchange calls.

Privilege calls

Privilege calls are interexchange calls dialed without a 10XXX prefix or PIC. The operating company completes privilege calls. The system translates these

calls as non-Equal Access, local exchange calls. The following interexchange call types can be privilege calls:

- 0 + 7 digits
- 0 + 10 digits
- 1 + 7 digits
- 1 + 10 digits

The operating company specifies the EATYPE as PRIVILEGE in table LATAXLA for each LATACODE to define privilege calls. The system routes calls the operating company enters as PRIVILEGE and dials with a 10XXX prefix as Equal Access interexchange calls. The system defines interexchange calls as calls that use the dialed IEC. Entries in table OCCINFO do not associate with a privilege call. The system bills privilege call as local exchange calls.

Non-Equal Access calls

Non-Equal Access calls are local exchange calls the operating company completes and dials without a 10XXX prefix. The following local exchange call types can be non-Equal Access calls:

- 7 digits
- 10 digits
- 0 + 7 digits
- 0 + 10 digits
- 1 + 7 digits
- 1 + 10 digits

The operating company specifies the EATYPE as NON_EA in table LATAXLA to define non-Equal Access calls. Calls the operating company enters as NON-EA and dials with a 10XXX prefix route to no dial access code (NACD) treatment. Entries in table OCCINFO do not associate with a non-Equal Access call. The system bills non-Equal Access calls as local exchange calls.

Calls using service access codes

The Equal Access End Office feature package allows the operating company to specify service access codes (SAC). A SAC is a code that replaces a numbering plan area (NPA) in the dialing sequence. Subscribers use SACs to access a specified service an IEC, INC, or operating company provides.

Correct SACs are of the form N0/1X

Equal Access End Office (continued)

where

N
is a number from 2 to 9

0/1
is either 0 or 1

X
is a number from 0 to 9

Enter a correct N0/1X code in table EASAC to enter the codes. Note that N11 codes are in the N0/1X range but are incorrect SACs. You cannot change tuples in table EASAC. You can add or delete tuples in table EASAC.

The correct SAC call type is

- 1 + N0/1X + NXX + XXXX

If a subscriber dials a SAC with a 10XXX prefix, the system routes the call to carrier access code error (CACE) treatment.

Note: Before this feature package, SAC 800 and 900 were hard-coded into the DMS switch. You must now enter SAC 800 and 900 in table EASAC.

Features supported by Equal Access

The Equal Access End Office implements the following features:

- overlap carrier selection (OCS)
- carrier toll denied (CTD)
- circle digit (CD)

A description of these features appears in the following sections.

Overlap carrier selection. The signaling in use for Equal Access calls is complicated and slow so the EAEO must complete most of this signaling. The EAEO must complete signaling before the subscriber finishes dialing. The OCS feature provides the EAEO with the ability to perform the following:

- seize an outgoing trunk to the carrier or the AT
- send selection digits to the carrier
- send the ANI digits before the subscriber finishes dialing

The DMS switch needs more information to determine the office route to an EAP carrier.

The DMS switch needs the following information:

- CAC, the subscriber dials CAC or the system software adds CAC
- call type prefix, 0, 1, 01 or 011
- country code for international calls outside World Zone 1
- area code for international calls inside World Zone 1
- area code and central office code for domestic calls

The OCS feature applies to FGD EAP carriers. The DMS-100 switch requires all the digits to select a route. The DMS-100 provides the correct outpulse sequence for FGB and FGC carriers.

For domestic calls, OCS begins when the user dials all digits except four digits. The system determines the office route to the carrier and the digits to outpulse for the first stage of outpulsing. The system determines the office route at this point in the dialing sequence. If the call routes to an AT, the DMS switch seizes an outgoing trunk and outpulses three items. The system outpulses call identification, the carrier identification and the ANI digits. If the call routes over direct trunks to the carrier, the DMS switch seizes an outgoing trunk. The system outpulses the ANI digits. In both occurrences, the system outpulses the called number after the user dials all the digits.

For international calls, OCS begins after the user dials the country code. At this point in the dialing sequence, the system determines the office route to the carrier. The system determines outpulse digits for the first stage of outpulsing. The DMS switch seizes an outgoing trunk and outpulses the following:

- call identification
- carrier identification,
- country or area identification
- ANI digits

The system outpulses the called number when the user dials all the digits.

Carriers can choose OCS on all calls, no calls or specified calls. Field OVERLAP in table OCCINFO controls this selection.

Note: When you use OCS with an IEC, EAEOs with BCS 19 software loads must make sure that office parameter EA_OVERLAP_CARRIER_SELECTION is Y.

Equal Access End Office (continued)

Carrier toll denied

With the CTD feature, the operating company can deny a subscriber toll access to a maximum of three carriers. When a subscriber attempts to place a call to a carrier and has access denied, the call completes or the system blocks the call. The call goes to an inter-LATA restricted (ILRS) treatment. This treatment appears in the “Failure conditions - new treatments" table. The decision to block a call to a carrier defined as toll denied depends on the characteristics of the call. For example, the system does not block OA and inward wide area telephone service (INWATS) calls.

The addition or deletion of the CTD feature from the system software occurs with the Service Order System (SERVORD). The modification of table LENFEAT can also cause additions or deletions. The modification of table LENFEAT to include the CTD feature can occur. This action occurs when the addition of the names of the carriers to which the operating company denies the subscriber access occurs.

A call from a line with the CTD feature to a carrier that is not in table LENFEAT is not affected. The information digits do not identify the line as toll denied. The CTD feature does not affect local exchange calls. Use of the special toll denied information digits allows interexchange and local exchange calls to go to ILRS treatment or to go through.

The system can allow a call from a line with the CTD feature to a carrier in table LENFEAT to go through. The information digits indicate that the line is toll denied. These information digits take priority over all other digits unless the DMS switch cannot identify the originating line. This condition occurs during an ANI failure or when an ANI test is not performed on a call, for example, on some multiparty lines.

Circle digit

The current CD feature allows 8-party and 10-party line subscribers to make a DD toll call. Assign a CD, zero to nine, to each member of the party line to provide this ability. Each party must dial the CD when the party makes a DD call. Circle digits support the following call types:

- 1 + CD + 7 digits
- 1 + CD + 10 digits
- 0 + CD + 7 digits
- 0 + CD + 10 digits

The office parameter single party DD digit (SPDD_DIGIT) in table OFCENG assigns a CD to the following:

- single party
- two-party
- four-party lines for agreement in the office numbering plan

With the current CD feature, 8-party and 10-party line subscribers cannot make DD toll calls with an EAP prefix. If SPDD_DIGIT is a value that is not 0, subscribers with 1FR (single party, flat rate) cannot use an EAP prefix. The 2FR (two-party, flat rate) or 4FR (four-party, flat rate) line class codes cannot use an EAP prefix.

This feature package introduces the office parameter EA_WITH_CD in table OFCENG. This feature allows CD subscribers to dial 10XXX+ DD calls.

Originally, the CD was the second number to dial. With the NTX186AB - Equal Access End Office package, if zero is the second digit, the system records a 10XXX call. The CD is the seventh number to dial.

This feature package supports the following call types:

- 1 + CD + 7 digits
- 1 + CD + 10 digits
- 0 + CD + 7 digits
- 0 + CD + 10 digits
- 10XXX + 1 + CD + 7 digits
- 10XXX + 1 + CD + 10 digits
- 10XXX + 0 + CD + 7 digits
- 10XXX + 0 + CD + 10 digits
- 10XXX + 0 + CD
- 10XXX + 0 + CD + #

Office parameter EA_WITH_CD is set to N in all offices at the start.

Carrier identification code expansion

Currently, a three-digit code, the CIC, identifies each carrier. You can assign a maximum of 970 CICs only to an FGD carrier. This action occurs because CICs in the series 10X, 15X, and 16X are not in use.

Equal Access End Office (continued)

To prepare for the expected exhaustion of available CICs, the NTX186AB feature package expands the number of CICs you can assign to 10 000. The format of CAC expands from 10XXX to 101XXXX, where XXX and XXXX are the CICs. The CAC is the dialing sequence that accesses the carrier. This feature package supports the CIC expansion for POTS and MDC environments. This feature supports integrated services digital network (ISDN) subscribers which follow standard Equal Access translations.

The system implements change from three-digit to four-digit CICs in three phases. The phases appear in the following table.

Conversion phases to implement four-digit CICs

Conversion period	Valid CACs	Invalid CACs	Number of CICs available
Current	10XXX	1010X	970
		1015X	
		1016X	
Permissive (part 1)	10XXX	1010X	970
	1010XXX	1015X	
		1016X	
Permissive (part 2)	10XXX	1010X	2970
	1010XXX	1015X	
	1015XXX	1016X	
	1016XXX		
Final	101XXXX	10XXX	10 000

During the first part of the permissive period, the end office can process CACs of the form 10XXX and 1010XXX. The three-digit CIC assigned to each carrier expands to four digits when you add a leading zero. In this period, CACs of the form 1010X, 1015X, 1016X, 1015XXX and 1016XXX are not assigned. If the subscriber dials a code that is not assigned, the system sends the call to treatment.

In the second part of the permissive period, CACs if the form 1015XXX and 1016XXX are assigned. The CACs of the form 1010X, 1015X and 1016X remain not assigned to help the end office. The end office can now distinguish between three-digit and four-digit CICs. When 10, 15, or 16 appear as digits 3 and 4 in the CAC, the end office records that a four-digit CIC is dialed. The system records other sequences as a three-digit CIC.

In the final period, the end office accepts only four-digit CICs. Calls with a three-digit CIC go to treatment. Note that these changes do not appear to subscribers that use PICs to complete interexchange calls.

Implementing four-digit CICs in an EAEO

Office parameter EAEO_FOUR_DIGIT_CIC_STATUS and table CICSIZE4 control the three change periods. The office parameter can take the following three values:

- THREEDIG: This state corresponds to the current period in the “Conversion phases to implement four-digit CICs" table and indicates that only three-digit CICs are in use.
- PERMISSIVE: This state corresponds to the permissive period in the “Conversion phases to implement four-digit CICs" table and indicates that both three-digit and four-digit CICs are in use.
- FOURDIG: This state corresponds to the final period in the “Conversion phases to implement four-digit CICs" table and indicates that only four-digit CICs are in use.

Table CICSIZE4 contains the trunk groups that use four-digit CICs. Trunk groups that do not appear in this table use three-digit CICs. When an interexchange call is made through an AT, the converted EAEO transmits four-digit CICs to the AT. This condition occurs if the entry of the trunk group you select occurs in table CICSIZE4. If the EAEO receives a three-digit CIC from the subscriber, the EAEO appends a leading zero before the EAEO outpulses to the AT. If the EAEO receives a four-digit CIC not entered in table CICSIZE4, the EAEO produces log DFIL147. The leading digit is not zero in this condition.

For calls that route to an INC, the converted EAEO transmits three-digit or four-digit CICs. Entries of the trunk group in table CICSIZE4 does not affect this condition.

When full four-digit CIC conversion occurs, all trunks at the EAEO carry four-digit CICs. Table CICSIZE4 becomes not necessary. You do not have to consult the table during translation. Office parameter EA_TAB_CICSIZE4_OBSOLETE is Y to specify that table CICSIZE4 is not a requirement.

Implementing four-digit CICs in a CCS7 EAEO

The EAEO calls route to the IEC directly over CCS7 ATC trunks or indirectly through an AT over CCS7 IT trunks. Send an outgoing initial address message (IAM) to the IEC to establish the call. To support four-digit CICs over CCS7 trunk groups, the optional transit network selection (TNS) parameter must

Equal Access End Office (continued)

change. The TNS parameter contains the CIC. The IAM contains this parameter for national and international calls that route to the AT. The IAM also contains this parameter for international calls that route directly to the IEC. With this feature package, the TNS parameter can contain a three-digit or four-digit CIC.

When office parameter EA_TAB_CICSIZE4_OBSOLETE is N, a four-digit CIC is in the TNS parameter. The CIC is in the TNS parameter if you enter the CCS7 IT or ATC trunk group in table CICSIZE4. The subscriber can dial a three-digit CIC and you can enter the CCS7 trunk group in table CICSIZE4. When these events occur, the end office appends a leading zero to the CIC dialed. The end office includes the CIC in the TNS parameter. If you do not enter the trunk group in table CICSIZE4, the TNS includes a three-digit CIC.

If the subscriber dials a four-digit CIC not in table CICSIZE4, the system removes the leading digit of the CIC. The leading digit forms a three-digit CIC in the TNS parameter. When office parameter EA_TAB_CICSIZE4_OBSOLETE is Y, the TNS parameter always includes a four-digit CIC.

Network changes

The network changes for the CIC expansion occur in a specified order. Some of these changes occur for each switch. Some changes occur for each trunk group or for each service control point (SCP) and signaling transfer point (STP) link. For example, you can convert an end office to accept four-digit CICs. An AT can have only a few trunk groups that accept four-digit CICs.

The changes this feature package introduces affect end offices only. You must update other elements in the network, like ATs and SCPs. The network changes to implement Equal access appear in the following procedure.

Network changes to implement Equal Access

At your current location:

1 Convert the SCP database and the service management system to store three-digit and four-digit CICs. Convert the database and service management system to respond with three-digit or four-digit CICs.

2 Convert ATs to accept four-digit CICs on trunk groups from upgraded EAEOs. Convert ATs to continue to accept three-digit CICs from non-upgraded ones.

3 Convert EAEOs to accept three-digit and four-digit CICs during a permissive period. Accept only four-digit CICs when that period ends.

4 Convert EAEOs to transmit four-digit CICs on upgraded trunk groups to the AT.

5 For international calls only, convert IEC switches to accept four-digit CICs from upgraded trunk groups.

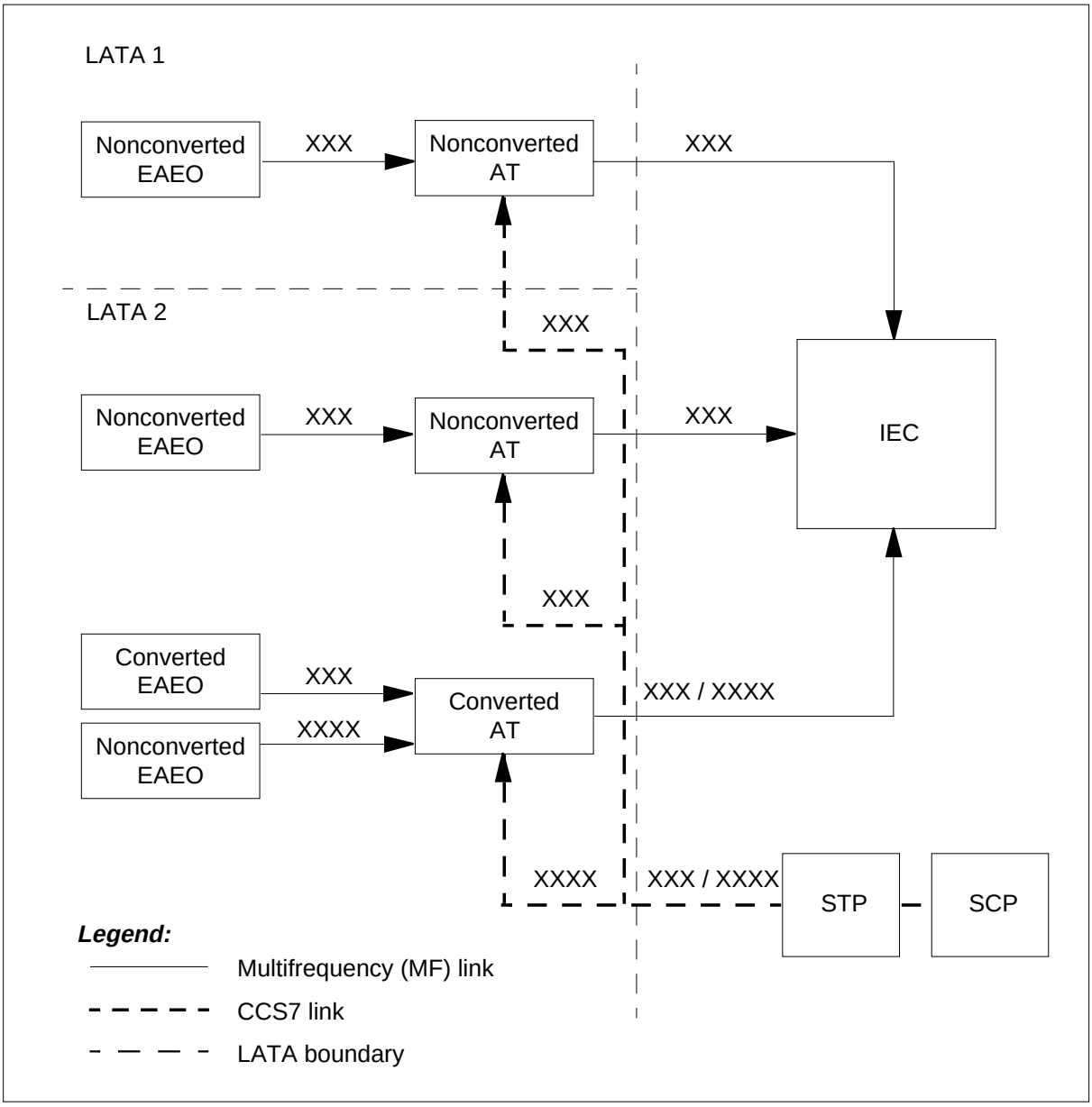
Equal Access End Office (continued)

This feature package covers steps 3 and 4. Step 2 appears in this document. Steps 1 and 5 appear to provide the operating company with a complete picture of the changes required.

A summary of a network that undergoes conversion appears in the following figure. In LATA 1, the EAEOs or trunk groups do not convert to four-digit CICs. In LATA 2, the system converts one office. A converted office is an office that accepts permissive or full four-digit CICs. A converted office is an office with some trunk groups or STP/SCP links that carry four-digit CICs.

Equal Access End Office (continued)

Network undergoing conversion



Result of the CIC expansion

The system limits the size of the digit register to 24. To expand the number of digits in the CIC means that the CAC uses 7 digits 101XXXX and not 5 10XXX. This increase causes the number of MDC prefix digits you can use for an international call to reduce from three to two. The new format of MDC international calls appears in the following example:

YY-101XXXX-011-44-1234567890

where

YY
are MDC prefix digits

Implementing the permissive dialing phase

The actions to implement the permissive dialing phase of the CIC expansion appears in the following procedure.

Implementing the permissive dialing phase

At your current location

1. Add tuples to the standard pretranslator for the seven-digit CACs that requires translation.
2. Set office parameter EAEO_FOUR_DIGIT_CIC_STATUS to PERMISSIVE.
3. Reload central control data in all the extended peripheral modules (like line modules and line concentrating modules) that serve line control devices. This operation changes digit collection in the peripherals.
4. Add the trunk name to table CICSIZE4 for the trunk groups that carry four-digit CICs.

Implementing the final dialing phase

The actions to implement the final dialing phase of the CIC expansion appear in the following procedure.

Implementing the final dialing plan for four-digit CICs

At your current location

1. Make sure you enter all four-digit CICs in table OCCINFO.
2. Manually delete all five-digit CACs out of the standard pretranslator, table STDPRTCT. Only seven-digit CACs are valid.

   Note: Standard pretranslators for five-digit CACs should be removed now. If five-digit CACs are not deleted, calls will continue to complete after step 4.
3. Set office parameter EAEO_FOUR_DIGIT_CIC_STATUS to FOURDIG.
4. Reload central control data in all the extended peripheral modules like line modules and line concentrating module that serve line control devices. This operation will change digit collection in the peripherals.
5. Change table CICSIZE4 to add the trunk groups that carry four-digit CICS. If the system converts all trunks to carry four-digit CICs, set office parameter EA_TAB_CICSIZE4_OBSOLETE to Y. When this event occurs, you do not need to enter table CICSIZE4.

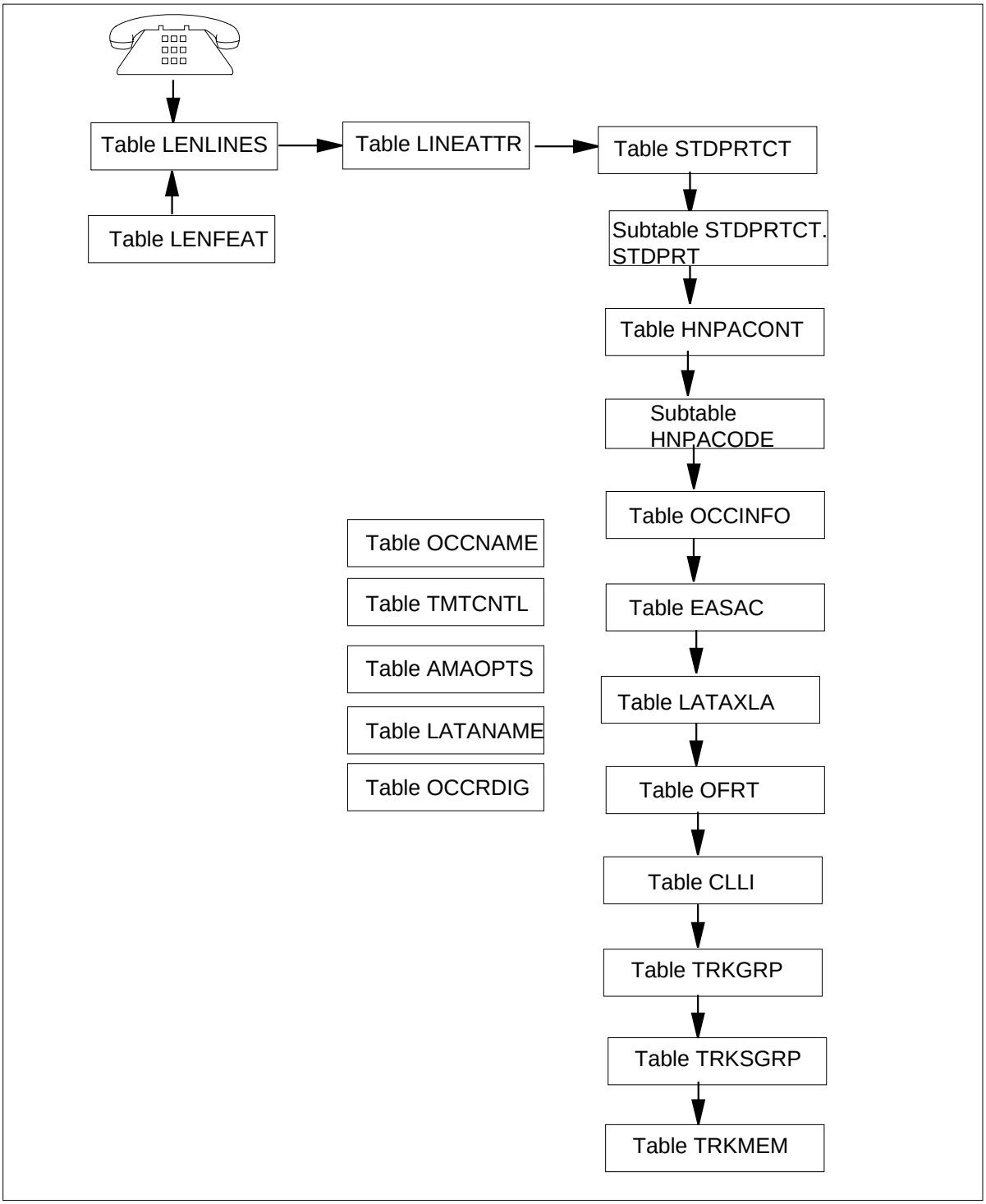
Equal Access End Office (continued)

Translations table flow

The Equal Access End Office translation process appears in the flowchart that follows.

Equal Access End Office (continued)

Table flow for Equal Access End Office



Equal Access End Office (continued)

Limits

The following limits apply to Equal Access End Office:

- 800+ feature (Canada)

  Equal Access is not compatible with the Canadian 800+ feature. The 800+ feature differs from the traditional 800 feature. Routing translation for 800+ calls occurs in the network database outside the switch. The network database stores the 800 numbers to simplify administration. Without the 800+ feature, enter an 800 number in the translation tables of all DMS toll switches that serve this number.

  Note: The 800+ service is different from the enhanced 800 (E800) service.

- Dynamically Controlled Routing (Canada)

  Dynamically Controlled Routing (DCR) reserves idle trunks in trunk groups to provide routes for traffic that overflows. One or two links from an originating toll switch separates the trunks. This DCR can route traffic from an end office to another end office to optimize the use of the DMS switch and trunks. Do not use DCR with Equal Access. The DCR interferes with Equal Access billing and network hierarchy. The system can only route Equal Access calls from an end office to an AT or directly to the IEC/INC. Equal Access calls cannot route from an end office to another end office.

- Toll Call Management Services (Canada)

  Toll Call Management Services (CMS) is equivalent to Custom Local Area Signaling Services (CLASS) in the United States. The CMS is a set of services that capitalize on the knowledge that information can transmit to the subscriber. This information can transmit to the subscriber on the calling and called line numbers. Toll CMS targets single-line users, like small business and residential and gives subscribers more control over their calls. Do not use toll CMS with Equal Access. The system provides CMS functionality over a toll network, interacting directly with Equal Access.

- Abbreviated dialing

  The following limits apply to abbreviated dialing:

  — Abbreviated dialing does not allow the system to translate more than one speed calling code.

  — Abbreviated dialing cannot provide access to FGC carriers when you dial AD1 (10XXX+#).

- FGB signaling on ATC trunks

The following limits apply to FGB signaling on ATC trunks:

— The system does not support the outpulse of ANI digits for FGB calls on ATC trunks with the exception of TOPS-to-ATC FGB calls.

— In a three-way call, when party A, the controlling party:

– flashes with party B on hold

– flashes immediately after dials

– 950+WXXX

Selection of a second trunk does not occur if the first trunk fails. The system takes down that leg of the call, gives treatment, and generates a TRK121 log.

- Overlap carrier selection

  The following limits apply to the OCS feature:

  — Equal Access translation does not allow more than six digits in the recursive translation. The OCS starts outpulsing when all but four digits are collected. The entry of a maximum number of digits can occur in all Equal Access pretranslators. This maximum is 1+6 digits for a 1+10 digit call, and 1+3 digits for a 1+7 digit call. The call does not complete properly if this maximum is exceeded.

  — An international call from a rotary-dial telephone can time-out and go to reorder. This condition occurs for Equal Access MF to ISDN user part (ISUP) interworking calls when OCS activates in the EAEO. To prevent this problem disable OCS in the EAEO.

  — The system does not support the OCS feature on P2 and PX trunks.

  — Equal Access Overlap Carrier Selection (OCS) is not in use on calls in which the originating agent subscribes to Advanced Intelligent Network (AIN). An AIN subscriber can make an Equal Access Call and call processing translations can dictate that the use of OCS occurs. When this event occurs, the call proceeds without the use of OCS.

  — If the definition of an office wide trigger occurs, AIN supported originating agents are considered an AIN subscriber. The announcement of an office wide trigger in table OFCVAR occurs (as appears below). The AIN_OFFICE_TRIGGRP parameter can be NIL, or the name of a trigger group entered in table TRIGGRP. This trigger group defines a set of office-based triggers. If an AIN supported agent originates an Equal Access call, AIN servicing overrides Equal Access

Equal Access End Office (continued)

Overlap Carrier Selection. This action occurs if the definition of an office wide trigger like LRN_LNP occurs.

Datafilling table OFCVAR

Field	Subfield or refinement	Entry	Explanation and action
AIN_OFFICE _TRIGGRP		OFCTRIG	

- Carrier toll denied

  The CTD feature has the following limits:

  — The feature applies only to lines in table LENLINES.

  — The feature is not compatible with the toll denied (TDN) feature in table LENLINES and cannot apply to the same line.

  — The feature is not compatible with the toll diversion (TDV) feature.

- Circle digit

  The following limits apply to the CD feature:

  — This feature does not support international call types or the following operator call types:

    – 10XXX + 00-

    – 00-

  — This feature does not support OCS for the following call types:

    – 0 + CD + 7 digits

    – 1 + CD + 7 digits

    – 10XXX + 0 + CD + 7 digits

    – 10XXX + 1 + CD + 7 digits

  — When EA_WITH_CD is Y, the assignment of the CD0 option to 8-party and 10-party lines cannot occur. If you use SERVORD, the following message appears on the screen and the change to the line is not allowed:

  ```
  CD0 INCOMPATIBLE WITH EA_WITH_CD
  ```

  — An attempt to change the value of SPDD_DIGIT to 10 when EA_WITH_CD is Y can occur. When this event occurs, the following message appears at the MAP terminal. The parameter does not change:

  ```
  THIS VALUE INCOMPATIBLE WITH EA_WITH_CD
  ```

- Corridor calls

  The following calls are not correct corridor calls:

  — 01 + country code + national number

  — 10XXX + 01 + country code + national number

  — 011 + country code + national number

  — 10XXX + 011 + country code + national number

  — 10XXX + #

  — 950-10XXX

  The fields INTNTL and AD1 in table OCCINFO must be N to indicate that the preceding call types are denied. The preceding call types are denied for a local exchange carrier.

- Privilege calls

  The following call types are not entered in table LATAXLA and are not privilege call types:

  — 0-

  — 00-

  — 10XXX + 0-

  — 10XXX + 00-

  — 10XXX + #

  — 01 + country code + national number

  — 10XXX + 01 + country code + national number

  — 011 + country code + national number

  — 10XXX + 011 + country code + national number

  — 950-10XXX

  Calls entered as privilege and dialed with a 10XXX prefix routes as Equal Access interexchange calls with use of the dialed IEC.

  The system routes a call as a non-Equal Access, local exchange call. This action occurs for a call entered as privilege and dialed with the 10XXX prefix of the operating company. These actions occur in offices that have both corridor and privilege call types.

- Non-Equal Access calls

Equal Access End Office (continued)

You can enter only local exchange calls as non-Equal Access. The following call types are not entered in table LATAXLA and are not non-Equal Access call types:

— 0-

— 00-

— 10XXX + 0-

— 10XXX + 00-

— 10XXX + #

— 01 + country code + national number

— 10XXX + 01 + country code + national number

— 011 + country code + national number

— 10XXX + 011 + country code + national number

— 950-10XXX

- EAEO IEC/INC event status enhancement

  The following limits apply to the IEC/INC event status enhancement this feature package provides:

  — The FGB is not considered in the application of the IEC/INC call event status.

  — The system can record call event status 07 when the system must record call event status 01 or 03. This condition can occur if the calling party goes on-hook after the ANI digits outpulse. This action occurs before the EAEO receives an acknowledgment wink, or before a time-out occurs when the EAEO waits for the acknowledgment wink.

  — For 10XXX + # and 950-10XXX calls, call event 07 masks call event 01.

  — The system does not support call event status 13 on international calls that use three-wink signaling.

  — Call event status 02 can mask call event 03 for four-wink international calls.

Interactions

The interactions between Equal Access End Office and other functionalities appear in the following paragraphs.

FGB signaling on ATC trunks

The ANI option in table TRKGRP can be N for the ATC trunk. When this event occurs, a trouble code of CARRIER_OFFHK_time-out appears in the

TRK121 log. If ANI is Y, a trouble code of ANI_TIME_OUT appears in the TRK121 log.

Equal Access in the MDC environment

For 950 calls, the Equal Access selector in table STDPRT and the NET selector in table IBNXLA are not compatible. Use the FGB selector in table STDPRT or the ROUTE selector in table IBNXLA.

The following features do not interact with the NTX186AB - Equal Access End Office feature package:

- MDC features internal to the MDC environment (Direct Inward Dial)
- MDC features on the terminating side of POTS calls (Call Waiting)
  - This package interacts with the following MDC features:
    - Three-Way Calling
    - Speed Calling 1
    - Speed Calling 2
    - Network Speed Calling
    - Six-Party Conference
    - Call Forwarding
    - Call Transfer
    - Custom Calling
    - Direct Inward System Access
    - Automatic Route Selection

Overlap carrier selection feature

When the OCS and Line to DP Trunk Overlap outpulsing features are both in use in the same office (EA_OCS_AND_DP_OVLP_NEEDED = Y), the real time increases for processing 7- digit and 10-digit calls. These calls do not use overlap outpulsing.

Even if outpulsing features can be in use in the same office, you can only use table LMOVCODE for one type of outpulsing.

At the start, the line module and line trunk controller peripherals used the LMOVCODE table to determine which NXX codes must complete. The codes complete when Line to DP Trunk Overlap outpulsing is in use. Now, the line peripherals can use LMOVCODE to determine which NXX codes do not require OCS outpulsing. The OC must decide for which type of outpulsing to use the LMOVCODE table.

Equal Access End Office (continued)

00 - dialing

Subscribers with lines that have the CTD feature can continue to make 00- calls to the PIC. The information digits outpulsed for the call are 08.

Activation/deactivation by the end user

Equal Access End Office does not require end user activation or deactivation.

Billing

A description of Billing for NTX186AB - Equal Access End Office appears in the following sections.

Originating billing

The DMS switch uses two call codes to produce originating access records for Equal Access calls:

- call code 110, inter-LATA station paid, for calls to an IEC and INC
- call code 114, inter-LATA wide area telephone service (WATS) billing number, for WATS Equal Access calls

Structure codes associate with each call code. The length of a call determines structure code and other characteristics. A call is a normal time call when the call disconnects before the second midnight after the call initiates. A call is a long time call when the call disconnects after the second midnight after the call initiates.

Terminating billing

The system creates terminating access records for completed Equal Access calls that route directly to the EAEO from an IEC. The same condition applies to INC on ATC trunk groups with SIGTYPE set to EAPLAN, BELLI, or BELLII in table TRKGRP. The system creates terminating records for unanswered calls, calls that go to treatment. The system creates terminating records for calls network management blocks under the following conditions:

- Table AMAOPTS has the OPTION field set to UNANSTOLL and the AMASEL field set to ON.
- Table AMAOPTS has the UNANS_LOCAL field set to ON.
- Table ATTCODES contains the required call codes.

The DMS switch uses call code 119, terminating access record and the associated structure codes to produce terminating access records for Equal Access calls. The length of the call and the datafill in field TERMREC of table OCCINFO determines the structure code the system uses. A call can be normal or long time.

Terminating billing is optional. Set option OCCTERM in table AMAOPTS to ON to create terminating access records.

Refer to *Bellcore Format Automatic Message Accounting Reference Guide*, 297-1001-830. For more information about Equal Access originating and terminating billing codes

Note: The system supports standard Equal Access billing records for Equal Access calls that originate from and terminate to a P2/PX trunk group. The system generates call Code 110 billing records for 00-, 10XXX+00-, and 10XXX+0- calls. The Called Number fields in the records the system generates for these types of calls are set to all zeros.

FGD CIC expansion

The IEC/INC prefix field of the standard interexchange AMA record now accommodates four-digit CICs. To accomodate four-digit CICs, the prefix field defines characters 1 to 4 as the IEC/INC identification. Before, the definition of the first character was padding (0). The billing records that include the IEC/INC prefix are the following:

- 110 - inter-LATA station paid
- 111 - inter-LATA WATS station detail
- 113 - inter-LATA WATS automatic flexible reroute to WATS
- 114 - inter-LATA WATS billing number
- 115 - inter-LATA WATS automatic flexible reroute to DDD
- 117 - inter-LATA Datapath
- 119 - terminating access record
- 120 - originating LATA overflow counts
- 121 - Datapath terminating access record

An example AMA record for an originating FGD call from a POTS line appears below. The IEC/INC PREFIX field contains the four-digit code.

Equal Access End Office (continued)

```
HEX ID:AA  STRUCTURE CODE:00625C  CALL CODE:110C
SENSOR TYPE:036C  SENSOR ID:0000000C  REC OFFICE TYPE:036C
REC OFFICE ID:0000000C  DATE:00604C  TIMING IND:00000C
STUDY IND:0000000C  ANSWER:0C  SERVICE OBSERVED:0C
OPER ACTION:0C  SERVICE FEATURE:000C  ORIG NPA:613C
ORIG NUMBER:6211233C  OVERSEAS IND:1C  TERM NPA:00613C
TERM NUMBER:8881234C  ANSWER TIME:1423651C
ELAPSED TIME:000000015C  IEC/INC PREFIX:12341C  CC
DATE:00504C
CC TIME:1345623C  ELAPSED CC:000000023C IEC/INC
EVENT STATUS:010C TRUNK GROUP NUMBER:00230C
ROUTING INDICATOR:0C DIALING INDICATOR:7C  ANI INDICATOR:1C
```

Event status field

The IEC/INC call event status field of the standard format inter-LATA AMA record contains of the following four binary coded decimal (BCD) characters in the form 0XXC,

where

0
is padding

XX
is a record of the last event that occurs in the call process before disconnect

C
is the sign character

Before this feature package, the DMS-100 Family switch supported call events 01, 03, 05, 06, 08, 09, 10, and 11.

This feature package adds the following events:

- 02 abandon or time-out before dialing is complete, originating LATA
- 04 time-out waiting for acknowledgment wink, originating LATA
- 07 acknowledgment wink received, originating LATA
- 12 operator signaling; time-out waiting for off-hook from IEC/INC after receipt of called number, originating LATA
- 13 off-hook rather than second start dial wink from INC, originating LATA

Originating overflow counts

The DMS switch generates call code 120 for calls that cannot complete because an outgoing trunk is not available. Call code 120 refers to originating LATA overflow counts. The system periodically produces records according to the requirements of the operating company. Overflow counts are kept for each IEC and INC. An overflow count increases when the system software encounters pseudo-common language location identifier (CLLI) named EAPEG. The system encounters EAPEG in a route list, like in table OFRT. Call code 120 contains information for a maximum of four IECs and INCs.

The EAPEG tuple always follows direct routes to the carrier. The EAPEG tuple does not follow routes that are not direct to the carrier. An example tuple with an EAPEG entry appears below:

Note that you do not enter the reserved name USE_PREVIOUS should as the carrier or treatment name. The name USE_PREVIOUS indicates that the Generic Recursive Pretranslator carrier provides the treatment. The activation of the Generic Recursive Pretranslator occurs with Software Optionality Control (SOC) process.

```
201  (S D ATCTOINC) (S D EAPEG) $
```

Perform a COLD RESTART after you enter the EAPEG tuple in the CLLI table.

Billing for FGB on ATC trunks

Use the FGB selector in table STDPRTCT for FGB calls over ATC trunks to produce call code 134 in the AMA record.

Station Message Detail Recording

Equal Access End Office does not affect Station Message Detail Recording.

Equal Access End Office (continued)

Datafilling office parameters

The office parameters used by Equal Access End Office appears in the following table. See *Office Parameters Reference Manual* for additional information about office parameters.

Office Parameters by Equal Access End Office (Sheet 1 of 4)

Table name	Parameter name	Explanation and action
OFCENG	DEFAULT_ CARRIER_OR_ TREAT	An EAEO requires this parameter. This parameter specifies the carrier name or treatment the system uses when a subscriber dials a toll call. This feature specifies the information for toll calls made without a PIC or a 10XXX prefix. If the call routes to a carrier, enter C and enter the carrier name. If the call must route to a treatment, enter T and enter the treatment name. Note that you do not enter the reserved name USE_PREVIOUS as the carrier or treatment name. The name USE_PREVIOUS indicates that the Generic Recursive Pretranslator carrier or treatment provides the activated through the (SOC) process.
	EA_OCS_AND_ DP_OVLP_ NEEDED	An EAEO requires this parameter. This parameter specifies if both the OCS and Dial Pulse Trunk Outpulsing features can be present together in a switching unit. When this parameter is Y, the user can use both features in an office. If the user sets this parameter to N, line-to-DP trunk overlap outpulsing is not available. This condition applies if office parameter EA_OVERLAP_CARRIER_SELECTION is Y. If a switching unit only needs OCS, the real time impact can reduce on non-OCS calls. If the parameter remains with a default value of Y, both forms work. Real time savings does not occur. After BCS35, when you make changes, the system removes the restart requirement.

Equal Access End Office (continued)

Office Parameters by Equal Access End Office (Sheet 2 of 4)

Table name	Parameter name	Explanation and action
	EA_OCS_ DIGCOL_ METHOD	An EAEO with the OCS feature requires this parameter. The parameter determines the method of digit collection. The four different methods of digit collection are: • NOAMBI, no ambiguous codes • PFXALL, ambiguous codes A caller must dial all 10-digit numbers with a prefix. A caller must not dial 7-digit numbers with a prefix. • PFXAMB, ambiguous codes The use of the prefix method occurs for resolving ambiguities. • TIMING The Prefix is not reliable to give any information. The OCS will not apply to ambiguous calls that use this method. After BCS35, when you make changes, the system removes the restart requirement.
	EA_OVERLAP_ CARRIER_ SELECTION	An EAEO with the OCS feature requires this parameter. This parameter determines which type of digit collection the line module performs. If the line module must perform digit collection for Equal Access OCS, enter Y. Enter N to specify normal digit collection is complete. After BCS35, the system removes the restart requirement when you make changes.
	EA_TAB_ CICSIZE4_ OBSOLETE	This office parameter specifies if the system requires table CICSIZE4. Set this parameter to N during the permissive phase of the CIC expansion. During this phase, table CICSIZE4 contains trunk groups with 4-digit CICs. When all CICs convert to 4 digits, set this parameter to Y. Table CICSIZE4 is not for use when this parameter is Y.

Equal Access End Office (continued)

Office Parameters by Equal Access End Office (Sheet 3 of 4)

Table name	Parameter name	Explanation and action
	EA_WITH_CD	This parameter specifies if the EAEO has the CD feature. The EA_WITH_CD parameter set to N implies the following: You can assign Option CD 0 (CD0) to 8-party and 10-party lines in table LENLINES. Lines with an associated CD cannot dial a 10XXX prefix. If you dial a 10XXX prefix, the call routes to an OC-defined treatment. The assignment of a PIC to a line with a CD can occur. You can set Office parameter SPDD_DIGIT in table OFCENG to a value from 0 to 10. Office parameter EA_WITH_CD set to Y implies the following: You cannot add option CD0 to 8-party and 10-party lines. Note that 10-party lines are limited to 9 members. Lines with an associated CD can make DD toll calls that use a 10XXX prefix. You can assign a PIC to a line with a CD. Office parameter SPDD_DIGIT in table OFCENG cannot be 10. A value of 10 assigns 1FR, 2FR, and 4FR subscribers a CD of 0. With SPDD_DIGIT set to 0, 1FR, 2FR, and 4FR subscribers are not required to dial a CD.
	EAEO_FOUR_ DIGIT_CIC_ STATUS	This parameter indicates the transitional phases of the CIC expansion. Values are: • THREEDIG, initial state Only 3-digit CICs CACs of the form 10XXX are correct. • PERMISSIVE, transitional phase Both 3- and 4-digit CICs, CACs of the form 10XXX, 1010XXX, 1015XXX, and 1016XXX are correct. • FOURDIG (final phase) Only 4-digit CICs are correct. After BCS35, the system removes the restart requirement when you make changes.

Equal Access End Office (continued)

Office Parameters by Equal Access End Office (Sheet 4 of 4)

Table name	Parameter name	Explanation and action
	EAEO_OFFICE_ TYPE	This parameter specifies the level of Equal Access support for end offices. Three levels of support are present: • CONFORMING Equal Access conforming end office as Bellcore FSD 20-24-0000 defines • NON_CONFORMING nonconforming end office with package NTXN12AA interfacing with a DMS-200 LEAS AT, package NTX710AA • NON_EQUAL_ACCESS nonconforming end office without package NTXN12AA
	NUMCPWAKE	Switching units require this parameter. This parameter specifies the maximum number of call process wakeups in the system. For FGB signaling on ATC trunks, increase this parameter to guarantee that 5-second timing occurs. The 5 s timing must occur on each originating FGB call.
OFCOPT	EA_LATANAME IN_SERVORD	Use this parameter to determine if SERVORD prompts the LATA name when the system adds new lines. Set this parameter to Y.
OFCSTD	EAEO_REC_1ST_ PRE_WK_TIME	This parameter specifies the time, 1 to 255, in 160-ms intervals, of the first pre-wink delay. The delay associates with outpulsing from an EAEO. The default is 100, 16 s.
	EAEO_REC_2ND _PRE_WK_TIME	This parameter specifies the time, 1 to 255, in 160-ms intervals, of the second pre-wink delay. The delay associates with outpulsing from an EAEO. The default is 175, 28 s.

Equal Access End Office (continued)

Datafill sequence

The tables that require datafill to implement Equal Access End Office appear in following table. The tables appear in the correct entry order.

Datafill requirements for Equal Access End Office (Sheet 1 of 2)

Table	Purpose of table
OFCENG	Office Engineering. This table contains data on engineering parameters for the office. See “Datafilling office parameters.
OFCOPT	Office Option. This table contains data on option parameters for the office. See “Datafilling Office Parameters."
OFCSTD	Standard Office Parameter. This table contains data on standard parameters for the office. See “Datafilling office parameters."
OCCNAME	Table OCCNAME other common carrier name, lists the connected carriers and establishes the spelling standard for tables that require the carrier name.
LATANAME	Table LATANAME, LATA name lists the names of the LATAs served by the DMS switch.
TRKGRP (ATC)	Table TRKGRP (ATC) (AT to carrier trunk group) contains information about each ATC trunk group in the EAEO.
TRKGRP (OP)	Table TRKGRP (OP) contains information about each OP trunk group. Table TRKGRP refers to outgoing and two way from local or toll to TOPS/TSPS trunk group.
TRKGRP (P2)	Table TRKGRP (P2) (trunk group) contains information about each P2 trunk group.
TRKGRP (PX)	Table TRKGRP (PX) (trunk group) contains information about each PX trunk group.
OFRT	Table OFRT (office route) contains route lists that tables other than the home NPA code subtable (HNPACONT.HNPACODE) point to. Table OFRT contains route lists that tables other than the foreign NPA code subtable (FNPACONT.FNPACODE) point to.
OCCINFO	Table OCCINFO (other common carrier information) defines the attributes for the carriers that serve a DMS switch and screens calls for carrier compatibility.
LINEATTR	Table LINEATTR (line attribute) defines the line attribute indexes that apply to an office. The assignment of line attributes to normal lines in table LENLINES occurs. The assignment of line attributes also occurs to MDC lines and attendant consoles in table IBNXLA.

Datafill requirements for Equal Access End Office (Sheet 2 of 2)

Table	Purpose of table
LATAXLA	Table LATAXLA (Equal Access LATA translation) defines the attributes of domestic calls (inter-LATA or intra-LATA, interstate or intrastate).
OCCRDIG	Table OCCRDIG (other common carrier regional digit) provides the regional code for outpulsing to the AT. Table ACCRDIG provides INC for calls to an NPA within World Zone 1, but outside the continental United States.
STDPRTCT	Table STDPRTCT (standard pretranslator control) lists the name of each standard pretranslator subtable the operating company defines.
STDPRTCT. STDPRT	Subtable STDPRTCT.STDPRT (standard pretranslator) is the first table the received leading digits index. This action occurs when the originating line attribute (from table LINEATTR) or trunk (from table TRKGRP) specifies a pretranslator name.
LENFEAT	Table LENFEAT (line feature) lists the features assigned to a specified line in table LENLINES. ***Note:*** Enter data in this table through SERVORD. The system does not provide datafill procedure or example.
AMAOPTS	Table AMAOPTS (AMA options) controls the activation and schedule of the recording options for local, tool and high-revenue calls.
VIRTGRPS	Table VIRTGRPS (virtual facility groups) assigns options to VFGs.
IBNXLA	Table IBNXLA stores the data required for the translation of calls from an MDC station.
TMTCNTL	Table TMTCNTL (treatment codes) provides route lists for a preset list of treatments.
CXGRP	Local or combined local/toll switching units require table CXGRP (customer group options) to define options. The options associate with a PX digital trunk group.
EASAC	Table EASAC (Equal Access service access codes) allows the operating company to specify N0X and N1X codes. The system treats these codes as SACs.
CICSIZE4	Table CICSIZE4 (carrier identification codes with 4 digits) identifies trunk groups with 4-digit CICs. Use this table during CIC expansion transitional phase.

Datafilling table OCCNAME

Datafill for Equal Access End Office for table OCCNAME appears in the following table. The fields that apply to Equal Access End Office appear in

Equal Access End Office (continued)

this table. See the data schema section of this document for a description of the other fields.

Datafilling table OCCNAME

Field	Subfield or refinement	Entry	Explanation and action
OCCNAME		Carrier name or 1 - 16 character alphanumeric abbreviation	Other common carrier name. Enter the carrier name. Enter a 1- to 16-character alphanumeric abbreviation of the carrier name. You can also enter the reserved carrier name USE_PREVIOUS if the system needs the generic recursive pretranslator.

Datafill example for table OCCNAME

Sample datafill for table OCCNAME appears in the following example.

MAP example for table OCCNAME

```
OCCNAME
_____________________________________________________________________
C111
C222
C333
C444
```

Datafilling table LATANAME

Datafill for Equal Access End Office for table LATANAME appears in the following table. The user can enter up to 31 LATAs. The system internally adds a null LATA (NILLATA) as the first LATA in the list. This tuple does not appear in the table printout. The fields that apply to Equal Access End Office

appear in this document. Refer to the data schema section of this document for a description of the other fields.

Datafilling table LATANAME

Field	Subfield or refinement	Entry	Explanation and action
LATANAME		LATA name	LATA name. Enter the 1-character to 16-character alphanumeric name of the LATAs in this office.
LATANUM		000 to 999	LATA number. Enter the LATA number, 000 to 999 for the LATANAME.

Datafill example for table LATANAME

Sample datafill for table LATANAME appears in the following example.

MAP example for table LATANAME

```
LATANAM      LATANUM
-------------------------------------------------------------------------------
L123           123
L456           456
LATA1          789
LATA2          759
```

Equal Access End Office (continued)

Datafilling table TRKGRP (ATC)

Datafill for Equal Access End Office for table TRKGRP (ATC) appears in the following table. The fields that apply to Equal Access End Office appear in this table. See the data schema section of this document for a description of the other fields

Datafilling table TRKGRP (ATC)

Field	Subfield or refinement	Entry	Explanation and action
	CARRNM	Carrier name	Carrier name. Enter a carrier name as table OCCINFO defines.
	SIGTYPE	BELLI, BELLII, EAPLAN, FGB	ANI signaling type. Enter the signaling type, BELLI, BELLII, EAPLAN, FGB for this trunk group.

Datafill example for table TRKGRP (ATC)

Sample datafill for table TRKGRP (ATC) appears in the following example.

MAP example for table TRKGRP (ATC)

```
  GRPKEY
                                                          GRPINFO
_____________________________________________________________________
ISUP2WC111
 ATC 0 NPDGP NCRT 2W TM MIDL NPRT NSCR 619 C111 Y EAPLAN
Y N COMB N $
```

Datafilling table TRKGRP (OP)

Datafill for Equal Access End Office for table TRKGRP (OP) appears in the following table. The fields that apply to Equal Access End Office appear in

this table. See the data schema section of this document for a description of the other fields

Datafilling table TRKGRP (OP)

Field	Subfield or refinement	Entry	Explanation and action
EADATA		see subfields	Equal Access data. This field contains subfields EA, EAOSS, and RTEVIAAT.
	EA	Y or N	Equal Access selector. Enter Y when the user requires Equal Access signaling, double ANI digits. When Equal Access signaling is not a requirement, enter N.
	EAOSS	Y or N	Exchange access operator services signaling. Enter Y if the user needs EAOSS on the trunk. If the EAOSS is not in use on the trunk, enter N. This field appears when EA = Y.
	RTEVIAAT	Y or N	Route through access tandem. Enter Y if the trunk is between an EAEO and a TOPS AT. For other conditions enter N. The system displays this field when EA = Y.

Datafill example for table TRKGRP (OP)

Sample datafill for table TRKGRP (OP) appears in the following example.

MAP example for table TRKGRP (OP)

```
GRPKEY
                                                        GRPINFO
_____________________________________________________________
LNTOPS2
  OP 11 TLD NCRT NIL MIDL COMB MIX REV TERMHOLD N OG Y Y
Y $
```

Datafilling table TRKGRP (P2)

Datafill for Equal Access End Office for table TRKGRP (P2) appears in the following table. The fields that apply to Equal Access End Office appear in

Equal Access End Office (continued)

this table. See the data schema section of this document for a description of the other fields.

Datafilling table TRKGRP (P2)

Field	Subfield or refinement	Entry	Explanation and action
	EA	Y or N	Equal Access. Enter Y for EAEO. If you enter Y, enter the PIC, CHOICE, and LATANM fields. Enter N (the default value) for a non-EAEO. If you set this field to N, the system treats outgoing calls as non-Equal Access calls. If the end office is an EAEO, the system treats outgoing calls as non-Equal Access call. The system bases call routing on standard translations (HNPACODE), and uses non-Equal Access billing..
	PIC	IEC or INC name, blank	Primary inter-LATA carrier. If field EA = Y, enter an IEC or INC name, as in table OCCNAME. If EA = N, leave this field blank.
	CHOICE	Y, N, or blank	Choice. If EA = Y, enter Y if 10XXX dialing is allowed. For other conditions, enter N. If EA = N, leave this field blank if EA does not equal y.
	LATANM	LATA name or blank	LATA name. If EA = Y, enter a LATA name specified in table LATANAME. If EA = N, leave this field blank.

Datafill example for table TRKGRP (P2)

Sample datafill for table TRKGRP (P2) appears in the following example.

MAP example for table TRKGRP (P2)

```
GRPKEY
                                                        GRPINFO
_____________________________________________________________
FRED
P2 0 ELO NCRT NIL MIDL 10 Y POT1 NSCR 407 NLCL TOPS CTOP
4
      NLCA N N N N N N N MR1 Y C111 Y L123 N $
```

Datafilling table TRKGRP (PX)

The datafill for Equal Access End Office for table TRKGRP (PX). The fields that apply to Equal Access End Office appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table TRKGRP (PX)

Field	Subfield or refinement	Entry	Explanation and action
	EA	Y or N	Equal Access. Enter Y for EAEO. If you enter Y, enter the PIC, CHOICE, and LATANM fields. Enter N (the default value) for a non-EAEO. If this field is N and the end office is an EAEO, the system treats all outgoing calls as non-Equal Access. Call routing is based on standard translations (HNPACODE). The use of non-Equal Access billing occurs.
	PIC	IEC or INC name, blank	Primary inter-LATA carrier. If field EA = Y, enter an IEC or INC name, as table OCCNAME defines. If EA = N, leave this field blank.
	CHOICE	Y, N or blank	Choice. If EA = Y, enter Y if 10XXX dialing is allowed. If dialing is not allowed, enter N. If EA = N, leave this field blank.

Datafill example for table TRKGRP (PX)

Sample datafill for table TRKGRP (PX) appears in the following example.

MAP example for table TRKGRP (PX)

```
GRPKEY
                                                          GRPINFO
_____________________________________________________________________
RCC1PX
    PX 0 ELO NCRT 2W NIL MIDL N POT1 NSCR 619 LCL NONE
NONE NLCA
     N N 32 NIL 5409999 DIALTN N Y C111 Y L123 N $
```

Datafilling table OFRT

Datafill for Equal Access End Office for table OFRT appears in the following table. The fields that apply to Equal Access End Office appear in this table.

Equal Access End Office (continued)

Refer to the data schema section of this document for a description of the other fields.

Datafilling table OFRT

Field	Subfield or refinement	Entry	Explanation and action
RTESEL		CND	Route selector. Enter CND to specify a condition before routing. If the condition occurs, the system executes the instructions of this route element. For any other conditions, the system skips the instructions and translation searches for instructions in the next route element. Conditions that relate to Equal Access appear below.
RTELIST		see subfields	Route list. This field contains the subfields described below.
	CNDSEL	EA	Condition selector. Enter EA as the type of condition to test.
	EA_CND_ RTE	CAC, INTNL, PIC	Condition sub-selector. Enter one of the following values: • dialing of CAC for an Equal Access call here 10XXX • INTNL for an Equal Access international call • PIC for other Equal Access calls

Datafill example for table OFRT

Sample datafill for table OFRT appears in the following table.

MAP example for table OFRT

```
RTE                                                    RTELIST
-------------------------------------------------------------------
 1                       CND   EA   CAC   SK   3    $
```

Datafilling table OCCINFO

Datafill for Equal Access End Office for table OCCINFO appears in the following table. The fields that apply to Equal Access End Office appear in this table. Refer to the data schema section of this document for a description of the other fields.

Datafilling table OCCINFO (Sheet 1 of 4)

Field	Subfield or refinement	Entry	Explanation and action
CARRNAME		Carrier name	Carrier name. Enter the carrier name or a 1-character to 16-character alphanumeric abbreviation of the carrier name as table OCCNAME defines. This table must have a tuple with the carrier name NILC to handle subscribers that require a null PIC.
CARRNUM		0000 to 9999	Carrier number. Enter the CIC (0000 to 9999). The CIC is equal to the XXXX digits in the Equal Access prefixes (101XXXX or 950YXXXX). ***Note 1:*** The system accepts only 256 entries for each office. ***Note 2:*** Entry N is in the range of values but this field does not accept this entry.

Equal Access End Office (continued)

Datafilling table OCCINFO (Sheet 2 of 4)

Field	Subfield or refinement	Entry	Explanation and action
ACCESS		NONE, INTERIM, EAP, OTC, TRANS, FGC	Access arrangement. Enter one of the following access types the carrier accepts to handle a call: • NONE: no access • INTERIM: interim dialing over FGD signaling • EAP: EAP dialing over FGD signaling • OTC: FGC dialing over FGC signaling (local billing) • TRANS: both interim and EAP dialing over FGD signaling • FGC: FGC dialing over FGC signaling (FGD billing) ***Note 1:*** The EACARR operational measurement (OM) group can record OM data. The field must be EAP, INTERIM, TRANS, or FGC for the OM group to record information. If the ACCESS field is NONE, the EACARR registers cannot increase. ***Note 2:*** This field must be NONE for the NILC tuple.
ORIGCARR		Y or N	Original carrier. This field specifies the carrier as original or duplicate. The specification occurs when more than one entry for a carrier with the same carrier number (field CARRNUM) occurs. Only one carrier of a group of carriers with the same CARRNUM can be the original carrier. Enter Y if the carrier is the original carrier. If this condition does not apply, enter N. Default is N.
INTER		Y or N	Inter-LATA. Enter Y if the carrier can handle inter-LATA traffic. For any other condition, enter N.
INTNTL		Y or N	International. Enter Y if the carrier can handle international traffic. If this condition does not apply, enter N.
INTRA		Y or N	Intra-LATA. Enter Y if the carrier can handle intra-LATA traffic. If this condition does not apply, enter N.

Datafilling table OCCINFO (Sheet 3 of 4)

Field	Subfield or refinement	Entry	Explanation and action
ANI		Y or N	Automatic number identification. Enter Y if the carrier requires ANI digits sent with the called number. If this condition does not apply, enter N.
FANI		Y or N	Flexible ANI. Enter Y if the carrier can receive flexible ANI information digits instead of standard ANI information digits. If this condition does not apply, enter N.
ONISCRN		Y or N	Operator number identification screening. Enter Y if ONI traffic requires an operator screen or CAMA position before the traffic can outpulse to the carrier. If this condition does not apply, enter N.
AD1		Y or N	Abbreviated dialing number one. Enter Y if abbreviated dialing can access the carrier. If this condition does not apply, enter N.
OVERLAP		Y or N	Overlap. Enter Y if the carrier requires overlap outpulsing to receive digits from the AT or the EAEO. If this condition does not apply, enter N.
INTERS		Y or N	Inter-state. Enter Y if the carrier can handle traffic between states. If this condition does not apply, enter N.
INTRAS		Y or N	Intra-state. Enter Y if the carrier can handle traffic in the same state. If this condition does not apply, enter N.
TERMREC		LONG or SHORT	Terminating access record. Enter the length LONG or SHORT of the terminating access record the system produced for the carrier. Default value is SHORT. ***Note:*** The production of access records occurs when the OCCTERM option in table AMAOPTS is ON.
OCCSEPNO		0 to 127	Other common carrier separation number. Enter the separation number (0 to 127) for the carrier in the Traffic Separations Measurement System.

Equal Access End Office (continued)

Datafilling table OCCINFO (Sheet 4 of 4)

Field	Subfield or refinement	Entry	Explanation and action
OPSIG		FGRPC, NONE	Operator signaling. Enter the type of operator signaling that the carrier provides. Enter FGRPC for FGD carriers that require FGC operator signaling. Enter the value NONE for all other FGD carriers. The FGC carriers ignore this entry.
PICIND		Y or N	Presubscription indicator. Enter Y if the carrier requires the presubscription indicator. If this condition does not apply, enter N. Enter data in this field for every entry in table OCCINFO.
NOA950		Y or N	Nature of address indicator. Enter Y to indicate that the nature of address indicator in the calling party number parameter is 1111110. This binary value indicates that the call is a network specific, 950+ call from public station or hotel/motel line or non-EAEO. Enter N to indicate that the nature of address indicator in the calling party number parameter is the normal value. ***Note:*** The default value of N does not affect the operation of the switch.
INCCPN		Y or N	Include calling party number. Enter N to indicate that the removal of calling party number parameter from any IAM the system sends to this carrier must occur. If this condition does not apply, enter Y. The default value is Y.
CTDOA		Y or N	Carrier toll deny operator assisted. Enter Y to block OA calls to this carrier when the subscriber has the CTD line option applied for this carrier. If this condition does not apply, enter N. The default value is N.
INTRAOPR		Y or N	Intra-LATA operator. Enter Y if the carrier can handle 0- intra-LATA operator calls. If this condition does not apply, enter N. The default value is N.

Datafill example for table OCCINFO

Sample datafill for table OCCINFO appears in the following example.

MAP example for table OCCINFO

```
CARRNAME CARRNUM ACCESS ORIGCARR INTER INTNTL INTRA ANI
FANI ONISCRN AD1 OVERLAP INTERS INTRAS TERMREC OCCSEPNO
OPSIG PICIND NOA950 INCCPN DTMFIND OPSERV CACBLOCK CTDOA
CMCMON SCRNWATS CRMCRA ATPINCL INTRAOPR
_____________________________________________________
    C111    0111   EAP      Y      Y      Y     N   Y    N
N     Y      Y     Y      Y    LONG       0    FGRPC    Y
  N     N     N       N       N      N      N      N
   Y    N        N
  C222    0222   EAP      Y      Y      N     Y   N    N
N    N       Y     Y      N    SHORT      0    FGRPC    N
  N    N       N       N       N      N      N      N
   Y    N        N
```

Datafilling table LINEATTR

Datafill for Equal Access End Office for table LINEATTR appears in the following table. The fields that apply to Equal Access End Office appear in this table. Refer to the data schema section of this document for a description of the other fields.

Datafilling table LINEATTR

Field	Subfield or refinement	Entry	Explanation and action
LATANM		LATA name	LATA name. Enter the name of the LATA associated with this line attribute.

Datafill example for table LINEATTR

Sample datafill for table LINEATTR appears in the following example.

MAP example for table LINEATTR

```
LNATTIDX LCC CHGCLSS COST SCRNCL LTG STS PRTNM LCANAME ZEROMPOS
TRAFSNO
MRSA SFC LATANM  MDI    IXNAME DGCLNAME FANIDIGS
           RESINF                                  OPTIONS
 ____________________________________________________________
 208      1FR NONE    NT   NSCR   0   619 POT1   LPOT      N
   10
NIL NILSFC LATA1   0       NIL      NIL     00
                 N
```

Equal Access End Office (continued)

Datafilling table LATAXLA

Datafill for Equal Access End Office for table LATAXLA appears in the following table. The fields that apply to Equal Access End Office appear in this table. Refer to the data schema section of this document for a description of the other fields.

Datafilling table LATAXLA

Field	Subfield or refinement	Entry	Explanation and action
LATACODE		see subfields	LATA code. This key field contains subfields LATANM and DIGITS.
	LATANM	LATA name	Calling LATA name. Enter the LATA name as table LATANAME defines.
	DIGITS	Dialed digits	Dialed digits. This field contains digits 1 to 18. Dial the digits to access the LATA. Enter the digits for which one of the following sets of attributes applies: intra-LATA, interstate inter-LATA, interstate inter-LATA, intrastate For the DMS switch, any code that the DIGITS field does not define has the intra-LATA, intrastate attributes. The attributes are the default entry. The DIGITS field allows the DMS switch to distinguish between NPA and ambiguous codes. The DIGITS field allows the DMS switch to determine the call attributes for carrier screening.
LATA		INTER or INTRA	LATA call attribute. Enter INTER or INTRA to define a code as inter-LATA or intra-LATA.
STATE		INTER or INTRA	STATE call attribute. Enter INTER or INTRA to define a code as interstate or intrastate.
EATYPE		STD, CORRIDOR, PRIVILEGE, NON_EA	Equal Access type call. Enter the correct Equal Access call type to identify the call as standard (STD), CORRIDOR, PRIVILEGE, or NON_EA. Only inter-LATA calls can be CORRIDOR or PRIVILEGE. Only intra-LATA calls can be NON_EA.

Datafill example for table LATAXLA

Sample datafill for table LATAXLA appears in the following example.

MAP example for table LATAXLA

```
                LATACODE    LATA    STATE    EATYPE
_____________________________________________________

      L123         203     INTER   INTER          STD
      LATA1        212220  INTRA   INTER          STD
      LATA2        221220  INTRA   INTER       NON_EA
```

Datafilling table OCCRDIG

Datafill for Equal Access End Office for table OCCRDIG appears in the following table. The fields that apply to Equal Access End Office appear in this table. Refer to the data schema section of this document for a description of the other fields.

Datafilling table OCCRDIG (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
OCCRSNPA		Valid NPA	Other common carrier R digits service NPA. Enter a correct NPA in World Zone 1, and outside the continental United States. Enter the NPA in table HNPACONT.

Equal Access End Office (continued)

Datafilling table OCCRDIG (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
OCCRDIG		0, 1, 3, 5, 7, 8, 9	Other common carrier R digit. Enter the digit of the areafor the location of NPA that OCCRSNPA defines. The correct digits are the following: • 0 - reserved NPA • 3 - Canada • 5 - Mexico • 7 - Alaska • 8 - Hawaii • 9 - Caribbean • The default value is 1.
OUTCNUS		Y or N	Outside continental U.S. Enter N or Y to specify if the areain OCCRDIG is outside the continental U.S. Enter N if the NPA in OCCRSNPA is reserved (700, 800, or 900) and is not in a specified area. Enter Y if the NPA in OCCRSNPA is not reserved and is in a specified area outside the continental U.S.

Datafill example for table OCCRDIG

Sample datafill for table OCCRDIG appears in the following example.

MAP example for table OCCRDIG

```
OCCRSNPA OCCRDIG OUTCNUS
_____________________________________________________

    403       3       Y
```

Datafilling table STDPRTCT

Datafill for Equal Access End Office for table STDPRTCT appears in the following table. The fields that apply to Equal Access End Office appear in

this table. Refer to the data schema section of this document for a description of the other fields.

Datafilling table STDPRTCT

Field	Subfield or refinement	Entry	Explanation and action
EXTPRTNM		Standard pretranslator subtable name	External standard pretranslator subtable name. Enter the name the operating company defines to represent the standard pretranslator subtable. The ISUP trunks automatically use standard pretranslator name C7PT on test calls in offices with ISUP capability.

Datafill example for table STDPRTCT

Sample datafill for table STDPRTCT appears in the following example.

MAP example for table STDPRTCT

```
   EXTPRTNM   STDPRT   AMAPRT
-------------------------------------------------------------------------
     EAFR (     1) (     0)
     EAOS (     1) (     0)
     POT1 (     1) (     1)
     INC1 (     1) (     0)
     OWT1 (     1) (     0)
     EACN (     1) (     0)
```

Datafilling subtable STDPRTCT.STDPRT

Subtable STDPRTCT.STDPRT is the first table that the received leading digits index. The digits index the subtable when the original line attribute from table LINEATTR specifies a pretranslator name. The digits index the subtable when the original trunk from table TRKGRP specifies a pretranslator name.

Datafill for Equal Access End Office for subtable STDPRTCT.STDPRT appears in the following table The fields that apply to Equal Access End Office

Equal Access End Office (continued)

appear in this table. Refer to the data schema section of this document for a description of the other fields.

Datafilling subtable STDPRTCT.STDPRT (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
FROMDIGS		From digits	From digits. Enter the digit(s) to translate. If the entry is a block of numbers in sequence, enter the first number in the block.
TODIGS		To digits	To digits. If FROMDIGS is a block of numbers in sequence, enter the last number in the block. If this condition does not apply, this field equals FROMDIGS.
PRETRTE		see subfields	Pretranslator route. For Equal Access calls, this field contains subfields PRERTSEL, TYPCALL, NOPREDIG, XLA_INFO, CARRNAME, and RTEAREA.
	PRERTSEL	EA	Pretranslation route selector. Enter EA, the pretranslator route selector for Equal Access calls.
	TYPCALL	DD, NP, OA	Type of call. Enter the type of call. The type of call can be DD, NP (no prefix), or OA. ***Note:*** The TYPCALL must contain DD to allow call billing.
	NOPREDIG	0 to 7	Number of prefix digits. Enter the number of prefix digits (0 to 7).
	XLA_INFO	see subfield	Equal Access translation information. This field contains subfield XLATYPE.

Datafilling subtable STDPRTCT.STDPRT (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	XLATYPE	N, P, T	Equal Access translation type. Enter one of the following values: • N when additional digit translation or screening is not required. Specify a route in field RTEAREA. • P for additional pretranslation. Enter a pretranslator subtable name in field PRTNM. • T when additional pretranslation is not required. Field TRANSYS determines the role of translation.
	PRTNM	Pretranslator subtable name	Pretranslator subtable name. Enter the name of the pretranslator subtable to which translation routes for pretranslation of the remaining digits. This field appears when XLATYPE = P.
	TRANSYS	NA, IN, NO	Translation system. Enter one of the following values: • NA when translation must proceed to North American digit translations and screening. • IN when translation must proceed to international translations. • NO when additional translation or screening is not required. This field appears when XLATYPE = T.
	CARRNAME	Carrier name	Carrier name. Enter the name of the carrier, to which the system offers the call. Table OCCNAME defines the name of the carrier.
	RTEAREA	see subfield	Route area. This field contains subfield RTEPRSNT.

Equal Access End Office (continued)

Datafilling subtable STDPRTCT.STDPRT (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	RTEPRSNT	Y or N	Route present. Enter Y to enter data in fields EXTRTEID, TABID, KEY, MINDIGSR, MAXDIGSR, and OCS. If this condition does not apply, enter N.
	EXTRTEID	see subfields	External route ID. This field contains subfields TABID and KEY.
	TABID	OFRT, OFR2, OFR3, OFR4	Table identifier. Enter an office route table name. Correct values are OFRT, OFR2, OFR3, OFR4.
	KEY	0 to 1023	Index. Enter the office route index (0 to 1023) to which the translation routes.
	MINDIGSR	1 to 18	Minimum digits received. Enter the minimum number of digits required before the call can route. The number of digits can be from 1 to 9.
	MAXDIGSR	1 to 24	Maximum digits received. Enter the maximum number of digits required before the call can route. The number of digits can be from 1 to 24.
OCS			Overlap carrier selection. If this field is Y and the carrier has field OVERLAP set to Y in table OCCINFO, the call uses OCS. If this condition does not apply, the use of the OCS does not occur.

Datafill example for subtable STDPRTCT.STDPRT

Sample datafill for subtable STDPRTCT.STDPRT appears in the following example. In the first tuple, fields PRERTSEL (EA) and XLATYPE (P) indicate that a call with leading digits 10120 must route to carrier CARR1. The call must route through table OFRT 100. The second stage pretranslator OCC1 can indicate that a call with leading digits 10120 does not route in this way. Field NOPREDIG sets the prefix limit at 5. This value indicates that the second stage pretranslator translates the digits that follow 10120.

In the second tuple, a call with leading digits 10999 must route to carrier CARR2 through second pretranslator OCC2.

In the third tuple, a call with leading digits FROM 9501120 must route to carrier CARR1 through table OFRT 102. Field TRANSYS indicates that translation to validate the dialed digits is not required.

MAP example for subtable STDPRTCT.STDPRT

```
FROMDIGS          TODIGS
                                                  PRETRTE
_____________________________________________________________________
 10120            10120
EA DD 5 P OCC1    CARR1    Y      OFRT   100   6 24    N
 10999            10999
EA DD 5 P OCC2    CARR2    N
 9501120       9501120
EA DD 7 T NO      CARR1    Y      OFRT   102   7  7    N
```

Datafilling table AMAOPTS

Table AMAOPTS activates and schedules the record options for local, toll, and high-revenue calls. The table contains one tuple for each option. A schedule associated with every option defines the following:

- if an option is active
- if an option is active only at specified times
- if an option is not active

Options ENFIA_B_C, OCCTERM, and OCCOVFL are related to Equal Access billing records.

Datafill for Equal Access End Office for table AMAOPTS appears in the following table. The fields that apply to Equal Access End Office appear in this table. Refer to the data schema section of this document for a description of the other fields.

Datafilling table AMAOPTS (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
OPTION		see subfields	Option. Enter an alphanumeric option code. The descriptions for the options that apply to Equal Access appear in the subfields that follow.
	ENFIA_B_C		This option controls the recording of ENFIA B and ENFIA C calls. An example of this call is 950-10XX. This option allows the system to record calls on all FGB trunk groups.

Equal Access End Office (continued)

Datafilling table AMAOPTS (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	OCCTERM		This option controls the recording of terminating Equal Access calls (call code 119).
	OCCOVFL		This option controls the recording of Equal Access overflow calls (call code 120).
SCHEDULE		see subfields	Schedule. This field contains the subfields AMASEL, ONDATE, OFFDATE, SCHED, ONTIME, and OFFTIME.
	AMASEL	ON, OFF, PERIODIC, TIMED	AMA selector. Enter one of the following values: ON Activate the option immediately. OFF Deactivate the option immediately. DEFAULT Use the default schedule for the option. PERIODIC Activate the option at the specified date and time. Perform the activity at different intervals. Complete subfields ONDATE and ONTIME to specify the date and time for activation. Complete field SCHED for the time intervals to perform the activity. TIMED Activate the option between the specified dates and times. For the ENFIA_B_C option, the correct AMA selectors are ON, OFF, TIMED, and DEFAULT. Default is ON. For the OCCTERM option, the correct AMA selectors are ON, OFF, TIMED, and DEFAULT. Default is ON. For the OCCOVFL option, the correct AMA selectors are ON, OFF, TIMED, PERIODIC, and DEFAULT. Default is PERIODIC.
	ONDATE	YYMMDD	Activation on date. If AMASEL = PERIODIC or TIMED, enter the year, the month, and the day when the activation of the option is ON. The format is YYMMDD. If this condition does not apply, this field does not have a prompt.

Datafilling table AMAOPTS (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	SCHED	see subfields	Periodic schedule. If AMASEL = PERIODIC, complete the two subfields TU and TV. If this condition does not apply, this subfield does not have a prompt.
	TV	0 - 255	Time value. Enter a value from 0 to 255.
	TU	AEONS, HRS, HUN-DREDMS, MINS, SECS, TENMS	Time unit. Time unit. Enter AEONS, HRS, HUNDREDMS, MINS, SECS, or TENMS.
	ONTIME	HHMM	Activation on time. If AMASEL = PERIODIC or TIMED, enter the hour and minute the option activates. The format is HHMM. If this condition does not apply, this field does not have a prompt.
	OFFDATE	YYMMDD	Activation off date. If AMASEL = TIMED, enter the year, the month, and the day when the activation of the option is set to OFF. The format is YYMMDD. If this condition does not apply, this field does not have a prompt.
	OFFTIME	HHMM	Activation off time. If AMASEL = TIMED, enter the hour and minute the option deactivates. The format is HHMM. If this condition does not apply, this field does not have a prompt.

Datafill example for table AMAOPTS

Sample datafill for table AMAOPTS appears in the following example.

MAP example for table AMAOPTS

```
    OPTION                                SCHEDULE
_____________________________________________________
    OCCTERM                                ON
```

Datafilling table VIRTGRPS

Table VIRTGRPS assigns options to VFGs. The options that apply to Equal Access are EA and LPIC. The EA option provides Equal Access capability to

Equal Access End Office (continued)

MDC stations and incoming trunks. The LPIC option provides an Equal Access carrier for local exchange calls. The LPIC is only correct if you assign the EA option.

Datafill for Equal Access End Office for table VIRTGRPS appears in the following table. The fields that apply to Equal Access End Office appear in this table. Refer to the data schema section of this document for a description of the other fields.

Datafilling table VIRTGRPS

Field	Subfield or refinement	Entry	Explanation and action
OPTIONS		EA, PIC, CHOICE, LPIC, IPIC	Options. Enter the list of options and associated subfields for the VFG. A space must separate each option and the option subfield. Enter EA and subfields PIC and CHOICE to assign the EA option. Enter LPIC and subfield IPIC to assign the intra-LATA PIC option.
	PIC	PIC name, NONE	Primary inter-LATA carrier. Enter the name for the PIC in table OCCNAME. Enter NONE, if a PIC is not required.
	CHOICE	Y or N	Choice. Enter Y if the subscriber can dial an EAP prefix to select a carrier manually. If this condition does not apply, enter N.
	IPIC	Intra-LATA carrier name	Intra-LATA carrier name. Enter the name of the Intra-LATA carrier for this VFG table OCCNAME defines.

Datafill example for table VIRTGRPS

Sample datafill for table VIRTGRPS appears in the following example. In this example, VFG EA12 has a size of 8. The VFG EA12 uses POTS translation tables to translate the call. The VFG EA12:

- has a billing number of 0131113
- uses line attribute 4
- has call detail recording

If the subscriber did not dial the EAP prefix of a carrier, the call routes through the subscriber PIC. The subscriber PIC is CRGP1. The subscriber can select a carrier manually because subfield CHOICE is Y.

MAP example for table VIRTGRPS

```
KEY                                                    DATA
                                                            OPTIONS
_____________________________________________________________________
EA12   SIZE 8  POTS   0131113   4   Y   EA   CGRP1 Y
                                                                  $
```

Datafilling table IBNXLA

Table IBNXLA stores the data required for the translation of calls from an MDC station. The options that apply to Equal Access are EA and LPIC. The EA option provides the Equal Access feature. The LPIC option provides an Equal Access carrier for local exchange calls.

Datafill for Equal Access End Office for table IBNXLA appears in the following table. The fields that apply to Equal Access End Office appear in this table. Refer to the data schema section of this document for a description of the other fields.

Note: For the system to record a call on an MDC line an Equal Access call, the use of a VFG must occur. The system can record a call an Equal Access call when the general network (GEN) selector assigns a PIC. The GEN selector must have the Equal Access option. Table IBNXLA defines this information.

Datafilling table IBNXLA (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
RESULT		see subfield	This field contains many subfields. For this feature, this field only affects subfield OPTION.
	OPTION	EA, PIC, CHOICE, INVEAFLX, LPIC, IPIC	Option. Enter the list of options and associated subfields assigned to the translator. A space must separate each option and option subfield. Enter EA and subfields PIC, CHOICE, and INVEAFLX to assign the EA option. Enter LPIC and subfield IPIC to assign the intra-LATA PIC option.
	PIC	PIC name, NONE	Preferred inter-LATA carrier. Enter the name assigned to the PIC in table OCCNAME. If a PIC is not required, enter NONE.

Equal Access End Office (continued)

Datafilling table IBNXLA (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	CHOICE	Y or N	Choice. Enter Y if the subscriber can dial an EAP prefix to select a carrier manually. If this condition does not apply, enter N.
	INVEAFLX	Invalid flexible intercept number	Invalid flexible intercept number. Enter the invalid flexible intercept number. If the carrier that field PIC specifies cannot make the call, the system sends this call to this treatment.
	IPIC	Intra-LATA carrier name	Intra-LATA carrier name. Enter the name of the intra-LATA carrier for this VFG as table OCCNAME defines.

Datafill example for table IBNXLA

Sample datafill for table IBNXLA appears in the following example.

MAP example for table IBNXLA

```
KEY
                                          RESULT
_____________________________________________________________
CXT1  9  NET  N Y Y 1 Y  NDGT  N  Y  GEN  LATTR 0
EA  CARRA  Y  0  LPIC  CARRB  $
```

Datafilling table TMTCNTL

Table TMTCNTL defines the tones, announcements, or states sent to the originator of a call when a treatment code occurs during translation. To support the new treatments for Equal Access, the EAEO must enter the treatments in table TMTCNTL.

The DRAM must contain recorded announcements that correspond to these treatments. These announcements must be in table OFRT.

Datafill for Equal Access End Office for table TMTCNTL appears in the following table. The fields that apply to Equal Access End Office appear in

this table. Refer to the data schema section of this document for a description of the other fields.

Datafilling table TMTCNTL

Field	Subfield or refinement	Entry	Explanation and action
EXTTMTNM		OFFTREAT	Enter OFFTREAT.
TREATMT		Treatment name	Treatment. Enter the treatment name. The new treatments that apply to Equal Access are CACE, D950, N950, ILRS, NACD, DACD, and IVCC.
LOG		Y or N	Log. Enter Y to print a trunk or line message 138 when the system routes translation to a treatment. If this condition does not apply, enter N.
FSTRTE		see subfields	First route. This field contains subfields FSTRTSEL, TABID, and KEY.
	FSTRTSEL	T	First route selector. Enter T, the first route selector.
	TABID	Table name	Table name. Enter the office route table name.
	KEY	1 to 1023	Index. Enter the index in the office route table that defines the route list for the treatment. The index can be from 1 to 23.

Datafill example for table TMTCNTL

Sample datafill for table TMTCNTL appears in the following example.

MAP example for table TMTCNTL

```
TREAT   LOG    FSTRTSEL    TABID           KEY
_____________________________________________
 CACE     Y        T        OFRT             7
 D950     Y        T        OFRT             8
 ILRS     Y        T        OFRT             10
```

Datafilling table CXGRP

Local or combined local/toll switching units require table CXGRP to define the options for PX trunks. The options that apply to Equal Access are CTD and LPIC.

Equal Access End Office (continued)

Datafill for Equal Access End Office for table CXGRP appears in the following table. The fields that apply to Equal Access End Office appear in this table. Refer to the data schema section of this document for a description of the other fields.

Datafilling table CXGRP

Field	Subfield or refinement	Entry	Explanation and action
CTD		Y or N	Carrier toll denied. Enter Y and the system prompts you for carriers. Input the list of carriers for which toll access cannot occur. If this condition does not occur, enter N.
CARRIERS		IEC names	Carriers. If the CTD field is Y, enter a maximum of 3 IEC names as table OCCNAME specifies. Enter a dollar sign after the last name.
PXOPTION		LPIC	Customer group options. Enter LPIC to assign a local PIC to the customer group.
CARRIER		PIC	Carrier name. If PXOPTION = LPIC, enter the local PIC name as table OCCNAME defines.

Datafill example for table CXGRP

Sample datafill for table CXGRP appears in the following example. In this example, the assignment of option LPIC to customer group 32 occurs.

MAP example for table CXGRP

```
CUSTKEY
              SPB
                                                    CTD
                                                  EWATS
                                               PXOPTION
-------------------------------------------------------
32
            N
                                                      N
                                                      N
                                 (LPIC CARRA) (TDV)   $
```

Datafilling table EASAC

The N0/1X codes that are SACs appear in table EASAC. The table has one field, SAC. Data entries for every code to be a SAC must appear in table

EASAC. The addition or deletion of codes can occur in EASAC, and tuples cannot change.

Datafill for Equal Access End Office for table EASAC appears in the following table. The fields that apply to Equal Access End Office appear in this table. Refer to the data schema section of this document for a description of the other fields

Datafilling table EASAC

Field	Subfield or refinement	Entry	Explanation and action
SAC		N0/1X code	Service access code. Enter each N0/1X code to treat as a SAC. The system does not allow all N11 codes. Example of N11 calls are 411, 611, and 911.

Datafill example for table EASAC

Sample datafill for table EASAC appears in the following example.

MAP example for table EASAC

```
SAC
_____________________________________________________________

800
```

Datafilling table CICSIZE4

Datafill for Equal Access End Office for table CICSIZE4 appears in the following tables. The fields that apply to Equal Access End Office appear in this table. Refer to the data schema section of this document for a description of the other fields.

Datafilling table CICSIZE4

Field	Subfield or refinement	Entry	Explanation and action
TRUNKGRP		Trunk groups	Enter the trunk groups that use a 4-digit CIC. Data entries in this table must occur during the permissive phase, when office parameter EA_TAB_CICSIZE4_OBSOLETE is N. When this parameter is Y, table CICSIZE4 is not in use.

Equal Access End Office (end)

Datafill example for table CICSIZE4

Sample datafill for table CICSIZE4 appears in the following example.

MAP example for table CICSIZE4

```
TRUNKGRP
_____________________________________________________________________
TGRPX
TGRPY
TGRPZ
```

Tools for verifying translations

Equal Access End Office does not use tools to verify translations.

SERVORD

The features the system assigns to an exact line in table LENLINES appear in table LENFEAT (line feature). The system enters data in table LENFEAT through SERVORD.

Equal Access End Office Enhancements

Ordering codes

Functional group ordering code: EQA00001

Functionality ordering code: does not apply

Release applicability

BCS30 and later versions

Requirements

To operate the Equal Access End Office Enhancements requires BAS Generic BAS00003.

Description

The Equal Access End Office (EAEO) feature package provides the following improvement features:

- Equal Access POTS presubscription reports

  This feature allows the system to generate a report that lists the POTS subscribers with an assigned PIC.

- Equal Access presubscription reports on MDC

  This feature allows the system to generate Equal Access presubscription reports for MDC lines and PBX trunks.

- presubscription indicator

  This feature allows the operating company to send an indicator to the IEC or INC. The operating company sends the indicator to a calling station that does not presubscribe to the carrier. The IEC or INC can receive or not receive the indicator.

- Equal Access multiparty line identification

  This feature allows the operating company to decide if Equal Access multiparty lines must route to an operator or a CAMA position. Equal Access multiparty lines route to an operator or a CAMA position for identification before outpulsing to an IEC/INC.

Operation

The features that this package provides appear in the following sections.

Equal Access POTS presubscription reports

Enter the PICLIST command at the MAP terminal. This entry causes the system to generate an Equal Access presubscription report. The system can generate presubscription reports for a single IEC or INC or all IECs and INCs

Equal Access End Office Enhancements (continued)

in the office. The type of report that the system generates depends on the specified parameter.

Equal Access presubscription reports on MDC lines and PBX trunks

Enter the IBNPICLIST command at the MAP. This entry causes the system to generate an Equal Access presubscription report on MDC lines and PBX trunks. The system can generate these reports for a single IEC or INC or for all IECs and INCs in table OCCNAME. The report can list IBN lines, PBX trunks, or both lines and trunks. The contents of the list depend on the specified parameter.

Presubscription indicator

An EAEO can determine that the system must route a call to an IEC or INC. When this event occurs, the EAEO verifies if carrier must receive the presubscription indicator. The presubscription indicator informs the carrier that the calling station is not presubscribed to that carrier.

The EAEO sends the presubscription indicator to the carrier as a modified key-pulse (KP) signal. The modified signal is KP prime (KP'). The signal contains the same MF tones as the start prime (ST') signal (900 Hz + 1700 Hz). The calling station is not always presubscribed to the IEC or INC. When this event occurs, a KP' signal replaces the KP signal that precedes the calling DN.

Add field PICIND to table OCCINFO to implement this feature. This field specifies if the carrier must receive the presubscription indicator.

Equal Access multiparty line identification

This feature allows the operating company to specify the following actions:

- route Equal Access multiparty ONI calls to a specified carrier
- route Equal Access multiparty calls to an operator or CAMA position for identification before outpulsing to the carrier.

Note: The ONI traffic includes ANI failure traffic.

Add field ONISCRN to table OCCINFO to provide this option. This field specifies if the carrier wants the system to screen ONI traffic. This field also specifies if the carrier wants the system to send the traffic to an operator or CAMA position. The carrier sends the traffic to an operator or CAMA position for identification before the EAEO outpulses to the carrier.

Equal Access End Office Enhancements (continued)

Two methods are available to route Equal Access ONI calls to an operator or CAMA position:

- With pretranslator route selector P method, the operator that the standard pretranslator specifies indexes to table POSITION. The route associated with the specified operator position from table POSITION routes the call.
- With the default method, if a pretranslator route selector P is not in use, the call defaults to a CAMA position. The route associated with the CAMA position from table POSITION routes the call.

Limits

The following limits apply to Equal Access End Office Enhancements:

- Carriers do not receive the presubscription indicator for SAC calls that the system does not bill to the originating station. An example of this call type is 800 Service.
- Carriers do not receive the presubscription indicator for 950-WXXX calls.
- The presubscription indicator only applies to FGD signaling.

Interactions

The Equal Access End Office Enhancements does not have functionality interactions.

Activation/deactivation by the end user

The Equal Access End Office Enhancements does not require activation or deactivation by the end user.

Billing

The Equal Access End Office Enhancements does not affect billing.

Station Message Detail Recording

The Equal Access End Office Enhancements does not affect Station Message Detail Recording.

Datafilling office parameters

The Equal Access End Office Enhancements does not affect office parameters.

Equal Access End Office Enhancements (continued)

Datafill sequence

The tables that require datafill to implement Equal Access End Office Enhancements appear in the following table. The tables appear in the correct entry order.

Datafill requirements for Equal Access End Office Enhancements

Table	Purpose of table
OCCINFO	Table OCCINFO (other common carrier information) defines the attributes for the carriers that serve a DMS switch. Table OCCINFO screens calls for carrier compatibility.

Datafilling table OCCINFO

Table OCCINFO defines the attributes for carriers that serve the end office. Table OCCINFO screens calls for carrier compatibility. For example, table OCCINFO allows the system to send international traffic only to carriers that can handle international traffic.

Datafill for Equal Access End Office Enhancements for table OCCINFO appears in the following table. The fields that apply to Equal Access End

Office Enhancements appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table OCCINFO

Field	Subfield or refinement	Entry	Explanation and action
ONISCRN		Y or N	Operator number identification screening. If ONISCRN is N, ONI screening is not necessary for that carrier. The carrier can handle ONI traffic. The carrier must identify the Equal Access ONI calls. If ONISCRN is Y, ONI screening is necessary for that carrier. The carrier cannot handle ONI traffic. The system sends Equal Access ONI calls to an operator or CAMA position. The system sends the calls to an operator or CAMA position for identification before the EAEO outpulses to that carrier.
PICIND		Y or N	Presubscription indication. Enter Y if the carrier must receive the presubscription indicator. If the carrier must not receive the presubscription indicator enter N. Enter data in this field for each entry in table OCCINFO.

Datafill example for table OCCINFO

Sample datafill for table OCCINFO appears in the following example.

MAP example for table OCCINFO

```
CARRNAME CARRNUM ACCESS ORIGCARR INTER INTNTL INTRA ANI FANI
ONISCRN AD1 OVERLAP INTERS INTRAS TERMREC OCCSEPNO OPSIG
PICIND NOA950 INCCPN DTMFIND OPSERV CACBLOCK CTDOA CMCMON
SCRNWATS CRMCRA ATPINCL INTRAOPR

   C111    0111   EAP     Y      Y      Y     N   Y    N
     N     Y      Y     Y      Y    LONG       0    FGRPC
 Y      N      N     N       N       N      N      N      N

      Y    N        N
     C222    0222   EAP     Y      Y      N     Y   N    N
      N    N       Y     Y      N    SHORT      0    FGRPC
N       N    N       N       N       N      N      N      N

      Y    N        N
```

Equal Access End Office Enhancements (end)

Tools for verifying translations

The Equal Access End Office Enhancements does not use tools to verify translation verification tools.

SERVORD

The Equal Access End Office Enhancements does not use SERVORD.

Equal Access on IBN/Datapath

Ordering codes

Functional group ordering code: EQA00001

Functionality ordering code: does not apply

Release applicability

BCS17 and later versions

Requirements

To operate, Equal Access on IBN/Datapath has the following requirements:

- BAS Generic, BAS00003
- MDC Minimum, MDC00001
- UDDD Services, UDD00001

Description

The Equal Access on IBN/Datapath feature provides equal access (EA) capabilities to IBN stations and incoming trunks. The EA grants other common carriers (OCC) the same access to long-distance trunks that AT&T has. The IBN stations that have this capability include the following:

- attendant consoles (AC)
- data units
- business sets
- standard IBN 500/2500 sets

These stations can belong to a dedicated SL-100 private branch exchange (PBX). These stations can be part of a DMS-100 switch customer group.

The dialing of the 100XXX code of the carrier provides access to inter-LATA carriers (IC) or international carriers (INC). The primary inter-LATA carrier (PIC) code of the station also provides access. If the call routes over an IBN trunk, foreign exchange (FX) line/trunk digit control facilities are available. The virtual facility group (VFG) digit control facilities is available. The system selects the correct carrier at the other end of the trunk connection. The insertion of the 10XXX digits in the outpulsed stream of digits performs the digit control.

In a DMS-100 switch Centrex configuration with a plain old telephone service (POTS) access code, the PIC routes to the carrier. The POTS access code is normally 9.

Equal Access on IBN/Datapath (continued)

Operation

The call process for the Equal Access on IBN/Datapath feature contains the following:

- a POTS access code
- line or group PIC
- private branch exchange (PBX), FX, or tie trunks
- a VFG
- outward WATS (OUTWATS)

POTS access code

The digit 9 is normally the standard POTS access code. The DMS-100 switch allows an access code of a maximum of three digits. This limit occurs because the system can translate and store a maximum of 24 digits. You can also specify zero access digits to implement the assume dial 9 capability.

When an IBN call enters the POTS environment, the translations are identical to standard POTS EA translations. The system allows all access codes. The access codes include the 10XXX and 950 dialing.

The NET selector and the GEN subselector in table IBNXLA implement the POTS access code.

Line/group PIC options

In some instances, an individual line (LPIC) or an individual group (GPIC) must have a specified PIC. The LPIC and the GPIC are optional. If the LPIC and GPIC are both present, the LPIC overrides the GPIC.

The DMS/SL-100 switch allows two levels of IBN translators. These levels are the preliminary and the customer group translators. If the dialed digits are not in the preliminary translator, the system searches the customer group translator. See table IBNXLA in the data schema section of this document for additional details.

The DMS/SL-100 switch implementation of the LPIC feature provides a separate network class of service (NCOS). This NCOS is for a line that has a PIC for the NCOS. The entry in the corresponding preliminary translator has a PIC for the entry. Enter data in option GPIC in a like method. A difference in the entry of data is that the customer group translator contains the PIC.

The PIC is optional in the preliminary and the customer group translators. The datafill can specify only if you can use the preliminary carrier. The datafill can specify if the system allows 10XXX dialing to other carriers. A termination

specified in table OFCENG receives an inter-LATA call that enters the POTS environment without a carrier. The inter-LATA call enters the POTS environment with the entry DEFAULT_CARRIER_OR_TREAT. The carrier can have PIC assigned or dialed. The selection of a default carrier can occur. The call can route to treatment.

PBX central office trunks and FX/tie lines

The system treats the outgoing tie lines, FX lines, and central office (CO) trunks the same way in the DMS/SL-100 switch environment. The FX lines and CO trunks appear to be identical. These outgoing trunk types have the full digit manipulation facilities of IBN table DIGMAN available.

PBX CO trunks

The CO trunks have IBNTO, IBN outgoing, type trunks specified in table TRKGRP. The CO trunks appear as lines in the adjoining end office. These trunks provide the normal dial 9 access to the public network. The end office (EO) must have EA capabilities for the PBX CO trunks to work. The line can be assigned the PIC option. This assignment can be the easiest method to achieve PIC dialing in an SL-100 switch office. This method has limits.

If IBN stations can dial a carrier directly, the 10XXX digits must outpulse on the CO trunk. Option SPF creates this outpulsing with the GEN subselector in table IBNXLA. If you use this option, the 10XXX digits and the digits that follow are available for outpulsing. Normally these digits are prefixing digits. These digits are not normally available for outpulsing.

The outpulsing of the 10XXX digits of the preferred carrier makes the options LPIC/GPIC known over the CO trunk. The same routes and digit manipulation entries are for 10XXX dialing. This event occurs because option SPF makes the 10XXX digits of the primary carrier available for outpulsing. The outpulsing occurs when the digits were not dialed. Inter-LATA calls do not have the 10XXX digits inserted. The carrier cannot handle inter-LATA traffic. The call cannot be complete.

> ***Note:*** The inter-/intra-LATA status requires you to enter data in table LATAXLA.

The general method to translate PIC calls is to perform complete translation and screening on the dialed digits (1+7/10 digits). The PIC inserts the appropriate 10XXX digits. Only the pretranslation occurs on 10XXX+1+7/10 digits to determine the actual route you must use.

Equal Access on IBN/Datapath (continued)

Tie lines

Only one capability is a requirement for outgoing tie lines. The requirement is the ability of the lines to insert 10XXX in the string of digits to be outpulsed. You can use option SPF. This use of option SPF means that 10XXX and LPIC/GPIC calls outpulse 10XXX digits on tie trunks. The last office in the tie line chain chooses the carrier if the carrier is not dialed. The present limit of 30 digits in an outpulsed string continues to apply in the EA environment.

FX lines

The FX lines are like the PBX CO trunks that go to the DMS/SL-100 switch office. The carrier associates with a PIC at the appearance of the FX line in the far-end office.

If the 10XXX digits outpulse over the FX line, you can use option SPF. The corresponding entry in table IBNXLA does not have an LPIC/GPIC for the entry. Only calls that have 10XXX digits dialed appear as non-PIC calls in the FX office.

Virtual facility groups

Virtual facility groups (VFG) are software simulations of a trunk group. A POTS VFG that simulates a trunk group from an IBN PBX to an EO can carry EA traffic.

Translations occur in two independent stages in a VFG call. One stage is from the IBN station to the trunk side of the VFG. The second stage is from the POTS line side of VFG to the final destination. A PIC can be assigned as an option to the PIC side of the VFG. A call outgoing through the VFG without a 10XXX prefix uses this PIC to choose a carrier.

The 10XXX digits are outpulsed through the VFG if the 10XXX or LPIC/GPIC dialing is a requirement. Option SPF in table IBNXLA can accomplish the outpulse. When option SPF occurs, the 10XXX and LPIC/GPIC calls appear as 10XXX calls on the POTS side of the VFG. See the data schema section of this document for additional information about VFGs.

Refer to EAEO - IBN PIC Using SERVORD and Bellcore AMA - Enhanced ARS Translations. The information on how to use option IBNPIC in table VIRTGRPS appears in these sections. The information is about how to override the VFG PIC during the second stage of translations. Option IBNPIC allows the PIC of the calling station to override the VFG PIC. Option IBMPIC allows the customer group PIC in the first stage of translations to override the VFG PIC.

Translations table flow

Equal Access on IBN/Datapath does not affect translations table flow.

Limits

Some IBN custom calling features require storing dialed digits on a semi-permanent basis. In this event, the system stores all the dialed digits. The following limits apply to Equal Access on IBN/Datapath:

- speed calling long list—24 digits
- speed calling short list—24 digits
- auto dial and call forward—18 digits

> ***Note:*** The system allows a maximum of two digits in the POTS access code if call forwarding to a 10XXX-1/+1+10 digit number is allowed.

Interactions

The description of the interactions between Equal Access on IBN/Datapath and other functionalities appear in the following paragraphs.

Automatic Route Selection

The system uses the present capabilities of DMS/SL-100 switch translations and routing with the ARS feature. The GEN subselector and option SPF improve the ARS feature. Refer to BV0506 ARS - (BASIC) and AF1234 Bellcore AMA - Enhanced ARS Translations for additional information about the ARS feature.

Direct Inward System Access

The NCOS is not for the DISA number with the DISA feature. You can assign a PIC in the preliminary translator.

IBN features

The dialing of an access number (PIC or 10XXX) can occur during the operation of the IBN feature. This ability to dial is the link between most IBN features and EA. Most IBN features use the same translations as standard IBN calls.

Some features in this category include:

- Three-Way Calling
- Speed Calling (short and long list)
- Network Speed Calling
- Six Party Conferencing

Equal Access on IBN/Datapath (continued)

- Call Forwarding
- Call Transfer

Activation/deactivation by the end user

Equal Access on IBN/Datapath does not require activation or deactivation by the end user.

Billing

Equal Access on IBN/Datapath does not affect billing.

Station Message Detail Recording

Equal Access on IBN/Datapath does not affect Station Message Detail Recording.

Datafilling office parameters

The office parameters that Equal Access on IBN/Datapath uses appear in the following table. Refer to the *Office Parameters Reference Manual* for more information about office parameters.

Office parameters for Equal Access on IBN/Datapath (Sheet 1 of 2)

Table name	Parameter name	Explanation and action
OFCENG	EA_OCS_DIGCOL_METHOD	Specifies the method of digit collection for the OCS feature. Enter NOAMBI (no ambiguous codes), PFXALL (ambiguous codes), PFXAMB (ambiguous codes), or TIMING (timing). The default value is NOAMBI.
OFCENG	EA_OVERLAP_CARRIER_ SELECTION	Specifies the type of digit collection the line module performs. Enter Y if the line module performs digit collection for EA overlap carrier selection. Enter N if normal digit collection occurs. The default value is N.
OFCENG	NO_OCCTS_OM_REGISTERS	Specifies the maximum number of operational measurement (OM) registers you can assign in the OCCTSINT table. Enter a value from 0 to 2047. The default value is 225.

Equal Access on IBN/Datapath (continued)

Office parameters for Equal Access on IBN/Datapath (Sheet 2 of 2)

Table name	Parameter name	Explanation and action
OFCENG	OCCTS_ENHANCED_FEATURE	Specifies if the operating company requires additional registers, source, and destination numbers for the EA Traffic Measurement Separation System. Enter Y or N. The default value is N.
OFCENG	OCCTS_IN_MAX_NUMBER	Specifies the maximum number of Source Traffic Separation Numbers (NSTS) that you can assign to OCCs in table OCCINFO. The NSTS separate EA traffic. Enter SIZE_15, SIZE_31, SIZE_63, or SIZE_127. The default value is SIZE_15.
OFCENG	OCCTS_OUT_MAX_NUMBER	Specifies the maximum number of Destination Traffic Separation Numbers (NDTS) that you can assign to the following: • outgoing and two-way trunk groups in table TRKGRP • announcements in table ANS • tones in table TONES • special tones in table STN to separate EA traffic Enter SIZE_15, SIZE_31, SIZE_63, or SIZE_127. The default value is SIZE_15.
OFCENG	TWO_WAY_FOR_OC	Specifies if the OC trunk groups are set for two-way operation. Enter Y or N. The default value is N.

Equal Access on IBN/Datapath (continued)

Datafill sequence with the GEN network selector

The tables that require datafill to implement Equal Access on IBN/Datapath appear in the following table. The tables appear in the correct entry order.

Datafill requirements for Equal Access on IBN/Datapath (Sheet 1 of 2)

Table	Purpose of table
CUSTHEAD	Customer Group Head. This table contains the following: • the translators • the digit collection name, if applicable • the options for the customer group
NCOS	Network Class of Service. This table contains the following: • the NCOS that are assigned to the ACs: • the IBN or the Residential Enhanced Services (RES) stations • the incoming or the incoming side of two-way IBN trunk groups • authorization codes • customer groups Enter data in table NCOS to identify the NCOS information for the customer group
IBNXLA	IBN Translation. This table can contain the following. • the data for the digit translation of calls from an IBN station • an AC • an incoming side of a two-way IBN trunk group
LINEATTR	Line Attribute. This table contains the following: • the line attributes to the IBN stations • the ACs • the regular lines of the customer group

Datafill requirements for Equal Access on IBN/Datapath (Sheet 2 of 2)

Table	Purpose of table
OCCNAME	Equal Access List of Other Common Carrier Names. This table contains one field (OCCNAME). The table serves two functions for translations: • Lists carriers that connect. The 999 tuples accommodate 999 carriers and one null carrier (NILC). The office default carrier is the same as other IC/INCs. The NILC adds internally as the last carrier of the list. • Establishes the spelling standard for other tables that require the carrier name. Examples of the carrier name are OCCINFO, TRKGRP, and STDPRT.
OCCINFO	Equal Access Other Common Carrier Information. This table contains the attributes for carriers that serve the DMS switch. This table screens calls for carrier compatibility.

Datafilling table CUSTHEAD

Datafill for Equal Access on IBN/Datapath for table CUSTHEAD appears in the following table. The fields that apply to Equal Access on IBN/Datapath appear in this table. See the data schema section of this document for a description of the other fields.

Equal Access on IBN/Datapath (continued)

Table Customer Group Head (CUSTHEAD) contains the following:

- the translators
- the digit collection name, if applicable
- the options for the customer group

Datafilling table CUSTHEAD

Field	Subfield or refinement	Entry	Explanation and action
CUSTNAME		1- to 16-alphanumeric character name	Customer Group Name. This field specifies the name you assign to the customer group. Enter the 1- to 16-alphanumeric character name.
CUSTXLA		1- to 8-character name	Customer Translator. This field specifies the name you assign to the block of data in table IBNXLA. This name specifies the data for the translations of digits that can originate from the following: • an IBN station • an attendant • an incoming or incoming side of a two-way trunk group Enter the 1- to 8-character name
DGCOLNM		character name	Digit Collection Name. This field specifies the name you assign to the block of data in table DIGCOL. The name specifies the IBN digit collection for the IBN lines. Enter the character name.
IDIGCOL		name	International Digit Collection Name. This field specifies the name you assign to a block of data in table DGHEAD. Enter the name.
OPTIONS		name of option	Options. This field specifies the options for the customer group. Enter the name (s) of the options.

Datafill example for table CUSTHEAD

Datafill for table CUSTHEAD appears in the following example.

MAP example for table CUSTHEAD

```
  CUSTNAME  CUSTXLA  DGCOLNM  IDIGCOL
                                                        OPTIONS
_____________________________________________________________
      IBNTEST     CXT1     TST1      NIL
(VACTRMT 0) (EXTNCOS 0) (ACCT 4 N N ) (OHQA MUSIC1)
(AUTH AUTOREG N N) (SUPERCNF ) (ACR AUTH 0) (OCTXLA KDSR)
(DISAFAC DISARAC) $
```

Datafilling table NCOS

Datafill for Equal Access on IBN/Datapath for table NCOS appears in the following table. The fields that apply to Equal Access on IBN/Datapath appear in this table. See the data schema section of this document for a description of the other fields.

Table Network Class of Service (NCOS) contains NCOS numbers that are assigned to the following:

- the ACs
- the IBN or RES stations
- the incoming or incoming side of two-way IBN trunk groups
- the authorization codes
- the customer groups

Enter data in table NCOS to identify the NCOS information for the customer group.

Datafilling table NCOS

Field	Subfield or refinement	Entry	Explanation and action
	NCOSOPTN	XLAS	Network Class of Service Options. This subfield specifies a vector of a maximum of 17 option entries for the NCOS number. Enter XLAS for the translator and digit collection option.

Datafill example for table NCOS

Datafill for table NCOS appears in the following example.

Equal Access on IBN/Datapath (continued)

MAP example for table NCOS

```
CUSTGRP   NCOS   NCOSNAME   LSC   TRAFSNO          OPTIONS
_____________________________________________________________
POTSDATA    0     PRAD       0        0                $
POTSDATA    3     PRAD       0        0                $
COREREGA   0     NCCORA     0        0  (OHQ 1 TONE_OHQ)
                                         (CBQ 3 3 N 1) $

COREREGA    5     Y          0        0 (XLAS CXCOREA NXLA
                                          NDGT) (ACR N) $
```

Datafilling table IBNXLA

Datafill for Equal Access on IBN/Datapath for table IBNXLA appears in the following table. The fields that apply to Equal Access on IBN/Datapath appears in this table. See the data schema section of this document for a description of the other fields.

Table IBNXLA (IBN Translation) can contain the following:

- the data for the digit translation of calls from an IBN station
- an AC
- an incoming or an incoming side of a two-way IBN trunk group

Enter data in table IBNXLA to define the GEN network selector and other data for digit translations.

Datafilling table IBNXLA (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
KEY		see subfields	Key. This field contains subfields XLANAME and DGLIDX.
	XLANAME	1- to 8-character name	Translator Name. This subfield specifies the name you assign to the translator. Enter the 1- to 8-character name.
	DGLIDX	1- to 18-digit number	Digilator Index. This subfield specifies the access code. Enter the 1- to 18-digit number you assign as the access code.
RESULT		see subfield	Result. This field contains subfields TRSEL, NET_TYPE, OPTION, and OPTION.

Datafilling table IBNXLA (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	TRSEL	NET	Translation Selector. This subfield specifies the translation selector. Enter NET.
	NET_TYPE	GEN	Network Type. This subfield specifies the network selector. Enter GEN.
	OPTION	LATTR	Option. This subfield specifies the option for the line attribute index you must use. Enter LATTR. Enter data into refinement LINEATTR.
	LINEATTR	0 to 31 999	Line Attribute. This subfield specifies the line attribute index. Enter a value from 0 to 31 999.
	OPTION	EA	Option. This subfield specifies the option for the equal access feature. Enter EA. Enter data in subfields PIC, CHOICE, and INVEAFLX.
	PIC	1- to 16-character alphanumeric	Primary Inter-LATA Carrier. This subfield specifies the 1- to 16-character alphanumeric name you assign to the PIC in table OCCNAME. Enter the carrier name.
	CHOICE	Y or N	Choice. This subfield specifies if the caller can dial a 10XXX prefix to manually choose a carrier. Enter Y or N.
	INVEAFLX	0 to 63	Invalid Flexible Intercept Number. This subfield specifies the flexible intercept number that you cannot use. Enter a value from 0 to 63.

Datafill example for table IBNXLA

Datafill for table IBNXLA appears in the following example.

MAP example for table IBNXLA

```
KEY
                                                          RESULT
_____________________________________________________________________
C1LBR2 613
NET N N N 0 N POTS N N GEN (LATTR 0) (EA MCI Y 6) $
```

Equal Access on IBN/Datapath (continued)

Datafilling table LINEATTR

Datafill for Equal Access on IBN/Datapath for table LINEATTR appears in the following table. The fields that apply to Equal Access on IBN/Datapath appear in this table. See the data schema section of this document for a description of the other fields.

Table Line Attribute (LINEATTR) contains the following:

- the line attributes to the IBN stations
- the ACs
- the normal lines of the customer group

Datafilling table LINEATTR

Field	Subfield or refinement	Entry	Explanation and action
LNATTIDX		0 to 31 999	Line Attribute Index. This field specifies the index into the line attribute table. Enter a value from 0 to 4095.
RESINF		see subfield	LCC (RES) Information. This field contains subfield RESINFO.
	RESINFO	Y or N	LCC (RES) Information Selector. This subfield specifies if the line attribute index is a requirement to support RES. Enter Y or N. If you enter Y, enter data in subfields CUSTGRP, SUBGRP, and NCOS.
	CUSTGRP	alphanumeric customer group name	LCC (RES) Customer Group. This subfield specifies the customer group name entered in field CUSTNAME in table CUSTENG. The LCC (RES) lines you enter with the line attribute index belong to this customer group. Enter the alphanumeric customer group name.
	SUBGRP	0 to 7	LCC (RES) Customer Subgroup. This subfield specifies the subgroup in the customer group. The LCC (RES) lines you enter with the line attribute index belong to this group. Enter a value from 0 to 7.
	NCOS	0 to 511	LCC (RES) Network Class of Service Number. This subfield specifies the NCOS in the customer group. The LCC (RES) lines you enter with the line attribute index belong to this customer group. Enter a value from 0 to 511.

Datafill example for table LINEATTR

Datafill for table LINEATTR appears in the following example.

MAP example for table LINEATTR

```
LNATTIDX  LCC CHGCLSS COST SCRNCL LTG STS PRTNM LCANAME
ZEROMPOS TRAFSNO
    MRSA    SFC  LATANM  MDI  IXNAME  DGCLNAME FANIDIGS
               RESINF                           OPTIONS
_____________________________________________________________
     142  1FR    NONE   NT   NSCR   0 919  ARG1     NLCA
    TOPS       0
     NIL NILSFC  LATA10    0    NIL       NIL       00
            Y  IBNTST 0  3                        $
```

Datafilling table OCCNAME

Table OCCNAME (Equal Access List of Other Common Carrier Names) contains one field. This field is OCCNAME. Table OCCNAME serves two functions for translations:

- lists carriers that connect. The 999 tuples accommodate 999 carriers and one null carrier (NILC). The office default carrier is the same as other IC/INCs. The NILC adds internally as the last carrier of the list.
- establishes the spelling standard for other tables that require the carrier name. The carrier name includes OCCINFO, TRKGRP, and STDPRT.

Enter data in table OCCNAME to define the carrier name for the IBN lines.

Datafill for Equal Access on IBN/Datapath for table OCCNAME appears in the following table. The fields that apply to Equal Access on IBN/Datapath

Equal Access on IBN/Datapath (continued)

appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table OCCNAME

Field	Subfield or refinement	Entry	Explanation and action
OCCNAME		1- to 16-alphanumeric or USE_PREVIOUS	Other Common Carrier Name. This field specifies the 1- to 16-character alphanumeric carrier name or abbreviation of the carrier name. Enter the carrier name or enter the reserved carrier name USE_PREVIOUS if you must use the generic recursive pretranslator.

Datafill example for table OCCNAME

Datafill for table OCCNAME appears in this example.

MAP example for table OCCNAME

```
                    OCCNAME
_____________________________________________________________

                      GTE
                      CNA
                      INT
                      ITT
                       WU
```

Datafilling table OCCINFO

Table OCCINFO (Equal Access Other Common Carrier Information) contains the attributes for carriers that serve the DMS switch. Table OCCINFO screens calls for carrier compatibility.

Enter data in the other common carrier information table, OCCINFO. The data entry defines the attributes for the carriers that serve the DMS-100 switch office.

Datafill for Equal Access on IBN/Datapath for table OCCINFO appears in the following table. The fields that apply to Equal Access on IBN/Datapath appear

in this table. See the data schema section of this document for a description of the other fields.

Datafilling table OCCINFO

Field	Subfield or refinement	Entry	Explanation and action
CARRNAME		1- to 16-alphanumeric	Carrier Name. This field specifies the abbreviation of the carrier name as it appears in table OCCNAME. Enter the carrier name, or a 1- to 16-alphanumeric character abbreviation of the carrier name.
ACCESS		NONE, INTERIM, EAP, OTC, TRANS or FGC	Access Arrangement. This field specifies the type of access arrangement. Enter from the following: • NONE • INTERIM • EAP • OTC • TRANS • FGC

Datafill example for table OCCINFO

Datafill for table OCCINFO appears in the following example.

MAP example for table OCCINFO

```
   CARRNAME CARNUM  ACCESS ORIGCARR INTER INTNTL INTRA
ANI FANI ONISCRN AD1
OVERLAP INTERS INTRAS TERMREC OCCSEPNO OPSIG PICIND
NO1950 INCCPN DTMFIND
OPSERV CACBLOCK DTDOA CMCMON SCRNWATS CRMCRA ATPINCL
INTRAOPR
_____________________________________________________
     ATT    0122     EAP        N     Y      Y     Y   Y
N       N   Y
 Y      Y      Y   LONG        12  NONE      N      N
 Y       N
 Y        N     N      N        Y      Y       N        N
```

Equal Access on IBN/Datapath (continued)

Datafill sequence with VFGs

The tables that require datafill to implement Equal Access on IBN/Datapath appear in the following list. The tables appear in the correct entry order.

Datafill tables for Equal Access on IBN/Datapath

Table	Purpose of table
NCOS	Network Class of Service. This table contains the following: • the NCOS that are assigned to ACs • the IBN or RES stations • the incoming or incoming side of two-way IBN trunk groups • authorization codes • customer groups
IBNXLA	IBN Translation. This table contains the following: • the data for the digit translation of calls from an IBN station • an AC • an incoming side of a two-way IBN trunk group Table IBNXLA has field NETTYPE set to DOD for the network type.
LINEATTR	Line Attribute. This table contains the following: • the line attributes to the IBN stations • the ACs • the normal lines of the customer group
IBNRTE	IBN Route. This table contains route lists that a route reference index number identifies.
DIGMAN	Digit Manipulation. This table contains the digit manipulation data for the customer group.
VIRTGRPS	Virtual Facility Groups. This table contains the line attributes and additional data for the VFG, and a mechanism to eliminate loop-around trunks. Loop-around trunks implement IBN inward wide area telephone service (INWATS) and outward wide area telephone service (OUTWATS). Loop-around trunks provide EA capabilities.

Datafilling table NCOS

Datafill for Equal Access on IBN/Datapath for table NCOS appears in the following table. The fields that apply to Equal Access on IBN/Datapath appear

in this table. See the data schema section of this document for a description of the other fields.

Table NCOS (Network Class of Service) contains NCOS numbers assigned to ACs, IBN or RES stations, incoming or incoming side of two-way IBN trunk groups, authorization codes, and customer groups.

- the NCOS numbers assigned to ACs
- the IBN or RES stations
- the incoming or incoming side of two-way IBN trunk groups
- authorization codes
- customer groups

Enter data into table NCOS to identify the NCOS information for the customer group.

Datafilling table NCOS

Field	Subfield or refinement	Entry	Explanation and action
	NCOSOPTN	XLAS	Network Class of Service Options. This subfield specifies a vector of up to 17 option entries for the NCOS number. Enter XLAS for translator and digit collection option.

Datafill example for table NCOS

Datafill for table NCOS appears in the following example.

MAP example for table NCOS

```
CUSTGRP   NCOS   NCOSNAME   LSC   TRAFSNO
OPTIONS
_____________________________________________________________
POTSDATA     0     PRAD       0         0                    $
POTSDATA     3     PRAD       0         0                    $
COREREGA    0     NCCORA     0         0   (OHQ 1 TONE_OHQ)
                                            (CBQ 3 3 N 1)   $

COREREGA    5     Y          0         0   (XLAS CXCOREA NXLA
                                            NDGT) (ACR N)   $
```

Equal Access on IBN/Datapath (continued)

Datafilling table IBNXLA

Datafill for Equal Access on IBN/Datapath for table IBNXLA appears in the following table. The fields that apply to Equal Access on IBN/Datapath appear in this table. See the data schema section of this document for a description of the other fields.

Table IBNXLA (IBN Translation) can contain the following:

- the data for the digit translation of calls from an IBN station
- an AC
- an incoming side of a two-way IBN trunk group

Table IBNXLA has field NETTYPE set to DOD for the network type.

Datafilling table IBNXLA

Field	Subfield or refinement	Entry	Explanation and action
KEY		see subfields	Key. This field contains subfields XLANAME and DGLIDX.
	XLANAME	1- to 8-characters	Translator Name. This subfield specifies the name that you assign to the translator. Enter the 1- to 8-character name.
	DGLIDX	1 to 18	Digilator Index. This subfield specifies the access code. Enter the 1- to 18-digit number assigned as the access code.
RESULT		see subfields	Result. This field contains subfields TRSEL and NETTYPE.
	TRSEL	NET	Translation Selector. This subfield specifies the translation selector. Enter NET for network.
	NETTYPE	DOD	Network Type. This subfield specifies the network type. Enter DOD for direct outward dial.

Datafill example for table IBNXLA

Datafill for table IBNXLA appears in the following example.

MAP example for table IBNXLA

```
KEY                                                    RESULT
_____________________________________________________________
POTSXLA          9                                NET DOD 3 Y
```

Datafilling table LINEATTR

Datafill for Equal Access on IBN/Datapath for table LINEATTR appears in the following table. The fields that apply to Equal Access on IBN/Datapath appear in this table. See the data schema section of this document for a description of the other fields.

Table Line Attribute (LINEATTR) contains the following:

- the line attributes to the IBN stations
- the ACs
- the normal lines of the customer group

Datafilling table LINEATTR (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
LNATTIDX		0 to 31 999	Line Attribute Index. This field specifies the index into the line attribute table. Enter a value from 0 to 31 999.
RESINF		see subfield	LCC (RES) Information. This field contains subfield RESINFO.
	RESINFO	Y or N	LCC (RES) Information Selector. This subfield specifies if the line attribute index is a requirement to support RES. Enter Y or N. If you enter Y, enter data into subfields CUSTGRP, SUBGRP, and NCOS.
	CUSTGRP	alphanumeric	LCC (RES) Customer Group. This subfield specifies the customer group name entered in field CUSTNAME in table CUSTENG. The LCC (RES) lines you enter with the line attribute index belong to the customer group. Enter the alphanumeric customer group name.

Equal Access on IBN/Datapath (continued)

Datafilling table LINEATTR (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	SUBGRP	0 to 7	LCC (RES) Customer Subgroup. This subfield specifies the subgroup in the customer group. The LCC (RES) lines you enter with the line attribute index belong to this group. Enter a value from 0 to 7.
	NCOS	0 to 511	LCC (RES) Network Class of Service Number. This subfield specifies the NCOS in the customer group. The LCC (RES) lines you enter with the line attribute index belong to this group. Enter a value from 0 to 511.

Datafill example for table LINEATTR

Datafill for table LINEATTR appears in this example.

MAP example for table LINEATTR

```
LNATTIDX  LCC CHGCLSS COST SCRNCL LTG STS PRTNM LCANAME
ZEROMPOS TRAFSNO
    MRSA    SFC  LATANM  MDI  IXNAME  DGCLNAME FANIDIGS
                RESINF                          OPTIONS
_____________________________________________________
     142  1FR    NONE   NT   NSCR   0 919  ARG1    NLCA
    TOPS       0
     NIL NILSFC  LATA10    0    NIL       NIL       00
           Y  IBNTST 0  3                        $
```

Datafilling table IBNRTE

Datafill for Equal Access on IBN/Datapath for table IBNRTE appears in the following table. The fields that apply to Equal Access on IBN/Datapath appear in this table. See the data schema section of this document for a description of the other fields.

Table IBNRTE (IBN Route) contains route lists that a route reference index number identifies.

Datafilling table IBNRTE

Field	Subfield or refinement	Entry	Explanation and action
	IBNRTSEL	VFG	IBN Route Selector. This subfield specifies the virtual facility group selector. Enter VFG.

Datafill example for table IBNRTE

Datafill for table IBNRTE appears in the following example.

MAP example for table IBNRTE

```
RTE                                                    RTELIST
_____________________________________________________________
  1            (VFG  N N N N              PBLTRK1  3)  $
```

Datafilling table DIGMAN

Datafill for Equal Access on IBN/Datapath for table DIGMAN appears in the following table. The fields that apply to Equal Access on IBN/Datapath appear in this table. See the data schema section of this document for a description of the other fields.

Table DIGMAN (Digit Manipulation) contains the digit manipulation data for the customer group.

Datafilling table DIGMAN

Field	Subfield or refinement	Entry	Explanation and action
	DIGCOM	INC	Digit Command. This subfield specifies the include digits command. Enter INC.
	INCDIGS	digits	Included Digits. This subfield specifies the digits to be included in the digit string. The included digits are placed in the digit string in front of the cursor. Enter the digits to be included.

Datafill example for table DIGMAN

Datafill for table DIGMAN appears in the following example.

Equal Access on IBN/Datapath (continued)

MAP example for table DIGMAN

```
        DMIKEY                                          DMIDATA
_____________________________________________________________________
        201    (INC 922) (CL BEG)  (REM 2)  (CL BEG)
```

Datafilling table VIRTGRPS

Table Virtual Facility Groups (VIRTGRPS) contains the line attributes and additional data for the VFG. Table VIRTGRPS contains a mechanism to eliminate loop-around trunks. Loop-around trunks implement IBN INWATS and OUTWATS. Loop-around trunks provide EA capabilities.

Datafill to Equal Access on IBN/Datapath for table VIRTGRPS appears in the following table. The fields that apply to Equal Access on IBN/Datapath appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table VIRTGRPS

Field	Subfield or refinement	Entry	Explanation and action
OPTIONS		EA	Options. This field specifies the list of options you assign to the VFG. Enter EA. Enter data in subfields PIC and CHOICE.
	PIC	1- to 16-character alphanumeric name or NONE	Primary Inter-LATA Carrier. This subfield specifies the 1- to 16-character alphanumeric name you assign to the PIC in table OCCNAME. Enter the carrier name, or enter NONE if a PIC is not required.
	CHOICE	Y or N	Choice. This subfield specifies if the caller can dial a 10XXX prefix to manually choose a carrier. Enter Y or N.

Datafill example for table VIRTGRPS

Datafill for table VIRTGRPS appears in the following example.

Equal Access on IBN/Datapath (end)

MAP example for table VIRTGRPS

```
KEY      DATA
                                                    OPTIONS
_____________________________________________________________
IBNNTI SIZE 4 POTS 6193516000 112 Y ( EA  REG444 Y)$
```

Tools for verifying translations

Equal Access on IBN/Datapath does not use translation verification tools.

SERVORD

Equal Access on IBN/Datapath does not use SERVORD.

Equal Access Operator Services Signaling

Ordering codes

Functional group ordering code: EQA00001

Functionality ordering code: EQA00011

Release applicability

BCS30 and later versions

Requirements

To operate the Equal Access Operator Services Signaling requires BAS Generic BAS00003.

Description

The Equal Access Operator Services Signaling (EAOSS) feature package provides the Operator Services System (OSS) with all the information to process calls. The OSS can process calls that arrive on a single combined trunk group. The EAOSS is a signaling type. The EAOSS allows the operating company to combine different types of operator and non-operator traffic on the same operator trunk group.

Operation

This feature package implements EAOSS. The EAOSS is feature group D (FGD) signaling with modified key pulse (KP) and start pulse (ST) signals. The EAOSS uses the modified signals to provide the operator system with all the information to process the combined traffic.

The first set of digits signals a modified ST (ST') to inform the operating company that OSS processing must occur. The ST signals other calls.

This feature package modifies the KP signals. The new KP signals are KP prime (KP'), KP double prime (KP") and KP triple prime (KP'"). The system sends modified signals at the start of the ANI sequences. The signals are the same MF tones as the equivalent ST signals. Descriptions of the KP signals appear in the following table.

Definition of KP signals (Sheet 1 of 2)

Signal	Call originated from	Meaning
KP	Rotary dial station	Customer did not dial the EAP prefix
KP'	Rotary dial station	Customer dialed the EAP prefix

Equal Access Operator Services Signaling (continued)

Definition of KP signals (Sheet 2 of 2)

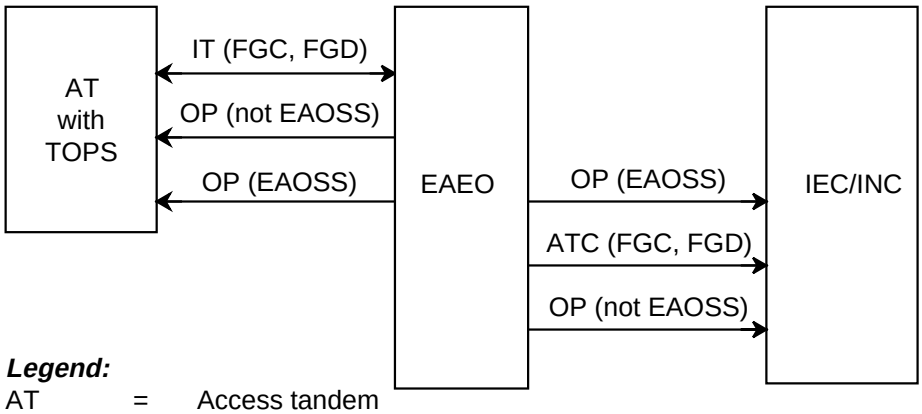
Signal	Call originated from	Meaning
KP''	Dual-tone MF station	Customer did not dial the EAP prefix
KP'''	Dual-tone MF station	Customer dialed the EAP prefix

The system routes traffic signaled with EAOSS from an EAEO to one of the following destinations:

- an operating company OSS. For example, the system can route the traffic to an AT equipped with a Traffic Operator Position System (TOPS)
- an IEC or INC operator system
- an IEC or INC through a TOPS access tandem (AT)

The first two destinations appear in the following figure.

Example of EAEO trunking arrangement with EAOSS



Legend:

AT	=	Access tandem
ATC	=	Access to carrier trunk group
EAEO	=	Equal Access end office
EAOSS	=	Exchange access operator services signaling
FGC	=	FGC signaling
FGD	=	FGD signaling
IEC	=	Interexchange carrier
INC	=	International carrier
IT	=	Intertoll trunk group
OP	=	Operator trunk group
TOPS	=	Traffic Operator Position System

Equal Access Operator Services Signaling (continued)

Any or all of the following types of traffic can combine on an operator trunk group. The EAOSS can signal the traffic.

- the operating company handles the following calls:
  - non-operator services calls
  - toll and assistance (TA) calls
  - directory assistance (DA) calls
  - intercept calls
  - direct distance dialing (DDD)
  - new services traffic
- the IEC/INC handles the following calls:
  - TA calls
  - DDD calls
  - new services traffic

A description of this feature package appears in three parts. The first part describes how the feature works for calls to an AT equipped with OSS. The second part describes how the feature works for calls routed to an IEC. The last part describes the datafill needed to implement this feature package.

Calls routed through an AT

This feature affects calls that originate from the EAEO and route over an OP trunk group that uses EAOSS. The following sections provide examples of the use of signaling for these EAOSS calls:

- operating company calls (exchange operator services)
- operating company calls (non-operator services)
- domestic IEC calls (EAOSS)
- number services calls (EAOSS)
- international IEC calls (EAOSS)
- IEC calls not requiring operating company EAOSS

Operating company calls (exchange operator services)

The use of the EAOSS plan occurs on the TA. The EAOSS lists services for example, DA calls, and intercept calls the operating company completes. These calls are normally intra-LATA. These calls can be inter-LATA. An example of inter-LATA calls are corridor calls. The signaling plan includes STs and two ANI information digits.

Equal Access Operator Services Signaling (continued)

The use of intercept signaling can occur if intercept traffic remains on separate trunk groups. Use signaling if intercept combines with other types of traffic on common trunk groups. The following ANI information digits apply to intercept calls. The digits apply to calls that the system routes to an AT OSS, over an operator trunk with EAOSS signaling:

- 30 - blank number intercept
- 31 - trouble intercept
- 32 - regular intercept

The signaling sequences for calls that originate from rotary dial stations appear in the following table. For calls that originate from DTMF stations, a KP" signal replaces a KP signal. The replacement occurs in the ANI sequences. See the “Definition of KP signals" table for a definition of KP signals.

Signaling on operating company calls (exchange operator services) (Sheet 1 of 2)

Call type	EAEO outpulsing	AT outpulsing	EAEO outpulsing
0+ intra-LATA 0- corridor	KP + 0/3/7/10D + ST'	off-hook ANI request	KP + II + ANI + ST
1+ intra-LATA OSS (such as coin and hotel calls) corridor calls	KP + 3/7/10D + ST"	off-hook ANI request	KP + II + ANI + ST
1+ listing services	KP + 411 + ST" KP + 555 + XXXX + ST" KP + NPA + 555 + XXXX + ST"	off-hook ANI request	KP + II + ANI + ST
Legend: ANI - calling number II - information digits ST' - 0- or 0+ was dialed ST" - the call requires OSS functions but 0- or 0+ was not dialed			

Equal Access Operator Services Signaling (continued)

Signaling on operating company calls (exchange operator services) (Sheet 2 of 2)

Call type	EAEO outpulsing	AT outpulsing	EAEO outpulsing
0+ listing services	KP + 411 + ST' KP + 555 + XXXX + ST' KP + NPA + 555 + XXXX + ST'	off-hook ANI request	KP + II + ANI + ST
intercept	KP + 10D + ST"	off-hook ANI request	KP + II + ST
Legend: ANI - calling number II - information digits ST' - 0- or 0+ was dialed ST" - the call requires OSS functions but 0- or 0+ was not dialed			

Operating company calls (non-operator services)

The signaling for intra-LATA calls that include corridor calls that do not require operator services is as follows:

- the EAEO outpulses KP + 0/3/7/10D + ST to AT.
- the AT routes call to trunk.

Domestic IEC calls (EAOSS)

The end office (EO) sends all IEC calls to the AT equipped with OSS. The EO uses a different signaling plan than operating company calls to allow overlap outpulsing. The AT equipped with OSS uses the following to process IEC:

- provides complete operator services before the system routes the call to the correct IEC point of termination (POT)
- forwards the call to the correct IEC POT without providing complete operator services
- forwards the call to the correct IEC POT without providing any operator services

The system uses the signal sequences that appear in the following table on calls that originate from rotary dial stations. For calls that originate from DTMF stations, a KP" signal replaces a KP signal in the ANI sequences. And a KP'"

signal replaces a KP' signal in the ANI sequences. Refer to the “Definition of KP signals'' table for a definition of KP signals. The station line data determines if the call originated from a DTMF station. The AT sends an acknowledgement wink or off-hook after the EAEO second outpulsing.

Signaling on domestic IEC calls (EAOSS)

Call type	EAEO outpulsing	AT outpulsing	EAEO outpulsing
0+ inter-LATA (PIC)	KP + 0ZZ + XXX + ST'	wink	KP + II + ANI + ST + KP + 0 + called number + ST
10XXX+0+ inter-LATA	KP + 0ZZ + XXX + ST'	wink	KP' + II + ANI + ST + KP + 0 + called number + ST
1+ inter-LATA OSS (like coin and hotel calls)	KP + 0ZZ + XXX + ST'	wink	KP + II + ANI + ST + KP + called number + ST
10XXX+1+ inter-LATA OSS (such as coin and hotel calls)	KP + 0ZZ + XXX + ST'	wink	KP' + II + ANI + ST + KP + called number + ST
00	KP + 0ZZ + XXX + ST'	wink	KP + II + ANI + ST + KP + 0 + ST
10XXX+0-	KP + 0ZZ + XXX + ST'	wink	KP' + II + ANI + ST + KP + 0 + ST

Legend:

ANI - calling number

II - information digits

ST' - the operating company provides EAOSS for the IEC

XXX - the CIC of the carrier

0ZZ - the call type for both DD and OA calls (for example, 080)

Number services calls (EAOSS)

The signals on number services calls is as follows:

- the EAEO outpulses KP + 0ZZ + XXX + ST'' to AT.
- the AT sends wink.

Equal Access Operator Services Signaling (continued)

- the EAEO outpulses KP + II + ANI + ST + KP + 3/7/10D + ST to AT.
- the AT sends acknowledgment wink.

Note: The ST" indicates a number services call. The 0 in 0ZZ tells the system that the call is a domestic IEC call. The ZZ provides carrier exact routing information. The XXX is the dial CIC or the presubscribed CIC.

Feature package NTX888AA International IEC calls (EAOSS)

The system uses signal sequences that appear in the following table on calls that originate from rotary dial stations. For calls that originate from DTMF stations, a KP" signal replaces a KP signal in the ANI sequences. A KP"' signal replaces a KP' signal in the ANI sequences. Refer to the “Definition of KP signals" table for a definition of KP signals. The stations line data determines if the call originated from a DTMF station. The AT sends an acknowledgement wink or off-hook after the EAEO second outpulsing.

Signaling on international IEC calls (EAOSS) (Sheet 1 of 2)

Call type	EAEO outpulsing	AT outpulsing	EAEO outpulsing
01+ international PIC 011+ inter-LATA OSS	KP + 1N'X + XXX + CCC + ST'	wink	KP + II + ANI + ST + KP + CC + NN + ST
10XXX+ 01+ international	KP + 1N'X + XXX + CCC + ST'	wink	KP + II + ANI + ST + KP + CC + NN + ST
Legend: ANI - calling number CC - country code digits CCC - pseudo country code digits II - information digits NN - national number ST' - the operating company provides EAOSS for the IEC XXX - the CIC of the carrier 1NX - international DD identification digits 1N'X - international OA identification digits			

Signaling on international IEC calls (EAOSS) (Sheet 2 of 2)

Call type	EAEO outpulsing	AT outpulsing	EAEO outpulsing
011+ international OSS	KP + 1N'X + XXX + CCC + ST'	wink	KP + II + ANI + ST + KP + CC + NN + ST
10XXX+011+ international OSS	KP + 1N'X + XXX + CCC + ST'	wink	KP + II + ANI + ST + KP + CC + NN + ST
00	KP + 1N'X + XXX + ST'	wink	KP + II + ANI + ST + KP + 0 + ST
10XXX+0-	KP + 1N'X + XXX + ST'	wink	KP' + II + ANI + ST + KP + 0 + ST

Legend:

ANI - calling number

CC - country code digits

CCC - pseudo country code digits

II - information digits

NN - national number

ST' - the operating company provides EAOSS for the IEC

XXX - the CIC of the carrier

1NX - international DD identification digits

1N'X - international OA identification digits

IEC calls not requiring operating company EAOSS

Calls that do not require operating company EAOSS functions outpulse to the AT with an ST instead of an ST'. Calls where the CAC dialed (10XXX and 00 calls) are signaled as described in the “Signaling on domestic IEC calls (EAOSS) and “Signaling on international IEC calls (EAOSS)" tables. However, if the IEC provides operator services and often does not want the operating company to handle dialed OSS calls. When this condition applies, the calls are signaled to the AT with an ST instead of an ST' (KP+0ZZ+XXX+ST).

Operator supervision is for each trunk group on the dialed calls that the operating company OSS does not handle. The 0ZZ digits that outpulse from the EAEO determine the operator supervision. The 0ZZ digits select the route

Equal Access Operator Services Signaling (continued)

from the AT to the IEC. If the IEC provides operator services, a minimum of one trunk must provide operator supervision on calls that route to the IEC.

Calls routed directly to an IEC

This feature affects calls that route directly to an IEC on an operator trunk with EAOSS. The signaling to the IEC differs from current signaling in two ways:

- the signal sends the rotary dial/DTMF indication if requested.
- the signal can receive off-hook instead of an acknowledgment wink to indicate OSS functions.

If the IEC provides OSS, calls to this carrier are signaled. The Equal Access signaling signals calls to this carrier. Feature package NTX186AA describes the Equal Access signaling. The calls can receive signaling from rotary dial/DTMF indication.

The IEC can respond to the address sequence with a returned steady off-hook instead of an acknowledgment wink. When this event occurs the EAEO interprets this off-hook as the signal to start the hold condition. The operator trunk group is often not set up for EAOSS and holdtype. In this event, the EAEO returns an announcement to the calling party. The EAEO releases the forward connection.

The system creates office parameter EA_OSS_HOLD_TIMEOUT_MINS to prevent a trouble condition on a call that requires the hold function. The parameter prevents the call from holding a line out of service for an extended period. When the line goes on-hook and the IEC is in an off-hook condition, the timer starts. The line can remain on-hook and not receive an on-hook or an expanded MF signal from the IEC. When this condition occurs, the connection releases. The line must receive the signal in the value set for EA_OSS_HOLD_TIMEOUT_MINS. When the connection releases a trouble record occurs. If the line receives an expanded MF signal, the timeout interval starts again.

Datafill needed to implement Equal Access Operator Services Signaling

The IEC can decide if AT OSS or IEC OSS handles OSS traffic when EC calls route through an AT with OSS. Field OPSERV in table OCCINFO indicates if the carrier handles dialed OSS traffic.

Enter data in field DTMFIND in table OCCINFO to indicate if the IEC requires the DTMF indication on dialed calls. Enter data in this field for calls that route through an AT or calls that route directly to the carrier. If the IEC does not request the rotary dial/DTMF indication, the signaling is the same as for the rotary dial station.

Routing

A conditional route allows the operating company to route calls dialed with the EAP prefix on a different route. When the use of EAOSS occurs the call needs to route on an operator trunk group that has EAOSS. When the operating company OSS handles the call, field RTEVIAAT in table TRKGRP must be Y. If the call routes directly to the IEC on an operator trunk, field RTEVIAAT must be N.

0+/01+ from non-presubscribed lines

To allow the operating company to route 0+ and 01+ inter-LATA calls from non-presubscribed lines, a special carrier must be set up to appear like a correct carrier. Operating company personnel add special carrier name (OSS) to table OCCNAME. Enter data in table OCCINFO for this special carrier.

Enter data in table STDPRTCT to send 0+ and 01+ inter-LATA calls to the special carrier (OSS). Other calls can have data entries to route to carrier OSS or to a treatment. This special carrier is then added to the non-presubscribed lines as the lines PIC.

Limits

The following limits and restrictions apply to Equal Access Operator Services Signaling:

- The operating company must use operator trunk groups for all calls signaled with EAOSS.
- The only listing services numbers recognized by the EAEO are 411 and 555 (NPA-555-XXXX and 555-XXXX). If the use of other numbers occurs for listing services, the EAEO does not recognize the numbers as listing services. The numbers that EAEO does not recognize are not signaled to the operating company OSS.
- If a carrier wants to provide operator services for EAOSS 10XXX+0 or 00 calls, that carrier must accept FGD signaling. The EAOSS does not affect normal OSS. For FGC carriers that provide operator services, the TOPS AT converts EAOSS to FGC signaling as long as OPSERV is N for that carrier.

Interactions

This feature package interacts with three-way calling and call waiting. The subscriber flashes can occur with all of these features. The same treatment applies to subscriber flash on EAOSS calls as provided on operating company operator calls. This treatment occurs when the subscriber has other flash capabilities.

Equal Access Operator Services Signaling (continued)

Activation/deactivation by the end user

Equal Access Operator Services Signaling does not require activation or deactivation by the end user.

Billing

The EAEO does not produce billing records for calls signaled with an STP. Calls that the system routes to the operating company operator system do not receive billing records. The system bills other calls as described in *Bellcore Format Automatic Message Accounting Reference Guide*, 297-1001-830.

For calls that the system routes from the EAEO to the IC/INC, an off-hook can indicate operator system functions. In this event an off-hook indicates the functions instead of an acknowledgment wink from the IC/INC. If the EAEO receives off-hook, an AMA record occurs. An AMA record cannot bill the originating customer. This record cannot bill the customer because answer supervision does not pass to the originating office when the EAEO receives an off-hook. The EAEO receives the off-hook when outpulsing ends.

Station Message Detail Recording

Equal Access Operator Services Signaling does not affect Station Message Detail Recording.

Datafilling office parameters

The office parameters used by Equal Access Operator Services Signaling appear in the following table Refer to *Office Parameters Reference Manual* for additional information on office parameters.

Office parameters by Equal Access Operator Services Signaling

Table name	Parameter name	Explanation and action
OFCENG	EA_OSS_HOLD_TIMEOUT_MINS	This office parameter specifies the EAOSS hold timeout. The EAOSS timeout is 1, 2 , 3 or 4 minutes. This parameter prevents a trouble condition on a call that requires the hold function. This parameter makes sure that a line on hold does not remain out of service for an extended period. The use of this parameter value occurs when a line goes on-hook and the IEC is in an off-hook position. The value of this parameter applies to calls that originate from the EAEO and route over an operator trunk group. The trunk group uses EAOSS signaling.

Datafill sequence

The tables that require datafill to implement Equal Access Operator Services Signaling appear in the following table. The tables appear in the correct entry order.

Datafill requirements for Equal Access Operator Services Signaling (Sheet 1 of 2)

Table	Purpose of table
OFCENG	Office Engineering. This table contains data on engineering parameters for the office. See “Datafilling office parameters" for how Equal Access Operator Services Signaling affects office parameters.
OCCNAME	Table OCCNAME (other common carrier name) lists the connected carriers and establishes the spelling standard for other tables that require the carrier name.
TRKGRP (OP)	Table TRKGRP (OP) (outgoing and two way from local or toll to TOPS/TSPS trunk group) contains information about each operator trunk group.

Equal Access Operator Services Signaling (continued)

Datafill requirements for Equal Access Operator Services Signaling (Sheet 2 of 2)

Table	Purpose of table
OCCINFO	Table OCCINFO (other common carrier information) defines the attributes for the carriers that serve a DMS switch and screens calls for carrier compatibility.
STDPRTCT. STDPRT	Subtable STDPRTCT.STDPRT (standard pretranslator) is the first subtable the received leading digits index. The digits index the subtable when the original line attribute from table LINEATTR specifies a pretranslator name. The digits index the subtable when the original trunk, from table TRKGRP specifies a pretranslator name.

Datafilling table OCCNAME

The carriers that serve the EAEO appear in table OCCNAME. The table establishes the spelling standard for other tables that require the carrier name (OCCINFO, TRKGRP, and STDPRTCT.STDPRT). This table must contain a dummy carrier name (OSS) to allow the operating company to route 0+ and 01+ inter-LATA calls from non-presubscribed lines.

Datafill for Equal Access Operator Services Signaling for table OCCNAME appears in the following table. The fields that apply to Equal Access Operator Services Signaling appear in this table. See to the data schema section of this document for a description of the other fields.

Datafilling table OCCNAME

Field	Subfield or refinement	Entry	Explanation and action
OCCNAME		Carrier name or 1-16 character alphanumeric abbreviation	Other common carrier name. Enter the carrier name or a 1- to 16-character alphanumeric abbreviation of the carrier name. Enter the reserved carrier name USE_PREVIOUS if the use of generic recursive pretranslator must occur.

Datafill example for table OCCNAME

Sample datafill for table OCCNAME appears in the following example.

MAP example for table OCCNAME

```
          OCCNAME
_____________________________________________________________

          C111
          C222
          C333
          C444
          OSS
```

Datafilling table TRKGRP (OP)

Datafill for Equal Access Operator Services Signaling for table TRKGRP (OP) appears in the following example. The fields that apply to Equal Access Operator Services Signaling appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table TRKGRP (OP)

Field	Subfield or refinement	Entry	Explanation and action
EADATA		refer to subfields	Equal Access data. This field contains of the following subfields.
	EA	Y or N	Equal Access selector. Enter Y for Equal Access signaling, double ANI digits. Otherwise, enter N.
	EAOSS	Y or N	Exchange access operator services signaling. Enter Y for the use of EAOSS on the trunk. Otherwise, enter N. The system displays this field when EA = Y.
	RTEVIAAT	Y or N	Route via access tandem. Enter Y if the trunk is between an EAEO and an AT equipped with OSS. For direct trunks between an EAEO and an IEC, enter N. The system displays this field when EA = Y.

Datafill example for table TRKGRP (OP)

Sample datafill for table TRKGRP (OP) appears in the following example. Trunk LNTOPS2 is between an EAEO and a TOPS AT (RTEVIAAT = Y). The trunk requires Equal Access signaling. The EA, EAOSS and RTEVIAAT fields appear in the last three entries.

Equal Access Operator Services Signaling (continued)

MAP example for table TRKGRP (OP)

```
GRPKEY
                                                          GRPINFO
_____________________________________________________________________
LNTOPS2
 OP 11 TLD NCRT SP MIDL NCN MIX REV TERMHOLD N OG Y Y Y $
```

Datafilling table OCCINFO

Table OCCINFO defines the attributes for carriers that serve the EO. Table OCCINFO screens calls for carrier compatibility. For example, table OCCINFO allows the transfer of international traffic to carriers that can handle international traffic.

You must enter data in fields DTMFIND and OPSERV for every carrier associated with an EO that uses EAOSS. You must enter data in the dummy carrier OSS in this table. The field DTMFIND applies to OSS calls that route directly to the carrier. The field DTMFIND must be N because OSS is a dummy carrier. Field OPSERV must be N because all calls that use this carrier require the operating company OSS to handle the calls.

Datafill for Equal Access Operator Services Signaling for table OCCINFO appears in the following table. The fields that apply to Equal Access Operator Services Signaling appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table OCCINFO

Field	Subfield or refinement	Entry	Explanation and action
DTMFIND		Y or N	Rotary dial/DTMF indicator. Enter Y if the carrier receives the rotary dial/DTMF indicator on operator services calls that route directly to the carrier. Otherwise, enter N. Enter data in this field for every entry in table OCCINFO. This field is active if feature package NTX888 is present.
OPSERV		Y or N	Operator services. Enter Y if the carrier accepts EAOSS calls where the CIC is dialed for example, 0XXX+0+, 00, 10XXX+0+. Enter Y if the CIC does not want the operating company to handle these calls. Otherwise, enter N. Enter data in this field for every entry in table OCCINFO. This field is active if feature package NTX888 is present.

Datafill example for table OCCINFO

Sample datafill for table OCCINFO appears in the following table. This example shows carrier OSS appears in this example. The CAC assigned to this carrier is 987, DTMFIND is N and OPSERV is N.

MAP example for table OCCINFO

```
CARRNAME CARRNUM ACCESS INTER INTNTL INTRA ANI FANI
ONISCRN AD1 OVERLAP INTERS INTRAS TERMREC OCCSEPNO OPSIG
PICIND NOA950 INCCPN DTMFIND OPSERV CTDOA CMCMON SCRNWATS
CRMCRA ATPINCL INTRAOPR
_____________________________________________________________
OSS   987     EAP      Y      N    Y    Y    Y     Y    Y
 Y     y      y      LONG    0      FGRPD   N      N
 N     N      N      N      N        N      N    N
 N
```

Datafilling subtable STDPRTCT.STDPRT

Subtable STDPRTCT.STDPRT is the first subtable the received leading digits index. The digits index the subtable when the original line attribute from table LINEATTR specifies a pretranslator name. The digits index the subtable when the original trunk from table TRKGRP specifies a pretranslator name. Enter data in this subtable to send 0+ and 01+ inter-LATA calls to dummy carrier OSS.

Datafill for Equal Access Operator Services Signaling for subtable STDPRTCT.STDPRT appears in the following table. The fields that apply to Equal Access Operator Services Signaling appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling subtable STDPRTCT.STDPRT (Sheet 1 of 4)

Field	Subfield or refinement	Entry	Explanation and action
FROMDIGS		digits	From digits. Enter the digits to translate. If the entry is a block of numbers in sequence, enter the first number in the block.
TODIGS		digits	To digits. If FROMDIGS is a block of numbers in sequence, enter the last number in the block. Otherwise this field equals FROMDIGS.
PRETRTE		refer to subfields	Pretranslation route. For Equal Access calls, this field contains subfields PRERTSEL, TYPCALL, NOPREDIG, XLA_INFO, CARRNAME, and RTEAREA.

Equal Access Operator Services Signaling (continued)

Datafilling subtable STDPRTCT.STDPRT (Sheet 2 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	PRERTSEL	EA	Pretranslator route selector. Enter EA, the pretranslator route selector for Equal Access calls.
	TYPCALL	DD, NP, OA	Type of call. Enter the type of call: • direct dial (DD) • no prefix (NP) • operator-assisted (OA) ***Note:*** TYPCALL must be DD to allow call billing.
	NOPREDIG	0 to 7	Number of prefix digits. Enter the number of prefix digits (0 to 7).
	XLA_INFO	refer to subfield	Equal Access translation information. This subfield contains subfield XLATYPE.
	XLATYPE	N, P, T	Equal Access translation type. Enter one of the following values: • N when additional digit translation or screening is not a requirement. Specify a route in subfield RTEAREA. • P for additional pretranslation. Enter a pretranslator subtable name in subfield PRTNM. • T when additional pretranslation is not a requirement. Subfield TRANSYS determines the direction of translation.
	PRTNM	Pretranslator subtable name	Pretranslator subtable name. Enter the name of the pretranslator subtable that translation routes to for pretranslation of the remaining digits. The system displays this subfield when XLATYPE = P.

Datafilling subtable STDPRTCT.STDPRT (Sheet 3 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	TRANSYS	NA, IN, NO	Translation system Enter one of the following values: • NA when translation must proceed to North American digit translations and screening. • IN when translation must proceed to international translations. • NO when additional translation or screening is not a requirement. The system displays this subfield when XLATYPE = T.
	CARRNAME	Carrier name	Carrier name. Enter the name of the carrier, as defined in table OCCNAME, to which the call is offered.
	RTEAREA	refer to subfield	Route area. This subfield contains subfield RTEPRSNT.
	RTEPRSNT	Y or N	Route present. Enter Y in subfields EXTRTEID, TABID, KEY, MINDIGSR, MAXDIGSR, and field OCS. Otherwise, enter N.
	EXTRTEID	refer to subfields	External route ID. This field contains subfields TABID and KEY.
	TABID	OFRT, OFR2, OFR3, OFR4	Table identifier. Enter an office route table name (OFRT, OFR2, OFR3, OFR4).
	KEY	0 to 1023	Index. Enter the office route index (0 to 1023). The translation routes to the index.
	MINDIGSR	1 to 18	Minimum digits received. Enter the minimum number of digits (1 to 18) to collect before the call can route.

Equal Access Operator Services Signaling (continued)

Datafilling subtable STDPRTCT.STDPRT (Sheet 4 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	MAXDIGSR	1 to 24	Maximum digits received. Enter the maximum number of digits (1 to 24) to collect before the call can route.
OCS		Overlap carrier selection	Overlap carrier selection. If this field is Y and the carrier has field OVERLAP in Y in table OCCINFO, the call uses OCS. Otherwise, OCS is not in use.

Datafill example for subtable STDPRTCT.STDPRT

Sample datafill for subtable STDPRTCT.STDPRT appears in the following table.

MAP example for subtable STDPRTCT.STDPRT

```
FROMDIGS          TODIGS
                                                PRETRTE
_____________________________________________________________________
OSS1 (    1) (    0)
                 08                  09
                                   EA OA 1 T NA  OSS N
P621 (    1) (    0)
              10987                10987
             EA DD 5 P  OSS1  OSS Y  OFRT  887  6 20 Y
```

Tools for verifying translations

The output from TRAVER that verifies Equal Access Operator Services Signaling appears in the following example.

In the TRAVER command that appears in this example

- L - indicates the originator is a line
- 6211234 - is the DN that originates the call
- 08881234 - is the DN that receives the call
- B - indicates a requirement for a report on both table entries and results

Equal Access Operator Services Signaling (continued)

TRAVER output example for Equal Access Operator Services Signaling

```
TRAVER L 6211234 08881234 B
TABLE LINEATTR
0 1FR NONE NT FR01 0 613 P621 L613 TSPS N 10 NIL NILSFC LATA1 0
NIL NIL
TABLE STDPRTCT
P621 ( 1) ( 0)
 . SUBTABLE STDPRT
 .  . 08 09 N OA 1 NA
 . SUBTABLE AMAPRT
 . KEY NOT FOUND
 . DEFAULT VALUE IS:   NONE
TABLE HNPACONT
613 127 1 ( 49) ( 1) ( 84)
 . SUBTABLE HNPACODE
 . 888 888 LRTE 13
 . SUBTABLE RTEREF
 .   13 N D TOPOGNY 0 N N
 . EXIT TABLE RTEREF
EXIT TABLE HNPACONT
TABLE LCASCRCN
613 L613 ( 12) MNDT N
 . SUBTABLE LCASCR
 . TUPLE NOT FOUND.  DEFAULT IS NON-LOCAL
TABLE PFXTREAT
MNDT OA N OA UNDT
TABLE CLSVSCRC
613 FR01 OA 2 N NONE ( 1)
 . SUBTABLE CLSVSCR
KEY NOT FOUND
DEFAULT IS TO LEAVE XLA RESULT UNCHANGED
OVERLAP CARRIER SELECTION (OCS) APPLIES
```

(Continued)

Equal Access Operator Services Signaling (end)

TRAVER output example for Equal Access Operator Services Signaling (continued)

```
TABLE OCCINFO
OSS 987 EAP Y N Y Y Y Y Y Y LONG 0 FGRPD N N Y
TABLE EASAC
TUPLE NOT FOUND
TABLE LATAXLA
LATA1 613888 INTER INTER STD
TABLE STDPRTCT
P621 ( 1) ( 0)
 . SUBTABLE STDPRT
 . 10987 10987 EA DD 5 P OSS1 OSS Y OFRT 887 6 20 Y
 .  . TABLE OFRT
 .  .  887 CND EA CAC SK 2
 .  .      N D LNTOPS 15 D019 N
 .  .      CND ALWAYS SK 1
 .  .      S D OGEACAR1
 .  . EXIT TABLE OFRT
 . TABLE STDPRTCT
 . OSS1 ( 1) ( 0)
 .  . SUBTABLE STDPRT
 .  . 08 09 EA OA 1 T NA OSS Y OFRT 887 8 11 Y
 .  .  . TABLE OFRT
 .  .  .  887 CND EA CAC SK 2
 .  .  .  N D LNTOPS 15 D019 N
 .  .  .  CND ALWAYS SK 1
 .  .  .  S D OGEACAR1
 .  . EXIT TABLE OFRT
+++ TRAVER: SUCCESSFUL CALL TRACE +++
DIGIT TRANSLATION ROUTES
1 LNTOPS               D019              STP
TREATMENT ROUTES.  TREATMENT IS: GNCT
1 *OFLO
2 LKOUT
+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

SERVORD

Equal Access Operator Services Signaling does not use SERVORD.

Equal Access Remote Call Forwarding Enhancements

Ordering codes

Functional group ordering code: EQA00001

Functionality ordering code: not applicable

Release applicability

NA010 and up

Prerequisites

This document includes all the data table information for this functionality. Complete use of this functionality can require software or hardware not described in this document.

Description

This feature enables users to assign and use a primary inter-LATA carrier (PIC) and primary intra-LATA carrier (LPIC) on a remote call forwarding (RCF) directory number (DN). It enables subscribers to have a local DN that automatically forwards calls to a station in another calling area. This feature applies only to RCF DNs. It does not apply to equal access RCF (RCFEA) DNs.

Operation

Currently, if a system forwards an RCF DN across LATA boundaries, the carrier access code (CAC) must be in the forwarded DN. With this feature, users can specify a PIC as an option on the RCF DN. Users no longer have to enter the CAC digits in the forwarded DN.

This feature also enables users to assign an intra-LATA carrier or LPIC to the RCF DN when the remote station is within the same LATA as the RCF DN. However, the call must be a toll call with respect to the RCF DN. If a user does not assign an LPIC, the local exchange carrier (LEC) carries these intra-LATA toll calls.

Options PIC and LPIC are separate options and do not depend on each other in any way. An RCF DN can have one or both of the PIC and LPIC options assigned. The following example shows why users must ensure they assign the correct option:

- Assume carrier XYZ supports inter-LATA and intra-LATA traffic.
- Assume an exising inter-LATA RCF has carrier XYZ as its PIC.
- Assume the forward DN is changed so that calls to this RCF result in intra-LATA toll calls.

Equal Access Remote Call Forwarding Enhancements (continued)

If the user wants XYZ to carry the call, it does not because the LEC handles the call. Although XYZ is the PIC for this RCF DN and XYZ carries intra-LATA traffic, the user must specify XYZ as the LPIC for this RCF to route intra-LATA toll calls to XYZ.

Translations table flow

The Equal Access Remote Call Forwarding Enhancements translations feature does not affect translations table flow.

Limitations and restrictions

The following limitations and restrictions apply to Equal Access Remote Call Forwarding Enhancements:

- This feature does not apply to RCFEA. Users must convert RCFEA DNs to RCF to use the PIC or LPIC options. Users must remove the existing RCF/RCFEA DN (with the OUTDN command) and use the NEWDN command to create a new RCF with options PIC or LPIC.
- Since RCF is a virtual DN, the PICLIST, LPICLIST, and CDN commands do support RCFEA PICs and LPICs. The redundancy feature also does not support RCF PICs and LPICs.
- Use SERVORD to enter an RCF DN; do not enter or modify an RCF DN directly using the table editor or DMO. Deleting options such as PIC or LPIC from table DNFEAT can prevent the system from forwarding calls.
- The system validates the forward DN based on translations when SERVORD completes the provisioning.

Interactions

This feature presents inter-LATA/intra-LATA calls with the PIC or LPIC option to the interexchange carrier (IXC) as presubscribed calls.

Activation/deactivation by the end user

Equal Access Remote Call Forwarding Enhancements require no activation or deactivation by the end user.

Billing

Equal Access Remote Call Forwarding Enhancements do not affect billing.

Station Message Detail Recording

Equal Access Remote Call Forwarding Enhancements do not affect Station Message Detail Recording.

Equal Access Remote Call Forwarding Enhancements (continued)

Datafilling office parameters

Equal Access Remote Call Forwarding Enhancements do not affect office parameters.

Datafill sequence

The following table lists the tables that require datafill to implement Equal Access Remote Call Forwarding Enhancements.

ATTENTION

Use SERVORD to complete or alter the tables. Do not use the table editor or DMO to edit the tables directly. Deleting options directly can prevent the system from forwarding calls.

Datafill tables required for Equal Access Remote Call Forwarding Enhancements

Table	Purpose of table
CFW	Call Forwarding contains the forward DN and RCF DN information.
DNFEAT	Directory Number Feature contains options PIC and LPIC for RCF DNs.

Datafilling table CFW

The following table shows the datafill specific to Equal Access Remote Call Forwarding Enhancements for table CFW. Only those fields that apply directly to Equal Access Remote Call Forwarding Enhancements are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table CFW (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
CFZKEY		see subfield	Call forwarding key area. This field consists of subfield CFW_KEY.
	CFW_KEY	0 to 32767	Call forwarding key. Enter a unique index number for each table record. The key cannot be duplicated in regular, remote, or remote equal access call forwarding for the same office.

Equal Access Remote Call Forwarding Enhancements (continued)

Datafilling table CFW (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
CFZINFO		see subfield	Call forwarding information. This field consists of subfield CFZCLASS.
	CFZCLASS	LCL, REM, or HNT	Call forwarding selector type. Enter LCL for the regular Call Forwarding feature and datafill refinements described in the following: Enter REM for RCF and datafill refinements. Enter HNT for remote call forwarding from a hunt group and datafill refinements.

Datafill example for table CFW

The following example shows sample datafill for table CFW.

MAP display example for table CFW

```
CFZKEY                                                          CFZINFO
_____________________________________________________________________

     1
           REM R 613 7424597 5122641257 SCR   5  20  19 N UNDT  0 Y Y
```

Datafilling table DNFEAT

The following table shows the datafill specific to Equal Access Remote Call Forwarding Enhancements for table DNFEAT. Only those fields that apply directly to Equal Access Remote Call Forwarding Enhancements are shown.

Equal Access Remote Call Forwarding Enhancements (continued)

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

Datafilling table DNFEAT (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
AREACODE		0 to 9 (3 digits)	*Area code* Enter the service numbering plan area (SNPA) associated with the DN. The entry in field AREACODE must correspond to an area code already datafilled in tables SNPANAME and TOFCNAME.
OFCCODE		0 to 9 (up to 7 digits)	*Office code* Enter the office code associated with the DN. The entry in field OFCCODE must correspond to an office code already datafilled in table TOFCNAME. If using the North American dial plan, this field is restricted to 3 digits.
STNCODE		0 to 9 (up to 8 digits)	*Station code* Enter the station code associated with the DN. The entry in this field corresponds to the remaining digits in the DN after the area code and office code. If using the North American dial plan, the entry in this field is the last four digits of the DN.
OPTLIST		see subfield	*Options list* This field consists of subfield DNOPT.
	DNOPT	vector of up to 8 characters	*Directory number option* This subfield consists of refinements AINDN, PORT, CLNT900, and LSPAO.
		AINDN	Enter AINDN for the advanced intelligent network DN option and datafill refinement AINGRP.
		PORT	Enter PORT for the local number portablity (LNP) 10-digit unconditional trigger. This causes an LNP query to the SCP database.

Equal Access Remote Call Forwarding Enhancements (continued)

Datafilling table DNFEAT (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
		CLNT900	For 900 fraud prevention (900FP), enter CLNT900 to identify a 900 client where validation is required.
		PIC	Specifies the carrier that carries inter-LATA calls for a virtual DN.
		LPIC	Specifies the carrier that carries intra-LATA calls for a virtual DN.
		LSPAO	For support of RCF for LSP, enter LSPAO to indicate LSP as an option for DISA.
	AINGRP	alphanumeric (up to 16 characters)	*Advanced intelligent network group* This field is the index into a group of triggers datafilled in table TRIGGRP. Enter the AIN group. The entry in this field must correspond to the entry in field TRIGNAME in table TRIGGRP.

Datafill example for table DNFEAT

The following example shows sample datafill for table DNFEAT.

MAP display example for table DNFEAT with options PIC and LPIC

```
AREACODE OFCCODE  STNCODE                        OPTLIST
_____________________________________________________________

  909     584     2516   (PIC C123 N) (LPIC C321 N) $
```

Translation verification tools

Equal Access Remote Call Forwarding Enhancements does not use translation verification tools.

SERVORD

SERVORD stores a PIC and/or LPIC for an RCF DN in table DNFEAT.

Equal Access Remote Call Forwarding Enhancements (continued)

SERVORD limitations and restrictions

The following SERVORD limitations and restrictions apply to Equal Access Remote Call Forwarding Enhancements:

- N is the only valid response for prompts CHOICE or LCHOICE when provisioning options PIC or LPIC on an RCF DN. If a user enters Y for prompts CHOICE or LCHOICE, SERVORD changes the response to N. The system informs the user of the change after it is written to the database.
- When assigning options PIC or LPIC to an RCF DN, do not include the carrier access digits in the FWD_DN field.
- SCR is the only valid entry for field RTEORSCR for RCF.

SERVORD prompts

The following table shows the SERVORD prompts used to assign a new DN using options PIC and LPIC.

SERVORD prompts for Equal Access Remote Call Forwarding Enhancements (Sheet 1 of 3)

Prompt	Valid input	Explanation
BLK_TOLL _COM	Y or N	Appears for the RCF option. Specifies the treatment given to a blocked toll call.
BLOCK_OF _DNS	YES = for a block of DNs NO = for a single DN and RCF	Used for assignment of a block of DNs or a single DN.
CARRIER	IC_INC_CAR RIER_NAME	The carrier is a valid carrier name from table OCCNAME.
CHOICE	BOOL	N is the only valid response for the PIC option on an RCF DN.
CONTEXT	N, U, or R	Specifies whether the line is native to the switch, unbundled, or resold.
DN	Ten digits	Serving numbering plan area code for the station.
FWD_DN	Thirty-two digits	Enter the DN to which calls are forwarded on a fixed call forwarding option.
LCHOICE	BOOL	N is the only valid response for option LPIC on an RCF DN.

Equal Access Remote Call Forwarding Enhancements (continued)

SERVORD prompts for Equal Access Remote Call Forwarding Enhancements (Sheet 2 of 3)

Prompt	Valid input	Explanation
LTG	0-255	Line treatment group member; used to calculate the line attribute index when the DN and LCC are insufficient to find an appropriate index. It is prompted for in conjunction with LCC. If office parms are ON, a prompt appears. If office parms are OFF, a prompt does not appear.
MAXCALLS	0-511	Appears during assignment of remote call forwarding. Specifies the maximum number of simultaneous calls allowed to the DN.
MRSA	MRSA as defined in table MRSANAME .	Message rate service area to be used for billing with RCF.
OM INDEX	0-127	Operations measurements index.
OPTION	Line option	Enter any line option.
PROVIDER	Any valid provider name from table LSPINFO	Assigns a local service provider to the DN.
RTEORSCR	RTE, SCR	Specifies route or screening class for a forwarded call.
SIGDATA	Y or N	Specifies whether or not to use RCF signaling enhancements.

Equal Access Remote Call Forwarding Enhancements (continued)

SERVORD prompts for Equal Access Remote Call Forwarding Enhancements (Sheet 3 of 3)

Prompt	Valid input	Explanation
SNPA	Three digits	Serving numbering plan area code for the station.
VDNTYPE	AIN = Advanced Intelligent Network DISA = Direct Inward System Access RCF = Remote Call Forwarding. A numeric entry of 1 to 30 digits RCFEA = Remote Call Forwarding equal access. A numeric entry of 1 to 30 digits RTE = Route	Used to provision VDNs. When BLOCK_OF_DNS is NO, the following inputs are valid: • AIN • DISA • RCF • RCFEA • RTE When BLOCK_OF_DNS field is YES, the valid input is RTE. The RTE input selects the type of VDN to be provisioned.

SERVORD example for adding RCF to a line for Equal Access Remote Call Forwarding Enhancements

The following SERVORD examples show how Equal Access Remote Call Forwarding Enhancements are added to a line using the NEWDN command.

Equal Access Remote Call Forwarding Enhancements (continued)

Example of the NEWDN command with option PIC

```
>NEWDN
SONUMBER:  NOW  76  1  4  PM
>
SNPA:
>909
BLOCK_OF_DNS:
>NO
DN:
>5501111
VDNTYPE:
>RCF
FWD_DN
>5198881234
MAXCALLS:
>2
LTG:
>0
MRSA:
>NIL
BLK_TOLL_COM:
>Y
BLOCK_TOLL_TREATMENT:
>TDND
OM_INDEX:
>1
RTEORSCR:
>SCR
SIGDATA:
>Y
OPTION:
>PIC
CARRIER:
>C123
CHOICE:
>N
OPTION:
>$
```

Example of the NEWDN command with option PIC in no-prompt mode

```
>NEWDN $ 909 NO 5501111 RCF 5198881234 2 0 NIL Y TDND 1 SCR Y
PIC C123 N $
```

Equal Access Remote Call Forwarding Enhancements (end)

Example of the NEWDN command with option LPIC

```
>NEWDN
SONUMBER:  NOW  76  1  4  PM
>
SNPA:
>909
BLOCK_OF_DNS:
>NO
DN:
>5501111
VDNTYPE:
>RCF
FWD_DN
>5198881234
MAXCALLS:
>2
LTG:
>0
MRSA:
>NIL
BLK_TOLL_COM:
>Y
BLOCK_TOLL_TREATMENT:
>TDND
OM_INDEX:
>1
RTEORSCR:
>SCR
SIGDATA:
>Y
OPTION:
>LPIC
CARRIER:
>C321
LCHOICE:
>N
OPTION:
>$
```

Example of the NEWDN command with option LPIC in no-prompt mode

```
>NEWDN $ 909 NO 5501111 RCF 5198881234 2 0 NIL Y TDND 1 SCR Y
LPIC C321 N $
```

Full Carrier Toll Deny for International Carriers

Ordering codes

Functional group ordering code: EQA00001

Functionality ordering code: EQA00026

Release applicability

Full Carrier Toll Deny for International Carriers (FCTDINT) was introduced in NA011.

Prerequisites

This document contains all the data table information for this functionality. Complete use of this functionality can require software or hardware not described in this document.

Description

The FCTDINT feature allows international carriers to prevent access to subscribers. Access is denied using the new line option FCTDINT.

Operation

Option FCTDINT controls subscriber access for international carriers. Option FCTDINT applies to IBN, RES, KSET, and POTS lines, and PX trunks.

Line option FCTDINT also applies to international call types 011+CC+NN and 10XXX/101XXXX+CC+NN, where

XXX/XXXX=carrier identification codeCC=country code digitsNN=national number digits

When option FCTDINT is present on a line, subscriber access for international calls is one of the following types:

- denied to all international carrier telephone operating company personnel who have not specified a carrier with this option
- allowed to specify international carriers (maximum of 21) if telephone operating company personnel have entered a carrier with this option

Translations table flow

The Full Carrier Toll Deny for International Carriers translations tables are described in the following list:

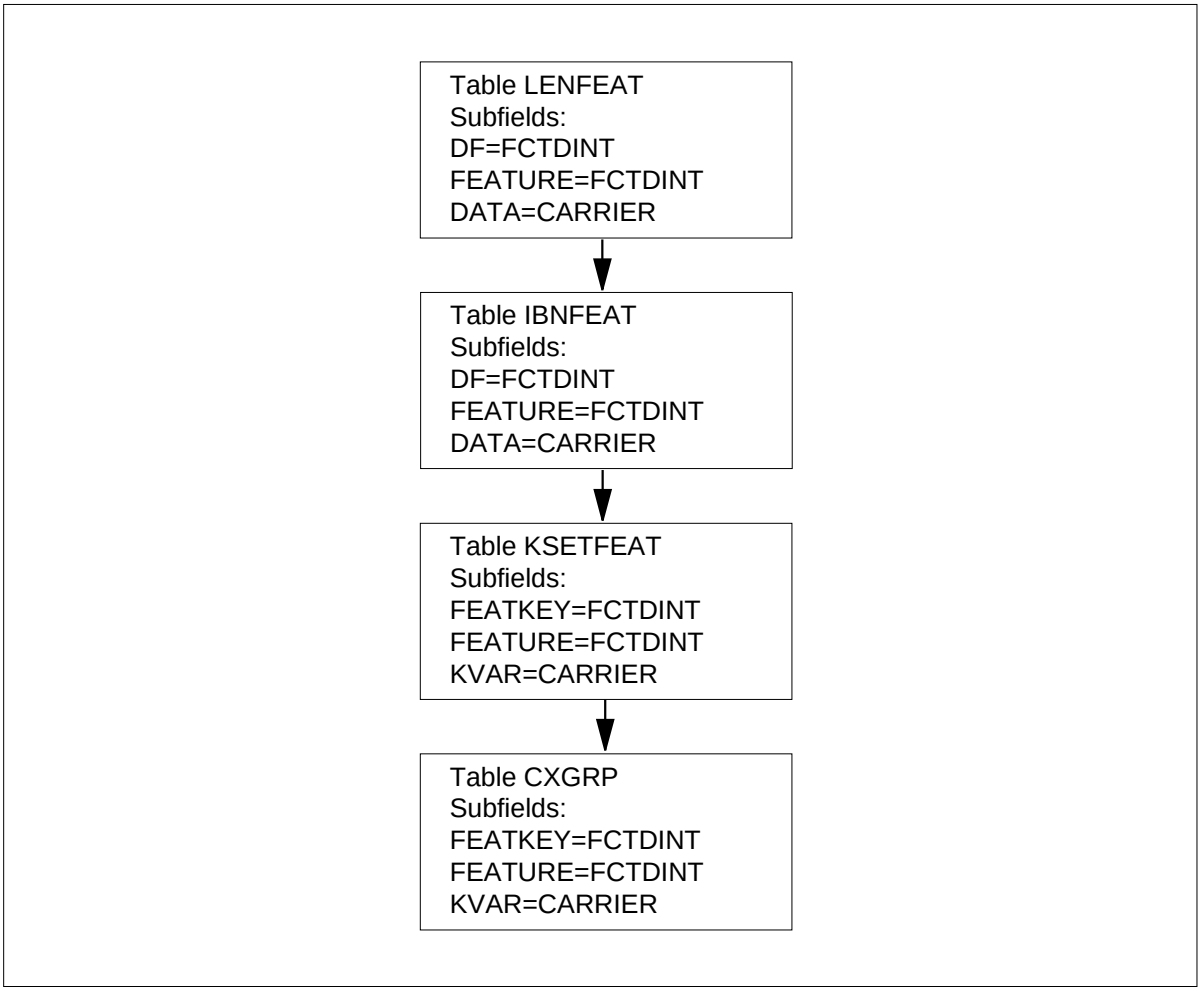
- LENFEAT
- Table IBNFEAT

Full Carrier Toll Deny for International Carriers (continued)

- Table KSETFEAT
- Table CXGRP

The Full Carrier Toll Deny for International Carriers translation process is shown in the flowchart that follows.

Table flow for Full Carrier Toll Deny for International Carriers



Full Carrier Toll Deny for International Carriers (continued)

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

Datafill example for Full Carrier Toll Deny for International Carriers

Datafill table	Example data
IBNFEAT	HOST 05 0 00 10 0 FCTDINT FCTDINT (CARRIER1)$
KSETFEAT	RCU0 00 0 00 06 1 FCTDINT FCTDINT (CARRIER1)$
LENFEAT	HOST 02 1 06 21 S FCTDINT FCTDINT (CARRIER1)$
CXGRP	34 N N N N Y (CARRIER1)$ N N (RMT)$
Note: Tables IBNFEAT, KSETFEAT, and LENFEAT are datafilled using SERVORD.	

Limitations and restrictions

Full Carrier Toll Deny for International Carriers is incompatible with the following:

- Current Carrier Toll Deny (CTD) option
- Automatic Line (AUL)
- Circuit Switched Digital Data Service (CSDO)
- Enhanced WATS Access Line (EWAL) and EWALI
- Line Appearance Digital Trunk Public Safety Answering Point (LDTPSAP)
- Toll Denied (TDN)
- Toll Diversion (TDV)

Interactions

Option FCTDINT interacts with option FCTDNTER. Option FCTDNTER is not referenced for international calls of type 011+CC+NN and 10XXX/101XXXX+CC+NN when FCTDINT is present.

Activation/deactivation by the end user

Full Carrier Toll Deny for International Carriers requires no activation or deactivation by the end user.

Billing

Full Carrier Toll Deny for International Carriers does not affect billing.

Station Message Detail Recording

Full Carrier Toll Deny for International Carriers does not affect Station Message Detail Recording.

Datafilling office parameters

Full Carrier Toll Deny for International Carriers does not affect office parameters.

Datafill sequence

The following table lists the tables that require datafill to implement Full Carrier Toll Deny for International Carriers. The tables are listed in the order in which they are to be datafilled.

Datafill tables required for Full Carrier Toll Deny for International Carriers

Table	Purpose of table
IBNFEAT	IBN Line Feature. This table lists the line features that are assigned to the IBN lines listed in table IBNLINES (IBN Line Assignment). ***Note:*** This table is datafilled through SERVORD; therefore, no datafill procedure or example is provided. Refer to “SERVORD" for an example of using SERVORD to datafill this table.
KSETFEAT	Business Set and Data Unit Feature. This table lists the line features that are assigned to the business sets and data units (DU) listed in table KSETLINE (Business Set and Data Unit Line Assignment). It also lists the Meridian digital telephone sets and DUs listed in table IVDINV. ***Note:*** This table is datafilled through SERVORD; therefore, no datafill procedure or example is provided. Refer to “SERVORD" for an example of using SERVORD to datafill this table.
LENFEAT	Line Feature. This table lists the features that are assigned to a specific line in table LENLINES (Line Assignment). ***Note:*** This table is datafilled through SERVORD; therefore, no datafill procedure or example is provided. Refer to “SERVORD" for an example of using SERVORD to datafill this table.
CXGRP	Customer Group Options. Local (or combined local and toll) switching units use this table to define the options associated with a digital trunk group type PX (private exchange).

Full Carrier Toll Deny for International Carriers (continued)

Datafilling table CXGRP

The following table shows the datafill specific to Full Carrier Toll Deny for International Carriers for table CXGRP. Only those fields that apply directly to Full Carrier Toll Deny for International Carriers are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table CXGRP

Field	Subfield or refinement	Entry	Explanation and action
FCTDINT		Y or N	Full Carrier Toll Deny for International Carriers. To enter datafill for this field, enter Y and enter datafill in subfield CARRIERS.
	CARRIERS	vector of up to 21 carrier names	Toll denial carriers. Enter up to 21 international carriers.

Datafill example for table CXGRP

The following example shows sample datafill for table CXGRP.

MAP display example for table Full Carrier Toll Deny for International Carriers

```
CUSTKEY
          SPB
                                                CTD
                                             FCTNTER
                                            FCTDNTRA
                                             FCTDINT
-------------------------------------------------------
     34
            N
                                                   N
                                                   N
                                                   N
                                        Y(CARRIER1)$
```

Translation verification tools

Full Carrier Toll Deny for International Carriers does not use translation verification tools.

Full Carrier Toll Deny for International Carriers (continued)

SERVORD

Full Carrier Toll Deny for International Carriers adds option FCTDINT to the following and their associated tables:

- IBN or RES lines (table IBNFEAT)
- KSET lines (table KSETFEAT)
- POTS lines (table LENFEAT)
- PX trunks

SERVORD limitations and restrictions

Line option FCTDINT is not compatible with the following line options:

- AUL
- CTD
- CSDO
- EWAL
- EWALI
- LDTPSAP
- LNPTST
- TDN
- TDV

SERVORD prompts

The following table shows the SERVORD prompts used to add option FCTDINT to a line.

SERVORD prompts for Full Carrier Toll Deny for International Carriers (Sheet 1 of 2)

Prompt	Valid input	Explanation
DN_OR_ LEN	7- or 10-digit value (no spaces or hyphens)	Specifies the directory number (DN).

Full Carrier Toll Deny for International Carriers (end)

SERVORD prompts for Full Carrier Toll Deny for International Carriers (Sheet 2 of 2)

Prompt	Valid input	Explanation
OPTION	FCTDINT	Specifies the option(s) associated with a service to be established, modified, or deleted.
CARRIERS	Carrier name from 1 to 21	Specifies the name of the carrier (maximum 21). If you select a carrier, the carriers listed for international calls limit subscriber access. If you do not select a carrier, subscriber access is denied to all carriers for international calls.

SERVORD example for adding option FCTDINT

The following SERVORD example shows how option FCTDINT added to a line using the ADO command.

SERVORD example for Full Carrier Toll Deny for International Carriers in prompt mode

```
>ADO
SONUMBER:  NOW 98 8 10 PM
>
DN_OR_LEN:
> 6215955
OPTION:
> FCTDINT
CARRIERS:
> CARRIER1
CARRIERS:
> CARRIER2
CARRIERS:
> $
OPTION:
> $
```

SERVORD example for Full Carrier Toll Deny for International Carriers in no-prompt mode

```
ADO $6215955 FCTDINT CARRIER1 CARRIER2 $
```

IBN Equal Access and Automatic Route Selector

Ordering codes

Functional group ordering code: EQA00001

Functionality ordering code: does not apply

Release applicability

The IBN Equal Access and Automatic Route Selector does not provide release applicability.

Requirements

The IBN Equal Access and Automatic Route Selector requires BAS Generic, BAS00003.

Description

The IBN Equal Access and Automatic Route Selector feature contains the following features:

- BC1368
- Equal Access on Integrated Business Network (IBN)/Datapath
- BV0782, Electronic Switched Network (ESN) - Network Automatic Route Selection, TEHO and HEHO.

The Equal Access on IBN/Datapath feature provides end users equal access capabilities to IBN stations or incoming trunks. The ESN - Network Automatic Route Selection, TEHO and HEHO, feature enables the system to search trunk route lists for an idle outgoing trunk.

Operation

The operation of the IBN Equal Access and Automatic Route Selector feature is like that of the Equal Access on IBN/Datapath feature. The exception is, this feature searches for idle outgoing trunks to route calls out of the digital multiplex system (DMS)-100 office. Refer to:

- *Equal Access on IBN/Datapath*
- *ESN - Network Automatic Route Selection (TEHO and HEHO)*

Translations table flow

The IBN Equal Access and Automatic Route Selector does not provide a translations table flow.

Limits

The IBN Equal Access and Automatic Route Selector does not have limits.

IBN Equal Access and Automatic Route Selector (continued)

Interactions

The IBN Equal Access and Automatic Route Selector does not have functionality interactions.

Activation/deactivation by the end user

The IBN Equal Access and Automatic Route Selector does not require activation or deactivation by the end user.

Billing

The IBN Equal Access and Automatic Route Selector does not affect billing.

Station Message Detail Recording

The IBN Equal Access and Automatic Route Selector does not affect Station Message Detail Recording (SMDR).

Datafilling office parameters

Office parameters that the IBN Equal Access and Automatic Route Selector use, appear in the following table. Refer to *Office Parameters Reference Manual* for more information about office parameters.

Office parameters for IBN Equal Access and Automatic Route Selector (Sheet 1 of 2)

Table name	Parameter name	Explanation and action
OFCENG	EA_OCS_DIGCOL_METHOD	Indicates the method of digit collection for the overlap carrier selection (OCS) feature. Enter NOAMBI, PFXALL, PFXAMB or TIMING. The default is NOAMBI.
OFCENG	EA_OVERLAP_CARRIER_ SELECTION	Indicates the type of digit collection that the line module performs. If you set this parameter to Y (yes), the line module performs digit collection for equal access OCS. The default is N (no).
OFCENG	NO_OCCTS_OM_REGISTERS	Indicates the maximum number of operational measurement (OM) registers that the system assigns in Table Equal Access OCCTSINT (Other Common Carrier Traffic Separation Intersection). Enter a value from 0 to 2047. The default is 255.

IBN Equal Access and Automatic Route Selector (continued)

Office parameters for IBN Equal Access and Automatic Route Selector (Sheet 2 of 2)

Table name	Parameter name	Explanation and action
OFCENG	OCCTS_ENHANCED_FEATURE	Indicates if the system requires additional registers and source and destination numbers for the equal access traffic measurement system. Enter Y or N. The default is N.
OFCENG	OCCTS_IN_MAX_NUMBER	Indicates the maximum number of source traffic separation numbers (NSTS) that the system assigns to other common carriers in Table Equal Access OCCINFO (Other Common Carrier Information). This procedure separates equal access traffic. Enter SIZE_15, SIZE_31, SIZE_63, or SIZE_127. The default is SIZE_15.
OFCENG	OCCTS_OUT_MAX_NUMBER	Indicates the maximum number of destination traffic separation numbers (NDTS) that the system assigns to: • outgoing and two-way trunk groups in Table TRKGRP (Trunk Group) • announcements in Table ANNS (Announcements) • tones in Table TONES (tones) • to special tones in Table STN (Special Tone).
OFCENG	TWO_WAY_FOR_OC	Indicates if the arrangement of OC trunk groups is for two-way operation. Enter Y or N. The default is N.

IBN Equal Access and Automatic Route Selector (continued)

Datafill sequence

The Tables that require datafill to install IBN Equal Access and Automatic Route Selector appears in the following table. The Tables appear in the correct entry order.

Note: Refer to *Defining MDC customer information* if the feature does not operate after the data entry is complete. The MDC information checks that the required IBN Tables for the customer group are entered.

Datafill requirements for IBN Equal Access and Automatic Route Selector (Sheet 1 of 2)

Table	Purpose of table
OFCENG	Office Engineering. This table contains data on engineering parameters for the office. See *Datafilling office parameters* for how IBN Equal Access and Automatic Route Selector affects office parameters.
IBNXLA	The IBN Translation table. Table IBN Translation (IBNXLA) stores data for the digit translation of calls from: • an IBN station • attendant console • incoming IBN trunk group • incoming side of a two-way IBN trunk group.
LINEATTR	Line Attribute table. This table assigns line attributes to MDC stations and attendant consoles.
STDPRTCT. STDPRT	List of Standard Pretranslation Tables table record - Standard Prestranslator subtable. Table STDPRTCT.STDPRT for Standard Pretranslator, is the first table to be indexed by the received leading digits. This condition occurs if the originating line attribute or trunk indicates a pretranslator name other than no pretranslator name (NPRT).
HNPACONT. HNPACODE	List of HNPA Code Subtables table record- HNPA Code subtable. This subtable indicates the translation for each of the 000-999 codes. ***Note:*** This table must contain datafill for IBN Equal Access and Automatic Route Selector. Special datafill is not required. A datafill procedure is not provided.
HNPACONT. RTEREF	List of HNPA Code Subtables table record- Home NPA Route Reference subtable. This subtable indicates the translations that associate with each of the route reference indexes specified in the Home NPA Code table.
IBNRTE	IBN Route table. Table IBN Route (IBNRTE) contains route lists that a route reference index number identifies.

Datafill requirements for IBN Equal Access and Automatic Route Selector (Sheet 2 of 2)

Table	Purpose of table
DIGMAN	Digit Manipulation table. Table DIGMAN (Digit Manipulation) defines the digit control data for a customer group.
VIRTGRPS	Virtual Facility Group table. Table VIRTGRPS (Virtual Facility Groups) provides a mechanism for the removal of loop-around trunks.
STDPRTCT. STDPRT	List of Standard Pretranslation Tables table record - Standard Prestranslator subtable. This subtable indicates the routing option: • to proceed to specified national or international tables • to proceed to a test line or office route table.
OFRT	Office Route table. This table is for routing all DMS except DMS-300.

Datafilling table IBNXLA

Datafill for IBN Equal Access and Automatic Route Selector for table IBNXLA appears in the following table. The fields that apply to IBN Equal Access and Automatic Route Selector appear in this table. See the data schema section of this document for a description of the other fields.

Table IBNXLA stores data for the digit translation of calls from an:

- IBN station
- attendant console
- incoming IBN trunk group
- incoming side of a two-way IBN trunk group.

For IBN Equal Access and Automatic Route Selector, you must enter data in table IBNXLA using DOD as the network type.

Datafilling table IBNXLA (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
RESULT		see subfields	Indicates result. This field contains subfield TRSEL.
	TRSEL	NET	Indicates Translations Selector. This subfield indicates the translations selector. Enter NET.
If you set TRSEL to NET, several subfields require datafill. Only subfields DGCOLNM and NETTYPE are for this feature.			

IBN Equal Access and Automatic Route Selector (continued)

Datafilling table IBNXLA (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	DGCOLNM	POTS	Indicates Digit Collection Name. This subfield indicates the name assigned to the block of data in Table IBN Digit Collection (DIGCOL) for IBN digit collection. Enter POTS.
	NETTYPE	DOD	Indicates Network Type. This subfield indicates the network type. Enter direct outward dial (DOD).

Datafill example for table IBNXLA

Sample datafill for table IBNXLA appears in the following example:

Datafill for table IBNXLA.

```
TABLE: IBNXLA                                          RESULT
-------------------------------------------------------------
BNCT 9NET  N  N  1  Y  POTS  N  N  DOD  Y  12  NONE
```

Datafilling table LINEATTR

Datafill for IBN Equal Access and Automatic Route Selector for table LINEATTR appears in the following table. The fields that apply to IBN Equal Access and Automatic Route Selector appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table LINEATTR

Field	Subfield or refinement	Entry	Explanation and action
LATANM		NILLATA	Indicates Local Access and Transport Area Name. This field indicates the LATA name. Enter NILLATA.

Datafill example for table LINEATTR

Sample datafill for table LINEATTR appears in the following example:

MAP example for table LINEATTR

```
LNATTIDX  LCC  CHGCLSS  COST  SCRNCL  LTG  STS  PRTNM LCANAME
ZEROMPOS    TRAFSNO  MRSA    SFC   LATANM  MDI  IXNAME

                       DGCLNAME
FANIDIGS
                                              RESINF

                       OPTIONS
_____________________________________________________________________
0         1FR   CAM0     NT   NSCR     0   613   HULL   OTWA
TOPS          0       NIL      NILSFC  NILLATA  0   NIL

                            NIL
00
                                              N
                       $
```

Datafilling table STDPRTCT.STDPRT

Datafill for IBN Equal Access and Automatic Route Selector for table STDPRTCT.STDPRT appears in the following table. The fields that apply to IBN Equal Access and Automatic Route Selector appear in this table. See the data schema section of this document for a description of the other fields.

The received leading digits first indexes table STDPRTCT.STDPRT. This procedure occurs when the originating line attribute or trunk indicates a pretranslator name other than NPRT. Table Line Attribute (LINEATTR), field PRTNM, indicates the pretranslator for an originating line. Table TRKGRP, field PRTNM indicates the pretranslator name for a trunk.

Datafilling table STDPRTCT.STDPRT

Field	Subfield or refinement	Entry	Explanation and action
PRETRTE		see subfield	Indicates Pretranslation Route. This field contains subfield PRERTSEL.
	PRERTSEL	N	Indicates Pretranslator Route Selector. This subfield indicates the routing option. Enter N to indicate that calls are to proceed to national or international translations.

IBN Equal Access and Automatic Route Selector (continued)

Datafill example for table STDPRTCT.STDPRT

Sample datafill for table STDPRTCT.STDPRT appears in the following example:

MAP example for table STDPRTCT.STDPRT

```
TABLE: STDPRTCT.STDPRT

FROMDIGS  TODIGS                                  PRETRTE
_____________________________________________________________
5          5                                  N  NP  0  NA
```

Datafilling table HNPACONT.RTEREF

Datafill for IBN Equal Access and Automatic Route Selector for table HNPACONT.RTEREF appears in the following table. The fields that apply to IBN Equal Access and Automatic Route Selector appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table HNPACONT.RTEREF

Field	Subfield or refinement	Entry	Explanation and action
RTESEL		T	Indicates Route Selector. This field indicates the route selector. Enter T.

Datafill example for table HNPACONT.RTEREF

Sample datafill for table HNPACONT.RTEREF appears in the following example:

MAP example for table HNPACONT.RTEREF

```
RTE                                                RTESEL
_____________________________________________________________
9                                              ( T  OFRT  1 ) $
```

Datafilling table IBNRTE

Datafill for IBN Equal Access and Automatic Route Selector for table IBNRTE appears in the following table. The fields that apply to IBN Equal

Access and Automatic Route Selector appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table IBNRTE

Field	Subfield or refinement	Entry	Explanation and action
RTELIST		see subfield	Indicates this field contains a number of subfields. Only subfield IBNRTESEL relates to this feature.
	IBNRTESEL	VFG	Indicates this subfield indicates the IBN route selector. Enter VFG.

Datafill example for table IBNRTE

Sample datafill for table IBNRTE appears in the following example:

MAP example for table IBNRTE

```
RTE                                                RTELIST
_____________________________________________________________
10                          ( VFG  Y  Y  Y  TIETRK  0 ) $
```

Datafilling table DIGMAN

Datafill for IBN Equal Access and Automatic Route Selector for table DIGMAN appears in the following table. The fields that apply to IBN Equal Access and Automatic Route Selector appear in this table. See the data schema section of this document for a description of the other fields.

IBN Equal Access and Automatic Route Selector (continued)

Table DIGMAN defines the digit control data for a customer group.

Note: There are additional differences for this feature. Refer to the data schema section of the *Translations Guide* for additional information.

Datafilling table DIGMAN

Field	Subfield or refinement	Entry	Explanation and action
DMIDATA		see subfield	Indicates Digit Manipulation Data. This field contains subfield DIGCOM.
	DIGCOM	INC	Indicates Digit Manipulation Command. This subfield indicates the digit command. Enter INC to indicate the include digits command.
If you set DIGCOM to INC, subfield INCDIGS requires datafill.			
	INCDIGS	specify digits included	Indicates Included Digits. This subfield indicates the digits to include in the digit string. Enter the digits to include.

Datafill example for table DIGMAN

Sample datafill for table DIGMAN appears in the following example:

MAP example for table DIGMAN

```
DMIKEY        DMIDATA
_____________________________________________________________________
1             ( INC 133 ) $
```

Datafilling table VIRTGRPS

Datafill for IBN Equal Access and Automatic Route Selector for table VIRTGRPS appears in the following table. The fields that apply to IBN Equal Access and Automatic Route Selector appear in this table. See the data schema section of this document for a description of the other fields.

Table VIRTGRPS provides a mechanism to eliminate loop-around trunks. Loop-around trunks implement IBN Inward Wide Area Telephone Service (INWATS) and Outward Wide Area Telephone Service (OUTWATS).

Datafilling table VIRTGRPS

Field	Subfield or refinement	Entry	Explanation and action
DATA		see subfield	Indicates data. This field contains a number of subfields. Only subfield INCTYPE relates to this feature.
	INCTYPE	POTS	Incoming Type. This subfield indicates the incoming trunk type for the VFG. Enter POTS.
OPTIONS		EA	Options. This field indicates options that the table assigns to the VFG. Enter EA.

Datafill example for table VIRTGRPS

Sample datafill for table VIRTGRPS appears in the following table:

MAP example for table VIRTGRPS

```
KEY                                                    DATA
                                                       OPTIONS
_____________________________________________________________

INWAT1    USES  OWAT1  POTS  9130131112 KDK1  0  3  17
          N  Y  Y
                                ( VFGAMA  TDMTT ) ( EA ) $
```

Datafilling table STDPRTCT.STDPRT

The received leading digits first indexes table STDPRTCT.STDPRT. This procedure occurs when the originating line attribute or trunk indicates a pretranslator name other than NPRT. Table LINEATTR, field PRTNM indicates the pretranslator for an originating line. Table TRKGRP, field PRTNM indicates the pretranslator name for a trunk. You must enter data in table STDPRTCT.STDPRT to define the route selector that the system uses with LOCAL/TOLL only.

Datafill for IBN Equal Access and Automatic Route Selector for table STDPRTCT.STDPRT appears in the following table. The fields that apply to

IBN Equal Access and Automatic Route Selector (continued)

IBN Equal Access and Automatic Route Selector appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table STDPRTCT.STDPRT

Field	Subfield or refinement	Entry	Explanation and action
PRETRTE		see subfield	Indicates Pretranslation Route. This field contains subfield PRERTSEL.
	PRERTSEL	P, T	Pretranslator Route Selector. This subfield indicates the routing option. Enter P to indicate that the system requires operator interruption. The system requires interruption on calls that are to proceed to specified national or international table. Enter T to indicate that calls are to proceed to a test line or office route table.

Datafill example for table STDPRTCT.STDPRT

Sample datafill for table STDPRTCT.STDPRT appears in the following example:

MAP example for table STDPRTCT.STDPRT

```
FROMDIGS  TODIGS                          PRETRTE
_____________________________________________________
5         5         T   x  IBNTRE  xx  4 4
```

Datafilling table OFRT

Datafill for IBN Equal Access and Automatic Route Selector for table OFRT appears in the following table. The fields that apply to IBN Equal Access and Automatic Route Selector appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table OFRT (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
RTELIST		see subfield	Indicates Route List. This field contains subfield RTESEL.
	RTESEL	N, N2, S, SX	Indicates Route Selector. This subfield indicates the route selector. Enter N, N2, S or SX.

IBN Equal Access and Automatic Route Selector (end)

Datafilling table OFRT (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
If RTESEL is set to N or S, several subfields require datafill. Only subfield CONNTYPE relates to this feature.			
	CONNTYPE	D	Indicates Connection Type. This subfield is not used for translations. Enter D.

Datafill example for table OFRT

Sample datafill for table OFRT appears in the following example:

MAP example for table OFRT

```
RTE                                        RTELIST
_____________________________________________________
9                              ( N  D  CLLI1  2  N  Y ) $
```

Tools for verifying translations

The IBN Equal Access and Automatic Route Selector does not use tools for verifying translations.

SERVORD

The IBN Equal Access and Automatic Route Selector does not use SERVORD.

International Primary Carrier

Ordering codes

Functional group ordering code: EQA00001

Functionality ordering code: EQA00026

Release applicability

NA007 and later versions

International Primary Carrier was introduced in NA07.

Requirements

This document contains all the datafill information for this functionality. Required software or hardware can be a requirement for complete installation.

Description

The International Primary Carrier feature allows the subscribers of Equal Access End Offices (EAEO) to designate a carrier for international calls. Subscribers can select a different carrier with this feature from the carriers selected with the Primary InterLATA Carrier (PIC). Subscribers can select a different carrier with this feature from the carriers selected for the Primary IntraLATA Carrier (LPIC) line options.

The International Primary Carrier feature provides this function through the International Primary Carrier (INTPIC) line option. Line option INTPIC permits subscribers to allow or disallow Carrier Access Code (CAC) dialing. This feature is available to the following:

- POTS, COIN, IBN and RES lines
- IBN and PX trunks
- Virtual Facility Groups (VFG)

Operation

To provide this feature, specify line option INTPIC. Subscribers that specify an international carrier with line option INTPIC receive the field CHOICE to allow or disallow CAC dialing.

Line option INTPIC supports Carrier Toll Denied (CTD) and Full Carrier Toll Denied InterLATA (FCTDNTER).

Translations table flow

A description of the International Primary Carrier translations tables appears in the following sections:

Table LENFEAT

Entry of data in table LENFEAT occurs through the Service Order System (SERVORD) for individual POTS and COIN lines. Operating company personnel can use SERVORD to add line option INTPIC to a POTS or COIN line. In this event, the system updates table LENFEAT to record the line option.

The subscriber can make an international call and the system does not apply option INTPIC to the line. When this event occurs, the call defaults to the interLATA carrier specified with line option PIC.

Table IBNFEAT

The entry of data in table IBNFEAT occurs through SERVORD for individual IBN and RES lines. Operating company personnel can use SERVORD to add line option INTPIC to an IBN or RES line. When this event occurs, the system updates table IBNFEAT or table KSETFEAT to record the line option. Specification of option EA (Equal Access) must occur in table IBNXLA or table XLANAME. Option INTPIC in table IBNFEAT does not function if this specification does not occur.

The subscriber can make an international call and table IBNFEAT does not specify a carrier. When this event occurs, the call defaults to the INTPIC specified for the Network Class of Service (NCOS) in table IBNXLA.

Table KSETFEAT

The entry of data in table KSETFEAT occurs through SERVORD for individual IBN and RES lines. Operating company personnel can use SERVORD to add line option INTPIC to an IBN or RES line. When this event occurs, the system updates table IBNFEAT or table KSETFEAT to record the line option.

The subscriber can make an international call and table KSETFEAT does not specify a carrier. In this event, the call defaults to the INTPIC specified for the NCOS in table IBNXLA.

Table IBNXLA and table XLANAME

Operating company personnel can enter data in table IBNXLA and table XLANAME directly for IBN and RES lines or IBN trunks. This data is based on the NCOS and Customer Group. Operating company personnel can add line option INTPIC directly to table IBNXLA and table XLANAME. If option INTPIC is in table IBNXLA, option EA must be in table IBNXLA.

Two levels of IBN translators are in table IBNXLA and table XLANAME. These two levels are preliminary group and customer group. A subscriber can

International Primary Carrier (continued)

make an international call and the system does not locate the digits in the preliminary translator. In this event, the system searches the customer group translator. Each of the translators in table IBNXLA and table XLANAME can specify an INTPIC.

Three levels of IBN prescribed carriers are present. These levels include the two levels of IBN translators and the individual prescribed carrier. These three levels are the following:

- Individual carriers assigned with SERVORD
- NCOS carriers assigned to the NCOS preliminary translator
- Customer Group carriers assigned to the Customer Group translator

The default carrier for IBN and RES lines appear in the order of priority in the following list. For example, a subscriber can make an international call from an IBN or RES line. This subscriber does not have an individual carrier specified in table IBNFEAT. In this event, the call defaults to the carrier specified for the NCOS preliminary translator in table IBNXLA.

- International carrier assigned to the individual line in table IBNFEAT or table KSETFEAT
- International carrier assigned to the NCOS preliminary translator in table IBNXLA
- International carrier for RES lines assigned to the NCOS preliminary translator in table XLANAME
- International carrier assigned to the Customer Group translator in table IBNXLA
- International carrier for RES lines assigned to the Customer Group translator in table XLANAME
- The PIC assigned to the individual line in table IBNFEAT or table KSETFEAT

Table CXGRP

Operating company personnel can enter data in table CXGRP directly for PX trunks. A subscriber can make an international call and line option INTPIC is not specified in CXGRP. In this event, the call defaults to the carrier specified in the option EA in table TRKGRP.

Table VIRTGRPS

The user enters data in table VIRTGRPS directly for VFGs. A VFG simulates a loop-around trunk.

International Primary Carrier (continued)

Calls that use VFGs have two legs. One leg is from the subscriber to the incoming trunk side of the VFG. The other leg is from the VFG to the end office. When option INTPIC specifies a carrier in table VIRTGRPS, an international VFG call uses this carrier to route the call. This call uses the second leg of translation to perform this operation. If the operating company has option IBNPIC assigned, the call uses the carrier from the first leg of translation.

The subscriber can make an international call and the line option INTPIC is not assigned in table VIRTGRPS. In this event, the call defaults to the carrier specified in option EA specified in table VIRTGRPS. Specification of option EA must occur in table VIRTGRPS to allow the INTPIC option in table VIRTGRPS to function.

Table VFGDATA

When changes to table VIRTGRPS occur, the system automatically updates table VFGDATA.

The International Primary Carrier translation process appears in the following chart.

International Primary Carrier (continued)

International Primary Carrier translation process

Line type		Configuration														
RES line	IBN line	INTPIC assigned to line	INTPIC assigned to NCOS entry in IBNXLA	INTPIC not assigned to NCOS entry in IBNXLA	INTPIC assigned to NCOS entry in XLANAME	INTPIC not assigned to NCOS entry in XLANAME	INTPIC assigned to group entry in IBNXLA	INTPIC not assigned to group entry in IBNXLA	INTPIC assigned to group entry in XLANAME	INTPIC not assigned to group entry in XLANAME	PIC assigned to line	EA assigned to NCOS entry in IBNXLA	EA assigned to NCOS entry in XLNAME	EA assigned to group entry in IBNXLA	EA assigned to group entry in XLANAME
X	X	X													
X	X		X												
X	X			X							X				
X					X										
X						X					X				
X	X						X								
X	X							X			X				
X									X						
X										X	X				
X	X										X				
X	X											X			
X													X		
X	X													X	
X															X

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

Datafill example for International Primary Carrier

Datafill table	Example data
LENFEAT	HOST 06 0 05 31
IBNFEAT	HOST 06 0 05 0 INTPIC INTPIC CARR1 Y
KSETFEAT	HOST 06 1 10 22 1 INTPIC INTPIC CXYZ Y
IBNXLA	CTX 10 NET Y Y N 0 Y POTS N N GEN (LATTR 42) (EA CARR1 Y 0) (INTPIC CARRY2 Y) $ $
XLANAME	CXT6 NET N Y N 1 Y NDGT N Y GEN (LATTR 1) (EA CARR1 Y 0) (INTPIC CARR2 Y) $ $
CXGRP	50 N N N N N (INTPIC CARRY2 Y) $
VIRTGRPS	VGRP1 SIZE 1 POTS N 0 Y (EA CARR1 Y) (INTPIC CARR2 Y) $
VFGDATA	TOLLV POTSVI1 POTSVI N 0 Y (VFGEA CARR1 Y) (VINTPIC CARR2 N)

Limits

The following limits apply to International Primary Carrier:

- This feature only applies to the following:
  - — POTS and COIN lines
  - — IBN, RES, and KSET lines
  - — VFGs
  - — IBN and PX trunks
- The line option INTPIC and the PIC line option support Carrier Toll Denied (CTD) in the same way. The line option INTPIC supports Full Carrier Toll Denied InterLATA (FCTDNTER) functionality in the same way as the PIC line option. The line option INTPIC does not apply to Full Carrier Toll Denied IntraLATA (FCTDNTRA). The use of FCTDNTRA occurs for the LPIC line option.
- The line option INTPIC does not apply to World Zone I calls. The World Zone I calls are not considered international.

International Primary Carrier (continued)

- Specification of option EA must occur in table IBNXLA. This specification allows the option INTPIC in table IBNXLA and table IBNFEAT to function.
- Specification of option EA must occur in table VIRTGRPS for the option INTPIC in table VIRTGRPS to function.

Interactions

The subscriber can make an international call and the system does not specify a carrier with line option INTPIC. This type of call is an example of a non-CAC call. In this event, the call defaults to the interLATA carrier specified with option PIC or EA.

The default carrier depends on the specified agent:

- The POTS or COIN lines default to the carrier specified with line option PIC.
- The IBN or RES lines default to option INTPIC assigned to the NCOS preliminary translator. If the system does not locate the dialed digits in the preliminary translator, the system searches the Customer Group translator.
- Virtual Facility Group calls default to the carrier specified in option EA in table VIRTGRPS if application of option IBNPIC does not occur.
- The PX trunk calls default to the carrier specified in option EA in table TRKGRP.

Note: For additional information about agent interactions, see the "Translations table flow" section in this feature description.

Activation/deactivation by the end user

International Primary Carrier does not require activation or deactivation by the end user.

Billing

International Primary Carrier does not affect billing.

Station Message Detail Recording

International Primary Carrier does not affect Station Message Detail Recording.

Datafilling office parameters

International Primary Carrier does not affect office parameters.

Datafill sequence

The tables that require datafill to implement International Primary Carrier appear in the following table. The tables appear in the correct entry order.

Datafill requirements for International Primary Carrier (Sheet 1 of 2)

Table	Purpose of table
LENFEAT	LEN Features. This table contains option INTPIC. The operating company can assign this option to POTS or COIN lines in table LENLINES. At the MAP display, option INTPIC appears in a range on field DF in this table. This range lists the available features on the switch. This list includes features in tables IBNFEAT, KSETFEAT, and LENFEAT. See note.
IBNFEAT	IBN Feature. This table contains option INTPIC. The operating company can assign option INTPIC to the IBN lines in table IBNLINES. See note.
KSETFEAT	Business Set and Data Unit Feature. This table contains the option INTPIC. The operating company can assign the option INTPIC to IBN and data unit sets in table KSETLINE. See note.
IBNXLA	IBN Translations. This table contains the data for the digit translation of calls from IBN sets. Entry of this option INTPIC in the table provides the ability to select a presubscribed carrier for international calls. Assignment of the international carrier occurs during the translation of the call.
XLANAME	List of Translator Names. This table contains the default data. This default data includes the acceptable digilator range for each translator. The system does not always find an access code in table IBNXLA for a specified translator. In this event, the use of default data from XLANAME occurs. This table controls the addition and deletion of translators in table IBNXLA. When the use of an EA translator occurs, the operating company can add option INTPIC.
VFGDATA	Virtual Facility Group Data. This table contains the data for one end of the VFG in each tuple. Each end of VFG can be an IBN or POTS VFG. The end of the VFG can be incoming or outgoing. The system automatically enters data in option INTPIC in this table. Option INTPIC provides the ability to choose a presubscribed carrier for international calls for a specified VFG. ***Note:*** When the entry of data in table VIRTGRPS occurs, the system automatically enters data in this read-only table. This document does not provide a datafill procedure or example because of this condition.
Note: Tables LENFEAT, IBNFEAT, and KSETFEAT are read-only tables. When the addition of option INTPIC occurs through SERVORD, the system automatically enter data in these tables. This document does not provide a datafill procedure or example because of this condition.	

International Primary Carrier (continued)

Datafill requirements for International Primary Carrier (Sheet 2 of 2)

Table	Purpose of table
VIRTGRPS	Virual Facility Group. This table contains option INTPIC. Option INTPIC provides the ability to choose a presubscribed carrier for international calls for a specified VFG. The specification for option EA must occur in table VFGDATA in order for option INTPIC to function in this table.
CXGRP	Customer Group Options. This table defines options associated with the Private exchange (PX) digital trunk group type. This table defines option INTPIC. Option INTPIC provides the ability to enter data in a presubscribed carrier with a PX trunk for international calls.
Note: Tables LENFEAT, IBNFEAT, and KSETFEAT are read-only tables. When the addition of option INTPIC occurs through SERVORD, the system automatically enter data in these tables. This document does not provide a datafill procedure or example because of this condition.	

Datafilling table IBNXLA

Datafill for International Primary Carrier for table IBNXLA appears in the following table. The fields that apply to International Primary Carrier appear in this table. See the data schema section of this document for a description of the other fields.

IBNXLA (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
KEY		See subfield.	Key. This field contains subfield XLANAME.
	XLANAME	alphanumeric (1 to 8 characters)	List of translator names. Enter the name assigned to the translator.

IBNXLA (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	DGLIDX	vector of a maximum of 18 digits	Digilator index. Enter the digit or digits assigned as an ambiguous code. The range of this field depends on field MAXDIG in table XLANAME. The DGLIDX can accept overdecadic digits. The acceptable values for the digilator section of DGLIDX of table IBNXLA are the following: *MAXDIG value IBNXLA digilator values* 9 Digits 0 to 9 C Digits 0 to 9 and B to C F Digits 0 to 9 and B to F Determination of the acceptable digit range for table IBNXLA digilator values occurs for each translator.
RESULT		See subfield.	Result. This field contains subfield OPTION.
OPTION		INTPIC	Option. Enter INTPIC for the International Primary Carrier feature.
	CARRIER	alphanumeric (a maximum of 16 characters)	Carrier name. Enter the selected international carrier. Table OCCNAME contains a list of the correct carrier names.
	CHOICE	Y or N	Choice. Enter Y (yes) to allow the selection of Carrier Access Code (CAC) dialing. Enter N (no) to disallow the selection of CAC dialing.

Datafill example for table IBNXLA

Sample datafill for table IBNXLA appears in the following example.

MAP example for table IBNXLA

```
KEY          RESULT
-----------------------------------------------------------
CGAXLA 791  NET Y Y N 3 Y POTS Y N GEN(LATTR42)(EA C541 Y
0)(INTPIC XYZ Y)$$
```

International Primary Carrier (continued)

Datafilling table XLANAME

Datafill for International Primary Carrier for table XLANAME appears in the following table. The fields that apply to International Primary Carrier appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table XLANAME

Field	Subfield or refinement	Entry	Explanation and action
XLANAME		alphanumeric (1 to 8 characters)	List of translator names. Enter the name assigned to the preliminary translator.
DEFAULT		Refer to subfield TRSEL in table IBNXLA.	Default data. This field is a vector that contains translation selector subfield TRSEL and refinements that depend on this selector. This field is identical to field RESULT in table IBNLXA. Copy datafill from field RESULT to table IBNXLA.
CONTMARK		+ or $	Continuation mark. Enter + if additional information for this tuple is in the next record. If additional information is not in the record, enter $ to indicate the end of the tuple.
MAXDIG			Maximum digit range. This field indicates the range of acceptable values for the digilator section of the table IBNXLA key of the specified translator. Enter 9 to specify range of 0 to 9. This value is in use for North America. Enter C to specify range of 0 to 9, A, B, and C. This value is in use for Australia. Enter F to specify range of 0 to 9, A, B, C, D, E, and F. This value is in use for Australia. Entries other than 9, C, or F are not correct. The entry of data in field MAXDIG can occur for a specified tuple. In this event, the user must delete the complete tuple and enter the tuple again with a new MAXDIG value. This action allows the user to change the MAXDIG value. The default MAXDIG value is 9.

Datafill example for table XLANAME

Sample datafill for table XLANAME appears in the following example.

MAP example for table XLANAME

```
XLANAME    DEFAULT    MAXDIG
-------------------------------------------------------
CXT6 NET N Y N 1 Y NDGT N Y GEN (LATTR 1) (EA CARR1 Y 0)
(INTPIC CARR2 Y) $ $
```

Datafilling table VIRTGRPS

Datafill for International Primary Carrier for table VIRTGRPS appears in the following table. The fields that apply to International Primary Carrier appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table VIRTGRPS (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
KEY		see subfield	VFG key. This field is the key to table VIRTGRPS. This field contains subfield VIRTGRP.
	VIRTGRP	alphanumeric (1 to 6 characters, or blank)	VFG. If the entry is the first entry for the VFG, enter a defined name defined by the user. The addition of a tuple defines the name used in other tables. This name requires VFGs. If the entry is not the first entry for the VFG, leave this field blank.
DATA		see subfields	Virtual facility group data. This field contains subfields MEMBERS and INCTYPE.
	MEMBERS	see subfields	Virtual facility group members. This subfield contains refinement VFGTYPE and subfields USESGRP and SIZE.
	VFGTYPE	SIZE or USES	Virtual facility group type. If this subfield is the first entry for the VFG, enter SIZE. If this subfield is not the first entry, enter USES.

International Primary Carrier (continued)

Datafilling table VIRTGRPS (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	SIZE	0 to 2048	Size. When the value of subfield VFGTYPE is SIZE, enter data in this refinement. Enter the number of simultaneous accesses allowed for the VFG.
	USESGRP	alphanumeric or nil	Virtual facility group name. When the value of VFGTYPE is USES, enter data in this refinement. The VFG name is the name of the VFG specified in table VIRTGRPS. This entry can provide the following options: • the ability to have virtual two-way trunks • the ability to associate more than one set of screening data with the same set of virtual circuits • the ability to provide both of the preceding options If the entry is not the first for the VFG, this field defaults to nil.

International Primary Carrier (continued)

Datafilling table VIRTGRPS (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	INCTYPE	E911, IBN, NIL, POTS, or blank	Incoming type. If this entry is the first entry for the VFG, perform one of the following steps: Enter E911 to terminate 911 calls from an end office to an E911 tandem through one of the following: • incoming ISDN user part (ISUP) trunks • super centralized automatic message accounting (SuperCAMA) trunks The system translates calls to an E911 VFG. The system selectively routes the calls to a primary public safety answering point (PSAP). The system routes these calls according to the directory number (DN) of the subscriber. Enter IBN if the call enters the Integrated Business Network (IBN) translation environment. Enter NIL if the VFG does not include associated screening information. Enter POTS if the call is entering the plain POTS translation environment. If this entry is not the first entry for the VFG, leave the subfield blank.
	INCTYPE		
OPTIONS		see subfield	Options. This field contains subfield OPTION. Subfield OPTION is a vector of a maximum of 11 multiples.
	OPTION	INTPIC	Option. Enter INTPIC from the list that appears to allow the option for International Primary Carrier.
	CARRIER	Carrier name as specified in table OCCNAME	Carrier name. Enter the name of the presubscribed carrier for international calls. Table OCCNAME contains a list of correct carrier names.
	CHOICE	Y or N	Choice. Enter Y to allow CAC dialing. Enter N to disallow CAC dialing.

International Primary Carrier (continued)

Datafill example for table VIRTGRPS

Sample datafill for table VIRTGRPS appears in the following example.

MAP example for table VIRTGRPS

```
KEY   DATA   OPTIONS
-----------------------------------------------------
BGRP1 SIZE 1 POTS 9199917777 0 N (EA CARR1 Y) (INTPIC XYZ
Y) $ $
```

Datafilling table CXGRP

Datafill for International Primary Carrier for table CXGRP appears in the following table. The fields that apply to International Primary Carrier appear in this table. Refer to the data schema section of this document for a description of the other fields.

Datafilling table CXGRP

Field	Subfield or refinement	Entry	Explanation and action
PXOPTION	see subfield		Customer group options. This field contains subfield OPTION
	OPTION	INTPIC	Option. Enter INTPIC from the list that appears to allow the option for International Primary Carrier.
	CARRIER	Carrier name as specified in table OCCNAME	Carrier name. Enter the name of the presubscribed carrier for international calls. Table OCCNAME contains a list of correct carrier names.
	CHOICE	Y or N	Choice. Enter Y to allow for the selection for Carrier Access Code (CAC) dialing. Enter N to disallow CAC dialing.

Datafill example for table CXGRP

Sample datafill for table CXGRP appears in the following table.

MAP example for table IBNXLA

```
CUSTKEY SPB CTD FCTDNTER FCTDNTRA EWATS  PXOPTION
------------------------------------------------------
50      N   Y   (CARR2) $ N       N N    (INTPIC XYZ Y) $
```

Tools for verifying translations

International Primary Carrier does not use tools for verifying translations.

SERVORD

The Service Order System (SERVORD) contains commands that allow the user to change lines in a DMS switch. The SERVORD is part of the database software of the switch. The SERVORD provides the operating company with a fast and transparent means to perform many operations. Examples of these operations include:

- addition and deletion of options from a line
- addition or removal of lines
- ability to change the aspects of a line like DN or line equipment number (LEN)

SERVORD limits

The INTPIC line option provides a presubscribed carrier to handle international calls. This option is correct for POTS, COIN, RES, IBN, and KSET lines only. The operating company cannot add the INTPIC line option to lines that use the EWAL or EWALI options.

International Primary Carrier (continued)

The SERVORD prompts used to assign International Primary Carrier to a line appear in the following table.

SERVORD prompts for International Primary Carrier

Prompt	Correct input	Explanation
SO	Refer to the SONUMBER in the Prompts table in Chapter 2 for information on valid input.	The number of the service order to enter.
OPTION	Refer to the Line service options table in Chapter 2 for a list of valid inputs.	Options associated with a service to establish, modify, or delete. You can add a maximum of 20 options in any ADD, ADO, EST, or NEW command.
CARRIER	1 to 16 alphanumeric characters	Name for the selected international Primary Carrier carrier. Refer to table OCCNAME for a list of correct carrier names.
CHOICE	Y or N	Choice for Carrier Access Code dialing. Enter Y to allow the selection of CAC dialing. Enter N to disallow the selection

SERVORD example for adding International Primary Carrier

An example of how to add International Primary Carrier to a line appears in the following SERVORD example. The addition of International Primary Carrier occurs using the ADO command.

International Primary Carrier (end)

SERVORD example for International Primary Carrier in prompt mode

```
>servord
SO:
>ado $ 6215955
OPTION:
> intpic
CARRIER
> carr3
CHOICE:
> y
OPTION:
> $
COMMAND AS ENTERED:
ADO NOW 96 9 17 PM 6215955 ( INTPIC CARR3 Y ) $
ENTER Y TO CONFIRM,N TO REJECT OR E TO EDIT
```

SERVORD example for International Primary Carrier in no-prompt mode

```
> ADO $ 6215955 INTPIC CARR3 Y $
```

IntraLATA PIC Enhancements

Ordering codes

Functional group ordering code: EQA00001

Functionality ordering codes:

- EQA00015—IntraLATA PIC Enhancements Phase I
- EQA00024—LATAXLA Override
- EQA00019—IntraLATA PIC for Enhanced WATS

Release applicability

NA006 and later versions

The IntraLATA PIC Enhancements was introduced in NA006.

The IntraLATA PIC for Enhanced WATS was introduced in NA007.

Requirements

This document contains the datafill information for this functionality. This functionality can require software or hardware to operate.

Description

This feature provides the following functions:

- IntraLATA PIC Enhancements Phase I
- LATAXLA Override
- IntraLATA PIC for Enhanced Wide Area Telecommunication Service (EWATS)

The IntraLATA PIC Enhancements Phase I and LATAXLA Override functions allow subscribers of Equal Access End Offices (EAEOs) to select a carrier. The subscriber can select a carrier to provide intra-Local Area and Transport Area (intraLATA) toll services.

These functions provide the following intraLATA PIC improvements:

- IntraLATA Toll Coin Routing flexibility
- Routing of intraLATA PRIVILEGE calls
- 0+ Local Call Routing flexibility
- 0- Call Routing flexibility
- Routing of interstate, intraLATA Calls

- CHOICE field for LPIC option
- Full-Carrier Toll Denied flexibility

The IntraLATA for EWATS function modifies how the system handles intraLATA calls from EWATS lines and trunks. Operating companies can specify a presubscribed intraLATA carrier network with this function. The EWATS lines indicate POTS or RES telephones with an LCC of EOW or ETW. The EWATS trunks indicate PX trunks with EWATS set to “Yes" in table CXGRP.

This function provides the following improvements:

- Option EWALI (Enhanced WATS Access Line for IntraLATA) for POTS and Residential Enhanced Services (RES) line with the Service Order system (SERVORD)
- Field EWATSI (Enhanced WATS for IntraLATA) in table CXGRP (customer group)
- Billing for intraLATA calls that originate from an EWATS lines or trunks
- Universal WATS support

Operation

This feature provides several requirements that operating companies identified that increase intraLATA competition and routing flexibility.

The Software Optionality Control (SOC) protocol controls access to the IntraLATA PIC Enhancements feature. The system allows Service Order (SERVORD) input and table datafill for this feature. The SOC state does not affect SERVORD input. The functionalities associated with this feature are available when the SOC state is ON.

The IntraLATA PIC Enhancements Phase I and LATAXLA Override functions of this feature provide the following improvements:

- IntraLATA Toll Coin Routing flexibility

  The IntraLATA PIC Enhancements feature provides the LPIC option. The LPIC option determines the carrier that routes intraLATA toll coin traffic. This ability to route to a specified carrier allows competition for intraLATA toll coin traffic. The IntraLATA PIC Enhancements feature allows increased competition between Local Equipment Carriers (LECs) and interexchange carriers (IECs).
- Routing of IntraLATA PRIVILEGE calls

IntraLATA PIC Enhancements (continued)

The IntraLATA PIC Enhancements feature allows the entry of IntraLATA PRIVILEGE in table LATAXLA. This entry allows the LEC to continue to handle special calls like 1+NPA-5551212 and 976.

- 0+ Local Call Routing flexibility

  This feature allows the LEC, the LPIC carrier, or an assigned complete office carrier to handle 0+ local calls.

- 0- Call Routing flexibility

  This feature allows the LEC, the LPIC carrier, or an assigned office-wide carrier to handle 0- local calls.

- Routing of Inter-STATE, IntraLATA calls

  The IntraLATA PIC Enhancements feature allows subscribers to complete intraLATA calls in a complete LATA when the LEC is the LPIC. This feature allows subscribers to complete intraSTATE/intraLATA calls when an IEC is the LPIC. Subscribers can complete calls in a complete LATA by casual dialing.

- CHOICE field for option LPIC

  This feature allows the LPIC option to have a LCHOICE field in table CXGRP, LENFEAT, IBNXLA, and XLANAME. Subscribers with the LPIC option can dial 10XXX/101XXXX intraLATA calls. Subscribers with the LCHOICE field set to “N" cannot use casual dialing.

- Full-Carrier Toll Denied flexibility

  The IntraLATA PIC Enhancements feature allows the LEC to refuse subscriber access to all carriers. This feature can allow the LEC to refuse subscribers to a limited number of carriers. The IntraLATA PIC Enhancements feature provides option Full Carrier Toll Denied (FCTD). Option FCTD includes option FCTDNTER for interLATA calls and option FCTDNTRA for intraLATA calls.

The IntraLATA PIC EWATS function allows EWATS lines and trunks to specify an intraLATA carrier network. This intraLATA carrier network is separate from the interLATA carrier network. This function does not affect how the system handles interLATA calls from an EWATS agent.

The IntraLATA PIC for EWATS function supports the following agents:

- POTS lines with a line class code (LCC) of EOW (Enhanced Outward WATS) or ETW (Enhanced Two-Way WATS)
- Residential Enhanced Services (RES) lines with an LCC of EOW or ETW
- Private Exchange (PX) trunks with EWATS lines set to “Yes" in table CXGRP

IntraLATA PIC Enhancements (continued)

Note: This function does not improve MDC lines. The EWATS lines indicate POTS or RES phones with an LCC of EOW or ETW. The EWATS trunks indicate PX trunks with EWATS set to “Yes" in table CXGRP.

The IntraLATA PIC for EWATS function provides the following improvements:

- Option EWALI (Enhanced WATS Access Line for IntraLATA) for POTS and Residential Enhanced Services (RES) line with the Service Order system (SERVORD)

  The assignment of line option EWALI to POTS and RES lines provides the IntraLATA PIC for EWATS function. Phones with a LCC of EOW or ETW can have option EWALI. This option contains the field LWICLIST. Field LWICLIST has a maximum of five carrier and bandset combination names. Table BANDSETS must contain the bandset name. Tables LENFEAT and IBNFEAT support option EWALI and SERVORD.

  Enter data in option EWALI with the SOC state set to IDLE. This option does not affect how the system handles the call.

- Field EWATSI (Enhanced WATS for IntraLATA) in table CXGRP (customer group)

  This field allows the assignment of a presubscribed EWATS intraLATA carrier network to a PX trunk. This field has a default value of “No." When the EWATS boolean for that tuple is “YES", the entry in the field must be “Yes."

  Field EWATSI contains subfield LWICINFO. Subfield LWICINFO has a maximum of five carrier and bandset group names. Table BANDSETS must contain the bandset.

  Enter data in field EWATSI with the SOC state set to IDLE. This field does not affect how the system handles the call.

- Billing for intraLATA calls that originate from EWATS lines or trunks

  The IntraLATA PIC for EWATS function does not provide new billing records. This function allows intraLATA calls that originate from an EWATS line or trunk to generate a call code 068 or 114. When the LEC or an operating telephone company (OTC) carrier handles an intraLATA call, the system produces a call code 068. When an interexchange carrier (IEC) handles the intraLATA call, the system produces Call Code 114.

- Universal WATS (UWATS) support

  The IntraLATA PIC for EWATS function of this feature supports UWATS. The feature provides UWATS for the IntraLATA PIC for EWATS function. This method is the same method that the feature provides UWATS for the

IntraLATA PIC Enhancements (continued)

InterLATA EWATS function. The UWATS carrier allows casual calls to complete to a carrier when the system completes band screening.

Enter data in options EWATSI or EWALI with the SOC state set to "IDLE." These option do not affect how the system handles the call.

- The CACBLOCK boolean in table OCCINFO

  The CACBLOCK boolean in table OCCINFO applies to casually dialed interLATA and intralATA calls. The system blocks casually dialed calls to specified carriers when the value of CACBLOCK boolean is "Yes." Before the introduction of IntraLATA PIC for EWATS function, the CACBLOCK boolean applied to casually dialed calls with UWATS.

- The settings of CAC_CALL and PIC_CALL in the call condense block (CCB) for EWATS lines and trunks appear in the following table.

CAC_CALL and PIC_CALL settings

Heading	Heading	Heading
non-CAC call to an inter/intraLATA number.	F	T
CAC call to an interLATA number when the casually dialed carrier is not the first carrier in the WICLIST.	T	F
CAC call to an interLATA number when the casually dialed carrier is the first carrier in the WICLIST.	T	T
CAC call to an intraLATA number when SOC for EQA00019 is set to IDLE. The casually dialed carrier is not the first carrier in the WICLIST.	T	F
CAC call to an intraLATA number when SOC for EQA00019 is set to IDLE. The casually dialed carrier is the first carrier in the WICLIST.	T	F
CAC call to an intraLATA number when SOC for EQA00019 is set to ON. The casually dialed carrier is not the first carrier in the WICLIST.	T	F
CAC call to an intraLATA number when SOC for EQA00019 is set to ON. The casually dialed carrier is the first carrier in the WICLIST.	T	T

Translations table flow

This section describes the IntraLATA PIC Enhancements translations tables.

IntraLATA PIC Enhancements (continued)

IntraLATA PIC Enhancements Phase I and LATAXLA Override table flow

The IntraLATA PIC Enhancements Phase I and LATAXLA Override translations tables appear in the following list:

- Table CXGRP (Customer Group Options) specifies the options for digital PX type trunk groups. The customer group option for IntraLATA PIC Enhancements is LPIC. Assign this option when intraLATA calls route through a PX trunk. Table OCCNAME must define the carrier name before this table references the carrier with option LPIC. Options FCTDNTER and FCTDNTRA are active for trunks in this table.
- Table IBNFEAT (IBN Line Feature) specifies the options for a single-line MDC station. The addition of option LPIC through SERVORD assigns the intraLATA PIC to a station. The addition of option LPIC through SERVORD updates fields DF and FEATURE with the LPIC entry. Field DATA contains subfield CARRIER. Field DATA defines the name of the intraLATA carrier. Table OCCNAME must define the carrier name before this table references the carrier with option LPIC.
- Table IBNXLA (IBN Translation) specifies the digit translation of calls that the MDC station end user dials. The table associates different options with the digits to define feature and network access codes. The translator option NET/GEN requires option EA for the preliminary or customer group translator to provide EA translations. Option LPIC for the option NET/GEN provides an intraLATA PIC for the customer group. The intraLATA PIC for a separate MDC station is associated with the NCOS. Use SERVORD to assign intraLATA PIC for a separate MDC station. Table IBNFEAT updates the entry. Table OCCNAME must define the carrier name before this table references to the carrier with option LPIC.
- Table KSETFEAT (Business Set and Data Unit Feature) specifies the line features assigned to business sets and data units. The MBS line equipment number (LEN) and key accesses this table. The addition of the LPIC feature through SERVORD updates this table for the IntraLATA PIC Enhancements feature. Field FEATURE specifies option LPIC. Field KVAR specifies the intraLATA carrier name. Table OCCNAME must define the carrier name before this table references the carrier with option LPIC.
- Table LATAXLA defines the attributes of domestic calls. The attributes of domestic calls include interLATA or intraLATA and interstate or intrastate. The system compares the attributes of the calls with the attributes of the carriers in table OCCINFO. This procedure determines the carriers that must handle the calls.
- Table LENFEAT lists the features assigned to a specified line in table LENLINES. At the MAP display, a range on field DF in table LENFEAT displays a list of features loaded on the switch.

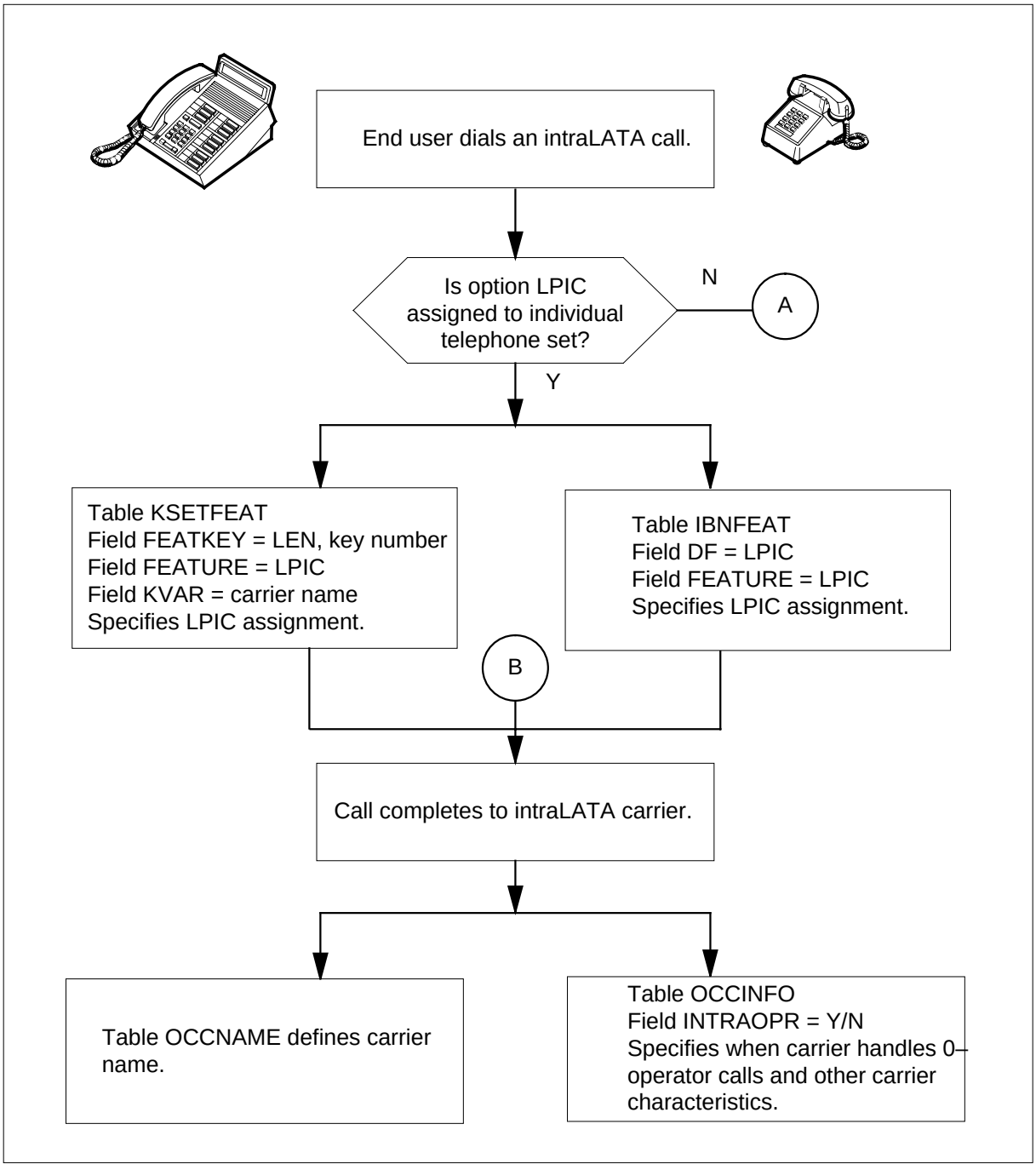
IntraLATA PIC Enhancements (continued)

- Table OCCINFO (Equal Access Other Common Carrier Information) specifies characteristics of carriers that table OCCNAME lists. Table OCCINFO also screens calls for carrier compatibility. Field INTRAOPR determines when a carrier can handle intraLATA operator calls, like 0- calls. See the data schema section of this document for additional information associated with table OCCINFO.
- Table VFGDATA (Virtual Facility Group Data) specifies data for each VFG entered in table VIRTGRPS. This table does not specify size. The system updates table VFGDATA with information entered in table VIRTGRPS. The system enters option EA as VFGEA. The system enters option LPIC as VLPIC with the carrier names in table VFGDATA.
- Table VIRTGRPS (Virtual Facility Groups) specifies information like name, size, direction, and billing number for a VFG. Assign option EA to the VFG before option LPIC. Option LPIC provides an IPIC (equal access carrier for intraLATA calls) for POTS-type VFGs for IntraLATA PIC Enhancements. The system uses the LPIC information for the second leg of the call. A VFG is a software mechanism that sizes and limits network access. The VFG removes the requirement for hardware or loop-around trunks. Assign option IBNPIC in table VIRTGRPS. Assign this option when the second leg of translations uses the same LPIC for the line as the first leg uses. Assign this option when the second leg of translations uses the same customer group PIC the first leg uses. When option IBNPIC is not present, use the VFG LPIC assigned in table VIRTGRPS.
- Table XLANAME controls the addition and deletion of translators in table IBNXLA. This table assigns each translator an alphanumeric one- to eight-character default value, default data, and an allowed digilator range. Table XLANAME stores the default data and the allowed digilator range for each translator. When table IBNXLA does not contain the access code for a specified translator, the system uses default data from table XLANAME.

An intraLATA call with the LPIC option appears in the following flowchart.

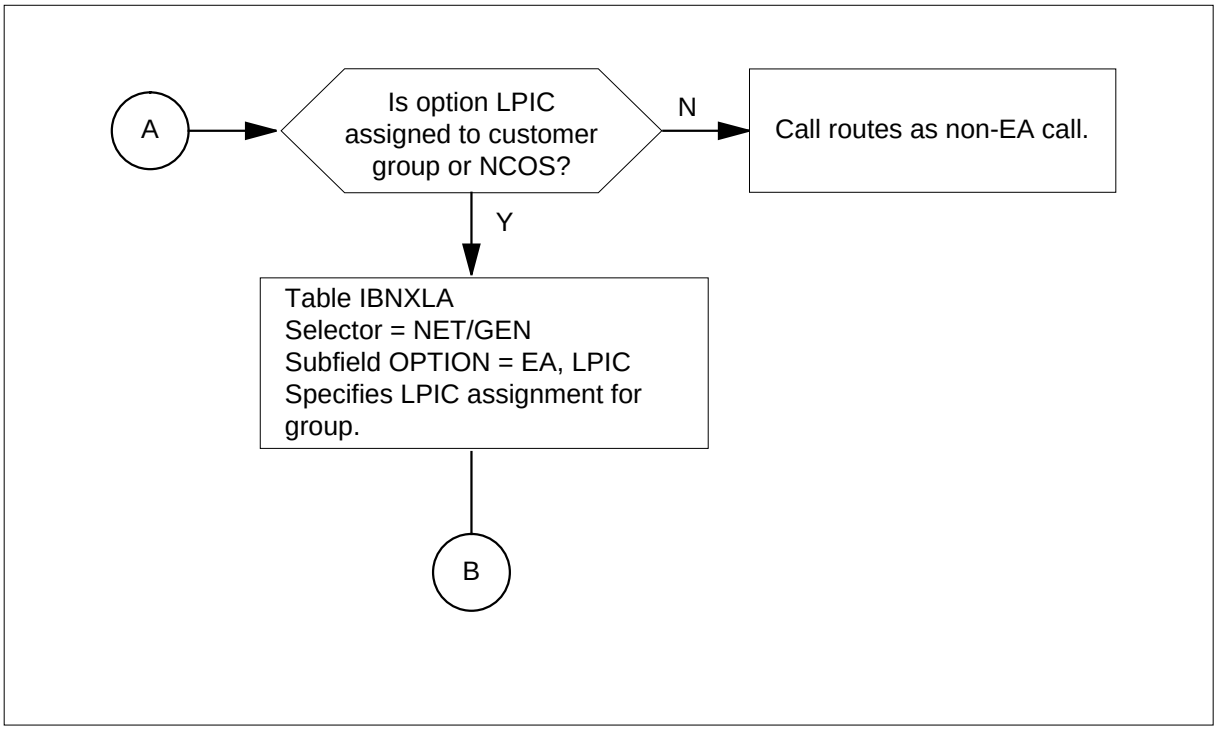
IntraLATA PIC Enhancements (continued)

Table flow for an intraLATA call using option LPIC



IntraLATA PIC Enhancements (continued)

Table flow for an intraLATA call using option LPIC (continued)



Datafill content in use in the previous flowchart appears in the following table.

Datafill example for IntraLATA PIC Enhancements (Sheet 1 of 2)

Datafill table	Example data
CXGRP	50 N N N N (LPIC CARR1 Y) (RMR) (RMR) $
IBNFEAT	HOST 00 02 06 23 0 LPIC LPIC CARR1 Y
IBNXLA	NET N Y N 1 Y NDGT N Y GEN (LATTR 0) (EA CARR1 Y 0) (LPIC CARR2 Y) $ $
KSETFEAT	HOST 02 0 06 23 1 LPIC LPIC CARR1 Y
LATAXLA	LATA3 416590 INTRA INTRA PRIVILIGE
LENFEAT	HOST 02 0 06 23 S LPIC LPIC CARR1 Y
OCCINFO	CARR1 0777 FGC Y Y Y Y N N N Y Y Y Y LONG 0 FGRPC N N N N N N N Y N Y N N Y CARR1 $
VFGDATA	TOLLV POTSVI1 N 0 Y (VFGEA CARR1 Y) (VLPIC CARR2) $

Datafill example for IntraLATA PIC Enhancements (Sheet 2 of 2)

Datafill table	Example data
VIRTGRPS	VRGRP1 SIZE 1 POTS 9199917798 0 N (EA CARR2 Y) (LPIC CARR1 Y) $
XLANAME	PUBXL1 (NET N N N 0 N NDGT N N GEN (LATTR 0) (EA CARR1 Y 0) (LPIC CARR2 N) $ $) $ 9 9

IntraLATA PIC for Enhanced EWATS table flow

Translations examples for EWATS calls appear in the following flowcharts.

IntraLATA call with the EWATS function

An example of the possible methods for the LEC to handle intraLATA 7/10 digit calls appears the following flowcharts.

Examples of these methods follow:

- Block 6 applies when SOC is IDLE. The LEC handles the intraLATA calls. This condition does not apply when the caller dials a CAC code. All intraLATA calls function in the same method as before the 07 release.
- Block 11 applies when SOC is ON. The options EWALI and EWATSI are not present on the originating agent. The LEC handles the intraLATA calls. For the casually dialed intraLATA calls, the WICLIST option must contain the carrier. The intraLATA calls function in the same method before the 07 release.
- Block 13 applies when SOC is ON. The options EWALI and EWATSI are present. The options do not specify carriers. The system blocks the casual dialed intraLATA calls. The term “Block 18" in the flowchart indicates that the system blocks casually dialed intraLATA calls.
- Block 26 applies when SOC is ON. Table OCCINFO defines an operating telephone company carrier (OTC) as an LEC. The assignment of the LEC carrier is as the first carrier in the EWALI and EWATSI carrier list. The value of SCRNWATS in table OCCINFO does not affect this procedure.

IntraLATA PIC Enhancements (continued)

Table flow for the IntraLATA EWATS function

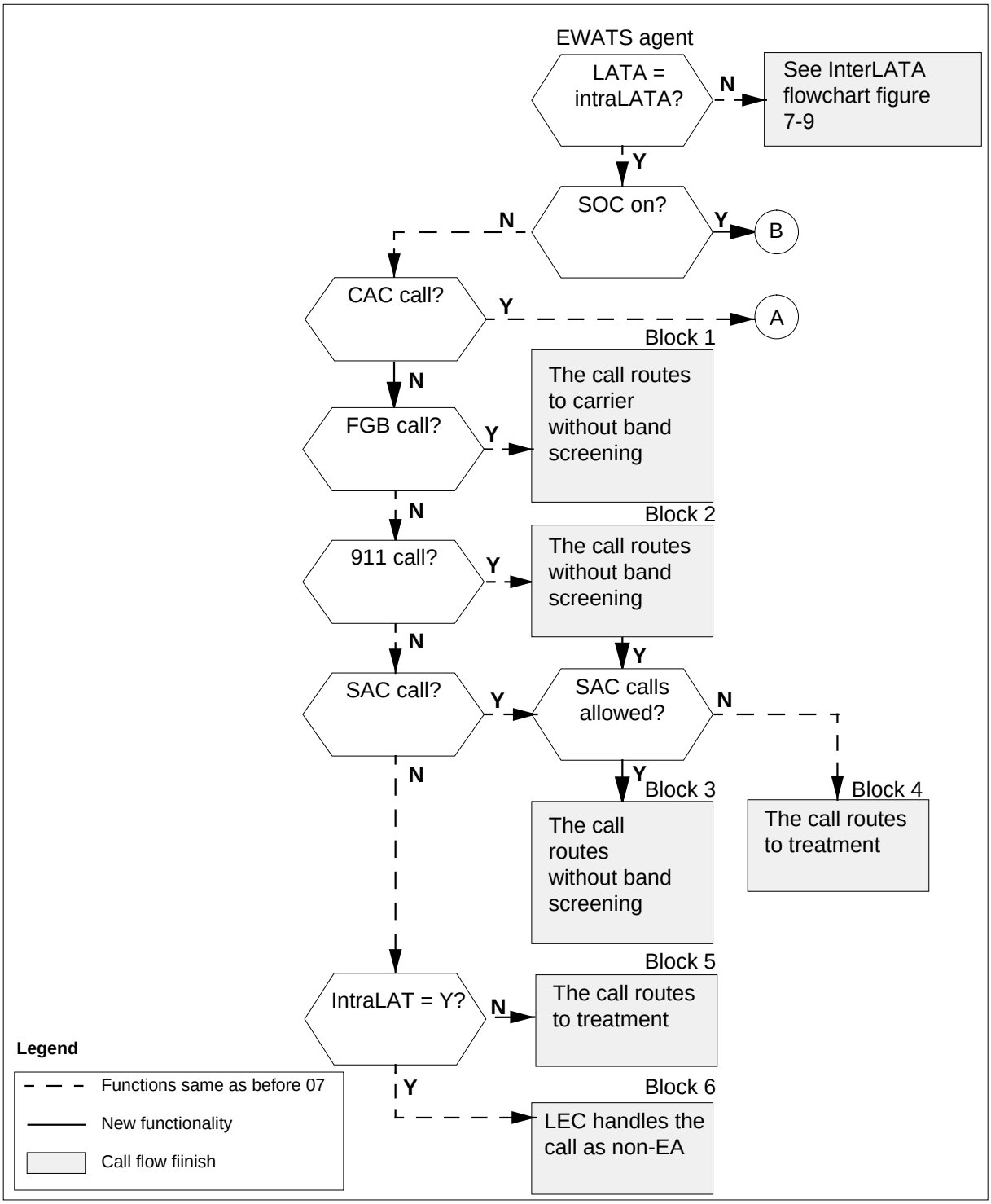
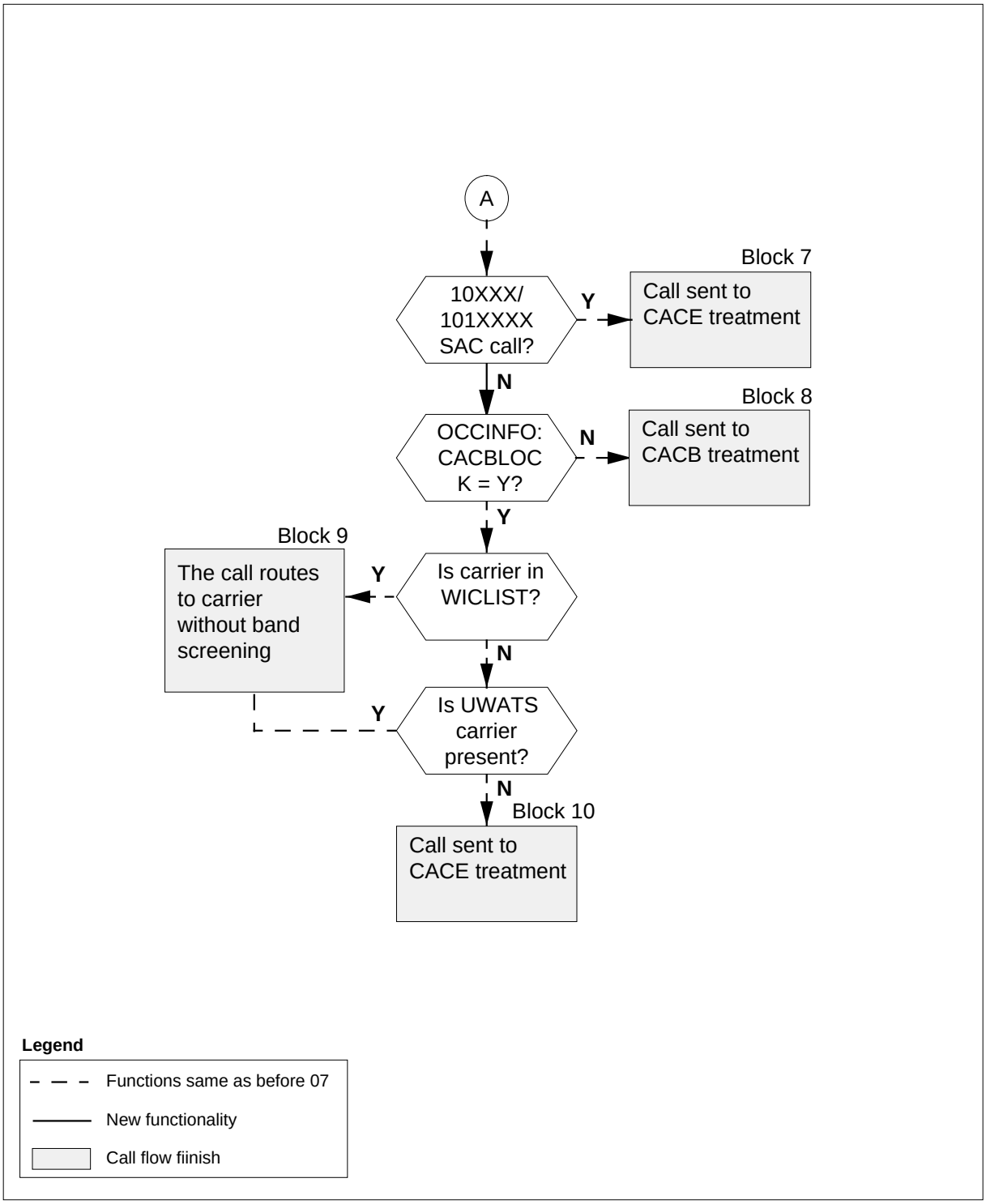


Table flow for the IntraLATA EWATS function (continued)



IntraLATA PIC Enhancements (continued)

Table flow for the IntraLATA EWATS function (continued)

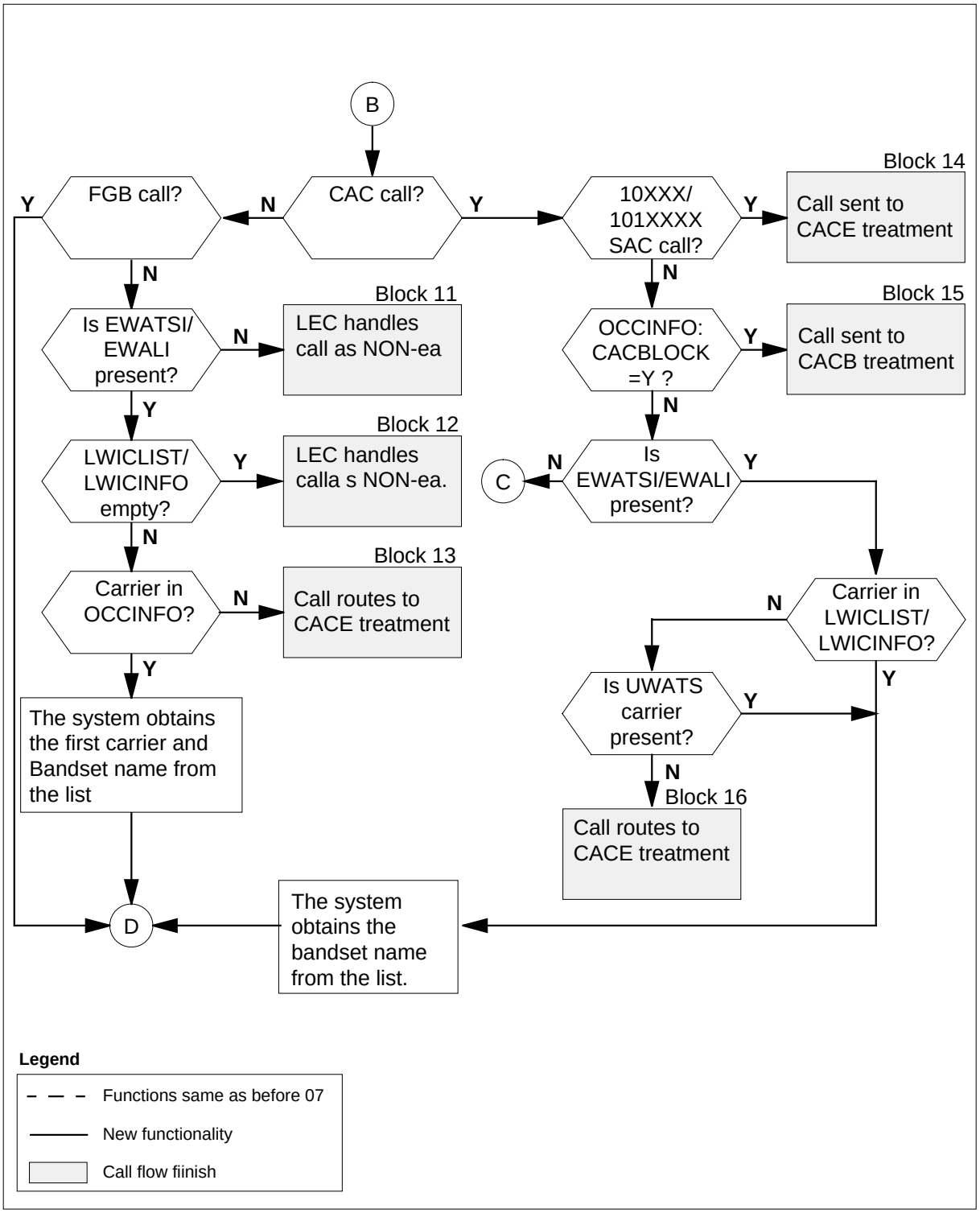
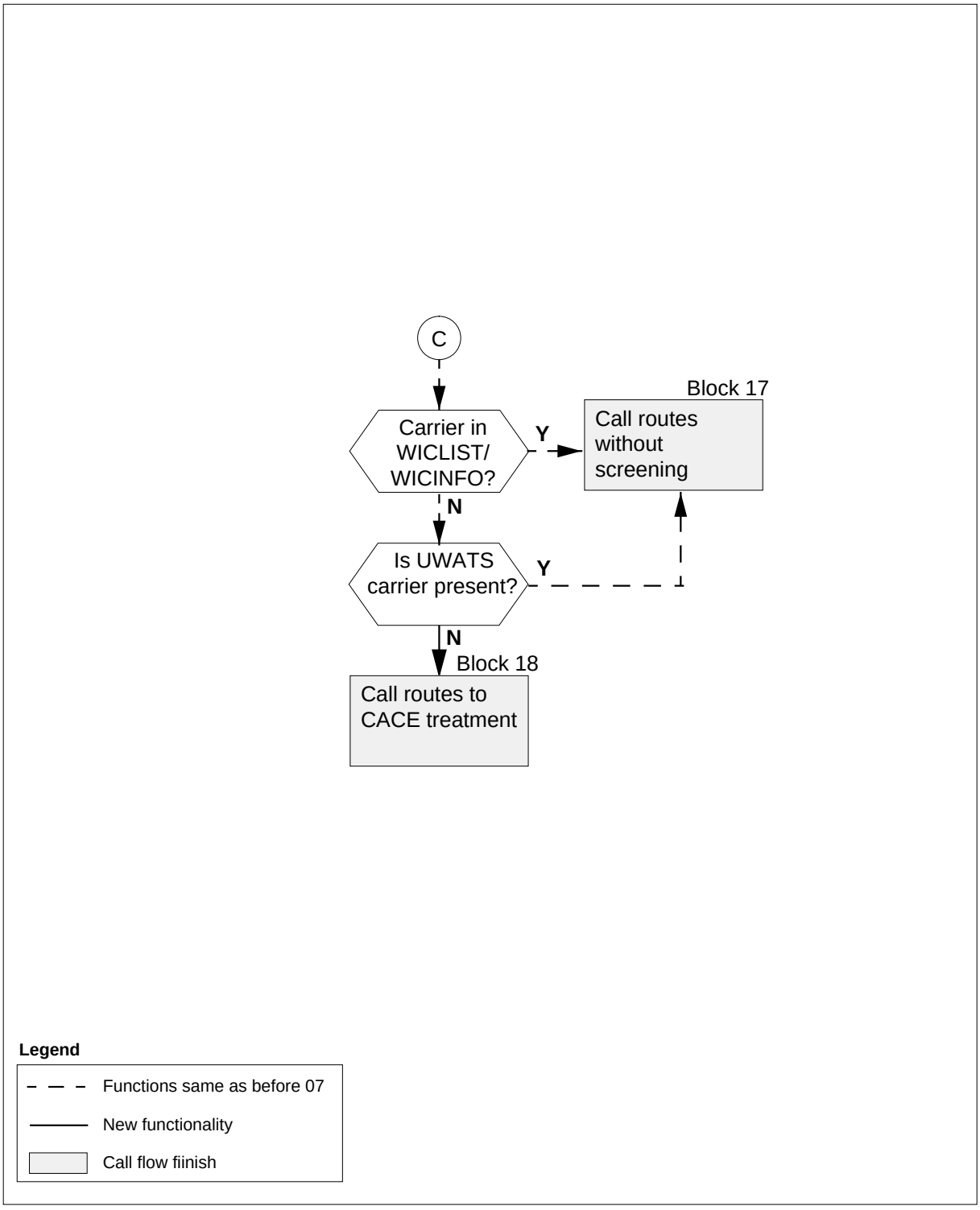


Table flow for the IntraLATA EWATS function (continued)



IntraLATA PIC Enhancements (continued)

Table flow for the IntraLATA EWATS function (continued)

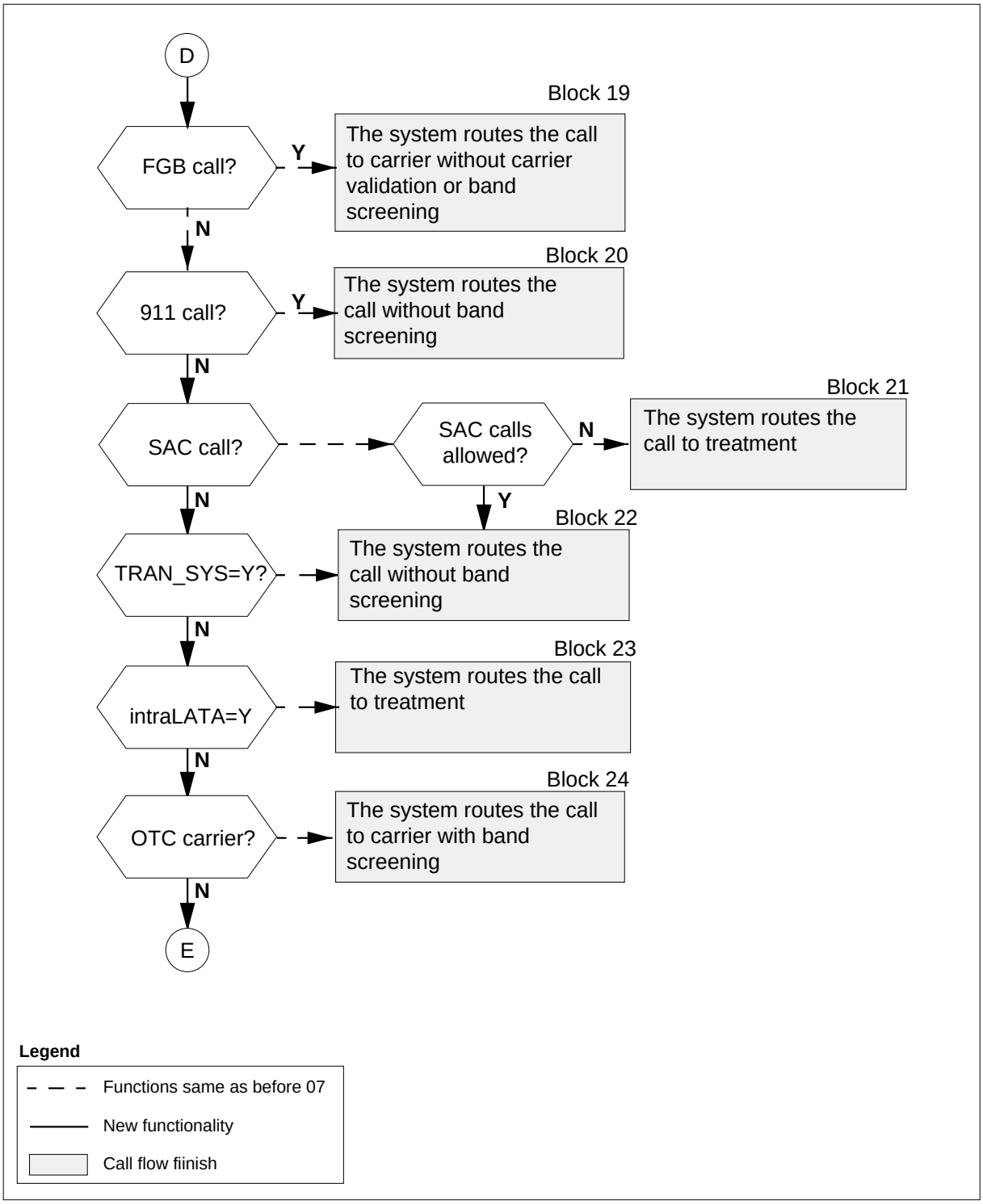
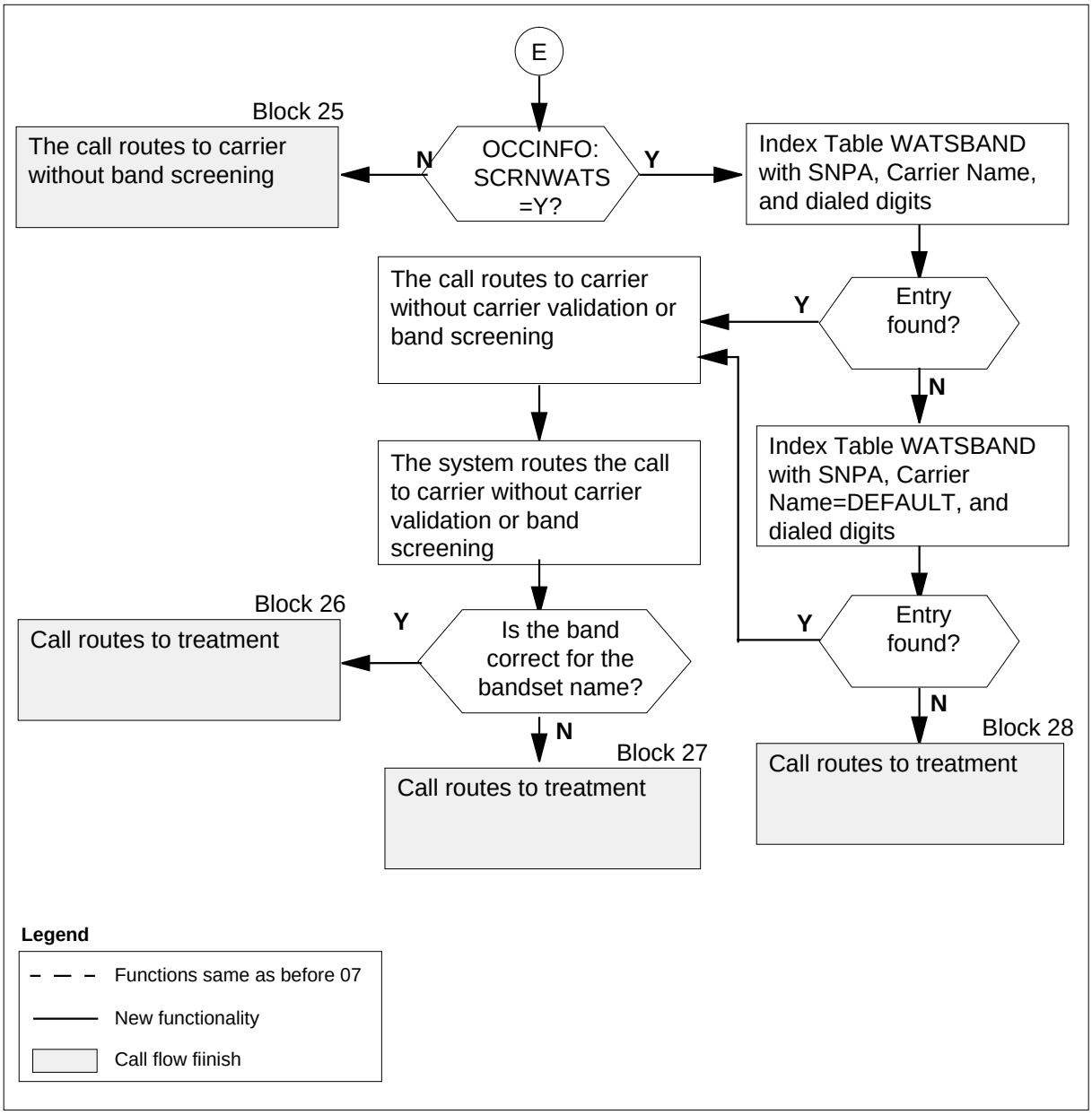


Table flow for the IntraLATA EWATS function (end)



InterLATA call using the EWATS function

The interLATA EWATS function appears in the following flowchart.

IntraLATA PIC Enhancements (continued)

Table flow for the InterLATA EWATS function

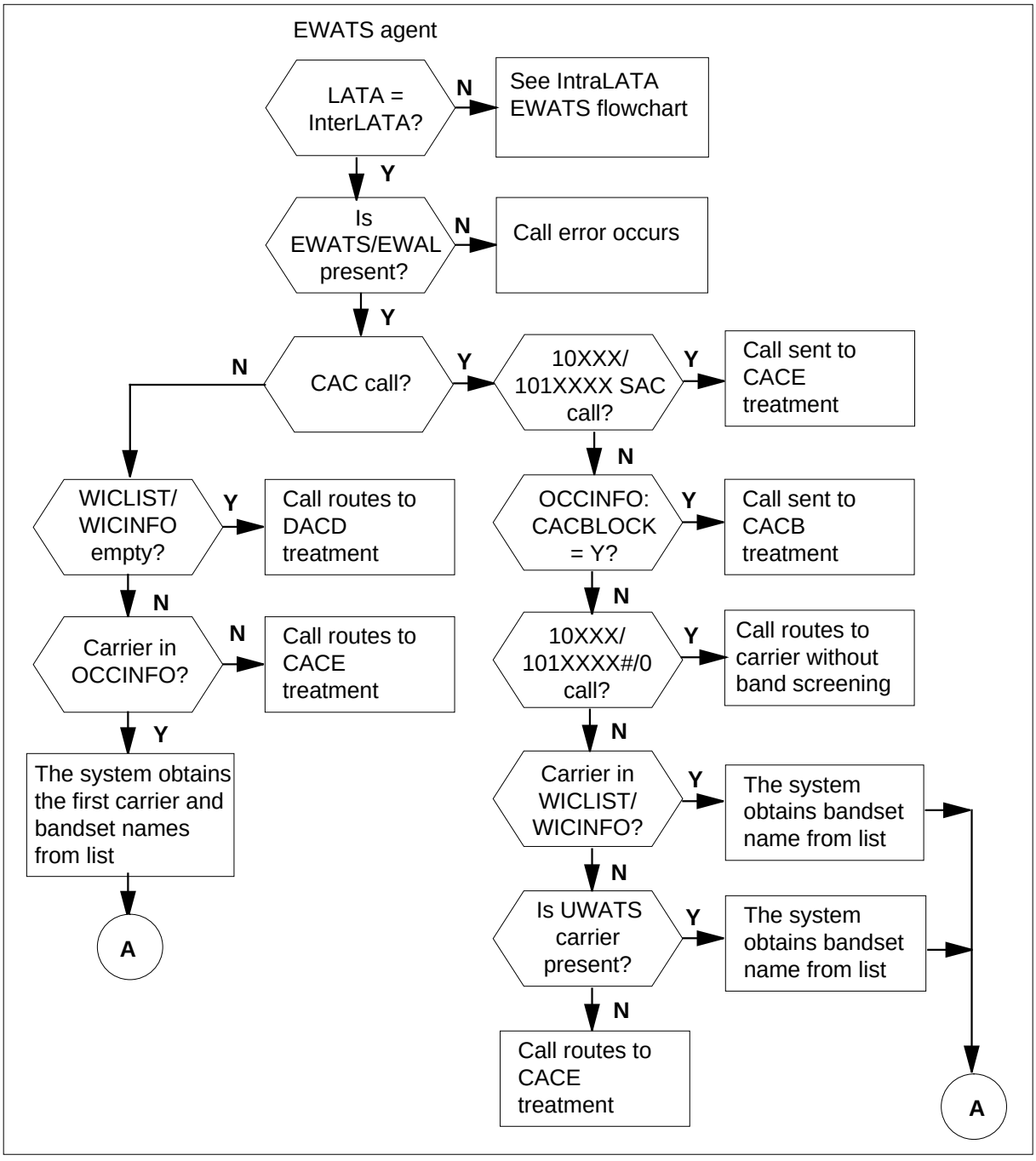
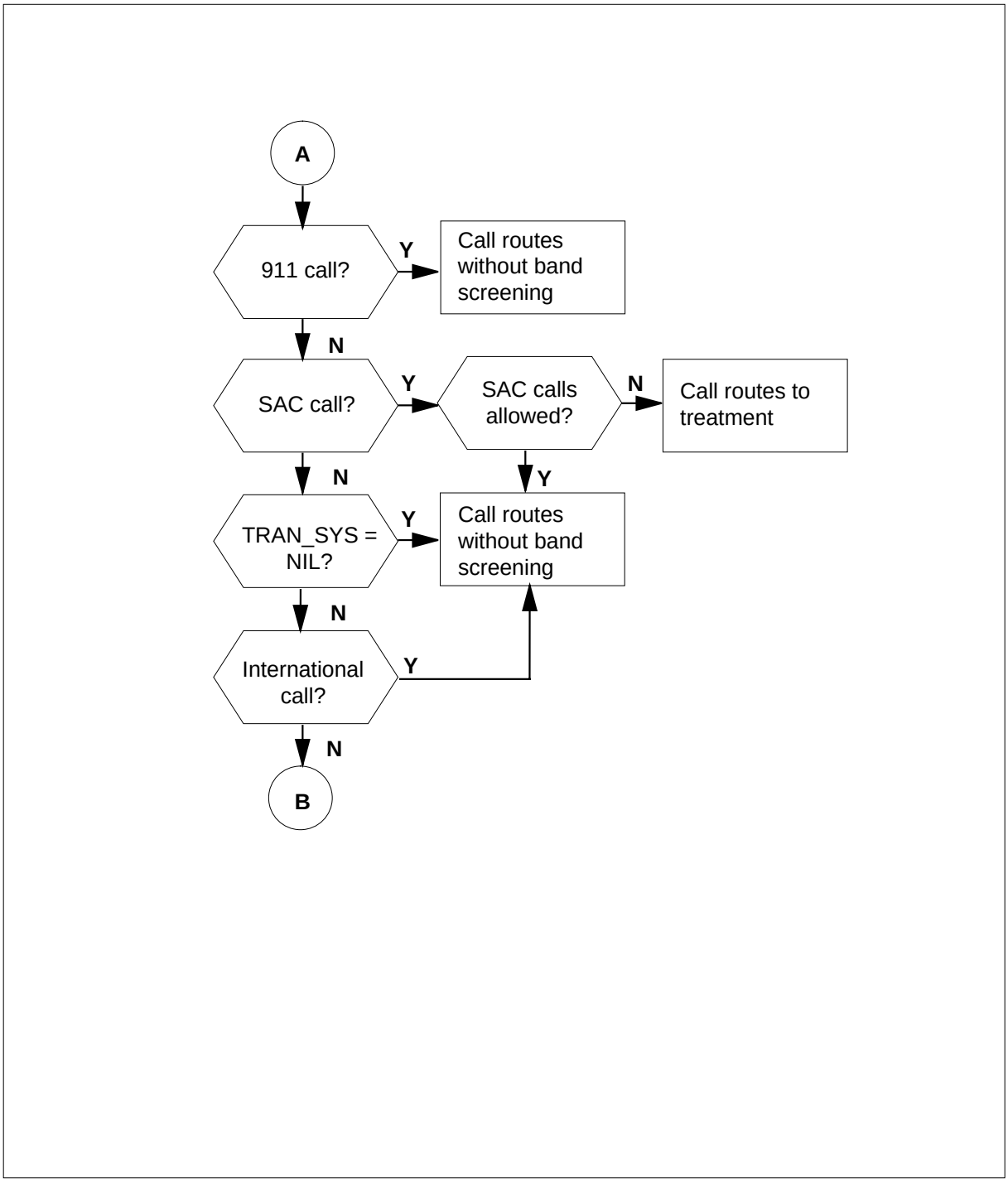
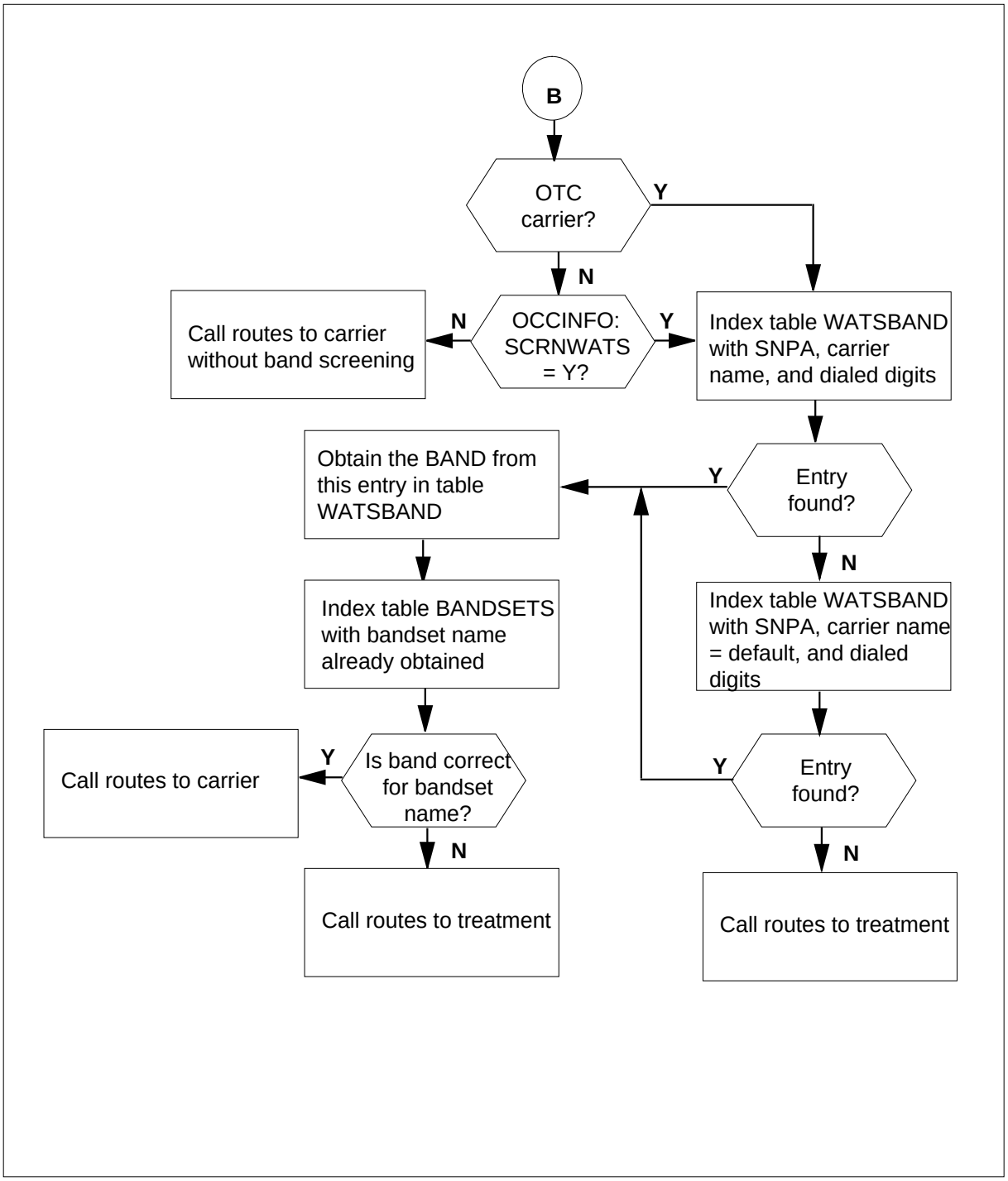


Table flow for InterLATA EWATS (continued)



IntraLATA PIC Enhancements (continued)

Table flow for InterLATA EWATS (end)



Limits

This section describes the IntraLATA PIC Enhancements limits.

The Software Optionality Control (SOC) protocol controls access to all functions of the IntraLATA PIC Enhancements feature. Operating companies that purchase the IntraLATA PIC Enhancements feature receive a password from Nortel. This password allows an operating company to use the feature with the SOC CI interface. Refer to the *Software Optionality Control User's Manual* for a description of this procedure.

IntraLATA PIC Enhancements Phase I and LATAXLA Override Equal Access End Office

The following limits apply to the IntraLATA PIC Enhancements Phase I and LATAXLA Override Equal Access End Office functions:

- Options FCTDNTER and FCTDNTRA and Carrier Toll Denied (CTD) are not compatible in the CTD functionality. The FCTD options added to the list of options that are not compatible for the CTD option include the following:
  - — Automatic Line (AUL)
  - — Circuit Switched Digital Data Switch (CSDO)
  - — Line Appearance Digital Trunk Public Safety Answering Point (LDTPSAP)
  - — Toll Denied (TDN)
  - — Toll Diversion (TDV)
- A subscriber can have options FCTDNTER and FCTDNTRA or option CTD. These FCTD options cannot function with CTD. Table OPTOPT describes this event.
- IntraLATA PIC features IntraLATA PIC Enhancements Phase I and LATAXLA Override Equal Access End Office provides basic requirements. These requirements allow operating companies that have EAEOs to choose a carrier that provides intraLATA toll service. Operating companies must have these basic services to provide the IntraLATA PIC Enhancements feature.

IntraLATA PIC for EWATS

The following limits apply to the IntraLATA PIC for EWATS function:

- This function applies to POTS and RES lines and PX trunks. The function does not support MDC lines.
- Only an EWATS line can have the EWALI line option assigned. The LCC is EOW or ETW.

IntraLATA PIC Enhancements (continued)

- To add the EWALI line option, the EWAL line option must be present.
- The EWATSI field in table CXGRP can be “Yes" when the EWATS fields is “Yes."

Interactions

The IntraLATA PIC Enhancements functions, IntraLATA PIC Enhanced Phase I and LATAXLA Override do not have functionality interactions.

The following interactions apply to the IntraLATA PIC for Enhanced WATS function:

- The EWALI option functions with EWATS lines. The LCC must be EOW or ETW.
- The EWATSI field in table CXGRP can be “Yes" when the EWATS fields is “Yes."
- This function supports UWATS. The UWATS carrier allows casual calls to complete to a carrier when the system can perform band screening.
- The CACBLOCK boolean in table OCCINFO applies to casual dialed intraLATA and interLATA calls.
- Options EWAL and EWALI are not compatible with INTPIC, PIC, LPIC, CTD and FCTDNTER, and FCTDNTRA.

Activation/deactivation by the end user

IntraLATA PIC Enhancements does not require activation or deactivation by the end user.

Billing

IntraLATA PIC Enhancements does not provide new billing records. The IntraLATA PIC for Enhanced EWATS function allows intraLATA calls that originate from an EWATS line or trunk to generate a call code 068 or 114. When the LEC or an operating telephone company (OTC) carrier handles the intraLATA call, the system generates call code 068. When an interexchange carrier (IEC) handles the intraLATA call, the system generates Call Code 114.

Station Message Detail Recording

IntraLATA PIC Enhancements does not affect Station Message Detail Recording.

Datafilling office parameters

Datafill for the IntraLATA PIC Enhancements office parameters appears in the following table.

Office parameters for IntraLATA PIC Enhancements (Sheet 1 of 2)

Table name	Parameter name	Description and action
OFCENG	ZERO_MINUS_LOCAL_CARRIER	This parameter determines when an LEC, an IEC, or LPIC of the subscriber handles 0-local traffic. The values for this parameter follow: • C. This value indicates that a carrier must be able to handle 0- traffic. • L. This value indicates that the LPIC of the subscriber can handle 0- traffic. • Examples of the possible values for this parameter follow: — C Carrier. The designated carrier handles 0- traffic. — C NILC. The LEC handles 0- traffic. With this value, the LEC handles all 0-traffic. When this parameter identifies a designated carrier or the LPIC of the subscriber, the carrier or the LPIC handles traffic. This value is the default setting. — L LPIC. The LPIC of the subscriber handles 0- traffic.

IntraLATA PIC Enhancements (continued)

Office parameters for IntraLATA PIC Enhancements (Sheet 2 of 2)

Table name	Parameter name	Description and action
OFCENG	ZERO_PLUS_LOCAL_CARRIER	This parameter determines when an LEC, an IEC, or the LPIC of the subscriber handles 0+ local traffic. The values for this parameter follow: • C. This value indicates that a carrier must have the ability to handle 0+ traffic. • L. This value indicates that the LPIC of the subscriber can handle 0+ traffic. • Examples of the possible values for this parameter follow: — C Carrier. The designated carrier handles 0+ traffic. — C NILC. The LEC handles 0+ traffic. With this value, the LEC handles all 0+ traffic. When this parameter identifies a designated carrier or the LPIC of the subscriber, the carrier or LPI handle traffic. This value is the default setting. — L LPIC. The LPIC of the subscriber handles 0+ traffic.

Datafill sequence

Tables that require datafill to provide IntraLATA PIC Enhancements appear in the following table. The tables appear in the correct entry order.

Datafill tables requirements for IntraLATA PIC Enhancements (Sheet 1 of 2)

Table	Function of table
CXGRP	Customer Group Options. This table assigns options to PBX trunks. Option intraLATA PIC allows the operating company to route intraLATA PIC calls through a PBX trunk. This table provides options FCTDNTER and FCTDNTRA for trunks.
IBNFEAT (see note)	IBN Line Feature. This table lists the line features assigned to the Integrated Business Network (IBN) lines. Table IBNLINES lists the IBN lines.
Note: Data entry for this table occurs through SERVORD. This table does not provide the datafill procedure or an example.	

IntraLATA PIC Enhancements (continued)

Datafill tables requirements for IntraLATA PIC Enhancements (Sheet 2 of 2)

Table	Function of table
IBNXLA	IBN Translation. This table specifies the digit translation of calls that the MDC station end user dials.
KSETFEAT (see note)	Business Set and Data Unit Feature. This table specifies the line features assigned to business sets and data units.
LATAXLA	Equal Access Local Area Transport Access Translation. This table defines the attributes of domestic calls like interLATA or intraLATA and interstate or intrastate. The system compares the attributes of the calls with the attributes of the carriers in table OCCINFO. This procedure determines which carriers must handle the calls.
LENFEAT (see note)	Line Features. This table lists the features assigned to a line in table LENLINES. At the MAP terminal, a range on field DF in table LENFEAT displays a list of features loaded on the switch.
OCCINFO	Equal Access Other Common Carrier Information. This table defines the attributes of carriers that serve the DMS-100 switch. The table screens calls for carrier compatibility.
OPTOPT	Incompatible Options. This table is read-only. For each line option, this table lists the other line options that cannot function with this line option. Options AUL and MAN are examples of options that cannot function together. The addition of lines by service orders (SERVORD), causes the system to reference this table. This procedure prevent the addition of options that cannot function together to the same line.
LCCOPT (see note)	LCC Compatible Options. This table is read-only. The operating company cannot modify this table. The addition of lines by service orders (SERVORD), causes the system to reference this table. This procedure checks the compatibility between line class codes (LCC) and options.
VFGDATA	Virtual Facility Group Data. This table specifies data for each VFG that table VIRTGRPS contains. This table does not specify size.
VIRTGRPS	Virtual Facility Groups. This table assigns options to VFGs. Option IntraLATA PIC provides an EA carrier for intraLATA calls for POTS-type VFGs.
XLANAME	List of Translator Names Table Integrated Business Network. Table IBNXLA and table XLANAME control translation.

Note: Data entry for this table occurs through SERVORD. This table does not provide the datafill procedure or an example.

IntraLATA PIC Enhancements (continued)

Datafilling table CXGRP

Datafill for IntraLATA PIC Enhancements for table CXGRP appears in the following table. When dump and restore occurs, this table requires a reformat procedure for data integrity. Field EWATSI has a value of “No."

The fields that apply to IntraLATA PIC Enhancements appear in this table. See the data schema section of this document for a description of the other field.

The IntraLATA PIC for EWATS function adds the field EWATSI to this table. Field EWATSI contains subfield LWICINFO. Subfield LWICINFO has a maximum of five carrier and bandset combination names. Enter the bandset in table BANDSETS.

Datafilling table CXGRP (Sheet 1 of 4)

Field	Subfield or refinement	Entry	Description and action
EWATSI		Y or N	Enhanced WATS for intraLATA. To provide the Enhanced WATS for intraLATA feature for this customer group, enter Y. Enter data in refinement LWICINFO and subfields CARRIER and BANDSET. To disable Enhanced WATS for intraLATA, enter N. To provide EWATSI, this table must contain an assignment for field EWATS.
	LWICINFO	vector of up to 5 carrier-bandset pairs	IntraLATA WATS interexchange list. This field is a vector. This field contains a maximum of five combinations of CARRIER and BANDSET information. This field can contain a maximum of five pairs.
	CARRIER	alphanumeric (up to 16 characters)	Carrier name. Table OCCNAME contains a list of correct carrier names.
	BANDSET	alphanumeric (up to 8 characters)	Bandset. Enter the allowable calling area that table BANDSETS defines.

IntraLATA PIC Enhancements (continued)

Datafilling table CXGRP (Sheet 2 of 4)

Field	Subfield or refinement	Entry	Description and action
PXOPTION		ATC, CLI, CPH, FANI, FNT, HOT	Customer group options. Enter a maximum of 14 options for each group as follows: • For the automatic time and charge option, enter ATC. • For the calling line identification option, enter CLI. • For the called party hold option, enter CPH. • For the flexible automatic number identification option, enter FANI and datafill refinement FANIDIGS. • For the free number terminating option, enter FNT. • For the hotel/motel option, enter HOT.

IntraLATA PIC Enhancements (continued)

Datafilling table CXGRP (Sheet 3 of 4)

Field	Subfield or refinement	Entry	Description and action
PXOPTION (continued)		LCDR, LPIC, ONI, RMR, RMT, TDN, TDV, or WATS	• For the local call detail recording option, enter LCDR. • For the intraLATA primary inter-LATA carrier option, enter LPIC. Enter refinement CARRIER with the alphanumeric data that identifies the carrier. The datafill of the LPIC option prompts for the LCHOICE field. Special checks occur when SOC goes from IDLE to ON. The checks make sure SOC is active for the first time after a one night process (ONP). After an ONP, field LCHOICE is Y when the LPIC option is available. • For the operator number identification option, enter ONI. • For the answer supervision local calls option, enter RMR. • For the answer supervision toll calls option, enter RMT. • For the toll denied option, enter TDN. • For the toll diverted option, enter TDV. • For the WATS service option, enter WATS. Enter data in refinement TYPEWATS.
	FANIDIGS	numeric (00 to 99)	Flexible automatic number identification digits. When field FANI in table OCCINFO is Y, enter data in this refinement. Enter the flexible automatic number identification (FANI) digit pair to outpulse to the carrier.
	CARRIER	alphanumeric (a maximum of 16 characters)	Carrier name. When the entry in refinement PXOPTION is LPIC, enter data in this refinement. Enter the intraLATA carrier name. Table OCCNAME contains a list of correct carrier names.

Datafilling table CXGRP (Sheet 4 of 4)

Field	Subfield or refinement	Entry	Description and action
	LCHOICE	Y or N	The LCHOICE entry (Y or N) determines when the LPIC subscriber can dial 10XXX/101XXXX codes. In the LCHOICE field, enter Y or N. This field does not have a default value.
	TYPEWATS	INWATS, OUTWATS, or TWWATS	Type of WATS. If the entry in refinement PXOPTION is WATS, enter this refinement. For outgoing WATS or two-way WATS, enter OUTWATS or TWWATS in the order given. Enter refinements TREAT and OWATZON. For incoming WATS, enter INWATS. Additional refinements do not require data entry.
	TREAT	alphanumeric (a maximum of 4 characters)	Treatment. Enter the unauthorized OUTWATS call treatment (for example, UNOW).
	OWATZONE	numeric (0 to 12)	OUTWATS zone. Enter the zone assigned to this WATS trunk group.

Datafill examples for table CXGRP

Sample datafill for table CXGRP appears in the following examples.

Example 1

Sample datafill for the IntraLATA PIC Enhancements Phase I and LATAXLA Override functions appears in the following example.

MAP example for IntraLATA PIC Enhancements Phase I and LATAXLA Override

```
CUSTKEY
                SPB
CTD   FCTDNTER   CARRIERS   FCTDNTRA   CARRIERS   CARRIERS   CARRIERS
CARRIERS   EWATS   PXOPTION   CARRIER   LCHOICE   PXOPTION
_____________________________________________________________________

69
                N
N   Y   $   Y   TEST   C111   SOR323   $
N   LPIC   C222   Y   $
```

IntraLATA PIC Enhancements (continued)

Example 2

Sample datafill for the IntraLATA PIC for EWATS function appears in the following example.

MAP example for IntraLATA PIC for EWATS

```
CUSTKEY
                SPB
                                                                    CTD
                                                                FCTDNTER
                                                                FCTDNTRA
                                                                   EWATS
                                                                PXOPTION
-------------------------------------------------------------------------
    51
              N
                                                                      N
                                                                      N
                                                                      N
Y EOWATS UNDT Y Y 0 LATA1 (C541 0THRU1) $
Y (C522 0THRU1) $
                                                        (    RMR )    $
```

Datafilling table LATAXLA

Datafill for IntraLATA PIC Enhancements for table LATAXLA appears in the following table. The fields that apply to IntraLATA PIC Enhancements appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table LATAXLA (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Description and action
LATACODE		see subfields	LATA code. This field is the key to table LATAXLA. This field has subfields LATANM and DIGITS.
	LATANM	alphanumeric (16 characters)	Calling LATA name. Enter the LATA name defined in table LATANAME.

Datafilling table LATAXLA (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Description and action
	DIGITS	numeric (a maximum of 18 digits)	Dialed digits. Enter the digits (NPA or NPANXX) dialed by the originator of the call. Enter the digits to which one of the following sets of attributes applies: • IntraLATA, interstate • InterLATA, interstate • InterLATA, intrastate ***Note:*** The LATA and STATE fields define these attributes. Enter inter-LATA and intra-NPA codes with NPANXX. The DMS-switch assumes that a numbering plan area (NPA) or NPANXX code that the DIGITS field does not define has the attributes intraLATA, intrastate. These attributes are the default entry. The DIGITS field allows the DMS switch to identify NPAs and ambiguous codes. The system can perform this action when the system determines the call attributes for carrier screening.
LATA		INTER or INTRA	LATA call attribute. Enter INTER or INTRA to define an NPA or NPANXX code as interLATA or intraLATA.
STATE		INTER or INTRA	State call attribute. Enter INTER or INTRA to define an NPA or NPANXX code as interstate or intrastate.
EATYPE		STD, CORRIDOR, PRIVILEGE, or NON_EA	Equal access call type. Enter the correct EA call type to identify the call as standard (STD), CORRIDOR, PRIVILEGE, or NON_EA. InterLATA calls can be CORRIDOR calls. IntraLATA calls can be NON_EA calls. InterLATA calls and intraLATA calls can be PRIVILEGE calls.

Datafill example for table LATAXLA

Sample datafill for table LATAXLA appears in the following example.

IntraLATA PIC Enhancements (continued)

MAP example for table IntraLATA PIC Enhancements

```
                    LATACODE  LATA STATE    EATYPE
_____________________________________________________

        LATA1         212220 INTRA INTER       STD
        LATA1         416589 INTER INTER       STD
        LATA2         212220 INTRA INTER    NON_EA
        LATA2        4165898 INTER INTER PRIVILEGE
        LATA2            518 INTER INTER  CORRIDOR
        LATA3         416590 INTRA INTRA PRIVILEGE
```

Datafilling table OCCINFO

Datafill for IntraLATA PIC Enhancements for table OCCINFO appears in the following table. The fields that apply to IntraLATA PIC Enhancements appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table OCCINFO (Sheet 1 of 7)

Field	Subfield or refinement	Entry	Description and action
CARRNAME		alphanumeric (1 to 16 characters)	Carrier name. Enter the carrier name or an abbreviation of the carrier name defined in table OCCNAME.
CARRNUM		numeric (0000 to 9999)	Carrier number. Enter the carrier access code (CAC). The CAC is equal to the XXXX digits in the equal access (EA) prefixes (10XXXX or 950YXXXX).

Datafilling table OCCINFO (Sheet 2 of 7)

Field	Subfield or refinement	Entry	Description and action
ACCESS		EAP, FGC, INTERIM, OTC, TRANS, or NONE	Access arrangement. Enter one of the following access types that the carrier accepts to handle a call: • EAP (equal access plan 10XXXX calls with feature group D (FGD) signaling) • FGC (10XXXX calls with feature group C (FGC) signaling) • INTERIM (950YXXXX calls with FGD signaling) • OTC (10XXXX calls with FGD signaling) • TRANS (both 950YXXXX and 10XXXX calls with FGD signaling) • NONE (no access)
ORIGCARR		Y or N	Original carrier. Enter Y (yes) to define this carrier name as the original carrier. For other conditions, enter N (no). Define one carrier name as the original carrier for each carrier number. When two or more carrier names have the same carrier number, define one of the duplicate carriers. Enter Y in this field to define one of the duplicate carriers as the original carrier.
INTER		Y or N	Inter-local access and transport areas (LATA). Enter Y when the carrier can handle traffic between LATA. In the carrier cannot handle traffic between LATA, enter N.
INTNTL		Y or N	International. Enter Y when the carrier can handle international traffic. When the carrier cannot handle international traffic, enter N.
INTRA		Y or N	IntraLATA. Enter Y when the carrier can handle traffic in the same LATA. When the carrier cannot have traffic in the same LATA, enter N.
ANI		Y or N	Automatic number identification (ANI). Enter Y when the carrier requires ANI digits sent with the called number. For other conditions, enter N.

IntraLATA PIC Enhancements (continued)

Datafilling table OCCINFO (Sheet 3 of 7)

Field	Subfield or refinement	Entry	Description and action
FANI		Y or N	Flexible automatic number identification (FANI). Enter Y when the carrier can receive FANI information digits instead of ANI information digits. For other conditions, enter N.
ONISCRN		Y or N	Operator number identification (ONI) screening. Enter Y when ONI traffic requires screening by an operator or centralized automatic message accounting (CAMA) position. Enter Y when the traffic requires screening before the traffic outpulses to the carrier. For other conditions, enter N.
AD1		Y or N	Abbreviated dialing number one. Enter Y when the abbreviated dialing can access the carrier. When abbreviated dialing cannot access the carrier, enter N.
OVERLAP		Y or N	Overlap. Enter Y when the carrier receives digits from the access tandem (AT) or the equal access end office (EAEO) with overlap outpulsing. For other conditions, enter N.
INTERS		Y or N	Inter-state. Enter Y when the carrier can handle traffic between states. When the carrier cannot handle traffic in the same state, enter N.
INTRAS		Y or N	Intra-state. Enter Y when the carrier can handle traffic in the same state. For other conditions, enter N.

Datafilling table OCCINFO (Sheet 4 of 7)

Field	Subfield or refinement	Entry	Description and action
TERMREC		LONG or SHORT	Terminating access record. Enter the length of the terminating access record produced for the carrier. The LONG format includes the same information fields as the SHORT format and the following fields: • service observed • operator action • service feature • overseas indicator • carrier connect date • carrier connect time • elapsed time from carrier • interLATA or international carrier (IC/INC) call event status When the additional fields are not necessary, enter SHORT for the short format. Refer to the automatic message accounting (AMA) reference guide that applies to this feature for a description of terminating records.
OCCSEPNO		numeric (0 to 127)	Other common carrier (OCC) separation number. Enter the OCC separation number for the carrier in the traffic separation measurement system (TSMS).
OPSIG		FGRPC, FGRPD, or NONE	Operator signaling. Enter the type of operator signaling that the carrier provides. This field does not require two carriers with the same access code in table OCINFO to provide transitional or EAP carriers. The FGC operator signaling uses the transitional or EAP carriers.
PICIND		Y or N	Presubscription indicator. Enter Y when the carrier receives the presubscription indicator. For other conditions, enter N.

IntraLATA PIC Enhancements (continued)

Datafilling table OCCINFO (Sheet 5 of 7)

Field	Subfield or refinement	Entry	Description and action
NOA950		Y or N	Nature of address indicator. Enter Y to specify that the nature of address indicator in the calling party number parameter is a binary value. The binary value is 1111110. The binary value is network specific: 950+ call from public station, hotel/motel line, or non-equal access end office (EAEO). For other conditions, enter N. The default value of N does not change the current operation of the switch.
INCCPN		Y or N	Include calling party number. Enter Y when a change in the current operation of the switch is not required. Enter N to remove the calling party number parameter from an initial address message (IAM) sent to this carrier. The default value for this field is Y.
DTMFIND		Y or N	Rotary dial or dual-tone multifrequency (DTMF) indicator. Enter Y when the carrier receives the DTMF indicator on operator services calls that route directly to the carrier. For other conditions, enter N. Field DTMFIND is active when feature Equal Access Operator Services Signaling (EAOSS) is present.

Datafilling table OCCINFO (Sheet 6 of 7)

Field	Subfield or refinement	Entry	Description and action
OPSERV		Y or N	Operator services. Enter Y when the carrier accepts EAOSS. Enter Y when the carrier does not require the operating company to process 10XXX+0 and 00 calls to the carrier. Enter N when the carrier does not accept EAOSS. This condition applies when this carrier requires the operating company to process 10XXX+0 and 00 calls to the carrier. For feature group C (FGC) carriers that provide operator services and do not accept feature group D (FGD) signaling, set field OPSERV to N. This action indicates that the carrier cannot accept EAOSS. The Traffic Operator Position System (TOPS) access tandem (AT) changes EAOSS signaling to FGC signaling for these carriers. Field OPSERV is active when feature Equal Access Operator Services Signaling (EAOSS) is present.
CACBLOCK		Y or N	Carrier access code (CAC) blocking. Enter Y when the carrier blocks the calls dialed with a CAC. For other conditions, enter N. Field CACBLOCK is active when feature Carrier Access Code Blocking for IC/INC is present.
CTDOA		Y or N	Carrier toll deny operator assisted. Enter Y to block the operator assisted (OA) calls to this carrier. This entry applies when the subscriber has the carrier toll denied (CTD) line option for this specified carrier. For other conditions, enter N. The default value for this field is N.
CMCMON		Y or N	Cellular mobile carrier (CMC) monitor. Enter Y to monitor the connection between the CMC and the interLATA or international carrier (IC/INC). Enter Y to place the called directory number in the originating IC/INC and terminating CMC billing records. For other conditions, enter N.

IntraLATA PIC Enhancements (continued)

Datafilling table OCCINFO (Sheet 7 of 7)

Field	Subfield or refinement	Entry	Description and action
SCRNWATS		Y or N	Enhanced wide area telephone service (WATS) screening. Enter Y when the carrier requires band screening on digits dialed from an enhanced WATS line. For other conditions, enter N. Field SCRNWATS applies when feature Enhanced WATS Operation (POTS) is present.
CRMCRA		Y or N	Circuit reservation and acknowledgement messages. Enter Y if a circuit reservation message (CRM) transmits from an access tandem (AT) to an inter-exchange carrier (IEC) on FGD calls. The FGD calls route over signaling system 7 (SS7) access-to-carrier (ATC) trunks. Enter Y when the AT receives a subsequent circuit reservation acknowledgement (CRA) message from the IEC on FGD calls. The FGD calls are incoming to the AT on multifrequency (MF) intertoll (IT) or superCAMA (SC) trunks. For other conditions, enter N.
ATPINCL		Y or N	Access transport parameter (ATP) included. Enter Y when the outgoing ISDN user part (ISUP) initial address message (IAM) contains the ATP. Enter N when the ISUP IAM does not contain the ATP. This field applies to TR444 calls. The TR444 calls are basic rate access (BRA) to ISUP calls.
INTRAOPR		Y or N	IntraLATA operator. Enter Y when the carrier can handle 0- intraLATA operator calls. For other conditions, enter N. The default value for this field is N.
INTRCOIN		Y or N	IntraLATA toll coin. This field indicates when a carrier can handle intraLATA toll coin traffic. The default value for this field is N.
CARRIER		alphanumeric	IntraLATA toll coin route carrier. This field indicates the carrier that handles intraLATA toll coin traffic. When the route carrier can handle intracoin traffic, the value of field INTRCOIN is Y. The default value for this field is NILC.

Datafill example for table OCCINFO

Sample datafill for table OCCINFO appears in the following example.

MAP example for table IntraLATA PIC Enhancements

```
CARRNAME CARRNUM ACCESS ORIGCARR INTER INTNTL INTRA ANI FANI ONISCRN
AD1
OVERLAP INTERS INTRAS TERMREC OCCSEPNO OPSIG PICIND NOA950 INCCPN
DTMFIND
OPSERV CACBLOCK CTDOA CMCMON SCRNWATS CRMCRA ATPINCL INTRAOPR
INTRCOIN CARRIER
_____________________________________________________________________
CARR2    320     EAP    Y        Y     Y      Y     Y   N    N
N
Y       Y      N     LONG     14       FGRP  N       N      Y       N
N      N        N     N       N        N      N       N Y       CARR1
```

Datafilling table LCCOPT

Datafill for IntraLATA PIC Enhancements for table LCCOPT appears in the following table. The options that apply to IntraLATA PIC Enhancements appear in this table. See the data schema section of this document for a description of the other fields.

When you add lines trough service orders (SERVORD), the system references table LCCOPT. This reference makes sure that LCC and options can function together. This check prevents the addition of options that cannot function together to the same line.

The tuple 1FR for the IntraLATA PIC Enhancements Phase I function describes compatible options CTD, FCTDNTER, and FCTDNTRA.

IntraLATA PIC Enhancements (continued)

The tuple EOW for the IntraLATA Enhanced EWATS function describes compatible options EWAL and EWALI.

Field descriptions

Field	Subfield or refinement	Entry	Description and action
LCC		alphanumeric	Line class code. This key field contains one LCC per record.
COMPAT		COMPAT_ OPTION_LIST	Compatible line options. This field contains the options. These options function with the LCC specified in field LCC.

Datafill example

Sample datafill for table IntraLATA PIC Enhancements appears in the following example.

MAP example for table IntraLATA PIC Enhancements

```
LCC
                  COMPAT
_____________________________________________________________________________
1FR
(ATC) (AUL) (BNN) (CDR) (CFW) (CIR) (CLF) (CLI) (COD) (CWT)
(DGT) (DLH) (DNH) (DOR) (DTM) (ELN) (ESL) (FIG) (FNT) (FRO)
(FRS) (FSR) (GND) (HOT) (INT) (LOD) (LOR) (MAN) (MLH) (NDC)
(NLT) (NOH) (OFR) (OFS) (ONI) (PLP) (RMB) (RMP) (RSP) (RSUS)
(SC1) (SC2) (SDY) (SHU) (SLU) (SPB) (SUS) (TDN) (TES) (3WC)
(RMR) (RMS) (WML) (DENYU3WC) (CTD) (FCTDNTER) (FCTDNTRA) $

PSET               (SLQ)
RES                 (FTS)
IBN                 (FTS)
EOW                 (EWAL) (EWALI)
```

Datafilling table OPTOPT

Datafill for IntraLATA PIC Enhancements for table OPTOPT appears in the following table. The options that apply to IntraLATA PIC Enhancements appear in this table. See the data schema section of this document for a description of the other fields.

For each line option, table OPTOPT lists the other line options that do not function together. For the IntraLATA PIC for Enhanced EWATS function,

table OPTOPT lists the following options. These options cannot function with options EWAL and EWALI:

- PIC
- LPIC
- INTPIC
- CTD
- FCTNTRA
- FCTNTRA

Datafilling table OPTOPT

Field	Subfield or refinement	Entry	Description and action
OPTION		alphanumeric	Line option. This key field contains one line option for each record.
INCOMPAT		INCOMPAT_OPTION_LIST	Incompatible options. This field contains the line options that do not function with the line option specified in the key field.

Datafill example for table OPTOPT

Sample datafill for table OPTOPT appears in the following example.

MAP example for table OPTOPT

```
OPTION
                INCOMPAT
_____________________________________________________________

CTD  (EWAL) (EWALI) (AUL)  (CSDO)  (LDTPSAP)  (TDN)  (TDV)
(FCTDNTER)  (FCTDNTRA)  $

EWAL
   (CTD)  (FCTDNTER)  (FCTDNTRA)  (INTPIC)  (LPIC) (PIC)   $
EWALI
   (CTD)  (FCTDNTER)  (FCTDNTRA) (INTPIC)  (LPIC) (PIC) $
```

Datafilling table VFGDATA

Datafill for the Phase I function of the IntraLATA PIC Enhancements feature for table VFGDATA appears in the following table. The options that apply to

IntraLATA PIC Enhancements (continued)

IntraLATA PIC Enhancements appear in this table. See the data schema section of this document for a description of the other fields.

The IntraLATA for EWATS function does not affect this table.

Datafilling table VFGDATA

Field	Subfield or refinement	Entry	Description and action
KEY		see subfields	Key. This field has subfields VFGNAME and TYPEDIR.
	VFGNAME	alphanumeric	Virtual facility group (VFG) name. This field contains the name assigned to the VFG in table VIRTGRPS.
	TYPEDIR	IBNVI, IBNVO, POTSVI, POTSVO, E911VI, or E911VO	Type and direction. This field contains the type and direction for the Integrated Business Network (IBN). An entry outside of the range indicated for this field is not correct.
DATA		see subfield	Data. This field has subfield TYPEDIR.
	TYPEDIR	IBNVI, IBNVO, POTSVI, E911VI, or E911VO	Type and direction. This field contains the type and direction for the IBN. An entry outside of the range indicated for this field is not correct.

Datafill example for table VFGDATA

Sample datafill for table VFGDATA appears in the following example.

MAP example for table IntraLATA PIC Enhancements

```
          KEY
                                                              DATA
_____________________________________________________________________
OWZNE1 POTSVI
POTSVI 6211234 8 Y $

RAGGEE  IBNVI
IBNVI 7777777 COMKODAK 0 0 0 N Y Y $

  INW1 POTSVI
POTSVI 6137224001 0 N $

CENVFG  IBNVI
IBNVI 7772000 CENTESN 0 0 0 N Y Y $

BRAVFG  IBNVI
IBNVI 9960000 BRAMESN 0 0 0 N Y Y $

LONVFG  IBNVI
IBNVI 9621111 LONDESN 0 0 0 N Y Y $

GOCVFG  IBNVI
IBNVI 6139905555 GOC990 0 0 0 N Y N $

E911VFG  E911VI
E911VI 118 621 613 123 Y Y $
```

Datafilling table VIRTGRPS

Datafill for the Phase I function of the IntraLATA PIC Enhancements feature for table VIRTGRPS appears in the following table. The options that apply to IntraLATA PIC Enhancements appear in this table. See the data schema section of this document for a description of the other fields.

IntraLATA PIC Enhancements (continued)

The IntraLATA for EWATS function does not affect this table.

Datafilling table VIRTGRPS (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Description and action
KEY		see subfield	Virtual facility group (VFG) key. This field is the key to table VIRTGRPS. This field has subfield VIRTGRP.
	VIRTGRP	alphanumeric (1 to 6 characters) or blank	Virtual facility group. When the entry is the first entry for the VFG, enter a name that the user defines. The addition of a tuple defines the name in use in other tables that require VFGs. When the entry is not the first entry for the VFG, leave this field blank.
DATA		see subfields	Virtual facility group data. This field has subfields MEMBERS and INCTYPE.
	MEMBERS	see subfields	Virtual facility group members. This subfield contains refinement VFGTYPE, and subfields USESGRP and SIZE.
	VFGTYPE	SIZE or USES	Virtual facility group type. When this entry is the first entry for the VFG, enter SIZE. When this entry is not the first entry, enter USES.
	SIZE	0 to 2048	Size. Enter this refinement when the value of subfield VFGTYPE is SIZE. Enter the number of simultaneous accesses allowed for the VFG.

Datafilling table VIRTGRPS (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Description and action
	USESGRP	alphanumeric or blank	Virtual facility group name. Enter this refinement when the value of VFGTYPE is USES. The VFG name is the name of the VFG specified in table VIRTGRPS. This entry indicates how to provide virtual two-way trunks. This entry indicates how to associate more than one set of screening data with the same set of virtual circuits. This entry can indicate the two conditions. When the entry is not the first entry for the VFG, leave this field blank.
	INCTYPE	E911, IBN, NIL, POTS, or blank	Incoming type. When this is the first entry for the VFG, perform one of the following steps: Enter E911 to terminate 911 calls from an end office to an E911 tandem. These call occur through incoming ISDN user part (ISUP) or super centralized automatic message accounting (SuperCAMA) trunks. The system translates calls to an E911 VFG. The system routes the calls to a primary public safety answering point (PSAP). The PSAP depends on the directory number (DN) of the subscriber. Enter IBN when the call enters the Integrated Business Network (IBN) translation environment. Enter NIL when the VFG does not have associated screening information. Enter POTS when the call enters the plain POTS translation environment. When the entry is not the first for the VFG, leave the subfield blank.

Datafill example for table VIRTGRPS

Sample datafill for table VIRTGRPS appears in the following example.

IntraLATA PIC Enhancements (continued)

MAP example for table VIRTGRPS

```
   KEY                                                    DATA
OPTIONS
_____________________________________________________________

OWAT1                SIZE    6 POTS     0131111   34 Y  $
```

Datafilling table XLANAME

Datafill for the Phase I function of the IntraLATA PIC Enhancements feature for table XLANAME appear in the following table. The options that apply to IntraLATA PIC Enhancements appear in this table. See the data schema section of this document for a description of the other fields.

The IntraLATA for EWATS function does not affect this table.

Datafilling table XLANAME (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Description and action
XLANAME		alphanumeric (1 to 8 characters)	Translator name. Enter the name assigned to the customer, feature, or preliminary translator.

Datafilling table XLANAME (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Description and action
DEFAULT		see subfield TRSEL in table IBNXLA	Default data. This field is a vector. This field has translation selector subfield TRSEL and refinements that depend on this selector. This field is the same as field RESULT in table IBNXLA. See table IBNXLA for a complete description of field RESULT and refinements. ***Note:*** Large numbers of TRSEL selector values and corresponding refinements do not allow this table to produce the RESULT refinement descriptions.
MAXDIG		9, C, or F	Maximum digit range. This field indicates the range of accepted values for the digilator portion of the table IBNXLA key of the specified translator. Enter 9 to specify range of 0 to 9. The North American systems use this value. Enter C to specify range of 0 to 9, A, B, and C. The Australian systems use this value. Enter F to specify range of 0 to 9, A, B, C, D, E, and F. The Australian systems use this value. Entries other than 9, C, or F are not correct. When field MAXDIG contains data for a specified tuple, changes to the MAXDIG value require the deletion of the complete tuple. Delete the complete tuple and enter the tuple again with a new MAXDIG value. The default MAXDIG value is 9.

Datafill example for table XLANAME

Sample datafill for table XLANAME appears in the following example.

IntraLATA PIC Enhancements (continued)

MAP example for table XLANAME

```
XLANAME
DEFAULT
MAXDIG
_____________________________________________________________________________
WARK
                                              (  FTR 79     GIC )$
     9
```

Tools for verifying translations

The IntraLATA PIC Enhancements feature does not use tools for verifying translations.

SERVORD

SERVORD limits

The following SERVORD limits apply to the IntraLATA PIC Enhancements Phase I function:

- Options FCTDNTER and FCTDNTRA and the current Carrier Toll Denied (CTD) option do not function with CTD functionality. The FCTD options added to the list of options that are not compatible for the CTD option follow:
  - — Automatic Line (AUL)
  - — Circuit Switched Digital Data Switch (CSDO)
  - — Line Appearance Digital Trunk Public Safety Answering Point (LDTPSAP)
  - — Toll Denied (TDN)
  - — Toll Diversion (TDV)
- A subscriber can have options FCTDNTER and FCTDNTRA or option CTD. These FCTD options do not function with CTD. Table OPTOPT describes this condition.

The LATAXLA Override functions do not have SERVORD limits.

The following SERVORD limits apply to the IntraLATA PIC for EWATS function:

- The POTS and RES lines can have this option assigned. Option EWALI does not apply to MDC lines.
- This option functions with line class codes (LCC) of Enhanced Outward WATS (EOW), Enhanced Two-Way WATS (ETW), or RES only. This option does not function with line options PIC, LPIC, INTPIC, FCTDNTER, FCTDNTRA, and CTD.
- The assignment of line option Enhanced WATS Access Line (EWAL) must occur. When this option is not present, the following message appears: EWALI NOT ALLOWED UNLESS EWAL IS PRESENT.
- The field LWICLIST in table IBNFEAT and LENFEAT can contain a maximum of five carrier and bandset combination names. Table BANDSETS must contain the bandset name.

SERVORD prompts

The SERVORD prompts that provide IntraLATA PIC Enhancements for a subscriber appear in the following table.

SERVORD prompts for IntraLATA PIC Enhancements (Sheet 1 of 2)

Prompt	Correct input	Description
SONUMBER	Refer to SONUMBER in the “Prompts" table in Chapter 2 for information on correct inputs.	The number of the service order to enter.
DN_OR_LEN	Refer to DN and LEN_OR_LTID in the “Prompts" table in Chapter 2 for information on correct inputs.	Directory number (DN) or line equipment number (LEN). Enter the DN or LEN of the line. For multiple-directory number (MDN) or multi-line hunt (MLH)/distributed line hunt (DLH) members, the following conditions apply. When the user specifies a DN, the system prompts the user for the LEN. When the user enters LEN, the system does not prompt the user for the DN.
OPTION	Refer to the “Line service options" table in Chapter 2 for a list of correct inputs.	Service options the user establishes, modifies, or deletes. The user can specify a maximum of 20 options in a single ADD, ADO, EST, or NEW command.

IntraLATA PIC Enhancements (continued)

SERVORD prompts for IntraLATA PIC Enhancements (Sheet 2 of 2)

Prompt	Correct input	Description
CARRIER	alphanumeric (1 to 16 characters)	Carrier. See field CARRNAME in table OCCINFO for list of correct carrier names.
LCHOICE	Y or N	Indicates when the subscriber can perform casually dialed intraLATA calls.

SERVORD example for adding IntraLATA PIC Enhancements with option LPIC

A description of the addition of IntraLATA PIC Enhancements to line equipment number (LEN) 00 1 02 01 appears in the following SERVORD example. This example uses the ADO command.

SERVORD example for IntraLATA PIC Enhancements in prompt mode

```
>ADO
SONUMBER:      NOW  76  1  1 AM
>
DN_OR_LEN:
>00 1 02 01
OPTION:
>LPIC
CARRIER:
>CAR1
LCHOICE:
>Y
OPTION:
>$
```

SERVORD example for IntraLATA PIC Enhancements in no-prompt mode

```
>ADO $ 00 1 02 01 LPIC CAR1 Y $
```

SERVORD example for the addition of IntraLATA PIC Enhancements option with option FCTDNTER

A description of the addition of IntraLATA PIC Enhancements to directory number (DN) 6215001 appears in the following SERVORD example. This example uses the ADO command.

SERVORD example for IntraLATA PIC Enhancements in prompt mode

```
>ADO
SONUMBER:     NOW  95  11  6 PM
>
DN_OR_LEN:
>6215001
OPTION:
>FCTDNTER
CARRIER:
>CARR1
CARRIER:
>CARR2
CARRIER:
>$
OPTION:
>$
```

SERVORD example for IntraLATA PIC Enhancements in no-prompt mode

```
>ADO $ 6215001  FCTDNTER  CARR1  CARR2  $  $
```

SERVORD example for the addition of IntraLATA PIC Enhancements option option FCTDNTRA

A description of the addition of IntraLATA PIC Enhancements to DN 6215002 appears in the following SERVORD example. This example uses the FCTDNTRA command.

IntraLATA PIC Enhancements (continued)

SERVORD example for IntraLATA PIC Enhancements in prompt mode

```
>ADO
SONUMBER:     NOW  95  11  6 PM
>
DN_OR_LEN:
>6215002
OPTION:
>FCTDNTRA
CARRIER:
>CARR1
CARRIER:
>CARR2
CARRIER:
>$
OPTION:
>$
```

SERVORD example for IntraLATA PIC Enhancements in no-prompt mode

```
>ADO $ 6215002  FCTDNTRA  CARR1  CARR2  $  $
```

SERVORD example for the addition of the IntraLATA PIC for Enhanced WATS function

This example describes the addition of option EWALI.

SERVORD example for the addition of option EWALI in prompt mode

```
> ado $ 6210050
OPTION:
> ewali
LWICLIST:
> CAR1
BANDSET:
> 0THRU1
LWICLIST:
> car2
BANDSET:
> 1THRU2
LWICLIST:
> car3
BANDSET:
> 3THRU4
LWICLIST:
> car4
BANDSET:
> 4THRU5
LWICLIST:
> carr5
BANDSET:
> 6THRU7
OPTION:
> $
COMMAND AS ENTERED:
ado NOW 96 9 16 PM 6210050  ( EWALI ( CAR1 0THRU1 )
( CAR2 0THRU1 ) ( CAR3 oTHRU1 ) ( CAR4 0THrU1 )
( CAR5 0THRU1 ) ) $
ENTER Y TO CONFIRM,N TO REJECT OR E to EDIT
> y
MACHINES ARE OUT OF SYNC, SERVICE ORDERS NOT ALLOWED
JOURNAL FILE IS INACTIVE, SERVICE ORDERS NOT ALLOWED
SHOULD ORDER BE DONE ANYWAY? (Y OR N)
> y
```

SERVORD example for the addition of option EWALI in no-prompt mode

```
>ADO $ 6215002  EWALI  CAR1  0THRU1 CAR2 1THRU2 CAR3 3THRU4
CAR4 4THRU5 CARR5 6THRU7   $
```

IntraLATA PIC Enhancements (end)

SERVORD example for the query of the DN with option EWALI

This example describes the query of a directory number (DN) with option EWALI.

SERVORD example for the query of the DN with option EWALI in prompt mode

```
> qdn 6210050
------------------------------------------------------
DN:     6210050
TYPE: SINGLE PARTY LINE
SNPA: 613    SIG: DT   LNATTIDX:  191
LINE EQUIPMENT NUMBER:     HOST  02 1 06 05
LINE CLASS CODE:  EOW
LINE TREATMENT GROUP:     0
CARDCODE:  6X17AC    GND: N  PADGRP: STDLN BNV: NL MNO:N
PM NODE NUMBER     :    45
PM TERMINAL NUMBER :    198
OPTIONS:
DGT
Enhanced WATS Access Line (EWAL) data:
   INTRALATA: YES   SAC: YES   BAND: 13
     CARRIER                    BANDSET
     -------                    -------
  1  CAR1                       OTHRU1

Enhanced WATS IntraLATA (EWALI) data:

     CARRIER                    BANDSET
     -------                    -------
  1  CAR1                       OTHRU1
  2  CAR2                       1THRU2
  3  CAR3                       3THRU4
  4  CAR4                       4THRU5
  5  CAR5                       6THRU7
------------------------------------------------------
```

IntraLATA PIC for IBN

Ordering codes

Functional group ordering code: EQA00001

Functionality ordering code: EQA00009

Release applicability

BCS33 and later versions

Requirements

To operate, the IntraLATA PIC for IBN feature has the following requirements:

- BAS Generic, BAS00003
- UDDD Services, UDD00001
- MDC Minimum, MDC00001

Description

The IntraLATA PIC for IBN feature allows the following users and parts to specify in translations a primary carrier. The primary carrier is for intra-local access and transport area (LATA) service.

- Meridian Digital Complex (MDC) stations
- integrated services digital network (ISDN) end users
- private branch exchange (PBX) trunks at an equal access end office (EAEO)

Operation

Before the IntraLATA PIC for IBN feature, the local telephone companies provided intra-LATA service to end users. Equal access (EA) MDC stations and PBX trunks can choose a primary carrier for intra-LATA service. The EA MDC stations perform this action with the IntraLATA PIC for IBN feature. This feature is optional. If intra-LATA carrier translation assignment is not present, the local telephone companies handle the calls of the end users.

Primary inter-LATA carriers (PIC) can be assigned to MDC stations in three places:

- customer group PIC (GPIC) for the group translator of the end user
- network class of service PIC (NPIC) for the station or network class of service (NCOS) preliminary translator of the attendant
- PIC assigned to the MDC station through the Service Order System (SERVORD)

IntraLATA PIC for IBN (continued)

The default carrier is the GPIC. Use the PIC assigned to the preliminary translator of a station to change the PIC.

The SERVORD can assign a single MDC station a preferred carrier. The station PIC overrides carriers the customer group default defines.

An intra-LATA PIC can be assigned to the following MDC stations:

- data units
- Meridian business sets (MBS)
- standard MDC 500/2500 sets
- attendant consoles

Note: A PIC cannot be assigned to an attendant console through SERVORD. The attendant console must use the NCOS or customer group PIC.

The DMS-100 switch has two levels of MDC translators. These levels are the preliminary and customer group translators. If the digits that the subscriber dials are not in the preliminary translator, the system searches the customer group translator. An intra-LATA PIC can be assigned to the preliminary and customer group translators.

The intra-LATA PIC can be assigned to the translators in Table IBNXLA (IBN Translation). In addition to the inter-LATA PIC, the system enters the intra-LATA PIC. The subselector LPIC, the intra-LATA PIC is assigned in subfield OPTION if EA was entered in subfield OPTION. The system enters the intra-LATA carrier identity in the new LPIC option.

Note: Before an EA translation can occur, enter the EA in table IBNXLA in subfield OPTIONS. After you enter EA, enter a designated intra-LATA PIC with option LPIC.

The CHOICE option is part of the EA option or a prompt for the MDC PIC option that SERVORD specifies. The SERVORD specifies the CHOICE option for inter-LATA PIC and intra-LATA PIC. If SERVORD does not specify the PIC option, CHOICE defaults to Y. The default value allows the end user to dial 10XXX.

An MDC call can enter the plain old telephone service (POTS) environment. In this occurrence, the IntraLATA PIC for POTS feature updates the POTS EA translations. For additional information on this feature, refer to the *Core Translations Guide*. The system uses the POTS EA translator.

IntraLATA PIC for IBN (continued)

The IntraLATA PIC for IBN call types and the way the system handles these calls appears in the following table.

IntraLATA PIC for IBN 0-calls

Type of call	Carrier (intra-LATA PIC specified)	Carrier (intra-LATA PIC not specified)
(x) + (1/0) + 7/10 digits intra-LATA (Note 1)	Intra-LATA PIC (Note 2)	Local operating company
(x) + 00-	Inter-LATA PIC	Inter-LATA PIC
(x) + 10XXX + 00-	XXX carrier	XXX carrier
(x) + 10XXX + inter-LATA number	XXX carrier	XXX carrier
(x) + 10XXX + intra-LATA number (Notes 2 and 3)	XXX carrier	XXX carrier
(x) + 0- (Note 4)	Intra-LATA PIC	Local operating company

Note 1: For each LATA calling name, the system must enter INTRA in field LATA in Table LATAXLA (Equal Access Local Access and Transport Area Translation). The LATA calling names include local calling names. Local calls are intra-LATA. A local exchange carrier handles local calls.

Note 2: The system routes these calls to a carrier if the carrier can provide intra-LATA service.

Note 3: Option CHOICE in Table VIRTGRPS (Virtual Facility Groups) assigns an intra-LATA PIC option. Option CHOICE assigns a preliminary translator, a customer group translator, and a single station line.

Note 4: Before IntraLATA PIC for IBN, the system routed 0-calls to the local operating company operator. With IntraLATA PIC for IBN, the system uses office parameter ZERO_MINUS_TO_CARRIER to route 0- calls to an intra-LATA carrier. Feature AF2332, IntraLATA PIC for POTS introduced this office parameter. For additional information on IntraLATA PIC for POTS, refer to the *Core Translations Translations Guide*. Field INTRAOPR in Table OCCINFO (Equal Access Other Common Carrier Information) determines if a carrier can handle intra-LATA 0- calls.

IntraLATA PIC for IBN (continued)

The way the system routes a 0-call appears in the following table. Office parameter ZERO_MINUS_TO_CARRIER and field INTRAOPR determine how the system routes this call.

IntraLATA PIC for IBN 0-calls

Field INTRAOPR value	Office parameter ZERO_MINUS_TO_CARRIER value	Result
Y	Y	Route the call to the intra-LATA PIC.
Y	N	Route the call to the local operating company operator.
N	Y	Route the call to the local operating company operator.
N	N	Route the call to the local operating company operator.

Virtual facility groups

Virtual facility group (VFG) calls that use VFG intra-LATA PIC assign an intra-LATA carrier. To assign an intra-LATA carrier, these calls enter an intra-LATA PIC in subfield OPTIONS in Table IBNXLA. These calls assign this option if option EA was previously assigned to this tuple. Refer to the following figure for information on translations data flow to activate IntraLATA PIC for IBN (VFG).

Note: For the VFG, you must enter the EA option before the assignment of option LPIC.

PBX trunks

The IntraLATA PIC for IBN feature allows PBXs and foreign exchange (FX) trunks to perform the following functions:

- handle incoming and outgoing EA calls
- presubscribe to a PIC and assign Carrier Toll Denied (CTD) to the specified carrier with SERVORD

Presubscription is added in Table CXGRP (Customer Group Options). Refer to Translations Table Flow in this feature description. This section contains

information on translations data flow to activate the IntraLATA PIC for IBN feature (PX trunk).

Note: The PX trunks that point to table CXGRP must specify the EA option. The PX trunks must specify the EA option before the addition of an intra-LATA carrier to Table CXGRP. The trunks must specify this option so that calls for the PX trunks that require LATA information can translate.

ISDN end users

For ISDN end users, digit analysis does not always provide an intra-LATA PIC in translations. In this occurrence, the system accesses Table KSETFEAT (Business Set and Data Unit Feature) to provide the intra-LATA PIC for each ISDN MBS.

Default carrier

The MDC lines and PBX trunks do not use the default carrier that office parameter DEFAULT_CARRIER_OR_TREAT specifies. The office parameter specifies this carrier in Table OFCENG (Engineered Office). An MDC line can be assigned a PIC in Table IBNFEAT (IBN Line Feature) or Table KSETFEAT. If a PIC is not assigned, the system uses the carrier that option EA assigns in Table IBNXLA. The NCOS translator or customer group translator in Table IBNXLA can contain option EA. If the translators do not contain option EA, the system translates EA calls as non-EA calls. If a PBX trunk is not assigned option EA in Table TRKGRP (Trunk Group), the system translates EA calls as non-EA calls.

The default carrier or treatment with the default count do not appear in the EA presubscription report on MDC. The EA presubscription reports for MDC include hunt groups. The report displays each member of a directory number hunt group (DNH) by directory number (DN). Distributed line hunt (DLH) group members and multiline hunt (MLH) group members appear under the same pilot DN. These hunt group members appear with different line equipment numbers (LEN).

Note: The system ignores bridged night number (BNN) DNs. The DNH, DLH, or MLH groups of these DNs account for the DNs.

Translations table flow

The IntraLATA PIC for IBN translations process appears in the following flowcharts. Individual station or customer group table flow for IntraLATA PIC for IBN appear in the first flowchart and data. IntraLATA PIC for IBN for a PX trunk appears in the second flowchart and data. IntraLATA PIC for IBN for a virtual facility group appears in the third flowchart and data.

IntraLATA PIC for IBN (continued)

Descriptions of the IntraLATA PIC for IBN translations tables appear in the following list:

- Table KSETFEAT (Business Set and Data Unit Feature) specifies the line features assigned to business sets and data units. The system accesses this table through MBS LEN and key. The addition of the LPIC feature through SERVORD updates this table for the IntraLATA PIC for IBN feature. Field FEATURE specifies the option LPIC. Field KVAR specifies the intra-LATA carrier name. Table OCCNAME must define the carrier name before you reference the carrier name with option LPIC.
- Table IBNFEAT (IBN Line Feature) specifies the options for a single-line MDC station. The addition of option LPIC through SERVORD assigns the intra-LATA PIC to an individual station. This addition also updates fields DF and FEATURE with the LPIC entry. Field DATA consists of subfield CARRIER. This subfield defines the name of the intra-LATA carrier. Table OCCNAME must define the carrier name before you reference the carrier name with option LPIC.
- Table OCCNAME (Equal Access List of Other Common Carrier Names) specifies the carrier names to establish the spelling standard for other tables. For additional information on table OCCNAME, refer to the data scheme section of this document.

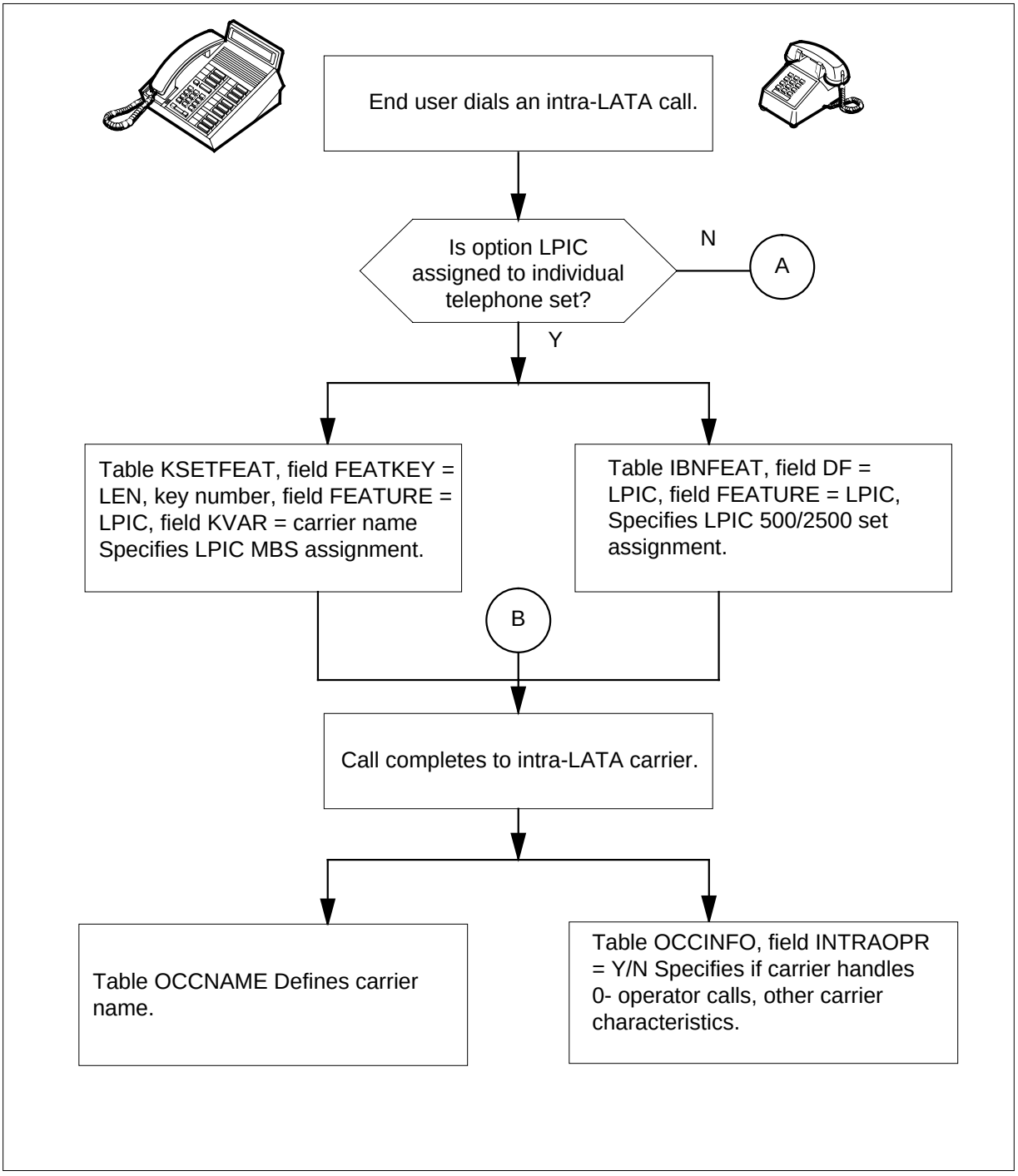
  Note: IntraLATA PIC for IBN requires entry of data in Table OCCNAME to establish the spelling standard for carrier names. Tables OCCINFO, IBNFEAT, KSETFEAT, IBNXLA, CXGRP, and VIRTGRPS identify these carrier names.

- Table OCCINFO (Equal Access Other Common Carrier Information) specifies characteristics of carriers and screens calls for carrier compatibility. These carriers appear in table OCCNAME. Field INTRAOPR determines if a carrier can handle intra-LATA operator calls. These calls include 0- calls. For additional information on table OCCINFO, refer to the data scheme section of this document.
- Table IBNXLA (IBN Translation) specifies the digit translation of calls the MDC station end user dials. Various selectors associate with the digits to define feature and network access codes. The translator selector NET/GEN requires the subselector EA for the preliminary or customer group translator to enable EA translations. The LPIC subselector for the NET/GEN selector is assigned to provide an intra-LATA PIC for the customer group. The intra-LATA PIC for an individual MDC station associates with the NCOS and is assigned through SERVORD. The system updates the entry in Table IBNFEAT. Table OCCNAME must define the carrier name before you reference the carrier name with option LPIC.

IntraLATA PIC for IBN (continued)

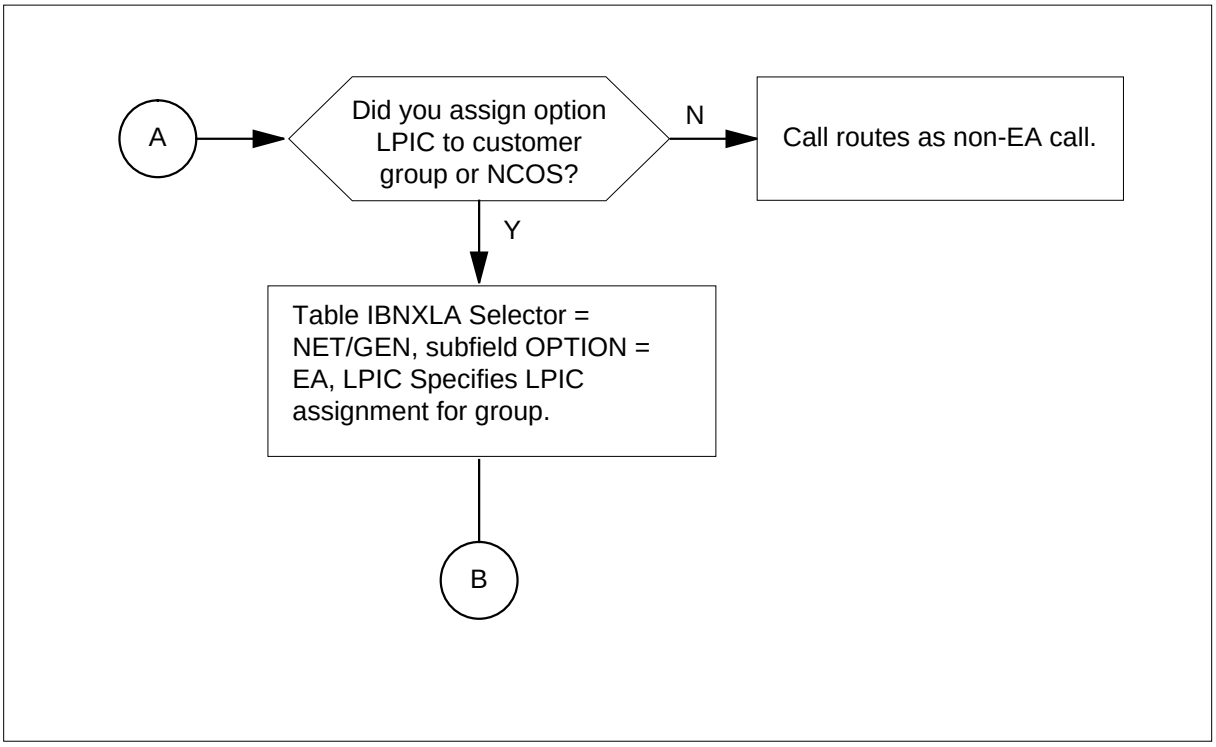
The IntraLATA PIC for IBN translation process appears in the following flowchart.

Table flow for IntraLATA PIC for IBN



IntraLATA PIC for IBN (continued)

Table flow for IntraLATA PIC for IBN (continued)



The datafill content in the previous flowchart appears in the following table. Table OCCINFO has one carrier example for simplification. Normally this table defines the attributes of the carriers that appear in the translations.

Datafill example for IntraLATA PIC for IBN

Datafill table	Example data
KSETFEAT	HOST 00 01 18 01 1 LPIC LPIC CARRA Y
IBNFEAT	HOST 00 01 18 08 0 LPIC LPIC CARRA Y
OCCINFO	CARRA123 FGC Y Y Y N N N Y Y Y Y LONG 0 FGRPC N N N N N N N N N Y N Y
IBNXLA	CXT1 NET N N N 1 Y POTS N Y GEN (EA CARR2 Y 0) (LPIC CARRD)$

Descriptions of the IntraLATA PIC for IBN translations tables appear in the following list:

- Table CXGRP (Customer Group Options) specifies the options for digital PX type trunk groups. The customer group option for IntraLATA PIC for IBN is LPIC. The LPIC is the option for IntraLATA PIC for IBN if the system routes intra-LATA calls through a PX trunk. Table OCCNAME

must define the carrier name before you reference the carrier name with option LPIC.

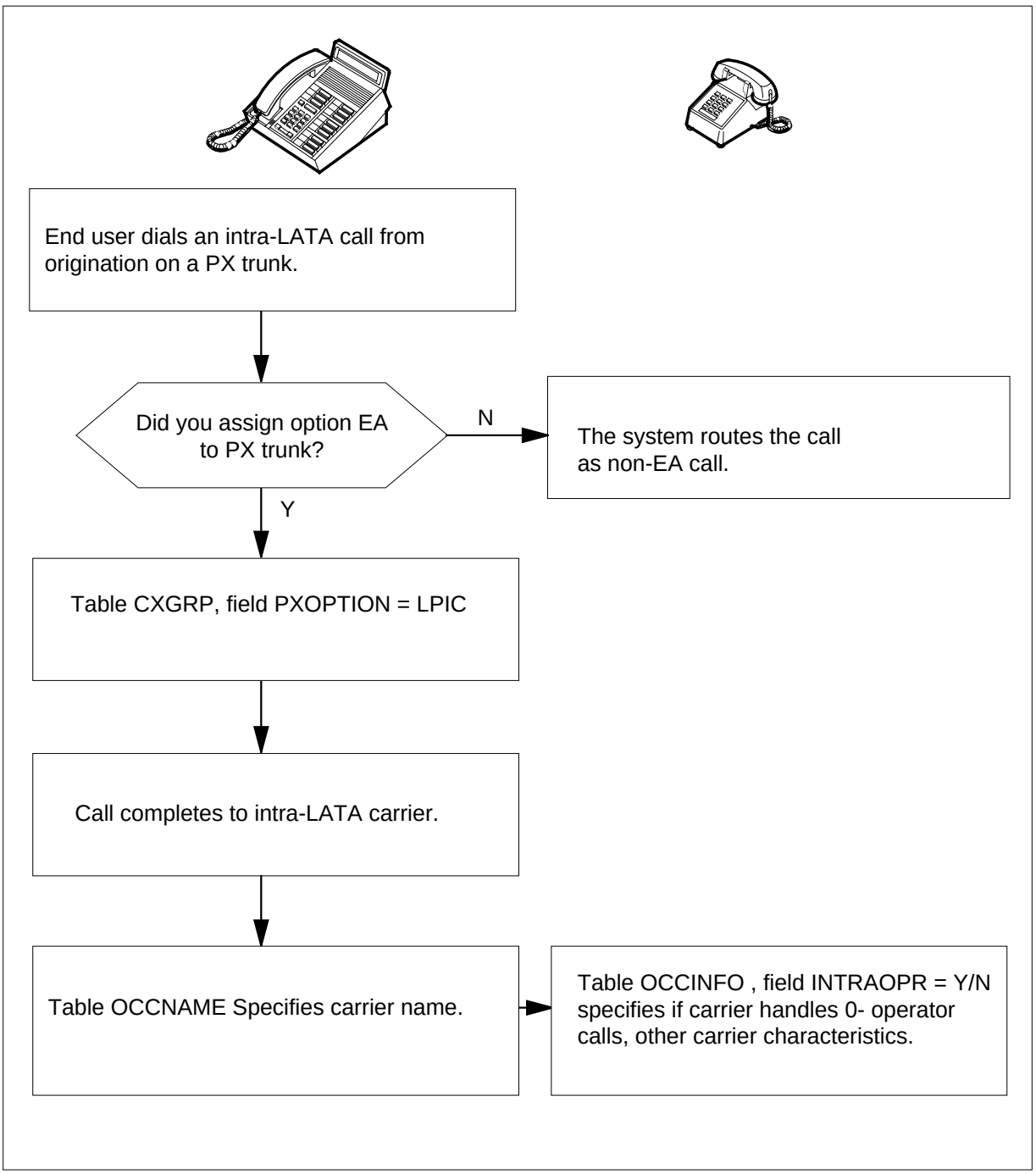
- Table OCCNAME (Equal Access List of Other Common Carrier Names) specifies the carrier names to establish the spelling standard for other tables. For additional information on table OCCNAME, refer to the data scheme section of this document.

  Note: The IntraLATA PIC for IBN feature requires data in Table OCCNAME to establish the spelling standard for carrier names. Tables OCCINFO, IBNFEAT, KSETFEAT, IBNXLA, CXGRP, and VIRTGRPS identify these carrier names.

- Table OCCINFO (Equal Access Other Common Carrier Information) specifies characteristics of carriers that appear in Table OCCNAME. Table OCCINFO screens calls for carrier compatibility. Field INTRAOPR determines if a carrier can handle intra-LATA operator calls. These calls include 0- calls. For additional information on table OCCINFO, refer to the data scheme section of this document.

IntraLATA PIC for IBN (continued)

Table flow for IntraLATA PIC for IBN (PX trunk)



IntraLATA PIC for IBN (continued)

The datafill used in the previous flowchart appears in the following table. Table OCCINFO has one carrier example for simplification. Normally this table defines the attributes of the carriers that appear in the translations.

Datafill example for IntraLATA PIC for IBN

Datafill table	Example data
CXGRP	SPB CTD EWATS PXOPTION 32 N N N (LPIC CARRA) (TDV)
OCCINFO	CARRA123 FGC Y Y Y N N N Y Y Y Y LONG 0 FGRPC N N N N N N N N N Y N Y

Descriptions of the IntraLATA PIC for IBN translations tables appear in the following list:

- Table IBNXLA (IBN Translation) specifies the digit translation of calls the MDC station end user dials. Different selectors associate with the codes to define feature and network access codes. The translator selector NET/GEN requires the subselector EA for the preliminary or customer group translator to enable EA translations. The LPIC subselector for the NET/GEN selector is assigned to provide an intra-LATA PIC for the customer group. The intra-LATA PIC for a separate MDC station that associates with the NCOS is assigned through SERVORD. The system updates this entry in Table IBNFEAT. Table OCCNAME must define the carrier name before you reference the carrier name with option LPIC.
- Table VIRTGRPS (Virtual Facility Groups) specifies information for a VFG. This information includes name, size, direction, and billing number. Assign option EA to the VFG before you assign option LPIC. Option LPIC provides an IPIC for POTS-type VFGs. An IPIC is an equal access carrier for intraLATA calls. Option LPIC provides an IPIC for IntraLATA PIC for IBN. The LPIC information is for the second leg of the call. A VFG is a software mechanism that sizes and limits network access. The VFG eliminates the requirement for hardware or loop-around trunks. The system can carry over an LPIC for the line or customer group PIC. The system can carry over an LPIC for the first leg of translations to the second leg of translations. Assign option IBNPIC in Table VIRTGRPS. If option IBNPIC is not present, the system uses the VFG LPIC assigned in table VIRTGRPS.
- Table VFGDATA (Virtual Facility Group Data) specifies data for each VFG that has an entry in Table VIRTGRPS. This table does not specify the size of each VFG. The system downloads the information in Table VIRTGRPS to Table VFGDATA. The system enters option EA as VFGEA and option LPIC as VLPIC with the carrier names in Table VFGDATA.
- Table OCCNAME (Equal Access List of Other Common Carrier Names) specifies the carrier names to establish the spelling standard for other

IntraLATA PIC for IBN (continued)

tables. For additional information on table OCCNAME, refer to the data scheme section of this document.

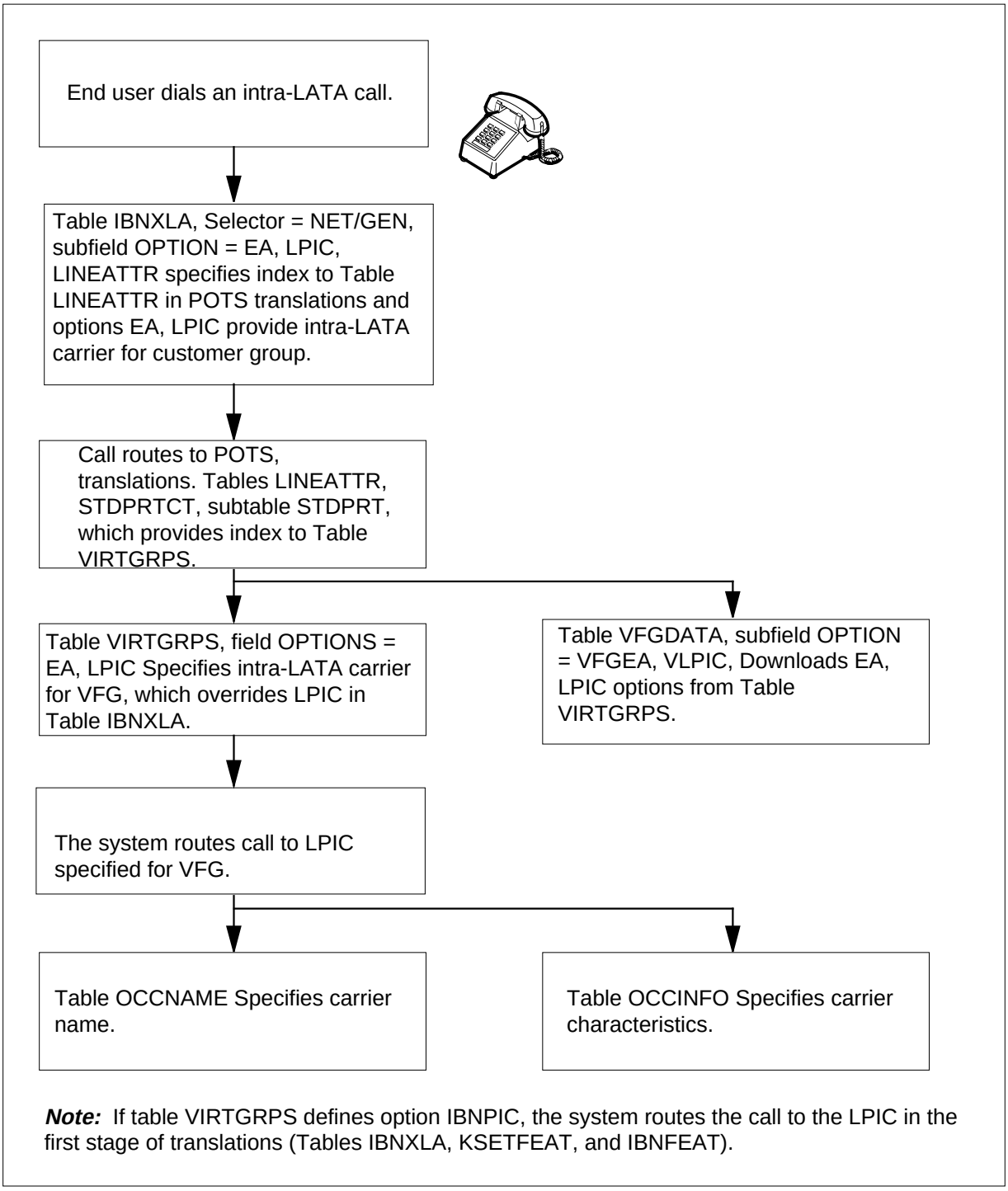
- For additional information on table OCCINFO, refer to the data scheme section of this document.

  Note: IntraLATA PIC for IBN requires the entry of data in Table OCCNAME to establish the spelling standard for carrier names. Tables OCCINFO, IBNFEAT, KSETFEAT, IBNXLA, CXGRP, and VIRTGRPS identify these carrier names.

- Table OCCINFO (Equal Access Other Common Carrier Information) specifies characteristics of carriers that appear in Table OCCNAME. Table OCCINFO screens calls for carrier compatibility. Field INTRAOPR determines if a carrier can handle intra-LATA operator calls. These calls include 0- calls. For additional information on table OCCINFO, refer to the data scheme section of this document.

IntraLATA PIC for IBN (continued)

Table flow for IntraLATA PIC for IBN (VFG)



Note: If table VIRTGRPS defines option IBNPIC, the system routes the call to the LPIC in the first stage of translations (Tables IBNXLA, KSETFEAT, and IBNFEAT).

IntraLATA PIC for IBN (continued)

The datafill in the previous flowchart appears in the following table. Table OCCINFO has one carrier example for simplification. Normally this table defines the attributes of the carriers that the translations specify.

Datafill example for IntraLATA PIC for IBN

Datafill table	Example data
IBNXLA	CXT1 NET N N N 1 Y POTS N Y GEN (EA CARR2 Y 0) (LPIC CARRD)$
VIRTGRPS	KDKVRT SIZE 2 POTS 6137224500 0 Y (EA CARR1 Y) (LPIC CARRB)$
VFGDATA	KDKVRT POTSVI POTSVI 6137224500 0 Y (VFGEA CARR1 Y) (VLPIC CARRB)$
OCCINFO	CARRA123 FGC Y Y Y N N N Y Y Y Y LONG 0 FGRPC N N N N N N N N N Y N Y

Limits

The following limits apply to the IntraLATA PIC for IBN feature:

- The system does not support the IntraLATA PIC for IBN feature for two-way PBX (P2) trunks.
- The system does not support Intra-LATA PICs for each bearer capability and call type for ISDN.
- The IntraLATA PIC for IBN feature cannot be assigned to an attendant console through SERVORD. The IntraLATA PIC for IBN feature must be assigned through the preliminary or customer group translator.
- The preliminary NCOS or customer group translator in Table IBNXLA must have the following data to allow for equal access translation:
  - — field TRSEL contains NET
  - — field NETTYPE contains GEN
  - — subfield OPTION contains EA
- The IntraLATA PIC for IBN feature can be assigned in Table CXGRP. This assignment can occur if you assign option EA to the PBX trunk groups that point to Table CXGRP entry.
- If PIC is not assigned to an end user, subfield CHOICE in Table IBNXLA defaults to Y. This condition allows the end user to dial 10XXX.

Interactions

The interactions between the IntraLATA PIC for IBN feature and other functionalities appear in the following paragraphs.

- Carrier Toll Denied (CTD). The system can deny an MDC station toll access to the carrier that translates a call (line, NCOS, customer group, or VFG intra-LATA PIC). The system denies access if that carrier appears in the CTD list for that MDC station. Option TOLL with the toll denied (TDN) or toll diversion (TDV) restriction can be present on the preliminary or customer group translator. If option TOLL is present, the system overrides CTD on MDC stations in the group.
- Direct Inward System Access (DISA). If an end user dials in on a DISA line, the intra-LATA PIC of that group carries the call.
- Subscriber Services (RES). The system can use the IntraLATA PIC for IBN feature as an option on RES lines.

Interactions

The IntraLATA PIC for IBN feature does not have functionality interactions.

Activation/deactivation by the end user

The IBNPICLIST command is modified to provide database presubscription reporting for MDC intra-LATA PICs. The modification occurs in addition to the current presubscription reporting for MDC. You can enter the IBNPICLIST command at the command interpreter (CI) level of the MAP terminal. The command syntax appears in the following table.

BNPICLIST command parameters and variables

Command	Parameters and variables						
IBNPICLIST	default	both	dnrange	npa	to_nxx	from_nxx	(1)
	all	ibnlines					(2)
		pbxtrunk					(3)
IBNPICLIST	(1)	nosum	both				
	(2)	summary	inter				
	(3)		intra				(end)

IntraLATA PIC for IBN (continued)

IBNPICLIST command parameters and variables

Parameters and variables	Description
all	This parameter indicates that the report must contain every intra-LATA carrier (IEC) in Table OCCNAME (Equal Access List of Other Common Carrier Names). The report must contain every nil carrier (NILC). The report must contain the number of MDC lines and PBX trunks that do not have a PIC.
both	When this parameter is in the second parameter position, this parameter specifies that the report must include PBX trunks and MDC lines. Omission of this entry from the second parameter position forces the system to default to include PBX trunks and MDC lines. When this parameter is in the last parameter position, this parameter specifies that the report must contain information. The information must be for inter-LATA and intra-LATA PICs. Omission of this entry from the last parameter position forces the system to default to report information for inter-LATA and intra-LATA PICs.
carrier	This variable specifies the IEC name for which system generates the report. The IEC name must be entered in Table OCCNAME. If the IEC name is a numeric string. The IEC must be in single quotes.
default	Omission of this entry forces the system to default and report specified MDC lines and PBX trunks. These MDC lines do not have a PIC in Table IBNFEAT or Table KSETFEAT. These PBX trunks do not have a PIC in Table TRKGRP.
dnrange	This parameter specifies that the system generates the report for a specified range of DNs and billing numbers.
from_nxx	This variable specifies the office code in the specified numbering plan area (NPA) for the lower DN range.
ibnline	This parameter specifies that the report must include MDC line information.
inter	This parameter specifies that the report must include inter-LATA information.
intra	This parameter specifies that the report must include intra-LATA information.
nosum	Omission of this entry forces the system to default to display a complete listing.
npa	This variable specifies the NPA for the specified DN range.
pbxtrunk	This parameter specifies that the report must include PBX trunk information.
summary	This parameter specifies that the report must contain carrier names and totals. The report does not contain a list of DNs and billing numbers.
to_nxx	This variable specifies the office code in the specified NPA for the upper DN range.

If you specify the INTER, INTRA, or BOTH parameter, the IBNPICLIST command reports presubscription information for the following:

- inter-LATA PICs
- intra-LATA PICs
- inter-LATA PICs and intra-LATA PICs, in that order

This last parameter is optional.

Note: The IBNPICLIST command works for end users that did not purchase feature package NTXF69AA, IBN - IntraLATA PIC in EAEO.

IBNPICLIST command examples

Examples of IBNPICLIST CI commands appear in the following three figures.

IBNPICLIST CI command with INTER parameter specified

```
CI:
>IBNPICLIST CARRIER1 PBXTRUNK INTER

*** IBN EQUAL ACCESS PRESUBSCRIPTION REPORT ***

START DATE/TIME:    92/06/10  12:13:01

CARRIER:  CARRIER1 INTERLATA
DN/BILLNUM      LEN/CLLI
_____________________________________________________________________________
6136215701      PXTRUNKA
6136215733      PXTRUNKB
6136215908      PXTRUNKX

CARRIER1 INTERLATA COUNT =               31

STOP DATE/TIME:    92/06/10  12:13:01

** END OF IBN EQUAL ACCESS PRESUBSCRIPTION REPORT ***
```

IntraLATA PIC for IBN (continued)

IBNPICLIST CI command with INTRA parameter specified

```
CI:
>IBNPICLIST '123' PBXTRUNK INTRA

*** IBN EQUAL ACCESS PRESUBSCRIPTION REPORT ***

START DATE/TIME:    92/06/10  12:13:01

CARRIER:  '123' INTERLATA
DN/BILLNUM      LEN/CLLI
_____________________________________________________________________________
6136215702      PXTRUNKA
6136215734      PXTRUNKB
6136215909      PXTRUNKX

'123 INTRALATA COUNT =               31

STOP DATE/TIME:    92/06/10  12:13:01

** END OF IBN EQUAL ACCESS PRESUBSCRIPTION REPORT ***
```

IBNPICLIST CI command with BOTH parameter specified

```
CI:
>IBNPICLIST ALL DNRANGE 613 621 722 BOTH
*** IBN EQUAL ACCESS PRESUBSCRIPTION REPORT ***
START DATE/TIME:    92/06/10  12:13:01

CARRIER:  CARRIER1
DN/BILLNUM      LEN/CLLI            PRESUBSCRIBED
-----------------------------------------------------
6137220001      HOST 00 0 00 01     INTER     INTRA
6137220002      HOST 00 0 00 02     INTER
6136215711      PXTRUNK1            INTER
6136215800      PXTRUNK8                      INTRA
6136215979      PXTRUNKY            INTER     INTRA
6136215999      PXTRUNKZ                      INTRA

CARRIER:  CARRIERZ
DN/BILLNUM      LEN/CLLI            PRESUBSCRIBED
-----------------------------------------------------
6137220003      HOST 00 0 00 03     INTER     INTRA
6137220011      HOST 00 0 00 09     INTER

6136215894      PXTRUNK28           INTER
6136215899      PXTRUNK32           INTER
6136215988      PXTRUNKM            INTER     INTRA
6136215998      PXTRUNKN                     INTRA

TOTALS:

CARRIER1 INTRALATA COUNT = 10
CARRIER1 INTRALATA COUNT = 10
CARRIERZ INTRALATA COUNT = 107
CARRIERZ INTRALATA COUNT = 107
------------------------------
TOTAL INTERLATA PRESUBSCRIBED = 656
TOTAL INTERLATA PRESUBSCRIBED = 345
INTERLATA DEFAULT COUNT       = 2319
INTERLATA DEFAULT COUNT       = 2456

STOP DATE/TIME:    92/06/10  12:13:01

** END OF IBN EQUAL ACCESS PRESUBSCRIPTION REPORT ***
```

Billing

The IntraLATA PIC for IBN feature produces a standard 110 Automatic Message Accounting (AMA) billing record. This billing record is for

IntraLATA PIC for IBN (continued)

intra-LATA calls that use the presubscribed carrier. This record is the same billing record for inter-LATA calls that originate in an end office. If the intra-LATA calls complete through the local operating company, the system produces an 006 record. For additional information, refer to the *Bellcore Format Automatic Message Accounting Reference Guide, 297-1001-830*.

The system generates a 110 call code AMA record for direct-dialed, station-paid toll calls. The system routes these calls over an inter-LATA carrier. The record contains carrier information for the application of access charges.

An example of an AMA record that the system generates for call code 110 appears in the following figure. The hexadecimal C at the end of each field indicates that the field is complete. A 1 at the beginning of a structure code indicates no answer.

Call code 110

```
HEX ID:AA STRUCT CODE:40625C CALL CODE:110C SENSOR
TYPE:036C
SENSOR ID:0000000C  REC OFC TYPE:036C  REC OFC
ID:0000000C
DATE:60101C  TIMING IND:00000C STUDY ND:0000000C
ANSWER:0C SERVICE OBSERVED:0C OPER ACTION:0C SERVICE
FEATURE:000C ORIG NPA:613C ORIG NUMBER: 6215002C OVERSEAS
IND:1C TERM NPA:00613 TERM NO:6215001C ANSWER
TIME:1941368C  ELAPSED TIME:000000056C IC/INC
PREFIX:02222C CC DATE:60101C CC TIME:1941346C ELAPSED CC:
000000079C IC/INC EVENT STATUS:010C TRUNK GROUP
NUMBER:30638C ROUTING INDICATOR:0C DIALING INDICATOR:1C
ANI INDICATOR:3C    MODULE CODE:070C BEARER
CAPABILITY:002C NETWORK INTERWORKING:0C SIG OR SUP
SERVICE CAPABILITIES USAGE:112211111111100C
RELEASE CAUSE INDICATOR:00016C MODULE CODE:000C
```

An example of an AMA record the system generates for call code 006 appears in the following figure. If the intra-LATA calls complete through the local operating company, the system produces a 006 record. The hexadecimal C at the end of each field indicates that the field is complete. A 1 at the start of a structure code indicates no answer.

Call code 006

```
HEX ID:AA STRUCT CODE:10002C CALL TYPE:006C SENSOR
TYPE:036C
SENSOR ID:0000000C  REC OFC TYPE:036C  REC OFC
ID:0000000C
DATE:60422C TIMING IND:00000C STUDY IND:2300000C
ANSWER:1C
SERV OBSERVED:0C OPER ACTION:0C SERV FEAT: 000C ORIG
NPA:919C ORIG NO:7224121C OVERSEAS IND: 0C TERM NPA:00918
TERM NO:2411111C CONN TIME:0100354C ELAPSED
TIME:000000000C CKT DATE: 60422C CKT TIME:0100397C
CIRCUIT ID:0000320C
```

Station Message Detail Recording

The IntraLATA PIC for IBN feature does not affect Station Message Detail Recording.

Datafilling office parameters

The IntraLATA PIC for IBN feature affects office parameter ZERO_MINUS_TO_CARRIER in Table OFCENG (Engineered Office). This parameter, and option LPIC, determine if the system routes 0-calls to the PIC operator or to the operating company operator.

The office parameters that the IntraLATA PIC for IBN feature uses appear in the following table. For additional information on office parameters, refer to *Office Parameters Reference Manual*.

Office parameters by IntraLATA PIC for IBN

Table name	Parameter name	Description
OFCENG	ZERO_MINUS_TO_CARRIER	Specifies if the system routes operator calls (0- dialed calls) to the PIC of the end user or to the local operating company for handling. Enter Y to route calls to the PIC operator. Enter N to route calls to the operating company operator.

Datafill sequence

The tables that require datafill to implement the IntraLATA PIC for IBN feature appear in the following table. The tables appear in the correct entry order.

IntraLATA PIC for IBN (continued)

Enter the name of the carrier for the intra-LATA PIC in Table OCCNAME before you enter data in these tables.

Datafill requirements for IntraLATA PIC for IBN

Table	Purpose of table
OCCINFO	Equal Access Other Common Carrier Information. This table defines the attributes of carriers that serve the DMS-100 switch. This table screens calls for carrier compatibility.
VIRTGRPS	Virtual Facility Groups. This table assigns options to VFGs. Option IntraLATA PIC provides an EA carrier for intra-LATA calls for POTS-type VFGs.
VFGDATA (Note 1)	Virtual Facility Group Data. This table specifies data for each VFG that has an entry in table VIRTGRPS. This table does not specify the size.
CXGRP	Customer Group Options. This table assigns options to PBX trunks. The addition of option intra-LATA PIC allows the operating company to route intra-LATA PIC calls through a PBX trunk.
IBNXLA	IBN Translation. This table specifies the digit translation of calls that the MDC station end user dials.
IBNFEAT (Note 2)	IBN Line Feature. This table specifies the options for a single-line MDC station.
KSETFEAT (Note 2)	Business Set and Data Unit Feature. This table specifies the line features assigned to business sets and data units.

Note 1: Table VFGDATA is a read-only table. The system enters data in this table when data are entered in Table VIRTGRPS. A datafill procedure for Table VFGDATA is available.

Note 2: Enter data in this table through SERVORD. A datafill procedure is not available.

Datafilling table OCCINFO

Table OCCINFO (Equal Access Other Common Carrier Information) defines the attributes of carriers that serve the DMS-100 switch. Table OCCINFO screens calls for carrier compatibility. Field INTRAOPR is added to this table. This field determines if the carrier can handle intra-LATA operator calls, like 0-calls.

Datafill for the IntraLATA PIC for IBN feature for table OCCINFO appear in the following table. The fields that apply to the IntraLATA PIC for IBN feature

appear in this table. Refer to the data schema section of this document for a description of the other fields.

Datafilling table OCCINFO

Field	Subfield or refinement	Entry	Description
INTRAOPR		Y or N	Intra-LATA Operator. This field specifies if the carrier can handle 0- intra-LATA operator calls. Enter Y or N.

Datafill example for table OCCINFO

Sample datafill for table OCCINFO appears in the following example. A tuple in Table OCCINFO in which a carrier can handle intra-LATA operator calls appears in the example.

MAP example for table OCCINFO

```
CARRNAME CARRNUM ACCESS INTER INTNTL INTRA ANI  FANI
ONISCRN
AD1  OVERLAP  INTERS  INTRAS  TERMREC  OCCSEPNO OPSIG
PICIND  NOA950  INCCPN DTMFIND OPSERV CACBLOCK CTDOA
CMCMON SCRNWATS  CRMCRA  ATPINCL INTRAOPR
_____________________________________________________
CAR1   123     FGC      Y     Y      Y      N     N     N
 Y    Y        Y        Y    LONG     0        FGRPC
 N      N      N       N        N         N       N    N
 N       Y         N     Y
```

Datafilling table VIRTGRPS

Table VIRTGRPS (Virtual Facility Groups) assigns options to VFGs. Option IntraLATA PIC provides an EA carrier for intra-LATA calls for POTS-type VFGs.

Datafill for IntraLATA PIC for IBN for table VIRTGRPS appears in the following table. The fields that apply to the IntraLATA PIC for IBN feature

IntraLATA PIC for IBN (continued)

appear in this table. Refer to the data schema section of this document for a description of the other fields.

Datafilling table VIRTGRPS

Field	Subfield or refinement	Entry	Description
DATA		see subfield	Data. This field contains subfield INCTYPE.
	INCTYPE	INCTYPE	Incoming Type. This subfield specifies the type of VFG. Enter INCTYPE.
OPTIONS		EA	Options. This field specifies the options for the VFG. Enter EA to assign a carrier for inter-LATA calls for this VFG. Enter option EA before the assignment of option LPIC. The system specifies EA when subfield INCTYPE contains POTS. ***Note:*** If OPTIONS contains EA, subfields PIC and CHOICE require datafill.
	PIC	primary inter-LATA carrier name or NONE	Primary Inter-LATA Carrier. This subfield specifies the 1- to 16-character alphanumeric name for the PIC in Table OCCNAME. Enter the primary inter-LATA carrier name or enter NONE if the system does not require a PIC.
	CHOICE	Y or N	Choice. This subfield specifies if the end user can dial a 10XXX prefix to choose a carrier. Enter Y or N.
OPTIONS		LPIC	Options. This field specifies the options. Enter LPIC to assign an EA carrier for intra-LATA calls. Enter option EA before the assignment of option LPIC. ***Note:*** If OPTIONS is set to LPIC, subfield IPIC requires datafill.
	IPIC	see subfields	Intra-LATA Carrier. This subfield specifies intra-LATA carrier name for this VFG. Enter the carrier name in Table OCCNAME before table VIRTGRPS.

Datafill example for table VIRTGRPS

Sample datafill for table VIRTGRPS appears in the following example. A tuple in Table VIRTGRPS with option EA and option intra-LATA PIC appear in the following example. These options are assigned to a POTS-type VFG.

MAP example for table VIRTGRPS

```
KEY                                              DATA
                                                        OPTIONS
_____________________________________________________________________
KDKVRT   SIZE  2   POTS   6137224500          0     Y
                                               (EA CARRA Y)
                                               (LPIC CARRC) $
```

Datafilling table CXGRP

Table CXGRP (Customer Group Options) assigns options to PBX trunks. Addition of option intra-LATA PIC allows the operating company to route intra-LATA PIC calls through a PBX trunk. You cannot add an intra-LATA carrier to table CXGRP if the PBX trunks do not have option EA set. These PBX trunks point to the Table CXGRP entry.

Datafill for IntraLATA PIC for IBN for table CXGRP appears in the following table. The fields that apply to IntraLATA PIC for IBN appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table CXGRP

Field	Subfield or refinement	Entry	Description
PXOPTION		LPIC	Customer Group Options. This field specifies a maximimum of 12 options for each customer group. For this feature, enter LPIC. ***Note:*** If PXOPTION is set to LIPC, subfield CARRIER requires datafill.
	CARRIER	carrier name	Carrier. This subfield specifies the name of the intra-LATA carrier of the end user. Enter the carrier name. Enter the carrier name in Table OCCNAME before Table CXGRP.

Datafill example for table CXGRP

Sample datafill for table CXGRP appears in the following example. A tuple in Table CXGR appears in the following example. This tuple allows the operating company to route intra-LATA PIC calls through a PBX trunk.

IntraLATA PIC for IBN (continued)

MAP example for table CXGRP

```
CUSTKEY
            SPB
                                                          CTD
                                                          EWATS
                                                        PXOPTION
_____________________________________________________________
32
              N
                                                            N
                                                            N
                                                 (LPIC CARRA) (TDV)
$
```

Datafilling table IBNXLA

Datafill for the IntraLATA PIC for IBN feature for table IBNXLA appears in the following table. The fields that apply to IntraLATA PIC for IBN appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table IBNXLA

Field	Subfield or refinement	Entry	Description
RESULT		see subfields	Result. This field contains several subfields. Subfield OPTION applies to this feature.
	OPTION	LPIC	Option. This subfield specifies the option. Enter LPIC. ***Note:*** If OPTION is set to LPIC, subfield IPIC requires datafill.
	IPIC	carrier name	Intra-LATA Carrier. This subfield specifies the name of the intra-LATA carrier. Enter the carrier name in Table OCCNAME before Table IBNXLA.

Datafill example for table IBNXLA

Sample datafill for table IBNXLA appears in the following example. A tuple in Table IBNXLA appears in this example. This table has option IntraLATA PIC assigned to an MDC station.

MAP example for table IBNXLA

```
                KEY                                    RESULT
_____________________________________________________________________
CXT1              9
NET  N   N   N  1  Y  POTS  N  Y  GEN  (LPIC  CARRB)  $
```

Tools for verifying translations

The TRAVER command changes to display the intra-LATA PICs for the MDC station, VFG, or PBX trunk. The TRAVER command displays these intra-LATA PICS if IntraLATA PIC for IBN is present. An intra-LATA call translation can be set up. In this occurrence, the TRAVER routes to the correct carrier. The relevant intra-LATA PIC specifies the correct carrier.

The system adds option RTEVFG to the TRAVER route specification. This option corrects problems that occur if MDC does not include VFG translation verifications. Some TRAVER commands can use the no trace (NT) or both (B) option. For these commands, the TRAVER route specification can include the RTEVFG option. This route specification can include the RTEVFG option after the NT or B specification.

The RTEVFG option causes TRAVER to check the first-pass routes to see if VFG routes are present. If VFG routes are present, the TRAVER process occurs again with a VFG. The TRAVER uses the VFG for this process, and for retranslation in call processing, in almost the same way. The RTEVFG option is not correct for a T trace because alone, this trace does not generate route lists. If the RTEVFG option is used with the T specification, TRAVER does not associate RTEVFG with the trace option. The TRAVER records the RTEVFG as the next option in the option area after the trace specification.

The output from TRAVER, when TRAVER uses the output to verify the IntraLATA PIC for IBN feature, appears in the following example. In this occurrence, the feature refers to group PIC and the RTEVFG option.

IntraLATA PIC for IBN (continued)

TRAVER output example for IntraLATA PIC for IBN (group PIC with RTEVFG option)

```
TRAVER L 5551000  1428035551234 B RTEVFG
TABLE IBNLINES
HOST 00 0 01 16 DT STN IBN 5551000 MDCGRP1 0 0 919 $
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE NCOS
MDCGRP1 0 0 0 KDK (XLAS CXDK NXLA NDGT) 0  (CBQ 0 3 N 2) $
TABLE CUSTHEAD; CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT,
AND
DIGCOL
MDCGRP1 PXDK CXDK CUSTFEAT 0 KDK
TABLE DIGCOL
KDK 1 COL S 2
NCOS PRELIM XLA name is NIL.  Go to next XLA name.
TABLE IBNXLA: XLANAME CXDK
CXDK 142 NET N Y 3 Y POTS N Y GEN (LATTR 24) (EA CARR1 Y 0)
                                             (LPIC CARR1) $
TABLE DIGCOL
POTS specified: POTS digit collection
TABLE LINEATTR
24 1FR NONE NT FRO1 0 919 P621 L919 NONE N 10 NIL NILSFC LATA1
0 NIL NIL 00 N
TABLE STDPRTCT
P621 (1) (1)
. SUBTABLE STDPRT
. 803 81 T NP 0 IBNRTE 10 3 18 NONE
. . TABLE IBNRTE
.       10 VFG N N N EWHVFG 0
  . EXIT TABLE IBNRTE
. SUBTABLE AMAPRT
. KEY NOT FOUND
. DEFAULT VALUE IS:   NONE    N
 + + + TRAVER: SUCCESSFUL CALL TRACE + + +
```

IntraLATA PIC for IBN (continued)

TRAVER output example for IntraLATA PIC for IBN (group PIC with RTEVFG option)

```
DIGIT TRANSLATIONS ROUTES
1 VFG: EWHVFG     8035551234

TREATMENT ROUTES.  TREATMENT IS :  GNCT
1 T120

+ + + TRAVER SUCCESSFUL CALL TRACE + + +  Resolving VFG: EWHVFG
Route with calling digits 8035551234
TABLE VIRTGRPS
EWHVFG SIZE 5 POTS 9195555555 0 N (IBNPIC) (TOLLRST)$
WARNING: IBNPIC Option is set
IBNXLA EA LPIC will be used
WARNING: TOLLRST option is set
TABLE LINEATTR
0 1FR NONE NT FRO1 0 919 P621 L919 TSPS N 10 NIL NILSFC LATA1 0 NIL
NIL 00 N
TABLE STDPRTCT
P621 (1) (1)
. SUBTABLE STDPRT
. 803 81 N NP 0 NA
. SUBTABLE AMAPRT
. KEY NOT FOUND
. DEFAULT VALUE IS:   NONE   N
TABLE HNPACONT
919 128 2 (35) (1)
. SUBTABLE HNPACODE
. 803 803 FRTE 42
. SUBTABLE RTEREF
.   42 S D LNTOPS
. EXIT TABLE RTEREF
EXIT TABLE HNPACONT
TABLE LCASCRCN
919 L919 (27) OPTL N
. SUBTABLE LCASCR
. TUPLE NOT FOUND. DEFAULT IS NON-LOCAL
```

IntraLATA PIC for IBN (continued)

TRAVER output example for IntraLATA PIC for IBN (group PIC with RTEVFG option)

```
TABLE PFXTREAT
OPTL NP N DD UNDT
TABLE CLSVSCRC
KEY NOT FOUND
DEFAULT IS TO LEAVE XLA RESULT UNCHANGED
OVERLAP CARRIER SELECTION (OCS) APPLIES
TABLE EASAC
TUPLE NOT FOUND
TABLE LATAXLA
LATA1 803 INTRA INTER STD
TABLE OCCINFO
CARR1 123 FGC Y Y Y N N N Y Y Y Y LONG 0 FGRPC N N N N N N N N
TABLE STDPRTCT
P621 (1) (0)
. SUBTABLE STDPRT
. 10123 10123 EA DD 5 P CARA1 CARR1 Y OFRT 888 6 20 Y
.    TABLE OFRT
.     888 CND EA INTNL SK 2
.          S D OGEACAR1
.          CND ALWAYS SK 1
.          N D OGEACAR2 0 1 N 6 N
. CARA1 (1) (0)
. SUBTABLE STDPRT
.  5 9 EA DD 0 T NA CARR1 N


+ + + TRAVER SUCCESSFUL CALL TRACE + + +


DIGIT TRANSLATIONS ROUTES

1 OGEACAR1             8035551234        ST

TREATMENT ROUTES.   TREATMENT IS: GNCT
1 T120

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

The output from TRAVER when TRAVER verifies IntraLATA PIC for IBN (standard MDC line) appears in the following example.

IntraLATA PIC for IBN (continued)

TRAVER output example for IntraLATA PIC for IBN (standard MDC line)

```
TRAVER L 5551234  918881234 B
TABLE IBNLINES
HOST 00 0 05 18 DT STN IBN 5551234 MDCGRP1 0 0 919 $
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE NCOS
MDCGRP1 0 0 0 KDKO (CBQ 0 3 N 2) $
TABLE CUSTHEAD; CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND
DIGCOL
MDCGRP1 PXDK CXDK CUSTFEAT 0 KDK
TABLE DIGCOL
KDK 9 RPT
NCOS PRELIM XLA name is NIL.  Go to next XLA name.
TABLE IBNXLA: XLANAME CXDK
CXDK 9 NET N Y 1 Y POTS N Y GEN (LATTR 0) (EA CARRB Y 0)
                                          (LPIC CARRC) $
TABLE DIGCOL
POTS specified: POTS digit collection
TABLE LINEATTR
0 1FR NONE NT FRO1 0 919 P621 L919 NONE N 10 NIL NILSFC LATA1
0 NIL NIL 00 N
TABLE STDPRTCT
P621 (1) (1)
. SUBTABLE STDPRT
. 15 19 N DD 1 NA
. SUBTABLE AMAPRT
. KEY NOT FOUND
. DEFAULT VALUE IS: NONE
TABLE HNPACONT
919 127 1 (46) (1) (84)
. SUBTABLE HNPACODE
. 888 888 LRTE 2
. SUBTABLE RTEREF
.     2 S D OTDP1
. EXIT TABLE RTEREF
EXIT TABLE HNPACONT
TABLE LCASCRCN
919 L919 (12) MAND N
. SUBTABLE LCASCR
. TUPLE NOT FOUND.  DEFAULT IS NON-LOCAL
```

IntraLATA PIC for IBN (continued)

TRAVER output example for IntraLATA PIC for IBN (standard MDC line)

```
TABLE PFXTREAT
TUPLE NOT FOUND DEFAULT IS TO LEAVE XLA RESULT UNCHANGED
TABLE CLSVSCRC
KEY NOT FOUND
DEFAULT IS TO LEAVE XLA RESULT UNCHANGED
OVERLAP CARRIER SELECTION (OCS) APPLIES
TABLE EASAC
KEY NOT FOUND
TABLE LATAXLA
LATA1 919888 INTRA INTER STD
TABLE IBNFEAT
HOST 00 0 05 18 LPIC LPIC CARRA
TABLE OCCINFO
CARRA 124 TRANS Y Y Y Y N N Y Y Y Y LONG 0 FGRPD N N N N N N N N N
TABLE STDPRTCT
P621 (1) (1)
. SUBTABLE STDPRT
. 10124 10124 EA DD 5 P CARR1 CARRA Y OFRT 888 6 20 Y
  . TABLE OFRT
  . 888 CND OCCINTNL SK 2
  . S D OGEACAR2
  . CND ALWAYS SK1
  . N D OGEACAR2 15 D121 N
  . EXIT TABLE OFRT
TABLE STDPRTCT
CARR1 (1) (0)
. SUBTABLE STDPRT
.  15 19 EA DD 1 T NA CARRA N


+ + +  TRAVER: SUCCESSFUL CALL TRACE   + + +

DIGIT TRANSLATION ROUTES

1 OGEACAR2     8881234     ST

TREATMENT ROUTES. TREATMENT IS: GNCT
1 OFLO
2 LKOUT
+ + +  TRAVER: SUCCESSFUL CALL TRACE  + + +
```

SERVORD

Complete the datafill for tables IBNFEAT and KSETFEAT with the service order utility, SERVORD.

The system supports the SERVORD option LPIC for MDC. You can add or delete this option from standard MDC lines, data units, and MBSs. Use the following commands to add or delete this option:

- the ADO (add option)
- the DEO (delete option)
- the CHF (change feature information for preexisting feature)
- NEW (establish service)

A new prompt, CARRIER, prompts for the name of the selected carrier. This prompt also occurs when addition of an intra-LATA PIC to a line occurs. Enter the name of the specified carrier in Table OCCNAME.

Option intra-LATA PIC has the same compatibilities and incompatibilities as option PIC. You cannot add option intra-LATA PIC to the line of an attendant console through SERVORD. You cannot specify option intra-LATA PIC on LCCs of PDATA, EOW, or ETW.

SERVORD limits

The IntraLATA PIC for IBN feature does not have SERVORD limits.

SERVORD prompts

The SERVORD prompts that prompt you to add the IntraLATA PIC for IBN feature to an MDC station appear in the following table. Use the ADO command to add this feature.

SERVORD prompts for IntraLATA PIC for IBN

Prompt	Correct input	Description
OPTION	LPIC	Specifies if you must assign or delete LPIC to or from standard MDC lines, data units, and MBSs. Enter LPIC.
CARRIER	Carrier name	Specifies the name of the carrier selected as LPIC. Enter this name in Table OCCNAME before this table.
Note: The system enters data in tables IBNFEAT and KSETFEAT when you use SERVORD to assign the IntraLATA PIC for IBN feature.		

IntraLATA PIC for IBN (continued)

SERVORD example for implementing IntraLATA PIC for IBN

The way in which you add the IntraLATA PIC for IBN feature to an MDC station appears in the following SERVORD example. Use the ADO command to add this feature.

Note: The addition of option LPIC to an MDC 500/2500 set through SERVORD updates Table IBNFEAT. The addition of an intra-LATA PIC to an MBS or a data unit through SERVORD updates Table KSETFEAT.

SERVORD example for adding IntraLATA PIC for IBN to a current line in prompt mode

```
SO:
> ADO
SONUMBER:  NOW 90 1 2 AM
>
DN_OR_LEN:
> 5551234
OPTION:
>LPIC
CARRIER:
>
OPTION:
> $
```

SERVORD example for adding IntraLATA PIC for IBN to a current line in no-prompt mode

```
> ADO $ 5551234 LPIC CARRA $
```

The way in which you delete the IntraLATA PIC for IBN feature from an MDC station appears in the following SERVORD example. Use the DEO command to delete this feature.

IntraLATA PIC for IBN (end)

SERVORD example for how to deleting IntraLATA PIC for IBN from a standard MDC station in prompt mode

```
SO:
> DEO
SONUMBER:  NOW 90 1 2 AM
>
DN_OR_LEN:
> 5551000
OPTION:
> LPIC
OPTION:
> $
```

SERVORD example for deleting IntraLATA PIC for IBN from a standard MDC station in no-prompt mode

```
>DEO $ 5551000 LPIC $
```

MDC EWATS for Intra-LATA PIC

Ordering codes

Functional group ordering code: EQA00001

Functionality ordering code: EQA00019

Release applicability

NA010 and up

Prerequisites

This document includes all the data table information for this functionality. However, complete implementation of this functionality can require software or hardware not described in this document.

Description

This feature allows interaction between MDC customer groups assigned with intra-LATA carriers and enhanced wide area telecommunication service (EWATS). This feature allows pre-subscription to intra-LATA carriers and permits subscribers of the customer group to complete casually dialed intra-LATA EWATS calls.

Operation

The basic call flow of an MDC EWATS call involves two stages of translations. The first stage of the call determines which virtual facility group (VFG) routes the call. The second stage enables the switch to translate the call through each VFG selected in the first stage of the call.

MDC EWATS traffic requires translation in the second stage by a VFG. Any VFG that can carry EWATS traffic must use a line attribute. This line attribute specifies a line class code (LCC) of enhanced outward WATS (EOW). All call traffic on a VFG becomes EWATS traffic.

The EWAUTH option in table IBNXLA points to an authorization key in table WATSAUTH. Table WATSAUTH specifies the carriers that an operating company uses to carry its outgoing WATS (OUTWATS) traffic. The combinations in table WATSAUTH compare with the EOW route elements in the IBN routing tables to select the appropriate VFGs. The VFGs route the call. The system then attempts to route the call over each VFG in the list until it can complete the call without having to send it to treatment.

Translations table flow

The MDC EWATS Intra-LATA PIC feature uses table WATSAUTH. For MDC offices that are also equal access end offices (EAEO), this feature gives

the customer access to different interexchange carriers for different OUTWATS bands.

Table WATSAUTH (WATS authority) specifies the carriers an operating company can use to carry its OUTWATS traffic. These carriers are WATS interexchange carriers (WIC). Each WIC has an associated band set that details the bands to which the customer has access to through the carrier. The system can specify up to five carriers and associated band sets.

Table IBNXLA (integrated business network translation) stores the data for the digit translation of calls from an IBN station, an attendant console (AC), an incoming trunk, or an incoming side of a two-way IBN trunk group.

Table LINEATTR (line attribute) assigns line attributes to regular lines in table LENLINES and to Meridian stations and attendant consoles.

Table IBNRTE (integrated business network route) contains the route lists identified by route-reference index numbers.

Table OCCINFO (other common carrier information) defines the attributes for carriers that serve the DMS switch and screens calls for carrier compatibility.

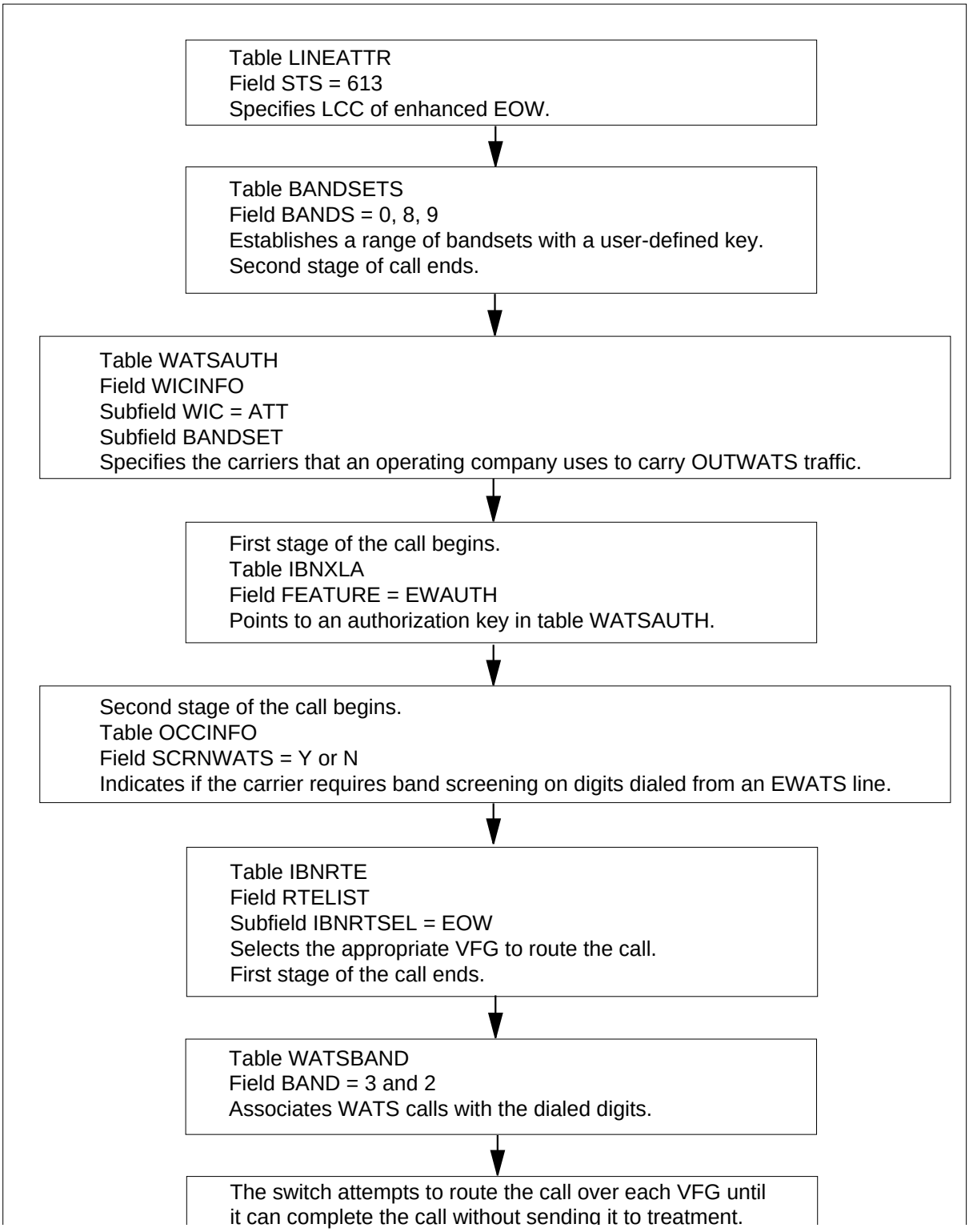
Table WATSBAND (WATS band) enables users to group patterns of digits into bands. It also enables carriers to define their own bands.

Table BANDSETS (band sets) groups bands together to form allowable calling areas.

The MDC EWATS for Intra-LATA PIC translation process is shown in the flowchart that follows.

MDC EWATS for Intra-LATA PIC (continued)

Table flow for MDC EWATS for Intra-LATA PIC



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

Datafill example for MDC EWATS for Intra-LATA PIC

Datafill table	Example data
IBNXLA	CXT1 CXT1 144 NET N Y 3 Y POTS N N GEN (LATTR 190) (EWAUTH IBNTST4) $ $
LINEATTR	0 IBN NONE NT NSCR 0 001 NPRT NLCA NONE 0 NIL NILSFC NILLATA 0 NIL NIL 00 N AMAGRPID NR_GRP $
WATSAUTH	CUST1 Y Y Y (ATT 0THRU3) N (CAR1 OTHRU9) $
IBNRTE	5 (S N N N N DMSKDKDTMF2W) (T IBNRTE 6) $
OCCINFO	UNT2 0202 TRANS Y Y Y N Y N N Y Y Y N LONG 61 FGRPD N N Y N N N N N N N N N Y N Y
WATSBAND	CAR1 613 CAR1 3192257777 17
BANDSETS	10THRU19

Limitations and restrictions

The following limitations and restrictions apply to MDC EWATS for Intra-LATA PIC:

- This feature only applies to agents that originate with MDC customer groups.
- The local access and transport area (LATA) name in the first and second stage translations must be identical. Since you determine the LATA in the first leg, the LATA name referenced by the VFGs must be the same. This eliminates any inconsistency when you determine the appropriate VFGs.
- When the CND selector is used to designate routing flexibility and the feature is turned off, the InterLATA route elements are used to screen the call in order to determine the available VFG. This screening ensures the InterLATA route list is still used to select VFG's when the feature is turned off.
- In the first stage translations, derive the IBN route from table STDPRTCT, not from table HNPACONT. Since you need a lookup into table LATAXlA during the first stage, a valid STS must be in table LINEATTR. If you select a VFG from an IBN route derived from a valid serving translation scheme (STS) in table HNPACONT, the VFG can route to the same IBN route by the same STS. This scenario depends on the translations datafill.

MDC EWATS for Intra-LATA PIC (continued)

- The protocols used to screen bands and validate carriers do not change in any way to reflect an IntraLATA call.
- Equal access calls cannot complete bandscreening.

Interactions

This feature interacts with the EWATS and MDC EWATS features.

Activation/deactivation by the end user

MDC EWATS for Intra-LATA PIC requires no activation or deactivation by the end user.

Billing

MDC EWATS for Intra-LATA PIC does not affect billing.

Station Message Detail Recording

MDC EWATS for Intra-LATA PIC does not affect Station Message Detail Recording.

Datafilling office parameters

MDC EWATS for Intra-LATA PIC does not affect office parameters.

Datafill sequence

The following table lists the tables that require datafill to implement MDC EWATS for Intra-LATA PIC. The tables are listed in the order in which they are to be datafilled.

Datafill tables required for MDC EWATS for Intra-LATA PIC (Sheet 1 of 2)

Table	Purpose of table
LINEATTR	Line attributes table assigns line attributes to regular lines in table LENLINES and to Meridian stations and attendant consoles.
BANDSETS	Band sets table groups bands together to form allowable calling areas.
WATSAUTH	WATS authority table specifies the carriers an operating company can use to carry its outgoing WATS (OUTWATS) traffic.
IBNXLA	Integrated business network translation table stores the data for the digit translation of calls from an IBN station, an attendant console (AC), an incoming trunk, or an incoming side of a two-way IBN trunk group.
OCCINFO	Other common carrier information table defines the attributes for carriers that serve the DMS switch and screens calls for carrier compatibility.

Datafill tables required for MDC EWATS for Intra-LATA PIC (Sheet 2 of 2)

Table	Purpose of table
IBNRTE	IBN route table contains the route lists identified by route reference index numbers.
WATSBAND	WATS band table enables users to group patterns of digits into bands. It also enables carriers to define their own bands.

Datafilling table LINEATTR

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

Datafilling table LINEATTR

Field	Subfield or refinement	Entry	Explanation and action
LATANM		alphanumeric (up to 8 characters)	*Local access and transport area name* Enter the name of the LATA assigned to the line attribute index.
LCC		alphanumeric (up to 8 characters) or NLCC	*Line class code* Enter the LCC assigned to the line attribute index. The LCC of an existing tuple cannot be changed. If there is no LCC, enter NLCC.
STS		numeric (3 digits)	*Serving translation scheme* Enter the serving numbering plan area assigned to the line attribute index. The STS of an existing tuple cannot be changed.

Datafill example for table LINEATTR

The following example shows sample datafill for table LINEATTR.

MDC EWATS for Intra-LATA PIC (continued)

MAP display example for table LINEATTR

```
LNATTIDX  LCC CHGCLSS COST SCRNCL LTG STS PRTNM LCANAME ZEROMPOS
TRAFSNO
MRSA    SFC  LATANM  MDI       IXNAME DGCLNAME FANIDIGS
                RESINF                                OPTIONS
_____________________________________________________________________

192  ETW  NONE  NT  NSCR  0 613  EWAT  NLCA  TOPS  10  NIL  NILSFC
LATA1  0  NIL  NIL  00  Y  RESGRP  0  7  $
```

Datafilling table BANDSETS

The following table shows the datafill specific to MDC EWATS for Intra-LATA PIC for table BANDSETS. Only those fields that apply directly to MDC EWATS for Intra-LATA PIC are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table BANDSETS

Field	Subfield or refinement	Entry	Explanation and action
BANDSET		1 to 8 characters	*Bandset* Enter the unique key that defines the allowable calling area.
BANDS		numeric sets of up to 127 bands with values 0 to 126	*Bands* Enter the set of bands that are grouped together as a vector. This vector determines the WATS calling area assigned to the key.

Datafill example for table BANDSETS

The following example shows sample datafill for table BANDSETS. The example enables users to group bands into a defined calling area. In the first tuple, INTRASTA consists of bands 0, 8, and 9. In the second tuple, INTERSTA consists of bands 1, 2, 3, 4, 5, and 6.

MAP display example for table BANDSETS

```
BANDSET
                                                          BANDS
_____________________________________________________________

INTRASTA
                                          (  0) (  8) (  9)$

INTERSTA
                          (  1) (  2) (  3) (  4) (  5) (  6)$
```

Datafilling table WATSAUTH

The following table shows the datafill specific to MDC EWATS for Intra-LATA PIC for table WATSAUTH. The table contains only those fields that apply directly to MDC EWATS for Intra-LATA PIC. For a description of the other fields, refer to the data schema section of this document.

Datafilling table WATSAUTH (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
AUTHKEY		see subfield	*Authorization key* This field is the key to the table and consists of subfield WATSAUTH_ID.
	WATSAUTH_ ID	alphanumeric (up to 8 characters)	*Wide area telephone service authorization identifier* Enter a name defined by the operating company.
INTRALAT		Y or N	*Intra-LATA* Enter Y (yes) if intra-LATA (local access and transport area) calls are allowed from an MDC EWATS virtual facility group (VFG). This screening is enforced on the VFG retranslation leg of an MDC Enhanced WATS call. Otherwise, enter N (no).

MDC EWATS for Intra-LATA PIC (continued)

Datafilling table WATSAUTH (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
SAC		Y or N	*Service access code* Enter Y if service access code (SAC) calling is permitted from the EWATS VFG. An SAC is a code that takes the place of a numbering plan area, such as an 800 or a 900 number. Otherwise, enter N (no).
CHOICE		Y	*Choice* Enter Y to indicate the caller is allowed to dial 10XXX to access one of the carriers in field WICINFO. Field CHOICE impacts how route selection is performed in table IBNRTE with the EOW route selector.
WICINFO		see subfields	*Wide area telephone service interexchange carrier information* This field consists of up to five multiples of subfields WIC and BANDSET. If fewer than five multiples are required, end the list with a $ (dollar sign). This field is used to designate which carriers and associated band sets are permitted for the caller. If this field contains any WATS interexchange carriers (WICs), these WICs are the only WICs allowed from retranslations out of the VFG. A least one vector must be specified.
	WIC	alphanumeric (up to 16 characters)	*Wide area telephone service interexchange carrier* Enter the name of a carrier from table OCCNAME. If universal WATS (UWATS) is used, the last carrier name must be the UWATS carrier name as entered in table OCCNAME.
	BANDSET	alphanumeric (up to 8 characters)	*Band set* Enter the name of a band set from table BANDSETS. This field indicates the band set that is allowed for the carrier in field WIC.

Datafilling table WATSAUTH (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
LCHOICE		Y or N	*LATA Choice* This field designates whether the caller is permitted to dial 10XXX/101XXXX to access one of the listed carriers in field LWICINFO described here.
LWICINFO		Vector that contains up to 5 combinations of WIC and BANDSET information	*LATA Wide area telephone service interexchange carrier information* This field designates which intra-LATA carriers and assiciated bandsets are permitted for the caller. If LCHOICE is not permitted, this field can be left empty. If LCHOICE is permitted, at least one LWIC and BANDSET must be specified. In either case, if this area contains any LWICS, they are the only LWICs permitted from retranslations out of the VFG.

Datafill example for table WATSAUTH

The following example shows sample datafill for table WATSAUTH.

MAP display example for table WATSAUTH

```
 AUTHKEY INTRALAT SAC CHOICE
                                WICINFO  LCHOICE  LWICINFO
_____________________________________________________________
   CUST1     Y     Y    Y
                                (ATT 0THRU3) N  (CAR1 0THRU9)
(CAR2 20THRU26) ( ITT GLOBAL) (SPCLEWATS ALLSPCL)$
```

Datafilling table IBNXLA

The following table shows the datafill specific to MDC EWATS for Intra-LATA PIC for table IBNXLA. The table contains only those fields that

MDC EWATS for Intra-LATA PIC (continued)

apply directly to MDC EWATS for Intra-LATA PIC. For a description of the other fields, refer to the data schema section of this document.

Datafilling table IBNXLA (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
RESULT		see subfield	*Result* This field consists of subfield TRSEL.
	TRSEL	NET	*Translations Selector* This subfield specifies the translations selector to be used. Enter NET.
If TRSEL is set to NET, subfields ACR, SMDR, VCDR, NO_ACCODE_DIGITS, SECOND_DIAL_TONE, DGCOLNM, CRL, INTRAGRP, NETTYPE, OPTION, LINEATTR, AUTHKEY, and NETRPTOPT require datafill.			
	ACR	Y or N	*Account Code Entry* This subfield specifies whether an account code is required.
	SMDR	Y or N	*Station Message Detail Recording* This subfield specifies whether SMDR is required.
	NO_ACCODE_DIGITS	0 to 7	*Number of access code digits* Enter the number of digits in the general network access code.
	SECOND_DIAL_TONE	Y or N	*Second dial tone* Enter Y if second dial tone is required. Otherwise, enter N.
	DGCOLNM	alphanumeric (1 to 8 characters)	*Digit collection name* Enter the name assigned to the block of data in table DIGCOL for digit collection for IBN lines.
	CRL	Y or N	*Code restriction level* Enter Y if code restriction levels apply. Otherwise, enter N.

Datafilling table IBNXLA (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	INTRAGRP	Y or N	*Intragroup* Enter Y if the call is for the same customer group. Otherwise, enter N.
	NETTYPE	GEN	*Network type* Enter the network type GEN.
	OPTION	LATTR, EWAUTH	*Option* This subfield specifies the feature assigned to a line. For the line attribute index, enter LATTR. For MDC EWATS calls, enter EWAUTH.
	LINEATTR	0 to 2047	*Line attribute* Enter the line attribute index to be used.
	AUTHKEY	alphanumeric (1 to 8 characters)	*Authorization key* Enter the name of an authorization key. The name must be a valid AUTHKEY name from table WATSAUTH during MDC enhanced OUTWATS translators.
	NETRTOPT	NARS or DMI	*Network routing option* Enter the name of a network routing option. To enable the network acess register (NAR) routing option, enter NARS. To permit the manipulation of dialed digits during translation, enter DMI (digit manipulation index). If none, enter $.

Datafill example for table IBNXLA

The following example shows sample datafill for table IBNXLA.

MDC EWATS for Intra-LATA PIC (continued)

MAP display example for table IBNXLA

```
IBNXLA   KEY                              RESULT
_____________________________________________________________

NTIXLA   123 NET N Y 3 Y POTS N N GEN (LATTR 6) (EWAUTH IBNTST) $
```

Datafilling table OCCINFO

The following table shows the datafill specific to MDC EWATS for Intra-LATA PIC for table OCCINFO. Only those fields that apply directly to MDC EWATS for Intra-LATA PIC are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table OCCINFO

Field	Subfield or refinement	Entry	Explanation and action
SCRNWATS		Y or N	*Enhanced wide area telephone service (EWATS) screening* Enter Y if the carrier requires band screening on digits dialed from an enhanced WATS line. Otherwise, enter N.

Datafill example for table OCCINFO

The following example shows sample datafill for table OCCINFO.

MAP display example for table OCCINFO

```
CARRNAME CARRNUM ACCESS ORIGCARR INTER INTNTL INTRA ANI FANI ONISCRN
AD1 OVERLAP INTERS INTRAS TERMREC OCCSEPNO OPSIG PICIND NA0950
INNCCPN DTMFIND OPSERV CACBLOCK CTDOA CMCMON SCRNWATS CRMCRA ATPINCL
INTRAOPR INCASA INTRCOIN ARBLKPVT
_____________________________________________________________________
UNT2 0202 TRANS Y Y Y N Y N N Y Y Y N LONG 61 FGRPD N N Y N N N N N N
N N N Y N Y
```

Datafilling Table IBNRTE

The following table shows the datafill specific to MDC EWATS for Intra-LATA PIC for table IBNRTE. The table contains only those fields that apply directly to MDC EWATS for Intra-LATA PIC. For a description of the other fields, refer to the data schema section of this document.

Datafilling table IBNRTE

Field	Subfield or refinement	Entry	Explanation and action
RTELIST		see subfield	*Route list* This field consists of subfield IBNRTSEL.
	IBNRTSEL	EOW, CND	*IBN route selector* Enter EOW for the enhanced outward WATS route selector. Enter CND for the conditional route selector.

Datafill example for table IBNRTE

The following examples show sample datafill for table IBNRTE. The first example contains two route lists that use the EOW selector. Route 10 contains one EOW route element in the route list. Route 11 shows part of a route list with three EOW elements in the list. The second example contains two route lists that use the CND selector.

MAP display example for table IBNRTE using the EOW selector

```
RTE                                              RTELIST

_____________________________________________________________

 10 (EOW N N N   CARR1   INTRALAT N 101  EOV6   0)$
 11 (EOW N N N   CARR1     GLOBAL Y   1  EOV1   0) (EOW N N N   CARR2
 10THRU15 Y   3  EOV2   0) (EOW N N N   CARR4   10THRU29 Y   4  EOV4
 0)$
```

MDC EWATS for Intra-LATA PIC (continued)

MAP display example for table IBNRTE using the CND selector

```
RTE                                                    RTELIST

_____________________________________________________________

 103 CND INTERLATA SK 2
     EOW N N N MCI 10THRU19 N 16 EWTV3 0
     CND ALWAYS SK 1
     EOW N N N MCI 10THRU19 N 16 EWTV5 0
```

Datafilling table WATSBAND

The following table shows the datafill specific to MDC EWATS for Intra-LATA PIC for table WATSBAND. Only those fields that apply directly to MDC EWATS for Intra-LATA PIC are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table WATSBAND

Field	Subfield or refinement	Entry	Explanation and action
WATSCODE		see subfields	*WATSBAND key* This field is the key to the table and consists of subfields SVFNPA, WIC, and DIGITS.
	SVGNPA	0 to 9 (3 digits)	*Serving number plan area* Enter the home numbering plan code to which the WATS is provided.
	WIC	alphanumeric (up to 16 characters) or DEFAULT	*Wide area telephone service interexchange carrier* Enter the WATS carrier that can be used with this band, or DEFAULT.
	DIGITS	0 to 9 (up to 18 digits)	*Digits* Enter the digits that are associated with the band.
BAND		0 to 126, or NIL	*Band* Enter the band number assigned to the digits. Enter NIL if a band number is not assigned.

Datafill example for table WATSBAND

The following example shows sample datafill for table WATSBAND. In the first, second, and fifth tuples, an outward WATS (OWATS) call is placed to digits 704. To screen the call against the subscriber's allowable service area for carrier A and carrier B, the switch uses bands 3 and 2, respectively. The default entry in tuple five signifies that all other carriers use the default band scheme, which is assigned to band 4.

The third, fourth, and fifth tuples depict digits for which all carriers use the same bands.

The last tuple is a special case and its calls always pass band screening. The NIL band is always valid for any bandset, although it does not appear when the tuple is listed in table BANDSETS. Certain restrictions are inherent with this capability.

MAP display example for table WATSBAND

```
                          WATSCODE BAND
_____________________________________________________________________
505 CARRIER_A                704    3
505 CARRIER_B                704    2
505   DEFAULT                413    5
505   DEFAULT                601    4
505   DEFAULT                704    4
505   DEFAULT           5551234  NIL
```

Translation verification tools

The following example shows the output from TRAVER when it verifies MDC EWATS for Intra-LATA PIC.

MDC EWATS for Intra-LATA PIC (continued)

TRAVER output example for MDC EWATS for Intra-LATA PIC

```
>TRAVER L 6212072 1443192557777 B RTEVFG ALL
TABLE IBNLINES
HOST 02 0 11 05 0 DT STN IBN 6212072 IBNTST 0 0 613 $
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TULE NOT FOUND
TABLE IBNFEAT
TUPLE NOT FOUND
TABLE CUSTSTN
TUPLE NOT FOUND
TABLE OFCVAR
AIN_OFFICE_TRIGGRP NIL
AIN Orig Attempt TDP: no subscribed trigger.
TABLE NCOS IBNTST 0 0 0 TST10 ( XLAS CXT1 RXCFN NDGT) ( OGQ 0
TONE_OHQ) ( CBQ 0 1 Y 2) (ERWT) ( ACR N)$
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA, VACTRMT, AND
DIGCOL
IBNTST NXLA CXT3 RXCFN 0 TST1
TABLE DIGCOL
TST1 1 COL S 2
TABLE IBNXLA: XLANAME CXT1
CXT1 144 NET N Y 3 Y POTS N N GEN ( LATTR 190) (EWAUTH IBNTST4)$ $
TABLE DIGCOL
POTS specified: POTS digit collection
TABLE LINEATTR
190 1FR NONE NT NSCR 0 613 LEG1 NLCA TOPS 10 NIL NILSFC LATA 0 NIL NIL
00 N $
LCABILL OFF – BILLING DONE ON BASIS OF CALLTYPE
TABLE WATSAUTH
IBNTST4 Y Y N ( CAR1 10THRU19) ( CAR2 20THRU26) ( ITT GLOBAL)
(SPCLEWATS ALLSPCL)$
TABLE STDPRTCT
LEG1 ( 1) (65021) 3
 . SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING.  CALL TYPE DEFAULT IS NP.  PLEASE REFER TO
DOCUMENTATION.
 . 3 510 T NP 0 IBNRTE 102 3 20 NONE
AIN Info Collected TDP: no subscribed trigger.
```

continued

MDC EWATS for Intra-LATA PIC (continued)

TRAVER output example for MDC EWATS for Intra-LATA PIC (continued)

```
TABLE TRIGGRP
LNPOFFICE INFOANAL
 . PODP ( DG PODPDIG)$ NIL
Trigger AIN PODP is applicable to office.
 . LNP ( DG LNPDIG) (ESCEA ) (ESCOP ) (ESCDN ) (ESCCN DD)$ NIL
Trigger AIN LNP is applicable to office.
AIN Info Analyzed TDP: trigger criteria not met.
 . . TABLE IBNRTE
 . .  102 EOW N N N MCI 10THRU12 Y 12 EWTV1 0
 . .      EOW N N N ATT 20THRU24 Y 24 EWTV2 O
 . .      EOW N N N MCT 10THRU19 Y 16 EWTV3 O
 . .      EOW N N N GTE 0THRU9  Y  9 EWTV4 O
           VFG N N Y TOLLV 0
 . . EXIT TABLE IBNRTE
 . SUBTABLE AMAPRT
 . KEY NOT FOUND
 . DEFAULT VALUE IS:  NONE OVRNONE N
TABLE HPCPATTN
TUPLE NOT FOUND
LNP00100 SOC Option is IDLE.

+++ TRAVER: SUCCESSFUL CALL TRACE +++
DIGIT TRANSLATION ROUTES

1 VFG: EWTV3  3192557777  ST {First stage translations determine which}
2 VFG: TOLLV  3192557777  ST {route elements are available for routing}
                            {the call. Band screening is completed }
TREATMENT ROUTES. TREATMENT IS: GNCT    {during the first stage.}
1 T120

+++ TRAVER: SUCCESSFUL CALL TRACE +++

--->
---> Resolving VFG: EWTV Route with calling digits 3192557777
--->
TABLE VIRTGRPS
EWTV3 SIZE 1 POTS 6133333333 192 Y $
IBNRTE EOW Route WIC will be used
LPIC is not available
INTPIC is not available
TABLE LINEATTR
192 ETW NONE NT NSCR 0 613 EWAT NLCA TOPS 10 NIL NILSFC LATA1 0 NIL NIL
00 Y RESGRP 0 7 $
LCABILL OFF – BILLING DONE ON BASIS OF CALLTYPE
```

continued

MDC EWATS for Intra-LATA PIC (continued)

TRAVER output example for MDC EWATS for Intra-LATA PIC (continued)

```
TABLE STDPRTCT
EWAT ( 1) ( 1) 2
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
BILLING.  CALL TYPE DEFAULT IS NP.  PLEASE REFER TO DOCUMENTATION.
 . 3 410 N DD 0 NA
 . SUBTABLE AMAPRT
 . KEY NOT FOUND
 . DEFAULT VALUE IS:  NONE OVRNONE N
TABLE HPCPATTN
TUPLE NOT FOUND
TABLE HNPACONT
613 Y 916 2 ( 54) ( 1) ( 0) ( 0) 2 $
 . SUBTABLE HNPACODE
 . 319 319 FRTE 717
TABLE IBNFEAT
TUPLE NOT FOUND
TABLE CUSTSTN
TUPLE NOT FOUND
TABLE OFCVAR
AIN_OFFICE TRIGGRP NIL
AIN Info Collected TDP: no subscribed trigger.
AIN Info Analyzed TDP: no subscribed trigger.
 . SUBTABLE RTEREF
 .  717 S D EATANDEMOG
 . EXIT TABLE RTEREF
EXIT TABLE HNPACONT
LNP00100 SOC Option is IDLE.
LNP Info: Called DN is not resident
 . SUBTABLE STDPRT
.
LNP Info: NHPA results are used.
TABLE LATAXLA
LATA1 319 INTER INTER STD
TABLE OCCINFO
CAR1 0123 TRANS Y Y Y Y Y N N Y Y Y Y LONG 0 FGRPD N N N N N N N N Y N
N N N N Y
TABLE EASAC
TUPLE NOT FOUND
OVERLAP CARRIER SELECTION (OCS) APPLIES
TABLE STDPRTCT
EWAT ( 1) ( 1) 2
 . SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE BILLING. CALL TYPE
DEFAULT IS NP.  PLEASE REFER TO
DOCUMENTATION.
```

continued

MDC EWATS for Intra-LATA PIC (continued)

TRAVER output example for MDC EWATS for Intra-LATA PIC (continued)

```
      10123 10123 EA DD 5 P CAR11 CAR1 Y OFRT 889 6 20 Y
    SUBTABLE AMAPRT
     . KEY NOT FOUND
     . DEFAULT VALUE IS:  NONE OVRNONE N
     . . TABLE OFRT
     . .  889 CND EA INTNL SK 3
     . .      S D OGEACAR1
     . .      S D ISUP2WCAR1
     . .      CND ALWAYS SK 2
     . .      N D OGEACAR1 15 D121 N
     . .      N D ISUP2WCAR1 O D121 N
     . . EXIT TABLE OFRT
     . TABLE STDPRTCT
     . CAR11 ( 1) (65021) 2
    WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE
    BILLING.  CALL TYPE DEFAULT IS NP.  PLEASE REFER TO
    DOCUMENTATION.
     . . 3 9 EA DD 0 T NA CAR1 N
    AIN Info Collected TDP: no subscribed trigger.
    AIN Info Analyzed TDP: no subscribed trigger.
    Using Equal Access (EA) route  OFRT 889 from Pretranslation
    TABLE OFRT
     889 CND EA INTNL SK 3
         S D OGEACAR1
         S D ISUP2WCAR1
         CND ALWAYS SK 2
         N D OGEACAR1 15 D121 N
          N D ISUP2WCAR1 0 D121 N
    EXIT TABLE OFRT
    TABLE WATSBAND
    Using WATS carrier: CAR1
    613 CAR1 3192257777 17
    TABLE BANDSETS
    Band 17 is valid for bandset: 10THRU19

    +++ TRAVER: SUCCESSFUL CALL TRACE +++
    DIGIT TRANSLATION ROUTES

    1 OGEACAR1      3192557777     ST
    2 ISUP2WCAR1    3192557777     ST

    TREATMENT ROUTES.  TREATMENT IS:  GNCT
    1 T120

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

MDC EWATS for Intra-LATA PIC (end)

SERVORD

MDC EWATS for Intra-LATA PIC does not use SERVORD.

MDC IntraLata PIC in EAEO

Ordering codes

Functional group order code: EQA00001

Functionality order code: EQA00009

Release applicability

BCS33 and later versions

Requirements

To operate, MDC IntraLata PIC in EAEO has the following requirements:

- BAS Generic, BAS00003
- UDDD Services, UDD00001
- MDC Minimum, MDC00001

Description

The Meridian Digital Centrex (MDC) Intra-LATA PIC is in the Equal Access End Office (EAEO) feature package. The MDC Intra-LATA PIC in the EAEO feature package provides intra-LATA carrier presubscription, screening, and routing abilities. The MDC Intra-LATA PIC provides these features for MDC stations, ISDN subscribers and PX trunks at an EAEO. With this feature package, subscribers can choose a primary carrier for intra-LATA service. Before this feature package, the local operating companies provided intra-LATA service to subscribers.

Operation

The MDC stations and PX trunks can choose a Primary Intra-LATA Carrier (PIC) to provide inter-LATA service. Three types of PICs are assigned to MDC stations:

- customer group PIC (GPIC) assigned to the group translator
- network class of service (NCOS) PIC (NPIC) assigned to the station NCOS preliminary translator
- the PIC assigned to the MDC station through SERVORD

The default carrier is the GPIC. An NPIC overrides the GPIC. When the user assigns a PIC to an MDC station through SERVORD, this PIC overrides the NPIC and the GPIC.

The uses of different PICs appear in the following example. When a customer assigns a PIC that the complete organization uses, the customer assigns this GPIC in the customer group translator. The customer uses the NPIC to assign

MDC IntraLata PIC in EAEO (continued)

a PIC common to all managers. Some personnel in the organization can require a separate PIC. Assign this PIC through the SERVORD system.

Assign a PIC to the following MDC stations:

- data units
- Meridian business sets
- standard MDC 500/2500 sets
- attendant console

> ***Note:*** You cannot assign a PIC to an attendant console through SERVORD. The attendant console must use the NCOS or customer group PIC.

This feature package allows the EAEO to assign three types of primary intra-LATA carriers (LPIC). The LPIC correspond to the following three PICs:

- customer group LPIC assigned to the group translator
- the NCOS LPIC assigned to the station NCOS preliminary translator
- the LPIC assigned to the MDC station through SERVORD

When a station cannot choose a PIC, the station cannot choose an LPIC. When the PIC is not a specified option, field CHOICE in table IBNXLA defaults to Y. The subscriber can dial the EAP prefix to manually select a carrier.

The DMS-100 switch has two levels of MDC translators. These translators are the preliminary and customer groups. When the digits that the subscriber dials are not in the preliminary translator, the system searches the customer group translator. The EAEO can assign an LPIC to each of these translators in table IBNXLA. Note that you must enter the EA option in table IBNXLA before you can assign option LPIC.

When an MDC call enters the plain old telephone service (POTS) environment, the system uses POTS Equal Access translations.

Limits

The following limits apply to MDC IntraLata PIC in EAEO:

- The MDC Intra-LATA PIC in EAEO does not support LPIC for P2 trunks.
- The MDC Intra-LATA PIC in EAEO does not support LPIC ability for each bearer and call type for ISDN.

- You cannot assign a LPIC to an attendant console through SERVORD. You can assign an LPIC through the preliminary or subscriber group translator.
- To perform Equal Access translations, the preliminary NCOS or subscriber group translator in table IBNXLA must have the following conditions present:
  - — set field TRSEL to NET
  - — set field NETTYPE to GEN
  - — set field OPTIONS to EA
- You cannot assign LPIC in table CXGRP unless you assign the EA option to specified PX trunk groups. These PX trunk groups point to that CXGRP entry.

Interactions

A description of the interactions between MDC IntraLata PIC in EAEO and other functionalities appears in the following paragraphs.

- Carrier Toll Denied (CTD)
  - — The system can deny an MDC station toll access to the carrier that translates the call. The system denies toll access when that carrier appears in the CTD list for that MDC station. The system can override the CTD on the group MDC stations. This event occurs when the following options are on the preliminary or customer group translator:
    - – the TOLL option with toll denied (TDN)
    - – the TOLL option with toll diversion (TDV) restriction
- Direct Inward System Access (DISA)

  When a user dials in on a DISA line, the LPIC assigned to that group carries the call.
- Residential Enhanced Services (RES)

  You can use MDC LPIC as an option on RES lines.

Activation/deactivation by the end user

The MDC IntraLata PIC in EAEO does not require activation or deactivation by the end user.

Billing

The MDC Intra-LATA PIC in EAEO does not affect billing. The system produces a standard 110 record for intra-LATA calls. The ssyetn produces the same record when the subscriber uses the LPIC. The system produces the

MDC IntraLata PIC in EAEO (continued)

same record record for inter-LATA calls that originate in the end office. The Automatic Message Accounting (AMA) billing record presubscription dialing indicator relates to the status of the intra-LATA carrier. The record indicates when the subscriber presubscribes to the carrier. For intra-LATA calls that the local operating company completes, the system produces a 006 record.

Station Message Detail Recording

The MDC IntraLata PIC in EAEO does not affect Station Message Detail Recording.

Datafilling office parameters

The MDC IntraLata PIC in EAEO does not affect office parameters.

Datafill sequence

Datafill for MDC IntraLata PIC in EAEO appears in the following table. The tables appear in the correct entry order.

Datafill requirements for MDC IntraLata PIC in EAEO

Table	Purpose of table
IBNFEAT (Note)	Table IBNFEAT (IBN line feature) assigns options to individual MDC stations.
KSETFEAT (Note)	Table KSETFEAT (business set and data-unit feature) assigns options to an MBS.
VIRTGRPS	Table VIRTGRPS (virtual facility groups) assigns options to virtual facility groups (VFGs).
VFGDATA	Table VFGDATA (virtual facility group data) contains tuples with information about one end of a VFG. Each end of a VFG can be an MDC, VFG, or POTS VFG. Each end can be incoming or outgoing.
CXGRP	Local or combined local/toll switching units require table CXGRP (customer group options). Table CXGRP defines the options associated with a PX digital trunk group.
IBNXLA	Table IBNXLA stores the data required for the translation of calls from an MDC station.
OCCINFO	Table OCCINFO (other common carrier information) defines the attributes for the carriers that serve a DMS switch. This table screens calls for carrier compatibility.
Note: Enter data in this table through SERVORD. This document does not provide a datafill procedure or example. Refer to “SERVORD" for an example of how to use SERVORD to enter data in this table.	

Datafilling table VIRTGRPS

Table VIRTGRPS assigns options to VFGs. The options for Equal Access are EA and LPIC. The EA option provides Equal Access ability to MDC stations and incoming trunks. The LPIC option provides an Equal Access carrier for local exchange calls. The LPIC option is correct with an assigned EA option.

Datafill for MDC IntraLata PIC in EAEO for table VIRTGRPS appears in the following table. The fields that apply to MDC IntraLata PIC in EAEO appear in this table. Refer to the data schema section of this document for a description of the other fields.

Datafilling table VIRTGRPS

Field	Subfield or refinement	Entry	Explanation and action
OPTIONS		EA	Options. Enter the list of options and associated subfields assigned to the VFG. Separate each option and subfield with a space. Enter EA and subfields PIC and CHOICE to assign the EA option. Enter LPIC and subfield IPIC to assign the intra-LATA PIC option.
	PIC	Primary inter-LATA carrier	Primary inter-LATA carrier. Enter the name assigned to the PIC in table OCCNAME. When you do not require a PIC, enter NONE.
	CHOICE	Y or N	Choice. Enter Y when the subscriber can dial an EAP prefix and choose a carrier manually. When this condition does not apply, enter N.
	IPIC	Intra-LATA carrier name	Intra-LATA carrier name. Enter the name of the intra-LATA carrier for this VFG as table OCCNAME defines.

Datafill example for table VIRTGRPS

Sample datafill for table VIRTGRPS appears in the following example. This example defines carrier CARRC as the LPIC for this VFG. This example assigns the EA option to the VFG.

MDC IntraLata PIC in EAEO (continued)

MAP example for table VIRTGRPS

```
KEY                                    DATA

                                        OPTIONS
_____________________________________________________________
KDKVRT SIZE 2  POTS  6137224500        0  Y
                                       (EA  CARRA Y)
                                       (LPIC  CARRC) $
```

Datafilling table VFGDATA

Table VFGDATA contains the data for each end of a POTS VFG. Add the LPIC option to provide data when you choose an Equal Access carrier to provide intra-LATA calls for POTS VFGs. Add this option when you add the EA option.

Datafill for MDC IntraLata PIC in EAEO for table VFGDATA appears in the following table. The fields that apply to MDC IntraLata PIC in EAEO appear in this table. Refer to the data schema section of this document for a description of the other fields.

Datafilling table VFGDATA

Field	Subfield or refinement	Entry	Explanation and action
OPTION		Option	Option. Enter the list of options and associated subfields assigned to the VFG. Separate each option and subfield with a space. Enter VFGEA and subfields PIC and CHOICE to assign the EA option. Enter VLPIC and subfield IPIC to assign the intra-LATA PIC option.
	PIC	Primary inter-LATA carrier	Primary inter-LATA carrier. Enter the name that table OCCNAME assigns to the PIC. When you do not require a PIC, enter NONE.
	CHOICE	Y or N	Choice. Enter Y when the subscriber can dial an EAP prefix to choose a carrier manually. When this condition does not apply, enter N.
	IPIC	Intra-LATA carrier name	Intra-LATA carrier name. Enter the name of the intra-LATA carrier for this VFG as table OCCNAME defines.

Datafill example for table VFGDATA

Sample datafill for table VFGDATA appears in the following example. This example defines carrier CARRB as the LPIC for this VFG. This example assigns the EA option to the VFG.

MAP example for table VFGDATA

```
KEY
                                        DATA
_____________________________________________________________________
KDKVRT  POTSVI
POTSVI  6137224500  0  Y            (VFGEA CARRA Y)
                                    (VLPIC CARRB)$
```

Datafilling table CXGRP

Table CXGRP assigns options to PX trunks. Add the LPIC option to allow the operating company to route LPIC calls through a PX trunk. To add an Intra-LATA carrier to table CXGRP, the specified PX trunk must have the EA option set in table TRKGRP (PX). The specified PX trunk points to the CXGRP entry.

Datafill for MDC IntraLata PIC in EAEO for table CXGRP appears in the following table. The fields that apply to MDC IntraLata PIC in EAEO appear in this table. Refer to the data schema section of this document for a description of the other fields.

Datafilling table CXGRP

Field	Subfield or refinement	Entry	Explanation and action
PXOPTION		LPIC option	Customer group options. Enter the LPIC option
CARRIER		Inter-LATA carrier name	Enter the name of the inter-LATA carrier for this trunk group as table OCCNAME defines.

Datafill example for table CXGRP

Sample datafill for table CXGRP appears in the following example.

MDC IntraLata PIC in EAEO (continued)

MAP example for table CXGRP

```
CUSTKEY
              SPB
                                                    CTD
                                                  EWATS
                                                PXOPTION
_____________________________________________________________________
32
             N
                                                      N
                                                      N
                                  (LPIC CARRA) (TDV)  $
```

Datafilling table IBNXLA

Table IBNXLA stores the data required for the translation of calls from an MDC station. The customer uses the table to specify an LPIC that an MDC station NCOS preliminary translator, customer group translator uses. You can assign the LPIC option when you assign the EA option.

Datafill for MDC IntraLata PIC in EAEO for table IBNXLA appears in the following table. The fields that apply to MDC IntraLata PIC in EAEO appear in this table. Refer to the data schema section of this document for a description of the other fields.

Datafilling table IBNXLA (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
RESULT		refer to subfields	This field contains several subfields. This feature affects subfield OPTION.
	OPTION	EA, LPIC	Option. Enter the list of options and associated subfields assigned to the translator. Separate each option and subfield with a space. Enter EA and subfields PIC, CHOICE, and INVEAFLX to assign the EA option. Enter LPIC and subfield IPIC to assign the intra-LATA PIC option.
	PIC	Primary inter-LATA carrier	Primary inter-LATA carrier. Enter the name table OCCNAME assigns to the PIC. When you do not require a PIC, enter NONE.

Datafilling table IBNXLA (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	CHOICE	Y or N	Choice. Enter Y when the subscriber can dial an EAP prefix to choose a carrier manually. When this condition does not apply, enter N.
	INVEAFLX	Invalid flexible intercept number	Invalid flexible intercept number. Enter the invalid flexible intercept number. When the call cannot occur through the carrier that field PIC specifies, the system sends the call to this treatment.
	IPIC	Intra-LATA carrier name	Intra-LATA carrier name. Enter the name of the intra-LATA carrier for this station as table OCCNAME defines.

Datafill example for table IBNXLA

Sample datafill for table IBNXLA appears in the following example. This example defines carrier CARRB as the LPIC for this MDC station. This example assigns the EA option.

MAP example for table IBNXLA

```
KEY
                                                    RESULT
_____________________________________________________________________
CXT1           9
NET  N  N  N 1  Y  POTS  N  Y  GEN  (EA CARRA Y 0)
                                     (LPIC  CARRB)  $
```

Datafilling table OCCINFO

Table OCCINFO defines the attributes for carriers that serve the end office. Table OCCINFO screens calls for carrier compatibility. For example, table OCCINFO allows the system to send international traffic to carriers that can handle this type of traffic.

Datafill for MDC IntraLata PIC in EAEO for table OCCINFO appears in the following table. The fields that apply to MDC IntraLata PIC in EAEO appear

MDC IntraLata PIC in EAEO (continued)

in this table. Refer to the data schema section of this document for a description of the other fields.

Datafilling table OCCINFO

Field	Subfield or refinement	Entry	Explanation and action
INTRAOPR		Y or N	Intra-LATA operator. Enter Y when the carrier can handle 0- intra-LATA operator calls. When this condition does not apply, enter N, the default value.

Datafill example for table OCCINFO

Sample datafill for table OCCINFO appears in the following example.

MAP example for table OCCINFO

```
CARRNAME CARRNUM ACCESS INTER INTNTL  INTRA  ANI  FANI
ONISCRN
AD1  OVERLAP  INTERS  INTRAS  TERMREC  OCCSEPNO OPSIG
PICIND  NOA950  INCCPN DTMFIND OPSERV CACBLOCK CTDOA
CMCMON SCRNWATS  CRMCRA  ATPINCL INTRAOPR
_____________________________________________________
CAR1      123     FGC      Y     Y     Y    N    N     N
 Y    Y        Y        Y      LONG     0       FGRPC
 N        N        N        N      N     N       N    N
 N           Y      N        N
```

Tools for verifying translations

The output from TRAVER when you use TRAVER to verify MDC IntraLata PIC in EAEO appears in the following example.

The following appears in the TRAVER command in this example:

- L indicates the originator is a line
- 6215000 is the DN that originates the call
- 1425188507777 is the DN that receives the call
- B indicates that a report on the two table entries and results is necessary
- RTEVFG refer to note below

Note 1: The TRAVER route specification contains the addition of option RTEVFG. This option corrects problems that VFG translation

verifications not included in MDC cause. For TRAVER runs that use the NT or B trace, include the RTEVFG after the NT or B specification.

Note 2: The RTEVFG option causes TRAVER to check the first pass routes to see if VFG routes are present. When VFG routes are present, the TRAVER process occurs. The RTEVFG option is not correct for a T trace. The option is not correct because this trace alone does not generate route lists. When you use option RTEVFG with the T specification, TRAVER does not associate the option with the trace option. The TRAVER interprets the option as the next option in the option area that follows the trace specification.

MDC IntraLata PIC in EAEO (continued)

TRAVER output example for MDC IntraLata PIC in EAEO

```
TRAVER L 6215000 1425188507777 B RTEVFG
TABLE IBNLINES
HOST 00 0 01 16 DT STN IBN 6215000 IBNTST 0 0 613 $
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS
TUPLE NOT FOUND
TABLE NCOS
IBNTST 0 0 0 TST10 ( XLAS CXT1 NXLA NDGT) ( OHQ 0 TONE_OHQ)
  >>>               ( CBQ 0 1 Y 2) ( ERWT )$
TABLE CUSTHEAD: CUSTGRP, PRELIMXLA, CUSTXLA, FEATXLA,
  >>>          VACTRMT, AND DIGCOL
IBNTST NXLA CXT3 NXLA 0 TST1
TABLE DIGCOL
TST1 1 COL S 2
TABLE IBNXLA: XLANAME CXT1
CXT1 142 NET N Y 3 Y NDGT N Y GEN ( LATTR 24) ( EA CAR1 Y 0)
                                                (LPIC CAR1) $
TABLE DIGCOL
NDGT specified: digits collected individually.
TABLE LINEATTR
24 1FR NONE NT NSCR 4 613 PRTC NLCA NONE N 10 NIL
   >>> NILSFC NILLATA 0 NIL NIL 00 N
TABLE STDPRTCT
PRTC ( 1) ( 0)
 . SUBTABLE STDPRT
 . 518 61 T NP 0 IBNRTE 10 3 18 NONE
 .  . TABLE IBNRTE
 .  .   10 VFG N N N EWHVFG 0
 .  . EXIT TABLE IBNRTE
 . SUBTABLE AMAPRT
 . KEY NOT FOUND
 . DEFAULT VALUE IS:  NONE   N

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

MDC IntraLata PIC in EAEO (continued)

TRAVER output example

```
DIGIT TRANSLATION ROUTES

1 VFG: EWHVFG          5188507777

TREATMENT ROUTES.  TREATMENT IS: GNCT
1 T120
+++ TRAVER: SUCCESSFUL CALL TRACE +++

--->
---> RESOLVING VFG: EWHVFG Route with calling digits 5188507777
--->

TABLE VIRTGRPS
EWHVFG SIZE 5 POTS 7777777777 0 N (IBNPIC ) (TOLLRST )$
WARNING: LIBNPIC option is set
IBNXLA EA LPIC will be used
WARNING: TOLLRST option is set
TABLE LINEATTR
0 1FR NONE NT FR01 0 613 P621 L613 TSPS N 10 NIL
```

SERVORD

Complete the datafill for the required tables IBNFEAT and KSETFEAT with the service order utility, SERVORD.

Table IBNFEAT assigns options to separate MDC stations. You can assign option LPIC to an MDC station with this table.

Table KSETFEAT assigns options to an MBS.

The system supports SERVORD option LPIC for MDC. You can add or delete this option from standard MDC lines, data units and MBSs. Add or delete this option through the use of the ADO, DEO, CHF and NEW commands. A new field, CARRIER, prompts for the name of the carrier selected as LPIC. This prompt occurs when you add LPIC to the line. Enter the name of the specified carrier in table OCCNAME.

MDC IntraLata PIC in EAEO (continued)

SERVORD prompts

The SERVORD prompts to add MDC IntraLata PIC in EAEO to a line appear in the following table.

SERVORD prompts for MDC IntraLata PIC in EAEO

Prompt	Correct input	Explanation
DN_OR_LEN	Correct DN or LEN	Enter the seven-digit directory number (DN) or the line equipment number (LEN).
OPTION	LPIC	Enter LPIC to assign the option.
CARRIER	Carrier name as datafilled in table OCCNAME	Enter the carrier assigned as the LPIC.

SERVORD example to add MDC IntraLata PIC in EAEO

To add the following SERVORD MDC IntraLata PIC in EAEO to the line, use the ADO command. This command appears in the following example.

Examples of SERVORD commands appear in the following sections.

Adding LPIC to an MDC station

The addition of an LPIC to an MDC 500/2500 set through SERVORD updates table IBNFEAT. The addition of an LPIC to an MBS or a data unit through SERVORD updates table KSETFEAT. The addition of an LPIC to an MDC station with the ADO command appears in the following example. The addition of an LPIC to an MDC station with the ADO command appears in the following example.

Example of SERVORD for MDC IntraLata PIC in EAEO in prompt mode

```
ADO
SONUMBER:    NOW 86 1 2 PM
$
DN_OR_LEN:
7211000
OPTION:
LPIC
CARRIER:
CARR1
OPTION:
$
```

Example of SERVORD for MDC IntraLata PIC in EAEO in no-prompt mode

```
ADO $ 7211000 LPIC CARR1 $
```

Deleting LPIC from an MDC station

The deletion of an LPIC from an MDC station with the DEO command appears in the following example.

```
DEO
SONUMBER:    NOW 86 1 2 PM
$
DN_OR_LEN:
7211000
OPTION:
LPIC
OPTION:
$
```

Example of SERVORD for MDC IntraLata PIC in EAEO in no-prompt mode

```
DEO $ 7211000 LPIC $
```

POTS IntraLata PIC in EAEO

Ordering codes

Functional group ordering code: EQA00001

Functionality ordering code: EQA00008

Release applicability

BCS33 and later versions

Requirements

To operate, POTS IntraLata PIC in EAEO has the following requirements:

- BAS Generic, BAS00003
- UDDD Services, UDD00001

Description

This functionality allows subscribers of equal access end offices (EAEO) to choose a carrier to provide intra-LATA service. The carrier is an intra-LATA PIC (LPIC). This ability is like the current ability to choose a primary inter-LATA carrier (PIC). Both abilities are optional to the subscriber. If the intra-LATA carrier is not specified, the operation company handles the intra-LATA subscriber calls.

Operation

This feature package implements intra-LATA carrier presubscription for POTS and coin lines. The addition of option LPIC to table LENFEAT allows the subscriber to specify a primary intra-LATA carrier (LPIC). The LPIC can be the same as the PIC.

The call can be an intra-LATA toll call. When this event occurs, the examination of calling DN line options occurs to determine if the subscriber chose an LPIC. If the subscriber chooses an LPIC, the system routes the call to that carrier. If the subscriber does not select an LPIC, the local operating company handles the call.

The LPIC option is like the PIC option. The difference between these options is that the system does not prompt user for the CHOICE prompt. The CHOICE prompt determines if the subscriber can dial 10XXX to select a carrier for each call. This ability applies to 10XXX dialing for both inter-LATA and intra-LATA calls. The determination of this ability occurs when a line receives the inter-LATA PIC option. If the PIC option is not specified, the default for CHOICE is true. This default allows subscribers that select an LPIC, but not a PIC, to place 10XXX calls. Specify the CARRIER name in table OCCNAME before you specify the name as the carrier for the LPIC option.

The handling of zero minus calls is different. Before this feature package, the system routed these calls to the local operating company operator for completion. The system can route these calls to an LPIC with this feature package. Use office parameter ZERO_MINUS_TO_CARRIER for Equal Access and MDC applications. This parameter is now in use for LEAS applications. Add field INTRAOPR to table OCCINFO to determine if a carrier can handle 0- LPIC calls.

Translations table flow

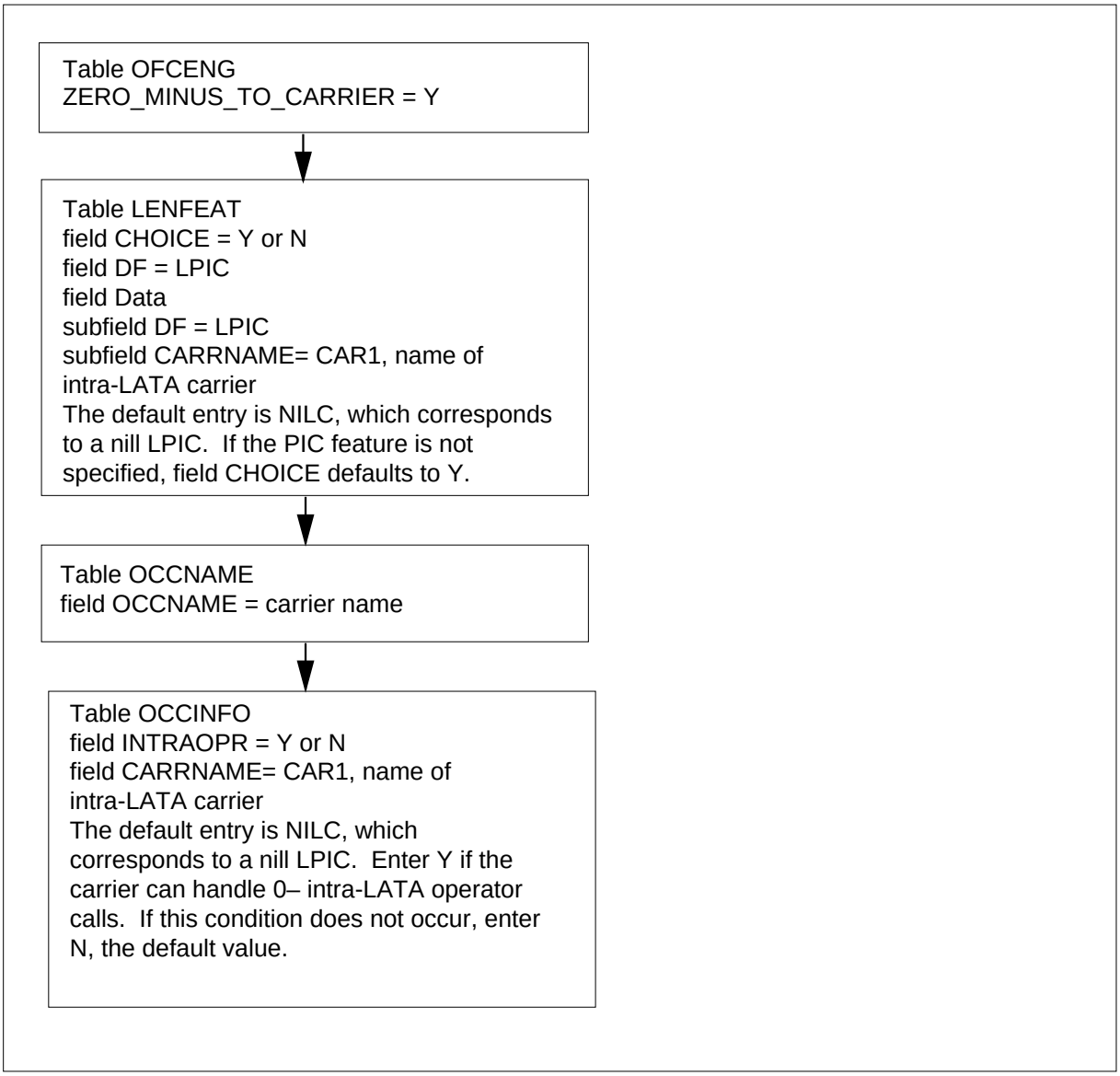
The POTS IntraLata PIC in EAEO translations tables appear in the following list:

- Table LENFEAT lists the functionalities for each POTS line you enter.
- Table OCCNAME lists the carriers that connect and establishes the spelling standard for carrier names.
- Table OCCINFO defines the attributes for carriers that serve the DMS switch and screens calls for carrier compatibility.

The POTS IntraLata PIC in EAEO translation process appears in the following flowchart.

POTS IntraLata PIC in EAEO (continued)

Table flow for POTS IntraLata PIC in EAEO



The datafill content in use in the flowchart appears in the following table.

Datafill example for POTS IntraLata PIC in EAEO (Sheet 1 of 2)

Datafill table	Example data
LENFEAT	HOST 02 1 07 04 S LPIC LPIC CAR1

POTS IntraLata PIC in EAEO (continued)

Datafill example for POTS IntraLata PIC in EAEO (Sheet 2 of 2)

Datafill table	Example data
OCCNAME	C111
OCCINFO	CAR1 0111 EAP Y Y Y N Y N N Y Y Y Y LONG 0 FGRPC Y N N N N N N N N Y N N

Limits

This functionality affects calls from POTS lines and coin lines. The Intra-LATA PIC for IBN functionality provides Intra-LATA PIC capability for integrated business network (IBN) lines.

Interactions

The Carrier Toll Denied (CTD) functionality applies to the LPIC option the same way CTD applies to the PIC option. When the CTD is specified on a line, the subscriber cannot access the carriers that appear. This condition applies to inter-LATA or intra-LATA calls.

Activation/deactivation by the end user

The POTS IntraLata PIC in EAEO does not require end user activation or deactivation.

Billing

Billing does not change. The system produces a standard 110 record for all intra-LATA calls that use a presubscribed carrier. For intra-LATA calls that the local operating company completes, the system produces a 006 record. This condition also applies for 10XXX calls.

The local operating company acts as a carrier for intra-LATA calls. This condition occurs when the ACCESS field in table OCCINFO is OTC. Calls that these carriers handle produce a 006 record. This billing record is the same as the billing record the system produces for inter-LATA calls that originate in the end office.

Calls with a value other than OTC that other carriers handle produce a 110 record. This record is the same as the record the system produces for 10XXX calls.

Station Message Detail Recording

The POTS IntraLata PIC in EAEO does not affect Station Message Detail Recording.

POTS IntraLata PIC in EAEO (continued)

Datafilling office parameters

Office parameters that POTS IntraLata PIC in EAEO use appear in the following table. Refer to *Office Parameters Reference Manual*.

Office parameters that are used by POTS IntraLata PIC in EAEO

Table name	Parameter name	Explanation and action
OFCENG	ZERO_MINUS_TO_CARRIER	This parameter determines if the system routes 0- calls to the Intra-LATA PIC of the subscriber or to the local operating company. The system can route calls to the Intra-LATA PIC if the selection of an Intra-LATA PIC occurs. The default value is N. This value specifies that the system routes 0- calls to the local operating company. ***Note:*** This parameter that was in use for LEAS applications, is now for LEAS, EA, and IBN applications.

Datafill sequence

The tables that require datafill to implement POTS IntraLata PIC in EAEO appear in the following table. The tables appear in the correct entry order.

Datafill requirements for POTS IntraLata PIC in EAEO

Table	Purpose of table
OFCENG	Office Engineering. Table OFCENG contains data on engineering parameters for the office. See “Datafilling office parameters" for how POTS Intra-LATA PIC in EAEO affects office parameters.
LENFEAT	Line Feature. Table LENFEAT lists the features for a specified line in table LENLINES. Enter LENFEAT through SERVORD.
OCCNAME	Other Common Carrier Name. Table OCCNAME contains the connected carriers and establishes the spelling standard for carrier names.
OCCINFO	Other Common Carrier Information. Table OCCINFO defines the attributes for the carriers that serve a DMS switch and screens calls for carrier compatibility.

Datafilling table OCCNAME

Table OCCNAME contains one field (OCCNAME) and serves the two following functions for translations:

- This table provides a list of carriers that connect. The 1000 tuples accommodate 999 carriers and 1 null carrier (NILC). The office default carrier is the same as any other inter-LATA (local access and transport area) carrier (IC) or international carrier (INC). Add NILC internally as the last carrier of the list.
- This table establishes the spelling standard for carrier names.

Datafill for POTS IntraLata PIC in EAEO for table OCCNAME appears in the following table. The fields that apply to POTS IntraLata PIC in EAEO appear in this table. See the data design section of this document for a description of the other fields.

Datafilling table OCCNAME

Field	Subfield or refinement	Entry	Explanation and action
OCCNAME		alphanumeric (1 to 16 characters)	Other Common Carrier Name. Table OOCNAME contains the carriers that connect. Table OOCNAME establishes the spelling standard for carrier names.

Datafill example for table OCCNAME

Sample datafill for table OCCNAME appears in the following example.

MAP example for table OCCNAME

```
   OCCNAME

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

    C111
```

Datafilling table OCCINFO

Table OCCINFO defines the attributes for carriers that serve the end office and screens calls for carrier compatibility. For example, table OCCINFO allows the system to route international traffic only to carriers that can handle this traffic.

POTS IntraLata PIC in EAEO (continued)

Datafill for POTS IntraLata PIC in EAEO for table OCCINFO appears in the following table. The fields that apply to POTS IntraLata PIC in EAEO appear in this table. See the data design section of this document for a description of the other fields.

Datafilling table OCCINFO

Field	Subfield or refinement	Entry	Explanation and action
INTRAOPR		Y or N	Intra-LATA operator. Enter Y if the carrier can handle 0- intra-LATA operator calls. If this condition does not apply, enter N. The default value is N.
CARRNAME		alphanumeric (1 to 16 characters)	Carrier name. Enter the carrier name or an abbreviation of the carrier name as the name appears in table OCCNAME.

Datafill example for table OCCINFO

Sample datafill for table OCCINFO appears in the following example. In this example, the INTRAOPR field contains Y. If you set office parameter ZERO_MINUS_TO_CARRIER to Y in table OFCENG, the system routes 0- calls to the LPIC.

MAP example for table OCCINFO

```
CARRNAME CARRNUM ACCESS ORIGCARR INTER INTNTL INTRA ANI
FANI ONISCRN AD1 OVERLAP INTERS INTRAS TERMREC OCCSEPNO
OPSIG PICIND NOA950 INCCPN DTMFIND OPSERV CACBLOCK CTDOA
CMCMON SCRNWATS CRMCRA ATPINCL INTRAOPR
_____________________________________________________________
   CAR1    0111   EAP      Y       Y       Y      N   Y    N
 N     Y       Y     Y       Y    LONG       0   FGRPC     Y
    N     N     N        N       N       N       N     N
      Y    N     N
   C222    0222   EAP      Y       Y       N      Y   N    N
 N    N        Y     Y       N    SHORT     0    FGRPC     N
   N    N       N       N       N       N       N     N
      Y    N     N
```

Tools for verifying translations

The update for Translation Verification (TRAVER) tool includes a lookup in table LENFEAT for intra-LATA calls. The lookup determines if the subscriber specified an intra-LATA carrier. If this condition occurs, that carrier handles

the call. If this condition does not occur, the operating company handles the call.

For offices that allow the system to route 0- traffic to carriers, translations performs a lookup in table OCCINFO. If the INTRAOPR option is not set for that carrier, TRAVER generates the following message:

```
THIS CARRIER DOES NOT HANDLE ZERO_MINUS CALLS
```

The output from TRAVER in use to verify POTS IntraLata PIC in EAEO appears in the following example.

The output from TRAVER in use to examine the translation and routing of a call that uses an LPIC appears in the following example.

In the TRAVER command that appears in this example, the following applies:

- L - indicates the originator is a line
- 6211235 - is the DN originating the call
- 2281234 - is the DN receiving the call
- B - indicates that a report on both table entries and results is desired

POTS IntraLata PIC in EAEO (continued)

TRAVER output example for POTS IntraLata PIC in EAEO

```
TRAVER L 6211235 2281234 B
TABLE LINEATTR
0 1FR NONE NE FR01 0 613 P621 L613 TSPS N 10 NIL NILSFC LATA1 0
    NIL NIL 00 N
TABLE DNATTRS
TUPLE NOT FOUND
TABLE DNGRPS

TUPLE NOT FOUND
TABLE STDPRTCT
P621 ( 1) ( 0)
 . SUBTABLE STDPRT
 . KEY NOT FOUND
 . DEFAULT VALUE IS:    N NP 0 NA
 . SUBTABLE AMAPRT
 . KEY NOT FOUND
 . DEFAULT VALUE IS:    NONE OVRNONE  N
TABLE HNPACONT
613 128 2 ( 36) ( 1) ( 0)
 . SUBTABLE HNPACODE
 . 228 228 HRTE 128
 . SUBTABLE RTEREF
 .  128 S D EATANDEMOG
 . EXIT TABLE RTEREF
EXIT TABLE HNPACONT
TABLE LCASCRCN
613 L613 ( 27) OPTL N
 . SUBTABLE LCASCR
 . TUPLE NOT FOUND.  DEFAULT IS NON–LOCAL
TABLE PFXTREAT
OPTL NP N DD UNDT
TABLE CLSVSCRC
```

(Continued)

TRAVER output example for POTS IntraLata PIC in EAEO (continued)

```
KEY NOT FOUND
DEFAULT IS TO LEAVE XLA RESULT UNCHANGED
TABLE LENFEAT
HOST 00 0 00 01 S LPIC LPIC CAR1
TABLE LENFEAT
HOST 00 0 00 01 S PIC PIC CAR2 Y
TABLE LATAXLA
LATA1 613228 INTRA INTER STD
TABLE OCCINFO
CAR1 123 TRANS Y Y Y Y N N Y Y Y Y LONG 0 FGRPC N N N N N N N N N
Y Y
TABLE EASAC
TUPLE NOT FOUND
TABLE STDPRTCT
P621 ( 1) ( 0)
 . STDPRTCT STDPRT
 . 10123 10123 EA DD 5 P CAR1 CAR Y OFRT 889 6 20 Y
 .  . TABLE OFRT
 .  . 889 CND EA INTNL SK 2
 .  .     S D OGEACAR1
 .  .     CND ALWAYS SK 1
 .  .     N D OGEACAR1 15 D121 N
 .  . EXIT TABLE OFRT
 . TABLE STDPRTCT
 . CAR1 ( 1) ( 0) .  . SUBTABLE STDPRT
 .  . 2 9 EA DD 0 T NA CAR N
+++ TRAVER:  SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES
1 OGEACAR1            2281234         ST
TREATMENT ROUTES.   TREATMENT IS:  GNCT
1 T120
+++ TRAVER SUCCESSFUL CALL TRACE +++
```

SERVORD

The system supports the LPIC that is a SERVORD option. Add or delete this option to or from standard POTS and coin lines with the ADO, DEO, CHF, and NEW commands. The CARRIER prompt prompts for the name of the carrier specified as LPIC. This prompt occurs when the addition of an LPIC to a line occurs. Enter the name of the specified carrier in table OCCNAME. The LPIC option is compatible with any PIC compatible option.

POTS IntraLata PIC in EAEO (continued)

SERVORD limits

The following SERVORD limits apply to POTS IntraLata PIC in EAEO:

- The LPIC option is not specified on the following line class codes (LCC):
  - PDATA
  - EOW
  - ETW

SERVORD prompts

The SERVORD prompts used to add POTS IntraLata PIC in EAEO to a line appear in the following table. The SERVORD prompts that specify the name of the carrier specified as LPIC appears in the following table. Refer to *SERVORD Reference Manual* for more information on service orders.

SERVORD prompts for POTS IntraLata PIC in EAEO

Prompt	Correct input	Explanation
DN_OR_ LEN	Correct DN or LEN	Enter the seven-digit DN or the LEN.
OPTION	LPIC	Enter LPIC to assign the option.
CARRIER	Carrier name like the name appears in table OCCNAME	Enter the carrier that is the LPIC.

SERVORD example for adding POTS IntraLata PIC in EAEO

The addition of a POTS IntraLata PIC in EAEO to a line with the ADO command appears in the following SERVORD example.

SERVORD example for POTS IntraLata PIC in EAEO in prompt mode

```
>ADO
SONUMBER:    NOW 86 1 2 PM
>
DN_OR_LEN:
>HOST 00 0 00 01
OPTION:
>LPIC
CARRIER:
>CAR1
OPTION:
> $
```

POTS IntraLata PIC in EAEO (end)

SERVORD example for POTS IntraLata PIC in EAEO in no-prompt mode

```
> ADO  $  HOST  00  0  00  01  LPIC  CAR1  $
```

Release Link Trunk for Equal-Access End Office

Ordering codes

Functional group ordering code: not applicable

Functionality ordering code: not applicable

Release applicability

Release 15 introduces Release Link Trunk for Equal-Access End Office.

Requirements

Release Link Trunk for Equal-Access End Office has no functional group requirements.

Description

The Release Link Trunk (RLT) for Equal-Access End Office (EAEO feature allows a Traffic Operator Position System (TOPS) office to release the control of a call to the originating office. Once the call is released, the EAEO performs the call completion. This action frees the trunk resources of the TOPS office and uses the trunks that belong to the EAEO.

In order for the RLT function to work, the end user calls the TOPS office to complete the directory assistance (DA) call. The EAEO receives an integrated services digital network user part release (ISUP REL) with a service activation parameter (SAP) of the RLT_REQUEST_MSG. This action indicates to the EAEO to attempt an RLT. The EAEO confirms the assignment of option RLT to an ISUP intertoll (IT) trunk in Table TRKOPTS.

If a trunk without option RLT receives the RLT_REQUEST_MSG, the following actions occur:

- The call routes to a feature not allowed (FNAL) treatment.
- A DFIL324 log report generates.

This error detection ensures that synchronization for RLT processing exist between the EAEO and TOPS offices. When option RLT is entered in Table TRKOPTS, the connection to the TOPS office deallocates. At this point, the EAEO can generate any automatic message accounting (AMA) records associated with the call to the TOPS office. Then the EAEO converts the number in the generic address parameter (GAP) to a subscriber format. Next, the EAEO utilizes a pre-defined reverse translator, RLT2DIAL. All RLT calls use RLT2DIAL to ensure reverse translationss simplification derives the

proper number to dial. Once reverse translation completes, the call then translates, routes, and bills as if the caller dialed the number.

Note 1: Only assign option RLT to ISUP IT trunks. If the request message is sent to an ISUP IT trunk without option RLT set, the call routes to FNAL.

Note 2: Do not enter datafill in Table CUSTHEAD, Table DNREVXLA, and Table CUSTNTWK with option RLT2DIAL. Option RLT2DIAL reverse translator is reserved for RLT calls only. The EAEO generates the error message “Cannot Specify RLT2DIAL - Reserved for Release Link Trunking” when this action occurs.

Operation

The Release Link Trunk (RLT) allows Traffic Operator Position (TOPS) offices to relinquish control of a call so that an originating office performs the call completion. TOPS offices save trunk resources when EAEO offices attempt the call completion using their own trunk resources.

Translations table flow

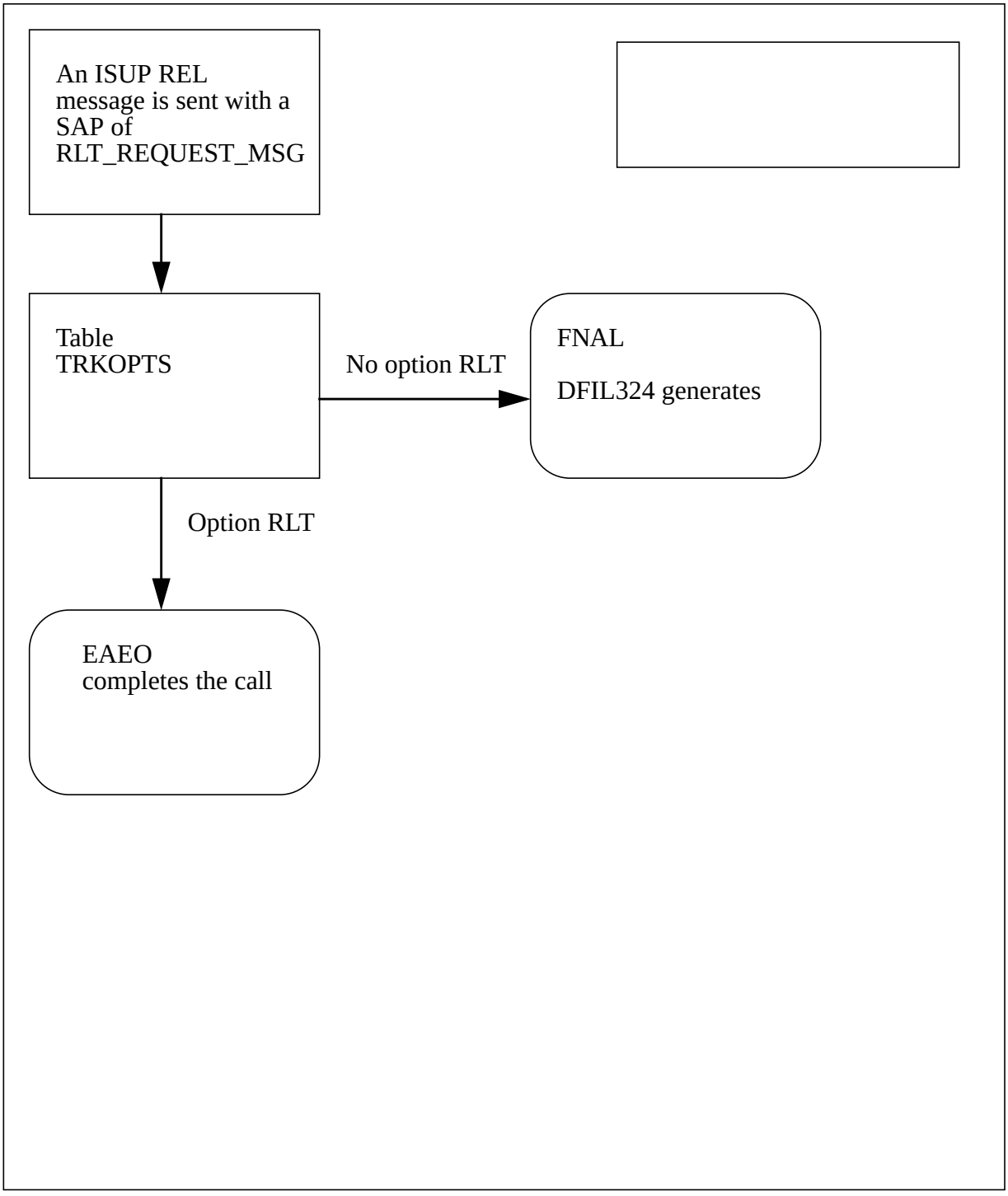
The list that follows includes the Release Link Trunk for Equal-Access End Office translations tables:

- Table TRKOPTS

The flowchart that follows provides the Release Link Trunk for Equal-Access End Office translations process.

Release Link Trunk for Equal-Access End Office (continued)

Table flow for Release Link Trunk for Equal-Access End Office



Release Link Trunk for Equal-Access End Office (continued)

The table that follows lists the datafill content used in the flowchart.

Datafill example for Release Link Trunk for Equal-Access End Office

Datafill table TRKOPTS	Example data
OPTKEY	ISUP2WIT
OPTINFO	RLT RLT

Limitations and restrictions

The limitations and restrictions that follow apply to the Release Link Trunk for Equal-Access End Office feature.

- Only these originators are supported: POTS, RES, IBN, 2FR, 4FR, 1MR, P-phones, and Huntgrps lines.
- Only these multiple-apprearance directory number (MADN) trunks are supported: MF/SS7 IBN, PX, and P2.
- There must be a direct connection between the EAEO office and the TOPS office using the ISUP IT trunk. RLT calls that route through an access tandem or from an EAEO to another EAEO then to a TOPS office are not supported.
- Option RLT must be assigned to ISUP IT trunks in Table TRKOPTS.
- RLT does not support Attendant Console and PRI/BRI.
- RLT requires that the GAP receive 10-digit numbers.
- The REVXLVER command for reverse translations of RLT calls supports only POTS, IBN, and RES agents.

Interactions

The Release Link Trunk for Equal-Access End Office feature does not interact with other functionalities.

Activation and deactivation by the user

The Release Link Trunk for Equal-Access End Office feature does not require activation or deactivation by the user.

Billing

The Release Link Trunk for Equal-Access End Office feature does not generate billing records or changes.

Release Link Trunk for Equal-Access End Office (continued)

Station Message Detail Recording

The Release Link Trunk for Equal-Access End Office feature does not require Station Message Detail Recording.

Office parameters used by Release Link Trunk for Equal-Access End Office

The Release Link Trunk for Equal-Access End Office feature does not generate office parameters.

Dataflow sequence

The table that follows lists the tables that require datafill to put Release Link Trunk for Equal-Access End Office into operation. You must enter data into the table in this order.

Datafill requirements for Release Link Trunk for Equal-Access End Office

Table	Purpose of table
TRKOPTS	Trunk options. Add option RLT for ISUP IT trunk.
CUSTHEAD	Customer head. RLT2DIAL is blocked from datafill in Table CUSTHEAD.
CUSTNTWK	Customer network. RLT2DIAL is blocked from datafill in Table CUSTNTWK.
DNREVXLA	DN reverse translations. RLT2DIAL is blocked from datafill in Table DNREVXLA.
Note: If the end user attempts to datafill RLT2DIAL, the following message displays “Cannot Specify RLT2DIAL - Reserved for Release Link Trunking.”	

Datafill related to Release Link Trunk for Equal-Access End Office for Table TRKOPTS

The table that follows provides the datafill related to the Release Link Trunk for Equal-Access End Office feature for Table TRKOPTS. This table includes only those fields that apply directly to the Release Link Trunk for Equal-Access End Office

Datafill related to Table TRKOPTS

Field	Subfield	Entry	Explanation and action
OPTKEY	OPTION	RLT	Enter option RLT so that an integrated services digital network user part (ISUP) intertoll (IT) trunk receives a service activation parameter (SAP) of the RLT_REQUEST_MSG. The EAEO verifies option RLT for the ISUP IT trunk.
Note: When a trunk without option RLT receives a service activation parameter (SAP) of the RLT_REQUEST_MSG, the system generates the DFIL324 log report.			

Datafill example for Table TRKOPTS

The figure that follows shows sample datafill for Table TRKOPTS.

MAP example for Table TRKOPTS

```
  OPTKEY                    OPTINFO
- _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ -
  ISUP2WIT                  RLT    RLT
```

MAP example for Table TRKOPTS

```
   LOGUTIL
- _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ -
   URTPB04BA * DFIL324 APR07 14:37:37 6600 INFO Missing Datafill
   CKT          RPTBSS7IT 0
   Missing RLT option in table TRKOPTS.
   Called DR = 411
```

Release Link Trunk for Equal-Access End Office (continued)

Error message for Table CUSTHEAD

The error message that follows apply to Table CUSTHEAD.

Error messages for table CUSTHEAD

Error message	Explanation and action
Cannot Specify RLT2DIAL- Reserved for Release Link Trunking	This feature introduces RLT2DIAL. All Release Link Trunk (RLT) calls use the RLT2DIAL reverse translator. The EAEO blocks RLT2DIAL from datafill in Table CUSTHEAD.
Note: Only RLT calls use the RLT2DIAL reverse translator.	

Error message for Table CUSTNTWK

The error message that follows apply to Table CUSTNTWK.

Error message for Table CUSTNTWK

Error message	Explanation and action
Cannot Specify RLT2DIAL- Reserved for Release Link Trunking	This feature introduces RLT2DIAL. All Release Link Trunk (RLT) calls use the RLT2DIAL reverse translator. The EAEO blocks RLT2DIAL from datafill in Table CUSTNTWK.
Note: Only RLT calls use the RLT2DIAL reverse translator.	

Error message for Table DNREVXLA

The error message that follows apply to Table DNREVXLA.

Error messages for Table DNREVXLA

Error message	Explanation and action
Cannot Specify RLT2DIAL- Reserved for Release Link Trunking	This feature introduces RLT2DIAL. All Release Link Trunk (RLT) calls use the RLT2DIAL reverse translator. The EAEO blocks RLT2DIAL from datafill in Table CUSTHEAD.
Note: Only RLT calls use the RLT2DIAL reverse translator.	

Translation verification tools

The Release Link Trunk for Equal-Access End Office feature does not use translation verification tools.

SERVORD

The Release Link Trunk for Equal-Access End Office feature does not use the Service Order System (SERVORD).

SERVORD limitations and restrictions

The Release Link Trunk for Equal-Access End Office feature has no SERVORD limitations or restrictions.

4 Datafilling EQA Toll

The following chapter describes the EQA Toll, EQA00002, functionality.

Access Tandem Switch

Ordering codes

Functional group ordering code: EQA00002

Functionality ordering code: not applicable

Release applicability

BCS36 and later versions

Requirements

The Access Tandem Switch feature requires BAS Generic, BAS00003.

Description

The DMS-200 switches are access tandems (AT). The Access Tandem Switch feature package allows ATs to originate, route, and bill calls to interexchange carriers (IEC) and international carriers (INC). The switches perform these actions according to the Equal Access plan (EAP).

Operation

The NTX386AB - Access Tandem Switch feature package provides the following abilities:

- translations and carrier screening
- trunking
- terminating billing
- treatments
- logs
- operational measurements (OM)
- access-to-carrier (ATC) tandem
- carrier identification code (CIC) expansion

Descriptions of these abilities appear in the following paragraphs.

Translations and carrier screening

This feature package provides the DMS-200 switch with digit translations and carrier screening abilities for the Equal Access environment. The AT can receive and translate EAP signaling from an Equal Access end office (EAEO). The AT also provides access to EAP carriers. The AT can provide access to interim, transitional, and feature group C (FGC) carriers to connected EAEOs and non-EAEOs.

Access Tandem Switch (continued)

Trunking

This feature package provides Equal Access trunk groups between the end office and the AT. Equal Access traffic from the end office to the AT occurs over the following three types of trunk groups:

- intertoll (IT)
- SuperCAMA (SC)
- Traffic Operator Position System (TOPS)

These trunk groups are combined trunk groups. The trunk groups can handle Equal Access traffic and the type of traffic the trunk groups handle in normal conditions. For each call, the AT determines if the call is Equal Access.

This feature package also provides Equal Access trunk groups between the AT and the carrier. These new trunk groups are ATC trunk groups. The switch requires these trunk groups because the EAP requires different intersystem signaling. The signaling differences include the following:

- additional winks
- regeneration of winks to end offices
- recognition of winks with non-standard duration and timing

Equal Access traffic requires dedicated trunk groups between the AT and the carrier.

Terminating billing

This feature package provides terminating billing for Equal Access calls. The system creates terminating access records for complete Equal Access calls that route to the AT from an IEC or INC. All billing records that the system produces are in the standard automatic message accounting (AMA) format. The billing section of this document describes terminating billing.

Treatments

This feature package provides the AT with treatments for call failures and trunk failures in the Equal Access environment. This feature provides treatments for failures between the AT and the IEC/INC, and the AT and the EAEO.

Note: This document describes treatments and dispositions for treatments. A treatment is a reaction to a call-failure condition. Software generates this reaction. A disposition is an action in response to a problem. The user defines this action.

Access Tandem Switch (continued)

Logs

This feature package provides the AT with the necessary log reports for the Equal Access environment. The system generates a log when the following conditions occur:

- the AT does not receive the first start pulsing wink on IEC calls.
- the first or second start pulsing winks on INC calls.
- the state changes on the trunk between the AT at the IEC or INC.

Refer to the *Advanced Maintenance Guide* for a list of log reports for Equal Access. Refer to the *Log Report Reference Manual* for a description of log reports.

Operational measurements

This feature package provides the AT with the OM that the Equal Access environment requires. In the Equal Access environment, the system generates OMs for each carrier. Current trunk measurements handle the OM that the trunks between offices require. Refer to the *Operational Measurements Reference Manual* for a list of OMs for Equal Access.

Access-to-carrier tandem

This feature prevents package NTX186AB - Equal Access End Office from tandeming an incoming feature group D (FGD) call to specified trunks. These trunks are an outgoing or one-way ATC trunk. This feature does not allow the EAEO to outpulse the incoming digits. This feature also disables the billing function. This feature reports an error when an attempt to tandem an FGD call occurs. The attempt occurs in an end office that does not have the NTX386AB - Access Tandem Switch feature package.

Carrier identification code expansion

A three-digit code, called the CIC, identifies each carrier. The system does not use CICs in the series 10X, 15X, and 16X. The system allows the assignment of a maximum of 970 CICs to an FGD carrier.

This feature prepares for the expected exhaustion of available CICs. This feature package increases the number of CICs that you can assign to 10 000. The format of the carrier access code (CAC) is the dialing sequence that accesses the carrier. The format increases from 10XXX to 101XXXX, where XXX and XXXX are the CICs. This feature package supports the CIC expansion for plain old telephone service (POTS) and Meridian Digital Centrex (MDC) environments. This feature package also supports integrated services digital network (ISDN) subscribers that follow standard Equal Access translations.

The change from three to four digit CICs occurs in three phases. The three phases appear in the following table.

Conversion phases to provide four-digit CICs

Conversion period	Correct CACs	Incorrect CACs	Number of CICs available
Current	10XXX	1010X	970
		1015X	
		1016X	
Permissive (part 1)	10XXX	1010X	970
	1010XXX	1015X	
		1016X	
(part 2)	10XXX	1010X	2970
	1010XXX	1015X	
	1015XXX	1016X	
	1016XXX		
Final	101XXXX	10XXX	10 000

In the first part of the permissive period, the AT can process CACs of the form 10XXX and 1010XXX. The addition of a leading zero to the three-digit CIC assigned to each carrier increases the CIC to four digits. In this period, CACs of the form 1010X, 1015X, 1016X, 1015XXX, and 1016XXX are not assigned. If the subscriber dials a code that is not assigned, the system sends the call to treatment.

In the second part of the permissive period, CACs of the form 1015XXX and 1016XXX are assigned. The CACs of the form 1010X, 1015X, and 1016X are not assigned. The CACs cannot help the AT identify between three and four-digit CICs. The numbers 10, 15, or 16 can appear as digits 3 and 4 in the CAC. When this condition occurs, the AT assumes that a user dialled a four-digit CIC. The AT assumes that any other sequence is a three-digit CIC.

In the final period, the AT accepts only four-digit CICs. The system sends any call with a three-digit CIC to treatment. These changes are transparent to subscribers that use the primary inter-LATA carriers (PIC) to complete interexchange calls.

Access Tandem Switch (continued)

Network changes

The network changes for the CIC expansion occur in a specified order. The switch performs some of these changes. The trunk group, service control point (SCP) and signaling transfer point (STP) link perform other changes. For example, a change in an end office can occur to allow the office to accept four-digit CICs. An AT can have only a limited number of trunk groups that accept four-digit CICs.

The changes that this feature package introduces affect ATs only. Other elements in the network, like EAEOs and SCPs, require updates. The network changes that must occur appear in the following procedure.

Network changes to implement Equal Access

At your current location

1 Change the SCP database and the service management system to store three-digit and four-digit CICs. Change the SCP database and management system to respond with three-digit or four-digit CICs.

2 Change ATs one trunk group at a time. Change ATs to accept four-digit CICs on trunk groups from upgraded EAEOs. Change ATs to accept three-digit CICs from non-upgraded EAEOs.

3 Change EAEOs to accept three-digit and four-digit CICs during a permissive period. Change EAEOs to accept only four-digit CICs when the period ends.

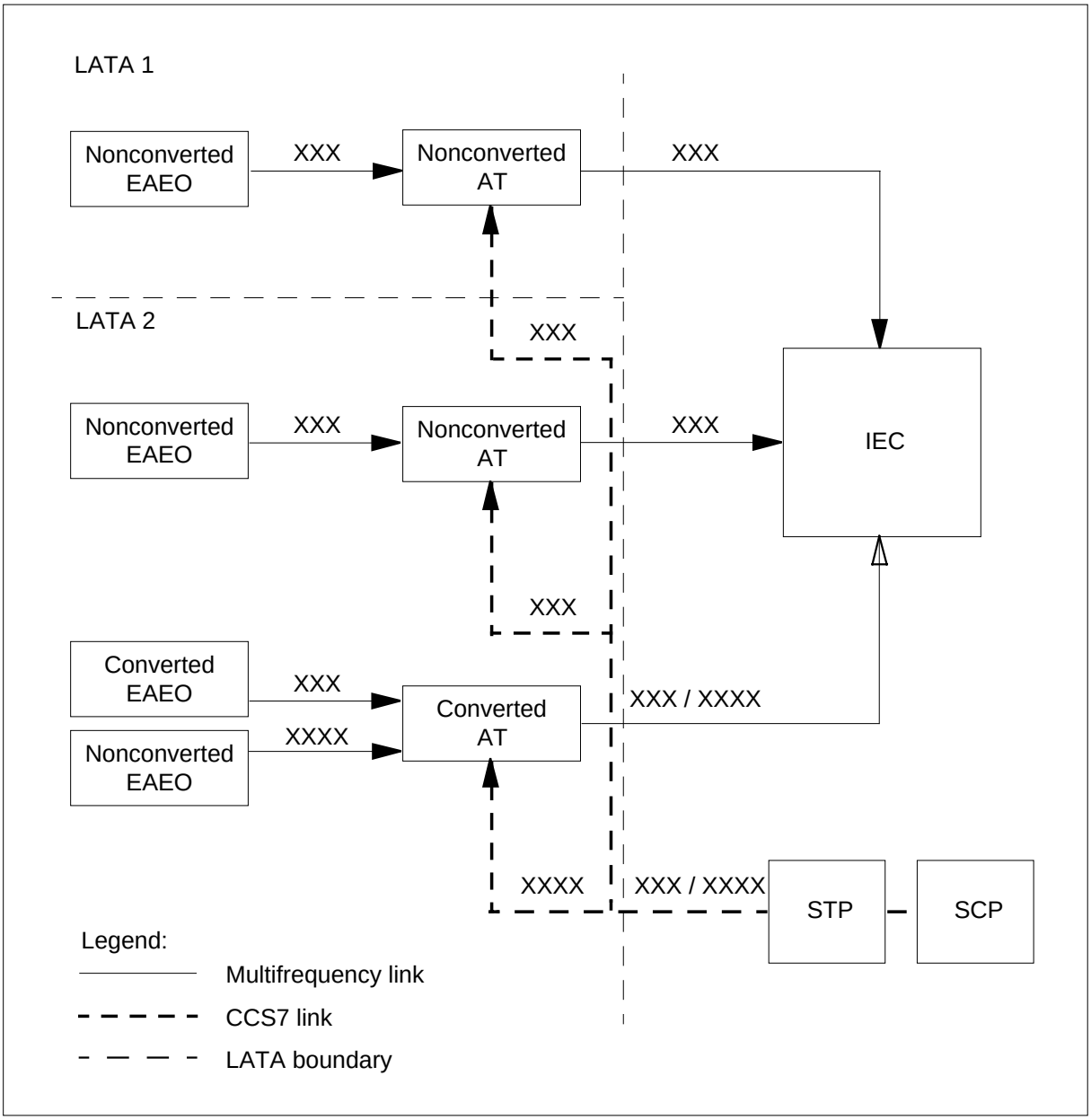
4 Change EAEOs to transmit four-digit CICs on upgraded trunk groups to the AT.

5 For international calls only, change IEC switches to accept four-digit CICs from upgraded trunk groups.

This feature package covers step 2. A description of steps 3 and 4 appears in this document. Steps 1 and 5 indicate the necessary changes to the operating company.

A summary of a network conversion appears in the following figure. In LATA 1, the EAEOs, ATs, or trunk groups do not change to four-digit CICs. In LATA 2, one EAEO and one AT change. A changed office accepts permissive or full four-digit CICs. A changed office can have some trunk groups or STP/SCP links that carry four-digit CICs.

Network conversion undergoing conversion



Implementing four-digit CICs in an AT

During the permissive period the AT must be able to receive:

- three-digit CICs from non-converted EAEOs
- four-digit CICs from converted EAEOs

Access Tandem Switch (continued)

The AT must not receive both three- and four-digit CICs on the same trunk group. The AT changes one trunk group at a time. This feature package supports the conversion of the following trunk group types:

- IT
- SC
- TOPS

Table CICSIZE4 contains the trunk groups that use four-digit CICs. Trunk groups that do not appear in this table use three-digit CICs. When the AT receives a CIC, the AT checks that table CICSIZE4 contains the trunk group. The AT can receive a four-digit CIC on a trunk for which table CICSIZE4 does not contain data. If this event occurs. the system generates log DFIL145. The AT can receive a three-digit CIC on a trunk group for which table CICSIZE4 contains data. If this event occurs, the system generates log DFIL146.

For calls the system routes to an IEC or INC, the converted AT transmits three- or four-digit CICs. The output depends on the presence of an entry for the trunk group in table CICSIZE4.

When complete four-digit CIC conversion occurs, all trunks at the AT carry four-digit CICs. The system does not need to check table CICSIZE4 during translation. Office parameter EA_TAB_CICSIZE4_OBSOLETE is Y to specify that the system does not require table CICSIZE4.

Implementing the permissive dialing phase

The actions required to provide the permissive dialing phase of the CIC expansion appear in the following procedure.

Implementing the permissive dialing phase

At your location

1 If an entry in subtable STDPRTCT.STDPRT uses the NSC selector, enter an entry that corresponds for four-digit CICs.

2 Add tuples to subtable STDPRTCT.STDPRT for the four-digit CICs that require translation. See the example that follows this table for additional information.

3 Add the trunk name to table CICSIZE4 for the trunk groups that carry four-digit CICs.

The following example describes an additional tuple in subtable STDPRTCT.STDPRT. In this example, CIC 123 expands to 0123.

Datafill example for subtable STDPRTCT.STDPRT

```
Current     080123  080123
entry           T NP 6  OFRT  202   6   6   NONE
New         0800123 0800123
entry           T NP 7  OFRT  202   7   7   NONE
```

Implementing the final dialing phase

The actions required to provide the final dialing phase of the CIC expansion appear in the following procedure.

Implementing the final dialing phase

At your current location

1 If an entry in subtable STDPRTCT.STDPRT uses the NSC selector, enter an entry that corresponds for four-digit CICs.

2 Add tuples to subtable STDPRTCT.STDPRT for the four-digit CICs that require translation. See the example that follows this table for additional information.

3 Check table CICSIZE4 to add the trunk groups that carry four-digit CICs. If all trunks can carry four-digit CICs, set office parameter EA_TAB_CICSIZE4_OBSOLETE to Y. In this condition, do not enter table CICSIZE4.

The following example describes an additional tuple in subtable STDPRTCT.STDPRT. In this example, CIC 222 expands to 02220

Datafill example for subtable STDPRTCT.STDPRT

```
Current     080222  080222
entry           T NP 6  OFRT  202   6   6   NONE
New         0800222 0800222
entry           T NP 7  OFRT  202   7   7   NONE
```

Impact of the CIC expansion

The expansion of the CIC to four digits affects E800 and private virtual network (PVN) calls. A converted EAEO can outpulse a four-digit CIC for E800. This EAEO can route PVN calls to the AT service switching point (SSP). These events allow the database query to occur.

Access Tandem Switch (continued)

The AT SSP uses the NSC selector in subtable STDPRTCT.STDPRT to translate the 0ZZXXX that the AT SSP received. The selector identifies the call as E800 or PVN. The maximum number of digits in fields FROMDIGS and TODIGS updates from 6 to 7 when field PRESEL = NSC. The entry of calls in form 0ZZXXX and 0ZZ0XXX can occur.

Office parameter SSP_NSC_CARRIER_ID holds the CIC that table OCCINFO contains. For 0ZZ0XXX incoming at the AT, the system must strip off the leading CIC digit. The system must perform this action before the system can compare the CIC with office parameter SSP_NSC_CARRIER_ID.

Translations table flow

The Access Tandem Switch feature does not provide tables for translations flow.

Limits

The following limits apply to the Access Tandem Switch feature package:

- The modification of digit translation decreases the size of table LMOVCODE by 8 bytes. Table LMOVCODE identifies the NXX codes that do not require OCX. If the digit collection table is greater than 256 bytes, delete table LMOVCODE entries to allow the data to fit.
- An international call from a rotary telephone can time-out and go to reorder. This condition occurs for Equal Access multifrequency (MF) to ISDN user part (ISUP) interworking calls. This same condition occurs when feature overlap carrier selection (OCS) is enabled in the EAEO. To prevent this problem, disable OCS in the EAEO.

The limits that the following sections describe apply to the Access Tandem Switch feature package. These limits apply to the Canadian networks only.

800+ feature (Canada)

Equal Access does not function with the Canadian 800+ feature. The 800+ feature is different than the normal 800 feature. The routing translation for 800+ calls occurs in the network database outside the switch. The network database stores all the 800 numbers to establish a simple administration. Without the 800+ feature, the translation tables of all DMS toll switches that serve an 800 number must contain that number.

Note: The 800+ service is different from the enhanced 800 (E800) service.

Dynamically controlled routing (Canada)

Dynamically controlled routing (DCR) reserves idle trunks in trunk groups to provide routes for overflow traffic. One or two links from an originating toll

switch separate the trunks. The DCR monitors the use of the DMS switch and trunks. The DCR does not function without Equal Access. When more than one carrier uses the operating company trunks, the switch cannot control the traffic.

Toll Call Management Services (Canada)

Toll Call Management Services (CMS) is the same as CLASS in the United States. Toll CMS utilizes the transmission of information to the subscriber on calling and called line numbers. Single-line users, like small business and residential use toll CMS. Toll CMS provides subscribers with additional control over calls. The use of toll CMS with Equal Access must not occur. A toll network provides the functionality of toll CMS. This condition interacts directly with Equal Access.

Interactions

Access Tandem Switch interacts with feature ISUP Intermediate Tandem (IMT), AF7127.

Activation/deactivation by the end user

The Access Tandem Switch feature does not require activation or deactivation by the end user.

Billing

The following sections describe billing for the Access Tandem Switch feature.

Terminating billing

In the Equal Access environment, the AT generates terminating access records only. The AT creates terminating records for all complete Equal Access calls. The system routed these calls directly to the AT from an IEC/INC on ATC trunk groups with field SIGTYPE. Field SIGTYPE has value EAPLAN, BELLI, or BELLII. The AT creates terminating records for unanswered calls, calls the system sends to a treatment, and calls that network management block. The AT generates terminating records when these events occur under the following conditions apply:

- Table AMAOPTS has the OPTION field set to UNANSTOLL.
- Call codes are in the BCCODES table.

The DMS switch uses call code 119 and the associated structure codes to generate terminating access records for Equal Access calls. Structure codes are associated with each call code. The length of the call, normal or long duration, and datafill in field TERMREC of table OCCINFO determine the structure code. A call is a normal duration call when the system disconnects the call before the second midnight after the call started. A call is a long

Access Tandem Switch (continued)

duration call when the system disconnects the call after the second midnight after the call started.

Note: All access records the system produces for Equal Access calls are in the Equal Access standard AMA format.

FGD CIC expansion

A modification of the IEC/INC prefix field of the standard interexchange AMA record allows the accommodation four-digit CICs. This process occurs through the definition of characters 1 to 4 as the IEC/INC identification. Before this feature, the definition of the first character was padding (0). The billing records that include the IEC/INC prefix are as follows:

- 110 - inter-LATA station paid
- 111 - inter-LATA WATS station detail
- 113 - inter-LATA WATS AFR to WATS
- 114 - inter-LATA WATS billing number
- 115 - inter-LATA WATS AFR to DDD
- 117 - inter-LATA CSDC
- 119 - terminating access record
- 120 - originating LATA overflow counts
- 121 - CSDC terminating access record

An example AMA record for an originating FGD call from a POTS line appears in the following figure. The IEC/INC PREFIX field contains the four-digit code.

```
HEX ID:AA  STRUCTURE CODE:00625C  CALL CODE:110C
SENSOR TYPE:036C  SENSOR ID:0000000C  REC OFFICE TYPE:036C
REC OFFICE ID:0000000C  DATE:00604C  TIMING IND:00000C
STUDY IND:0000000C  ANSWER:0C  SERVICE OBSERVED:0C
OPER ACTION:0C  SERVICE FEATURE:000C  ORIG NPA:613C
ORIG NUMBER:6211233C  OVERSEAS IND:1C  TERM NPA:00613C
TERM NUMBER:8881234C  ANSWER TIME:1423651C
ELAPSED TIME 000000025C   IECC/INC PREFIX:12341C  CC
DATE:00504C
CC TIME:1345623C  ELAPSED CC:000000023C IEC/INC
EVENT STATUS:010C TRUNK GROUP NUMBER:00230C
ROUTING INDICATOR:0C DIALING INDICATOR:7C  ANI INDICATOR:1C
```

Originating overflow counts

The AT generates call code 120 for calls that the system cannot complete. Call code 20 is originating LATA overflow counts. The system cannot complete the calls because an outgoing trunk is not available. The operating company determines when the system must generate records. The system maintains overflow counts for each IEC and INC. The overflow count increases when the system software encounters the pseudo-common language location identifier (CLLI) EAPEG. This increase in overflow count. The system software encounters EAPEG in a route list as in table OFRT. Call code 120 contains information for a maximum of four IECs and INCs. The system uses structure code 00955.

The EAPEG tuple always follows direct routes to the carrier. The following is an example tuple with an EAPEG.

```
> 201  (S D ATCTOINC) (S D EAPEG) $
```

Perform a COLD RESTART after the entry of the EAPEG tuple in table CLLI.

Billing for FGC calls

For ATC trunk groups, field SIGTYPE is EAPLAN in table TRKGRP. This condition allows the system to obtain terminating access records for FGC. The terminating access record is call code 119.

Billing for feature group B calls

Field FGBTRAFC is Y in table TRKGRP for feature group B (FGB) calls to a non-TOPS AT. This condition allows the system to obtain terminating billing records. The terminating billing record is call code 135.

Station Message Detail Recording

The Access Tandem Switch feature does not affect Station Message Detail Recording.

Access Tandem Switch (continued)

Datafilling office parameters

The office parameters that the Access Tandem Switch feature uses appear in the following table. Refer to the *Office Parameters Reference Manual* for additional information about office parameters.

Office parameters for Access Tandem Switch

Table name	Parameter name	Description and action
OFCENG	EA_TAB_ CICSIZE4_ OBSOLETE	This office parameter specifies if the system requires table CICSIZE4. Set this parameter to N during the permissive phase of the CIC expansion. During this phase, table CICSIZE4 contains trunk groups with four-digit CICs. When all CICs change to four digits, set this parameter to Y. The system does not use table CICSIZE4 when this parameter is Y.
OFCSTD	EAEO_REC_ 1ST_PRE_WK_ TIME	This parameter specifies the time, 1 to 255, in 160 ms intervals. This parameter specifies the time of the first pre-wink delay associated with the outpulse from an EAEO. The default is 100, or 16 s.
OFCSTD	EAEO_REC_ 2ND_PRE_WK_ TIME	This parameter specifies the time, 1 to 255, in 160 ms intervals. This parameter specifies the time of the first pre-wink delay associated with the outpulse from an EAEO. The default is 100, or 16 s.
OFCSTD	EA_REC_ MAX_WK_TIME	This parameter specifies the maximum time, 1 to 255, in 160 ms intervals for the system to recognize a wink.
OFCVAR	EA_TEST_ CALL_SPILL	This parameter specifies the number to be spilled on a test call. The number has a maximum of 15 digits. The number contains the following: • two information digits (95 for test call) • three digits for calling NPA • seven digits for calling number
OFCENG	SSP_NSC_ CARRIER_ID	This parameter holds the carrier identification code that table OCCINFO contains. For an incoming NSC call (NSC selector in subtable STDPRTCT.STDPRT) at the AT, the system compares CIC with this parameter.

Datafill sequence

The tables that require datafill to provide the Access Tandem Switch feature appear in the following table. The tables appear in the correct entry order.

Datafill requirements for Access Tandem Switch (Sheet 1 of 2)

Table	Function of table
OFCENG	Office Engineering. This table contains data on engineering parameters for the office. See the the section “Datafilling office parameters" for how Access Tandem Switch affects office parameters.
OFCSTD	Standard Office Parameter. This table contains data on standard parameters for the office. See the section ``Datafilling office parameters" for how Access Tandem Switch affects office parameters.
OFCVAR	Variable Office Parameters. This table contains data on variable parameters for the office. See the section ``Datafilling office parameters" for how Access Tandem Switch affects office parameters.
OCCNAME	Table OCCNAME (other common carrier name) lists the connected carriers. This table establishes the spelling standard for other tables that require the carrier name.
TRKGRP (ATC)	Table TRKGRP (ATC) (AT to carrier trunk group) contains information about each ATC trunk group in the AT.
TRKGRP (IT)	Table TRKGRP (IT) (IT trunk group) contains information about each IT trunk group in the AT.
TRKGRP (SC)	Table TRKGRP (SC) (two-way or incoming from North America 5 and CAMA trunk group). A toll or combined local/toll switching units for SC trunk groups require this table.
TRKGRP (OP)	Table TRKGRP (OP) (outgoing and two way from local or toll to TOPS/TSPS trunk group). This table contains information about each OP trunk group.
TRKSGRP	Table TRKSGRP (trunk subgroup) lists additional information for each subgroup assigned to one of the trunk groups in table TRKGRP.
OFRT	Table OFRT (office route) contains route lists that tables indicate. The home numbering plan area (HNPA) code subtable (HNPACONT.HNPACODE) or the foreign NPA code subtable (FNPACONT.FNPACODE) does not indicate these route lists.
OCCINFO	Table OCCINFO (other common carrier information) defines the attributes for the carriers that serve a DMS switch. The table also screens calls for carrier compatibility.

Access Tandem Switch (continued)

Datafill requirements for Access Tandem Switch (Sheet 2 of 2)

Table	Function of table
STDPRTCT	Table STDPRTCT (standard pretranslator control) lists the name of each standard pretranslator subtable defined by the operating company.
STDPRTCT. STDPRT	Subtable STDPRTCT.STDPRT (standard pretranslator) is the first table that the received leading digits indexes. This event occurs when the originating line attribute from table LINEATTR or trunk from table TRKGRP specifies a pretranslator name.
CICSIZE4	Table CICSIZE4 (carrier identification codes with four digits) identifies trunk groups with four-digit CICs. The system uses this table only during CIC expansion transitional phase.

Datafilling table OCCNAME

Datafill for Access Tandem Switch for table OCCNAME appears in the following table. The fields that apply to Access Tandem Switch appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table OCCNAME

Field	Subfield or refinement	Entry	Description and action
OCCNAME		Carrier name	Other common carrier name. Enter the carrier name or a 1 to 16 character alphanumeric abbreviation of the carrier name. Enter the reserved carrier name USE_PREVIOUS if the system must use the generic recursive pretranslator.

Datafill example for table OCCNAME

Sample datafill for table OCCNAME appears in the following example. In this example, four carriers serve the AT.

MAP example for table OCCNAME

```
OCCNAME
_____________________________________________________________

C111
C222
C333
C444
```

Datafilling table TRKGRP (ATC)

Datafill for Access Tandem Switch for table TRKGRP (ATC) appears in the following table. The fields that apply to Access Tandem Switch appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table TRKGRP (ATC) (Sheet 1 of 4)

Field	Subfield or refinement	Entry	Description and action
GRPKEY		see subfield	Group key. This field contains subfield CLLI.
	CLLI	Trunk group code	Common language location identifier. Enter the code that identifies the trunk group in table CLLI.
GRPTYP		ATC	Group type. Enter ATC, the trunk group type.

Access Tandem Switch (continued)

Datafilling table TRKGRP (ATC) (Sheet 2 of 4)

Field	Subfield or refinement	Entry	Description and action
TRAFSNO		0 to 127, 0	Traffic separation number. For incoming ATC trunks, enter the incoming traffic separation number assigned to the trunk group. The incoming traffic separation number is 0 to 127. For outgoing ATC trunks, enter the outgoing traffic separation number assigned to the trunk group. The outgoing traffic separation number is 0 to 127. For two-way trunks, enter both numbers. If the system does not require traffic separation, enter 0. If the AT has the NTX085AA - Traffic Separation Peg Count feature package, set parameter TFAN_IN_MAX_NUMBER in table OFCENG to 1. For ATs without the NTX085AA - Traffic Separation Peg Count feature package, enter a number from 0 to 15. Reserve incoming and outgoing traffic separation numbers 1 to 9 for generic traffic separation numbers. See table TFANINT for additional information.
PADGRP		Pad group name	Pad group. Enter the name of the pad group assigned to the trunk group in table PADDATA.
NCCLS		NCRT, OM no circuit class	OM no circuit class. For incoming trunk groups, enter NCRT. For outgoing and two-way trunks, enter the OM no circuit class that indicates the OM register. The OM register indicated increases when treatment GNTC occurs.
GRPINFO		see subfields	Variable group data. This field contains the following subfields.
	DIR	IC, OG, 2W	Direction. Enter the direction of traffic flow. The directions are incoming (IC), outgoing (OG), or two way (2W).
	TRAFCLS	Traffic use class	Traffic use class. Enter the traffic use class assigned to the trunk group.

Access Tandem Switch (continued)

Datafilling table TRKGRP (ATC) (Sheet 3 of 4)

Field	Subfield or refinement	Entry	Description and action
	SELSEQ	MIDL, LIDL	Select sequence. For incoming trunks, enter MIDL. For outgoing and two-way trunks, enter the selection sequence (LIDL or MIDL).
	PRTNM	Standard pretranslat-ion table name, NPRT	Standard pretranslator table name. For incoming and two-way trunks, enter the name of the standard pretranslation table. Perform this action if the system requires standard pretranslation. If the system does not require standard pretranslation, enter NPRT. For outgoing trunks, enter NPRT.
	SCRNCL	Screening table name, NSCR	Class of service screening table name. For incoming and two-way trunks, enter the name of the screening table if the system requires class of service screening. If the system does not require class of service screening, enter NSCR. For outgoing trunks, enter NSCR.
	SNPA	3-digit NPA	Serving NPA. Enter the three-digit serving NPA code for the trunk group.
	CARRNM	Carrier name	Carrier name. Enter a carrier name as defined in table OCCINFO.
	ANI	Y or N	Automatic number identification. When the trunk group direction is incoming, the system does not require this field. Enter N. For outgoing and two-way trunks, enter Y if the trunk must send automatic number identification (ANI) digits. If the system does not require ANI digits, enter N.
	SIGTYPE	BELLI, BELLII, EAPLAN, FGB	ANI signaling type. Enter the signaling type for this trunk group. The signaling types are BELLI, BELLII, EAPLAN, or FGB.

Access Tandem Switch (continued)

Datafilling table TRKGRP (ATC) (Sheet 4 of 4)

Field	Subfield or refinement	Entry	Description and action
	STNCLS	COMB	Station class signaling. The ATs do not require this field. Enter COMB.
	OSIND	Y or N	Operator services indicator. For incoming trunk groups, enter N. For outgoing and two-way trunk groups, enter Y. Perform this action when the carrier must receive an ANI digit indication that operator services are available. If this indication is not necessary, enter N.

Datafill example for table TRKGRP (ATC)

Sample datafill for table TRKGRP (ATC) appears in the following example. Trunk ISUP2WC111 is a two-way ATC trunk. Signaling that this trunk uses is FGD EAP. Carrier name field (CARRNM) is C111 and SIGTYPE is EAPLAN.

MAP example for table TRKGRP (ATC)

```
GRPKEY
                                                    GRPINFO
_____________________________________________________________

ISUP2WC111
 ATC 0 NPDGP NCRT 2W TM MIDL NPRT NSCR 619 C111 Y EAPLAN
Y N COMB N $
```

Datafilling table TRKGRP (IT)

Datafill for Access Tandem Switch for table TRKGRP (IT) appears in the following table. The fields that apply to Access Tandem Switch appear in this table. See the data schema section of this document for a description of the other fields.

Trunk ISUP2WC111 is a two-way ATC trunk. Signaling that this trunk uses is FGD EAP. Carrier name field (CARRNM) is C111 and SIGTYPE is EAPLAN.

Datafilling table TRKGRP (IT) (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Description and action
GRPKEY		see subfield	Group key. This field contains subfield CLLI.
	CLLI	Trunk group code	Common language location identifier. Enter the code that identifies the trunk group in table CLLI.
GRPINFO		see subfields	Variable group data. When GRPTYP=IT, this field contains the following subfields.
	GRPTYP	IT	Group type. Enter IT, the trunk group type.
	TRAFSNO	0 to 127	Traffic separation number. For two-way IT, enter the incoming and outgoing traffic separation number assigned to the trunk group. The incoming and outgoing traffic separation number is 0 to 127. For incoming IT, enter the incoming traffic separation number. The incoming traffic separation number is 0 to 127. If the system does not require this number, enter 0. If the two-way IT switching unit has the NTX085AA - Traffic Separation Peg Count feature package, enter 1. Enter 1 to the lower value of parameters TFAN_IN_MAX_NUMBER and TFAN_OUT_MAX_NUMBER in table OFCENG. For an incoming IT unit, enter 1 to the value of parameter TFAN_IN_MAX_NUMBER in table OFCENG. For two-way IT switching units without the NTX085AA - Traffic Separation Peg Count feature package, enter a number from 1 to 15. For incoming IT units, enter a number from 0 to 15. Reserve incoming and outgoing traffic separation numbers 1 to 9 for generic traffic separation numbers.
	PADGRP	Pad group name	Pad group. Enter the name of the pad group assigned to the trunk group in table PADDATA.

Access Tandem Switch (continued)

Datafilling table TRKGRP (IT) (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Description and action
	NCCLS	NCBN, NCID, NCIM, NCIT, NCLT, NCOF, NCON, NCOT, NCTC, NOSC, NCRT	OM no circuit class. For two-way IT units, enter the OM no circuit class to indicate the OM register. The OM register indicated increases when treatment GNCT occurs. The following are the correct entries: • NCBN • NCID • NCIM • NCIT • NCLT • NCOF • NCON • NCOT • NCTC • NOSC For incoming IT units, the system does not require this field. Enter NCRT (no circuit). The first value is NCRT.
	DIR	2W, IC	Direction. Enter the direction of traffic flow. The directions are 2W or IC. If parameter TRK_OOS_CHK_ON in the variable office parameter table is Y, busy all trunks in the group. This process must occur before the value of this field can change through data modification order.
	TRAFCLS	Traffic use class	Traffic use class. Enter the traffic use class assigned to the trunk group.
	SELSEQ	MIDL, selection sequence	Select sequence. For incoming trunks, enter MIDL. For two-way trunks, enter the selection sequence.
	CONNGNPA	3-digit NPA code	Connecting NPA. Enter the three-digit NPA code of the switching unit that translates the outpulsed digits.

Datafilling table TRKGRP (IT) (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Description and action
	PRTNM	Standard pretranslat-ion table name, NPRT	Standard pretranslator table name. Enter the name of the standard pretranslation table if the system requires standard pretranslation. If the system does not require standard pretranslation, enter NPRT. If parameter TRK_OOS_CHK_ON in the variable office parameter table is Y, busy all trunks in the group. Perform this action before the value of this field can change by data modification order.
	SCRNCL	Screening table name	Class of service screening table name. Enter the name of the screening table if the system requires class of service screening. If the system does not require class of service screening, enter NSCR.
	SNPA		Serving NPA. If parameter TRK_OOS_CHK_ON in the variable office parameter table is Y, busy all trunks in the group. This process must occur before the value of this field can change through data modification order.
	TERMTC	000, terminating toll center code	Terminating toll center. This field does not apply to incoming IT trunks. Enter 000. For two-way trunks, if the end office that translates the outpulsed digits has a terminating toll center code, enter this code. If the end office does not have a terminating toll center code, enter 000.
	TOLLCOMP	Y or N	Toll completing. This field does not apply to incoming IT trunks. Enter N. For two-way trunks, enter Y if the trunk group is toll completing. If the trunk group is not toll completing, enter N.
	CCWKVLD	Y or N	Carrier connect wink. Enter N to indicate that the system must not regenerate carrier connect wink in Equal Access international calls. If the system can regenerate the carrier connect wink, enter Y.
	OPTION	Option	Option. Enter the option assigned to this trunk group.

Access Tandem Switch (continued)

Datafill example for table TRKGRP (IT)

Sample datafill for table TRKGRP (IT) appears in the following example.

MAP example for table TRKGRP (IT)

```
GRPKEY
                                                    GRPINFO
_____________________________________________________________________

TVEROG
     IT O TLA NCRT IC NIL MIDL 619 PEA NSCR 619 000 N N $
```

Datafilling table TRKGRP (SC)

Datafill for Access Tandem Switch for table TRKGRP (SC) appears in the following table. The fields that apply to Access Tandem Switch appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table TRKGRP (SC) (Sheet 1 of 6)

Field	Subfield or refinement	Entry	Description and action
GRPKEY		see subfield	Group key. This field contains subfield CLLI.
	CLLI	Trunk group code	Common language location identifier. Enter the code that identifies the trunk group in table CLLI.
GRPINFO		see subfields	Variable group data. When GRPTYP=SC, this field contains the following subfields.
	GRPTYP	SC	Group type. Enter SC, the trunk group type.

Datafilling table TRKGRP (SC) (Sheet 2 of 6)

Field	Subfield or refinement	Entry	Description and action
	TRAFSNO	0 to 127	Traffic separation number. Enter the incoming or incoming and outgoing traffic separation number, 0 to 127 assigned to the trunk group. If the system does not require this number, enter 0. If the switching unit has the NTX085AA - Traffic Separation Peg Count feature package, enter 1. Enter 1 to the lower value of parameters TFAN_IN_MAX_NUMBER and TFAN_OUT_MAX_NUMBER in table OFCENG. For switching units that do not have the NTX085AA - Traffic Separation Peg Count feature package, enter a number from 1 to 15. Reserve incoming and outgoing traffic separation numbers 1 to 9 for generic traffic separation numbers.
	PADGRP	Pad group name	Pad group. Enter the name of the pad group assigned to the trunk group in table PADDATA.
	NCCLS	NCRT	OM no circuit class. Enter NCRT. Incoming trunk calls do not require this field.
	TRAFCLS	Traffic usage class	Traffic use class. Enter the traffic use class assigned to the trunk group.
	ONI	Y or N	Operator number identification. Enter Y when traffic on the trunk group is all ONI traffic. If the traffic is not all ONI traffic, enter N.
	SNPA	three-digit NPA code	Serving NPA. Enter the three-digit SNPA code that contains the trunk group. If parameter TRK_OOS_CHK_ON in the variable office parameter table is Y, busy all trunks in the group. This process must occur before the value of this field can change through data modification order.

Access Tandem Switch (continued)

Datafilling table TRKGRP (SC) (Sheet 3 of 6)

Field	Subfield or refinement	Entry	Description and action
	PRTNM	Standard pretranslator table name, NPRT	Standard pretranslator table name. If the system requires standard pretranslation, enter the name of the standard pretranslator table. This table is the location to which the system routes digit translation after the system receives one digit. If the system does not require pretranslation, enter NPRT. If parameter TRK_OOS_CHK_ON in the variable office parameter table is Y, busy all trunks in the group. This process must occur before the value of this field can change through data modification order.
	NODIGRTE	RTE1, RTE2, RTE3, RTE4, NONE	No digit route. Enter the position (RTE1, RTE2, RTE3, or RTE4) in table POSITION that the system routes all operator assisted (OA) calls. If the entry is NONE, the system routes all OA calls to position CAMA in table POSITION. If parameter TRK_OOS_CHK_ON in the variable office parameter table is Y, busy all trunks in the group. This process must occur before the value of this field can change through data modification order.
	TRTMTSUP	OFFHOOK, ONHOOK, OFHKWK	Treatment supervision. Enter the type of supervision the system requires when the system routes translation to a treatment, tone, or announcement. The following are the types of supervision: • off-hook (OFFHOOK) • on-hook (ONHOOK) • off-hook wink (OFFHKWK)
	NPRETSUP	OFFHOOK, ONHOOK, OFFHKWK	No prefix return supervision. Enter the type of return supervision the system requires on no prefix type of calls. The following are the types of return supervision: • OFFHOOK • ONHOOK • OFFHKWK

Datafilling table TRKGRP (SC) (Sheet 4 of 6)

Field	Subfield or refinement	Entry	Description and action
	NOBILLCD	Number of bill codes	Number of bill codes. Enter the number of bill codes and spares that the system must save in table BILLCODE.
	ANISEIZ	2 s to 30 s	ANI seizure timing. Enter the time in seconds that the trunk must wait to receive the first ANI digit or signal. This time is 2 s to 30 s. If parameter TRK_OOS_CHK_ON in the variable office parameter table is Y, busy all trunks in the group. This process must occur before the value of this field can change through data modification order.
	ANIPDIAL	2 s to 30 s	ANI partial dialing. Enter the time that the trunk must wait to receive each ANI signal or digit. This time does not apply to the first signal or digit. Enter 2 s to 30 s. If parameter TRK_OOS_CHK_ON in the variable office parameter table is Y, busy all trunks in the group. This process must occur before the value of this field can change through data modification order.
	DIR	IC	Direction. Enter IC, the direction of the traffic flow. If parameter TRK_OOS_CHK_ON in the variable office parameter table is Y, busy all trunks in the group. This process must occur before the value of this field can change through data modification order.
	SELSEQ	MIDL	Select sequence. Enter MIDL. When the trunk group is incoming (DIR=IC), sequential selection does not apply.
	DIGSOUT	0	Digits outpulsed. Enter 0. The system reserves this field for future use.
	SDATA	see subfields	Signaling data. This subfield contains the following subfields.

Access Tandem Switch (continued)

Datafilling table TRKGRP (SC) (Sheet 5 of 6)

Field	Subfield or refinement	Entry	Description and action
	SIGFMT	BELL	Signaling format. Enter BELL, the signaling formation that this feature package uses. If parameter TRK_OOS_CHK_ON in the variable office parameter table is Y, busy all trunks in the group. This process must occur before the value of this field can change through data modification order.
	GRPTYPE	OSS	Group type. Enter OSS if the start signal for DD calls is ST and two information digits are expected.
	DEFANIFL	CAMA, TSPS, TREAT	Default ANI fail. This field determines the route for translations when the system does not receive an ANI (ANI FAIL). If the translation must route to position CAMA in table POSITION, enter CAMA. If the translation must route to position TSPS in table POSITION, enter TSPS. If the translation must route to a hard-coded TOLL DENIED treatment, enter TREAT. This treatment routes originator to reorder.
	IC_ROUTE	Position	Independent carrier route. When GRPTYPE=OSS, enter the position, according to table POSITION field POS. This position specifies the route of the call. When the start signal identifies the call as an independent IEC Equal Access call, this event determines the route.
	ANITYPE	WK, REV	ANI request signal. Enter the type of ANI request signal. The types are wink (WK) or reversal (REV). If parameter TRK_OOS_CHK_ON in the variable office parameter table is Y, busy all trunks in the group. This process must occur before the value of this field can change through data modification order.

Datafilling table TRKGRP (SC) (Sheet 6 of 6)

Field	Subfield or refinement	Entry	Description and action
	RECORDNP	NP	Record calls of type NP. This feature package does not require this field. Enter NP.
	SPLOOKUP	Y or N	Special lookup. If the non-EAEO cannot outpulse the correct ANI information digit, enter Y. Enter Y if all incoming calls on the trunk group require a lookup in table SPLANIN. In all other conditions, enter N.

Datafill example for table TRKGRP (SC)

Sample datafill for table TRKGRP (SC) appears in the following example.

MAP example for table TRKGRP (SC)

```
GRPKEY
                                                    GRPINFO
_____________________________________________________________

SCTRK
 SC 44 NPDGP NCRT NIL N 619 TCA3 TSPS DD ONHOOK ONHOOK 30
5 5 IC
    LIDL 0 BELL OSS CAMA NONE RTE2 REV Y NP N $
```

Access Tandem Switch (continued)

Datafilling table TRKGRP (OP)

Datafill for Access Tandem Switch for table TRKGRP (OP) appears in the following table. The fields that apply to Access Tandem Switch appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table TRKGRP (OP)

Field	Subfield or refinement	Entry	Description and action
EADATA		see subfields	Equal Access data. This field contains subfields EA, EAOSS, and RTEVIAAT.
	EA	Y or N	Equal Access selector. Enter Y when the system requires Equal Access signaling. Equal Access signaling is double ANI digits. If the system does not require Equal Access signaling, enter N.
	EAOSS	Y or N	Equal access operator services signaling. Enter Y if the trunk uses EAOSS. If the trunk does not use EAOSS, enter N. This field appears only when EA = Y.
	RTEVIAAT	Y or N	Route via access tandem. Enter Y if the trunk is between an EAEO and a TOPS AT. If the trunk is not between an EAEO and a TOPS AT, enter N. This field appears only when EA = Y.

Datafill example for table TRKGRP (OP)

Sample datafill for table TRKGRP (OP) appears in the following example. Trunk LNTOPS2 is between an EAEO and a TOPS AT (RTEVIAAT = Y). Trunk LNTOPS2 requires Equal Access signaling. The last three entries indicate the EA, EAOSS, and RTEVIAAT fields.

MAP example for table TRKGRP (OP)

```
GRPKEY
                                                        GRPINFO
_____________________________________________________________

LNTOPS2
  OP 11 TLD NCRT NIL MIDL COMB MIX REV TERMHOLD N OG Y Y Y $
```

Datafilling table TRKSGRP

Datafill for Access Tandem Switch for table TRKSGRP appears in the following table. The fields that apply to Access Tandem Switch appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table TRKSGRP

Field	Subfield or refinement	Entry	Description and action
	SIGDATA	STD	Signaling data. Enter STD for standard signaling.
	DIR	IC, OG, 2W	Direction. Enter IC, OG, or 2W for the trunk group direction. When trunk GRPTYPE = TPS101, the system can use only direction IC or OG.
	IPULSTYP	MF	Incoming type of pulsing. For ATC trunks, enter MF.
	ISTARTSG	WK	Incoming start dial signal. For ATC trunks, enter WK to indicate that the type of start dial signal the system requires is wink.
	OSTARTSG	WK	Outgoing start dial signal. For ATC trunks, enter WK to indicate that the type of start dial signal the system requires is wink.

Datafill example for table TRKSGRP

Sample datafill for table TRKSGRP appears in the following example.

MAP example for table TRKSGRP

```
SGRPKEY   CARDCODE
                                                    SGRPVAR
_____________________________________________________________

DAC 0     DS1SIG
   STD OG     MF       WK    7 0 NO      NO N N N   70    UNEQ
```

Access Tandem Switch (continued)

Datafilling table OFRT

Table OFRT contains route lists that tables indicate. The HNPA code subtable (HNPACONT.HNPACODE) and the foreign NPA code subtable (FNPACONT.FNPACODE) do not indicate route lists.

Datafill for Access Tandem Switch for table OFRT appears in the following table. The fields that apply to Access Tandem Switch appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table OFRT

Field	Subfield or refinement	Entry	Description and action
RTESEL		CND	Route selector. Enter CND to specify a condition before routing occurs. If the condition occurs, the system performs instructions of this route element. In all other conditions, translation searches for instructions in the next route element.
RTELIST		see subfields	Route list. This field contains the following subfields.
	CNDSEL	EA	Condition selector. Enter EA as the type of condition to test.
	EA_CND_ RTE	CAC, INTNL, PIC	Condition subselector. Enter one of the following values: • CAC for an Equal Access call when the user dials 10XXX • INTNL for an Equal Access international call • PIC for an Equal Access call

Datafill example for table OFRT

Sample datafill for table OFRT appears in the following example.

MAP example for table OFRT

```
RTE                                                RTELIST
_____________________________________________________________

     1                                  CND   EA   CAC   SK   3
```

Datafilling table OCCINFO

Table OCCINFO defines the attributes for carriers that serve the AT. Table OCCINFO screens calls for carrier compatibility. For example, table OCCINFO allows the system to send international traffic only to carriers that can handle that traffic.

Datafill for Access Tandem Switch for table OCCINFO appears in the following table. The fields that apply to Access Tandem Switch appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table OCCINFO (Sheet 1 of 5)

Field	Subfield or refinement	Entry	Description and action
CARRNAME		Carrier name	Carrier name. Enter the carrier name or a 1 to 16 character alphanumeric abbreviation of the carrier name. Table OCCNAME defines these names. This table must have a tuple with the carrier name NILC to handle subscribers that require a null PIC.
CARRNUM		0000 to 9999	Carrier number. Enter the CIC (0000 to 9999). The CIC is equal to the XXXX digits in the Equal Access prefixes (101XXXX or 950-WXXX). ***Note 1:*** The system accepts only 256 entries by office. ***Note 2:*** The range of values includes N. The value N is not a correct entry for this field.

Access Tandem Switch (continued)

Datafilling table OCCINFO (Sheet 2 of 5)

Field	Subfield or refinement	Entry	Description and action
ACCESS		NONE, INTERIM, EAP, OTC, TRANS, FGC	Access arrangement. Enter one of the following access types that the carrier accepts to handle a call: • NONE no access • INTERIM interim dialing over FGD signaling • EAP EAP dialing over FGD signaling • OTC FGC dialing over FGC signaling (local billing) • TRANS interim and EAP dialing over FGD signaling • FGC FGC dialing over FGC signaling (FGD billing) ***Note 1:*** To allow the EACARR OM group to record OM data, set this field to EAP, INTERIM, TRANS, or FGC. If the ACCESS field is NONE, the system does not peg the EACARR registers. ***Note 2:*** Set this field to NONE for the NILC tuple.
ORIGCARR		Y or N	Original carrier. This field specifies an original or duplicate carrier when you enter more than one carrier with the same carrier number. The carrier number is in field CARRNUM. Only one carrier of a group of carriers with the same CARRNUM can be the original carrier. Enter Y if the carrier is the original carrier. Enter N, if the carrier is not the original carrier. The default value is N.
INTER		Y or N	Inter-LATA. Enter Y if the carrier can handle inter-LATA traffic. Enter N if the carrier cannot handle inter-LATA traffic.

Datafilling table OCCINFO (Sheet 3 of 5)

Field	Subfield or refinement	Entry	Description and action
INTNTL		Y or N	International. Enter Y if the carrier can handle international traffic. Enter N, if the carrier cannot handle international traffic.
INTRA		Y or N	Intra-LATA. Enter Y if the carrier can handle intra-LATA traffic. Enter N if the carrier cannot handle inter-LATA traffic.
ANI		Y or N	Automatic number identification. Enter Y if the carrier requires the system to send ANI digits with the called number. Enter N if the carrier does not require ANI digits.
FANI		Y or N	Flexible ANI. Enter Y if the carrier can receive flexible ANI information digits instead of normal ANI information digits. Enter N if the carrier cannot receive flexible ANI information digits.
ONISCRN		Y or N	Operator number identification screening. Enter Y if ONI traffic requires screening by an operator or CAMA position before the traffic outpulses to the carrier. In all other condition, enter N.
AD1		Y or N	Abbreviated dialing number one. Enter Y if the abbreviated dialing allows access to the carrier. Enter N if abbreviated dialing does not allow access to the carrier.
OVERLAP		Y or N	Overlap. Enter Y if the carrier requires digits from the AT or the EAEO with overlap outpulsing. In all other conditions, enter N.
INTERS		Y or N	Inter-state. Enter Y if the carrier can handle traffic between states. Enter N if the carrier cannot handle traffic between states.
INTRAS		Y or N	Intra-state. Enter Y if the carrier can handle traffic in the same state. Enter N if the carrier cannot handle traffic in the same state.

Access Tandem Switch (continued)

Datafilling table OCCINFO (Sheet 4 of 5)

Field	Subfield or refinement	Entry	Description and action
TERMREC		Length of record	Terminating access record. Enter the length of the terminating access record the system produces for the carrier. The length can be LONG or SHORT. The default value is SHORT. ***Note:*** The system produces access records when the OCCTERM option in table AMAOPTS is ON only.
OCCSEPNO		0 to 127	Other common carrier separation number. Enter the separation number for the carrier in the Traffic Separations Measurement System. The separation number is 0 to 127.
OPSIG		FGRPC, NONE	Operator signaling. Enter the type of operator signaling that the carrier provides. Enter FGRPC for FGD carriers that require FGC operator signaling. Enter NONE for all other FGD carriers. The FGC carriers ignore this entry.
PICIND		Y or N	Presubscription indication. Enter Y if the carrier requires the presubscription indicator. Enter N if the carrier does not require the presubscription indicator. Enter data in this field for each entry in table OCCINFO.
NOA950		Y or N	Nature of address indicator. Enter Y to indicate that the address indicator in the calling party number parameter is 1111110. This binary values indicates that the call is a network specific, 950+ call from public station or hotel/motel line or non-EAEO. Enter N to indicate that the address indicator in the calling party number parameter is the normal value. ***Note:*** The default value of N does not change the current operation of the switch.
INCCPN		Y or N	Include calling party number. Enter N to remove the calling party number parameter from any initial address message (IAM) sent to this carrier. Enter Y if the removal of the parameter is not a requirement. The default value is Y.

Datafilling table OCCINFO (Sheet 5 of 5)

Field	Subfield or refinement	Entry	Description and action
CTDOA		Y or N	Carrier toll deny operator assisted. Enter Y to block OA calls to this carrier when the subscriber has the carrier toll denied (CTD) line option for this carrier. In all other conditions, enter N. The default value is N.
CRMCRA		Y or N	Circuit reservation and acknowledgement messages. Enter Y if the following conditions occur: • an AT sends a circuit reservation message (CRM) to an IEC on FGD calls outgoing over common channel signaling 7 (CCS7) ATC trunk groups. • the AT receives a following circuit reservation acknowledgement (CRA) message from the IEC on FGD calls incoming to the AT on MF IT or SC trunks. In all other conditions, enter N.

Datafill example for table OCCINFO

Sample datafill for table OCCINFO appears in the following example. In this example, two carriers serve the AT. These two carriers are C111 and C222.

Access Tandem Switch (continued)

MAP example for table OCCINFO

```
CARRNAME CARRNUM ACCESS ORIGCARR INTER INTNTL INTRA ANI FANI
ONISCRN AD1 OVERLAP INTERS INTRAS TERMREC OCCSEPNO OPSIG
PICIND NOA950 INCCPN DTMFIND OPSERV CACBLOCK CTDOA CMCMON
SCRNWATS CRMCRA ATPINCL INTRAOPR
_____________________________________________________________

C111    0111   EAP     Y      Y      Y     N   Y    N
  N     Y      Y     Y      Y    LONG       O    FGRPC  Y
   N      N     N       N       N      N      N      N
    Y    N        N
     C222    0222   EAP     Y      Y      N     Y   N
  N     N    N       Y    Y     N   SHORT    O    FGRPC    N
   N    N       N       N       N      N      N      N
     Y    N        N
```

Datafilling table STDPRTCT

Datafill for Access Tandem Switch for table STDPRTCT appears in the following table. The fields that apply to Access Tandem Switch appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table STDPRTCT

Field	Subfield or refinement	Entry	Description and action
EXTPRTNM		Standard pretranslator subtable name	External standard pretranslator subtable name. Enter the name that the operating company define to indicate the standard pretranslator subtable. The ISUP trunks uses standard pretranslator name C7PT on test calls in offices with ISUP capability.

Datafill example for table STDPRTCT

Sample datafill for table STDPRTCT appears in the following example. This example provides information for six pretranslator subtables.

MAP example for table STDPRTCT

```
EXTPRTNM   STDPRT   AMAPRT
_____________________________________________________________

EAFR (    1) (    0)
     EAOS (    1) (    0)
     POT1 (    1) (    1)
     INC1 (    1) (    0)
     OWT1 (    1) (    0)
     EACN (    1) (    0)
```

Datafilling table STDPRTCT.STDPRT

Subtable STDPRTCT.STDPRT is the first table that the received leading digits index. This event occurs when the originating line attribute or trunk specifies a pretranslator name. The originating line attribute is from table LINEATTR. The trunk is from table TRKGRP.

Datafill for Access Tandem Switch for table STDPRTCT.STDPRT appears in the following table. Only fields that apply to Access Tandem Switch appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table STDPRTCT.STDPRT

Field	Subfield or refinement	Entry	Description and action
FROMDIGS		From digits	From digits. Enter the digits that require translation. If the entry is a series of numbers, enter the first number in the series. When field PRESEL = NSC, the number of digits for field FROMDIGS changes to 6 or 7.
TODIGS		To digits	To digits. If FROMDIGS is a series of numbers in sequence, enter the last number in the series. In all other conditions, this field equals FROMDIGS. When field PRESEL = NSC, the number of digits for field TODIGS changes to 6 or 7.

Datafill example for table STDPRTCT.STDPRT

Sample datafill for subtable STDPRTCT.STDPRT appears in the following example.

Access Tandem Switch (continued)

MAP example for table STDPRTCT.STDPRT

```
FROMDIGS          TODIGS
                                                    PRETRTE
_____________________________________________________________________

 092110            092110      NSC  DD 6  6  PFN  NA
0920110           0920110      NSC  DD 7  7  PFN  NA
```

Datafilling table CICSIZE4

Datafill for Access Tandem Switch for table CICSIZE4 appears in the following table. The fields that apply to Access Tandem Switch appear in this table. Trunk groups that do not appear in this table use three-digit CICs. See the data schema section of this document for a description of the other fields.

Datafilling table CICSIZE4

Field	Subfield or refinement	Entry	Description and action
TRUNKGRP		Trunk groups	Trunk group. Enter the trunk groups that use a four-digit CIC. Enter data in this table during the permissive phase only, when office parameter EA_TAB_CICSIZE4_OBSOLETE is N. When this parameter is Y, the system does not use table CICSIZE4.

Datafill example for table CICSIZE4

Sample datafill for table CICSIZE4 appears in the following example.

MAP example for table CICSIZE4

```
TRUNKGRP
_____________________________________________________________________

 TGRPX
 TGRPY
 TGRPZ
```

Tools for verifying translations

The Access Tandem Switch feature does not use tools to verify translations.

SERVORD

The Access Tandem Switch feature does not use SERVORD.

CCS7 ISUP Inter-LATA Connection AT

Ordering codes

Functional group ordering code: EQA00002

Functionality ordering code: EQA00012

Release applicability

NA009 and later versions

Requirements

To operate, CCS7 ISUP Inter-LATA Connection AT has the following requirements:

- BAS Generic, BAS00003
- Base ISUP, ISP70001

Description

Feature package Access Tandem Switch implemented Equal Access connections with MF signaling. A different name for MF signaling is inband signaling. The CCS7 ISUP Inter-LATA Connection AT feature package implements the following capabilities:

- to route incoming Equal Access calls over CCS7 trunks to a CCS7 or an MF IEC
- to mix intra-LATA traffic and inter-LATA or international traffic
- to route IEC calls to the EAEO over CCS7 trunks
- to interwork incoming TOPS MF trunks with CCS7 ATC trunks
- DP signaling on incoming TOPS trunks to ATC CCS7 trunks

Operation

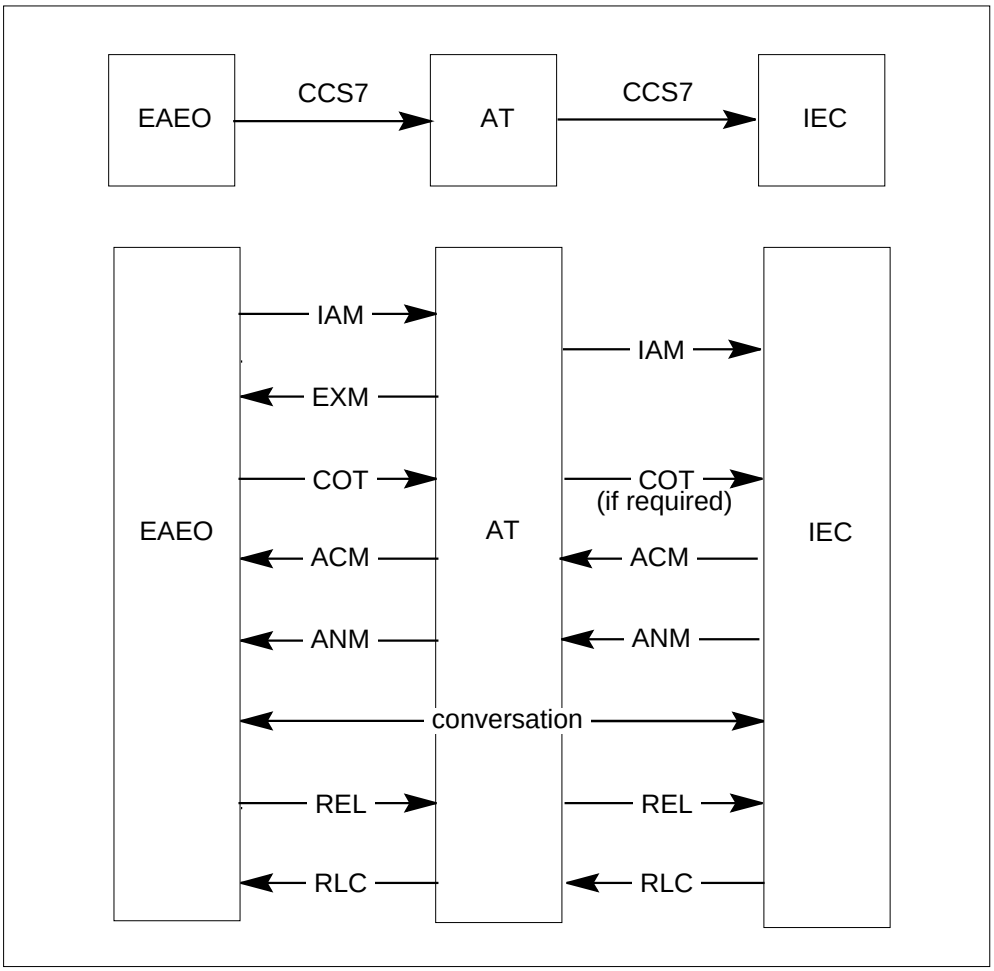
The following interworking conditions appear in the following sections:

- CCS7-to-CCS7 interworking
- CCS7-to-MF interworking
- CCS7-to-CCS7 interworking with E800
- CCS7-to-MF interworking with E800
- TOPS trunks interworking with CCS7 trunks
- FGB interworking with CCS7
- FGC interworking with CCS7

CCS7-to-CCS7 interworking

The CCS7 message flow for an Equal Access call appears in the following figure. This message flow originates in the EAEO over a CCS7 trunk and tandems to a CCS7 IEC trunk.

CCS7-to-CCS7 Equal Access protocol



The IAM the AT receives must include the optional transit network selection (TNS) parameter. The parameter contains four octets of data. Three of these octets represent the binary-coded-decimal (BCD) equivalent of the Equal Access CAC. The fourth octet indicates the Equal Access circuit code. This code is like the 0ZZ or 1N/N'X digits the system outpulses on MF IECs. The TNS parameter, with the country code on international calls, indicates the outgoing IEC the AT selects.

CCS7 ISUP Inter-LATA Connection AT (continued)

When the AT selects a CCS7 IEC, the AT formulates an IAM. The IAM includes the TNS parameter only for calls that route to a CCS7 INC. The AT starts a timer after the AT sends the IAM to the IEC. The system sends an exit message (EXM) to the EAEO when the first of the following events occurs:

- the receipt of an address complete message (ACM), answer message (ANM), or release message (REL) from the outgoing circuit
- the timeout of the timer

The EXM must precede any ACM or ANM that the system sends the EAEO. The system must send the EXM before the system generates an REL. The system generates an REL when the system receives a message from the IEC. The system also generates an REL when the system receives a repeated continuity check failure. This continuity check failure is for the circuit group to the IEC.

This timer must be in at least 100 ms intervals from 100 ms to 1200 ms. This feature package hardcodes this timer value. The message priority field in the service information octet of the EXM is code 10. Code 10 indicates a priority of 2. This field includes the optional outgoing trunk group number parameter. This field contains the number of the trunk group that routes the call from the AT to the IEC. The trunk group number is in field ADNUM of table CLLI.

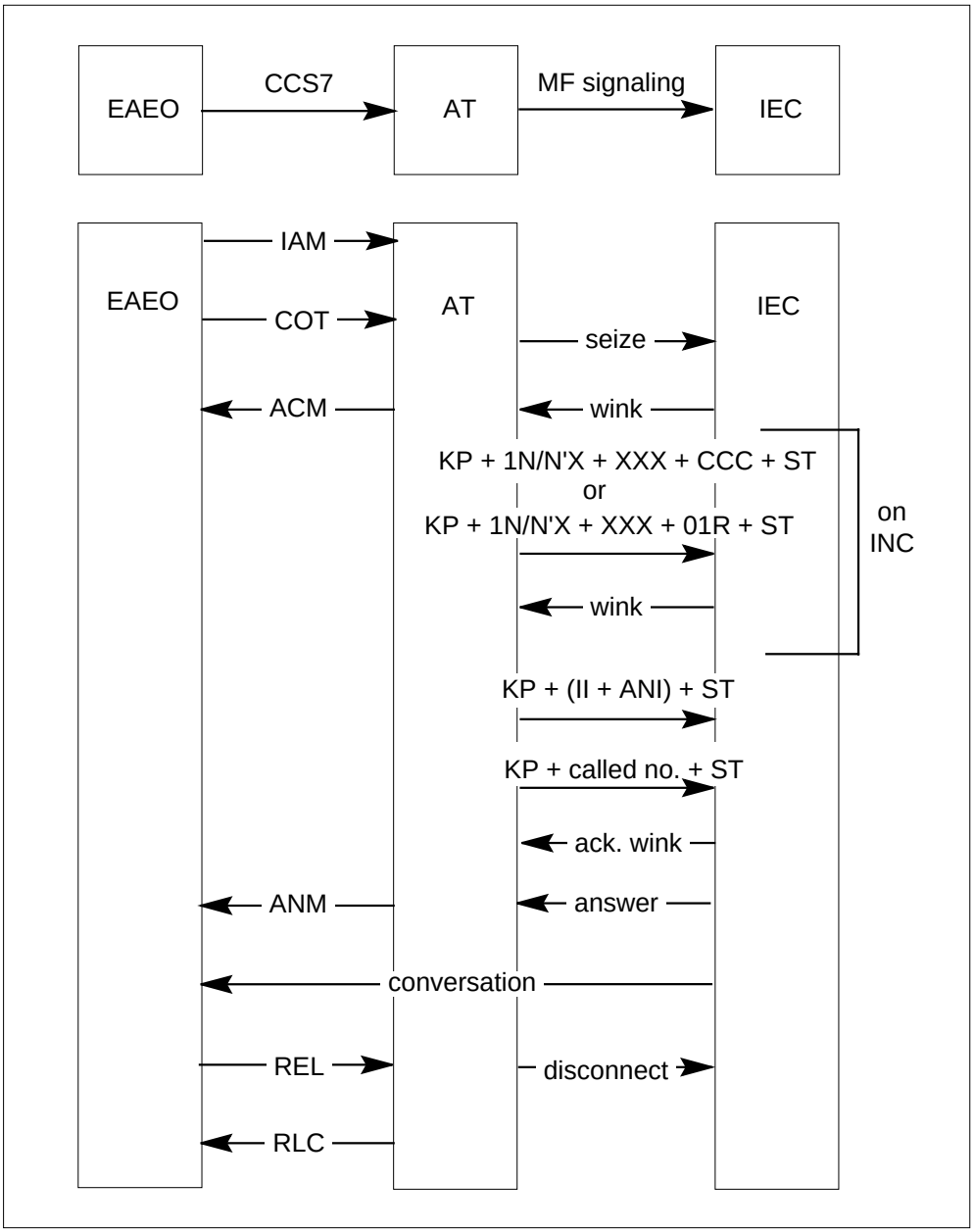
The AT does not delay sending of the EXM until the completion of any continuity check on the incoming circuit.

CCS7-to-MF interworking

The CCS7 messages interworking with MF signals for an Equal Access call appears in the following figure. These messages originate in the EAEO over a CCS7 facility and tandem to an MF IEC facility.

CCS7 ISUP Inter-LATA Connection AT (continued)

CCS7-to-MF Equal Access protocol



The AT seizes the outgoing circuit and waits for a wink. The system can perform a continuity check on the incoming circuit. The IAM indicates that this check occurs. When this event occurs, the AT does not wait to receive the “continuity check successful" continuity message (COT) before the AT seizes the IEC.

CCS7 ISUP Inter-LATA Connection AT (continued)

The system sends an ACM to the EAEO when the system receives the wink from the MF IEC. Bit I of the ACM, the interworking bit, is 1. This 1 indicates the encounter of interworking.

The AT is ready to outpulse digits on the IEC. The TNS in the IAM indicates if the AT accesses an IEC or INC.

The IEC MF signaling sends the ANI information digits, the calling number, and the called number. The nature of address code in the received called party address parameter determines the sequence this signaling outpulses. The TR-394 describes the relationship between the nature of address code and the MF sequence to outpulse. The coding of the called party address parameter appears in the following table.

Called party address parameter coding

Nature of address	Odd/Even indicator	Address information	Meaning
0000001	1	7D	subscriber number
0000011	0	10D	national number
0000100	1/0	CC_NN	international number
1110001	1	7D	subscriber number (0+ call)
1110010	0	10D	national number (0+ call)
1110011	1/0	CC_NN	international call (0+ call)
1110100	0	none	no address, operator requested
1110101	0	none	no address, cut-through to IEC
1111110	1	7D	network specific: 950+ call

The IAM from the EAEO can contain a carrier selection parameter that provides an indication of presubscription. The relationship between the carrier

selection information and the correct key pulse (KP) in the ANI sequence appears in the following table.

Carrier selection parameter mapping

Information	KP/KP '	Description
00000001	KP	presubscribed, CAC not dialed
00000010	KP	presubscribed, CAC also dialed
00000011	KP	presubscribed, no indication of dialing
00000100	KP '	not presubscribed, CAC dialed

An acknowledgment wink from the IEC must occur after outpulsing the called digits. The AT completes the transmission path after outpulsing the digits on the IEC. The AT does not complete the transmission path later than the receipt of the acknowledgement wink.

The system distinguishes an international call from a domestic call by the nature of the address indicator. This address indicator is in the called party number parameter. The IAM that arrives at the AT includes this called party parameter.

When the call goes to an MF INC, an additional sequence of digits must outpulse to the IEC. The additional sequence can take the form of KP+1N/N'X+XXX+CCC+ST or KP+1N/N'X+XXX+01R+ST. The AT must use the contents of the TNS parameter to determine the 1N/N'X+XXX digits. The IAM receives this parameter from the EAEO. The pseudo country code (CCC) is the country code in the dialed digits padded with a leading zero. The CCC is present for calls to an INC that terminates outside of World Zone 1. The 01R is present for calls to an INC that terminates outside of the continental United States inside World Zone 1.

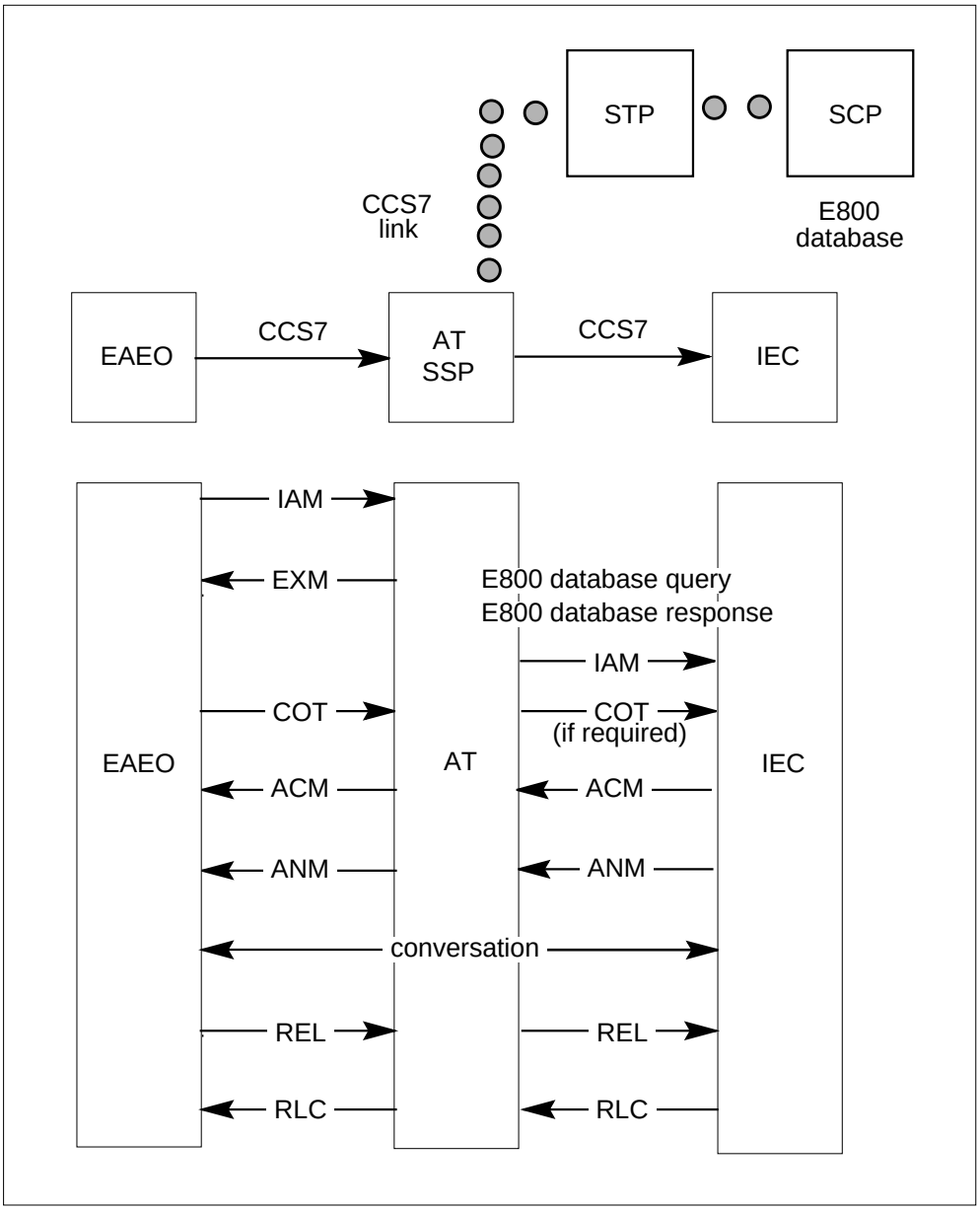
The AT can use the NPA in the received called party number parameter to determine the R digit. After the outpulsing of the sequence KP+1N/N'X+XXX+CCC+ST or KP+1N/N'X+XXX+01R+ST, the AT waits for a wink from the IEC. The wink allows the outpulsing sequence to continue like the IEC MF signaling condition. The called number is different for INC calls outside of World Zone 1. This difference is present because a country code (CC) and a national number (NN) composes the called number. Transmission path completion and the messaging and signaling that remains are like the IEC condition that appears in this section.

CCS7 ISUP Inter-LATA Connection AT (continued)

CCS7-to-CCS7 interworking with E800

The CCS7 message flow for an E800 call that originates in the EAEO over a CCS7 trunk appears in the following figure. This message flow initiates an E800 database query at the AT SSP and completes over a CCS7 trunk. The outgoing CCS7 facility can be a local exchange carrier (LEC) or an IEC. The incoming E800 call can be an Equal Access call.

CCS7-to-E800-to-CCS7 protocol



The system always sends an EXM to the EAEO when the AT launches the query to the E800 database. When the AT receives the database response from the E800 SCP at the AT, the call completes. The decoded routing information determines the completion of the call. The type of facility on which the call terminates determines the CCS7 messages that return to the EAEO. In this condition, the terminating facility is a CCS7 IEC or IEC.

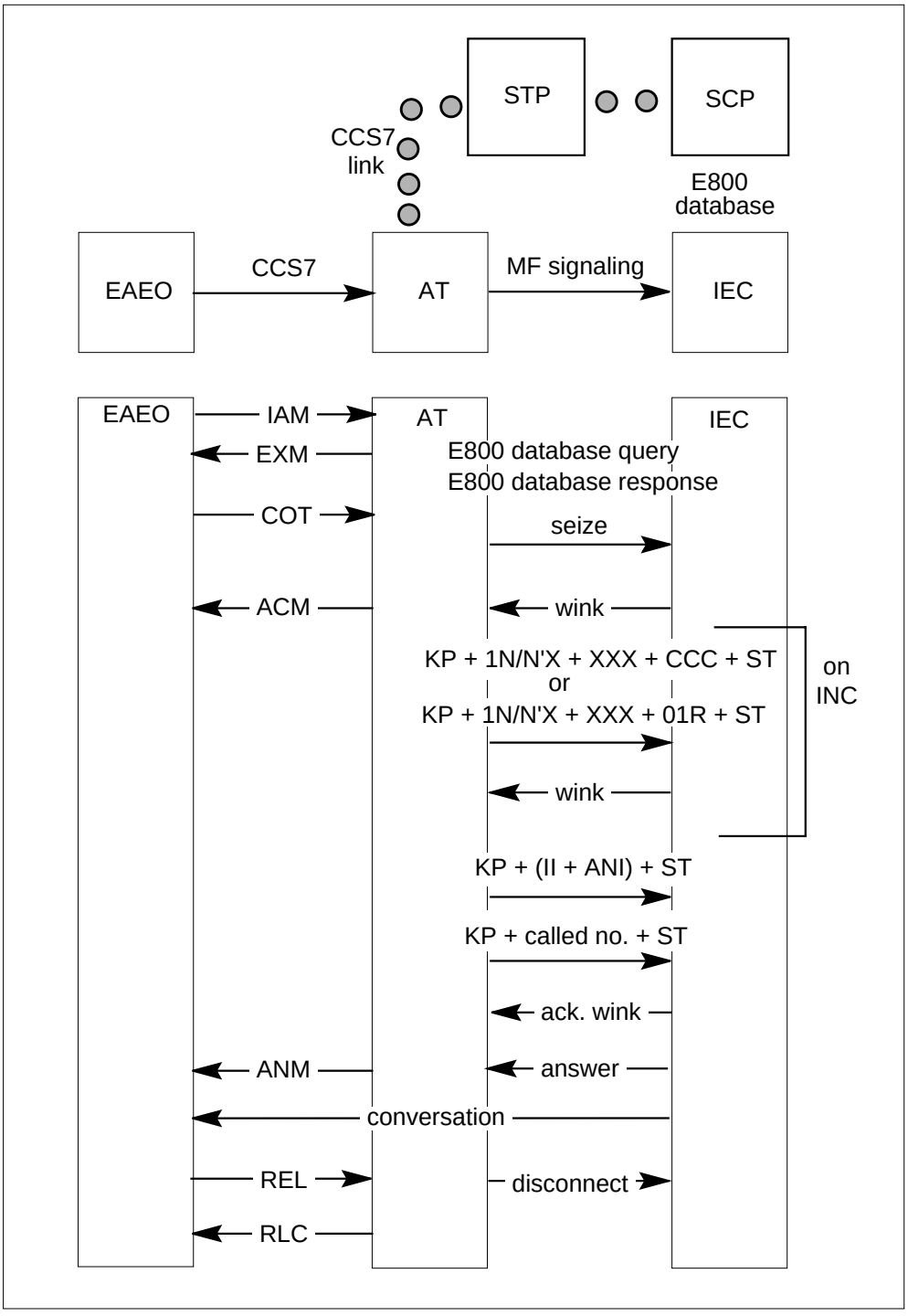
CCS7-to-MF interworking with E800

The CCS7 message and MF signal flow for an E800 call appears in the following figure. This message and signal flow originate in the EAEO over a CCS7 trunk. This condition initiates an E800 database query at the AT SSP and completes over an MF IEC.

Note: The COT/ACM messaging is separate from the SEIZE/WINK signaling.

CCS7 ISUP Inter-LATA Connection AT (continued)

CCS7-to-E800-to-MF IEC protocol



TOPS trunks interworking with CCS7 trunks

This feature package provides the TOPS AT with the capability to interwork incoming TOPS inband and DP trunks with ATC CCS7 trunks. The following are the types of inband signaling that the system supports:

- traditional (BELL) operator services signaling
- modified BELL (MODBELL) signaling
- the AMR5 signaling
- interim operator services signaling
- Equal Access FGD
- combined FGD
- Equal Access Operator Services Signaling (EAOSS)
- the EAP FGD cut-through signaling

This feature package supports every call type that the TOPS AT now supports. These call types originate on TOPS trunks and terminate on ATC MF trunks. This feature package also supports inward operator calls from the IEC.

The operator functions over CCS7 trunks do not have specifications. Operator functions include operator hold, coin control and rering control. This feature does not support operator functions over the ATC CCS7 trunk. on OA calls that forward or transfer to the IEC operator.

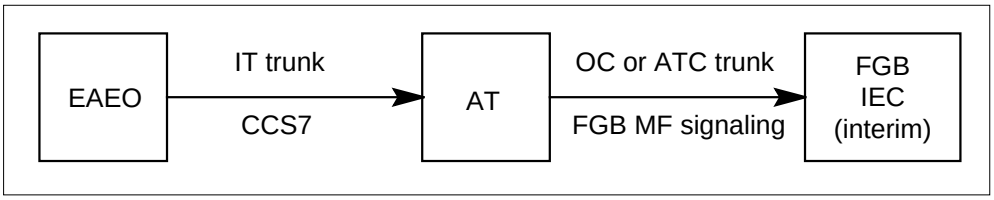
FGB interworking with CCS7

This feature package provides the capability to interwork CCS7 with FGB, EAP, and traditional MF signaling for the 950-WXXX dialing plan. This feature is an enhancement to the CCS7-to-MF internetwork interworking capabilities that the DMS switch supports.

The CCS7-to-FGB inband signaling interworking appears in the following figure. The 950-WXXX call originations that terminate to an FGB IEC through the AT require this configuration. The facilities between the EAEO and the AT are IT trunk groups that support CCS7. The facilities between the AT and the FGB IEC can be outgoing CAMA (OC). These facilities can be ATC trunk groups that support MF or DP FGB inband signaling.

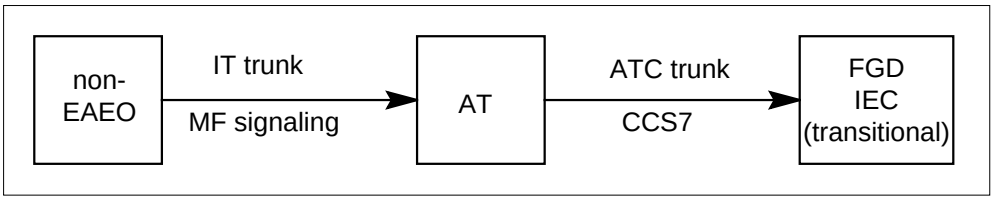
CCS7 ISUP Inter-LATA Connection AT (continued)

FGB interworking with CCS7 configuration



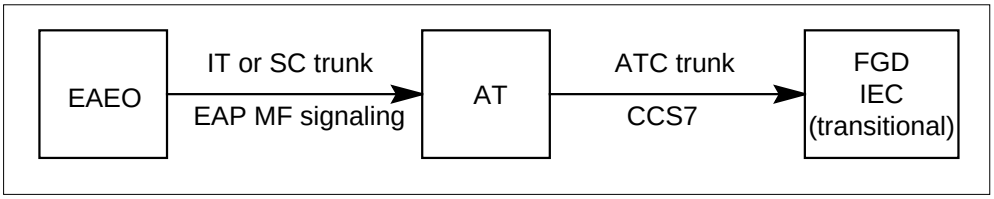
Traditional MF-to-CCS7 interworking appears in the following figure. The 950-WXXX call originations from a non-EAEO that terminate to an FGD IEC through the AT require this configuration. The facilities between the non-EAEO and the AT are IT trunk groups that support traditional inband signaling. The facilities between the AT and the FGD IEC are ATC trunk groups that support CCS7. This feature provides enhancements in the AT to support the traditional inband signaling-to-CCS7 interworking.

Traditional MF signaling interworking with CCS7 configuration



Interworking for EAP MF-to-CCS7 appears in the following figure. The 950-WXXX call originations from an EAEO that terminates to an FGD IEC through the AT requires this configuration. The facilities between the EAEO and the AT are IT or SC trunk groups that support EAP inband signaling. The facilities between the AT and the FGD IEC are ATC trunk groups that support CCS7. This feature provides enhancements in the AT to support the EAP MF-to-CCS7 interworking.

EAP signaling interworking with CCS7 configuration

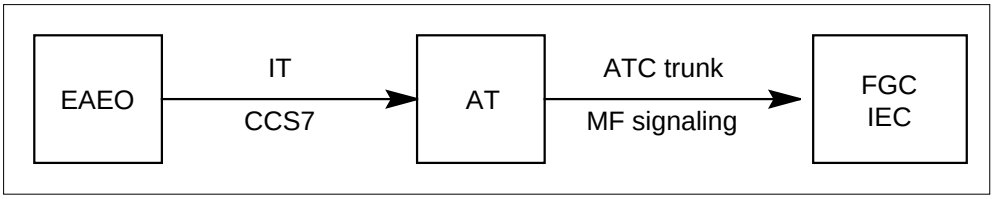


FGC interworking with CCS7

This feature package provides two other interworking capabilities. These capabilities are related to FGC. These capabilities appear in the following two figures.

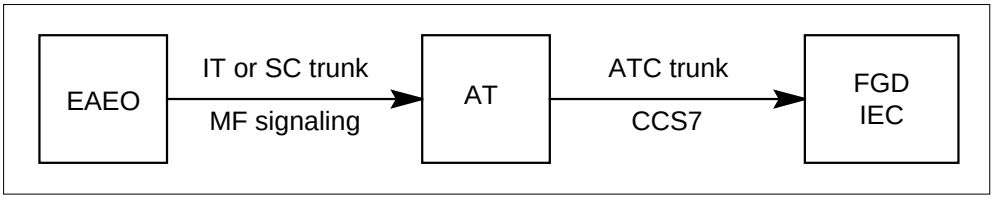
Interworking for CCS7-to-FGC inband signaling appears in the following figure. The call originations that terminate to an FGC IEC through the AT require this configuration. The facilities between the EAEO and the AT are IT trunk groups that support CCS7. The facilities between the AT and the FGC carrier are ATC trunk groups that support FGC inband signaling.

CCS7-to-FGC inband signaling



Interworking for FGC inband signaling to CCS7 appears in the following figure. The call originations that terminate to an FGD IEC through the AT require this configuration. The facilities between the EAEO and the AT are IT or SC trunk groups that support traditional inband signaling. The facilities between the AT and the FGD carrier are ATC trunk groups that support CCS7.

FGC inband signaling to CCS7



Note: As of BCS36, FGC calls sent over CCS7 IT trunks include the calling party number (CPN) parameter. This condition occurs if, in the EAEO, the entry in field INCCPN in table OCCINFO is Y for the FGC carrier.

Translations table flow

The CCS7 ISUP Inter-LATA Connection AT translation does not affect the table flow.

Limits

The following limits apply to CCS7 ISUP Inter-LATA Connection AT:

- For Equal Access calls that arrive at the AT on IT, SC, or TOPS trunks that use MF FGD signaling, the following applies. The terminating route cannot contain a primary ISUP ATC trunk and a secondary MF ATC trunk. The system does not support overflowing from an ISUP ATC trunk to an

CCS7 ISUP Inter-LATA Connection AT (continued)

MF ATC trunk. This condition applies when the incoming signaling is MF FGD.

- Equal Access calls that arrive on MF facilities at the AT from the EAEO do not interwork with CCS7 IEC facilities. The system does not support test calls and operator signaling.
- The system does not support PVN calls that arrive on CCS7 facilities.
- The AT does not support the CELL trunk type that uses ISUP signaling protocol from a cellular mobile carrier (CMC).

The following limits apply to TOPS trunks interworking with CCS7 trunks:

- The system does not support operator functions, like operator hold, coin control, and rering control, over ATC CCS7 trunks.
- In some conditions, the TOPS AT can receive digits KP+50WXXX+ST or KP+0WXXX+ST for a 950-WXXX call origination. The non-EAEO determines this condition. For these digit sequences, field FROMDIGS of subtable STDPRTCT.STDPRT must be at 50WXXX and field TODIGS must be at 0WXXX. In table OFRT, the N selector must prefix the digits 9 or 95 on the called digits. In some conditions, the N selector does not prefix these digits. In this condition, the system sends the CCS7IAM message to the CCS7 IEC. In this condition, this message does not contain the complete 950-WXXX digit sequence in the called party address parameter.

The following limits apply to FGB interworking with CCS7:

- The AT provides the capability to complete FGB 950-WXXX calls incoming from a non-EAEO over an MF IT trunk group. This condition uses traditional MF signaling. These calls terminate to an IEC over a CCS7 ATC trunk group. The system does not support FGB 950-WXXX calls incoming from a non-EAEO over an MF SC trunk group. These calls complete to an IEC over a CCS7 ATC trunk group.
- In some conditions, the system does not support alternate routing from a CCS7 ATC trunk group to an MF EAP ATC trunk group. The system does not support this routing for FGB 950-WXXX calls. The FGB 950-WXXX calls are incoming from a non-EAEO over an MF IT trunk group.
- The system does not support international FGC CCS7-to-MF and MF-to-CCS7 interworking calls. The TR-TSY-000394 does not contain specifications for these calls.

Interactions

The interactions between CCS7 ISUP Inter-LATA Connection AT and other functionalities appear in the following paragraphs.

In some conditions, the originating end office cannot provide the ANI digits for FGD and FGC calls. This condition applies for FGD and FGC calls incoming over MF IT/SC trunks to the AT. The FGD and FGC calls complete to CCS7 ATC trunks. For example, for FGD, the system receives only KP+ST for ANI. For FGC, the system does not receive the ANI digit stream. In some conditions, the system does not receive ANI digits. When this condition is present, enter data in the FGD (CCS7) IEC in the AT to receive ANI. When this condition occurs, the originating line information (OLI) parameter and charge number parameter codes are as follows:

```
OLI:  ANI failure/unavailable (i. e., #00000010)

Charge Number:

      Odd/Even Indicator: even number of address digits
(i. e., #0)

      Nature of Address Indicator: ANI not available or
not

provided (for example, # 0000010)

      Numbering Plan: not included

      Address Information: not included
```

The system codes and sends the first octet of the charge number parameter only. The system does not send the octets that remain. These octets normally include the NPA information.

For FGB MF-to-CCS7 calls from a non-EAEO, the IAM includes the OLI and charge number parameters. This condition occurs when data entry specifies the FGD (CCS7) IEC receives ANI.

CCS7 ISUP Inter-LATA Connection AT interacts with ISUP Intermediate Tandem (IMT), AF7127.

Activation/deactivation by the end user

The CCS7 ISUP Inter-LATA Connection AT.does not require activation or deactivation by the end user.

CCS7 ISUP Inter-LATA Connection AT (continued)

Billing

Billing for this feature package appears in this section. Refer to *Bellcore Format Automatic Message Accounting Reference Guide*, 297-1001-830. for detailed information about billing.

Billing for CCS7 FGD signaling

An AT that handles incoming calls from an IEC must produce a billing record when the office is the LATA entry point. To implement this feature, the nature of route and the terminating access record call type expand to include structure codes. These structure codes are 00625 and 00627. The nature of the route is in the trunk group number field that appears in table 83. The terminating access record call type is call code 119.

The nature of route in the trunk group number field and the IEC/INC ANI/CPN indicator expands for the originating 141 billing record. The trunk group number field appears in table 83. The IEC/INC ANI/CPN is the calling party number. The IEC/INC ANI/CPN indicator appears in table 60.

The IAM receives the calling party number or charge number. The system records this number in table 13 and table 14. Table 13 is the originating NPA field. Table 14 is the originating number field. The system records an indication of interworking in the trunk group number field in table 83. The system codes originating billing records the system produces on E800-to-IEC calls with call code 141.

The expanded coding applies to Bellcore AMA format records only.

Billing for TOPS trunks interworking with CCS7 trunks

The system can produce billing records for the calls that this feature supports in a TOPS MF-to-ATC MF environment. When this condition occurs, the system also produces billing records in a TOPS MF-to-ATC CCS7 environment.

The carrier connect time is the time that the TOPS AT sends the IAM. For Equal Access FGD and combined FGD originated calls, the following condition is present. The carrier connect time is the time the system seizes the originating TOPS trunk at the TOPS AT.

The system can set the IC/INC call event status field to first wink received when reception of the ACM message occurs. The system can set the IC/INC call event status field to answer on reception of the ANM message. Refer to *Bellcore Format Automatic Message Accounting Reference Guide*, 297-1001-830, for a description of the trunk group number field.

Origination billing record (traditional inband signaling)

The system does not support billing in the AT for calls incoming on IT trunks. Billing must be available in the non-EAEO.

Origination billing record (EAP inband signaling)

The system does not support billing in the AT for calls incoming on IT or SC trunks by EAP inband signaling. Billing must be available in the EAEO.

FGC origination billing record

The system does not support billing in the AT for calls incoming on IT trunks. The system continues to support billing on calls incoming on SC trunks. The system produces a 006 call code record for the following calls. The system produces the records that come in the AT on SC MF trunks and go out on CCS7 ATC trunks.

Station Message Detail Recording

The CCS7 ISUP Inter-LATA Connection AT does not affect Station Message Detail Recording.

Datafilling office parameters

The CCS7 ISUP Inter-LATA Connection AT does not affect office parameters.

Datafill sequence

The tables that require datafill to implement CCS7 ISUP Inter-LATA Connection AT appear in the following table. The tables appear in the correct entry order.

Datafill requirements for CCS7 ISUP Inter-LATA Connection AT (Sheet 1 of 2)

Table	Purpose of table
OCCINFO	Table OCCINFO (Other Common Carrier Information) defines the attributes for the carriers that serve a DMS switch. Table OCCINFO screens calls for carrier compatibility.
OFRT	Table OFRT (Office Route) contains route lists pointed to from tables that are not the home NPA code subtable (HNPACONT.HNPACODE) or the foreign NPA code subtable (FNPACONT.FNPACODE).
TRKSGRP	Table TRKSGRP (Trunk Subgroup) contains additional information for each subgroup for one of the trunk groups in table TRKGRP.

CCS7 ISUP Inter-LATA Connection AT (continued)

Datafill requirements for CCS7 ISUP Inter-LATA Connection AT (Sheet 2 of 2)

Table	Purpose of table
STDPRTCT. STDPRT	Each standard pretranslator (STDPRTCT.STDPRT) subtable sets up the translation for a specified call type. This subtable is the first subtable the received leading digits index if table LINEATTR or table TRKGRP specifies a standard pretranslator subtable name.
CKTDIGIT	Table CKTDIGIT (Circuit Digit) allows the combination of the TNS and circuit code in a specified 0ZZ, 1NX, or 1N'X circuit digit value. The AT extracts the CARRNAME field from table OCCINFO by the XXX digits the TNS receives.

Datafilling table OCCINFO

Table OCCINFO defines the attributes for carriers that serve the AT and screens calls for carrier compatibility. For example, table OCCINFO allows the system to send international traffic only to carriers that can handle this traffic.

Datafill for CCS7 ISUP Inter-LATA Connection AT for table OCCINFO appears in the following table. The fields that apply to CCS7 ISUP

Inter-LATA Connection AT appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table OCCINFO

Field	Subfield or refinement	Entry	Explanation and action
ACCESS		TRANS, EAP, FGC, INTERIM	Access arrangement. Enter one of the following access types the carrier accepts to handle a call: • TRANS or EAP for EAEO calls that complete to the IEC over trunks by CCS7. Enter TRANS or EAP for calls that complete over CCS7-supported circuits to the AT and from the AT to the IEC. • FGC for CCS7-to-MF FGC IEC interworking calls. • INTERIM for CCS7-to-MF FGB IEC interworking calls.
NOA950		Y or N	Nature of address indicator. Enter Y to indicate that the nature of address indicator in the calling party number parameter is at 1111110. This binary value indicates that the call is a network specified 950+ call from public station or hotel/motel line or non-EAEO. Enter N to indicate that the nature of address indicator in the calling party number parameter is at the normal value. ***Note:*** The default value of N does not cause a change in the current operation of the switch.
INCCPN		Y or N	Include calling party number. Enter N to remove the calling party number parameter. The system removes the parameter from any IAM message in this carrier. In any other condition, enter Y. The default value is Y.

Datafill example for table OCCINFO

Sample datafill for table OCCINFO appears in the following example.

CCS7 ISUP Inter-LATA Connection AT (continued)

MAP example for table OCCINFO

```
CARRNAME CARRNUM ACCESS INTER INTNTL INTRA ANI FANI ONISCRN
AD1 OVERLAP INTERS INTRAS TERMREC OCCSEPNO OPSIG PICIND
NOA950 INCCPN DTMFIND OPSERV CACBLOCK CTDOA CMCMON SCRNWATS
CRMCRA ATPINCL INTRAOPR
_____________________________________________________________

     C111      111   EAP     Y      Y     N   Y    N
N  Y
     Y         Y      Y    LONG       O  FGRPC      Y      N
      N        N      N        N     N      N        N      Y
       N         N
```

Datafilling table OFRT

Table OFRT contains route lists pointed to that are from tables that are not the home NPA code subtable (HNPACONT.HNPACODE) or the foreign NPA code subtable (FNPACONT.FNPACODE).

Datafill for CCS7 ISUP Inter-LATA Connection AT for table OFRT appears in the following table. The fields that apply to CCS7 ISUP Inter-LATA Connection AT appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table OFRT (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
RTESEL		CND	Route selector. Enter CND to specify a condition before routing. If the condition occurs, the system executes the instructions of this route element. If the condition does not occur, the system does not execute the instructions. Translation looks for instructions in the next route element.
RTELIST		see subfields	Route list. This field contains the following subfields.

Datafilling table OFRT (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	CNDSEL	EA	Condition selector. Enter EA as the type of condition to test.
	EA_CND_RTE		Condition subselector. Enter one of the following values: • CAC for an Equal Access call where 10XXX is dialed • INTNL for an Equal Access international call • PIC for an Equal Access call

Datafill example for table OFRT

Sample datafill for table OFRT appears in the following example.

MAP example for table OFRT

```
RTE                                              RTELIST
_____________________________________________________________

     1                                 CND  EA  CAC  SK  3
```

Datafilling table TRKSGRP

Datafill for CCS7 ISUP Inter-LATA Connection AT for table TRKSGRP appears in the following table. The fields that apply to CCS7 ISUP

CCS7 ISUP Inter-LATA Connection AT (continued)

Inter-LATA Connection AT appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table TRKSGRP (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
SGRPKEY		see subfields	Subgroup key. This field contains subfields CLLI and SGRP.
	CLLI	CLLI code	Common language location identifier. Enter the code assigned in table CLLI to the trunk group to which the subgroup belongs.
	SGRP	Trunk subgroup number	Subgroup number. Enter the number for the trunk subgroup.
SGRPVAR		see subfields	Variable subgroup data. For standard signaling this field contains the following subfields.
	SIGDATA	STD	Signaling data. Enter STD for standard signaling.
	DIR	IC, OG, 2W	Direction. Enter the trunk group direction: IC, OG, or 2W. For trunks defined as four wire lines (GRPTYPE = AVLN in table TRKGRP), you must specify the direction as incoming. Where trunk GRPTYPE = TPS101, only the use of direction IC or OG can occur.

CCS7 ISUP Inter-LATA Connection AT (continued)

Datafilling table TRKSGRP (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	IPULSTYP	DP, DT, MF, MFC, NP, RP	Incoming type of pulsing Where trunk group is incoming or two way, enter the type of pulsing: • DP dial pulse • DT DIGITONE* • MF multifrequency • MFC multifrequency compelled • NP no pulsing • RP revertive pulsing Where trunk group is outgoing, leave this field blank.
	ISTARTSG	IM, WK, DD, LP, GD, DIALTONE	Incoming start dial signal. Where trunk group is incoming or two way and incoming pulse type is DP, DT, or MF, perform the following procedure. Enter the type of start dial signal required. The start signal can be immediate dial (IM), wink (WK), or delay dial-on hook idle (DD). The start signal can be loop (LP), ground (GD), or DIALTONE. Where incoming pulse type is NP, enter IM. Where trunk is outgoing, leave blank.
	OVLP	Y or N	Overlap outpulsing. Where trunk group is incoming or two-way DP IT, local, or MDC, perform the following procedure. Enter Y if trunk-to-trunk overlap outpulsing is a requirement. If trunk-to-trunk overlap outpulsing is not required, enter N. Where trunk group is outgoing, leave this field blank.

CCS7 ISUP Inter-LATA Connection AT (continued)

Datafilling table TRKSGRP (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	OPULSTYP	DP, MF, MFC, DT, RP, NP	Outgoing type of pulsing. Where trunk group is outgoing or two way, enter the type of pulsing. The type of pulsing can be dial pulse (DP), multifrequency (MF), multifrequency compelled (MFC), Digitone (DT), or revertive pulsing (RP). Where trunk group is not outgoing or two way, enter NP, no pulsing.
	OSTARTSG	IM, WK, DD, XD, LP, GD, blank	Outgoing start dial signal. Where trunk group is outgoing or two way and outgoing pulse type is DP, MF, or DT, perform the following procedure. Enter the type of start dial signal: The type of start signal can be immediate dial (IM), wink (WK), delay dial-on hook idle (DD), delay dial-off hook idle (XD), loop (LP), or ground (GD). Where OPULSTYP is NP, enter IM. Where trunk group is incoming, leave blank.
	IDGTIME	7, 0, blank	Interdigital timing. Where trunk group is outgoing or two-way and type of pulsing is dial pulse (DP). Enter the interdigital timing interval in 10 ms intervals. Where the type of pulsing is MF, enter 7 (70 ms). If the type of pulsing is NP, enter 0. Where trunk group is incoming, leave blank.
	NUMSTOPS	0, blank	Number of stop/go signals. Where trunk group is outgoing or two-way IT with DP pulsing, enter the maximum number of stop/go signals allowed. Where trunk group is not outgoing or two-way IT with DP pulsing, enter 0. Where trunk group is incoming, leave blank.
	DIALMODE	C, M	Dial mode. Where trunk group is incoming or two way, enter C if incoming digits originate from a subscriber or customer. If incoming digits do not originate from a subscriber, enter M to indicate that a machine produces incoming digits. Where trunk group is outgoing, leave this field blank. Where customer dialed, the system does not for permanent signal, partial dial, and abandoned calls.

Datafill example for table TRKSGRP

Sample datafill for table TRKSGRP appears in the following example.

MAP example for table TRKSGRP

```
SGRPKEY   CARDCODE
                                                        SGRPVAR
_____________________________________________________________________

DAC 0     DS1SIG
      STD OG     MF     WK    7 0 NO      NO N N N   70    UNEQ
```

Datafilling subtable STDPRTCT.STDPRT

Subtable STDPRTCT.STDPRT is the first table the received leading digits index. This condition occurs when the originating line attribute or trunk specifies a pretranslator name. The originating line attribute is from table LINEATTR. The trunk is from table TRKGRP.

Datafill for CCS7 ISUP Inter-LATA Connection AT for subtable STDPRTCT.STDPRT appears in the following table. The fields that apply to CCS7 ISUP Inter-LATA Connection AT appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table subtable STDPRTCT.STDPRT (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
FROMDIGS		From digits	From digits. Enter the digit(s) to translate. If the entry is a block of consecutive numbers, enter the first number in the block.
TODIGS		To digits	To digits. If FROMDIGS is a block of consecutive numbers, enter the last number in the block. For other conditions, this field equals FROMDIGS.
PRETRTE		see subfields	Pretranslation route. For the FGB selector, this field contains subfields PRERTSEL, TYPCALL, NOPREDIG, CARRNAME, and RTEAREA, RTEPRSNT, EXTRTEID, TABID, KEY, MINIDIGSR, and MAXDIGSR.
	PRERTSEL	FGB	Pretranslator route selector. Enter FGB to originate FGB calls.

CCS7 ISUP Inter-LATA Connection AT (continued)

Datafilling table subtable STDPRTCT.STDPRT (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	TYPCALL	DD, NP, OA	Type of call. Enter the type of call. The type of call can be direct dial (DD), no prefix (NP), or operator assisted (OA). ***Note:*** The TYPCALL must be DD to allow call billing.
	NOPREDIG	0 to 7	Number of prefix digits. Enter the number of prefix digits (0 to 7).
	CARRNAME	Carrier name	Carrier name. Enter the name of the carrier, as table OCCNAME defines. The system offers the call to this carrier.
	RTEAREA	see subfield	Route area. This field contains subfield RTEPRSNT.
	RTEPRSNT	Y or N	Route present. Enter Y to enter data into subfields EXTRTEID, TABID, KEY, MINDIGSR and MASDIGSR. For other conditions, enter N.
	EXTRTEID	see subfield	External route ID. This field contains subfields TABID and KEY.
	TABID	OFRT	Table identifier. Enter OFRT. This table contains the routes for FGB calls.
	KEY	Index	Index. Enter the office route index (0 to 1023) to which the translation routes.
	MINDIGSR	1 to 15	Minimum digits received. Enter the minimum number of digits (1 to 15) for collection before routing the call.
	MAXDIGSR	1 to 24	Maximum digits received. Enter the maximum number of digits (1 to 24) for collection before routing the call.

Datafill for subtable STDPRTCT.STDPRT to implement FGB-to-CCS7 interworking appears in the following procedure. This procedure contains the

fields that apply to this package. See the data schema section of this document for a description of the other fields.

Datafilling Subtable Stdprtct.stdprt For Prertsel = EA (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
FROMDIGS		From digits	From digits. Enter the digit(s) to translate. If the entry is a block of consecutive numbers, enter the first number in the block.
TODIGS		To digits	To digits. If FROMDIGS is a block of consecutive numbers, enter the last number in the block. If this field is not a block of consecutive numbers, this field equals FROMDIGS.
PRETRTE		see subfields	Pretranslation route For Equal Access calls, this field contains subfields PRERTSEL, TYPCALL, NOPREDIG, XLA_INFO, CARRNAME, and RTEAREA.
	PRERTSEL	EA	Pretranslator route selector. Enter EA, the pretranslator route selector for Equal Access calls.
	TYPCALL	DD, NP, OA	Type of call. Enter the type of call: DD, NP, or OA. ***Note:*** The TYPCALL must at DD to allow call billing.
	NOPREDIG	0 to 7	Number of prefix digits. Enter the number of prefix digits (0 to 7).
	XLA_INFO	see subfield	Equal Access translation information. This field contains subfield XLATYPE.

CCS7 ISUP Inter-LATA Connection AT (continued)

Datafilling Subtable Stdprtct.stdprt For Prertsel = EA (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	XLATYPE	N, P, T	Equal Access translation type. Enter one of the following values: • N when additional digit translation or screening is not a requirement. Field RTEAREA must specify a route. • P when additional pretranslation is a requirement. Field PRTNM must contain a pretranslator subtable. • T when additional pretranslation is not a requirement. Translation proceeds as field TRANSYS determines.
	PRTNM	Pretranslator subtable name	Pretranslator subtable name. Enter the name of the pretranslator subtable to which translation routes for pretranslation of the remaining digits. This field appears when XLATYPE = P.
	TRANSYS	NA, IN, NO	Translation system. Enter one of the following values: • NA when translation proceeds to North American digit translations and screening. • IN when translation proceeds to international translations. • NO when additional translation or screening is not a requirement. This field appears when XLATYPE = T.
	CARRNAME	Carrier name	Carrier name. Enter the name of the carrier, as table OCCNAME defines. The system offers the call to this carrier.

Datafilling Subtable Stdprtct.stdprt For Prertsel = EA (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	RTEAREA	see subfield	Route area. This field contains subfield RTEPRSNT.
	RTEPRSNT	Y or N	Route present. Enter Y to enter data in fields EXTRTEID, TABID, KEY, MINDIGSR, MAXDIGSR, and OCS. For other conditions, enter N.
	EXTRTEID	see subfields	External route ID. This field contains subfields TABID and KEY.
	TABID	OFRT, OFR2, OFR3, OFR4	Table identifier. Enter an office route table name (OFRT, OFR2, OFR3, or OFR4).
	KEY	0 to 1023	Index. Enter the office route index (0 to 1023) to which the translation routes.
	MINDIGSR	1 to 18	Minimum digits received. Enter the minimum number of digits (1 to 18) for collection before routing the call.
	MAXDIGSR	1 to 24	Maximum digits received. Enter the maximum number of digits (1 to 24) for collection before routing the call.
OCS			Overlap carrier selection If this field at Y and the carrier has Y in the field OVERLAP in table OCCINFO, the call uses OCS. If these fields do not contain Y, the call does not use OCS.

Datafill example for subtable STDPRTCT.STDPRT

Sample datafill for table subtable STDPRTCT.STDPRT appears in the following example.

CCS7 ISUP Inter-LATA Connection AT (continued)

MAP example for table subtable STDPRTCT.STDPRT

```
FROMDIGS        TODIGS
                                PRETRTE
_____________________________________________________________

950WXXX         950WXXX
                 FGB DD 0    OFRT      100    7   7
```

Datafilling table CKTDIGIT

The system requires table CKTDIGIT when a CCS7 trunk between an EAEO and an AT is present. In the AT, this table uses the circuit code the TNS parameter receives to determine the 0ZZ or 1N/N'X digits. The carrier name and the circuit code fields index this table. For each carrier that serves the AT, a tuple must be available for each 0ZZ or 1N/N'X code passed to this carrier.

Datafill for CCS7 ISUP Inter-LATA Connection AT for table CKTDIGIT appears in the following table. The fields that apply to CCS7 ISUP Inter-LATA Connection AT appear in this table. See the data schema section of this document for a description of the other fields.

Datafilling table CKTDIGIT

Field	Subfield or refinement	Entry	Explanation and action
CARRIER_ NAMES		Carrier names	Carrier names. Enter the name of the carrier that serves the AT.
CKT_CODE		Circuit code	Circuit code. Enter the circuit code expected in the TNS parameter of the IAM the AT receives.
CKTDIGITS		3-digits	Circuit digits Enter the first three digits in the Equal Access signaling digit sequences. The digit sequences are 0ZZ XXX, 1N/N'X XXX CCC, or 1N/N'X XXX 01R. The digit sequences transmit on MF trunks. These digits single out one of the outgoing circuits in the carrier group. This field always contains three digits. The first digit must be 0 or 1. The two digits that remain can be any value from 00 to 99.

Datafill example for table CKTDIGIT

Sample datafill for table CKTDIGIT appears in the following example.

MAP example for table CKTDIGIT

```
CARRNAME          CKTCODE                 CKTDIGITS
_____________________________________________________

CARR1                   1                      138
```

Tools for verifying translations

The CCS7 ISUP Inter-LATA Connection AT does not use translation verification tools.

SERVORD

The CCS7 ISUP Inter-LATA Connection AT does not use SERVORD.

Equal Access Intermediate Tandem—U.S. only

Ordering codes

Functional group ordering code: EQA00002

Functionality ordering code: EQA00005

Release applicability

BCS36 and later versions

Requirements

To operate, Equal Access Intermediate Tandem—U.S. only has the following requirements:

- LEAS Toll, LEA00001
- Equal Access Alternate Switching Point, EQA00007

Description

This package, with the LATA Equal Access (LEAS) package, provides a DMS-100/200 or DMS-200 office with the ability to transfer interexchange carrier (IEC) calls. The IEC calls are incoming from nonconforming end offices (NCEO) to an AT. The calls can route directly to an IEC. This action can occur if the IEC has a point of presence at the Equal Access intermediate tandem (EAIT) office.

Operation

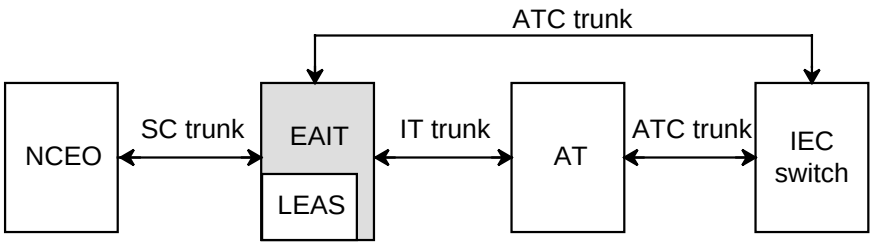
In some rural areas that independent telephone companies serve, clusters of small electromechanical end offices are present. The nearest AT office can be far away and cannot provide Equal Access-like service. These offices are NCEOs. Specified telephone companies want the ability to deliver Equal Access traffic from NCEOs or equal access end offices (EAEO) to an EAIT. Telephone companies want to tandem the traffic to an AT or send the traffic to the IEC.

The current EASP feature package, NTX803AA, allows a DMS-100, DMS-100/200 or DMS-200 switch to tandem Equal Access traffic. The switches tandem the traffic between a cluster of EAEOs and an AT. The EASP feature cannot provide service like the Equal Access service to NCEOs. The LEAS feature package, NTX710AA, does not provide the ability to tandem Equal Access traffic from NCEOs to an AT. The package provides service like the Equal Access service to NCEOs. The EAIT feature package uses the abilities of the EASP and LEAS to provide the ability to tandem Equal Access traffic. The feature provides the ability to tandem Equal Access traffic from NCEOs through an EAIT to an AT or to the carrier. The EAIT is a

Equal Access Intermediate Tandem—U.S. only (continued)

DMS-100/200 or a DMS-200 switch with LEAS. An EAIT switching configuration appears in the following figure.

EAIT switching configuration



Legend:

AT	=	Access tandem	IT	=	Intertoll
ATC	=	Access to carrier	LEAS	=	LATA Equal Access System
EAIT	=	Equal Access intermediate tandem	NCEO	=	Non-conforming end office
IEC	=	Interexchange carrier	SC	=	SuperCAMA

With this package, the system can recognize non-OA calls incoming to EAIT over SC trunks as LEAS calls with FGD signaling. If the carrier has an EAIT point of presence, the system can send the calls to the carrier over ATC trunks. The system routes operator traffic like LEAS.

The FGD signaling is in use between the EAIT and the AT for national and international calls. When the EAIT seizes the AT, this feature package generates a digit stream to the AT. For national calls, the package generates digit stream KP+0ZZ+XXX+ST. For international calls, the package generates digit stream KP+1NX+XXX+CCC+ST. This digit stream is the first stage of outpulsing. The AT seizes a trunk to the carrier, generates the digits again and sends the digits to the carrier.

The second stage of outpulsing has two stages. During this second stage, the AT remains transparent to the digits that outpulse to the carrier. The first phase sends the information digits and the automatic number identification (ANI) through the AT to the carrier. The second phase sends the called number through the AT to the carrier.

After the second stage of outpulsing, the AT receives an acknowledgement wink from the carrier. The AT generates the acknowledgement wink again to the EAIT. Supervision of the call occurs for answer. Billing occurs in the EAIT for calls incoming from NCEOs.

Equal Access Intermediate Tandem—U.S. only (continued)

Carrier identification code expansion

A three-digit code identifies each carrier. This code is the carrier identification code (CIC). The CICs in the series 10X, 15X and 16X are not in use. You can assign a maximum of 970 CICs to an FGD carrier.

To prepare for the exhaustion of available CICs, this feature package expands the number of CICs you assign to 10 000. The format of the carrier access code (CAC), expands from 10XXX to 101XXXX. The XXX and XXXX are the CICs. The CAC is the dialing sequence that accesses the carrier. This package supports the CIC expansion for LEAS calls.

Installation of the change from three-digit to four-digit CICs occurs in three phases. The three phases appear in the following table.

Conversion phases to implement four-digit CICs

Conversion period	Valid CACs	Incorrect CACs	Number of CICs available
Current	10XXX	1010X	970
		1015X	
		1016X	
Permissive	10XXX	1010X	970
(part 1)	1010XXX	1015X	
		1016X	
(part 2)	10XXX	1010X	2970
	1010XXX	1015X	
	1015XXX	1016X	
	1016XXX		
Final	101XXXX	10XXX	10 000

During the first part of the permissive period, the EAIT can process CACs of the form 10XXX and 1010XXX. Addition of a leading zero expands the three-digit CIC assigned to each carrier to four digits. In this period, CACs of the form 1010X, 1015X, 1016X, 1015XXX, and 1016XXX are not assigned. If the subscriber dials an code that is not assigned, the call goes treatment.

In the second part of the permissive period, CACs of the form 1015XXX and 1016XXX are assigned. The CACs of the form 1010X, 1015X and 1016X are not assigned. This condition helps the EAIT distinguish between three-digits

and four-digit CICs. The numbers 10, 15 or 16 can appear as digits three and four in the CAC. When this condition occurs. the LEAS records that the subscriber dialed a four-digit CIC. The LEAS records sequences as three-digit CICs.

In the final period, the EAIT accepts only four-digit CICs. Calls with a three-digit CIC go to treatment.

Implementing four-digit CICs in an EAIT

During the permissive period, the EAIT must be able to receive three-digit CICs from EAEOs that are not converted. The EAIT must be able to receive four-digit CICs from converted EAEOs. The EAIT does not receive both three-digit and four-digit CICs on the same trunk group. This condition causes the conversion of the EAIT to occur trunk group by trunk group.

Table CICSIZE4 contains the trunk groups that use four-digit CICs. Trunk groups that do not appear in this table use three-digit CICs. When full four-digit CIC conversion occurs, trunks at the EAIT carry four-digit CICs. Table CICSIZE4 is not a requirement. You do not need to consult table CICSIZE4 during translation. Set office parameter EA_TAB_CICSIZE4_OBSOLETE to Y to specify that table CICSIZE4 is not a requirement.

Implementing the permissive dialing phase

The actions to implement the permissive dialing phase of the CIC expansion appear in the following procedure.

At your location, perform the following actions:

1 Add tuples to the standard pretranslator for the seven-digit CACs to translate.

2 Add the trunk name to table CICSIZE4 for the trunk groups that carry four-digit CICs.

A tuple addition to subtable STDPRTCT.STDPRT appears in the following example. In this example, CIC 123 expands to 0123.

MAP example for subtable STDPRTCT.STDPRT

```
Current     080123  080123
entry           T NP 6  OFRT  202   6   6   NONE

New         0800123 0800123
entry           T NP 7  OFRT  202   7   7   NONE
```

Equal Access Intermediate Tandem—U.S. only (continued)

Implementing the final dialing phase

The actions that implement the final dialing phase of the CIC expansion appear in the following procedure.

At your location, perform the following actions:

1 Make sure all four-digit CICs are in table OCCINFO.

2 Change the standard pretranslator in table STDPRTCT to translate seven-digit CACs.

3 Revise table CICSIZE4 to add the trunk groups that carry four-digit CICs. If all trunks can carry four-digit CICs, set office parameter EA_TAB_CICSIZE4_OBSOLETE to Y. In this occurrence, you do not need to enter data in table CICSIZE4.

A tuple addition to subtable STDPRTCT.STDPRT appears in the following example. In this example, CIC 222 expands to 0222.

MAP example for subtable STDPRTCT.STDPRT

```
Current     080222  080222
entry           T NP 6  OFRT  202   6   6   NONE

New         0800222 0800222
entry           T NP 7  OFRT  202   7   7   NONE
```

Translations table flow

The Equal Access Intermediate Tandem—U.S. only translation does not affect the table flow.

Limits

The following limits apply to Equal Access Intermediate Tandem—U.S. only:

- Non-OA traffic must route from the EAIT to the AT over IT trunks.
- Except for the changes this feature provides, all limits of the LEAS feature apply.
- The LEAS does not support the Automatic Message Accounting (AMA) billing call codes 111, inter-LATA wide area telephone service (WATS), station detail. The LEAS does not support the 114, inter-LATA WATS, billing number, and 117, inter-LATA Datapath. The system does not generate call code 120 if the call comes over a Traffic Operator Postion System (TOPS) trunk group. Call code 120 originates overflow counts for ATC trunks. Long period calls over TOPS trunk groups do not generate A, B, C or D records.

Equal Access Intermediate Tandem—U.S. only (continued)

Interactions

Equal Access Intermediate Tandem—U.S. only interacts with ISUP Intermediate Tandem (IMT), AF7127.

Activation/deactivation by the end user

Equal Access Intermediate Tandem—U.S. only does not requires activation or deactivation by the end user.

Billing

Billing occurs in the EAIT for calls incoming from NCEOs.

Station Message Detail Recording

Equal Access Intermediate Tandem—U.S. only does not affect Station Message Detail Recording.

Datafilling office parameters

The office parameters that Equal Access Intermediate Tandem—U.S. only uses appear in the following table. Refer to *Office Parameters Reference Manual* for more information on office parameters.

Office parameters for Equal Access Intermediate Tandem—U.S. only

Table name	Parameter name	Explanation and action
OFCENG	EA_TAB_CICSIZE4_OBSOLETE	This office parameter specifies if table CICSIZE4 is a requirement. Set this parameter to N during the permissive phase of the CIC expansion. During this phase, table CICSIZE4 contains trunk groups with four-digit CICs. When CICs convert to four digits, set this parameter to Y. Table CICSIZE4 is not in use when this parameter is Y.

Equal Access Intermediate Tandem—U.S. only (continued)

Datafill sequence

The tables that require datafill to implement Equal Access Intermediate Tandem—U.S. only appear in the following table. The tables appear in the correct entry order.

Datafill requirements for Equal Access Intermediate Tandem—U.S. only

Table	Purpose of table
OFCENG	Office Engineering. This table contains data on engineering parameters for the office. See How to enter office parameters for how EAIT affects office parameters.
CICSIZE4	Table CICSIZE4 (carrier identification codes with four digits) identifies trunk groups with four-digit CICs. This table is in use during CIC expansion transitional phase.

Datafilling table CICSIZE4

Datafill for Equal Access Intermediate Tandem—U.S. only for table CICSIZE4 appears in the following table. The fields that apply to Equal Access Intermediate Tandem—U.S. only appear in this table. See the data schema section of this document for a description of the other fields.

Table CICSIZE4 contains the trunk groups that use four-digit CICs. Trunk groups that do not appear in this table use three-digit CICs.

Datafilling table CICSIZE4

Field	Subfield or refinement	Entry	Explanation and action
TRUNKGRP		Trunk groups	Trunk group. Enter the trunk groups that use a four-digit CIC. Enter this table during the permissive phase, when office parameter EA_TAB_CICSIZE4_OBSOLETE is N. When this parameter is Y, table CICSIZE4 is not in use.

Datafill example for table CICSIZE4

Sample datafill for table CICSIZE4 appears in the following example.

MAP example for table CICSIZE4

```
TRUNKGRP
_____________________________________________________

TGRPX
TGRPY
TGRPZ
```

Tools for verifying translations

Equal Access Intermediate Tandem—U.S. only does not use translation verification tools.

SERVORD

Equal Access Intermediate Tandem—U.S. only does not use SERVORD.

Hawaiian Telephone Phantom CIC

Ordering codes

Functional group ordering code: EQA00002

Functionality ordering code: EQA00029

Release applicability

NA010 and up

Prerequisites

This document includes all the data table information for this functionality. Complete use of this functionality can require software or hardware not described in this document.

Description

The Hawaiian Telephone Phantom CIC feature enables the DMS-200 to receive an invalid carrier identification code (CIC), map it to a real national or international CIC, and route it to the carrier.

To control this feature, toggle SOC EQA00029 to ON or IDLE (default value). You can complete table PCIC if the feature is IDLE, although the system will not use the information until the feature is ON.

Operation

Currently, calls that originate in the DMS-200 access tandem over an integrated services digital network user part (ISUP) trunk, using GR-394 signaling, always pass the carrier identification parameter (CIP) or transit network selector (TNS) received. National calls pass the CIP, while international calls pass the TNS. The outgoing trunk must also use GR-394 signaling.

When the access tandem receives an invalid CIC, the interexchange carrier (IXC) also receives an invalid CIC. This feature enables the DMS-200 access tandem to send the correct CIP or TNS to the IXC if it receives a phantom CIC.

If the call originates on a trunk that uses GR-394 signaling, the system looks in table OCCINFO using the phantom CIC in the TNS parameter. If the system cannot find the carrier number in table OCCINFO, it looks in table PCIC. If the system can find the carrier number in table PCIC, the system maps the phantom CIC to a real national or international CIC.

If the call originates on a trunk that uses multifrequency (MF) signaling, and terminates on a trunk that uses ISUP signaling, the system derives the phantom

Hawaiian Telephone Phantom CIC (continued)

CIC using the incoming carrier information. The system looks in table OCCINFO using the derived CIC. If the carrier number is not in table OCCINFO, the system looks in table PCIC. If the carrier number is in table PCIC, the system maps the phantom CIC to a real national or international CIC.

If the system finds a match for the carrier number in table OCCINFO, it assumes that the CIC is not a phantom CIC. If the system cannot find a match in tables OCCINFO and PCIC, it generates a DFIL618 log.

The parameters of the initial address message (IAM) the system sends to the carrier depend on the signaling on the incoming and outgoing trunks. It also depends on whether the call is national or international. If the incoming and outgoing trunks use ISUP signaling, the system sends the CIP to the carrier if the call is national, and sends the TNS if the call is international.

Translations table flow

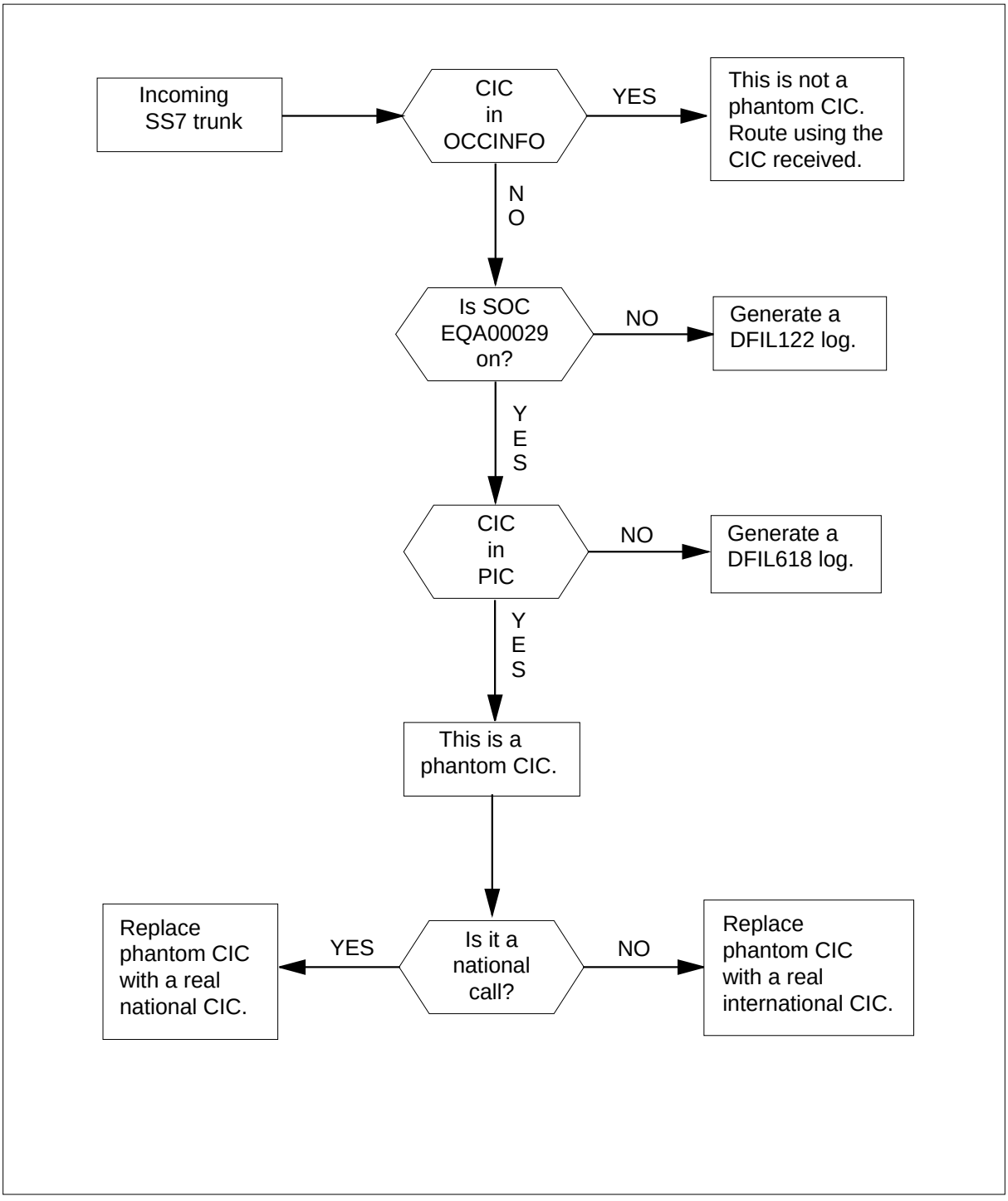
The Hawaiian Telephone Phantom CIC translations tables are described in the following list:

- Table PCIC (Phantom Carrier Identification Code). This table is only accessed for trunk-originated calls using feature group D (FGD) signaling.
- Table OCCNAME (Other Common Carrier Name). This table provides a list of connected carriers.
- Table OCCINFO (Other Common Carrier Information). This table defines the attributes for carriers that serve the DMS switch and screens calls for carrier compatibility.
- Table STDPRTCT (Standard Pretranslation). This table lists the names the operating company assigns for each of the 4095 (maximum) standard pretranslator subtables.

The Hawaiian Telephone Phantom CIC translation process is shown in the flowcharts that follow.

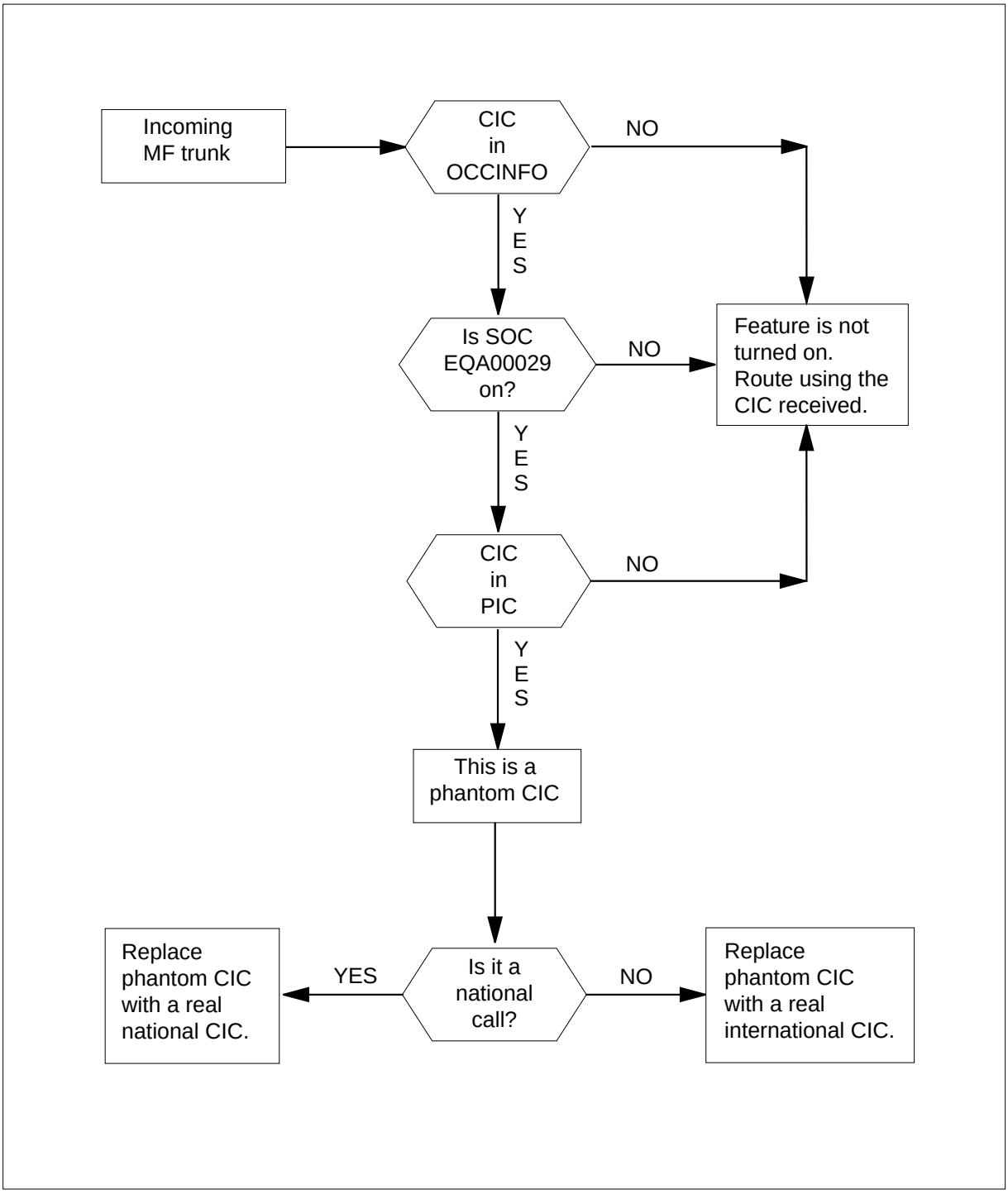
Hawaiian Telephone Phantom CIC (continued)

Table flow for Hawaiian Telephone Phantom CIC with incoming SS7 trunk



Hawaiian Telephone Phantom CIC (continued)

Table flow for Hawaiian Telephone Phantom CIC with incoming MF trunk



Hawaiian Telephone Phantom CIC (continued)

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

Datafill example for Hawaiian Telephone Phantom CIC

Datafill table	Example data
PCIC	9999 CAR1 CAR2
OCCNAME	CAR1 CAR2
OCCINFO	UNT2 9999 TRANS Y Y Y N Y N N Y Y Y N LONG 61 FGRPD N N Y N N N N N N N N N Y N Y
STDPRTCT	BNR (1) (0)

Limitations and restrictions

The following limitations and restrictions apply to Hawaiian Telephone Phantom CIC:

- You must enter the correct carrier in table PCIC against the outgoing access tandem to carrier (ATC) trunk if the call uses multifrequency (MF) signaling.
- Software optionality control (SOC) controls this feature, which has a default value of IDLE.
- Although you can complete table PCIC while the feature is IDLE, the system will not use the information until the feature is turned ON.
- The system consults table PCIC only if the incoming CIC is not in table OCCINFO and the feature is turned ON.
- For national calls where the TNS and CIP parameters are phantoms, delete both parameters from table OCCINFO and add them to table PCIC.
- The TRAVER tool is not enhanced for this feature.

Interactions

This feature works with equal access calls. If the incoming call does not use equal access signaling, this feature does not affect the call.

Activation/deactivation by the end user

Hawaiian Telephone Phantom CIC requires no activation or deactivation by customers who make phone calls. Software optionality control (SOC), which the telco activates, controls this feature.

Billing

Hawaiian Telephone Phantom CIC does not affect billing.

Hawaiian Telephone Phantom CIC (continued)

Station Message Detail Recording

Hawaiian Telephone Phantom CIC does not affect Station Message Detail Recording.

Datafilling office parameters

Hawaiian Telephone Phantom CIC does not affect office parameters.

Datafill sequence

The following table lists the tables that require datafill to implement Hawaiian Telephone Phantom CIC. The tables are listed in the order in which data are to be entered.

Datafill tables required for Hawaiian Telephone Phantom CIC

Table	Purpose of table
PCIC	Phantom carrier identification code is only accessed for trunk-originated calls using feature group D (FGD) signaling. PCICs that originate in an equal access end office (EAEO) are not mapped to a real CIC before routing.
OCCNAME	Other common carrier name provides a list of connected carriers.
OCCINFO	Other common carrier information defines the attributes for carriers that serve the DMS switch and screens calls for carrier compatibility.
STDPRTCT	Standard pretranslation lists the names the operating company assigns for each of the 4095 (maximum) standard pretranslator subtables.

Datafilling table PCIC

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

Datafilling table PCIC (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
PCICKEY		numeric (0000 to 9999)	The actual phantom CIC that comes into the office. This field is not a tuple count.

Hawaiian Telephone Phantom CIC (continued)

Datafilling table PCIC (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
RNATLNM		alphanumeric (1 to 16 characters)	The Real National carrier name used in place of the phantom CIC. This field is popluated using the OCCNAME field in table OCCNAME.
RINTLNM		alphanumeric (1 to 16 characters)	The Real International carrier name used in place of the phantom CIC. This field is popluated using the OCCNAME field in table OCCNAME.

Datafill example for table PCIC

The following example shows sample datafill for table PCIC.

MAP display example for table PCIC

```
>PCIC

PCICKEY RNATLNM RINTLNM
_____________________________________________________________________
9999    CAR1    CAR2
```

Datafilling table OCCNAME

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

Datafilling table OCCNAME

Field	Subfield or refinement	Entry	Explanation and action
OCCNAME		alphanumeric (1 to 16 characters)	Other common carrier name. Enter the carrier name or an alphanumeric abbreviation of the carrier name or use the reserved carrier name USE_PREVIOUS if you plan to use the generic recursive pretranslator.

Datafill example for table OCCNAME

The following example shows sample datafill for table OCCNAME.

MAP display example for table OCCNAME

```
OCCNAME

------------------------------------------------------
MCI
NONAME
```

Datafilling table OCCINFO

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

Datafilling table OCCINFO (Sheet 1 of 8)

Field	Subfield or refinement	Entry	Explanation and action
CARRNAME		alphanumeric (1 to 16 characters)	Carrier name. Enter the carrier name or an abbreviation of the carrier name as it appears in table OCCNAME. Note: USE_PREVIOUS is not a valid entry in this field.
CARRNUM		numeric (0000 to 9999)	Carrier number. Enter the carrier access code (CAC). The CAC is equal to the XXXX digits in the equal access (EA) prefixes (10XXXX or 950YXXXX).

Hawaiian Telephone Phantom CIC (continued)

Datafilling table OCCINFO (Sheet 2 of 8)

Field	Subfield or refinement	Entry	Explanation and action
ACCESS		EAP, FGC, INTERIM, OTC, TRANS, or NONE	Access arrangement. Enter one of the following access types accepted by the carrier to handle a call: • EAP-equal access plan dialing over feature group D (FGD) signaling • FGC-feature group C (FGC) dialing over FGC signaling • INTERIM-interim dialing over FGD signaling • OTC-FGC dialing over FGC signaling (local billing) • TRANS-both interim and EAP dialing over FGD signaling • NONE-no access ***Note:*** Wireless calls do not support value OTC.
ORIGCARR		Y or N	Original carrier. Enter Y (yes) to define this carrier name as the original carrier. Otherwise, enter N (no). Define one carrier name as the original carrier for each unique carrier number. If two or more carrier names contain the same carrier number, define one (and only one) of the duplicate carriers as the original carrier by typing "Y" in this field.
INTER		Y or N	Inter-local access and transport areas (LATA). Enter Y if the carrier can handle traffic between LATAs. Otherwise, enter N.
INTNTL		Y or N	International. Enter Y if the carrier can handle international traffic. Otherwise, enter N.
INTRA		Y or N	Intra-LATA. Enter Y if the carrier can handle traffic within the same LATA. Otherwise, enter N.
ANI		Y or N	Automatic number identification. Enter Y if the carrier requires that ANI digits be sent with the called number. Otherwise, enter N.

Hawaiian Telephone Phantom CIC (continued)

Datafilling table OCCINFO (Sheet 3 of 8)

Field	Subfield or refinement	Entry	Explanation and action
FANI		Y or N	Flexible automatic number identification. Enter Y if the carrier can receive FANI information digits in the place of ANI information digits. Otherwise, enter N.
ONISCRN		Y or N	Operator number identification screening. Enter Y if ONI traffic requires a screen by an operator or centralized automatic message accounting (CAMA) position before outpulsing to the carrier. Otherwise, enter N.
AD1		Y or N	Abbreviated dialing number one. Enter Y if you can access the carrier using abbreviated dialing. Otherwise, enter N.
OVERLAP		Y or N	Overlap. Enter Y if the carrier receives digits from the access tandem (AT) or the equal access end office (EAEO) using overlap outpulsing. Otherwise, enter N.
INTERS		Y or N	Inter-state. Enter Y if the carrier can handle traffic between states. Otherwise, enter N.
INTRAS		Y or N	Intra-state. Enter Y if the carrier can handle traffic within the same state. Otherwise, enter N.

Hawaiian Telephone Phantom CIC (continued)

Datafilling table OCCINFO (Sheet 4 of 8)

Field	Subfield or refinement	Entry	Explanation and action
TERMREC		LONG or SHORT	Terminating access record. Enter the length of the terminating access record produced for the carrier. The LONG format includes the same informational fields as the SHORT format, plus the following fields: • service observed • operator action • service feature • overseas indicator • carrier connect date • carrier connect time • elapsed time from carrier • inter-LATA or international carrier (IC/INC) call event status If the additional fields are not necessary, enter SHORT for the short format. Refer to the applicable automatic message accounting (AMA) reference guide for a more detailed description of record termination.
OCCSEPNO		numeric (0 to 127)	Other common carrier (OCC) separation number. Enter the OCC separation number used for the carrier in the traffic separation measurement system (TSMS).
CONTMARK		+	Continuation mark. Enter + to indicate that additional information for this tuple exists in the next record.
OPSIG		FGRPC, FGRPD, or NONE	Operator signaling. Enter the type of operator signaling provided by the carrier. The availability of this field eliminates the need to establish two carriers with the same access code in table OCCINFO to enable transitional or EAP carriers for FGC operator signaling.

Hawaiian Telephone Phantom CIC (continued)

Datafilling table OCCINFO (Sheet 5 of 8)

Field	Subfield or refinement	Entry	Explanation and action
PICIND		Y or N	Presubscription indicator. Enter Y if the carrier receives the presubscription indicator. Otherwise, enter N. Complete this field for every entry in table OCCINFO.
NOA950		Y or N	Nature of address indicator. Enter Y to specify the nature of address indicator in the calling party number parameter is a binary value of 1111110 (network specific: 950+ call from public station, hotel/motel line, or non-equal access end office). Otherwise, enter N. The default value of N causes no change in the existing operation of the switch.
INCCPN		Y or N	Include calling party number. Enter Y if the existing operation of the switch requires no change. Enter N to indicate the calling party number parameter is absent from any initial address message (IAM) sent to this carrier. The default value for this field is Y.
DTMFIND		Y or N	Rotary dial or dual-tone multifrequency indicator. Enter Y if the carrier receives the DTMF indicator on operator services calls routed directly to the carrier. Otherwise, enter N. Complete field DTMFIND for every entry in table OCCINFO. Field DTMFIND is active only if feature package NTX888AA (Equal Access Operator Services Signaling [EAOSS]) is present.

Hawaiian Telephone Phantom CIC (continued)

Datafilling table OCCINFO (Sheet 6 of 8)

Field	Subfield or refinement	Entry	Explanation and action
OPSERV		Y or N	Operator services. Enter Y if the carrier accepts EAOSS and does not require the operating company to process 10XXX+0 and 00 calls to the carrier. Enter N if the carrier does not accept EAOSS and requires the operating company to process 10XXX+0 and 00 calls to the carrier. For example, for feature group C (FGC) carriers that provide their own operator services and do not accept feature group D (FGD) signaling, set field OPSERV to N to indicate the carrier cannot accept EAOSS. The Traffic Operator Position System (TOPS) access tandem (AT) converts EAOSS signaling to FGC signaling for those carriers. Complete field OPSERV for every entry in table OCCINFO. Field OPSERV is active only if feature package NTX888AA (Equal Access Operator Services Signaling [EAOSS]) is present.
CACBLOCK		Y or N	Carrier access code blocking. Enter Y if the carrier blocks all calls dialed with a CAC. Otherwise, enter N. Complete field CACBLOCK for every entry in table OCCINFO. Field CACBLOCK is active only if feature package NTX989AA (Carrier Access Code Blocking for IC/INC) is present.
CTDOA		Y or N	Carrier toll deny operator assisted. Enter Y to block operator assisted (OA) calls to this carrier if the subscriber has the carrier toll denied (CTD) line option enabled for this carrier. Otherwise, enter N. The default value for this field is N.
CMCMON		Y or N	Cellular mobile carrier (CMC) monitor. Enter Y to monitor the connection between the CMC and the inter-LATA or international carrier (IC/INC), and to place the called directory number in the originating IC/INC and terminating CMC billing records. Otherwise, enter N.

Hawaiian Telephone Phantom CIC (continued)

Datafilling table OCCINFO (Sheet 7 of 8)

Field	Subfield or refinement	Entry	Explanation and action
SCRNWATS		Y or N	Enhanced wide area telephone service (WATS) screening. Enter Y if the carrier requires band screening on digits dialed from an enhanced WATS line. Otherwise, enter N. Field SCRNWATS is only applicable if feature package NTXA16AA (Enhanced WATS Operation) is present.
CRMCRA		Y or N	Circuit reservation and acknowledgement messages. Enter Y if a circuit reservation message (CRM) is sent from an access tandem (AT) to an inter-exchange carrier (IXC) on FGD calls outgoing over signaling system 7 (SS7) access-to-carrier (ATC) trunks. Also enter Y if a subsequent circuit reservation acknowledgement (CRA) message is received at the AT from the IXC on FGD calls incoming to the AT on either multifrequency (MF) intertoll (IT) or superCAMA (SC) trunks. Otherwise, enter N.
ATPINCL		Y or N	Access transport parameter (ATP) included. Enter Y if the ATP is in the outgoing ISDN user part (ISUP) initial address message (IAM). Enter N if the ATP is discarded. This field is only applicable for TR444 calls (basic rate access [BRA] to ISUP calls).
INTRAOPR		Y or N	Intra-LATA operator. Enter Y if the carrier can handle 0- intra-LATA operator calls. Otherwise, enter N. The default value for this field is N.
INCASA		Y or N	In-call service access. This field determines whether access to messaging applies to calls handled by the carrier in table OCCINFO.
INTRCOIN		Y or N	Intra-LATA toll coin. Designates if a carrier can handle intra-LATA toll coin traffic. The default value for this field is N.

Hawaiian Telephone Phantom CIC (continued)

Datafilling table OCCINFO (Sheet 8 of 8)

Field	Subfield or refinement	Entry	Explanation and action
	CARRIER	alphanumeric	Intra-LATA toll coin route carrier. Represents the carrier that handles intra-LATA toll coin traffic. If the route carrier can handle intracoin traffic, field INTRCOIN is set to Y. The default value for this field is NILC (nill carrier).
ARBLKPVT		Y or N	Automatic recall blocking of private calls. This field indicates whether a carrier can complete AR calls to private numbers. When set to Y (yes), and the applicable office parameter in table OFCENG (AR_BLOCK_PRIVATE_RES or AR_BLOCK_PRIVATE_CTX) is CARSCRN, AR activation attempts routed by the carrier are blocked and sent to treatment. When set to N (no), the CASOP feature allows AR activation attempts to complete. Note: When the ACCESS field in this table is OTC (operating telephone company), all AR activation attempts to a private DN can complete regardless of the entry specified in field ARBLKPVT.

Datafill example for table OCCINFO

The following example shows sample datafill for table OCCINFO.

MAP display example for table OCCINFO

```
CARRNAME CARRNUM ACCESS ORIGCARR INTER INTNTL INTRA ANI FANI ONISCRN
AD1 OVERLAP INTERS INTRAS TERMREC OCCSEPNO OPSIG PICIND NA0950
INNCCPN DTMFIND OPSERV CACBLOCK CTDOA CMCMON SCRNWATS CRMCRA ATPINCL
INTRAOPR INCASA INTRCOIN ARBLKPVT
------------------------------------------------------------------
UNT2 0202 TRANS Y Y Y N Y N N Y Y Y N LONG 61 FGRPD N N Y N N N N N N
N N N Y N Y
```

Datafilling table STDPRTCT

The following table shows the datafill specific to Hawaiian Telephone Phantom CIC for table STDPRTCT. Only those fields that apply directly to

Hawaiian Telephone Phantom CIC (continued)

Hawaiian Telephone Phantom CIC are shown. For a description of the other fields, refer to the data schema section of this document.

Datafilling table STDPRTCT

Field	Subfield or refinement	Entry	Explanation and action
EXTPRTNM		alphanumeric (up to 8 characters)	External standard pretranslator subtable name. Enter the name defined by the operating company to represent the standard pretranslator subtable. Standard pretranslator name C7PT is automatically used by ISDN ISUP trunks on test calls in offices with ISUP capability, as described in table STDPRTCT.STDPRT. You do not have to complete this field.

Datafill example for table STDPRTCT

The following examples show sample datafill for table STDPRTCT. National calls translate on OZZ + XXX(X). International calls translate on 1NX + XXX(X).

MAP display example for table STDPRTCT

```
EXPRTNM  STDPRT  AMAPRT
-------------------------------------------------------
  BNR    (  1)   (  0)
```

Translation verification tools

The following example shows the output from TRAVER when it is used to verify Hawaiian Telephone Phantom CIC.

Hawaiian Telephone Phantom CIC (continued)

TRAVER output example for Hawaiian Telephone Phantom CIC

```
>traver tr isup2witea 080999 b
TABLE TRKGRP
ISUP2WITEA IT 0 ELO NCRT 2W NIL MIDL 519 PEA NSCR 919 000 N N $
TABLE OFCVAR
AIN_OFFICE_TRIGGRP LNPOFFICE
TABLE STDPRTCT
PEA  ( 1)  (65021)  2
 . SUBABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE BILLING.
CALL TYPE DEFAULT IS NP.  PLEASE REFER TO DOCUMENTATION.
 . 080999 080999 T NP 6 OFRT 889 6 6 NONE
AIN Info Collected TDP: no subscribed trigger.
TABLE TRIGGRP
LNPOFFICE INFOANAL
 . PODP ( DG PODPDIG) $ NIL
Trigger AIN PODP is applcable to office.
 . LNP ( DG LNPDIG) (ESCEA ) (ESCOP ) (ESCDN ) (ESCCN DD) $ NIL
Trigger AIN LNP s applicable to office.
AIN Info Analyzed TDP: trigger criteria not met.
 . . TABLE OFRT
 . .  889 CND EA INTNL SK 3
 . .      S D ISUP2WCAR1
 . .      S D ISUP2WCAR1
 . .      CND ALWAYS SK 2
 . .      N D OGEACAR1 15 D121 N
 . .      N D ISUP2WCAR1 0 D121 N
 . . EXIT TABLE OFRT
 . SUBTABLE AMAPRT
 . KEY NOT FOUND
 . DEFAULT VALUE IS: NONE OVRNONE N
LNP00100 SOC Option is IDLE.

+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

1 ISUP2WCAR1 STP
  BILL
2 ISUP2WCAR1 STP
  BILL

TREATMENT ROUTES.  TREATMENT IS: GNCT
1 T120

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

Hawaiian Telephone Phantom CIC (end)

SERVORD

Hawaiian Telephone Phantom CIC does not use SERVORD.

ISUP Intermediate Tandem

Ordering codes

Functional group ordering code: EQA00002

Functionality ordering code: EQA00027

Release applicability

ISUP Intermediate Tandem(IMT) was introduced in NA009.

Prerequisites

ISUP Intermediate Tandemrequires functional group EQA00002 (Equal Access Toll).

Description

The ISUP Intermediate Tandem feature, AF7127, enhances the DMS-200 access tandem (AT) switch to meet requirements identified by local exchange carriers (LEC). ISUP IMT provides the DMS200 AT with the capability to interconnect to other tandem switches.

Before ISUP IMT, Equal Access (EA) calls originating over an ISUP intertoll trunk (IT), to a DMS-100/200 or DMS-200 AT using GR-394-Core signaling, restricted connections to access to carrier (ATC) type trunks only. Also, local access and transport area (LATA) Equal Access System (LEAS), E800, and cellular (CELL) 2A calls have this restriction. Feature ISUP IMT allows these call types to connect to ISUP IT trunks.

Operation

Feature ISUP IMT allows an AT to serve as an IMT when routing traffic. For E800, CELL, and LEAS calls, the IMT may be responsible for providing access billing records. Feature ISUP IMT does not significantly alter existing translations. This document describes differences in ISUP IMT translations and functionality of the following existing applications.

The following applications are supported by the ISUP IMT feature. These applications are discussed in detail in the following sections:

- Basic ISUP IMT
- ISUP CELL 2A IMT
- ISUP IMT LEAS (first access tandem [AT1] serves as LEAS office)
- ISUP IMT LEAS (second access tandem [AT2] serves as LEAS office)
- Multi-Frequency (MF) LEAS with ISUP IMT

- E800 ISUP IMT (database dip at AT1)
- E800 ISUP IMT (database dip at AT2)

Translations table flow

ISUP IMT translations tables are described in the following list and discussed in detail in the following sections:

- Table TRKGRP
- Table STDPRTCT
- Table OFRT

Datafill sequence for ISUP IMT applications

The following table lists the tables that require datafill to activate basic IMT applications. For detailed table datafill information, refer to the translations sections of the functions described in the Interactions section of this document.

Datafill tables required for ISUP IMT

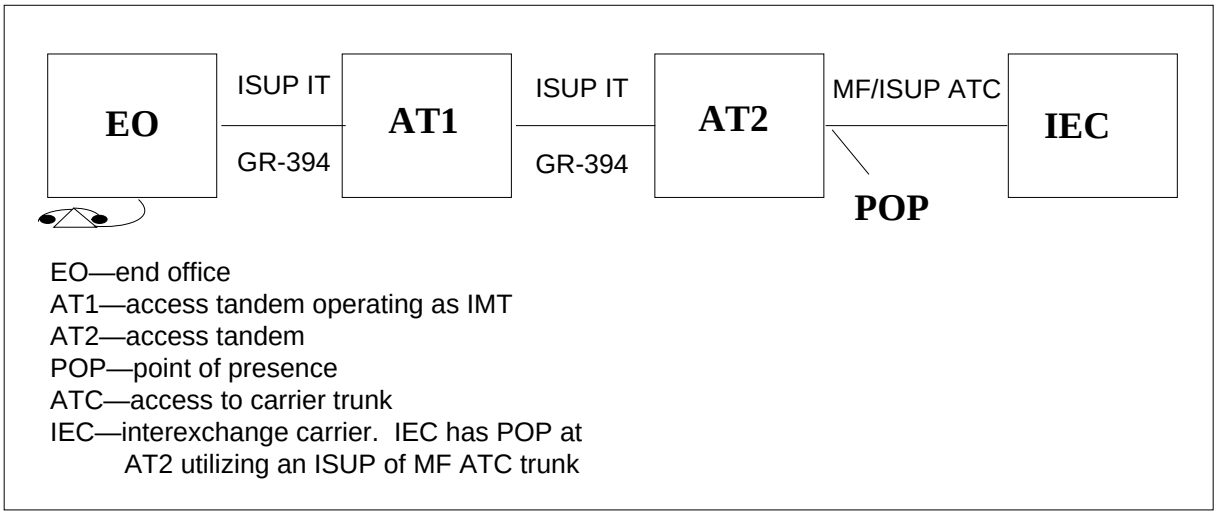
Table	Purpose of table
TRKGRP	Trunk group table contains data assigned by the operating company for each trunk group that exists in the switching unit.
STDPRTCT	Standard Pretranslation table contains the names assigned by the operating company for each of the 4095 (maximum) standard pretranslator subtables (STDPRTCT.STDPRT).
OFRT	Office Route table contains route information if an earlier translation stage identified a route reference index of an originating call. Refer to the descriptions of table OFRT and subtables HNPACONT.RTEREF, FNPACONT.RTEREF, and FNPACONT.FNPAST.RTEREF for more information on the stages of translation that can point to the route reference tables.
Note: In table STDPRTCT, the “T" selector is used and the number of prefix digits is 6.	

Basic ISUP IMT applications

The following figure shows the basic network configuration supported for Basic ISUP IMT. This configuration allows ISUP IT with GR-394 signaling to connect to another ISUP IT trunk at an IMT with GR-394 signaling.

ISUP Intermediate Tandem (continued)

Basic ISUP IMT applications



Basic ISUP IMT messaging

Basic ISUP IMT has the following requirements for ISUP messaging:

- The IMT propagates all ISUP messages from the incoming ISUP IT trunk to the outgoing ISUP IT trunk. With the basic ISUP IMT application, the IMT is not responsible for building any messages. The transit network selector (TNS) parameter received in the initial access message (IAM) at the AT1 switch propagates to the AT2 switch.
- The IMT bounces all messages received from the outgoing ISUP IT trunk to the incoming ISUP IT trunk. The exit message (EXM) received from AT2 bounces back to the end office (EO).

Note: The IMT only receives the EXM if the ATC trunk is ISUP.

Datafill examples for basic ISUP IMT applications

Table STDPRTCT datafill example (basic ISUP IMT national calls)

The IMT translates on the 0ZZXXX(X) code, where XXX(X) is the carrier identification code (CIC) for national calls. The datafill of table STDPRTCT with IMT is the same as standard datafill in the AT. The AT does not require special datafill for national calls if the operating company provisions the AT for GR-394 signaling before IMT.

MAP display example for table STDPRTCT (national)

```
TABLE: STDPRTCT PRTNM1: STDPRT
------------------------------------------------------
088123 088123 T NP 6 OFRT 895 6 6 NONE
```

Table STDPRTCT datafill example (Basic ISUP IMT international)

The IMT translates on the 1NXXXX(X) + CCC code, where the XXX(X) is the CIC and CCC is the country code digits for international calls. The datafill of table STDPRTCT with IMT is the same as standard datafill in the AT. The AT does not require special datafill for international calls if the operating company provisions the AT for GR-394 signaling before IMT.

Note: The “T" selector is used and the number of prefix digits is 0.

MAP display example for table STDPRTCT (international)

```
TABLE: STDPRTCT PRTNM1: STDPRT
------------------------------------------------------
188123 188123 T NP 0 OFRT 895 9 9 NONE
```

Table OFRT must be datafilled with “$" in the PFXDIGS field. A new 0ZZ/1NX code can not be specified in the office route. Following is an example of the required datafill for table OFRT.

Translation verification tools for Basic ISUP IMT applications

The following examples show the output from TRAVER used to verify ISUP IMT for Basic IMT applications.

MAP display example for table OFRT (both national and international)

```
TABLE: OFRT
------------------------------------------------------
895 N D ISUP2WIT 0 $ N
```

ISUP Intermediate Tandem (continued)

TRAVER output example for basic ISUP IMT national call

```
TRAVER TR ISUP2WITEA 088488 b
TABLE TRKGRP
ISUP2WITEA IT 0 ELO NCRT 2W NIL MIDL 519 PEA NSCR 919
000 N N $
TABLE OFCVAR
AIN_OFFICE_TRIGGRP LNPOFFICE
TABLE STDPRTCT
PEA (1) (65021) 2
 . SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE BILLING.
CALL TYPE DEFAULT IS NP.  PLEASE REFER TO DOCUMENTATION.
 . 088488 088488 T NP 6 OFRT 895 6 6 NONE
AIN INFO COLLECTED TDP: NO SUBSCRIBED TRIGGER.
TABLE TRIGGRP
LNPOFFICE INFOANAL
 . PODP ( DG PODPDIG) $ NIL
TRIGGER AIN PODP IS APPLICABLE TO OFFICE.
 . LNP ( DG LNPDIG)  (ESCEA )  (ESCOP )  (ESCDN )  (ESCCNDD) $ NIL
TRIGGER AIN LNP IS APPLICABLE TO OFFICE.
AIN INFO ANALYZED TDP: TRIGGER CRITERIA NOT MET.
 .  . TABLE OFRT
 .  . 895 N D ISUP2WIT 0 $ N
 .  . EXIT TABLE OFRT
 . SUBTABLE AMAPRT
 . KEY NOT FOUND
 . DEFAULT VALUE IS:  NONE OVRNONE N
LNP00100  SOC OPTION IS IDLE.

+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

1 ISUP2WIT                                    ST

TREATMENT ROUTES.  TREATMENT IS: GNCT
1 T120

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

TRAVER output example for basic ISUP IMT international call

```
TRAVER TR ISUP2WITEA 188488043 B
TABLE TRKGRP
ISUP2WITEA IT 0 ELO NCRT 2W NIL MIDL 519 PEA NSCR 919
000 N N $
TABLE OFCVAR
AIN_OFFICE_TRIGGRP LNPOFFICE
TABLE STDPRTCT
PEA (1) (65021) 2
 . SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE BILLING.
CALL TYPE DEFAULT IS NP.  PLEASE REFER TO DOCUMENTATION.
 . 188488 188488 T NP 0 OFRT 896 9 9 NONE
AIN INFO COLLECTED TDP: NO SUBSCRIBED TRIGGER.
TABLE TRIGGRP
LNPOFFICE INFOANAL
 . PODP ( DG PODPDIG) $ NIL
TRIGGER AIN PODP IS APPLICABLE TO OFFICE.
 . LNP ( DG LNPDIG)  (ESCEA )  (ESCOP )  (ESCDN )  (ESCCNDD) $ NIL
TRIGGER AIN LNP IS APPLICABLE TO OFFICE.
AIN INFO ANALYZED TDP: TRIGGER CRITERIA NOT MET.
 .  . TABLE OFRT
 .  . 896 N D ISUP2WIT 0 $ N
 .  . EXIT TABLE OFRT
 . SUBTABLE AMAPRT
 . KEY NOT FOUND
 . DEFAULT VALUE IS:  NONE OVRNONE N
LNP00100  SOC OPTION IS IDLE.

+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

1 ISUP2WIT     188488043             ST

TREATMENT ROUTES.  TREATMENT IS: GNCT
1 T120

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

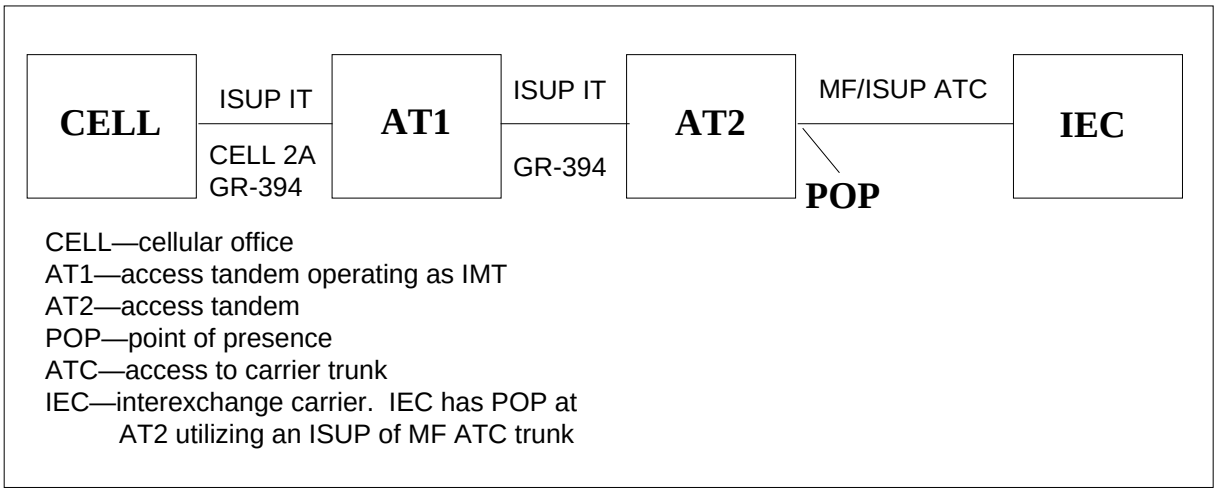
Billing

Basic ISUP IMT does not affect billing. Refer to the Billing section in this document for more information about general billing records.

ISUP Intermediate Tandem (continued)

The following figure shows the basic network configuration supported for ISUP CELL 2A IMT. This configuration allows CELL 2A trunks using GR-394 signaling to connect to another ISUP IT trunk at an IMT with GR-394 signaling.

ISUP IMT CELL 2A applications



ISUP IMT CELL 2A messaging

ISUP IMT CELL 2A has the same messaging requirements as basic ISUP IMT messaging. The IMT switch at AT1 is responsible for processing all ISUP messages like EXM, ACM, ANM, and REL.

Note: The EXM is only received if the ATC trunk is ISUP.

ISUP IMT CELL 2A datafill

The ISUP IMT CELL 2A applications have the same datafill requirements as basic ISUP IMT. For ISUP CELL 2A applications, assign the originating ISUP IT trunk the CELL 2A and BILLNO options in Table TRKGRP. The assignments are not changed for the ISUP IMT CELL 2A applications. The datafill is the same for CELL 2A applications supported before the ISUP IMT feature.

Translation verification tools for ISUP CELL 2A IMT applications

The following examples show the output from TRAVER used to verify ISUP IMT CELL 2A applications.

TRAVER output example for ISUP CELL 2A IMT national call

```
TRAVER TR ISUP2WITEA 088488 b
TABLE TRKGRP
ISUP2WITEA IT 0 ELO NCRT 2W NIL MIDL 519 PEA NSCR 919
000 N N  (CELL 2A) (BILLNO 3334441234) $
TABLE OFCVAR
AIN_OFFICE_TRIGGRP LNPOFFICE
TABLE STDPRTCT
PEA (1) (65021) 2
 . SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE BILLING.
CALL TYPE DEFAULT IS NP.  PLEASE REFER TO DOCUMENTATION.
 . 088488 088488 T NP 6 OFRT 895 6 6 NONE
AIN INFO COLLECTED TDP: NO SUBSCRIBED TRIGGER.
TABLE TRIGGRP
LNPOFFICE INFOANAL
 . PODP ( DG PODPDIG) $ NIL
TRIGGER AIN PODP IS APPLICABLE TO OFFICE.
 . LNP ( DG LNPDIG)  (ESCEA )  (ESCOP )  (ESCDN )  (ESCCNDD) $ NIL
TRIGGER AIN LNP IS APPLICABLE TO OFFICE.
AIN INFO ANALYZED TDP: TRIGGER CRITERIA NOT MET.
 .  . TABLE OFRT
 .  . 895 N D ISUP2WIT 0 $ N
 .  . EXIT TABLE OFRT
 . SUBTABLE AMAPRT
 . KEY NOT FOUND
 . DEFAULT VALUE IS:  NONE OVRNONE N
LNP00100  SOC OPTION IS IDLE.

+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

1 ISUP2WIT                                  ST

TREATMENT ROUTES.  TREATMENT IS: GNCT
1 T120

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

Note: The TRAVER output shows only the terminating trunk. The TRAVER of the AT2 leg is on the 0ZZXXX(X) code.

ISUP Intermediate Tandem (continued)

TRAVER output example for ISUP IMT CELL 2A international call

```
TRAVER TR ISUP2WITEA 188488043 B
TABLE TRKGRP
ISUP2WITEA IT 0 ELO NCRT 2W NIL MIDL 519 PEA NSCR 919
000 N N (CELL 2A) (BILLNO 3334441234) $
TABLE OFCVAR
AIN_OFFICE_TRIGGRP LNPOFFICE
TABLE STDPRTCT
PEA (1) (65021) 2
 . SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE BILLING.
CALL TYPE DEFAULT IS NP.  PLEASE REFER TO DOCUMENTATION.
 . 188488 188488 T NP 0 OFRT 896 9 9 NONE
AIN INFO COLLECTED TDP: NO SUBSCRIBED TRIGGER.
TABLE TRIGGRP
LNPOFFICE INFOANAL
 . PODP ( DG PODPDIG) $ NIL
TRIGGER AIN PODP IS APPLICABLE TO OFFICE.
 . LNP ( DG LNPDIG)  (ESCEA )  (ESCOP )  (ESCDN )  (ESCCNDD) $ NIL
TRIGGER AIN LNP IS APPLICABLE TO OFFICE.
AIN INFO ANALYZED TDP: TRIGGER CRITERIA NOT MET.
 .  . TABLE OFRT
 .  . 896 N D ISUP2WIT 0 $ N
 .  . EXIT TABLE OFRT
 . SUBTABLE AMAPRT
 . KEY NOT FOUND
 . DEFAULT VALUE IS:  NONE OVRNONE N
LNP00100  SOC OPTION IS IDLE.

+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

1 ISUP2WIT     188488043             ST

TREATMENT ROUTES.  TREATMENT IS: GNCT
1 T120

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

ISUP IMT CELL 2A billing examples

The following examples of billing records were produced by the ISUP IMT CELL 2A application for national calls. Refer to the Billing section in this document for more information about general billing records.

National Billing Record Call Code 066

```
HEX ID:AA  STRUCTURE CODE:00625C  CALL CODE:066C  SENSOR TYPE:036C
  SENSOR ID:0619351C  REC OFFICE TYPE:036C  REC OFFICE ID:0619351C
DATE:70625C  TIMING IND:00000C  STUDY IND:0000000C  CLD PTY OFF-HK:0C
 SERVICE OBSERVED:0C  OPER ACTION:0C  SERVICE FEATURE:023C  ORIG NPA:333C
 ORIG NUMBER:4441234C  OVERSEAS IND:0C  TERM NPA:00519C
  TERM NUMBER:8885000C  CONNECT TIME:1246148C  ELAPSED TIME:000000066C
 IC/INC PREFIX:04882C  CC DATE:70625C  CC TIME:1246115C
ELAPSED CC:000000100C IC/INC EVENT STATUS:010C TRUNK GROUP NUMBER:00640C
 ROUTING INDICATOR:0C  DIALING INDICATOR:FF  ANI INDICATOR:0C
```

National Billing Record Call Code 110

```
HEX ID:AA  STRUCTURE CODE:00625C  CALL CODE:110C  SENSOR TYPE:036C
  SENSOR ID:0619351C  REC OFFICE TYPE:036C  REC OFFICE ID:0619351C
 DATE:70625C  TIMING IND:00000C  STUDY IND:0200000C  CLD PTY OFF-HK:0C
 SERVICE OBSERVED:0C  OPER ACTION:0C  SERVICE FEATURE:023C ORIG NPA:333C
 ORIG NUMBER:4441234C  OVERSEAS IND:0C  TERM NPA:00519C
  TERM NUMBER:8885000C  CONNECT TIME:1246148C  ELAPSED TIME:000000066C
 IC/INC PREFIX:04882C  CC DATE:70625C  CC TIME:1246115C
ELAPSED CC:000000100C  IC/INC EVENT STATUS:010C TRUNK GROUP NUMBER:40297C
  ROUTING INDICATOR:1C  DIALING INDICATOR:0C  ANI INDICATOR:1C
```

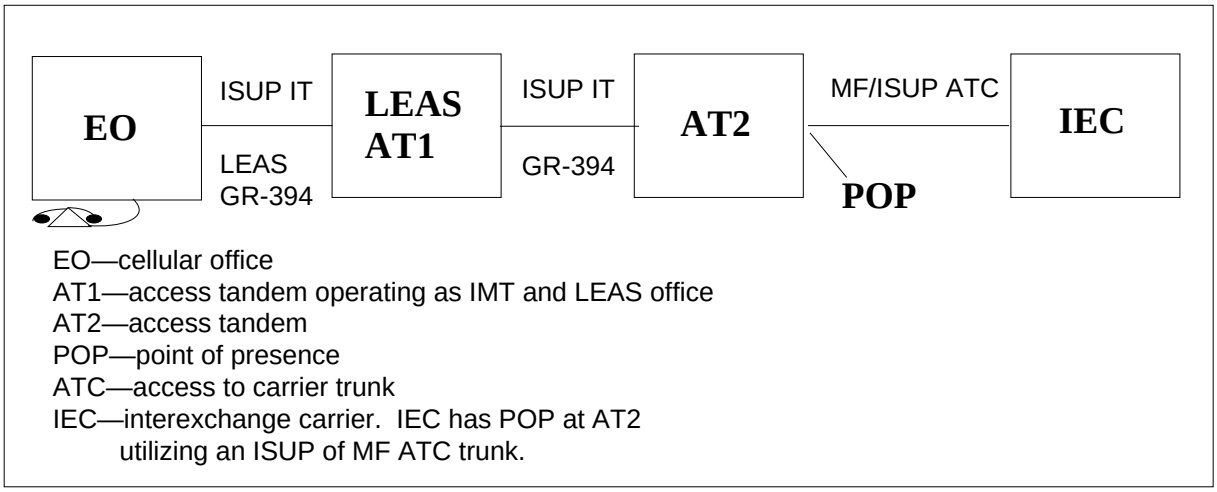
ISUP IMT LEAS applications

The following examples show the ISUP LEAS network configurations supported by the ISUP IMT feature. The ISUP IMT LEAS application supports two different methods of translation. In one case the EO does carrier

ISUP Intermediate Tandem (continued)

administration and the ISUP IMT LEAS office (AT1) is responsible for billing only. In the other case the ISUP IMT LEAS office does carrier administration and billing.

ISUP IMT LEAS application, ISUP LEAS does billing only



ISUP IMT LEAS messaging

When the ISUP IMT LEAS switch does billing only, messaging is done the same as in Basic ISUP IMT. When the ISUP IMT LEAS office does administration and billing the following requirements apply:

- The IMT switch builds the TNS parameters, carrier identification parameters (CIP), and carrier selection (CS) parameters based on the carrier administration performed. All other ISUP parameters from the incoming ISUP IT trunk to the outgoing ISUP IT trunk are propagated.
- The IMT is responsible for processing all ISUP messages like EXM, ACM, ANM, and REL. Refer to the Billing section in this document for more information about general billing records.

ISUP IMT LEAS datafill considerations

If the operating company provisions the IMT as an ISUP LEAS office, the only necessary datafill changes are in table OFRT. The datafill changes are necessary if the IMT does billing only, or for carrier administration and billing.

Note: In table OFRT provision the 0ZZ code to agree with the equal access end office (EAEO) datafill. The following MAP output shows an example of the required ISUP IMT LEAS datafill for table OFRT.

MAP display example for table OFRT

```
TABLE: OFRT

------------------------------------------------------------
895 N D ISUP2WIT 0 D088 N
```

Translation verification tools for ISUP IMT LEAS applications

The following examples show the output from TRAVER used to verify ISUP LEAS applications.

The following figure displays the TRAVER for a national call for the ISUP IMT LEAS applications. The ISUP IMT LEAS at the AT1 switch does the carrier administration and billing. The TRAVER displays the table datafill discussed in ISUP IMT LEAS datafill considerations. TRAVER of the next leg at AT2 is on the 0ZZXXX(X) code. AT1 does the primary inter-LATA carrier (PIC) administration.

ISUP Intermediate Tandem (continued)

TRAVER output example for ISUP IMT LEAS national call

```
TRAVER TR ISUP2WITEA 15198882060 b n cdn 6136215955 cic 0115
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE BILLING.
CALL TYPE DEFAULT IS NP.  PLEASE REFER TO DOCUMENTATION.
TABLE TRKGRP
.ISUP2WITEA IT 0 ELO NCRT 2W NIL MIDL 519 PEA NSCR 919 000 N N $
TABLE STDPRTCT
PEA (1) (65021) 2
 . SUBTABLE STDPRT
 . 1519 1519 N DD 1 NA
 . SUBTABLE AMAPRT
 . KEY NOT FOUND
 . DEFAULT VALUE IS:  NONE OVRNONE N
TABLE HNPACONT
919 Y 950 8 ( 126) (1 ) ( 0) ( 0) 3
 . SUBTABLE HNPACODE
 . 519 519 FRTE 519
TABLE OCVAR
AIN_OFFICE_TRIGGRP LNPOFFICE
AIN INFO COLLECTED TDP: NO SUBSCRIBED TRIGGER
TABLE TRIGGRP
LNPOFFICE INFOANAL
 . PODP ( DG PODPDIG) $ NIL
TRIGGER AIN PODP IS APPLICABLE TO OFFICE.
 . LNP ( DG LNPDIG)  (ESCEA )  (ESCOP )  (ESCDN )  (ESCCNDD) $ NIL
TRIGGER AIN LNP IS APPLICABLE TO OFFICE.
AIN INFO ANALYZED TDP: TRIGGER CRITERIA NOT MET.
 . SUBTABLE RTEREF
 .  519 N D AL8ITOGS7CIC4 0 $ N
 . EXIT TABLE RTEREF
EXIT TABLE HNPACONT
LNP INFO: CALLED DN IS NOT RESIDENT.
LNP INFO:HNPA RESULTS ARE USED.
TABLE TRKLATA
LATA1 51 INTER INTER STD
TABLE EASAC
TUPLE NOT FOUND
USING LEAS PIC ADMINISTRATION
TABLE DNPIC
613 621 59 55 CAR Y N
TABLE OCCINFO
CAR 0222 TRANS Y Y Y Y Y N N Y Y Y Y LONG 0 FGRPD N N N N N N N
N Y N N N N N Y
```

continued

TRAVER output example for ISUP IMT LEAS national call (continued)

```
TABLE STDPRTCT
PEA ( 1) (65021) 2
 . SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE BILLING.
CALL TYPE DEFAULT IS NP.  PLEASE REFER TO DOCUMENTATION.
TABLE TRKGRP
 . 10222 10222 EA DD 5 P CAR1 CAR Y OFRT 701 6 20 N
 . SUBTABLE AMAPRT
 . KEY NOT FOUND
 . DEFAULT VALUE IS: NONE OVRNONE N
 . . TABLE OFRT
 . . 701 CND EA INTNL SK 1
 . . ND ISUP2WIT 0 D088 N
 . . CND ALWAYS SK 1
 . . N D ISUP2WIT 15 D121 N
 . . EXIT TABLE OFRT
 . TABLE STDPRT
 . MCI1 ( 1) (65021) 2
 . . SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE BILLING.
CALL TYPE DEFAULT IS NP.  PLEASE REFER TO DOCUMENTATION.
. .  15 19 EA DD T NA CAR N
USING EQUAL ACCESS (EA) ROUTE   OFRT 701 FROM PRETRANSLATION
TABLE OFRT
701 CND EA INTNL SK 1
 . ND ISUP2WIT 0 D088 N
 . CND ALWAYS SK 1
 . N D ISUP2WIT 15 D121 N
EXIT TABLE OFRT

+++ TRAVER: SUCCESSFUL TRACE +++

DIGIT TRANLATION ROUTES


1 ISUP2WIT               D0885198882060   ST
  BILL                    6136215955

TREATMENT ROUTES.     TREATMENT IS: GNCT  1 T120

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

end

ISUP Intermediate Tandem (continued)

The following figure displays the TRAVER for a national call for ISUP IMT LEAS applications. The ISUP IMT LEAS switch at AT1 does billing only. The TRAVER displays the table datafill discussed in ISUP IMT LEAS datafill considerations. TRAVER of the next leg at AT2 is on the 0ZZXXX(X) code.

TRAVER output example for ISUP IMT LEAS national call (billing only)

```
TRAVER TR AL81TICS7CIC4 088222 B CDN 6136212016
NO LEAS ADMINISTRATION REQUIRED
TABLE TRKGRP
AL81TICS7CIC4 IT 0 ELO NCRT IC NIL MIDL 909 AT1 NSCR 501 000 N N $
000 N N  $
TABLE OFCVAR
AIN_OFFICE_TRIGGRP LNPOFFICE
TABLE STDPRTCT
AT1 (1) (65021) 2
 . SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE BILLING.
CALL TYPE DEFAULT IS NP.  PLEASE REFER TO DOCUMENTATION.
 . 088222 088222 T DD 6 OFRT 895 6 6 NONE
AIN INFO COLLECTED TDP: NO SUBSCRIBED TRIGGER.
TABLE TRIGGRP
LNPOFFICE INFOANAL
 . PODP ( DG PODPDIG) $ NIL
TRIGGER AIN PODP IS APPLICABLE TO OFFICE.
 . LNP ( DG LNPDIG)  (ESCEA )  (ESCOP )  (ESCDN )  (ESCCNDD) $ NIL
TRIGGER AIN LNP IS APPLICABLE TO OFFICE.
AIN INFO ANALYZED TDP: TRIGGER CRITERIA NOT MET.
 .  . TABLE OFRT
 .  . 895 N D ISUP2WIT 0 $ N
 .  . EXIT TABLE OFRT
 . SUBTABLE AMAPRT
 . KEY NOT FOUND
 . DEFAULT VALUE IS:  NONE OVRNONE N


+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

1 ISUP2WIT     DO88            ST
  BILL            6136212016

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

The following figure displays the TRAVER for an international call for the ISUP IMT LEAS applications. The ISUP IMT LEAS office at the AT1 switch does the carrier administration and billing. The TRAVER displays the table datafill as discussed in ISUP IMT LEAS datafill considerations. TRAVER of the next leg at AT2 is on the 1ZZXXX(X) + CCC (common customer code). AT1 does the primary inter-LATA carrier (PIC) administration.

TRAVER output example for ISUP IMT LEAS international call

```
TRAVER TR ISUP2WITEA 011431234567890 b n cdn 6136215955 cic 0115
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE BILLING.
CALL TYPE DEFAULT IS NP.  PLEASE REFER TO DOCUMENTATION.
TABLE TRKGRP
.ISUP2WITEA IT 0 ELO NCRT 2W NIL MIDL 519 PEA NSCR 919 000 N N $
TABLE STDPRTCT
PEA (1) (65021) 2
 . SUBTABLE STDPRT
 . 011 011 N DD 3 IN
 . SUBTABLE AMAPRT
 . KEY NOT FOUND
 . DEFAULT VALUE IS:  NONE OVRNONE N
TABLE CCTR
43 T 043 7 12 T OFRT 903 Y
TABLE OCVAR
AIN_OFFICE_TRIGGERP LNPOFFICE
AIN INFO COLLECTED TDP: NO SUBSCRIBED TRIGGER
TABLE TRIGGRP
LNPOFFICE INFOANAL
 . PODP ( DG PODPDIG) $ NIL
TRIGGER AIN PODP IS APPLICABLE TO OFFICE.
 . LNP ( DG LNPDIG)  (ESCEA )  (ESCOP )  (ESCDN )  (ESCCNDD) $ NIL
TRIGGER AIN LNP IS APPLICABLE TO OFFICE.
AIN INFO ANALYZED TDP: TRIGGER CRITERIA NOT MET.
TABLE OFRT
903 TS D LNTOPS 0 N N 3 189
EXIT TABL OFRT
TABLE TRKLATA
ISUP2WITEA 6136215955 LATA1 Y T CACE
USING LEAS PIC ADMINISTRATION
TABLE DNPIC
613 621 59 55 MCI Y N
TABLE OCCINFO
MCI 0222 TRANS Y Y Y Y Y N N Y Y Y Y LONG 0 FGRPD N N N N N N N
N Y N N N N N Y
```

continued

ISUP Intermediate Tandem (continued)

TRAVER output example for ISUP IMT LEAS international call (continued)

```
TABLE STDPRTCT
PEA ( 1) (65021) 2
 . SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE BILLING.
CALL TYPE DEFAULT IS NP.  PLEASE REFER TO DOCUMENTATION.
TABLE TRKGRP
 . 10222 10222 EA DD 5 P MCI1 MCI Y OFRT 701 6 20 N
 . SUBTABLE AMAPRT
 . KEY NOT FOUND
 . DEFAULT VALUE IS: NONE OVRNONE N
 . . TABLE OFRT
 . . 701 CND EA INTNL SK 1
 . . ND ISUP2WITEA 0 D088 N
 . . CND ALWAYS SK 1
 . . N D ISUP2WIT 15 D121 N
 . . EXIT TABLE OFRT
 . TABLE STDPRTCT
 . MCI1 ( 1) (65021) 2
 . . SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE BILLING.
CALL TYPE DEFAULT IS NP.  PLEASE REFER TO DOCUMENTATION.
. .  011 011 EA DD 3 T IN MCI N
USING EQUAL ACCESS (EA) ROUTE   OFRT 701 FROM PRETRANSLATION
TABLE OFRT
 701 N D ISUP2WIT 15 D121 N
EXIT TABLE OFRT

+++ TRAVER: SUCCESSFUL TRACE +++

DIGIT TRANLATION ROUTES


1 ISUP2WIT               D121  ST
  BILL                   6136215955

TREATMENT ROUTES.     TREATMENT IS: GNCT  1 T120

+++ TRAVER:  SUCCESSFUL CALL TRACE +++

                              end
```

The following figure displays the TRAVER for an international call for the ISUP IMT LEAS applications. The ISUP IMT LEAS office at the AT1 switch does the billing only. The TRAVER displays the table datafill as discussed in

ISUP IMT LEAS datafill considerations. TRAVER of the next leg at AT2 is on the 1ZZXXX(X) + CCC.

TRAVER output example for ISUP IMT LEAS international call (billing only)

```
TRAVER TR AL81TICS7CIC4 088222 B CDN 6136212016
NO LEAS ADMINISTRATION REQUIRED
TABLE TRKGRP
AL81TICS7CIC4 IT 0 ELO NCRT IC NIL MIDL 909 AT1 NSCR 501 000 N N $
000 N N  $
TABLE OFCVAR
AIN_OFFICE_TRIGGRP LNPOFFICE
TABLE STDPRTCT
AT1 (1) (65021) 2
 . SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE BILLING.
CALL TYPE DEFAULT IS NP.  PLEASE REFER TO DOCUMENTATION.
 . 188222 188222 T DD 0 OFRT 896 9 9 NONE
AIN INFO COLLECTED TDP: NO SUBSCRIBED TRIGGER.
TABLE TRIGGRP
LNPOFFICE INFOANAL
 . PODP ( DG PODPDIG) $ NIL
TRIGGER AIN PODP IS APPLICABLE TO OFFICE.
 . LNP ( DG LNPDIG)  (ESCEA )  (ESCOP )  (ESCDN )  (ESCCNDD) $ NIL
TRIGGER AIN LNP IS APPLICABLE TO OFFICE.
AIN INFO ANALYZED TDP: TRIGGER CRITERIA NOT MET.
 .  . TABLE OFRT
 .  . 896 N D ISUP2WIT 0 $ N
 .  . EXIT TABLE OFRT
 . SUBTABLE AMAPRT
 . KEY NOT FOUND
 . DEFAULT VALUE IS:  NONE OVRNONE N


+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

1 ISUP2WIT     D188222043           ST
  BILL            6136212016

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

ISUP IMT LEAS billing examples

The following examples of billing records were produced by the ISUP IMT LEAS application for national calls. Refer to the Billing section in this document for more information about general billing records.

ISUP Intermediate Tandem (continued)

ISUP IMT LEAS national billing record (IMT performs carrier administration and billing)

```
*HEX ID:AA  STRUCTURE CODE:00625C  CALL CODE:110C  SENSOR TYPE:036C
  SENSOR ID:0619351C  REC OFFICE TYPE:036C  REC OFFICE ID:0619351C
DATE:70625C TIMING IND:00000C  STUDY IND:0200000C  CLD PTY OFF–HK:1C
  SERVICE OBSERVED:0C OPER ACTION:0C SERVICE FEATURE:023C ORIG NPA:333C
  ORIG NUMBER:4441234C  OVERSEAS IND:0C  TERM NPA:00519C
  TERM NUMBER:8882060C  CONNECT TIME:1320476C  ELAPSED TIME:000000000C
  IC/INC PREFIX:02222C  CC DATE:70625C  CC TIME:1320368C
ELAPSED CC:000000107C IC/INC EVENT STATUS:007C TRUNK GROUP NUMBER:40639C
 ROUTING INDICATOR:1C  DIALING INDICATOR:0C  ANI INDICATOR:1C
```

ISUP IMT LEAS national billing record (IMT performs only billing)

```
*HEX ID:AA  STRUCTURE CODE:00625C  CALL CODE:110C  SENSOR TYPE:036C
  SENSOR ID:0619351C  REC OFFICE TYPE:036C  REC OFFICE ID:0619351C
DATE:70625C TIMING IND:00000C  STUDY IND:0200000C  CLD PTY OFF–HK:0C
  SERVICE OBSERVED:0C OPER ACTION:0C SERVICE FEATURE:000C ORIG NPA:000C
  ORIG NUMBER:0000000C  OVERSEAS IND:0C  TERM NPA:22519C
  TERM NUMBER:8882060C  CONNECT TIME:1136547C  ELAPSED TIME:000000046C
 IC/INC PREFIX:00001C  CC DATE:70627C  CC TIME:1136521C
ELAPSED CC:000000072C IC/INC EVENT STATUS:010C  TRUNK GROUP NUMBER:50297C
 ROUTING INDICATOR:1C  DIALING INDICATOR:0C  ANI INDICATOR:1C
```

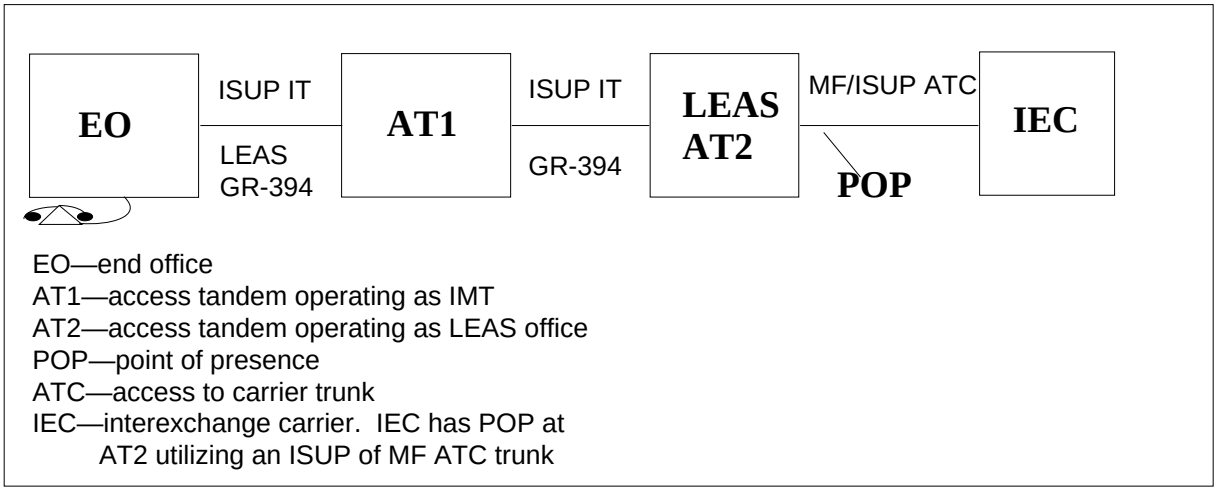
ISUP IMT LEAS with LEAS office at AT2

The following figure shows the ISUP LEAS network configuration where the AT2 switch serves as the LEAS office. The IMT at the AT1 switch functions

as a Basic ISUP. The only responsibility of the IMT switch at is to tandem the call to the AT2 switch for LEAS handling.

Note: he messaging, datafill, and billing for ISUP IMT LEAS with LEAS office at AT2 is the same as Basic ISUP IMT.

ISUP IMT LEAS application



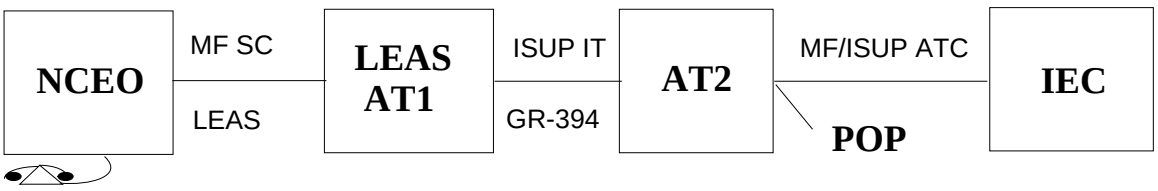
Multi Frequency (MF) LEAS with ISUP IMT

The MF LEAS with ISUP IMT application allows calls that originate on an MF trunk. Before the AF7127 feature, the LEAS office connected calls to an ISUP or MF ATC trunk only.

Note: The interexchange carrier (IEC) has a point of presence (POP) at the AT2 switch utilizing an ISUP or MF ATC trunk. The nonconforming end office (NCEO) connects by a MF super CAMA (SC) trunk to the AT1 switch.

ISUP Intermediate Tandem (continued)

MF LEAS with ISUP IMT application



NCEO—non-conforming end office
AT1—access tandem IMT and LEAS office
AT2—access tandem
POP—point of presence
ATC—access to carrier trunk
IEC—interexchange carrier. IEC has POP at AT2 utilizing an ISUP of MF ATC trunk
MF SC—multi-frequency super CAMA trunk

MF LEAS with ISUP IMT messaging

MF LEAS with ISUP IMT requires the following messaging:

- All ISUP messages are built in the AT1 switch and sent to the AT2 switch. These messages include the parameters of the IAM.
- The IMT at the AT1 switch is responsible for processing all ISUP messages like EXM, ACM, ANM, and REL. The ISUP IMT LEAS office at AT1 does not bounce messages that originate on an MF type trunk.

MF LEAS with ISUP IMT datafill considerations

A deviation exists from the standard LEAS datafill of the MF LEAS with ISUP IMT application. The 0ZZ/1NX codes that agree with the EAEO datafill are specified in table OFRT. The following example shows sample datafill of table OFRT for MF LEAS with ISUP IMT.

MAP display example for table OFRT

```
TABLE: OFRT

------------------------------------------------------------
100 N D ISUP2WIT 0 D088 N
```

The following figure displays the TRAVER for a national call for the MF LEAS application at AT1. The TRAVER displays the table datafill discussed in MF LEAS IMT datafill considerations. TRAVER of the next leg at the AT2 switch is on the 0ZZXXX(X).

ISUP Intermediate Tandem (continued)

TRAVER FOR MF LEAS with ISUP IMT national call

```
TRAVER TR OTWAON52CG02 5188880050 B N ST2P 08411111 ST
TABLE TRKGRP
OTWAON52CG02 SC 44 NPDGP NCRT NIL N 519 TCA3 TOPS DD ONHOOK ONHOOK
30 5 5 IC LIDL 0 BELL SUPER CAMA REV Y N  $
TABLE STDPRTCT
TCA3 (1) (65021) 2
 . SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE BILLING.
CALL TYPE DEFAULT IS NP.  PLEASE REFER TO DOCUMENTATION.
 . 5 612 N DD 0 NA
 . SUBTABLE AMAPRT
 . KEY NOT FOUND
 . DEFAULT VALUE IS: NONE OVRNONE N
TABLE HNPACONT
519 Y 58 3 ( 14) ( 1) ( 0) ( 0) 1
 . SUBTABLE HNPACODE
 . 518 518 FRTE 20
TABLE OFCVAR
AIN_OFFICE_TRIGGRP LNPOFFICE
AIN INFO COLLECTED TDP: NO SUBSCRIBED TRIGGER.
TABLE TRIGGRP
LNPOFFICE INFOANAL
 . PODP ( DG PODPDIG) $ NIL
TRIGGER AIN PODP IS APPLICABLE TO OFFICE.
 . LNP ( DG LNPDIG)  (ESCEA )  (ESCOP )  (ESCDN )  (ESCCNDD) $ NIL
TRIGGER AIN LNP IS APPLICABLE TO OFFICE.
AIN INFO ANALYZED TDP: TRIGGER CRITERIA NOT MET.
 .  . SUBTABLE RTEREF
 .  .  20 S D EATANDEMOG
 .  . EXIT TABLE RTEREF
EXIT TABEL HNPACONT
LNPOO1OO SOC OPTION IS IDLE
LNP INFO: CALLED DN IS NOT RESIDENT
LNP INFO: HNPA RESULTS ARE USED
TABLE BILLCODE
OTWAON52CG02 841 0TWA TCA3 613841 CAMO
TABLE LCASCRRCN
519 OTWA ( 11) OPTL N N
 . SUBTABLE LCASCR . TUPLE NOT
FOUND.  DEFAULT IS NON-LOCAL
TABLE PFXTREAT
TUPLE NOT FOUND. DEFAULT IS TO LEAV
XLA RESULT UNCHANGED
```

continued

ISUP Intermediate Tandem (continued)

TRAVER FOR MF LEAS with ISUP IMT national call (continued)

```
TABLE CLSVSCRC
SUBTABLE CLSVSCR
DETERMINE IF THE ROUTE SHOULD BE REPLACED WITH A NEW EQUAL ACCESS
ROUTE
TABLE TRKLATA
OTWAON52CG02 6138411 LATA1 Y T DACD
TABLE EASAC
TUPLE NOT FOUND
TABLE LATAXLA
LATA1 51 INTER INTER STD
TABLE DNPIC
613 841 11 11 CAR1 Y N
TABLE OCCINFO
CAR1 0488 TRANS Y Y Y Y Y N N Y Y Y Y Y LONG 14 FGRPD N N N N N N N
N Y N N N N  Y
  C524 Y
TABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE BILLING.
CALL TYPE DEFAULT IS NP.  PLEASE REFER TO DOCUMENTATION.
 . 10488 10488 EA DD 5 P CAR1 Y OFRT 900 6 20 N
 . TABLE OFRT
 . 900 N D ISUP2WITEA 15 D088 N
 . EXIT TABLE OFRT
 . TABLE STDPRTCT
 . CAR1P ( 1) (65021) 0
 . SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE BILLING.
CALL TYPE DEFAULT IS NP.  PLEASE REFER TO DOCUMENTATION.
 . .15 19 EA DD 1 T NA CAR1 N
USING EQUAL ACCESSS (EA) ROUTE OFRT 900 FROM PRETRANSLATION
TABLE OFRT
900 N D ISUP2WITEA 0 D088 N
EXIT TABLE OFRT

+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES
1 ISUP2WITEA          DO885188880050        ST
   BILL               6138411111

TREATMENT ROUTES.  TREATMENT IS: GNCT 1 T120
+++ TRAVER: SUCCESSFUL CALL TRACE ++++++ TRAVER: SUCCESSFUL CALL
TRACE +++
```

end

The following figure displays the TRAVER for an international call for the MF LEAS application at AT1. The TRAVER displays the table datafill discussed in MF LEAS IMT datafill considerations. TRAVER of the next leg at AT2 is on the 1NXXXX(X) + CCC.

TRAVER FOR MF LEAS with ISUP IMT international call

```
TRAVER TR OTWAON52CG02 01143123456789 B N ST2P 08411111 ST
TABLE TRKGRP
OTWAON52CG02 SC 44 NPDGP NCRT NIL N 519 TCA3 TOPS DD ONHOOK ONHOOK
30 5 5 IC LIDL 0 BELL SUPER CAMA REV Y N  $
TABLE STDPRTCT
TCA3 (1) (65021) 2
 . SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE BILLING.
CALL TYPE DEFAULT IS NP.  PLEASE REFER TO DOCUMENTATION.
 . 011 011 N DD 3 IN
 . SUBTABLE AMAPRT
 . KEY NOT FOUND
 . DEFAULT VALUE IS: NONE OVRNONE N
TABLE CCTR
43 T 043 7 12 T OFRT 903 Y
TABLE OFCVAR
AIN_OFFICE_TRIGGRP LNPOFFICE
AIN INFO COLLECTED TDP: NO SUBSCRIBED TRIGGER.
TABLE TRIGGRP
LNPOFFICE INFOANAL
 . PODP ( DG PODPDIG) $ NIL
TRIGGER AIN PODP IS APPLICABLE TO OFFICE.
 . LNP ( DG LNPDIG)  (ESCEA )  (ESCOP )  (ESCDN )  (ESCCNDD) $ NIL
TRIGGER AIN LNP IS APPLICABLE TO OFFICE.
AIN INFO ANALYZED TDP: TRIGGER CRITERIA NOT MET.
TABLE OFRT
903 TS D LNTOPS 0 N N 3 189
EXIT TABLE OFRT
TABLE BILLCODE
OTWAON52CG02 841 OTWA TCA3 613841 CAMO
DETERMINE IF THE ROUTE SHOULD BE REPLACED WITH A NEW EQUAL ACCESS
ROUTE
TABLE TRKLATA
OTWAON52CG02 6138411 LATA1 Y T DACD
TABLE DNPIC
613 841 11 MCI Y N
```

continued

ISUP Intermediate Tandem (continued)

TRAVER FOR MF LEAS with ISUP IMT national call (continued)

```
TABLE OCCINFO
MCI 0222 TRANS Y Y Y Y Y N N Y Y Y
Y LONG O FGRPD N N N N N N N N Y N
N N N N Y
TABLE STDPRTCT
TCA3 ( 1) (65021) 1
 . SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE BILLING.
CALL TYPE DEFAULT IS NP.  PLEASE REFER TO DOCUMENTATION.
 . 10222 10222 EA DD 5 P MCI1 MCI Y OFRT 889 6 20 N
 . SUBTABLE AMAPRT
 . KEY NOT FOUND
 . DEFAULT VALUE IS NONE OVRNONE  N
 . . TABLE OFRT
 . . 889 N D ISUP2WITEA 15 D121 N
 . . EXIT TABLE OFRT
 . TABLE STDPRTCT
 . MCI1 ( 1) (65021) 2
 . . SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE BILLING.
CALL TYPE DEFAULT IS NP.  PLEASE REFER TO DOCUMENTATION.
 . . 011 011 EA DD 3 T IN MCI N
USING EQUAL ACCESSS (EA) ROUTE OFRT 889 FROM PRETRANSLATION
TABLE OFRT
889 N D ISUP2WITEA 15 D121 N
EXIT TABLE OFRT

+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES
1 ISUP2WITEA          D12143123456789        ST
   BILL               6138411111

TREATMENT ROUTES.  TREATMENT IS: GNCT 1 T120

+++ TRAVER: SUCCESSFUL CALL TRACE +++


                                end
```

MF LEAS IMT billing example

The following is an example of a billing record produced in the MF LEAS IMT application for national calls. Refer to the Billing section in this document for more information about general billing records.

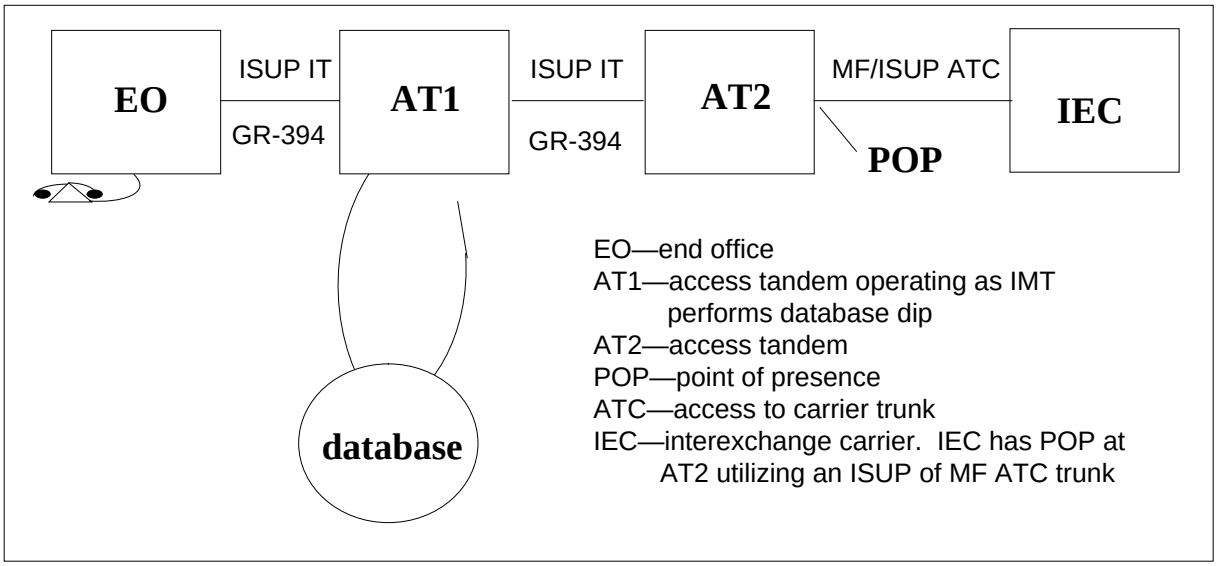
ISUP IMT LEAS national billing record (IMT performs carrier administration)

```
*HEX ID:AA  STRUCTURE CODE:00625C  CALL CODE:110C  SENSOR TYPE:036C

 SENSOR ID:0619351C  REC OFFICE TYPE:036C  REC OFFICE ID:0619351C

 DATE:70403C  TIMING IND:00000C  STUDY IND:0200000C  CLD PTY OFF-HK:0C

 SERVICE OBSERVED:0C  OPER ACTION:0C  SERVICE FEATURE:000C  ORIG NPA:613C

ORIG NUMBER:8411111C  OVERSEAS IND:0C  TERM NPA:00518C

 TERM NUMBER:8880050C  CONNECT TIME:0746129C  ELAPSED TIME:000000228C

IC/INC PREFIX:04881C  CC DATE:70403C  CC TIME:0746062C

ELAPSED CC:000000296C  IC/INC EVENT STATUS:010C TRUNK GROUP NUMBER:40639C

ROUTING INDICATOR:1C  DIALING INDICATOR:1C  ANI INDICATOR:1C
```

E800 ISUP IMT application

The following examples show the E800 ISUP network configurations supported by the ISUP IMT feature. In the first configuration the IMT at AT1 performs the database dip. This configuration allows ISUP IT trunks using the GR-394 signaling to perform a database dip and connect to another ISUP IT trunk that uses GR-394 signaling.

ISUP IMT LEAS application



ISUP Intermediate Tandem (continued)

E800 ISUP IMT messaging (database dip at AT1)

The E800 ISUP IMT builds the TNS, CIP, and CS parameters based on the carrier administration performed. The E800 IMT propagates all other ISUP messages from the incoming ISUP IT trunk to the outgoing ISUP IT trunk.

The IMT is responsible for processing all ISUP messages like EXM, ACM, ANM, and REL. The IMT bounces all the messages to the incoming ISUP IT trunks except the EXM message received from AT2.

Note: The E800 protocol requires the AT send the EXM to the EAEO before the database dip. E800 ISUP IMT does not alter this protocol. The EXM is not bounced at the IMT to the EAEO.

E800 ISUP IMT datafill

If the operating company provisions the IMT as an E800 office, then the only changes to the datafill are in tables OFRT and CKTDIGIT. Table OFRT must have an "$" in the PFXDIGS field. A new 0ZZ/1NX code can not be specified in the office route. The IMT uses the 0ZZ code specified in table NSCDEFS when building the circuit code of the TNS for national calls. The IMT does not use the 1NX code for building the circuit code of the TNS for international calls. This is because the value of the CIRCUIT_CODE of the TNS is hard coded to 1 since E800 calls are always identified as direct dialed. The datafill for table OFRT follows.

MAP display example for table OFRT

```
TABLE: OFRT

------------------------------------------------------
895 N D ISUP2WIT 0 $ N
```

For E800 ISUP IMT to function correctly table CKTDIGIT must be datafilled in the IMT and AT2 switches with the 0ZZ from table NSCDEFS for each carrier that the database can return. The following two examples show sample datafill for table CKDIGIT and table NSCDEFS.

MAP display example for table CKDIGIT

```
TABLE: CKDIGIT

------------------------------------------------------
CAR1 9 078
CAR2 5 078
```

MAP display example for table NSCDEFS

```
TABLE: NSCDEFS

------------------------------------------------------
E800 3 (NSC0ZZ 078) (NSC1NX 178) (NSCNUM 800) $
```

Translation verification tools for E800 ISUP IMT applications

The following examples show the output from TRAVER when it verifies ISUP IMT for E800 applications.

The following figure shows the TRAVER for a national call for the E800 IMT applications at the AT1 switch. The TRAVER displays the table datafill discussed in E800 ISUP IMT datafill. TRAVER for AT2 is on the 0ZZXXX(X).

Note: TRAVER does not display the 0ZZ code. The 0ZZ code used in building the TNS is the code specified in Table NSCDEFS.

ISUP Intermediate Tandem (continued)

TRAVER output example for E800 ISUP IMT national call

```
%% DATABASE RETURNS CIC – 0488
%% THE 0ZZ CODE 078 IS DERIVED FROM TABLE NSCDEFS

TRAVER TR ISUP2WITEA 0780488 b
TABLE TRKGRP
ISUP2WITEA IT 0 ELO NCRT 2W NIL MIDL 519 PEA NSCR 919
000 N N $
TABLE OFCVAR
AIN_OFFICE_TRIGGRP LNPOFFICE
TABLE STDPRTCT
PEA (1) (65021) 2
 . SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE BILLING.
CALL TYPE DEFAULT IS NP.  PLEASE REFER TO DOCUMENTATION.
 . 0780488 0780488 T NP 7 OFRT 1000 7 7 NONE
AIN INFO COLLECTED TDP: NO SUBSCRIBED TRIGGER.
TABLE TRIGGRP
LNPOFFICE INFOANAL
 . PODP ( DG PODPDIG) $ NIL
TRIGGER AIN PODP IS APPLICABLE TO OFFICE.
 . LNP ( DG LNPDIG)  (ESCEA )  (ESCOP )  (ESCDN )  (ESCCNDD) $ NIL
TRIGGER AIN LNP IS APPLICABLE TO OFFICE.
AIN INFO ANALYZED TDP: TRIGGER CRITERIA NOT MET.
 .  . TABLE OFRT
 .  . 100 N D ISUP2WIT 0 $ N
 .  . EXIT TABLE OFRT
 . SUBTABLE AMAPRT
 . KEY NOT FOUND
 . DEFAULT VALUE IS:  NONE OVRNONE N


+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

1 ISUP2WIT                                    ST

TREATMENT ROUTES.  TREATMENT IS: GNCT 1 T120
+++ TRAVER: SUCCESSFUL CALL TRACE +++
```

TRAVER output example for E800 ISUP IMT international call

```
%% DATABASE RETURNS CIC – 0488
%% THE 1NX CODE 178 IS DERIVED FROM TABLE NSCDEFS

TRAVER TR AL8ITICS7CIC4 178222043 B
TABLE TRKGRP
AL8ITICS7CIC4 IT 0 ELO NCRT IC NIL MIDL 909 PEA NSCR
501 000 N N $
TABLE OFCVAR
AIN_OFFICE_TRIGGRP LNPOFFICE
TABLE STDPRTCT
PEA (1) (65021) 2
 . SUBTABLE STDPRT
WARNING: CHANGES IN TABLE STDPRT MAY ALTER OFFICE BILLING.
CALL TYPE DEFAULT IS NP.  PLEASE REFER TO DOCUMENTATION.
 . 178222 178222 T NP 0 OFRT 885 9 9 NONE
AIN INFO COLLECTED TDP: NO SUBSCRIBED TRIGGER.
TABLE TRIGGRP
LNPOFFICE INFOANAL
 . PODP ( DG PODPDIG) $ NIL
TRIGGER AIN PODP IS APPLICABLE TO OFFICE.
 . LNP ( DG LNPDIG)  (ESCEA )  (ESCOP )  (ESCDN )  (ESCCNDD) $ NIL
TRIGGER AIN LNP IS APPLICABLE TO OFFICE.
AIN INFO ANALYZED TDP: TRIGGER CRITERIA NOT MET.
 .  . TABLE OFRT
 .  . 885 N D ISUP2WIT 0 $ N
 .  . EXIT TABLE OFRT
 . SUBTABLE AMAPRT
 . KEY NOT FOUND
 . DEFAULT VALUE IS:  NONE OVRNONE N
LNP00100  SOC OPTION IS IDLE.

+++ TRAVER: SUCCESSFUL CALL TRACE +++

DIGIT TRANSLATION ROUTES

1 ISUP2WIT     178222043             ST

TREATMENT ROUTES.  TREATMENT IS: GNCT 1 T120

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

ISUP Intermediate Tandem (continued)

E800 ISUP IMT billing example

The following is an example of a billing record produced in the E800 ISUP IMT application for national calls. Refer to the Billing section in this document for more information about general billing records.

E800 ISUP IMT national billing record (database dip at AT1)

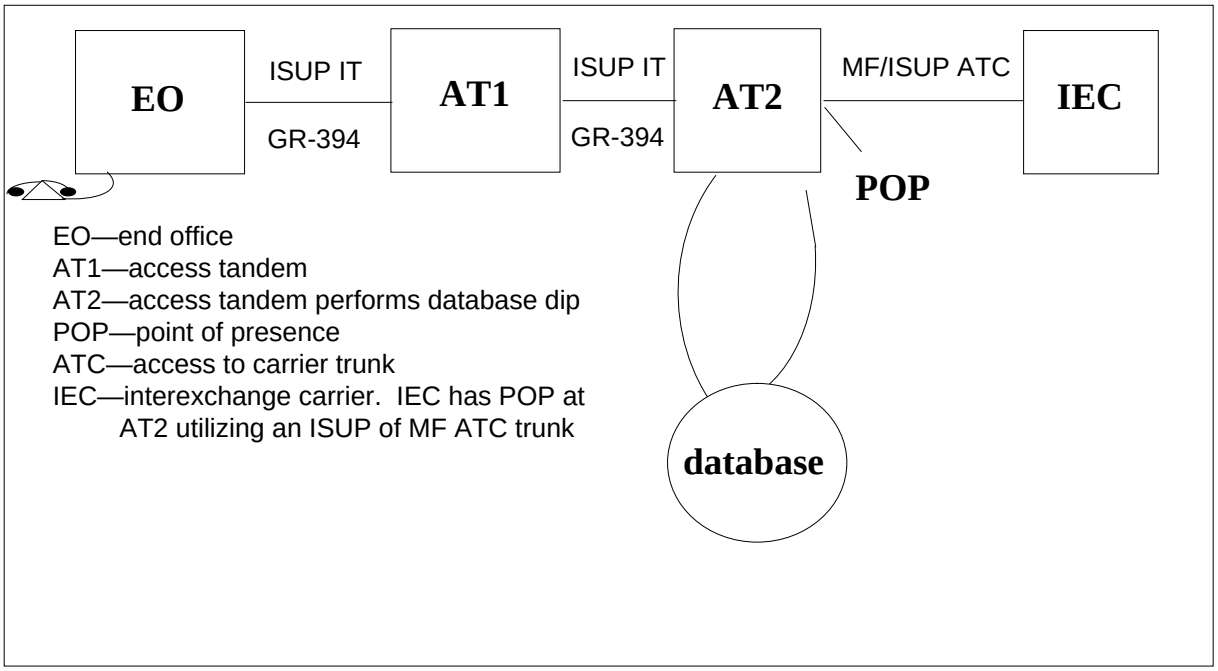
```
*HEX ID:AA  STRUCTURE CODE:00361C  CALL CODE:141C  SENSOR TYPE:036C

SENSOR ID:0619351C  REC OFFICE TYPE:036C  REC OFFICE ID:0619351C

DATE:70625C  TIMING IND:00000C  STUDY IND:0000000C  CLD PTY OFF–HK:0C

SERVICE OBSERVED:0C  OPER ACTION:0C  SERVICE FEATURE:555C  ORIG NPA:613C

ORIG NUMBER:6210050C  DIALED NPA:800C  DIALED NUMBER:5671003C

OVERSEAS IND:0C  TERM NPA:00519C  TERM NUMBER:8882016C

CONNECT TIME:1812591C  ELAPSED TIME:000000125C  IC/INC PREFIX:02221C

CC DATE:70625C  CC TIME:1812433C  ELAPSED CC:000000283C

IC/INC EVENT STATUS:010C  TRUNK GROUP NUMBER:40638C  ROUTING INDICATOR:1C

DIALING INDICATOR:8C  ANI INDICATOR:1C  RAO NUMBER:000C

ORIGINATING LATA:111C  ALTERNATE BILLING NUMBER:06136211111C
```

E800 ISUP IMT with database dip at AT2

The following figure shows the E800 ISUP network configuration where AT2 performs the database dip. The IMT functions as a basic ISUP IMT only. The IMT only connects the call to the AT2 for E800 handling.

Note: E800 ISUP IMT with database dip at AT2 has messaging, datafill, and TRAVER examples the same as E800 ISUP IMT with database dip at AT1. If the E800 ISUP IMT performs the database dip at the AT2 switch, no billing records are produced by the IMT.

E800 ISUP IMT application (database dip at AT2)



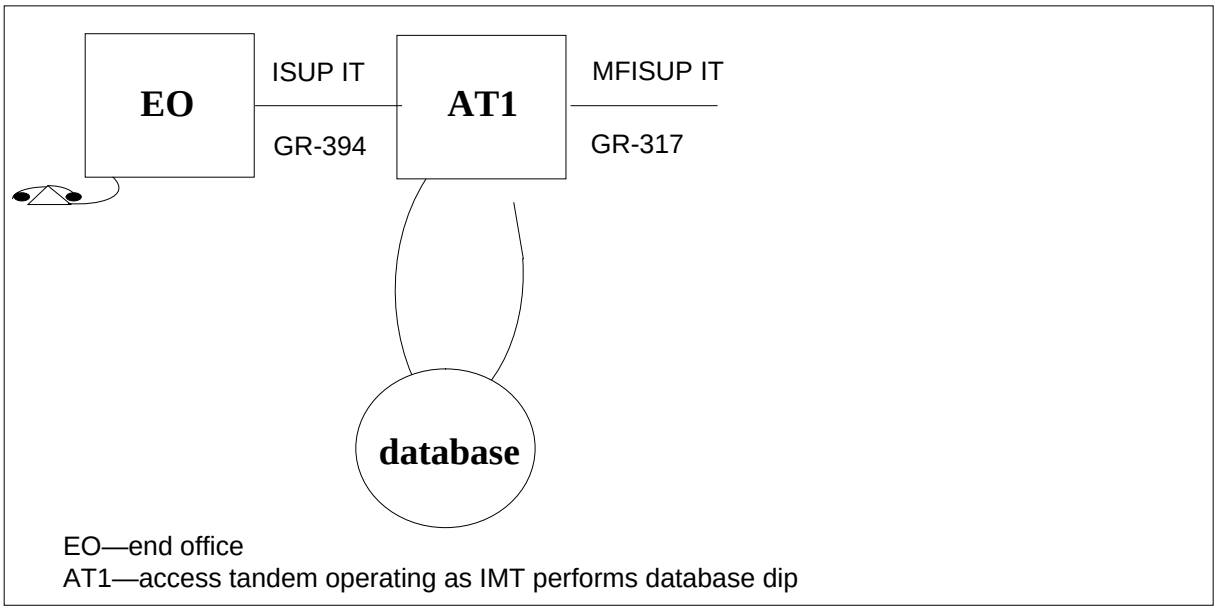
Limitations and restrictions

The following limitations and restrictions apply to ISUP IMT:

- ISUP IMT does not support Advanced Intelligent Networks (AIN) applications.
- ISUP IMT does not support Private Virtual Networks (PVN) applications.
- ISUP IMT does not support AMR5 signaling on the SC trunk. For the MF LEAS InterMediate Tandem application the SC trunk must be MF.
- None of the ISUP IMT applications support utilizing the ET selector in table STDPRTCT for national or international calls. The IMT applications must use the T selector in table STDPRTCT.
- All TRAVER outputs will be changed as shown in the previous examples.
- This feature assumes that E800 traffic prior to this feature is not routed ISUP IT to MF/ISUP IT. The following diagram shows this configuration.

ISUP Intermediate Tandem (continued)

Configuration not supported by ISUP IMT



EO—end office
AT1—access tandem operating as IMT performs database dip

Interactions

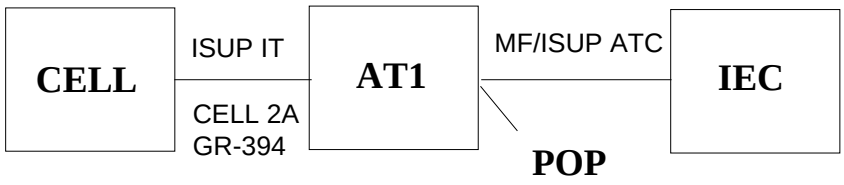
ISUP IMT has the following functionality interactions.

Impacts on Other Network Configurations

In the following diagram, theAT1 switch originates a call on an ISUP IT trunk that handles CELL 2A traffic. The incoming IAM has a TNS value equivalent to CAR1. The call connects to an ATC trunk that has CAR2 assigned as the carrier in table TRKGRP. Before the ISUP IMT feature, Call Codes 066 and 110 identified CAR2 in the IC/INC Prefix field of the billing record. This feature changes the carrier to CAR1 in the billing record. The carrier identified in the TNS parameter is reflected in the billing record.

ISUP Intermediate Tandem (continued)

Existing CELL 2A applications



CELL—cellular office
AT1—access tandem operating as IMT
POP—point of presence
ATC—access to carrier trunk
IEC—interexchange carrier. IEC has POP at AT1 utilizing an ISUP of MF ATC trunk

Note: AT1 will produce a Call Code 066 and 110 for EA CELL calls.

The EO affects carrier selection in the IMT if the EO performs carrier selection and, as a result, the ISUP LEAS IMT does billing only. In this situation the carrier identified in the billing record is the same as in the CELL application.

The carrier pegged for EATSMS and EACARR operational measurements (OM) changes for applications that affect the carrier identified in the billing record. The OMs now peg information for the carrier identified in the TNS parameter.

The carrier identified in the billing records, OMs, and logs is not altered on CELL 2A calls that originate on an MF IT trunk. The carrier identified continues to be the carrier associated to the ATC trunk.

The following translations documents may have features that interact with ISUP IMT feature applications.

- Introduction to ISDN User Part
- Equal Access Intermediate Tandem—U.S. only
- CCS7 ISUP Inter-LATA Connection EAEO
- CCS7 ISUP Inter-LATA Connection AT
- Access Tandem Switch
- Intra-LATA PIC for LEAS
- LATA Equal Access System
- NCEO/LEAS Interface

ISUP Intermediate Tandem (continued)

- Cellular AMA
- Cellular 2A/2B Interface

Activation/deactivation by the end user

ISUP IMT does not require activation or deactivation by the end user.

Billing

ISUP IMT feature does not introduce new billing records. E800, CELL 2A, and LEAS applications in effect before this feature generated billing records. These applications will continue to generate billing records with ISUP IMT. The information contained in these records follows GR-1100 Core guidelines. Fields that required special considerations are discussed in the following sections.

Routing indicator

Call Codes 066, 110, and 141 produced at the IMT switch have the Routing Indicator set to 1. This value indicates that the call routes through the AT2 switch and not direct to the carrier.

Dialing Indicator

The dialing indicator defaults to the value of 0 for the Call Code 110 for existing CELL 2A applications. GR-1100 Core guidelines define the value of 0 in the dialing indicator to mean that there is no indication if the calls are presubscribed and/or casually dialed. If the dialing indicator value is 0, presubscription is not indicated to the inter-LATA carrier (IC) or international carrier (INC). The default dialing indicator value of 0, in the Call Code 110 billing record, continues to be the default for ISUP IMT CELL applications.

The dialing indicator setting is based on datafill in field PICIND, of table OCCINFO, if the Dialing Indicator is not set to the default. Field PICIND determines if the call is presubscribed and/or casually dialed when a switch generates Call Code 110 in LEAS applications. This functionality is not changed for the ISUP IMT LEAS applications.

> ***Note:*** If MF LEAS and SS7 LEAS applications function the same, they are referred to as LEAS applications. If MF LEAS and SS7 LEAS applications do not function the same, they are referred to as MF or SS7 applications.

For CELL 2A applications the dialing indicator is set to Hex FF, as defined in GR-1504 Core (Issue 1, June 1994). This functionality is not changed for ISUP IMT CELL 2A applications.

For existing E800 applications, the dialing indicator is set to 8 in the Call Code 141. If the Dialing Indicator value is 8, there is no indication that the call was casually dialed or presubscribed. Presubcription information is not indicated to the IC/INC. This functionality is not changed for the ISUP IMT E800 applications.

ANI/CPN indicator

The information contained in the automatic number identification (ANI) / calling party number (CPN) indicator is not impacted for any of the IMT applications.

Trunk group number

The information in the Trunk Group Number field is not modified for the ISUP IMT CELL 2A application. The Trunk Group Signaling Type indicator field, in Call Code 066, will continue to be set to the default value of 0. Characters two to five, in the Trunk Group Number field, will continue to contain the number of the incoming trunk group.

Note: The value 0 for the Trunk Group Signaling Type indicator is not defined by Bellcore. The DMS utilizes the value as the default value. CELL 2A applications that existed before the ISUP IMT CELL 2A feature set the indicator to 0.

The Trunk Group Signaling Type indicator is set to either 4 or 5 when the IMT produces Call Codes 110 or 141 for the LEAS and E800 applications. The IMT sets the indicator to 4 when the trunk connections between the IMT, the AT2, and the IEC are all ISUP. In this configuration characters one through four contain the trunk group number of the ISUP trunk between AT2 and IEC. The IMT sets the indicator to 5 if the trunk connection between the IMT and the AT2 is ISUP and between the AT2 and the IEC is MF. In this configuration characters one through four contain the trunk group number of the trunk between the IMT and AT2.

Carrier connect time and date

The arrival of the first EXM, ACM, or ANM message determines the carrier connect time and date timestamp when the terminating agent is an IT trunk. The generation of the billing record does not affect the timestamp. Changes are not required for ISUP IMT applications.

IC/INC Prefix

For ISUP IMT CELL 2A applications and ISUP LEAS with billing only functionality, the IC/INC field identifies the carrier in the TNS of the incoming IAM.

ISUP Intermediate Tandem (end)

For E800 applications with the database at the IMT, the IC/INC field contains the carrier identified by the database.

For ISUP LEAS applications where the IMT handles both carrier administration and billing, the IC/INC field contains the carrier identified by translations.

For MF LEAS applications, the IC/INC field contains the carrier identified by translations.

Station Message Detail Recording

ISUP IMT does not affect Station Message Detail Recording.

Datafilling office parameters

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

Office parameters used by ISUP Intermediate Tandem

Table name	Parameter name	Explanation and action
OFCENG	EA_ISUP_INTERMEDIATE_ TANDEM	Must be set to (Y) yes to activate ISUP IMT capabilities. If office parameter EA_ISUP_INTERMEDIATE_TANDEM is set to (N) no then the outgoing initial address message (IAM) will not include the optional transit network selector (TNS).

SERVORD

ISUP IMT does not use SERVORD.

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