

297-8321-815

DMS-100 Family

## **Extended Peripheral Module**

Extended Peripheral Module Translations Reference Manual

Volume 1 of 3

XPM14 and up Standard 14.01 March 2001

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# About this document

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## How to check the version and issue of this document

The version and issue of the document are indicated by numbers, for example, 01.01.

The first two digits indicate the version. The version number increases each time the document is updated to support a new software release. For example, the first release of a document is 01.01. In the next software release cycle, the first release of the same document is 02.01.

The second two digits indicate the issue. The issue number increases each time the document is revised but rereleased in the same software release cycle. For example, the second release of a document in the same software release cycle is 01.02.

To determine which version of this document applies to the software in your office and how documentation for your product is organized, check the release information in *Product Documentation Directory*, 297-8991-001.

## References in this document

The following documents are referred to in this document:

- *Customer Data Schema Reference Manual*
- *Digital Interface Between the SLC96 Digital Loop Carrier System and a Local Digital Switch*, TR-TSY-000008
- *DMS-100 Business Set Feature Description and Operation*
- *DPX Channel Unit Descriptions*
- *ISDN Operations, Administration, and Maintenance System Description Reference Manual*
- *Log Report Reference Manual*
- *Office Parameters Reference Manual*
- *Operational Measurements Reference Manual*
- *Outside Plant Access Cabinet (OPAC) Maintenance Guide*

- *Product Documentation Directory, 297-8991-001*
- *Remote Switching Center Maintenance Procedures*
- *Routine Maintenance Procedures*
- *SERVORD Reference Manual*
- *Subscriber Carrier Module-100 Access Maintenance Manual*
- *Translations Guide*
- *XPM Log Reports Reference Manual*

As of NA011 (LEC and LET) and EUR010 (EUR) releases, any references to the data schema section of the *Translations Guide* will be mapped to the *Customer Data Schema Reference Manual*.

### What precautionary messages mean

The types of precautionary messages used in NT documents include attention boxes and danger, warning, and caution messages.


An attention box identifies information that is necessary for the proper performance of a procedure or task or the correct interpretation of information or data. Danger, warning, and caution messages indicate possible risks.

Examples of the precautionary messages follow.

ATTENTION - Information needed to perform a task

<p><b>ATTENTION</b></p> <p>If the unused DS-3 ports are not deprovisioned before a DS-1/VT Mapper is installed, the DS-1 traffic will not be carried through the DS-1/VT Mapper, even though the DS-1/VT Mapper is properly provisioned.</p>
--

DANGER - Possibility of personal injury

	<p><b>DANGER</b> <b>Risk of electrocution</b></p> <p>Do not open the front panel of the inverter unless fuses F1, F2, and F3 have been removed. The inverter contains high-voltage lines. Until the fuses are removed, the high-voltage lines are active, and you risk being electrocuted.</p>
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WARNING - Possibility of equipment damage

**WARNING****Damage to the backplane connector pins**

Align the card before seating it, to avoid bending the backplane connector pins. Use light thumb pressure to align the card with the connectors. Next, use the levers on the card to seat the card into the connectors.

CAUTION - Possibility of service interruption or degradation

**CAUTION****Possible loss of service**

Before continuing, confirm that you are removing the card from the inactive unit of the peripheral module. Subscriber service will be lost if you remove a card from the active unit.

## How commands, parameters, and responses are represented

Commands, parameters, and responses in this document conform to the following conventions.

### Input prompt (>)

An input prompt (>) indicates that the information that follows is a command:

```
>BSY
```

### Commands and fixed parameters

Commands and fixed parameters that are entered at a MAP terminal are shown in uppercase letters:

```
>BSY CTRL
```

### Variables

Variables are shown in lowercase letters:

```
>BSY CTRL ctrl_no
```

The letters or numbers that the variable represents must be entered. Each variable is explained in a list that follows the command string.

## Responses

Responses correspond to the MAP display and are shown in a different type:

FP 3 Busy CTRL 0: Command request has been submitted.

FP 3 Busy CTRL 0: Command passed.

---

# 1 XPM translations introduction

---

This extended peripheral module (XPM) translations reference manual provides a product overview; translations datafill procedures; description of basic and optional XPM feature capabilities; and describes how specific tables activate, deactivate, or alter product capabilities for the following XPMs:

- Outside Plant Access Cabinet (OPAC)
- Remote Line Concentrating Module (RLCM)/Outside Plant Module (OPM)
- Remote Switching Center (RSC)
- Remote Switching Center-SONET (Synchronous Optical Network) (RSC-S)
- Subscriber Carrier Module-100 Access (SMA)
- Subscriber Carrier Module-100S (SMS)
- Subscriber Carrier Module-100S Remote (SMS-R)
- Subscriber Carrier Module-100 Urban (SMU)



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## 2 Introduction to data tables

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The translations database contains numerous data tables. Each table has a specific purpose and contains a certain type of data. Datafilling is the term used to describe the process of entering the specific data into a table. The following section describes the composition of data tables.

Data associated with hardware and software systems of the Digital Multiplex System (DMS) switch are stored in the form of two-dimensional entities called tables.

A table consists of rows and columns. A row is called a *tuple*. Columns represent *fields* in a tuple. Refer to the following figure for examples of a table, subtable, and sub-subtable.

Each field has a unique field name consisting of a maximum of eight characters. The field name is used as a prompt for data input.

A field is either a single-element field or a multiple-element field with subfields. A field or subfield contains data expressed in the form of numbers or alphanumeric strings.

### Tuple properties

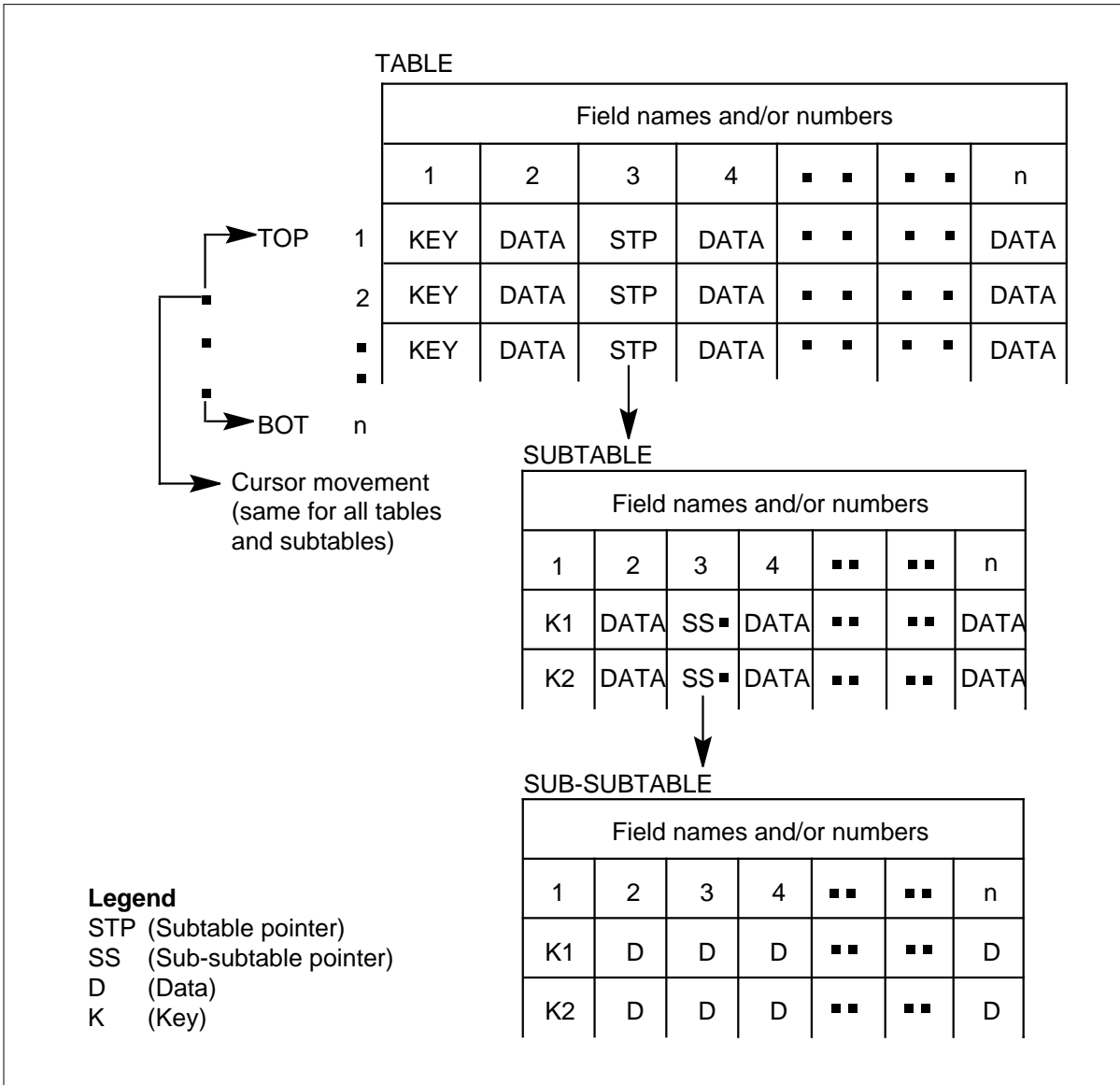
Each tuple is identified by a unique key.

A key always contains the first field. For most tables, the key comprises only one field. In other tables, more than one field of data is required to make the key unique. In this case, the first field plus one or more subsequent fields in the tuple are used to make up the key.

Tuples are referenced either by their key or by the table editor (TE) cursor. The cursor is an internal pointer to a tuple of a table. It can be moved by using TE commands, such as POSITION, LIST, BOTTOM, and TOP. Refer to the following table for a description of TE commands.

The tuple the cursor points to, at any given time, is called the current tuple.

Figure 2-1 Examples of table, subtable, and sub-subtable



### Using the table editor

The TE is a set of commands used to modify the data contained in the DMS-100 control tables. The commands are entered at the MAP terminal.

**Note:** Only two subtable levels are supported.

The TE allows users to perform the following functions:

- add, delete, or change tuples or fields in a table or subtable
- list one or more tuples of a table or subtable

- move the cursor to display any tuple in a table or subtable
- display specified valid field values
- search for tuples containing specified field values

## **Procedures for datafilling any system**

The datafill procedures in this section list the field and subfield names of the key tables that must be datafilled for any system. Explanations of each field and subfield are also provided. Examples of field entries are provided for most fields and subfields. The examples correspond to the example configuration shown in the previous table and to examples of tuples displayed at the end of each procedure.

### **Input prompts and prompting mode**

A prompt is the system way of notifying the user the data entered is not complete or is not in defined parameters. When a prompt occurs, the user is provided the name of the required field or parameter. The user has the following options:

- input correct data entirely on the current line
- enter ABORT to exit the command and to exit the input and prompt mode
- enter invalid data, which causes the system to provide additional information about the field or parameter

If the tuple being datafilled has multiple list items, prompting continues until the maximum list length is reached or until a single dollar sign (\$) is entered.

## Nonprompting mode



### **DANGER**

#### **Possible loss of service if using the NONPROMPT mode**

In all tables which have fields with multiple entries such as, OPTCARD, EXECTAB, CSLINKTAB, and PSLINKTAB, do not use the NONPROMPT mode of datafill. All entries of a field must be entered in one entry when using the NONPROMPT mode. All entries that are not datafilled in the NONPROMPT mode will be deleted from the table. Operating company personnel will not be prompted for additional entries in a field unless they are in the PROMPT mode which steps through each individual value. The PROMPT mode is the only mode that should be used when making datafill changes to multiple entry fields.

All commands are initially processed in the nonprompting mode. After recognizing a valid command, one field value is processed at a time until either the end of the input line is reached (\$) or an error is found.

A tuple can be added all at once by stringing subsequent field values together, leaving a blank space between each field value, and by indicating the end of the string with a dollar sign (\$). If the information for one tuple exceeds one input line a plus sign (+) is placed as the last character on the line. This will enable the contents of the current line and the next line to be processed as a single input.

### **Activating changes to tables**

After the TE checks that input data is complete and valid, a data modification order (DMO) is created. The DMO is then applied to change the appropriate table data.

### **Table editor commands**

The following table lists all TE commands and provides a description for and parameters of each command.

**Table 2-1 editor commands (Sheet 1 of 3)**

<b>Command</b>	<b>Description</b>
TABLE <i>table name</i>	Opens the table <i>table name</i> .
ADD	Adds the tuple given as a parameter to the table or, if no parameters are given, prompts for each field for user input.



Table 2-1 editor commands (Sheet 2 of 3)

Command	Description
BOTtom	Positions the cursor at bottom of the table.
CHAnge	Changes the specified fields to the specified values. If no fields are specified, each field is prompted for user input.
COUNT condition	Counts the number of tuples in the table that meet specified conditions, and positions the cursor at the first tuple.
DELeTe KEY	Deletes the tuple containing the specified key. If no parameters are given, the current tuple is deleted.
DISPlay	Displays the current tuple without the heading.
DOWn n	Moves the cursor down a specified number of tuples. A display of the tuple without the heading follows.
FIRST	Positions the cursor at the first tuple in the table or subtable, but does not display it.
HEADING	Displays the current tuple heading line or lines, showing tuple format.
HELp command name	Displays a brief description of the function of the desired TE command.
LAST	Positions the cursor at the last tuple in the table or subtable without displaying the tuple.
LIST n or all condition	Displays one or more tuples of the current table, as follows: <ul style="list-style-type: none"> <li>• <i>n</i> is the number of tuples to be displayed, starting with the current tuple.</li> <li>• <i>all</i> includes all tuples of the current table displayed beginning at the first tuple, regardless of cursor position.</li> <li>• The condition command parameter is conditional and all tuples meeting the condition are listed. It is used in conjunction with the <i>n</i> and <i>all</i> parameters.</li> </ul>
NEXT	Positions the cursor at the tuple following the current tuple but does not display it.
OVErride	Cancels the prompt that occurs when the CPUs are out-of-sync or when the journal file is not available.
POSition KEY	Positions the cursor at a specified tuple and causes the tuple to be displayed.

**Table 2-1 editor commands (Sheet 3 of 3)**

Command	Description
QUIT all	Exits the user from the current table if QUIT is entered. The parameter <i>all</i> causes the system to quit all tables accessed during the table editor session and returns directly to the command interpreter (CI) level of the MAP terminal.
RANge field	Displays the parameter range for the fields of the current tuple.
RETurn	Returns from sub-subtable to subtable or from a subtable to a main table.
SUBtable field name or field#	Opens and enters the subtable from a main table. The main table must be entered first before its subtable(s) can be accessed. If there is more than one subtable, the field name or the field number associated with it must be specified. When no parameters are entered, only one field points to a subtable and that subtable is entered.
TOP	Positions the cursor at the first tuple in the table and displays the tuple field data.
UP	Moves the cursor up by the specified number of tuples and displays the field data without headings.
VERify ON or OFF	Sets a verify mode, which delays execution of subsequent commands and lets a user check the display, as follows: <ul style="list-style-type: none"><li>• ON causes the system to prompt the user to confirm that the tuple addition, change, replacement, or deletion data is correct.</li><li>• OFF causes the system to execute the command as entered, without confirmation from the user.</li></ul>

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## 3 Outside Plant Module

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### Understanding OPM translations

The Outside Plant Module (OPM) is part of a group of remote peripherals. The remote peripheral allow extended geographic instructions of the Digital Multiplex System (DMS)-100 switch.

Before you attempt to enter data in the OPM, understand the purpose of translations and the terminology of translations. This introduction provides a general description of the OPM and the OPM translations functions.

#### Introduction to the OPM

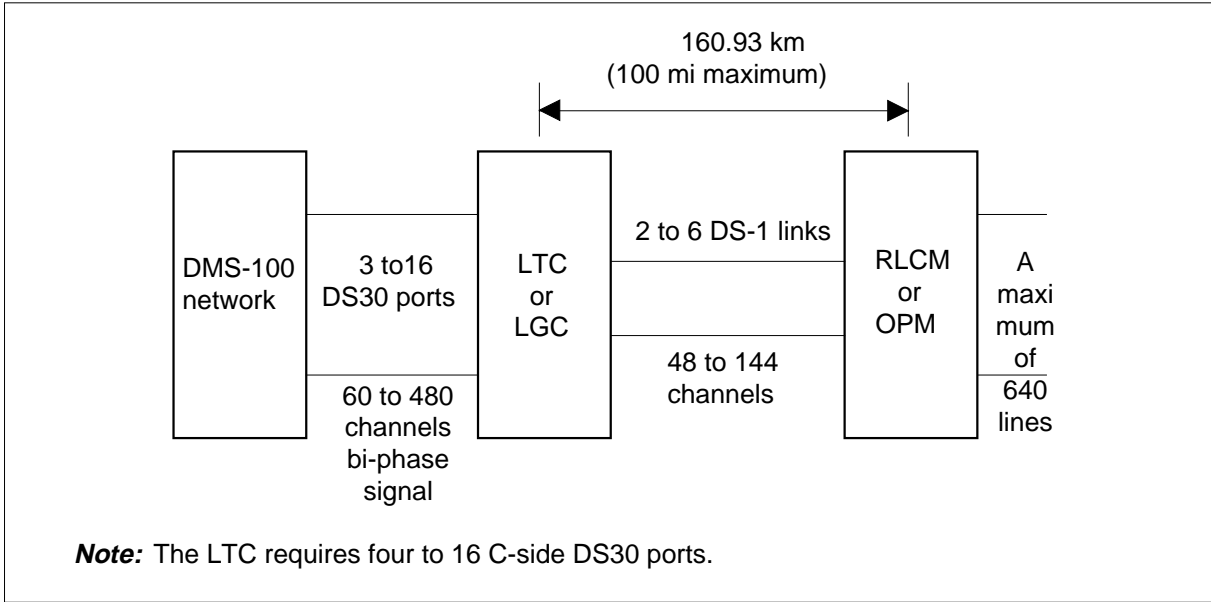
The OPM provides an interface between two to six DS-1 links. The links run from the line group controller (LGC) or line trunk controller (LTC) at the host office with a maximum of 640 subscriber lines connected locally. The OPM can operate at a site a maximum of 160.9 km (100 mi) from the host central office. The OPM can also be configured from a Remote Switching Center (RSC). The OPM provides functions like the functions of a small community dial office (CDO) or private branch exchange (PBX). The OPM can support host-directed traffic that ranges from 1100 to 4200 hundred call seconds (CCS).

A weatherproof cabinet houses the OPM. The weatherproof cabinet provides a controlled environment for the OPM electronic equipment. The OPM provides an interface for two to six DS-1 links from an LTC, LGC or RSC. The OPM functions in the same method as an RLCM in the DMS network. Like an RLCM, the OPM can operate at a maximum of 161 km (100 mi) from the central office.

The OPM is available in two configurations. The first configuration is the OPM-640 (NT8X01AA, AB, AC). The OPM-640 can have a maximum of 640 subscriber lines. The second configuration is the OPM-256 (NT8X01BA, BB, BC). The OPM-256 can have 256 subscriber lines and can expand to hold a maximum of 576 lines.

The configuration of the OPM in the DMS network appears in the following figure.

Figure 3-1 The OPM system integration



The OPM can also have additional feature packages that allow intracalling capability and emergency stand-alone (ESA) operation. The translations database allows the DMS switch to recognize the software and hardware abilities of the OPM and to execute call processing.

### Signaling for the OPM

This section describes the signaling protocols that the OPM uses to communicate with the DMS-100 switch and provide subscriber services. The following sections discuss OPM signaling and the types of subscriber services that the signaling provides.

#### The OPM signaling links

The DS-1 interface cards (NT6X50AA) are the signaling interfaces between the OPM and the host XMS-based peripheral module (XPM). The host XPM can be an LGC, an LTC, or the RCC of a RSC. The host interface equipment shelf contains the DS-1 interface cards.

Each DS-1 interface card can accept a maximum of two DS-1 links from the host XPM. The OPM and the host XPM exchange signaling information over the DS-1 links through dedicated message channels. The signaling information allows the OPM and the host XPM to perform the following tasks:

- communicate the states of subscriber lines
- execute call processing

- set test configurations
- pass test results

The DMS-100 switch controls the OPM. The host office handles all intersystem and operator signaling. Intersystem signaling is the signaling between the host and other systems. Operator signaling is the signaling between the host and the subscriber.

### **Message channels**

The OPM requires a minimum of two DS-1 links to the host. These links are the primary links. The LCM section of the OPM requires two message channels to the host XPM.

The LCM message channels occupy channel 1 on each of the primary DS-1 links to the host. The remote maintenance module (RMM) requires two message channels to the host XPM. The RMM channels occupy channel 2 on each of the primary links.

The emergency stand-alone (ESA) processor also requires two message channels to the host. These ESA channels occupy channel 3 on each primary link. If the ESA processor is not present, channel 3 is available for speech traffic.

### **Signaling protocol**

The message channels on the primary DS-1 links have nailed-up connections to the DMS central control (CC). These message channels use the DMS-X protocol to communicate with the host.

The DMS-X is a half-duplex, byte-oriented protocol. The use of a full duplex message channel like the DS-links implements the DMS-X. The LCM processor handles the DMS-X message protocol through the LCM message channels to the host.

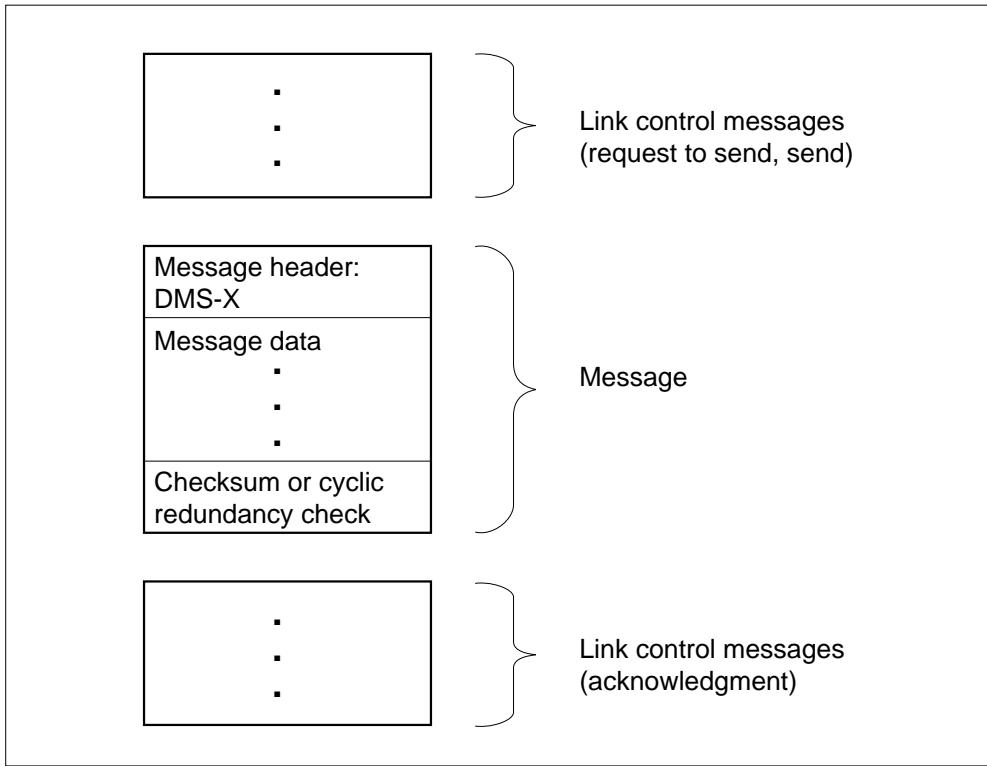
The RMM control card processes DMS-X messages, trunk messages and pulse code modulation (PCM) data. The ESA processor communicates with the host XPM with the use of DMS-X protocol when the OPM is in ESA mode.

### **The DMS-X protocol**

The DMS-X protocol is a state-driven code that requires handshake messaging between the OPM and host. Handshake messaging must occur at each stage of data transfer. The protocol allows the terminals in communication to delay the message transfer if a terminal is not ready.

A general form of the handshake protocol that composes DMS-X protocol appears in the following figure.

Figure 3-2 The DMS-X handshaking protocol

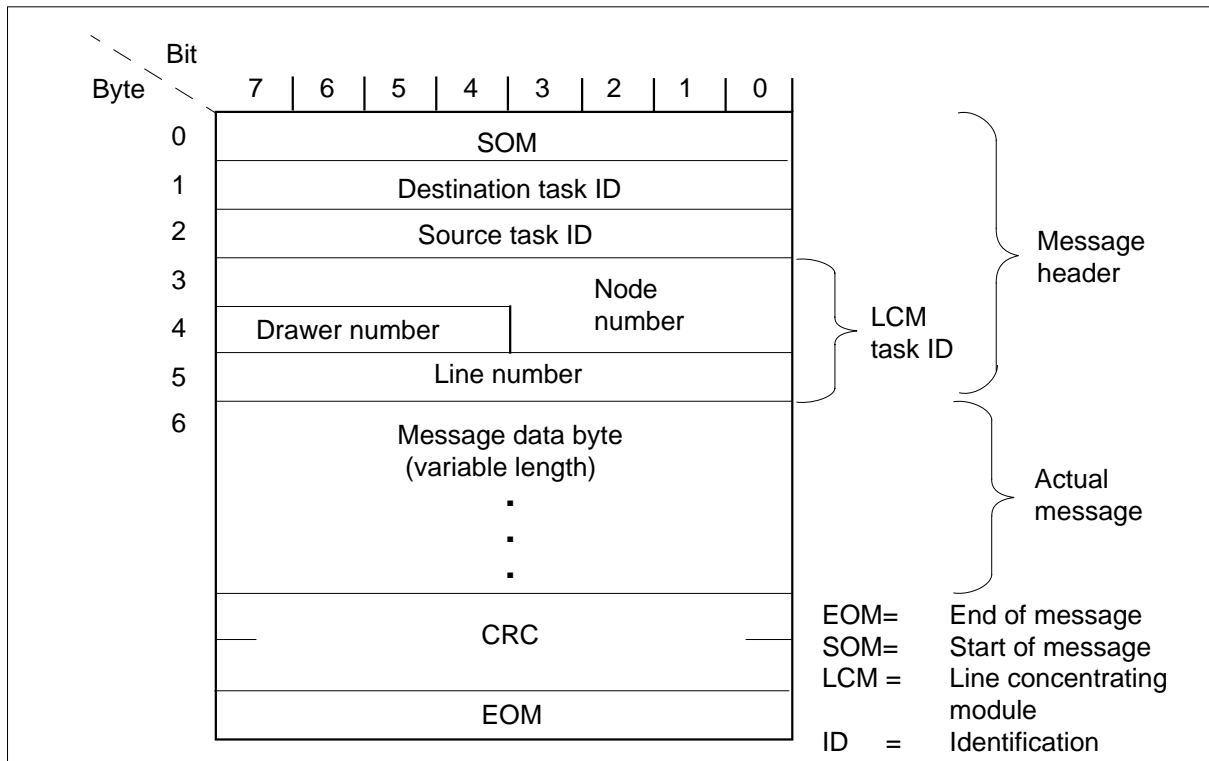


The DMS-X protocol includes a cyclic redundancy check (CRC) code for error detection. Message time-out and message checksum or CRC calculation perform message error detection.

When protocol, checksum, or CRC failure on an outgoing message occurs, the sending node attempts the send sequence again. When an incoming message failure occurs, the sending node routes the message through an alternate central-side (C-side) link. Hardware redundancies provide a minimum of one other path to and from a node.

The format of DMS-X messages appear in the following figure.

Figure 3-3 The DMS-X message format



The DMS-X message header is in the first 6 bytes. The description of the bytes appears in the following:

- the first byte specifies the start of message (SOM)
- the second byte specifies the destination task identification (ID) of the message. An outgoing message uses the destination ID to identify the process, the task in the LCM, that must receive the message.
- the third byte specifies the source task ID. An incoming message uses the source task ID to identify the LCM task that sent the message.
- the next 3 bytes specify the task ID number

The number of bytes in the message or data is variable. The CRC detects transmission errors. The CRC occupies two bytes. The end of message occupies 1 byte.

### Signaling functions

Signaling contains specified functions to support call processing activities. The specified functions are as follows:

- call origination
- tone generation

- digit collection
- ringing

### **Call origination**

Signaling transmits the on-hook and off-hook signals that allow the host XPM to identify the subscribers that request service.

When a subscriber lifts the handset from the cradle, a voltage source in the OPM provides a steady flow of current. The OPM sends the current through the transmitter. The LCM processor detects this current and sends an off-hook message to the central office (CO).

The CO reads the off-hook signal as a request for service. The CO allocates a channel on a DS-1 link to serve the subscriber line. The CO applies dial tone to the line.

The subscriber line transmits open pulses or dual tone multifrequency signals through the OPM to the CO. The type of telephone determines the type of signal that the subscriber line transmits. The CO analyzes the digits and determines if the call is an interoffice call. The calling end of the trunk is seized and a connect signal transmits forward to the called end of the trunk. The connect signal is a continued off-hook signal. This signal indicates a request for service. This signal continues until the connection ends.

### **Tone generation**

The host XPM provides all correctly cadenced tones. The OPM applies the cadenced tones as needed to subscriber lines. The tones the host supports and the OPM applies are as follows:

- the dial tone
- audible ringing
- warble ringing
- the busy tone
- the reorder tone
- the receiver off-hook (ROH) tone

### **Digit collection**

The OPM performs the digit collection function of subscriber dialing. Dial pulse or dual tone multifrequency (DTMF) signaling supports the type of dialing.

Dial pulsing or multifrequency signaling can transmit the address of a called party. These signals provide digit transmission only. These signals must



combine with other types of signaling to provide the DS-1 links with complete signaling ability.

### **Dial pulse signaling**

The LCM of the OPM performs dial pulse digit collection. The number of on-hook intervals in a train of pulses represents the numerical value of each digit.

Short off-hook intervals separate the on-hook intervals of each digit. Long off-hook intervals separate the digits. A percent of the pulse period (break + make duration) indicates the break time. The name of the break time is the percent break.

Three characteristics of dial pulsing are speed, percent break and interdigital time. The host XPM analyzes the dial pulsing characteristics. The host XPM assigns a channel or time slot in the digital line.

### **DTMF signaling**

Digitone phones send dial pulse or dual-tone multifrequency signals to transmit address information over a line. During normal operation, the RMM forwards this signal to the host. During ESA operation, the RMM sends this information to an RMM Digitone receiver.

The DTMF signals are specified groups of tones that represent digits (0-9) and other special units. Special trunk interface circuits decode the tones to digits. The special trunk interface circuits are the DT and MF receivers.

The RMM of the OPM analyzes the output of the receivers to identify the time the digits arrive in the receivers. The RMM relays the digits from the MF receiver to the host XPM. The host XPM analyzes the digits and assigns a channel or time slot in the digital line.

### **End-to-end signaling**

End-to-end signaling allows a subscriber to use a keypad to send DTMF signals to the far end. The keypad is part of a Meridian Digital Centrex (MDC) Meridian business set (MBS). The subscriber can press specified keys at the MBS to transmit DTMF signals to the machine. The DTMF signals can start, stop, rewind, and playback the recordings on tape at the machine. After each 130 ms DTMF signal, the PCM signal connects again.

### **Ringling**

The CO identifies the type of ringing to use. The CO sends a ringing signal to the OPM. The CO sends the ringing signal over the DS-1 channel associated with the called subscriber line. The ringing signal directs the OPM to connect

the ringing generator to that line. The CO provides the following ringing types:

- bridged ringing (single-party)
- superimposed ringing (multiparty)
- coded ringing (cadencing)
- frequency selective ringing (FSR)

### **ESA signaling**

The ESA feature is an emergency service. The ESA provides a part of call-processing abilities during a loss of communications to the host. The ESA provides call processing for basic station-to-station calls in the OPM for plain old telephone service (POTS) and MDC lines.

The OPM with the ESA feature package provides the same tones as an OPM in operation. The tones appear on channel 16 of the incoming C-side ports of the OPM. The OPM software provides tone cadence. The OPM controls the time switch in the link control card (LCC) to interrupt the tone.

The ESA processor sends a start cadence message to the OPM to provide a tone in ESA mode. This message specifies the tone required, the terminal identification, and the cadence times.

When the OPM receives the make cadence message, the OPM performs the following steps:

#### **Procedure 3-1**

- 1 Breaks terminal current receive path connection, if required.
- 2 Connects the receive path of the terminal to the correct port.
- 3 Sets the specified cadence for the tone.

The handling of idle tone also uses the start cadence message. The OPM connects the receive path to a port that provides idle tone.

## **Preparing to datafill OPM**

### **PCL—New Software Delivery Vehicle**

After BCS36, Northern Telecom begins to deliver Product Computing-Module Loads (PCLs). These PCLs are delivered instead of BCS releases or Universal Software Loads (USLs).

A PCL contains features from the development stream software product for a specified application in a specified market. The PCL contains the abilities

earlier divided between many related NTX packages. An eight-digit ordering code replaces the NTX package codes.

The ordering code and Functional Group name required for the OPM appears in the following table. A list of the earlier NTX packages in the Functional Group also appears in the table. These abilities associate with the OPM.

**Table 3-1 OPM ordering code**

Ordering code	Name	Former NTX package codes
BAS00012	BAS Remotes Generic	NTX146AA—Remote Line Concentrating Module  NTX147AB—Outside Plant Module Maintenance  NTX154AA—Emergency Stand-Alone Operation  NTX156AA—RLCM Intracalling

**Tasks associated with datafilling the OPM**

The OPM tables fall in several categories. These categories comprise the tasks associated with datafill entries for the OPM. The categories of tables in which you enter datafill appear in the following summary:

- test trunks, test lines, and service circuits in table CLLI
- RLCM components and location datafill in tables SITE, LTCINV, LTCPSINV, LCMINV, RMMINV, DFINV and LNINV
- call processing translations in the lines, trunks, screening, and routing tables. These tables are TRKGRP, TRKSGRP, TRKMEM, LINEATTR, LENLINES, LENFEAT and DNROUTE.
- system alarms in tables ALMSCGRP, ALMSDGRP, ALMSD and ALMSC
- spare scan and signal distribution points in tables SCGRP and SDGRP
- metallic test access assignments in tables MTAMDRVE, MTAVERT and MTAHORIZ

**Procedures for datafilling procedures for the OPM**

The datafill procedures in this guide list the field and subfield names of key tables. Enter data in these key tables for the OPM. The guide provides explanations of each field and subfield. The guide provides and information for the OPM datafill. This guide also provides examples of field entries for most fields and subfields.

The following chapters of this guide describe the key tables for the OPM. Other tables contain datafill for call processing, scan and signal distribution points and system alarms. The data schema section of the *Translations* Guide describes the other tables.

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## Basic call processing

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### Functional group

Functional group BAS00012

### Release applicability

XPM05 and up

### Requirements

To operate, Basic call processing requires functional group BAS00003.

### Description

The BAS00003 functional group allows the RLCM to provide basic call processing capability to a maximum of 640 subscriber lines.

Some of the features of BAS00003 are as follows:

- line testing capability
- alarms processing
- coin capability
- operational measurements (OM)
- basic maintenance features

The RLCM also supports Meridian Digital Centrex (MDC). The MDC provides centralized telephone exchange services for businesses.

### Operation

Two to six DS-1 links connect the RLCM to one of the following basic maintenance features:

- line trunk controller (LTC)
- line group controller (LGC)
- Remote Switching Center (RSC)

When the RLCM connects to one of the above features, the RLCM functions as an interface. The interface is present between the host network DS-1 links and a maximum of 640 locally connected subscriber lines.

The RLCM has remote functions that allow the RLCM to operate at a maximum distance of 161 km (100 miles) from the host office.

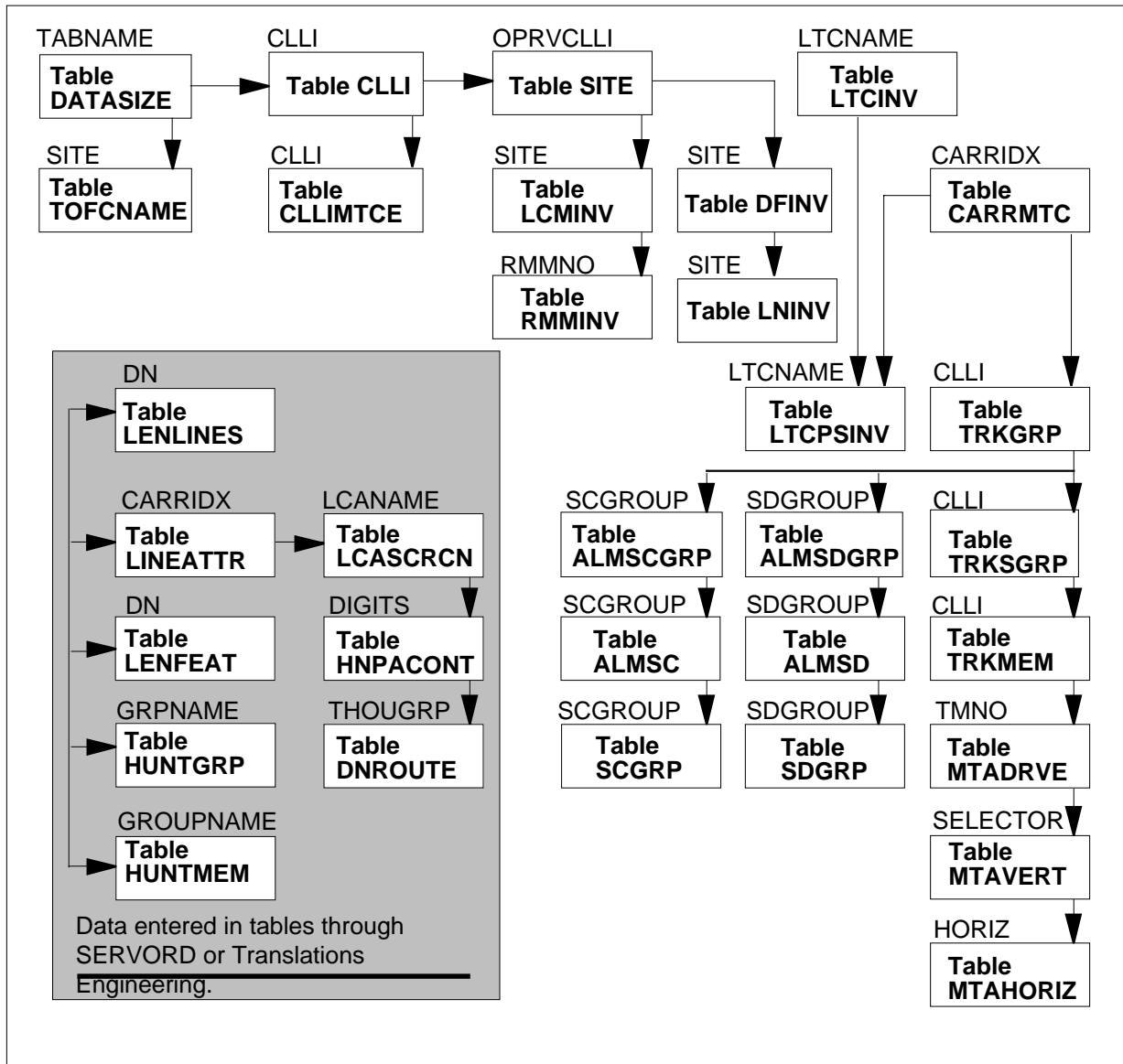
### User interface

Basic call processing does not affect the user interface.

## Basic call processing (continued)

### Translations table flow

The Basic call processing translation process appears in the following flowchart.



### Limits

Basic call processing does not have limits.

### Interactions

Basic call processing does not have functionality interactions.

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## Basic call processing (continued)

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### Activation/deactivation by the end user

The end user does not need to activate or deactivate Basic call processing.

### Billing

Basic call processing does not affect billing.

### Station Message Detail Recording

Basic call processing does not affect Station Message Detail Recording.

### Entering office parameters

The following table shows the office parameters that Basic call processing uses. For more information about office parameters, refer to *Office Parameters Reference Manual*.

#### Office parameters by Basic call processing (Sheet 1 of 2)

Table name	Parameter name	Explanation and action
OFCENG	#_OF_BC_LAMA_UNITS	This parameter specifies the number of recording units the host office requires to collect call data during a dump. The dump is to a tape or disk by the call buffer.
OFCENG	#_OF_NT_RECORDING_UNITS	This parameter specifies the number of Northern Telecom (Nortel) recording units the host office requires to collect call data when all the automatic message accounting (AMA) buffers are full.
OFCENG	MAX_NO_OF_ALT_TEST_PROCS	This parameter speeds up automatic line testing (ALT) in the host office. The parameter allows several test processes from different ALT users to run at the same time under the control of one ALT process.
OFCENG	NO_OF_FTR_CONTROL_BLOCKS	This parameter specifies the number of feature control blocks the host office requires if the host office has vertical features or MDC feature packages.
OFCENG	NMULTIBLKS	This parameter allocates memory and multiblocks for three-way calling, and call waiting features assigned to lines in the host office.

## Basic call processing (continued)

### Office parameters by Basic call processing (Sheet 2 of 2)

Table name	Parameter name	Explanation and action
OFCENG	NUMPERMEXT	This parameter allocates permanent external memory that specified features in the host office can require.
OFCENG	TALK_BATTERY_ALARM	This parameter activates the automatic audits of the talk battery in all LCM/XLCM/LCME/RLCM/OPM/OPAC peripheral modules when set to default Y.
OFCVAR	BICRELAY_XLCM_TESTS_SCHEDULED	This parameter allows the user to define the start time and stop time of the bus interface card relay test (BRT). The definition of the start and stop times defines the window for the office-level test.
OFCVAR	BICRELAY_NUM_SIMUL_TESTS	This parameter indicates the number of line concentrating module (LCM) level tests that can run at the same time.
OFCVAR	PMSTAT_OM_CONTROL	This parameter allows the user to activate and deactivate data collection for processor occupancy measurements in the PMSTAT OM group.
OFCVAR	NODEREXCONTROL	This parameter governs execution of all system routine exercise (SREX) tests (nodes). The fields of the table are REXON (default is Y), REXSTART (default is 1:30), and REXSTOP (default is 3:30).  <b>Note:</b> Datafill in table REXSCHED controls individual REX test nodes.

### Office parameter #\_OF\_BC\_LAMA\_UNITS

This parameter specifies the number of recording units the host office requires to collect call data when the call buffer dumps. The call buffer dumps to a tape or disk. If the office has local automatic message accounting (LAMA) system billing, this call data is used. System billing requires call data to operate. A



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**Basic call processing** (continued)

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formula that combines traffic statistics for the following features determines the value for this parameter.

- MDC feature package
- Datapath feature package
- call-forwarding vertical feature

If the RLCM supports any of the above features, the value for `#_OF_BC_LAMA_UNITS` must increase.

**Office parameter `#_OF_NT_RECORDING_UNITS`**

This parameter specifies the number of Northern Telecom recording units the host office requires to collect call data when all the AMA buffers are full.

If the centralized automatic message accounting (CAMA) or LAMA systems are in the office, the system uses the data for billing purposes. The traffic statistics for the following features determine the value for parameter `#_OF_NT_RECORDING_UNITS`:

- MDC feature package
- inward wide-area telephone service (INWATS) feature package
- call-forwarding vertical feature

If the RLCM supports any of the above features, the value of parameter `#_OF_NT_RECORDING_UNITS` must increase.

**Office parameter `MAX_NO_OF_ALT_TEST_PROCS`**

This parameter increases the speed of ALT in the host office. The parameter allows several test processes from different ALT users to run at the same time. The test processes run under the control of one ALT process. The number of the following test units configured in the office determines the parameter value:

- transmission test unit (TTU) NT2X47 and NT2X56
- line test unit (LTU) NT2X10 and NT2X11

The value of this parameter must increase by two for each LTU configured in the remote maintenance module (RMM) shelf of the RLCM. This parameter value is not affected under the following conditions:

- RLCM is not provisioned with an RMM
- RLCM is provisioned with an RMM without an LTU

## **Basic call processing** (continued)

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### **Office parameter NO\_OF\_FTR\_CONTROL\_BLOCKS**

This parameter specifies the number of feature control blocks required in the host office. The number represents the feature control blocks in a host office with vertical features or MDC feature packages. The number of plain ordinary telephone service (POTS) lines in the office that support vertical features or MDC determines the value for this parameter.

If the RLCM supports MDC lines or lines with vertical features, the value of NO\_OF\_FTR\_CONTROL\_BLOCKS may need to increase.

### **Office parameter NMULTIBLKS**

This parameter allocates memory (multiblocks) for Three-way Calling and Call Waiting features assigned to lines in the host office. The value of parameter NO\_OF\_FTR\_CONTROL\_BLOCKS in part determines the value of this parameter.

See the previous description of the NO\_OF\_FTR\_CONTROL\_BLOCKS for conditions that necessitate both of these parameters as they apply to RLCM lines.

### **Office parameter NUMPERMEXT**

This parameter allocates permanent external memory that certain features in the host office require. You must assign a value to parameter NUMPERMEXT if parameter NO\_OF\_FTR\_CONTROL\_BLOCKS is provisioned. The value of the feature control blocks parameter in part determines the value of this parameter.

Refer to parameter NO\_OF\_FTR\_CONTROL\_BLOCKS for the conditions of parameter NUMPERMEXT as this parameter applies to RLCM lines.

### **Office parameter TALK\_BATTERY\_ALARM**

This parameter activates the automatic audits of the talk battery in all LCM/XLCM/LCME/RLCM/OPM/OPAC peripheral modules. When this parameter changes, activation is immediate.

### **Office parameter BICRELAY\_XLCM\_TESTS\_SCHEDULED**

This parameter in table OFCVAR allows the user to define the start time and stop time of the bus interface card (BIC) relay test (BRT). The start time is field BRTST\_START\_TIME and the stop time is field BRTST\_STOP\_TIME. The definition of the start and stop times defines the window for the office-level test.

You cannot enter the same value for the start and stop time fields. The values must indicate a window of a minimum of 10 min. The third field of this

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## Basic call processing (continued)

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parameter is parameter BRTST\_DAYS\_OF\_TST. This parameter specifies the day or days of the week the office-level test must run.

The entries for this field are MON, TUE, WED, THU, FRI, SAT and SUN. You can enter a maximum of seven days. You cannot enter the same day twice.

### Office parameter BICRELAY\_NUM\_SIMUL\_TESTS

This parameter appears in table OFCVAR. The parameter indicates the number of LCM level tests that can run at the same time. You can use the start and stop times in BICRELAY\_XLCM\_TESTS\_SCHEDULED with this parameter. Use the start and stop time values to configure a window that suits the number of LCMs and RLCMs in the office.

You must only change this parameter when the current date and time do not match the times of the scheduled window.

If you need to change the values immediately, stop the BRT that uses the command interpreter (CI) and BICRELAYOFF command. After you make the changes, issue the BICRELAYON command to restore BRT testing.

### Office parameter PMSTAT\_OM\_CONTROL

This parameter appears in table OFCVAR. This parameter allows the user to activate or deactivate data collection for processor occupancy measurements in the PMSTAT OM group. The parameter defaults to ON.

If the PMSTAT\_OM\_CONTROL parameter changes, data transmits immediately to all XMS-based peripheral modules (XPMs). These XPMs have subtending extended-memory line concentrating modules (XLCMs).

If the XPM is in an in-service (InSv) or in-service trouble (ISTb) state, the maintenance and administration position (MAP) terminal displays a confirmation message. The confirmation message reads `polling activated` or `polling deactivated`.

If the XPM is in an out-of-service (OOS) or manual busy (ManB) state, the data transmits during the return-to-service (RTS) action.

An audit makes sure that all INSV or ISTb XPMs report data when the PMSTAT\_OM\_CONTROL parameter is in the ON position. If the audit determines that the XPMs do not report data, the system sends the static data again to the XPM. The XPM begins data collection on the XLCM of an XPM unit that did not report the data.

**Note:** You must only change this office parameter during low traffic periods to prevent undue stress on the message system.

## Basic call processing (continued)

### Office parameter NODEREXCONTROL

Control of routine exercise (REX) testing for line concentrating modules (LCM) transfers from parameter LCDREX\_CONTROL in table OFCVAR. The testing of LCM ring and voltage values was part of section LCM\_REX. Currently, the testing divides into an LCM converter test (LCM\_COV\_REX). The control of LCM\_REX\_TEST and LCMCOV\_REX\_TEST is currently part of system REX (SREX). The control of parameter LCM\_REX\_TEST and LCMCOV\_REX\_TEST transfers to parameter NODEREXCONTROL in table OFCVAR. Parameter LCDREX\_CONTROL remains to control REX testing of line modules (LM).

*Note:* The LCMCOV\_REX\_TEST must run on LCMs, XLCMs, OPMs and RLCMs.

### Datafill sequence

You must enter data in the tables in the order the tables appear for BAS00012 functional group to operate correctly. After you enter the tables, reload both the host XPM and the RLCM from the central control (CC). This reload activates the BAS00012 functional group.

The following table lists the tables in which you must enter data to implement Basic call processing. The tables appear in the order in which you must datafill the tables.

#### Datafill requirements for Basic call processing (Sheet 1 of 4)

Table	Purpose of table
DATASIZE	Guarantees adequate system memory to accommodate additional entries in trunk group tables
CLLI	Identifies the maintenance and test trunks in the RLCM
SITE	Allows the DMS switch to recognize the remote equipment tied to the host
PMNODES	Peripheral module node table. Table PMNODES is read only. The CM uses table PMNODES to control XPM unit node tables. The system enters table PMNODES when entries are added or changed in inventory tables. An entry is present in table PMNODES for all subtending nodes of each XPM. Fields are updated to reflect CM control of configuration data tables (CDT) in the XPM nodes.
<p><b>Note 1:</b> Different table applications require different versions of data schema forms. See the corresponding data schema section for the correct form version.</p> <p><b>Note 2:</b> Additional data schema sections explain datafill for each required trunk group type.</p> <p><b>Note 3:</b> The version of office alarm equipment in the office determines the data schema section.</p>	

**Basic call processing** (continued)**Datafill requirements for Basic call processing (Sheet 2 of 4)**

<b>Table</b>	<b>Purpose of table</b>
LTCINV	Tracks inventory of various peripheral module (PM) types and excludes P-side link assignments
LTCPSINV	Identifies the module type and number and the port designation of the P-side links
CARRMTC	Sets the maintenance and engineering parameters and characteristics for DS-1, T1 carrier spans
LCMINV	Lists data assignment for each frame associated with an LCM unit
RMMINV	Identifies an RMM by its location, product engineering code (PEC), PM load executive program and C-side PM
REXSCHED	System REX scheduling of frequency and number of concurrent SREX tests. Used along with parameter NODEREXCONTROL in table OFCVAR to control the execution of all SREX tests. Tuples are automatically added to this table after inventory tables are datafilled.
LCASCRCN	Assigns local calling area names to serving trunk group area codes
TRKGRP	Identifies the test circuits associated with the maintenance and test trunks
TRKSGRP	Lists the supplementary information for each subgroup that is assigned to one of the trunk groups listed in table TRKGRP
TRKMEM	Identifies the circuits that associate with the test equipment that tests lines and trunks
CLLIMTCE	Lists the testing parameters for each trunk group CLLI
ALMSCGRP	Lists alarm scan circuits and their locations and card types and serves as a head table for the respective scan points
ALMSC	Identifies the functions each of the assigned scan points perform in the alarm scan groups
ALMSDGRP	Lists alarm signal distributor (SD) circuits and their locations and card types and serves as a head table for the respective SD points
ALMSD	Identifies the function each of the assigned SD points perform in the alarm SD groups
<p><b>Note 1:</b> Different table applications require different versions of data schema forms. See the corresponding data schema section for the correct form version.</p> <p><b>Note 2:</b> Additional data schema sections explain datafill for each required trunk group type.</p> <p><b>Note 3:</b> The version of office alarm equipment in the office determines the data schema section.</p>	

## Basic call processing (continued)

### Datafill requirements for Basic call processing (Sheet 3 of 4)

Table	Purpose of table
DFINV	Identifies the location of distributing frames at the host or remote sites
SCGRP	Lists the PEC and the physical location at the host or remote switching units for the spare scan groups. These scan groups are reserved for use as scan points for line features
SDGRP	Lists the PEC and the physical location at the host or remote switching units for the spare SD groups. These scan groups are reserved for use as SD points for line features
TOFCNAME	Lists all terminating offices in the switch
LINEATTR	Assigns line attributes to regular lines in table LENLINES, Meridian stations and attendant consoles in the MDC translations tables
LNINV	Retains an inventory of subscriber lines and associated line cards for the RLCM
HUNTGRP	Stores the data for the hunt groups assigned in the switching unit
LENLINES	Lists the following data for each line: <ul style="list-style-type: none"> <li>• site name, if the line is remote</li> <li>• line equipment number</li> <li>• specifies the party where the directory number is assigned</li> <li>• specifies the ringing code assigned to the directory lines</li> <li>• directory number</li> <li>• signal type</li> <li>• index into table LINEATTR</li> <li>• list of options</li> </ul>
LENFEAT	Lists the features assigned to a specific line in table LENLINES
HUNTMEM	Lists the members assigned to the hunt groups listed in table HUNTGRP
DNROUTE	Lists information for writeable directory numbers in the switch
HNPACONT	Lists the home numbering plan area (HNPA) subtables
<p><b>Note 1:</b> Different table applications require different versions of data schema forms. See the corresponding data schema section for the correct form version.</p> <p><b>Note 2:</b> Additional data schema sections explain datafill for each required trunk group type.</p> <p><b>Note 3:</b> The version of office alarm equipment in the office determines the data schema section.</p>	

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## Basic call processing (continued)

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### Datafill requirements for Basic call processing (Sheet 4 of 4)

Table	Purpose of table
MTAMDRVE	Specifies the physical location and the type of the minibar driver assigned to the minibar switch
MTAVERT	Identifies the vertical connectivity to the MTA matrix
MTAHORIZ	Lists the assignment to a horizontal and horizontal group of MTAMs
<p><b>Note 1:</b> Different table applications require different versions of data schema forms. See the corresponding data schema section for the correct form version.</p> <p><b>Note 2:</b> Additional data schema sections explain datafill for each required trunk group type.</p> <p><b>Note 3:</b> The version of office alarm equipment in the office determines the data schema section.</p>	

### Datafill examples

The following paragraphs describe each possible table for datafill required for activation of BAS00012 functional group. Illustrations provide sample tuples. Refer to the *Translation Guide* for more information on tables.

Actual office configuration and provisioning determines the need for datafill in tables. You may not need to enter data in all tables. Office configuration determines the number of tuples each table needs. The system establishes datafill needs at the installation of the RLCM.

The continuation mark (CONTMARK) appears in data tables when the next record indicates additional data for a subfield. Enter a dollar sign (\$) to end the vector.

### Datafilling table DATASIZE

Table DATASIZE makes sure enough system memory is present to accommodate additional entries in tables CLLI, TRKGRP, TRKSGRP, SCGRP, and SDGRP. The tables require enough system memory to allow the addition of RLCM maintenance facilities. The table initially contains default values for field sizes. You can use the REPLACE command to change a default value.

**Note:** Only Northern Telecom can change the SIZE field after the initial input of the size value for a specified table.

### Datafill example for table DATASIZE

Sample datafill for table DATASIZE appears below.

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## Basic call processing (continued)

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### MAP display example for table DATASIZE

DATSKEY	SIZE
CLLI	650
:	:
SCGRP	100
SDGRP	100
:	:
TRKGRP	500
TRKSGRP	500

### Datafilling table CLLI

The common language location identifier (CLLI) table identifies the hardware source of each of the following in the DMS-100 switch:

- tone
- announcement
- trunk group
- test trunk
- service circuit

If the RLCM has an RMM shelf, the RMM circuits can require additional entries in the tables. Examples of additional entries are the remote operator verification (REMOTEVER90) and the remote test desk (REMOTETESTDK).

The system creates some CLLI table entries automatically. The entries are created when corresponding features are in the DMS-100 switch and may already be in table CLLI.

If the RMM circuits do not require additional entries, check the trunk group sizes of CLLI entries assigned in field TRKGRSIZ. Complete this action to make sure the trunk group can accommodate RMM.

Check the following trunk group sizes in table CLLI:

- LTU line test unit
- MONTALK monitor/talk connection
- OAUSC office alarm unit scan points



**Basic call processing** (continued)

- OAUSD office alarm unit SD points
- MTADRIVER metallic test access driver

The total number of entries to which memory is allocated in table CLLI is equal to the value of field SIZE. Field SIZE appears in table DATASIZE for key CLLI.

The following table shows the datafill specific to Basic call processing for table CLLI. Only those fields that apply directly to Basic call processing appear.

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

**Datafilling table CLLI (Sheet 1 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
CLLI		refer to subfields (a maximum of 16 characters)	Common language location identifier. Enter a specific 16-character field to identify the far end of each announcement, tone, trunk group, test trunk, national milliwatt test lines, and service circuit.  The recommended method to name CLLI is PLACE, PROV, BLDG, TRAFUNIT and SUFX.
	PLACE	alphanumeric	Place. Enter a four-character code to identify the name of the city or town at the far end of each group.
	PROV	alphanumeric	Province or state. Enter a two-character code to identify the province or state at the far end of the trunk group.
	BLDG	alphanumeric	Building. Enter a two-character code to identify the building number at the far end of the trunk group.
	TRAFUNIT	alphanumeric	Traffic unit. This three-character code identifies the destination of the traffic unit at the far end of the trunk group.
	SUFX	alphanumeric	Suffix. This one-character code identifies trunk groups that terminate at the same CLLI location.
<p><b>Note:</b> The SIZE field allocates memory in the data size (DATASIZE) table for the entry with field DATSKEY equal to CLLI. The maximum number of CLLI codes is 8192.</p>			

**Basic call processing** (continued)

**Datafilling table CLLI (Sheet 2 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
ADNUM		numeric	Administrative trunk group number. Enter a number from 0 to a number one less than the size of table CLLI in table DATASIZE. The value must be unique.
TRKGRSIZ		0 to 2047	Trunk group size. This four-character field is equal to the maximum quantity of trunk members to be assigned to the trunk group.
ADMININF		alphanumeric (up to 32 characters)	Administrative information. The operating company uses this 32-character field to record administrative information.  The switching unit does not use the information in this field. The recommended subfields are TRAFCLS, OFFCLS, and TRKGRTYP.
	TRAFCLS	alphanumeric	Trunk group traffic class. This field is optional input for administrative purposes only.
	OFFCLS	alphanumeric	Office class. This field is optional input for administrative purposes only.
	TRKGRTYP	alphanumeric	Trunk group type. This field is optional input for administrative purposes only.

**Note:** The SIZE field allocates memory in the data size (DATASIZE) table for the entry with field DATSKEY equal to CLLI. The maximum number of CLLI codes is 8192.

**Datafill example for table CLLI**

The following example shows sample datafill for table CLLI.

**MAP display example for table CLLI**

CLLI	ADNUM	TRKGRSIZ	ADMININF
SYNCH	8	10	SYNCH/NONSYNCH
OFFHKSUP	9	10	SUPERVISION_SIGNAL_OFFHOOK
RSMVER90	23	10	REMOTE_SERVICE_MOD_VERIFICATION
OPMPES	78	198	OUTSIDE_PLANT_MODULE_PES
ALMSC	79	240	ALARM_SC
ALMSD	80	240	ALARM_SD
RLCMVER90	81	10	RLCM_REMOTE_VER_CKR

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**Basic call processing** (continued)

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**Datafilling table SITE**

Table SITE lists all node sites that require the DMS-100 switch and the miscellaneous configuration information for each of these sites. The first entry in table SITE contains the site name and the operator verification truck group (VER90) for the host switching office.

The RLCM requires an entry in table SITE. The entry contains the following:

- the remote site name for the RLCM
- the operator verification trunk group for the RLCM
- REMOTEVER90
- the three SD points assigned to critical, major and minor alarms for the RLCM

*Note:* This datafill reserves three of the seven SD points in one RLCM SD group. You cannot assign the four SD points that remain in this SD group to lines for line features.

If more than one RLCM is present at each remote site, you must give each RLCM a different site name.

The following table shows the datafill specific to Basic call processing for table SITE. Only those fields that apply directly to Basic call processing appear.

## Basic call processing (continued)

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

### Datafilling table SITE (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
NAME		alphanumeric (a maximum 4 characters)	Site name. Enter the site name assigned to the remote switching unit. The first character must be alphabetic. Site names can be a maximum of four characters in length. You cannot use the PM type names for site names.  <b>Note:</b> The first entry in this field is for the host switching unit.
LTDSN		00 to 99	The LEN test desk site number. Enter the two-digit number required to dial the site that appears under field NAME.
MODCOUNT		0	Module count. Enter zero. The system updates this field when you enter data in table LCMINV.
OPVRCLLI		alphanumeric	Operator verification CLLI. Enter the CLLI assigned to the operator verification trunk group at the remote location.
ALMDATA		refer to subfields	Alarm data. This field is for remote locations only and contains subfields ALMTYPE, TMTYPE, TMNO, TMCKTNO and POINT.
	ALMTYPE	CR, MJ, or MN	Enter the alarm type as critical (CR), major (MJ) or minor (MN).
	TMTYPE	RMM	Enter the trunk module type (remote service module) located at the miscellaneous SD point assigned to the alarm.
ALMDATA	TMNO	0 to 255	Enter the number assigned to the remote service module where the miscellaneous SD point assigned to the alarm is located.
<p><b>Note 1:</b> Memory is automatically allocated for a maximum of 32 sites.</p> <p><b>Note 2:</b> Changes to fields with multiple entries must be made in the PROMPT mode only. In nonprompt mode it is possible to leave out already present entries.</p> <p><b>Note 3:</b> Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p>			

**Basic call processing** (continued)

**Datafilling table SITE (Sheet 2 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
	TMCKTNO	0 to 27	Enter the trunk module circuit on the remote service module where the miscellaneous SD point assigned to the alarm is located.
	POINT	0 to 6	Enter the SD point number within the trunk module circuit number which is assigned to the alarm.
<p><b>Note 1:</b> Memory is automatically allocated for a maximum of 32 sites.</p> <p><b>Note 2:</b> Changes to fields with multiple entries must be made in the PROMPT mode only. In nonprompt mode it is possible to leave out already present entries.</p> <p><b>Note 3:</b> Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p>			

**Datafill example for table SITE**

Sample datafill for table SITE appears below.

**MAP display example for table SITE**

NAME	LTDSN	MODCOUNT	OPVRCLLI	ALMDATA
HOST				
01		34	VER90	\$
RLCM0				
02		2	RLCM0VER90	\$
RLCM1				
03		2	RLCM1VER90	\$
RCR0				
04		1	RCR0VER90	\$

**Datafilling table PMNODES**

Table Peripheral module nodes (PMNODES) is read only. The CM uses table PMNODES to control XPM unit node tables. The system automatically enters data in table PMNODES when you add or change entries in inventory tables. An entry is present in table PMNODES for all subtending nodes of each XPM. The system updates fields to reflect CM control of configuration data tables (CDT) in the XPM nodes. Holes can appear in the table when nodes are

**Basic call processing** (continued)

deleted. Holes are not always filled when new nodes are added. Tuples in table PMNODES all have subtending nodes with a higher index than the head node of the subtending node.

**Datafilling table PMNODES for RSC basic operation (Sheet 1 of 3)**

Field	Subfield or refinement	Entry	Explanation and action
TABKEY		0 to 4095 0 to 117	Table key. Enter a two-part key that a space separates. The entry identifies the XPM with the unit node table. The first part of the entry is the host external node number. The second part is the internal index number. Examples: The first key of an LTC with an external node number of 25 is 25 1. The key of the first XPM attached to the LTC is 25 2.
EXTNDNUM		0 to 4095	External node number. Enter the external number that the CM assigns to the XPM. Field TABKEY identifies this number. Example: If the first XPM in the example above is an RCC with an external node of 33, the key of 25 2 refers to XPM external node 33 in the LTC node tuple. The RCC also has a node tuple key of 33 1 to represent that node.
NODETYPE		refer to list	Node type of XPM. Enter a generic type of PM node. You can enter LTC_NODE, RCC_NODE, LCM_NODE or RCS_NODE.
PMTYPE		see list	PM type. Enter a specific PM type assigned to the node. You can enter RCC, LCM, SMSR or LTC.
LEVEL		0 to 15	The PM level. Enter the number of device levels that separates the XPM node from the messaging host. The entry number begins at level 0 for messaging (head) XPMs. Examples: An LCM at level 2 attaches to the RCC at level 1. Level 1 attaches to the HOST LTC at level 0. The same LCM is at level 1 of the RCC tuple at level 0.

**Basic call processing** (continued)**Datafilling table PMNODES for RSC basic operation (Sheet 2 of 3)**

<b>Field</b>	<b>Subfield or refinement</b>	<b>Entry</b>	<b>Explanation and action</b>
MSGHOST		0 to 4095	Messaging host. Enter the external node that transfers messages to this node. A messaging host must be able to transfer messages. Examples: The LTC and RCC are XPMs that can transfer messages. The RCU and SMSR are XPMs that cannot function as messaging hosts.
PHYSHOST		0 to 4095	Physical host. Enter the external node to which this XPM node is physically attached. Example: The LCME is physically attached to RCC at external node 33.
PORTS		0 to 127	Number of ports. Enter the total number of P-side ports in the physical host that this XPM node requires.
STPORT		0 to 255	Starting port. Enter the first P-side port in the physical host that this XPM node uses
TERMS		0 to 4095	Number of terminals. Enter the total number of terminals in the physical host that this XPM node requires.
STTERM		0 to 8675	Starting terminal. Enter the first terminal in the physical HOST that this XPM node uses.
PROTOCOL		alphanumeric	Message protocol. Enter the type of message protocol that the physical host uses for node links. Examples: MDS30, MDMSX or MHDLC
MS		M or S	Master or slave. Enter M if this node contains the master clock.
IPML		Y or N	Inter-peripheral message link (IPML). Enter Y if the configuration of this node reveals the node as part of an IPML.
MODE		T or P	Table entry mode. Enter T for terminal indexing. Enter P for port indexing.
SLLCON		Y or N	Site line load control. Enter Y if this node is at a site that uses Essential Line Service Protection (ESP) or other site line load control features.

**Basic call processing** (continued)

**Datafilling table PMNODES for RSC basic operation (Sheet 3 of 3)**

Field	Subfield or refinement	Entry	Explanation and action
NT6X28		N	Uses NT6X28 card. Enter Y if this XPM uses the NT6X28 card. The International Digital Trunk Controller (IDTC) uses the NT6X28 signaling interface card. Always enter N.
LCMLGMEM		Y or N	The LCM large memory. Enter Y if this XPM is an LCM with large memory (for example, 256k bytes).
RSVPORTS		Y or N	Reserved ports. Enter Y if this XPM has ports reserved for messaging.
RSVTERMS		Y or N	Reserved terminals. Enter Y if this XPM has terminals reserved for messaging.
MATENODE		Y or N	Mate node. Enter Y if this node is part of a dual configuration.
PACKED		Y or N	Packed internal tables. Enter Y if the system packs internal node tables on this node. Before the creation of this feature, compression of the node table occurred when the XPM was RTS with the NODATASYNC option. Currently, compression only occurs when the CM sets to out-of-service (OOS) and loads both units of an XPM.
SUPPCDT		Y Y	Support configuration data table (CDT). Enter Y for each unit if the XPM supports CDT management.
CMINCTRL		Y or N	The CM node control. Enter Y if the CM controls the node.

**Datafill example for table PMNODES**

The following examples show datafill for an LTC node with an RCC node connected and an LCME connected to the RCC.



---

**Basic call processing** (continued)

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**MAP display example for table PMNODES (LTC tuple)**

```

Table: PMNODES

  TABKEY  EXTNDNUM  NODETYPE  PMTYPE  LEVEL  MSGHOST  PHYSHOST  PORTS
    25     1         25    LTC_NODE    LTC     0         25         25     16

STPORT  TERMS  STTERM  PROTOCOL  MS  IPML  MODE  SLLCON  NT6X28  LCMLGMEM  RSVPORTS
   0     641     1    MDS30A   S   N    P     N       N         N         N       Y

RSVTERMS  MATENODE  PACKED  SUPPCDT  CMINCTRL
          Y         N         Y         YY         Y

```

**Datafilling table LTCINV**

The line trunk controller inventory (LTCINV) table contains all inventory data except P-side link assignment for the LTC line group controller (LGC). Memory is allocated as required to allow a maximum of 210 tuples in tables LTCINV and LTCRINV combined.

Table LTCINV must contain an entry for the host controller that connects the RLCM to the DMS-100 network. Table LTCINV identifies the following information:

- type and location of the host controller peripheral equipment
- executive programs of the host controller peripheral equipment
- C-side links between the host controller and the network

The following table shows the datafill specific to Basic call processing for table LTCINV. Only those fields that apply directly to Basic call processing appear.

## Basic call processing (continued)

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

### Datafilling table LTCINV (Sheet 1 of 4)

Field	Subfield or refinement	Entry	Explanation and action
LTCNAME		refer to subfields	Line trunk controller name. Contains subfield XPMTYPE and XPMNO.
	XPMTYPE	LTC or LGC	XPM type. Enter LTC if the XPM must support trunking. Enter LGC if the XPM must support lines only.
	XPMNO	numeric	XPM number. The range for NT40 is 0 to 127. The range for SuperNode is 0 to 255.  <b>Note:</b> Operating company personnel can number the XPMs from 0 to 255 but the total number of tuples in tables LTCINV and LTCRINV combined cannot exceed 210 XPMs. The XPM types can be any combination of types accepted by the two tables.
<b>Note 1:</b> The system automatically allocates memory to a maximum of 128 tuples for table LTCINV.			
<b>Note 2:</b> You must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode, entries that are already present can be left out.			
<b>Note 3:</b> Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies more data or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.			

**Basic call processing** (continued)

Datafilling table LTCINV (Sheet 2 of 4)

Field	Subfield or refinement	Entry	Explanation and action
ADNUM		numeric	<p>Peripheral module administrative number. Enter the administrative number associated with the PM. The range is 0 to 4095.</p> <p><b>Note 1:</b> The value of field ADNUM must be unique across all PM inventory tables (DLMINV, IPEINV, LCMINV, LMINV, LTCINV, RCCINV, RCSINV, RCTINV and VSRINV). The system rejects attempts to add a PM with an ADNUM already in use. The system prompts the user with the next available ADNUM value.</p> <p><b>Note 2:</b> An Engineering and Administrative Data Acquisition System (EADAS) or data collection (DC) section associated with the OM groups LMD or UTR can include the OM values for the PM. You cannot change field ADNUM if one of these sections includes the OM values for that PM.</p>
FRTYPE		LTE or LGE	<p>Frame Type. Enter LTE for the LTC; enter LGE for the LGC.</p> <p><b>Note:</b> Enter the location of this PM in fields FRNO, SHPOS, FLOOR, ROW and FRPOS.</p>
EQPEC		6X02AG or 6X02AH	Product equipment code. Enter 6X02AG for an LTC or 6X02AH for an LGC.
LOAD		alphanumeric	Load. Enter the PM load in table PMLOADS.
EXECTAB		see subfields	Executive table. Contains subfields TRMTYPE and EXEC. The terminal type and associated execs are datafilled together.
<p><b>Note 1:</b> The system automatically allocates memory to a maximum of 128 tuples for table LTCINV.</p> <p><b>Note 2:</b> You must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode, entries that are already present can be left out.</p> <p><b>Note 3:</b> Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies more data or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p>			

**Basic call processing** (continued)**Datafilling table LTCINV (Sheet 3 of 4)**

Field	Subfield or refinement	Entry	Explanation and action
	TRMTYPE	alphanumeric	Terminal type. Enter the type of terminal models to be used: POTS for regular lines, KSET for EBS terminals, ABTRK for regular trunks, or RMM_TERM for MTC trunks.
	EXEC	alphanumeric	Executive Programs. Enter the execs associated with the terminal type (POTSEX, KSETEX, RSMEX, and DTCEX).
CSLNKTAB		see subfields	The C-side link table. Contains subfields NMNO and NMPORT.
	NMNO	0 to 63	Network module number. Enter the network module pair where the PM is assigned.
	NMPORT	0 to 64	Network module port. Enter the network port corresponding to the above network pair.
OPTCARD		alphanumeric	Optional card. Enter when the LTC includes the UTR, message, and CMR cards. If the CMR card is included, enter the CMRLOAD.
CMRLOAD		alphanumeric	Class modem resource load. Enter the CMR software load.
TONESSET		NORTHAM	Tone set. Enter NORTHAM for North America.
PECS6X45		alphanumeric	Product equipment codes 6X45. Enter the PEC of the card in LTC units 0 and 1. The PEC must reflect minimum firmware capabilities in the processor complex of each unit. The PEC MX77AA is added for XPM PLUS.
E2LOAD		alphanumeric	The EEPROM file. Contains the name of the loadfile loaded in the NTMX77AA EEPROM
<p><b>Note 1:</b> The system automatically allocates memory to a maximum of 128 tuples for table LTCINV.</p> <p><b>Note 2:</b> You must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode, entries that are already present can be left out.</p> <p><b>Note 3:</b> Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies more data or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p>			

**Basic call processing** (continued)

**Datafilling table LTCINV (Sheet 4 of 4)**

Field	Subfield or refinement	Entry	Explanation and action
OPTATTR		blank	Optional attribute. This field is for a DTC supporting CCS7, leave this field blank.
PEC6X40		alphanumeric	6X40 equipment PEC. Enter the version of the NT6X40 to use.
<p><b>Note 1:</b> The system automatically allocates memory to a maximum of 128 tuples for table LTCINV.</p> <p><b>Note 2:</b> You must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode, entries that are already present can be left out.</p> <p><b>Note 3:</b> Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies more data or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p>			

**Datafill example for table LTCINV**

The following example shows sample datafill for table LTCINV.

**MAP display example for table LTCINV**

```

LTCNAME
ADNUM FRTYPE FRNO SHPOS FLOOR ROW FRPOS EQPEC LOAD
                                EXECTAB
                                CSLNKTAB
                                OPTCARD

TONESET  PEC6X45
                                E2LOAD          OPTATTR

PEC6X40
-----
LTC 0
   1005 LGE      5      18      1      B 5 6X02AG NLT35ZI1
                                (POTS POTSEX) (RMM_TERM RSMEX)$
   (9 17) (13 61) (5 14)(0 29)(1 30)(2 31)(3 28)(4 29)$
                                ( UTR16) ( CMR18 CMR36A15) (MSG6X69)$
DEFAULT MX77AA MX77AA MX77MA24
                                NILLOAD          $

6X40AC
    
```

## Basic call processing (continued)

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### Datafilling table LTCPSINV

The line trunk controller P-side link inventor (LTCPSINV) table contains the assignments of the peripheral side links for the following:

- LTC
- DTC
- LGC
- SMR
- SMS
- SMU
- IDTC

The key for table LTCPSINV is the same as table LTCINV. The system automatically allocates memory in table LTCPSINV to a maximum of 128 tuples. Memory is allocated as required to allow a maximum of 210 tuples in tables LTCINV and LTCRINV combined.

The list of links in table LTCPSINV must include the DS-1 links that connect the LTC and the RLCM.



#### **CAUTION**

##### **Potential extended outage**

Do not change the signaling format to B8ZS for OPM C-side links until the NT6X51 LCM processors are upgraded to NT6X51DA. If you change the signaling format to B8ZS on links to the OPM not provisioned with the NT6X51DA, you will not be able to restore service to the OPM if it becomes SysB or ManB. A software reload will be required and the signaling format must be changed back to ZCS before you reload and RTS the OPM.

The following table shows the datafill specific to Basic call processing for table LTCPSINV. Only those fields that apply directly to Basic call processing appear.

**Basic call processing** (continued)

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

**Datafilling table LTCPSINV (Sheet 1 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
LTCNAME		refer to subfields	Link trunk controller name. Contains subfields XPMTYPE and XPMNO.
	XPMTYPE	LTC or LGC	The PM type. Enter LTC if the LTC connects to the RCC. Enter LGC if the LTC connects to the RCC. Only the LTC or LGC can connect to the RCC.
	XPMNO	0 to 255	The PM number. Enter the peripheral module number assigned to this PM.  <b>Note:</b> Operating company personnel can number the XPMs from 0 to 255 but the total number of tuples in tables LTCINV and LTCRINV combined cannot exceed 210 XPMs. The XPM types can be any combination of types accepted by the two tables.
PSLNKTAB		0 to 19	The P-side link table. Contains subfields PSLINK and PSDATA.
	PSLINK	0 to 19	The P-side link. Enter the P-side port number.
	PSDATA	DS-1, DS30A, or NILTYPE	The P-side data. Enter the DS-1 for trunks and remote nodes. The DS-1 can include the RCC and the RLCM. Enter DS30A if the P-side interface is an interface to a local LCM.  <b>Note:</b> If PSDATA is DS-1, fill in fields CARRIDX and ACTION.
<p><b>Note 1:</b> The system automatically allocates memory to a maximum of 128 tuples for table LTCPSINV.</p> <p><b>Note 2:</b> You must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode, entries that are already present can be left out.</p> <p><b>Note 3:</b> Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies more data or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p>			

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**Basic call processing** (continued)
 

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**Datafilling table LTCPSINV (Sheet 2 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
PSLNKTAB (continued)	CARRIDX	DEFAULT	Carrier index. Enter the name to index into table CARRMTC. Enter DEFAULT for the default template in table CARRMTC.
	ACTION	N	Action. Enter Y if the carrier must be removed from service when the OOS limit for frame, slip, errored-second, or severe errored-second is exceeded.
<p><b>Note 1:</b> The system automatically allocates memory to a maximum of 128 tuples for table LTCPSINV.</p> <p><b>Note 2:</b> You must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode, entries that are already present can be left out.</p> <p><b>Note 3:</b> Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies more data or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p>			

**Datafill example for table LTCPSINV**

The following example shows sample datafill for table LTCPSINV.



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**Basic call processing** (continued)
 

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**MAP display example for table LTCPSINV**

LTCNAME	PSLNKTAB
LTC 0	(0 DS30A) (1 DS30A) (2 DS30A) (3 DS30A) (4 DS30A) (5DS30A) (6 DS30A) (7 DS30A) (8 DS30A)(9 DS30A)(10 DS30A)(11 DS30A) (12 DS30A) (13 DS30A) (14 DS30A) (15 DS30A) (16 DS30A) (17 DS30A) (18 DS30A) (19 DS30A) \$
LTC 1	(0 DS1 Default N) (1 DS1 Default N) (2 DS1 Default N) (3 DS1 Default N) (4 DS1 Default N) (5 DS1 Default N) (6 DS1 Default N)(7 DS1 Default N) (8 DS1 Default N) (9 DS1 Default N)(10 NILTYPE)(11 NILTYPE)(12 NILTYPE) (13 NILTYPE)(14 NILTYPE)(15 NILTYPE)(16 NILTYPE)(17 NILTYPE) (18 NILTYPE)(19 NILTYPE) \$
LGC 2	(0 DS30A)(1 DS30A)(2 DS1)(3 DS1)(4 NILTYPE)(5 NILTYPE) (6 DS30A)(7 DS30A)(8 DS1)(9 DS1)(10 NILTYPE)(11 NILTYPE) (12 NILTYPE) (13 NILTYPE) (14 NILTYPE) (15 NILTYPE) (16 NILTYPE) (17 NILTYPE) (18 NILTYPE) (19 NILTYPE) \$

**Datafilling table CARRMTC**

The carrier maintenance control (CARRMTC) table allows the DMS switch administration to enter the following information:

- maintenance control information in peripherals
- OOS limits for alarms,
- system RTS occurrences

A maximum of 16 entries are present for each type of peripheral that provides carrier links in the switch. The choice of entries for each carrier is in the inventory table of the C-side peripheral, table LTCPSINV.

## Basic call processing (continued)

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The following checks are made between table CARRMTC and table LTCPSINV:

- When you enter a carrier index (CARRIDX) in table LTCPSINV, an entry for the peripheral module type must already be present in table CARRMTC. Examples of entries are RCC and LTC.
- When you delete an entry from table CARRMTC, carriers in table LTCPSINV cannot refer to that entry. If the carriers refer to the entry, the deletion command is rejected.
- When you change a current entry in table CARRMTC, table LTCPSINV determines if INSV carriers refer to that entry. If the INSV carriers refer to the entry, the change command is rejected. The rejection of the command causes a list of the INSV carriers to appear.

The following table shows the datafill specific to Basic call processing for table CARRMTC. Only those fields that apply directly to Basic call processing appear.

**Basic call processing** (continued)

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

**Datafilling table CARRMTC (Sheet 1 of 4)**

<b>Field</b>	<b>Subfield or refinement</b>	<b>Entry</b>	<b>Explanation and action</b>
CSPMTYPE		LGC	The C-side node PM type. Enter the PM type of the node on the C-side of the carrier link. In this case, enter LGC.
TMPLTNM		alphanumeric (a maximum of 16 characters)	Template name. Enter the template name that is a maximum of 16 characters for the PM. This entry also appears in the CARRIDX field of table RCCPSINV. The default entry value is DEFAULT.
RTSML		0 to 255	Return-to-service maintenance limit. Enter the number of times during the audit interval a carrier can return to service. The system returns the carrier to service before a warning is issued. Value 255 disables this feature.
RTSOL		0 to 255	Return to service out-of-service limit. Enter the number of times during an audit interval a carrier can return to service. The system returns the carrier to service before the carrier is permanently out of service. Value 255 disables this feature.
ATTR		see subfields	Attribute. This field is comprised of subfield SELECTOR.
<p><b>Note 1:</b> The DMS switch adds the first tuple for RCC (or LTC or LGC) to table CARRMTC automatically. The DMS switch adds the first tuple during initial program load (IPL) or first restart after IPL. The entry is designated as index 0 and has the value DEFAULT in the TMPLTNM field and default values for the other fields. You cannot delete this tuple. You can only change fields ES and SES and thresholds for frame and slip losses.</p> <p><b>Note 2:</b> You must add tuples other than the default tuple before table LTCPSINV can reference the tuple. You can delete these tuples only if DS-1 carriers are not with these tuples.</p> <p><b>Note 3:</b> You can change tuples in table CARRMTC only if the associated DS-1 carriers are ManB or OffL.</p> <p><b>Note 4:</b> You must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode entries that are already present can be left out.</p> <p><b>Note 5:</b> Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies more data or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p>			

**Basic call processing** (continued)

Datafilling table CARRMTC (Sheet 2 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	SELECTOR	DS1	Selector. Enter carrier type DS-1.
	CARD	NT6X50AA or NT6X50AB	Card. Enter the product engineering code (PEC) of the DS-1 interface card used. Range of values for the RCC: NT6X50AA or NT6X50AB (clear channel).  <b>Note:</b> Refer to the <i>Remote Switching Center Maintenance Guide</i> for details on retrofitting NT6X50AB on the C-side DS-1 links for an RCC.
	VOICELAW	A_LAW or MU_LAW	Voice law. Enter the voice law in the carrier. Entry A_LAW is used in international switches. Entry MU_LAW is used in North American switches.
ATTR	FF	SF or ESF	Frame format. Enter SF (standard frame or super frame) in this field.
	ZLG	ZCS or B8ZS	Zero logic. Enter zero code suppression (ZCS) in the ZLG field. If all zeros are transmitted, a 1 is inserted in the second least significant bit position.
	BERB	BPV or CRC	Bit error rate base. Enter BPV for bipolar violation.
	DLK	NILDL	Data link. Currently, only NILDL is supported.
<p><b>Note 1:</b> The DMS switch adds the first tuple for RCC (or LTC or LGC) to table CARRMTC automatically. The DMS switch adds the first tuple during initial program load (IPL) or first restart after IPL. The entry is designated as index 0 and has the value DEFAULT in the TMPLTNM field and default values for the other fields. You cannot delete this tuple. You can only change fields ES and SES and thresholds for frame and slip losses.</p> <p><b>Note 2:</b> You must add tuples other than the default tuple before table LTCPSINV can reference the tuple. You can delete these tuples only if DS-1 carriers are not with these tuples.</p> <p><b>Note 3:</b> You can change tuples in table CARRMTC only if the associated DS-1 carriers are ManB or OffL.</p> <p><b>Note 4:</b> You must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode entries that are already present can be left out.</p> <p><b>Note 5:</b> Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies more data or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p>			

**Basic call processing** (continued)

Datafilling table CARRMTC (Sheet 3 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	IAT	Y or N	Inhibit alarm transmit. Enter Y for the IAT field to inhibit yellow alarms.
	LCGAST	1 to 9999	Local carrier group alarm set. Enter the threshold value in units of 10 ms.
	LCGACL	1 to 9999	Local carrier group alarm clear threshold. Enter the threshold value in units of 10 ms.
	RCGAST	1 to 9999	Remote carrier group alarm set. Enter the threshold value in units of 10 ms.
	RCGACL	1 to 9999	Remote carrier group alarm clear threshold. Enter the threshold value in units of 10 ms.
	AISST	1 to 9999	Alarm indication signal set threshold. Enter the threshold value in units of 10 ms.
AISCL		1 to 9999	Alarm indication signal clear threshold. Enter the threshold value in units of 10 ms.
BEROL		3 to 6	Bit error rate out-of-service limit. Enter the bit error rate out-of-service limit expressed as the negative of the exponent of 10 (10E-n). The number 3, for example, represents a 1-in-1000 bit error rate.
<p><b>Note 1:</b> The DMS switch adds the first tuple for RCC (or LTC or LGC) to table CARRMTC automatically. The DMS switch adds the first tuple during initial program load (IPL) or first restart after IPL. The entry is designated as index 0 and has the value DEFAULT in the TMPLTNM field and default values for the other fields. You cannot delete this tuple. You can only change fields ES and SES and thresholds for frame and slip losses.</p> <p><b>Note 2:</b> You must add tuples other than the default tuple before table LTCPSINV can reference the tuple. You can delete these tuples only if DS-1 carriers are not with these tuples.</p> <p><b>Note 3:</b> You can change tuples in table CARRMTC only if the associated DS-1 carriers are ManB or OffL.</p> <p><b>Note 4:</b> You must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode entries that are already present can be left out.</p> <p><b>Note 5:</b> Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies more data or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p>			

## Basic call processing (continued)

### Datafilling table CARRMTC (Sheet 4 of 4)

Field	Subfield or refinement	Entry	Explanation and action
BERML		4 to 7	Bit error rate maintenance limit. Enter the bit error rate maintenance limit expressed as the negative of the exponent of 10 (10E-n).
ES		0 to 9999	Error second (ES) threshold. Enter the threshold value in units of 10 ms.
SES		0 to 9999	Severe error second (SES) threshold. Enter the threshold value in units of 10 ms.
FRAMEML		0 to 9999	Frame maintenance limit. Enter the maintenance limit for frame loss.
FRAMEOL		0 to 9999	Frame loss limit. Enter the out-of-service limit for frame loss. Note that FRAMEOL should be larger than FRAMEML.
SLIPML		0 to 9999	Slip maintenance limit. Enter the maintenance limit for slip.
SLIPOL		0 to 9999	Slip out-of-service limit. Enter the out-of-service limit for slip. Note that SLIPOL should be larger than SLIPML.

**Note 1:** The DMS switch adds the first tuple for RCC (or LTC or LGC) to table CARRMTC automatically. The DMS switch adds the first tuple during initial program load (IPL) or first restart after IPL. The entry is designated as index 0 and has the value DEFAULT in the TEMPLNM field and default values for the other fields. You cannot delete this tuple. You can only change fields ES and SES and thresholds for frame and slip losses.

**Note 2:** You must add tuples other than the default tuple before table LTCPSINV can reference the tuple. You can delete these tuples only if DS-1 carriers are not with these tuples.

**Note 3:** You can change tuples in table CARRMTC only if the associated DS-1 carriers are ManB or OffL.

**Note 4:** You must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode entries that are already present can be left out.

**Note 5:** Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies more data or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.

### Datafill example for table CARRMTC

Sample datafill for table CARRMTC appears below.

**Basic call processing** (continued)

**MAP display example for table CARRMTC**

CSPMTYPE	TMPLTNM	RTSML	RTSOL	ATTR																					
LGC	DEFAULT	255	255	DS1	NT6X50AA	MU_LAW	SF	ZCS	BPV	NILDL	N	250	1000	50	50	150	1000	3	6	864	100	17	511	4	255

**Datafilling table LCMINV**

The line concentrating module inventory (LCMINV) table lists the data assignment for each frame associated with a local or remote LCM unit. This table must include one entry for each RLCM. Only fields that require datafill specific to this feature appear.

Table LCMINV associates the site name in table SITE with the following:

- location of the RLCM
- its PM software
- C-side linking data

*Note 1:* The C-side links for the RLCM in table LCMINV must correspond to those for the host LGC/LTC in table LTCPSINV.

*Note 2:* If LCMSELECTOR of field LCMINFO is set to RLCM, you must also enter table RMMINV.

The field BICTST was added to table LCMINV in BCS33. This field provides a boolean indication. The field indicates if a particular RLCM is included in the test schedule.

The following table shows the datafill specific to Basic call processing for table LCMINV. Only those fields that apply directly to Basic call processing appear.

## Basic call processing (continued)

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

### Datafilling table LCMINV (Sheet 1 of 4)

Field	Subfield or refinement	Entry	Explanation and action
LCMNM		refer to subfields	The LCM name. Enter the site name, frame number and peripheral module number assigned to the remote LCM.
	SITE	alphanumeric	Site. Enter the site name assigned to the remote location.
	FRAME	0 to 511	Frame number. Enter frame number for the LCM.
LCMNM	PMNO	0 to 255	Peripheral module number. Enter the peripheral module.
FRTYPE		RLCE	Frame type. Enter the frame type where the PM equipment is mounted. For example, enter LCE, LCEI or CLCE.  <b>Note:</b> Enter the location of the C-side PM in fields FRNO, SHPOS, FLOOR, ROW and FRPOS.
EQPEC		6X04AA	Equipment product engineering code. Enter the PEC of the PM. For example, the PEC of the PM is 6X04AA.
LOAD		alphanumeric	Load name. Enter the name of the issue of PM software.
<p><b>Note 1:</b> You must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode entries that are already present can be left out.</p> <p><b>Note 2:</b> Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies more data or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p> <p><b>Note 3:</b> When you enter fields link information (LNKINFO) or link map (LNKMAP), make sure message links are not assigned to the same physical interface card. When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This restriction applies to all interface link types. Examples of the interface link types are DS-1, DS30, DS30A and PCM-30. Table control issues a warning if you attempt to assign message links on the same interface card. When you assign message links to the same interface card, you can cause an E1 outage (failure of all message links) because of card failure.</p>			



**Basic call processing** (continued)**Datafilling table LCMINV (Sheet 2 of 4)**

<b>Field</b>	<b>Subfield or refinement</b>	<b>Entry</b>	<b>Explanation and action</b>
CSPMNO		see subfields	C-side peripheral module type and number. Enter the C-side PMTYPE and PM number.
	PMTYPE	LGC, LTC, RCC, or RCC2	The PMTYPE. Enter the C-side PM type.
	PMNO	0 to 255	Peripheral module number. Enter the number assigned to the C-side PM.
BICTST		Y or N	The BIC relay test (BRT). Enter Y to include the RLCM in the next LCM BRT schedule. Entry values are Y and N.
<p><b>Note 1:</b> You must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode entries that are already present can be left out.</p> <p><b>Note 2:</b> Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies more data or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p> <p><b>Note 3:</b> When you enter fields link information (LNKINFO) or link map (LNKMAP), make sure message links are not assigned to the same physical interface card. When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This restriction applies to all interface link types. Examples of the interface link types are DS-1, DS30, DS30A and PCM-30. Table control issues a warning if you attempt to assign message links on the same interface card. When you assign message links to the same interface card, you can cause an E1 outage (failure of all message links) because of card failure.</p>			

**Basic call processing** (continued)

Datafilling table LCMINV (Sheet 3 of 4)

Field	Subfield or refinement	Entry	Explanation and action
ADNUM		0 to 4095	<p>Peripheral module administrative number. Enter the administrative number associated with the peripheral module (PM).</p> <p><b>Note 1:</b> The value of field ADNUM must be unique across all PM inventory tables (DLMINV, IPEINV, LCMINV, LMINV, LTCINV, RCCINV, RCSINV, RCTINV, and VSRINV). Attempts to add a PM with an ADNUM already in use are rejected and the system prompts the user with the next available ADNUM value.</p> <p><b>Note 2:</b> Field ADNUM cannot change if the operational measurements (OM) counts for that PM are in an Engineering and Administrative Data Acquisition System (EADAS). Data collection (DC) section that associates with OM groups LMD or UTR can include OM counts for that PM.</p>
MEMSIZE		256K	<p>Memory size. Enter the memory size of the processor card used in the LCM. Entry values are 256 kB and 64 kB. The MEMSIZE field must be set to 256 kB if BICTST is set to Y.</p> <p>If MEMSIZE is set to 64 kB, BICTST must be set to N.</p>
LCMTYPE		see subfields	<p>The LCMTYPE info multiple with ringing data, ringing type and LCMINFO.</p>
<p><b>Note 1:</b> You must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode entries that are already present can be left out.</p> <p><b>Note 2:</b> Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies more data or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p> <p><b>Note 3:</b> When you enter fields link information (LNKINFO) or link map (LNKMAP), make sure message links are not assigned to the same physical interface card. When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This restriction applies to all interface link types. Examples of the interface link types are DS-1, DS30, DS30A and PCM-30. Table control issues a warning if you attempt to assign message links on the same interface card. When you assign message links to the same interface card, you can cause an E1 outage (failure of all message links) because of card failure.</p>			

**Basic call processing** (continued)

**Datafilling table LCMINV (Sheet 4 of 4)**

Field	Subfield or refinement	Entry	Explanation and action
LCMINFO	LCM	alphanumeric	The LCMTYPE selector. Enter LCM selector multiple with ringing data and ringing type.
		see subfields	Enter LCMINFO multiple with LCMSELECTOR, LINKMAP, INTRASW, ESA, CONVERTIBLE and DS1CARD.
	LCM SELECTOR	RLCM	Enter HLCM multiple with LINKMAP when C-side link is DS30A or RLCM multiple with LINKMAP, INTRASW, ESA, CONVERTIBLE.  Enter DS1CARD when C-side interface link type is DS1.
	LINKMAP	2 to 6	Enter C-side link numbers equipped; minimum of 2 links and a maximum of 6 links.
	INTRASW	Y or N	Boolean Y or N to turn intraswitching ON or OFF
LCMINFO (continued)	ESA	Y or N	Boolean Y or N to turn emergency stand-alone ON or OFF
	CONV	Y or N	Boolean Y or N if this RLCM can convert to an RSC
	DS1CARD	6X50AA or 6X65AB	Enter the C-side DS1 interface card type 6X50AA or 6X50AB.
<p><b>Note 1:</b> You must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode entries that are already present can be left out.</p> <p><b>Note 2:</b> Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies more data or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p> <p><b>Note 3:</b> When you enter fields link information (LNKINFO) or link map (LNKMAP), make sure message links are not assigned to the same physical interface card. When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This restriction applies to all interface link types. Examples of the interface link types are DS-1, DS30, DS30A and PCM-30. Table control issues a warning if you attempt to assign message links on the same interface card. When you assign message links to the same interface card, you can cause an E1 outage (failure of all message links) because of card failure.</p>			

**Datafill example for table LCMINV**

Sample datafill for table LCMINV appears in the following table.

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**Basic call processing** (continued)
 

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**MAP display example for table LCMINV**

LCMNM	FRTYPE	SHPOS	FLOOR	ROW	FRPOS	EQPEC	LOAD	CSPMNO
BICTST	ADNUM	MEMSIZE						LCMTYPE
HOST	00 0	LCE	4	1	B 6	6X04AA	XLCM031G	LGC 0
	N 22	256K 256K						
		LCM Y		S 48V	HLCM	( 2) ( 3)	( 6) ( 7)	(10) (11))\$

**Datafilling table RMMINV**

Table remote maintenance module inventory (RMMINV) identifies an RMM by the following sites:

- RLCM
- OPM
- RSC

The site includes the following information:

- physical location
- EQPEC
- PM load
- executive program
- attached C-side peripheral module

The system dynamically allocates memory to this table. The maximum size of the table is 255 entries. Table RMMINV requires an entry if the RLCM has an RMM shelf.

The entries for Basic call processing for table RMMINV appears in the following table. The fields that apply directly to Basic call processing appear.

**Basic call processing** (continued)

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

**Datafilling table RMMINV (Sheet 1 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
RMMNAME		alphanumeric	The RMM name. Enter the name for the RMM. Contains subfields SITENM, PMTYPE and RMMNO.
	SITENM	Location	Site. Enter the site name assigned to the remote location. This entry must also appear in table RCCINV, LCMINV and SITE.
	PMTYPE	RMM	The PM type. Enter RMM.
	RMMNO	0 to 255	The RMM number. Enter the number assigned to this RMM.
FRTYPE		RLCE	Frame Type. For the RLCM, enter RLCE.  <b>Note:</b> Enter the location of the RCC in fields FRNO, SHPOS, FLOOR, ROW and FRPOS.
EQPEC		6X13AA	Equipment PEC. Enter 6X13AA for a regular RMM.
LOAD			Load. Enter the load for the RMM. Make sure that table PMLOADS contains the load and table name.
EXECS		RSMEX	Exec table. Enter the appropriate execs. For the RMM, the exec is RSMEX.
CSPMINFO		refer to subfields	C-side PM information. Contains subfields RMMSELECTOR, CSIDEPM and CSIDPORT.
<p><b>Note 1:</b> When the RMMSELECTOR is set to RMMRCC, the RMM is in an RCE frame. Port 0 of the RCC is extended through backplane wiring to shelf position 51. Port 1 is extended to shelf position 65.</p> <p><b>Note 2:</b> You must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode you can leave out current entries.</p> <p><b>Note 3:</b> Enter the continuation mark (+) in fields with multiple possible entries when more data is specified on the next line. Enter the continuation mark when there are more records to enter. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p>			

## Basic call processing (continued)

### Datafilling table RMMINV (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
CSIDEPM	RMM SELECTOR	RMMLCM	The RMM selector. Enter the selector for the type of module on the C-side of the RMM. The selectors are RMMRCC or RMMLCM.
		refer to subfields	The C-side peripheral module. Contains subfields PMT and EXT_PMNO.
	PMT	LCM	The PM type. Based on the value in field RMMSELECTOR. Enter RCC or LCM.
	EXTPMNO	0 to 255	External PM number. Enter the external PM number where the RMM is attached. This number must also appear in table LCMINV or RCCINV for the C-side PM.
	CSIDPORT	0 or 1	The C-side port. Enter the C-side port connected to the RMM.
<p><b>Note 1:</b> When the RMMSELECTOR is set to RMMRCC, the RMM is in an RCE frame. Port 0 of the RCC is extended through backplane wiring to shelf position 51. Port 1 is extended to shelf position 65.</p> <p><b>Note 2:</b> You must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode you can leave out current entries.</p> <p><b>Note 3:</b> Enter the continuation mark (+) in fields with multiple possible entries when more data is specified on the next line. Enter the continuation mark when there are more records to enter. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p>			

### Datafill example for table RMMINV

Sample datafill for table RMMINV appear in the following table.

### MAP display example for table RMMINV

TRSC	RMM	FRNO	FRTYPE	FRNO	SHPOS	FLOOR	ROW	FRPOS	EQPEC	LOAD	EXECS
CSPMINFO											
		1	RCE	0	51	1	D	2	6X13AA	RMM34C	RSMEX
	RMMRCC	RCC		0							

### Datafilling table REXSCHED

Table routine exercise schedule (REXSCHED) contains the SREX test scheduling information the REX controller requires.

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**Basic call processing** (continued)

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The datafill for LCM REX testing appears in the following table. The fields that apply directly to LCM REX appear. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

**Datafilling table REXSCHED for RSC-S basic operation (Sheet 1 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
REXTSTID		see subfield	The REX tests identification. Contains subfield REX_TEST_ID
	REX_TEST_ID	see list	The REX test ID. The system defines REX test identifiers when inventory tables are entered. Examples: MS_REX_TEST, CM_REX_TEST, SLM_REX_TEST, LGC_REX_TEXT, MSB_REX_TEST, LCM_REX_TEST and LCMCOV_REX_TEST.
ENABLE		Y or N	Enable REX test. Enable test schedule for specific REX identifier. Default: Y
PERIOD		1 to 7 inclusive	Minimum number of days between consecutive REX schedules. Each REX test must run a minimum of once a week. Default: 1 (run REX every day).
<p><b>Note 1:</b> The LCMCOV_REX_TEST is performed on LCMs, XLCMs, OPMs and RLCMs.</p> <p><b>Note 2:</b> You must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode you can leave out current entries.</p> <p><b>Note 3:</b> Enter the continuation mark (+) in fields with multiple possible entries when more data is specified on the next line. Enter the continuation mark when more records to enter are present. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p>			

## Basic call processing (continued)

### Datafilling table REXSCHED for RSC-S basic operation (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
PARALLEL		1 to 99	Number of specified REX tests that run parallel. Limit of REX tests that run for a node type at the same time. For LCM_REX, the maximum number of tests that can run at the same time is 4. For LCMCOV_REX tests, the availability of only one line test unit (LTU) in an LCM requires a maximum of 1. Default: 1.
DAYSDBL		see list	Days to disable REX testing. A list of days when REX testing is disabled. The values are MON, TUE, WED, THU, FRI, SAT, SUN, ALL or NONE. Each REX test must run a minimum of once a week. The ALL option is included to suspend a REX test to facilitate system maintenance. Default: none.
<p><b>Note 1:</b> The LCMCOV_REX_TEST is performed on LCMs, XLCMs, OPMs and RLCMs.</p> <p><b>Note 2:</b> You must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode you can leave out current entries.</p> <p><b>Note 3:</b> Enter the continuation mark (+) in fields with multiple possible entries when more data is specified on the next line. Enter the continuation mark when more records to enter are present. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p>			

### Datafill example for table REXSCHED

Sample datafill for table REXSCHED appears in the following example.

### MAP display example for table REXSCHED

```

Table: REXSCHED

      REXTSTID  ENABLE  PERIOD  PARALLEL  DAYSDBL
MS_REX_TEST      Y        1        1        NONE
CM_REX_TEST      Y        1        1        NONE
SLM_REX_TEST     Y        1        1        NONE
LGC_REX_TEST     Y        1        1        NONE
MSB_REX_TEST     Y        1        1        NONE
LCM_REX_TEST     Y        1        4        NONE
LCMCOV_REX_TEST  Y        1        1        NONE
    
```



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**Basic call processing** (continued)

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**Datafilling table LCASCRCN.LCASCRCN**

Subtable local calling area screening (LCASCA) maps numbering plan areas (NPA) geographically against trunk groups in the DMS-100 switch for billing purposes. The local calling area screening control table (LCASCRCN) controls two subtables. Subtable LCASCRCN is one of the subtables that LCASCRCN controls.

Control table LCASCRCN assigns select local calling area names to serving trunk group area codes. Each trunk group area code and assigned name represents a key in subtable LCASCRCN. Enter the command SUB LCASCRCN in table LCASCRCN to access this subtable.

Each key in subtable LCASCRCN is assigned ranges of local area codes, or NPA. These ranges are assigned to that trunk group. All NPAs the RLCM serves must be assigned to a trunk group. Table LCASCRCN defines these trunk groups. Make these assignments in subtable LCASCRCN.LCASCRCN.

The entries for Basic call processing for table LCASCRCN appear in the following table. Table LCASCRCN is a subtable of table LCASCRCN. Access table LCASCRCN through table LCASCRCN. The fields that apply directly to Basic call processing appear.

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

**Datafilling table LCASCRCN.LCASCRCN**

Field	Subfield or refinement	Entry	Explanation and action
FROMDIGS		000 to 999	From digits. Enter the three-digit prefix (NNX) code. This number represents a single code or the first in a block of consecutive local NNX codes.
TODIGS		000 to 999	To digits. Field FROMDIGS can represent the first of a block of consecutive local NNX codes. If this event occurs, enter the last NNX code in the block.  If field FROMDIGS represents a single local NNX code, enter the NNX code entered in FROMDIGS.

**Datafill example for table LCASCRCN.LCASCRCN**

Sample datafill for table LCASCRCN.LCASCRCN appear in the following example.

---

**Basic call processing** (continued)
 

---

**MAP display example for table LCASCRCN.LCASCR**

POS 904 FLA1; SUB LCASCR;POS 305;LIST 3	
FROMDIGS	TODIGS
305	305
813	813
912	912

**Datafilling table TRKGRP**

Table trunk group (TRKGRP) defines data for each trunk group associated with the switching unit. Each trunk group entry in table TRKGRP has a CLLI for the trunk group. Each trunk group entry in table TRKGRP also has several fields that the trunk group type (field GRPTYP) determines.

Any incoming or outgoing test trunk card, like NT2X90AC, in the RMM must be in table TRKGRP as REMOTETESTDK or REMOTEVER90.

Sample datafill for table TRKGRP appear in the following example.

**Datafilling table TRKGRP**

Table trunk group (TRKGRP) defines data for each trunk group associated with the switching unit. Each trunk group entry in table TRKGRP consists of a different CLLI for the trunk group. The trunk group type (field GRPTYP) determines several fields which comprise each trunk group.

Incoming or outgoing test trunk cards like NT2X90AC are provisioned in the RMM. Table TRKGRP must list the cards as REMOTEST OK or REMOTEVER 90.

---

**Basic call processing** (continued)

---

The datafill for Basic call processing for table TRKGRP appears in the following table. This table lists only fields that apply directly to Basic call processing.

**Datafilling table TRKGRP**

Field	Subfield or refinement	Entry	Explanation and action
GRPKEY		refer to subfields	Group key. This field consists of the subfield CLLI. Enter the CLLI code for the trunk group assigned in table CLLI.
	CLLI	alphanumeric	Group key. This field consists of the subfield CLLI. Enter the CLLI code for the trunk group assigned in table CLLI.
GRPINFO		GRPTYP, TRAFSNO, PADGRP, NCCLS, and CARD	Variable group data. When trunk group type is MAINT, this field consists of subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, and CARD.
	GRPTYP	ITL2, TTL2, LOOPA, MAINT, or SOCKT	Group type. Enter the group type for the trunk group. For maintenance and test trunks, the range is ITL2, TTL2, LOOPA, MAINT or SOCKT.
	TRAFSNO	0 to 127	Traffic separation number. Maintenance and test trunks do not require this number.
	PADGRP	alphanumeric	Pad group. Enter the name of the pad group assigned to the trunk group in table PADDATA. For maintenance and test trunks, enter IAO (intra-office trunks). For other trunk groups, enter NPDGP.
	NCCLS	NCRT	There is no circuit class. Enter NCRT (no circuit).
	CARD	alphanumeric	Card code. Enter the product engineering code of the maintenance and test trunk.
<p><b>Note 1:</b> Table TRKGRP contains memory for the total number of trunk groups. The number of trunk groups equals the value of field SIZE in table DATASIZE for key TRKGRP.</p> <p><b>Note 2:</b> Each trunk group in table TRKGRP must be assigned one or two subgroups that table TRKSGRP defines.</p> <p><b>Note 3:</b> Table TRKMEM lists the location of analog or digital trunks assigned to trunk groups in table TRKGRP.</p>			

## Basic call processing (continued)

### Datafill example for table TRKGRP

Sample datafill for table TRKGRP appears in the following example.

### MAP display example for table TRKGRP

GRPKEY		GRPINFO					
VER90		MAINT	0	NPDGP	NCRT	2X90AB	
TTT		MAINT	0	IAO	NCRT	2X96AA	
TTU		MAINT	0	IAO	NCRT	2X47AA	
LTU		MAINT	0	IAO	NCRT	2X11AA	
RLCMVER90		VR	0	TLD	NCRT		VR
OG_1	TO	0	TLD	NCRT	IE	MIDL	7 N
OG_2	TO	0	TLD	NCRT	IE	MIDL	4 N
OG_3	TO	0	TLD	NCRT	IE	MIDL	4 N
OG_4	TO	0	TLD	NCRT	IE	MIDL	4 N
OG_5	TO	0	TLD	NCRT	IE	MIDL	4 N
OG_6	TO	0	TLD	NCRT	IE	MIDL	4 N

### Datafilling table TRKSGRP

Table TRKSGRP (trunk subgroup) lists additional information for each subgroup assigned to trunk groups that table TRKGRP lists. You must specify input data for each trunk group table TRKGRP lists. You must specify data for a minimum of one or a maximum of two subgroups for each trunk group. The list does not include trunk groups that TRKGRP defines as maintenance group types (MAINT).

The trunk subgroup table for the MAINT trunk group type does not require data.

Each REMOTETESTDK or REMOTEVER90 provisioned in the RMM of the RLCM must be assigned a corresponding subgroup in this table. A sample of datafill for table TRKSGRP appears in the following example.

**Note:** The system allocates memory to table TRKSGRP for the number of trunk groups. The number of trunk groups is equal to the value of field SIZE in table DATASIZE for key TRKSGRP.

## Basic call processing (continued)

The datafill for Basic call processing for table TRKSGRP appears in the following table. Only fields that apply directly to Basic call processing are shown.

**Datafilling table TRKSGRP (Sheet 1 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
SGRPKEY		see subfields	Subgroup key. This field contains subfields CLLI and SGRP.
	CLLI	alphanumeric	Common language location identifier. This subfield contains the code assigned in the CLLI table to the trunk group where the subgroup belongs.
	SGRP	0 or 1	Subgroup number. This subfield contains the number assigned to the trunk subgroup.
CARDCODE		alphanumeric	Card code. This field lists the maintenance and test trunk PEC.
SGRPVAR		STD, DSOTL, STDTL, C7UP, ISDN, FST, X75	Subgroup variable signalling data selector. Defines type of signalling data for trunk subgroup.
SGRPVAR	DIR	IC, OG, 2W	Variable subgroup data. Consists of subfield direction (DIR). Refinements are defined for directions of incoming (IC) outgoing (OG) or two way (2W) trunk traffic.
		OG	For outgoing trunks enter the following refinements.
	OPULSTYP	DP, DT, MF, or blank	Outgoing type of pulsing. For maintenance and test trunks, the entry is no pulsing (NP).
	OSTARTSG	DD, IM, LS, GS, or WK	Outgoing start dial signal. For maintenance and test trunks, the entry is wink (WK).
	IDGTIME	0 to 100 or blank	Interdigital timing. For maintenance and test trunks, this value is 2.
<p><b>Note 1:</b> The system allocates memory for the number of trunk subgroups by the SIZE field in table DATASIZE. This event occurs for the entry with field DATSKEY equal to TRKSGRP.</p> <p><b>Note 2:</b> The maximum number of trunk subgroups is equal to twice the number of trunk groups.</p> <p><b>Note 3:</b> The maximum number of trunk subgroups that can be assigned is 4096.</p>			

**Basic call processing** (continued)**Datafilling table TRKSGRP (Sheet 2 of 2)**

<b>Field</b>	<b>Subfield or refinement</b>	<b>Entry</b>	<b>Explanation and action</b>
	NUMSTOPS	0 to 3, or blank	Number of stop/goes. For maintenance and test trunks, this value is 0.
	CCONT	MW or NO	Coin control. For maintenance and test trunks, the entry is MW (multiwink).
	RNGBCK	IB or N	Ringback. For maintenance and test trunks, the entry is inband (IB).
	ESUPR	F, H, or N	Echo suppressor. For maintenance and test trunks, the entry is no echo suppressor, N.
	SAT	Y or N	Satellite. For maintenance and test trunks, the entry is no satellite, N.
	REMBSY	Y or N	Remote make busy. For maintenance and test trunks, the entry no feature assigned, N.
	TRKGDTIM	16	Trunk guard timing. For maintenance and test trunks, this value is 16. This value is 160 ms elapse time interval before the trunk returns to the idle link list after trunk disconnect.

**Note 1:** The system allocates memory for the number of trunk subgroups by the SIZE field in table DATASIZE. This event occurs for the entry with field DATSKEY equal to TRKSGRP.

**Note 2:** The maximum number of trunk subgroups is equal to twice the number of trunk groups.

**Note 3:** The maximum number of trunk subgroups that can be assigned is 4096.

**Datafill example for TRKSGRP**

Sample datafill for table TRKSGRP appears in the following example.

**Basic call processing** (continued)

**MAP display example for table TRKSGRP**

SGRPVAR	SGRPKEY	CARDCODE						SGRPVAR
-----								
	VER90 0	2X90AB						
STD		OG NP	WK	0 0	NO	N F N N	17	
	TTT 0	2X96AA						
STD		OG NP	WK	0 0	NO	N F N N	17	
	TTU 0	2X47AA						
STD		OG NP	WK	0 0	NO	N F N N	17	
	LTU 0	2X11AA						
STD		OG NP	WK	0 0	NO	N F N N	17	
	RLCMVER90	2X90AB						
STD		OG NP	WK	0 0	NO	N F N N	17	
	OG_1	DS1SIG						
STD		OG DP	IM	70 0	NO	N N N N	70	

**Datafilling table TRKMEM**

Table TRKMEM (trunk member) lists data for each analog or digital trunk. The analog or digital trunks are assigned to a trunk group or subgroup in tables TRKGRP and TRKSGRP. The following example shows a sample datafill for table TRKMEM.

Each circuit provisioned in the remote maintenance module (RMM) must include entries. When you assign these RMM circuits to current CLI (LTU, MONTALK), do not duplicate external trunk members, field EXTRKNM. The PMTYPE must be RMM for analog RLCM RMM circuits that table TRKMEM lists.

## Basic call processing (continued)

Datafill for Basic call processing for table TRKMEM appears in the following table. This table contains only fields that apply directly to Basic call processing.

### Datafilling table TRKMEM

Field	Subfield or refinement	Entry	Explanation and action
CLLI		alphanumeric	Common language location identifier. Enter the code assigned in table CLLI to the trunk group where the trunk is a member.
EXTRKNM		0 to 9999	External trunk number. Enter the external trunk number assigned to the trunk.
SGRP		0 to 1	Subgroup number. Enter the subgroup number where the trunk is assigned. Enter 0 for maintenance and test trunks. Enter 1 for other maintenance and test trucks.
MEMVAR		see subfields	Variable data for members. For RSC applications, this field varies when the trunk is part of an interoffice trunk or a maintenance trunk. For an interoffice trunk, the subfields are PMTYPE, RCCNO, RCCCKTNO and RCCCKTS.
	PMTYPE	RMM	Peripheral module type. Enter the PM type where the trunk mounts.
	RMMNO	0 to 2047	The RMM number. Enter the number assigned to this remote maintenance module.
	TMCKTNO	0 to 29	The RMM circuit number. Enter the RMM circuit number to which the TRKGRP member is assigned.
<p><b>Note 1:</b> The system allocates memory for the total number of trunks specified in field TRKGRSIZ in table CLLI for the correct trunk groups.</p> <p><b>Note 2:</b> To increase the table size with data present, change field TRKGRSIZ in table CLLI for the correct trunk groups.</p>			

### Datafill example for table TRKMEM

Sample datafill for table TRKMEM appears in the following example.



**Basic call processing** (continued)**MAP display example for table TRKMEM**

```

>Table TRKMEM;LIS;POS RSMVER90
TABLE: TRKMEM
      CLLI              EXTRKNM  SGRP              MEMVAR
-----
RSMVER90              0      0              RMM  2  4
RSMVER90              1      0              MTM  2  2
MONTALK 3             2      0              RMM  2  6
LTU 3                 3      0              RMM  2  3
LTU 5                 4      0              RMM  2  5
MONTALK 5             5      0              RMM  2  8
ESADGTR 0             6      0              RMM  2 10
ESADGTR 1             7      0              RMM  2 11

```

**Datafilling table CLLIMTCE**

Table common language location identifier maintenance (CLLIMTCE) lists the following information for each trunk group CLLI:

- abbreviated CLLI code for use by maintenance personnel
- percentage of service circuits that can be removed before specific alarms display
- type of test equipment at the far end
- index to test line control
- index to milliwatt data table
- signaling test runs after diagnostic test
- additional digits to be prefixed in addition to the four digits of subtable test line number.

The system automatically datafills table CLLIMTCE as table CLLI datafills entries. Check table CLLIMTCE as required for accuracy and maintenance.

**Datafill example for table CLLIMTCE**

Sample datafill for table CLLIMTCE appears in the following example.

**MAP display example for table CLLIMTCE**

```

CLLI  SCLLI  MINALM  MAJALM  CRITALM  SYNCTYPE  TSTNOIND
MWIDX  SIGTST  PRFXDIGS  DIAGDATA
-----
RSMVER90 RSMVER90  5      10      50      SYN      0
0          Y          N          ( 2 )

```

## Basic call processing (continued)

### Datafilling table ALMSCGRP

Table alarm scan group (ALMSCGRP) lists DMS-100 alarm scan circuits (alarm sensors) locations and card types. Table ALMSCGRP must list an RLCM when the RLCM has an RMM shelf with a miscellaneous scan card (NT0X10).

#### Datafill example for table ALMSCGRP

Sample datafill for table ALMSCGRP appears in the following example.

#### MAP display example for table ALMSCGRP

SCGROUP	TMTYPE	TMNO	TMCKTNO	CARDCODE
0	MTM	1	1	3X82AA
1	MTM	3	1	3X82AA
2	MTM	1	7	3X84AA
3	MTM	1	10	0X10AA
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
15	RSM	1	7	0X10AA
.	.	.	.	.
.	.	.	.	.
20	RMM	0	10	0X10AA
21	RMM	0	11	0X10AA

### Datafilling table ALMSC

Table alarm scan (ALMSC) identifies the function of the assigned scan points in the alarm scan groups. When the RLCM has an RMM shelf with an NT0X10 card, table ALMSC must list the scan points for the RLCM. Scan points must be assigned to scan groups in table ALMSC. Table SCGRP defines scan groups.

#### Datafill example for table ALMSC

Sample datafill for table ALMSC appears in the following example.

**Basic call processing** (continued)

**MAP display example for table ALMSC**

FUNCTION	SCGROUP	POINT	NORMALST	REPORT	ALM	LOGIC
TSTSCAN	0	0	1	Y	NA	Y
:	:	:	:	:	:	:
ABSRLCM	11	0	0	Y	MN N	(RLCMAUD N N) (RLCMABS N N) (MNXFER N Y) \$
PDCRLCM	11	1	0	Y	MJ N	(RLCMAUD N N) (RLCMPDC N N) (MJXFER N Y) \$
AISARLCM	11	2	0	Y	MJ N	(RLCMMAJ N N) (RLCMAUD N N)
:	:	:	:	:	:	:
MNRLCM	12	3	0	Y	MN N	(RLCMAUD N N) \$
MJRLCM	12	4	0	Y	MJ N	(RLCMAUD N N) \$
CRRLCM	12	5	0	Y	CR	(RLCMAUD N N) \$

**Datafilling table ALMSDGRP**

Table alarm signal distribution group (ALMSDGRP) lists DMS-100 alarm SD circuits (alarm drivers) locations and card types. When the RLCM has an RMM shelf with an NT2X57 card, table ALMSDGRP must list the card.

**Datafill example for table ALMSDGRP**

Sample datafill for table ALMSDGRP appears in the following example.

---

**Basic call processing** (continued)
 

---

**MAP display example for table ALMSDGRP**

SDGROUP	TMTYPE	TMNO	TMCKTNO	CARDCODE
0	MTM	1	0	3X82AA
1	MTM	3	0	3X82AA
2	MTM	1	6	3X84AA
4	MTM	1	4	2X57AA
5	MTM	1	5	2X57AA
6	MTM	1	18	2X57AA
7	MTM	1	19	2X57AA
8	MTM	6	18	2X57AA
9	MTM	6	19	2X57AA
10	MTM	9	18	2X57AA
11	MTM	9	19	2X57AA
12	RMM	0	22	2X57AA
8	RMM	0	23	2X57AA
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
22	MTM	12	18	2X57AA
23	MTM	12	19	2X57AA

**Datafilling table ALMSD**

Table alarm signal distribution (ALMSD) identifies the function of each assigned SD point in the SD groups. The RLCM can have RMM shelf with an NT2X57 card. In this event, table ALMSD must list the SD points for the RLCM. These SD points must be assigned to groups in table ALMSD. Table SDGRP defines the SD groups.

**Datafill example for table ALMSD**

Sample datafill for table ALMSD appears in the following example.

---

**Basic call processing** (continued)
 

---

**MAP display example for table ALMSD**

FUNCTION	SDGROUP	POINT	NORMALST	AUDIBLE	LAMPTEST
EXPILPWR	2	6	0	N	N
EXPILDMS	2	5	0	N	N
NTALMXFR	2	4	0	N	N
LN101TST	2	3	0	N	N
OAUFALL	0	0	1	N	N
.	.	.	.	.	.
.	.	.	.	.	.
.	.	.	.	.	.
LMMNV	6	6	0	Y	N
PREFLRF	0	6	0	N	N

**Datafilling table DFINV**

Table distribution frame inventory (DFINV) stores information for a maximum of 31 distribution frames at the host or in remote locations. Northern Telecom provides the information in this table.

Table DFINV must contain an entry that corresponds to the RLCM. This entry allows the RLCM to operate correctly. Table DFINV associates the site name for the RLCM with a different distribution frame name in field DFNAME. Data in this table supports automatic line testing (ALT).

**Datafill example for table DFINV**

Sample datafill for table DFINV appears in the following example.

**MAP display example for table DFINV**

DFNO	DFNAME	MAXZONE	SITE
0	HOST	4	HOST
1	RLCM	4	REM3

**Datafilling in table SCGRP**

The scan group (SCGRP) table lists the PECs and locations of scan groups that provide scan points for line features. Each different scan card, NT0X10, provides 14 single-lead scan points.

## Basic call processing (continued)

The card is divided into two scan groups. Each scan group consists of seven scan points. These scan points are 0-6. Table ALMSC assigns an RMM circuit number to each scan point.

The allocation of memory in table SCGRP is for the total number of trunk groups. The total number of trunk groups is equal to the value of field SIZE in table DATASIZE for key SCGRP.

The seven scan points in the scan group are available for assignment to MDC, business set or normal lines. These lines must have the line features remote make busy (RMB) or stop hunt (SHU). The RMB and SHU features require scan points.

### Datafill example for table SCGRP

Sample datafill for table SCGRP appears in the following example.

#### MAP display example for table SCGRP

SCGRPNO	TMTYPE	TMNO	TMCKTNO	CARDCODE
0	OAU	0	22	0X10AA
1	RMM	0	10	0X10AA
2	RMM	0	11	0X10AA

### Datafilling in table SDGRP

Table signal distribution group (SDGRP) lists the PECs and location of signal distributor (SD) circuits on the RMM assigned to line features. Each SD card provides 14 SD points subdivided into two SD groups. Each SD group is assigned to a trunk module circuit number.

*Note:* Operating company personnel must assign lines at a remote location to SD points that belong to SD groups at the location.

### Datafill example for table SDGRP

Sample datafill for table SDGRP appears in the following example.

---

**Basic call processing** (continued)

---

**MAP display example for table SDGRP**

SDGRPNO	TMTYPE	TMNO	TMCKTNO	CARDCODE
0	RSM	0	15	2X57AA
1	OAU	0	20	2X57AA
2	MTM	0	6	2X57AA
3	MTM	0	7	2X57AA
4	RMM	0	25	2X57AA

**Datafilling table TOFCNAME**

Table terminating office name (TOFCNAME) replaces table THOUGRP for BCS33 and up. This table lists all terminating offices in the switch. A terminating office is a different group of area code and office code.

The universal directory number (DN) system can contain a maximum of 1024 TOFCs. North American offices can contain 100 TOFCs.

The AREACODE field identifies the area code where the terminating office resides. Table SNPANAME or table HNPACONT defines the area code.

The OFCCODE field identifies the second part of the terminating office code (TOFC) and is a subarea of AREACODE. A number cannot be an AREACODE and an OFCCODE. For example, when 613 is an AREACODE, 613 cannot be an OFCCODE in any AREACODE.

You must enter data in this table before you enter data in a table that defines the serving numbering plan area (SNPA). The SNPA tables are HNPACONT, DNHEAD and SNPANAME. Tables that assign directory numbers are HUNTGRP, LENLINES or IBNLINES.

**Datafill example for table TOFCNAME**

Sample datafill for table TOFCNAME appears in the following example.

**MAP display example for table TOFCNAME**

AREACODE	OFCCODE
613	621
819	622
613	722
613	222
819	221

## Basic call processing (continued)

### Datafilling table LINEATTR

Table line attribute (LINEATTR) assigns line class codes (LCC) and billing and screening information to lines in the DMS switch. In this table, you must identify all lines that the RLCM supports as private, coin or private branch exchange (PBX).

Each tuple of table LINEATTR corresponds to one tuple in table LENLINES, which identifies the location of the line circuit. The index field of table LINEATTR matches tuples.

### Datafill example for table LINEATTR

Sample datafill for table LINEATTR appears in the following example.

### MAP display example for table LINEATTR

LAXD	LCC	CHGCLSS	COST	SCRNCL	LTG	STS	PRTNM	LCANAME	LCABILL
SFC	LATANM	MDI	IXNAME	DGCLAME	FANIDIGS	ZEROMPOS	TRAFSNO	MRSA	
	RESINFO				OPTIONS				
0	1FR	NONE	NT	FR01	0	613	POTS	LCA1	N
							CTOP	20	NIL
	NILSFC	NILLATA	0	NIL		NIL	00		
		N					(HOT)\$		
2	1FR	NONE	NT	NSCR	0	819	POTS	LCA1	N
							CTOP	21	NIL
	NILSFC	NILLATA1	0	NIL		NIL	00		
		N					(HOT)\$		
3	1MR	NONE	NT	NSCR	0	819	POTS	LCA1	N
							CTOP	22	NIL
	NILSFC	NILLATA2	0	NIL					
		N					\$		
4	CCF	NONE	LO	FR01	0	613	POTS	LCA1	N
							CTOP	23	NIL
	NILSFC	NILLATA1	0	NIL					
		N					\$		



**Basic call processing** (continued)

**Datafilling table LNINV**

Table line inventory (LNINV) associates the site name from table SITE to each line circuit in the RLCM. This table defines the line equipment number (LEN) of a line. This table indicates the software location and hardware characteristics. A tuple in table LNINV must represent each line card in the RLCM.

The subfields that identify the line card are changed to allow a LEN to identify an RLCM line card. In a LEN for an LCM, the fields for the LEN are defined as follows:

- SITE
- FRAME
- UNIT
- SUBGROUP
- CIRCUIT

Note the following table interactions:

- Line assignment for coin lines occurs in table LENLINES.. The LNATTIX field corresponds to the line class code, coin first (CCF), coin dial-tone first (CDF) or coin semi-postpay (CSP), in table LINEATTR.
- POTS lines LCMLSG do not have corresponding tuples in keyset-type tables.
- For Meridian business sets, (MBS), the VARTYPE in table LCMINV must be NTPROP.

The datafill for Basic call processing for table LNINV appears in the following table. Only fields that apply directly to Basic call processing appear in this table.

**Datafilling table LNINV (Sheet 1 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
LEN		alphanumeric	Line equipment number. This field contains the following subfields: SITE, FRAME, UNIT, SUBGROUP and CIRCUIT.
	SITE	alphanumeric	Site. Enter the location of the LCM (four-character alphanumeric). This entry is not optional. This entry does not have a default value.

**Basic call processing** (continued)

Datafilling table LNINV (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	FRAME	0 to 511	LCM frame. Enter the LCM frame number. The LCM frame number is not a frame, but a software entity. The frame number represents the group that the LCM belongs at the site.
	UNIT	0 to 1	LCM unit. Enter the number that represents the LCM unit in the group.
	SUBGROUP	0 to 19	LCM subgroup. Enter the number of subgroups in the line drawers.
	CIRCUIT	0 to 31	LCM circuit. Enter the number of circuits in the subgroups. The range is 0-31.
CARDCODE		alphanumeric	Card code. Enter the PEC of the line card or line card carrier.
PADGRP		STDLN, UNBAL, PPHON, LRLM, and NPDGP.	Pad group. Enter the name of the pad group assigned to the line circuit in the pad data table. The values include STDLN, UNBAL, PPHON, LRLM and NPDGP.
STATUS		HASU, WORKING, UNEQUIP, CUTOFF, and RESERVED.	Status. Enter the line inventory availability status. The values include HASU, WORKING, UNEQUIP, CUTOFF and RESERVED.
GND		Y or N	Ground. Where line is ground start, enter Y. For other conditions, enter N (for loop start).
BNV		NL	Balanced network value. Enter L when line circuit is configured for a loaded network. For other conditions, enter NL (for nonloaded network).
MNO		N	Manual override. Enter Y to prevent an on-hook balance network test from updating field BNV in this table.  For other conditions, enter N to allow an off-hook balance network test to update field BNV in this table.
CARDINFO		NIL	Card information. The NIL value is the default. The values are NIL, SSLCC or ISLCC.

**Basic call processing** (continued)**Datafill example for table LNINV**

Sample datafill for table LNINV appears in the following example.

**MAP display example for table LNINV**

LEN	CARDCODE	PADGRP	STATUS	GND	BNV	MNO	CARDINFO
REM1	00 0 0	1	2X17AB	STDLN	HASU	N	NL N NIL
REM1	00 0 0	2	2X17AB	STDLN	HASU	N	NL N NIL
REM1	00 0 0	3	2X17AB	STDLN	HASU	N	NL N NIL
REM1	00 0 0	4	2X17AB	STDLN	WORKING	N	NL N NIL
REM1	00 0 0	5	2X17AB	STDLN	HASU	N	NL N NIL
REM1	00 0 0	6	2X17AB	STDLN	RESERVED	N	NL N NIL
REM1	00 0 0	7	2X17AB	STDLN	HASU	N	NL N NIL
REM1	00 0 0	8	2X18AD	STDLN	HASU	N	NL N NIL
REM1	00 0 0	9	2X18AD	STDLN	HASU	N	NL N NIL
REM1	00 0 0	10	2X18AD	STDLN	HASU	Y	NL N NIL
REM1	00 0 5	0	2X17AB	STDLN	HASU	N	NL N NIL
REM1	00 0 5	1	2X17AB	STDLN	HASU	N	NL N NIL

**How to enter data in table HUNTGRP**

Table hunt group (HUNTGRP) lists groups of subscriber lines assigned for certain MDC features to work. Enter the pilot DN for all hunt groups associated with the RLCM.

**CAUTION**

**Use the SERVORD system to add and delete tuples to and from table HUNTGRP.**

When you use the table editor to enter data in this table, incompatible features can be assigned to the line.

**Datafill example for table HUNTGRP**

Sample datafill for table HUNTGRP appears in the following example.

## Basic call processing (continued)

### MAP display example for table HUNTGRP

HTGRP	SNPA	DN	GRPTTYPE	GRPDATA
21	919	7820280	DNH Y N N	RCVD N
			N	N
			N	3 \$
19	919	7821111	DLH Y N N	RCVD N
			N	N
			N	1 \$

### Datafilling table LENLINES

Table line equipment number to lines (LENLINES) associates each line circuit by LEN with the remote location and attributes from table LINEATTR. A tuple in table LENLINES represents each line card in the RCLM.



#### CAUTION

Use the **SERVORD** system to add and delete tuples to and from table **LENLINES**.

When you use the table editor to enter data in this table, incompatible features can be assigned to the line.

Table LENLINES contains the following data:

- site name assigned to remote location
- party to which a DN is assigned
- ringing code assigned to a DN

**Note:** For BCS33 and up, the DN field of table LENLINES accommodates a maximum of 15 digits.

**Basic call processing** (continued)

The datafill for Basic call processing for table LENLINES appears in the following table. Only fields that apply directly to Basic call processing appear in the following table.

**Datafilling table LENLINES (Sheet 1 of 2)**

<b>Field</b>	<b>Subfield or refinement</b>	<b>Entry</b>	<b>Explanation and action</b>
LEN		alphanumeric	Line equipment number. This field contains the following subfields: SITE, FRAME, UNIT, SHELF and SLOT.
	SITE	alphanumeric	Site. Enter the four-character alphanumeric value that represents the PM location.
	FRAME	0 to 99	Frame. Enter the number that represents the group the RLCM belongs to at the site.
	UNIT	0 to 1	Unit. Enter the number that represents the RLCM unit in the group.
	SHELF	numeric	Shelf number. Enter the number that represents the shelf number of the RLCM.
	SLOT	numeric	Slot number. Enter the number that represents the slot number of the RLCM.
PTY		R1 to R15, T1 to T15 <i>or</i> single	Party and ringing group. The line can be assigned to a two-, four-, eight-, or ten-party line. Enter the party of the DN assigned to the line.  The range is R1 to R5 and T1 to T5. When the line is assigned to a separate line, enter S, single party.
RINGCODE		0 to 7	Ring code. Enter the ring code assigned to the line.
DN		numeric	Directory number. Enter the DN assigned to the line.
SIGTYPE		DP <i>or</i> DT	Signal type. Enter the type of pulse you expect, DP (dial pulse) or DT (Digitone).

**Basic call processing** (continued)

**Datafilling table LENLINES (Sheet 2 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
LNATTIDX		0 to 1023	Line attribute index. Enter the index in the line attribute table LINEATTR.
OPTLIST		alphanumeric	Option list. Enter a list of a maximum of 20 basic options assigned to the DN. Each three-character option must be separated with a blank space. Enter invalid data to display the list of available options.

**Datafill example for table LENLINES**

Sample datafill for table LENLINES appears in the following example.

**The MAP display example for table LENLINES**

		LEN	PTY	RINGCODE	DN	SIGTYPE	LNATTIDX	OPTLIST
REM1	LM	0	0	0 23	S	0	6213010	
							DP	0 \$
REM1	LM	0	0	0 24	S	0	6213030	
							DP	0 \$
REM1	LM	0	0	0 26	S	0	6213050	
							DT	0 \$
REM1	LM	0	0	0 28	S	0	6213060	
							DP	0 \$
REM1	LM	0	0	0 29	S	0	6213070	
							DP	0 \$
REM1	LM	0	0	0 30	S	0	7771113	
							DT	160 \$
REM1	LM	0	0	05 10	R1	0	6213300	
							DT	200 \$
REM1	LM	0	0	05 10	T1	0	6213301	
							DT	200 \$
REM1	LM	0	0	05 10	R2	0	6213302	
							DT	200 \$

**Basic call processing** (continued)**Datafilling table LENFEAT**

Table line equipment number feature (LENFEAT) contains assignments of any special line features for each line circuit. When a line does not have features, a tuple for the line does not appear in this table.

**CAUTION**

**Use the SERVORD system to add and delete tuples to and from table LENFEAT.**

When you use the table editor to enter data in this table, incompatible features can be assigned to the line.

**Datafill example for table LENFEAT**

Sample datafill for table LENFEAT appears in the following example.

**The MAP display example for table LENFEAT**

LEN	PTY	DF	DATA
REM1 LM 00 0 0 26 S PIC PIC			TR1 Y
REM1 LM 00 0 5 26 S PIC PIC			TR1 Y
REM1 LM 00 0 10 26 S PIC PIC			TR1 Y
REM1 LM 00 0 15 26 S PIC PIC			TR1 Y
REM1 LM 00 1 0 26 S PIC PIC			TR1 Y
REM1 LM 00 1 5 26 S PIC PIC			TR1 Y
REM1 LM 00 1 10 26 S PIC PIC			TR1 Y
REM1 LM 00 1 15 26 S PIC PIC			TR1 Y
REM1 LM 00 0 5 28 S PIC PIC			TR1 Y
REM1 LM 00 0 15 28 S PIC PIC			TR1 Y
REM1 LM 00 1 15 28 S PIC PIC			TR1 Y

## Basic call processing (continued)

### Datafilling table HUNTMEM

Table hunt group member (HUNTMEM) lists the members assigned to the hunt groups listed in table HUNTGRP. Enter all members assigned to RLCM line hunt groups.



#### CAUTION

Use the **SERVORD** system to add and delete tuples to and from table HUNTMEM.

When you use the table editor to enter data in this table, incompatible features can be assigned to the line.

### Datafill example for table HUNTMEM

Sample datafill for table HUNTMEM appears in the following example.

#### The MAP display example for table HUNTMEM

HTGRP	SEQNO	INSERT	HTMDATA					
50	0	N	L	RLCM	00	02	24	N
50	1	N			D	6211902	N	
50	2	N			D	6211903	N	
51	0	N			D	6211904	N	
51	1	N			D	6211905	N	
51	2	N			D	6211906	N	
51	3	N			D	6211907	N	
52	0	N			D	6211908	N	
52	1	N			D	6211909	N	

### Datafilling table DNROUTE

For BCS33 and up, table directory number route (DNROUTE) replaces table WRDN. This table lists information for writeable DNs in the switch. The tuples DN\_SEL=FEAT, FEATURE=MEETME, and FEATURE=PC, which appeared in table WRDN, do not appear in table DNROUTE.

The AREACODE and OFCCODE fields are the same as in table TOFCNAME. The AREACODE and OFCCODE fields must be previously specified in table TOFCNAME. The STNCODE field is DEFG in North America.



---

## Basic call processing (continued)

---

The DNRESULT field is the same as in table DN. Enter numbers in these groups that result when an RLCM is provisioned.

**Note:** Table DN is read only. The table contains data for all assigned and not assigned directory numbers. The table includes numbers in DNROUTE. Input is not necessary for this table.

### Datafill example for table DNROUTE

Sample datafill for table DNROUTE appears in the following example.

### MAP display example for table DNROUTE

AREACODE	OFCCODE	STNCODE	DNRESULT
613	621	1000	FEAT DISA IBNTST 0 N N N Y \$
613	621	1010	FEAT DISA IBNTST 0 N N N Y \$
613	621	1096	
613	621	1117	
613	621	1181	
613	621	1251	

### Datafilling table HNPACONT.HNPACODE

Subtable home numbering plan area code (HNPACONT.HNPACODE) lists the route and treatment or table where a translation must route. The translation must route for three-digit codes, 000-999, in each serving number plan area (SNPA) or serving translation schemes (STS). These numbers are assigned in table HNPACONT.

You can expand each three-digit code to ten or more digits. Expand the code to make the code compatible with office equipment and other datafill.

Assign the code station ringer test, (SRT) to the NPA that the RLCM serves. When table TOFCNAME changes, change subfield NXX of the CDRRTMT field to the DN where the SRT is assigned.

### Datafill example for table HNPACONT.HNPACODE

Sample datafill for table HNPACONT.HNPACODE appears in the following example.

## Basic call processing (continued)

### The MAP display example for table HNPACONT.HNPACODE

POSITION ON (NPA) sub HNPACODE			CDRRTMT
FROMDIGS	TODIGS		
1150	1150	STRG	24
1155	1155	OPC4	25
141	141	OPC3	22
181	181	OPC3	23
201	201	VCT	HNPI
228	228	HRTE	1
229	229	HRTE	1
303	303	FNPA	0
404	404	FNPA	0
418	418	FRTE	29
514	514	FRTD	10

### Datafilling table MTAMDRVE

The metallic test access minibar driver (MTAMDRVE) network is a matrix of vertical and horizontal crosspoints. The MTAMDRVE is like a minibar that connects specified verticals to horizontals in the network.

The MTA network connects testing equipment on the horizontal crosspoints to circuits that need tests on the vertical crosspoints.

Table MTAMDRVE specifies the location and type of minibar driver assigned to a minibar switch. The NT3X09 driver has relays on the card. The NT3X09 driver does not require an associated minibar switch.

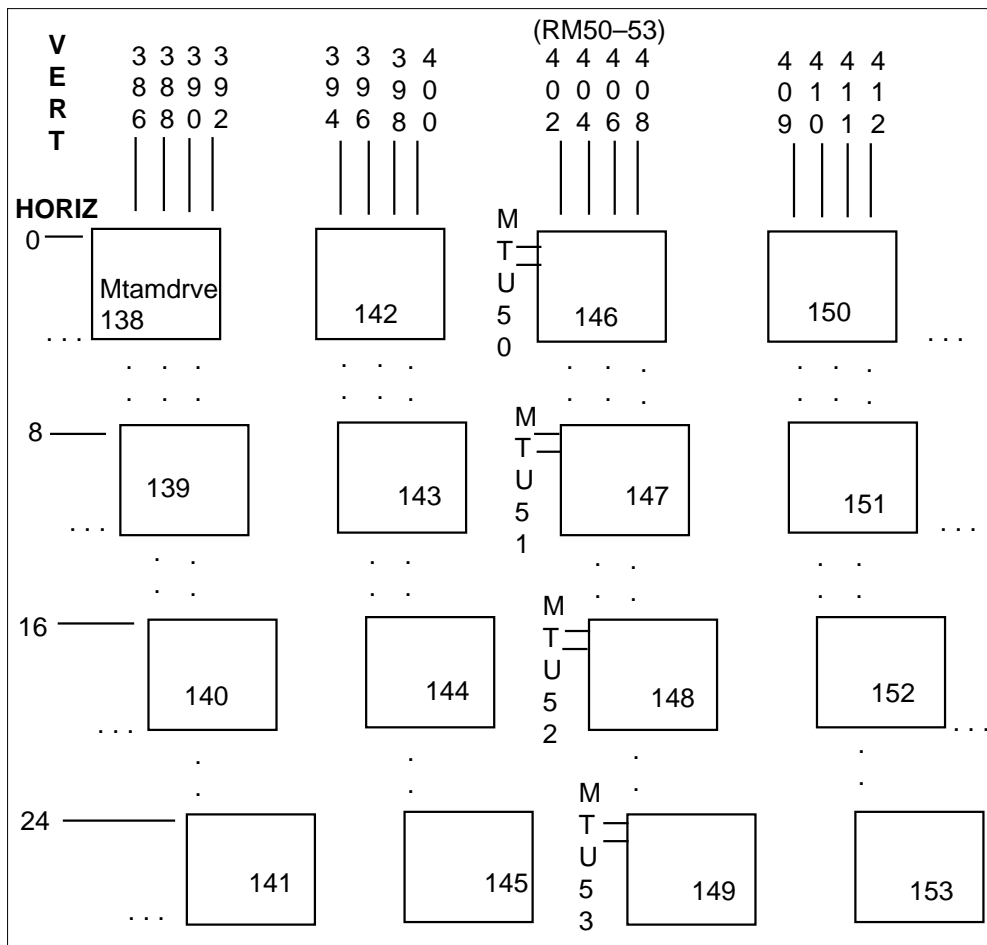
If the RLCM is provisioned with a remote MTA in its RMM, table MTAMDRVE requires an entry that identifies the NT3X09 card. The 0, 0 crosspoint in the matrix identifies each minibar driver.

**Basic call processing** (continued)

**Many remotes in an MTA**

An MTA supports up to 509 remotes. This number of remotes is supported by adding up to four horizontal rows with an offset of two verticals. This configuration (the additional rows with an offset of two verticals) works with either NT3X09AA or NT3X09BA MTAMDRVE cards. See the following figure.

**Example configuration for an MTA with many remotes**



The following MAP display example shows table MTAMDRVE datafill for the previous example. In addition, MAP display examples related to the configuration example mentioned above are provided for table MTAHORIZ and table MTAVERT.

**Basic call processing** (continued)

**Datafill example for table MTAMDRVE**

MTAMEM	VERT	HORIZ	TMTYPE	TMNO	TMCKTNO	MTACARD
146	402	0	RMM	50	18	3X09BA
147	404	8	RMM	51	18	3X09BA
148	406	16	RMM	52	18	3X09BA
149	408	24	RMM	53	18	3X09BA

The following MAP display example shows table MTAHORIZ datafill for the previous example.

**Datafill example for table MTAHORIZ**

HORIZ	HORIZGRP	HORIZAGT			MTAGRP
0	5	L	MTU	50 Y	(146 0) \$
8	5	L	MTU	51 Y	(147 0) \$
16	5	L	MTU	52 Y	(148 0) \$
24	5	L	MTU	53 Y	(149 0) \$

The following MAP display example shows table MTAVERT datafill for the previous example.

**Datafill example for table MTAVERT**

VERT	VERTCONN		
402	S	L	RM50 0 0
404	S	L	RM51 0 0
406	S	L	RM52 0 0
408	S	L	RM53 0 0

**Basic call processing** (continued)

The datafill for Basic call processing for table MTAMDRVE appears in the following table. Only fields that apply directly to Basic call processing appear in the following table.

**Datafilling table MTAMDRVE**

Field	Subfield or refinement	Entry	Explanation and action
MTAMEM		0 to 255	Metallic test access minibar driver member. Enter the MTA driver member number. The number is the key to the table.
VERT		0 to 639	The MTAM driver vertical start location. Enter the vertical start location for the MTAM driver.
HORIZ		0 to 127	The MTAM driver horizontal start location. Enter the horizontal start location for the MTAM driver.
TMTYPE		RMM	Trunk module type. Enter the type of trunk module where the minibar driver mounts. In this event, RMM
TMNO		0 to 255	Trunk module number. Enter the number assigned to the remote maintenance trunk module.
TMCKTNO		0 to 27	Trunk module circuit number. Enter the circuit number of the trunk module where the minibar driver is assigned.
MTACARD		NT3X09AA or NT3X09BA	The MTAM driver card. Enter the card code for the MTAM driver card. The AA version is a 4 by 8 matrix. The BA version is an 8 by 8 matrix.

**Datafill example for table MTAMDRVE**

Sample datafill for table MTAMDRVE appears in the following example.

**MAP display example for table MTAMDRVE**

MTAMEM	VERT	HORIZ	TMTYPE	TMNO	TMCKTNO	MTACARD
0	0	0	RMM	0	12	3X09AA

## Basic call processing (continued)

### Datafilling table MTAVERT

Table metallic test access vertical (MTAVERT) identifies the minibar switch verticals that connect the RLCM to the MTA matrix. The type of connection is single or multiple.

The datafill for Basic call processing for table MTAVERT appears in the following table. Only fields that apply directly to Basic call processing appear in the following table.

#### Datafilling table MTAVERT

Field	Subfield or refinement	Entry	Explanation and action
VERT		0 to 639	Vertical. Enter the MTA vertical connection number.
VERTCONN		S or M	Vertical connection. Enter S or M to indicate single or multiple connections.
	SELECTOR	L or T	Selector. When you use selector L, the entry in VERTCONN is S. You must enter data in subfields SITE, FRAME and UNIT.
	SITE	alphanumeric	Site name. Enter the name selected for the remote location.
	FRAME	0 to 99	Frame number. Enter the frame number.
	UNIT	0 to 1	Unit number. Enter the unit number.

#### Datafill example for table MTAVERT

Sample datafill for table MTAVERT appears in the following example.

#### The MAP display example for table MTAVERT

VERT	VERTCONN
0	S L RCM 01 0

### Datafilling table MTAHORIZ

Table metallic test access horizontal (MTAHORIZ) lists the assignment of horizontal agents to a horizontal and horizontal group of MTA minibars (MTAM).

---

**Basic call processing** (continued)

---

Horizontal agents include the following parts:

- line test units (LTU)
- metallic test units (MTU)
- operator check
- metal jacks
- incoming test access trunks
- extended MTA
- short circuits

Different horizontal agents can use the same horizontal. The different horizontal agents must associate with different MTAMs or horizontal groups. A maximum of 160 different horizontal agents is allowed for a given horizontal.

A maximum of 32 MTAMs can be grouped to connect to a single horizontal agent. A horizontal agent can be used only one time.

The datafill for Basic call processing for table MTAHORIZ appears in the following table. Only fields that apply directly to Basic call processing appear in the following table.

**Note 1:** Horizontals are not reserved for dedicated LTUs. Nondedicated LTUs do not have assignment limit.

**Note 2:** A LTU can be assigned to a host switching unit. When this event occurs, the horizontal where the LTU is assigned is multiplied to all minibar switches. The horizontal is assigned to the host switching unit. An LTU can be assigned to a remote location. When this event occurs, the horizontal, where the LTU is assigned, is multiplied to all minibar switches. The switches are also assigned to the remote location.

**Note 3:** The minibar switch can be present at a host switching unit. When this event occurs assignment limit is not present for the assignment of incoming test and operator verification trunks. Each incoming test access trunk and operator verification trunk requires one horizontal.

**Note 4:** The MTA configuration can be small or medium. When this event occurs, the horizontals are multiplied to all minibar switches. The horizontals are the location for the assignment of incoming test access and operator verification trunks. The switches are located at the host switching unit.

**Note 5:** The minibar switch can be remote from the host switching unit. When this event occurs, the horizontals are available for the assignment of

**Basic call processing** (continued)

incoming test access trunks. All horizontals are available for the operator verification trunks and for the extension of the metallic test access feature.

**Note 6:** Each incoming test access trunk, operator verification trunk and vertical on the host minibar switch requires one horizontal. The switch is assigned to a horizontal on the minibar switch at the remote or host location.

**Note 7:** The maximum number of metal jacks in each DMS office is 256.

**Note 8:** Tables CLLI, TRKGRP, TRKSGRP and TRKMEM contain the assignment of LTUs, incoming test access and operator verification trunks-to-trunk group. Tables CLLI, TRKGRP, TRKMEM also contain the trunk subgroup and trunk member tables.

**Note 9:** You must datafill LTU or MTU in table TRKMEM before an LTU or an MTU is added to table MTAHORIZ. When the deletion of an LTU or MTU from table TRKMEM occurs, the system marks the corresponding tuple in table MTAHORIZ as deleted. The system restores the tuple when you add the LTU or MTU again to table TRKMEM.

**Note 10:** The system continuously allocates memory for this table to a maximum of 2000 tuples.

**Datafilling table MTAHORIZ (Sheet 1 of 3)**

Field	Subfield or refinement	Entry	Explanation and action
HORIZ		0 to 127	The MTA horizontal. Enter the MTA horizontal where the test equipment and horizontal agent connect.
HORIZGRP		0 to 159	The MTA horizontal group. Enter the horizontal group number that identifies the horizontal and horizontal agent as a different tuple. The group allows assignment of different test equipment on the same MTA horizontal.
HORIZAGT		Refer to subfield	This field contains subfields that depend on the value of the SELECTOR used.
SELECTOR			Selector. Range: S, L, T, B, E, MJ, J, and LA.
		S	Enter S for a timed short circuit.
		L	Enter L for LTU or MTU assignment. Complete subfields CLLI, EXTRKNM, and ALTUSE.
		T	Enter T for incoming test access or operator verification trunk assignment, and complete subfields CLLI and EXTRKNM.



**Basic call processing** (continued)

Datafilling table MTAHORIZ (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
		B	Enter B for a board-to-board dedicated horizontal, and complete subfield BBTNR.
		E	Enter E to multiply a horizontal of a minibar switch from a host or remote to the vertical of a host minibar switch. Complete subfield EMTAVERT.
		MJ	Enter MJ for metal connection to the tip and ring of the subscriber line. Complete subfields CLLI and MJACKNUM.
	Selector	J or LA	Selectors J and LA are for licensee use only.
	CLLI	refer to list	Common language location identifier. Enter LTU for a line test unit or MTU for a metallic test unit. For operator checks or for an incoming test access trunk, enter the alphanumeric code that represents the test access trunk group.
		LTU	Enter LTU for line test unit.
		MTU	Enter MTU for metallic test unit.
		CLLI	For operator checks of an incoming test access trunk, enter the alphanumeric code that represents this trunk group in table CLLI.
		MJACK	Enter MJACK for metal jacks.
	EXTRKNM	0 to 9999	External trunk number. Enter the external trunk number assigned in table TRKMEM. The assigned number can be the line test unit, metal test unit, operator verification trunk or incoming test access trunk.
	ALTUSE	Y or N	Automatic line test use. Enter Y to use line test equipment for automatic line testing (ALT). For other conditions, enter N.
	BBTNR	0 to 7	Board-to-board testing number. Enter the number of the board-to-board set that this horizontal associates with.

## Basic call processing (continued)

### Datafilling table MTAHORIZ (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
MTAGRP	EMTAVERT	0 to 639	Extended metallic test access column. Enter the associated vertical on the MTA in the host where the horizontal connects.
	MJACKNUM	1 to 256	Metallic jack number. Where the entry in subfield CLLI is MJACK, enter the metallic jack number.
		MTAMEM, HORIZ, and CONTMARK	MTA group. This field has a list of MTA drivers that multiply to the test equipment. This field is a vector of a maximum of 32 multiples of subfields MTAMEM, HORIZ and CONTMARK.
	MTAMEM	0 to 255	MTA minibar driver member. Enter the MTAM driver member number where the horizontal connects.
	HORIZ	0	Horizontal. The HORIZ a read-only field. The field provides information about the horizontal where the MTA drivers connect. Enter 0 to satisfy table control.
	CONTMARK	+ or \$	Continuation mark. Enter a plus sign (+) when additional data is specified on the next record. For other conditions, enter dollar sign (\$) after last record.

### Datafill example for table MTAHORIZ

Sample datafill for table MTAHORIZ appears in the following example.

### The MAP display example for table MTAHORIZ

HORIZ	HORIZGRP	HORIZAGT	MTAGRP
0	0	L	LTU 0 ( 0 0 )\$

### Translation verification tools

Basic call processing does not use translation verification tools.

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**Basic call processing** (continued)

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**SERVORD**

The Service Order System (SERVORD) provides operating companies with the best means to perform the following operations:

- add or remove subscriber service lines
- add or delete line service options
- change the LEN or DN of present lines
- add to or delete features from lines

Update tables LENLINES, LENFEAT, HUNTGRP, HUNTMEM and DNINV through SERVORD.

When a line is entered in table LNINV, SERVORD automatically enters the correct line attribute number for the line in table LENLINES. The SERVORD enters the correct line options and feature information after the option, feature or both are entered with SERVORD.

**CAUTION**

**Do not use the table editor to datafill SERVORD tables.** When you do not use SERVORD commands to datafill tables LENLINES, LENFEAT, HUNTGRP, HUNTMEM, and DNINV, incompatible features can be assigned to lines.

**SERVORD commands**

A list and description of the service order commands appear in the following table.

**Service order commands (Sheet 1 of 2)**

Command	Description
SERVORD	Accesses the service order software
ADD	Adds a line or lines to a current hunt group. Adds lines to a call pickup group
ADO	Adds options to lines. Adds lines to a directory number hunt (DNH) group
DEL	Deletes a line or lines from a hunt group. Applies to hunt group members except pilot
DEO	Deletes options from lines

## Basic call processing (continued)

### Service order commands (Sheet 2 of 2)

Command	Description
NEW	Establishes new service. Applies to separate nonhunt lines and party lines
OUT	Removes service. Applies to separate lines and the pilot of hunt group

### SERVORD limits

Basic call processing does not have SERVORD limits.

### SERVORD prompts

You can enter a service order in the prompt mode. The system prompts you for input or nonprompt mode. You enter all input in one command string.

When entry of a service order is complete, the service order displays for verification purposes. The system prompts you for a Y, N or E. Enter N to abort the service order. Enter E to edit the service order in prompt mode. When you enter Y, the system verifies the service order.

When the system detects an error, the system rejects the service order. The system accepts a service order entered without a service order number (SONUMBER) for immediate activation.

The SERVORD prompts to assign, delete, add or change Basic call processing to or from a destination appear in the following table.

The service order prompts you use to implement individual line options in the example service orders appear in the following table.

### SERVORD prompts for Basic call processing (Sheet 1 of 2)

Prompt	Correct input	Explanation
DN	Enter seven digits without spaces or hyphens	Directory number associated with the service you establish, modify or delete.
LCC	1FR	Line class code of the service you establish, modify or delete. The individual flat rate, residence and business is 1FR.
LATANAME	NILLATA (LATA name defined in table LATANAME)	The calling local access and transport area (LATA) name associated with the originator of the call.

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**Basic call processing** (continued)
 

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**SERVORD prompts for Basic call processing (Sheet 2 of 2)**

Prompt	Correct input	Explanation
LTG	0-255	Line treatment group number. Calculates the line attribute index when the DN and link control card (LCC) cannot find a correct index
LEN_OR_LTID	alphanumeric	Line equipment number or logical terminal identification. Associated with the establishment, modification or deletion of a service when the following conditions apply: <ul style="list-style-type: none"> <li>• site is the site name (defaults to host)</li> <li>• ff is the frame number</li> <li>• u is the unit number</li> <li>• dd is the drawer number of the line spread group</li> <li>• cc is the line circuit number</li> </ul>
OPTION	\$	Line service options are not available.

**SERVORD example to add, delete, and change Basic call processing**

The following service order examples describe how to establish an individual line without options. The examples describe how to add or delete an option to a line. The examples also describe how to remove a line from service.

## Basic call processing (continued)

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### The SERVORD example for Basic call processing in prompt mode

```
> SERVORD
SO:
> NEW
SONUMBER:
> <RETURN>
DN
> 5320105
LCC:
> 1FR
LATANAME
> NILLATA
LTG: 0
> 230
LEN_ORLTID
> REM1 00 0 01 27
OPTION
> $
COMMAND AS ENTERED:
NEW NOW 90 11 13 PM 5320105 1FR NILLATA 230 REM1 00 0
01 27 $
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
> Y
```

### The SERVORD example for Basic call processing in no-prompt mode

```
> NEW $ 5320105 1FR NILLATA 230 REM1 00 0 01 27 $
```

### Example of adding the negate partial ground (NPGD) option in the prompt mode

```
>ADO
SONUMBER:      SR 12345 Q 95  4 13 PM
>
DN_OR_LEN:
>4817251
OPTION:
>NPGD
OPTION:
>$
```

---

**Basic call processing** (continued)
 

---

**Example of adding the NPGD option in the no-prompt mode**

```
>ADO $ 4817251 NPGD $
```

**The SERVORD example of deleting an option from an individual line in prompt mode**

```
>SERVORD
SO:
>DEO
SONUMBER:
><RETURN>
DN_OR_LEN
>REM1 00 0 01 27
OPTION:
>DGT
OPTION:
>$
COMMAND AS ENTERED:
DEO NOW 90 11 13 PM REM1 00 0 01 27 ( DGT ) $
ENTER Y TO CONFIRM, N TO REJECT TO E TO EDIT
>Y
```

**The SERVORD example of how to delete an option from an individual line in non-prompt mode**

```
>DEO $ REM1 00 0 01 27 DGT $
```

## Basic call processing (end)

---

The **SERVORD** example of how to remove a current individual line service in prompt mode

```
>SERVORD
SO:
>OUT
SONUMBER:
><RETURN>
DN:
>5320105
LEN_OR_LTID
>REM1 00 0 01 27
INTERCEPT_NAME
>BLDN
LEN:
>$
COMMAND AS ENTERED:
OUT NOW 90 11 13 PM $ 5320105 REM1 00 0 01 27 BLDN
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
>Y
```

The **SERVORD** example of removing a current individual line service in non-prompt mode

```
>OUT $ 5320105 REM1 00 0 01 27 BLDN $
```

### How **SERVORD** affects tables **LENLINES**, **LINEATTR**, and **LENFEAT**

A line can be entered in table LNINV. When this event occurs, **SERVORD** enters the line attribute number for the line in tables **LINEATTR** and **LENLINES**. The **SERVORD** enters the correct line options and feature information in table **LENFEAT** after the option or feature. You can enter the option and feature with **SERVORD**.



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**OPM maintenance**

---

**Functional group**

Functional group: BAS00012

**Feature package**

Feature package: NTX147AB OPM Maintenance

**Release applicability**

BCS35 and later versions

**Requirements**

To operate, outside plant module (OPM) maintenance has the following requirements:

- Bilge, NTX000AA
- Common Basic, NTX001AA
- Remote Line Concentrating Module (RLCM), NTX146AA
- New Peripheral Maintenance Package, NTX270AA
- Local Features II, NTX901AA

**Description**

The OPM is a reconfigured remote line concentrating module (RLCM) packaged in an environmentally controlled cabinet. The cabinet has a main compartment that contains the electronic equipment, an environmental control system, and batteries.

The cabinet contains a cable-connection compartment that contains the terminals, protection, and cross-connections for incoming lines and cables.

The OPM cabinet is configured with two equipment rows. Each row has two bays (BAY 0 and 1). The BAY 0 is on the left. The BAY 1 is on the right. The bays in the front row are hinged to allow access to the equipment in the rear row.

The OPM is available in two configurations. The OPM-640 has a maximum subscriber line capacity of 640 lines. The OPM-256 has a lower maximum subscriber line capacity of 256 lines. This lower line capacity allows for the installation of fiber or channel bank shelves instead of additional lines.

## OPM maintenance (continued)

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### Operation

The OPM must be able to operate in outside weather conditions, like extreme heat, cold, or heavy dust. The environmental control equipment of the OPM must function correctly.

The environmental control equipment consists of fans, heaters, heat sensors, air filters, and vents. Alarms and circuit states monitor the condition of the power and environment system (PES).

Table OPMINV controls the OPM PES data.

Battery maintenance audits monitor the status of the power backup system. The OPM performs this maintenance function through the following procedures:

- automatic battery rotation
- load bus diagnostic
- charge bus diagnostic

To maintain charged batteries, each pair of battery strings connects to the charge bus for one day. The battery strings are charged in rotation.

A commercial ac power failure causes interruption of the rotation. All battery strings are forced to the load bus for the duration of the power outage. If all eight battery strings are equipped and completely charged, the power backup mechanism can provide power. The mechanism can provide power for a minimum of 8 h.

After recovery of ac power, the battery strings remain on the load bus. The strings remain on the load bus for a minimum of 24 h before the battery strings start normal rotation again.

If the voltage measurement of the load bus indicates low voltage, the system triggers a major alarm. The alarm appears in the peripheral module (PM) top level of the MAP display. The MAP user uses the QueryPES command to determine the cause of the problem.

The OPM battery audit provides a charge bus diagnostic to test the voltage measurement of the battery control unit (BCU) charge buses.

If a charge bus does not provide the correct energy to the batteries, the system generates a log. The log indicates the defective battery charge controller (BCC) board. A minor alarm appears in the PM top level of the MAP display. The QueryPES command indicates the cause of the defective unit.

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**OPM maintenance** (continued)

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**Translations table flow**

This package does not change standard translations data flow.

**Limits**

The following limits apply to OPM maintenance:

- An OPM PES is different for each office.
- The battery string must be in an open circuit state to switch to the load bus or to the charge bus.
- You can change battery string equipped states only in table OPMINV when the BCCDVR is in the offline state.
- The audit is inactive on the circuit marked M (manual busy), O (offline), or P (peripheral made busy).
- The BCCDVR and PESALRM must be offline to delete the OPM PES from the OPMINV table.
- Alarm displays remain in the previous updated state when PESALRM is M, O, or P.
- The operating company personnel cannot switch battery string pairs when a condition occurs that is not safe.
- A return-to-service (RTS) command on PESALRM from the MAP terminal runs a test before the RTS completes. If the test detects a failure, the RTS does not occur. An M appears on the MAP terminal and in PESALRM state memory.

**Interactions**

The OPM maintenance does not have functionality interactions.

**Activation/deactivation by the end user**

The OPM maintenance does not require activation or deactivation by the end user.

**Billing**

The OPM maintenance does not affect billing.

**Station Message Detail Recording**

The OPM maintenance does not affect Station Message Detail Recording.

## OPM maintenance (continued)

### Datafilling office parameters

The following table shows the office parameters that OPM maintenance uses. For additional information about office parameters, refer to *Office Parameters Reference Manual*.

#### Office parameters that OPM maintenance uses

Table name	Parameter name	Explanation and action
OFCSTD	OPM_CHARGE_START_TIME	Indicates the hour when battery string pairs connect to the charge bus.
OFCSTD	OPM_CHARGE_DURATION	Indicates the duration, in hours, that a battery string pair remains connected to the charge bus.
OFCSTD	OPM_DISCHARGE_TIME	Indicates the length of discharge through the test load resistor in the BCC card, NT8X02, in 15-min intervals.
OFCSTD	OPM_MIN_CHG_VOLT	Indicates the minimum voltage, in tenths of a volt, that a battery string requires to connect to the charge bus.
OFCSTD	OPM_VOLT_TST_OCC	Indicates the voltage threshold in tenths of a volt for the battery voltage test.
OFCSTD	OPM_VOLT_TST_DIS	Indicates the voltage threshold in tenths of a volt for the second test after the discharge interval.
OFCSTD	OPM_VOLT_TST_CHG	Indicates the voltage threshold in tenths of a volt for the battery voltage test after the post-charge open-circuit interval.
OFCSTD	OPM_VOLT_TST_LTU_ADJUSTMENT	Indicates the adjustments in tenths of a volt to apply to the OPM_VOLT_TST values. This parameter applies when a line test unit (LTU) is used for the measurements instead of a multiline test unit (MTU).

The charge and test of OPM battery strings depends on parameters entered in the office parameters table OFCSTD as follows:

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**OPM maintenance** (continued)

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**Office parameter OPM\_CHARGE\_START\_TIME**

The parameter OPM\_CHARGE\_START\_TIME indicates the hour when battery string pairs are connected to the charge bus. This parameter indicates the time during charge cycles and the test-and-charge cycle.

The range is 0 through 23. A value of 0 indicates midnight, or 00:00 A.M. A value of 23 indicates 11:00 P.M. The default value is 23.

The OPMPE level of the MAP terminal indicates the current states of the battery strings. If the battery rotation audit is enabled, the correct battery string pair changes to the CHARGE (CHG) state. The battery string pair must be equipped. This event occurs at or a short time after the specified start time every Monday through Friday.

Charge the battery strings at low temperatures. To charge the battery strings at high temperatures can cause the battery strings to crack, break, or cause other damage. The recommended start time is 23:00 hours, after the OPM is cooled down from the heat of the day.

**Office parameter OPM\_CHARGE\_DURATION**

The parameter OPM\_CHARGE\_DURATION indicates the duration in hours that a battery string pair remains connected to the charge bus. The range of the parameter is 0 to 20. The default value is 7.

**WARNING**

**Do not overcharge batteries.**

Batteries can crack when overcharged.

The battery state appears at the OPMPE level of the MAP terminal. After the time specified passes, the battery state changes to OCC. This change indicates that the batteries are open-circuited before the batteries are returned to the load bus.

**Office parameter OPM\_DISCHARGE\_TIME**

The parameter OPM\_DISCHARGE\_TIME indicates the length of discharge through the test load resistor in the BCC card, NT8X02, in 15-min intervals. The range is 0 through 4.

For example, a value of 0 indicates that there is no discharge time. A value of 4 indicates 60 min of discharge time. Northern Telecom recommends the default value 4 for Yuasa batteries.

## **OPM maintenance** (continued)

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The NT8X02 card does not dissipate the heat from the discharge for more than 1 h each week.

The states of the battery string pair in the test-and-charge cycle appear at the OPMPE level of the MAP terminal. The MAP terminal displays the states on every Monday. The state of the battery string pair appears as DIS for the specified number of minutes.

### **Office parameter OPM\_MIN\_CHG\_VOLT**

The parameter OPM\_MIN\_CHG\_VOLT indicates the minimum voltage required for a battery string to connect to the charge bus. The value is in tenths of a volt. The range is -400 to -500.

For example, the value of -420 indicates -42.0 V. The value entered must be less than the value for parameter OPM\_VOLT\_TST\_DIS. The default value is -420.

When the rotation schedule calls for charging of the pair, the pair must be on the charge bus. If the voltage of a string pair is less than this value, this process does not occur. The system generates a PES115 log when the voltage of a string pair is less than this value.

### **Office parameter OPM\_MIN\_CHG\_VOLT**

The parameter OPM\_MIN\_CHG\_VOLT indicates the minimum voltage required for a battery string to the charge bus connection. The value is in tenths of a volt. The range is -400 to -500.

For example, the value of -420 indicates -42.0 V. The value entered must be less than the value for parameter OPM\_VOLT\_TST\_DIS. The default value is -420.

When the rotation schedule calls for charging of the pair, the pair must be on the charge bus. If the voltage of a string pair is less than this value, this process does not occur. The system generates a PES115 log when the voltage of a string pair is less than this value.

### **Office parameter OPM\_VOLT\_TST\_OCC**

The parameter OPM\_VOLT\_TST\_OCC indicates the voltage threshold for the battery voltage test. The value is in tenths of a volt. A value of zero indicates the test will not occur. The range is 0 to -600. The default value is -504 and indicates -50.4 V. Northern Telecom recommends the use of the default value for Yuasa batteries.

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**OPM maintenance** (continued)

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An adjustment occurs for the value for OPMs that have a line test unit (LTU) rather than a metallic test unit (MTU). Office parameter OPM\_VOLT\_TST\_LTU\_ADJUSTMENT describes this adjustment.

If the parameter specifies the wrong value for the batteries in use the system can mark good battery strings failed. The system can fail to detect bad strings.

The audit tests each equipped battery string 1 time each month. The test does not occur when the audit is disabled, ENABATST is N, or an ac failure occurs. Battery strings that do not pass two tests in sequence are marked failed. The battery strings are removed from the rotation. The system generates a PES117 log.

**Office parameter OPM\_VOLT\_TST\_CHG**

The parameter OPM\_VOLT\_TST\_CHG indicates the voltage threshold for the battery voltage test. The value is in tenths of a volt. This test occurs after the post-charge open-circuit interval. A value of zero indicates the test does not occur. The range is 0 to -600.

For example, a value of -509 indicates -50.9 V. The default value is -509. Northern Telecom recommends the use of the default value for Yuasa batteries. An adjustment occurs for the value for OPMs that have an LTU instead of an MTU. The parameter OPM\_VOLT\_TST\_LTU\_ADJUSTMENT describes this adjustment.

If the parameter specifies the wrong value for the batteries in use the system can mark good battery strings failed. The system can fail to detect bad strings.

The audit tests each equipped battery string 1 time each month. The test does not occur when the audit is disabled, ENABATST is N, or an ac failure occurs. Battery strings that do not pass two tests in sequence are marked failed. The battery strings are removed from the rotation. The system generates a PES117 log.

**Office parameter OPM\_VOLT\_TST\_LTU\_ADJUSTMENT**

The parameter OPM\_VOLT\_TST\_LTU\_ADJUSTMENT indicates the adjustments to apply to the OPM\_VOLT\_TST values. The value is in tenths of a volt. The adjustments apply when an LTU takes the measurements instead of an MTU.

The range is 0 through 50. The default value of 10 indicates 1.0 V. This value is the recommended value to compensate for LTU dc volt measurement accuracy.

## OPM maintenance (continued)

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The value of this parameter increases the OPM\_VOLT\_TST\_(OCC, DIS, OR CHG) value. The result is truncated to an integral volt.

For example, the OPM\_VOLT\_TST\_CHG default value of -509 becomes -49.0 (-50.9 + 1.0 = -49.9, truncated to -49.0). This value applies when an LTU is used instead of an MTU.

If the parameter specifies the wrong value for the batteries in use the system can mark good battery strings failed. The system can fail to detect bad strings.

For OPMs with LTUs instead of MTUs, the values of the battery strings do not normally fail the above tests. Test failure only occurs when the measured values of the battery strings fail the adjusted values that the OPM\_VOLT\_TST value computes.

### Datafill sequence

The following table lists the tables that require datafill to implement OPM maintenance. The tables appear in the order in which data entry for the tables must occur.

#### Datafill tables required for OPM maintenance

Table	Purpose of table
OPMINV	Lists the information for the OPM cabinet and the battery setup

### Datafilling table OPMINV

Table OPMINV lists data for each OPM cabinet related to an RLCM, and the battery equipment.

Data entry for table OPMINV must occur after CLLI, LCMINV, and RMMINV. The BCCDVR card must be offlined at the OPMPES MAP level before the BATTINFO field can change.

To change the RLCMNM, TMTYPE, and TMNM fields, delete or add the tuple. The ENABATST field can change when the BCCDVR card is in service. Allocation of memory in this table is dynamic.

The following table describes the datafill for OPM maintenance for table OPMINV. This table describes only the fields that apply to OPM maintenance.



**OPM maintenance** (continued)

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

**Datafilling table OPMINV**

Field	Subfield or refinement	Entry	Explanation and action
OPMPESK		0 to 198	OPM PES key. Enter the key to this table. The maximum number of PESs allowed in the office limits this number.
RLCMNM		see subfields	RLCM information. Contains RLCM information that relates to the OPM. The subfields are SITE, FRAME, and UNIT.
	SITE	alphanumeric	Site name. Enter the site name assigned to the location of the RLCM.
	FRAME	0 to 99	Frame number. Enter the frame number of the RLCM, at the site specified in field SITE. If the RLCM has a remote maintenance module (RMM).
	MODULE	0	Module number. Enter the module number of the RLCM in the OPM cabinet.
TMTYPE		RMM	Trunk module type. Enter the peripheral module (PM) type of RMM.
TMNM		0 to 2047	Trunk module number. Enter the module number for the RMM.
BATTINFO		Y or N (table of 8 booleans)	Table of battery information. This table indicates that a battery string is present Y or is not present N. The position of the boolean Y or N indicates the string.  For example, YYYYNYYN indicates battery strings 0, 1, 2, 4, 5, and 6 are present, strings 3 and 7 are not present.  <b>Note:</b> Battery strings 3 and 7 are not equipped when Eagle Picher A0386201 batteries are used.
ENABATST		Y or N	Enable battery test. When set to N, the audit does not test the batteries and the audit continues. When set to Y, the audit performs three measurement types each Sunday.

## OPM maintenance (continued)

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### ENABATST field

The field ENABATST (enable battery test) enables or disables automatic audit tests of battery equipment in an OPM.

The ENABATST field has a value of Y or N. If the field is set to Y, the test-and-charge cycle starts on one battery string pair of the OPM. The cycle starts on every Sunday.

The test-and-charge cycle includes three measurements of battery voltages. One measurement occurs at the end of the 24-hour open-circuit period. A second measurement occurs after the discharge period. The third measurement occurs at the end of the open-circuit period that follows the charge period. This test causes the system to mark the battery string pair failed and remove the pair from the charge rotation.

If field ENABATST is set to N, a test-and-charge cycle becomes a charge-only cycle. An initial open-circuit or discharge does not occur before the charge period. The three measurements do not occur and do not determine defective strings.

Voltage measurements of the load bus, charge bus, and all strings continue to occur each Sunday. The system continues to generate an PES116 log to record the value of these measurements.

*Note:* Restarts can occur several times a day. If this condition occurs, the recommended value for any test facility is N. Value N disables battery tests. Tests only occur when the complete test and charge procedure runs. The complete procedure runs from Sunday at 10:00 p.m. to Tuesday at 11:00 p.m., with default parameters. Reloads or restarts during this time cause the procedure to abort.

### Datafill example for table OPMINV

Sample datafill for table OPMINV appears in the following example. The following information appears in the datafill example:

- an OPM with a key OPMPEsk of 5
- a site name, cabinet, and module number of REM5 02 0
- an RMM
- an RMM 7
- a battery string with 0, 1, 2, 4, 5, and 6 equipped
- the battery test not enabled

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**OPM maintenance** (end)

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**MAP example for table OPMINV**

TABLE OPMINV						
OPMPESK	RLCMNM	TMTYPE	TMNM	BATTINFO	ENBATST	
5	REM5 02 0 RMM	7		YYNYYYN	N	

**Tools for verifying translations**

The OPM maintenance does not use translation verification tools.

**SERVORD**

The OPM maintenance does not use SERVORD.

## RLCM Intracalling

---

### Functional group

Functional group: BAS00012

### Feature package

Feature package: NTX156AA RLCM Intracalling

### Release applicability

BCS35 and later versions

### Requirements

The RLCM Intracalling requires BAS00003 to operate. The BAS00003 includes the following:

- Bilge, NTX000AA
- Common Basic, NTX001AA
- Remote Line Concentrating Module, NTX146AA
- New Peripheral Maintenance Package, NTX270AA
- Local Features II, NTX901AA

### Description

The RLCM/OPM Intracalling functional group allows calls between subscribers on the same RLCM/OPM connect without the host network. This connection reduces the use of the DS-1 links to the host.

Intracalling has the following two parts:

1. *intraswitching*—This part connects calls between subscribers that have the same LCM unit from an RLCM/OPM. This part uses the RLCM/OPM intraswitching channels instead of the host network.
2. *interswitching*—This part connects calls between subscribers that have different LCM units from an RLCM/OPM. This part uses the RLCM/OPM interswitching channels instead of the host network.

### Operation

Intraswitching and interswitching connect through the link control cards (LCC) on the host interface equipment (HIE) shelf. The LCC connects in sequence to the DS30A ports of each line concentrating array (LCA) of the LCM.

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**RLCM Intracalling** (continued)

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An LCA has eight DS30A ports. These ports can have equipped or unequipped host links. An equipped port has 24 channels of the DS-1 link mapped to a 32-channel DS30A port.

Six of the unmapped DS30A channels are for intraswitching, and two are for control and signaling. For the DS30A ports without host links, the LCCs provide the following:

- 18 channels for intraswitching
- 12 channels for interswitching
- 2 channels for control and signaling

When the LCC provides intraswitching and interswitching channels for connection of internal calls, additional channels on the DS-1 links are free. These connections allow the host network to handle external calls. This feature maximizes the use of the DS-1 links. The DS-1 links are a limited resource.

### **Translations table flow**

This feature does not affect the standard translations table flow.

### **Limits**

There are limits on the types of lines that can intraswitch. The following lines can intraswitch:

- One-party and two-party flat rate lines
- Meridian Digital Centrex (MDC) lines
- lines connected to P-phones and data units

Lines with call waiting and call forwarding features can intraswitch. When the features are active, the call reverts to a normal network connection. Coin phone calls cannot intraswitch.

Multiple access directory number (MADN) line originations from any primary or secondary MADN member, are intra/interswitched when possible. Terminations to MADN lines are only intra/interswitched for the primary directory number (PDN). There is a maximum of 73 intra/interswitched calls at a time.

### **Interactions**

The RLCM Intracalling does not have functionality interactions.

## **RLCM Intracalling** (continued)

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### **Activation/deactivation by the end user**

For the RLCM/OPM Intracalling functional group to operate, the intraswitch field in table LCMINV must be Y.

### **Billing**

The RLCM Intracalling does not affect billing.

### **Station Message Detail Recording**

The RLCM Intracalling does not affect Station Message Detail Recording.

### **Datafilling office parameters**

The RLCM Intracalling does not affect office parameters.

### **Datafill sequence**

The following table lists the tables that require datafill to use RLCM Intracalling. The tables indicate the order in which to enter data.

#### **Datafill tables required for RLCM Intracalling**

<b>Table</b>	<b>Purpose of table</b>
LCMINV	Lists the data assignment for each frame associated with an LCM unit.

### **Datafilling table LCMINV**

The following table shows the datafill that relates to RLCM Intracalling for table LCMINV. Only the fields that apply directly to the RLCM Intracalling are listed.

**RLCM Intracalling** (continued)

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

**Datafilling table LCMINV (Sheet 1 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
LCMTYPE		LCM, ILCM, SRU, LCMI, LCME, ELCM, or ALCM	<p><i>LCM type</i></p> <p>Enter the LCM type that corresponds to the entry in field EQPEC as follows:</p> <ul style="list-style-type: none"> <li>• 6X04AA - LCM</li> <li>• 6X04BA - ILCM</li> <li>• 8X95AB - SRU</li> <li>• BX30AA - LCMI</li> <li>• BX30AB - LCME</li> <li>• NX1201 - ELCM</li> </ul> <p><b>Note:</b> The RLCM PEC is 6X04AA. Enter the RLCM PEC as LCM.</p>
	LCMINFO	see subfield	<p><i>Line concentrating module information</i></p> <p>This field consists of subfield LCMSELECTOR.</p>
	LCM-SELECTOR	HLCM or RLCM	<p><i>LCM selector</i></p> <p>Enter RLCM for a remote LCM and datafill refinements LINKMAP, INTRASW, ESA, CONV, and DS1CARD.</p>

**RLCM Intracalling** (continued)

**Datafilling table LCMINV (Sheet 2 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
	LINKMAP	0 to 63 (vector of up to 6 values)	<p><i>P-side link information</i></p> <p>Enter the LGC links or the LTC links (0 to 19), or both of the links. Enter the links of the assigned remote LCM that corresponds C-side links LK0 to LK5 of the RLCM. The first link is the MSG link to LCA 0. The second link is the MSG link to LCA 1. Assign the first link and the second link to different DS-1 cards. The DS-1 links are on the line group assembly and line trunk assembly (LGA/LTA) shelf array. The first link is the first entry in the field. The second link is the second entry in the field.</p>
	INTRASW	Y or N	<p><i>Intraswitch</i></p> <p>Enter Y (yes) if the entry in field LCMSELECTOR is RLCM and the RLCM has internal links. The internal links are the intrabay (IA) or interbay (IR) link option. If not, enter N (no).</p>

**Datafill example for table LCMINV**

The system only requires the boolean for intraswitching in field LCMINV to enter the intracalling feature.

Sample datafill for table LCMINV appears in the following example.



**RLCM Intracalling (end)**

**MAP example for table LCMINV**

LCMNM	FRTYPE	SHPOS	FLOOR	ROW	FRPOS	EQPEC	LOAD	CSPMNO	LCMTYPE
BICTST	ADNUM	MEMSIZE							
TRSC	30 1	LCE	38	1	D	3 6X04AA	LCM01D	RCC	1
	N 28	64K	64K						
			LCM Y	S	48V	HLCM ( 2) ( 3) ( 4) ( 5) ( 6) ( 7)\$			
TRLC	40 0	RLCM	4	1	D	4 6X04AA	XLCM031G	LTC	1
	N 29	256K	256K						
			LCM Y	S	48V	RLCM ( 0) ( 2) ( 3) ( 4) ( 5)\$		Y Y N	6X50AA
TOPM	00 0	RLCM	1	1	A	1 6X04AA	LCM01D	RCC	0
	N 30	64K	64K						
			LCM Y	S	48V	RLCM (16) (18) (17) (19)\$		Y Y N	6X50AA
RSCS	00 0	CRSC	4	1	ZZ	1 BX30AB	LCME031F	RCC2	0
	N 31	256K	256K						
LCME	Y S	48V	(36) (34) (33) (31) (32) (30)						\$

**SERVORD**

The RLCM Intracalling does not use SERVORD.

## **RLCM ESA Operation**

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### **Functional group**

Functional group: BAS00012

### **Feature package**

Feature package: NTX154AA, RLCM Emergency Stand-Alone (ESA) Operation

### **Release applicability**

BCS 35 and later versions

### **Requirements**

To operate, RLCM ESA Operation requires the following:

Functional group: BAS00003

### **Description**

The emergency stand-alone (ESA) operation is an optional feature available for the RLCM. The ESA module provides limited call processing capability to the RLCM when the module loses communication with the host site.

1. The ESA hardware has two possible configurations. The first configuration includes the following equipment:

- NTMX45AA ESA processor
- NT6X75AA ESA clock and tone card

2. The second possible configuration uses the following equipment:

- NT6X45AF ESA processor
- NT6X47AC 4 Mbyte ESA memory card
- NT6X75AA ESA clock and tone card

The MX45 based configuration enables in-service firmware downloads and duplicate NXX in ESA mode. This processor has on card memory and a filler plate occupies the memory card slot for this configuration. All components for either configuration are in the host interface equipment (HIE) shelf of the RLCM.

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## RLCM ESA Operation (continued)

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The clock and tone card provides clocking and tones. This card provides an interface that allows the ESA processor to message to the following:

- host
- line concentrating module (LCM)
- remote maintenance module (RMM)

The RMM must be provisioned with the ESA digitone receivers NT2X48AA/AB.

### Operation

Communication to the ESA processor is over the same DS-1 links that connect the RLCM to the host unit. A special ESA channel transmits messages over the DS-1 links to the host. The status of the messaging link between the host and the RLCM determines entry into ESA mode.

The switch from the ESA channel to the ESA processor occurs in the link control card (LCC). A request from the ESA processor determines exit from the ESA when communications to the host resume.

The RLCM monitors the state of the DMS-X message channel to the host XPM. The RLCM monitors a line trunk controller (LTC), line group controller (LGC), or remote cluster controller (RCC). The RLCM must monitor the receiver framing status for the DS-1 link that carries the message channel.

When ESA is in use, the RLCM also checks for an LTC response to periodic loop-around messages. When an indication of link failure appears, the LTC sends a message to inform the DMS CC of the failure. The DMS CC uses this information to update a flag that indicates a mate link failure.

When the host XPM has a messaging channel to the LCM, the XPM sends a message to report the DMS-X failure. When ESA is active, the RLCM determines when to enter ESA. This condition occurs every time a link failure or failure message occurs.

The RLCM link can be bad and a failed link occurs on the mate unit of the LCM. When this condition occurs, the mate is inactive. When the inter-unit communication (IUC) link fails, the RLCM requests ESA. When the two RLCM units are active, the two units must request ESA from the ESA processor.

When the IUC fails and one RLCM unit messaging link fails, the unit with the failed link requests ESA. This request occurs while the failed unit mate can

## **RLCM ESA Operation** (continued)

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continue to communicate with the DMS host. When this condition occurs, the LCC hardware does not connect the RLCM unit to the ESA processor.

After a timeout, the unit that requests ESA determines that the unit cannot message to the ESA processor. The unit removes the ESA request and drops activity. The mate unit continues to communicate with the host. When the failed unit drops activity, the mate unit takes control of the calls of the affected unit.

You can enter data in RLCM to delay ESA requests until a link failure condition persists for a specified number of seconds. This function allows for applications where brief link interruptions are frequent. When messaging to the host resumes in this period, an ESA request does not occur. An optional datafill message from the host sets the value N. The N value gives the delay in units of 500 ms from 0 through 127. A default delay is present.

When in ESA, the messaging link from the RLCM goes to the ESA processor. During ESA, the ESA processor has complete control over all calls. When the ESA processor regains the host link and can surrender control, the ESA sends a command. The ESA sends this command to both units of the RLCM to request an ESA exit.

### **Translations table flow**

The following is a list of RLCM ESA Operation translations tables:

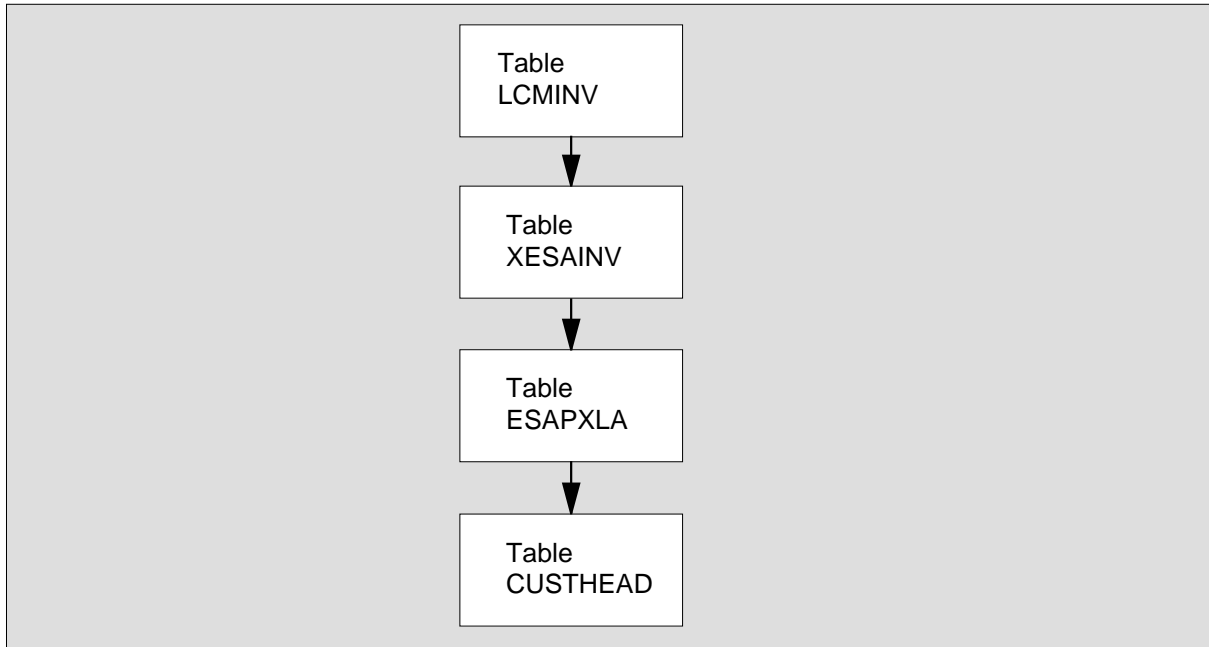
- table LCMINV
- table XESAINV
- table ESAPXLA
- table CUSTHEAD

The RLCM ESA Operation translation process appears in the flowchart that follows.

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**RLCM ESA Operation** (continued)

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**Table flow for ESA Operation RLCM****Limits**

The following limits apply to RLCM ESA Operation:

- When the ESA module exits the ESA state, the system drops all calls in progress.
- A busy tone is not present for a party calling the same party number because the system does not perform number identification (ANI).
- Party line circle digits are not supported during ESA.
- The ESA supports a maximum of 64 automatic lines (AUL).

**Interactions**

The CC provides support for ESA call processing. Feature group BAS00012 provides basic maintenance, ESA entry and exit and translation data support.

**Activation/deactivation by the end user**

The following procedure describes the required steps to activate the ESA feature package.

## RLCM ESA Operation (continued)

Activation/deactivation of ESA Operation RLCM by the end user

1. Make sure that the DMS switch has with a software load of BCS21 or greater.
2. Change the ESA field in table LCMINV from N to Y to allow the ESA feature.
3. Provision table XESAINV.
4. When required, change the office parameters.
5. When required, enter data in table ESAPXLA.
6. When required, enter data in table CUSTHEAD.
7. The following actions at the PM MAP level activate the ESA feature for both units of the RLCM.
  - At PM level of MAP, post ESA n.
  - Loadpm CC ESADATA.

### Billing

RLCM ESA Operation does not affect billing.

### Station Message Detail Recording

RLCM ESA Operation does not affect Station Message Detail Recording.

### Datafilling office parameters

Office parameters help the operating company prepare the office-dependent data for the switching unit. The following table shows the office parameters for RLCM ESA Operation uses.

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

The office parameters for ESA operation, the table names and the associated forms appear in the following table.

#### Office parameters for RLCM ESA Operation (Sheet 1 of 2)

Table name	Parameter name	Explanation and action
OFCENG	RLCM_ESAENTRY_BADLINK	Controls the performance of the RLCM ESA feature when a carrier alarm occurs.
OFCENG	RLCM_ESAENTRY_BADCSIDE	Controls the performance of the RLCM ESA feature when a carrier alarm is not present.

**RLCM ESA Operation** (continued)**Office parameters for RLCM ESA Operation (Sheet 2 of 2)**

Table name	Parameter name	Explanation and action
OFCENG	RLCM_XPMESAEXIT	Controls the performance of the RLCM ESA feature when communication to the host resumes.
OFCENG	RLCM_ESASDUPD_HOUR	Sets the starting time to download ESA static data to all RLCM/OPMs in a sequence that agrees to data in table LCMINV.
OFCENG	RLCM_ESASDUPD_BOOL	Determines if a download of ESA static data must occur to all ESA equipped RLCM/OPMs nightly update of the RLCM/OPM ESA static data.
OFCENG	RLCM_ESA_NOTIFY_TONE	Provide an ESA notification tone to the user in the ESA mode.

The office parameters support ESA applications as follows:

- RLCM\_ESAENTRY\_BADLINK: DS-1 failure timeouts
- RLCM\_ESAENTRY\_BADCSIDE: loop-around message audit failure timeouts
- RLCM\_XPMESAEXIT: ESA EXIT timeout
- RLCM\_ESASDUPD\_HOUR: RLCM ESA static data updates (each night)
- RLCM\_ESASDUPD\_BOOL: RLCM ESA static data updates (each night)
- RLCM\_ESA\_NOTIFY\_TONE: dial-tone alert

The following pages describe and provide examples for each of the five office parameters.

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

**Office parameter RLCM\_ESAENTRY\_BADLINK**

This parameter is the delay between link failure and the drop of RLCM into the ESA mode. This parameter defines the delay time in 10-second intervals. For example, 6 means 60 s.

## **RLCM ESA Operation** (continued)

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The default value for this parameter is 3 with a range of 3 through 100. To change the parameter, load the ESA data with the LOADPDM command. Perform this command at the PM level of the MAP terminal with the ESA processor posted.

### **Office parameter RLCM\_ESAENTRY\_BADCSIDE**

This parameter is the delay between failure of RLCM communication with the C-side peripheral and the drop of the RLCM to ESA mode. The loop-around message mechanism detects this condition.

This function defines the delay time in 1-minute intervals. For example, 6 means 6 min.

The default value for this parameter is 15 with a range of 5 through 60. To change the parameter, load the ESA data with the LOADPDM command. Perform this command at the PM level of the MAP terminal with the ESA processor posted.

### **Office parameter RLCM\_XPMESAEXIT**

This parameter is the delay between the restoration of links and the RLCM removal of ESA mode. The restoration of links is a recovery of communication with C-side peripheral. This function defines the time in 10-second intervals. For example, 2 means 20 s.

The default value is 0. The default value means the RLCM waits for manual RTS. The range of value is 0 through 100. The activation is immediate when the parameter changes.

### **Office parameter RLCM\_ESASDUPD\_HOUR**

This parameter specifies the daily start time to download ESA static data to the RLCMs. The RLCMs download static data in a sequence that accords to the data in table LCMINV. This parameter defines the time in 1-hour intervals. For example, 4 means 4 a.m. and 14 means 2 p.m.

The value must comply with the following conditions:

- A time of low traffic on the switch.
- A time different from the weekly LCM routine exercise (REX) test.
- A time different from the Remote Switching Center (RSC) nightly update. See parameter RSC\_ESASDUPD\_HOUR in table OFCENG.



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## RLCM ESA Operation (continued)

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The default for this parameter is 4 with a range of 0 through 23. The activation is immediate when the parameter changes.

*Note:* The RLCM and RCC must not be on the same static data update hour. Static data damage for the RLCM and RCC can result from this event.

### Office parameter RLCM\_ESASDUPD\_BOOL

This parameter determines if a download of ESA static data must occur to the update each night of the RLCM ESA static data. This parameter applies to ESA equipped RLCMs.

When the default value of Y does not change, a download of the static data occurs at the update each night.

When the value changes to N, a download of the static data does not occur at the update each night. The activation is immediate when the parameter changes.

### Office parameter RLCM\_ESA\_NOTIFY\_TONE

This parameter controls if the subscriber hears a dial-tone burst to alert the subscriber that the RLCM is in ESA mode. This dial-tone burst is 0.25 s on and 0.25 s off, for a duration of 7 s.

## ESA control of translation facilities

When the host controls the RLCM, the DMS CC performs translations. When the RLCM is in ESA mode, the ESA processor performs translations. The ESA performs translations with a subset of translation data from the DMS CC. This subset is a snapshot of the DMS CC data needed for ESA call processing. The translation data in the snapshot is static data.

The download of static data to the ESA processor from the DMS CC truncates some of the translation data. The system generates ESA logs when the downloaded data exceeds the RLCM ESA maximum.

The RLCM does not enter RLCM ESA mode until the DMS CC loads the ESA processor with static data.

The ESA processor must download ESA static data from the DMS CC when one or more of the following tables change:

- translation data tables
- table ESAPXLA
- table CUSTHEAD

## RLCM ESA Operation (continued)

The translation data tables, entries, maximum entry types and ESA logs that apply for download errors appear in the following table.

### Static data for ESA translations

Table	Type	Entries	
		Max	Download warning log
Terminal data	Terminal data	640	N/A
Automatic line	1 for each AUL	64	ESA101
Customer group	1 for each group	32	ESA102
Prefix header	1 for each customer group	32	N/A
Prefix table	1 for each ESA prefix translator		ESA103
	plain old telephone service (POTS)	16	
	customer group	8	
Extension header	1 for each customer group	32	ESA104
Extension table	1 for each MDC extension translator	256	
ABC	1 for each directory number (DN)	640	ESA105
DEFG	DEFG	1000	
Hunt header	1 for each hunt group	26	ESA106
Hunt member	1 for each hunt group	520	ESA107
Office parameter	1	1	N/A
Digitone receiver	1 for each Digitone receiver	30	N/A

---

**RLCM ESA Operation** (continued)

---

**Translation data tables**

Translation data tables in static data are as follows:

- The terminal data table determines how to set up a call. Terminal data includes the following:
  - line type
  - DP or Digitone/DP signaling
  - automatic or coin line
  - AUL index to AUL data table
  - customer group index to customer group data table
  - customer group number for a Meridian Digital Centrex (MDC) lineEach terminal has one entry and a maximum of 640 terminals.
- The AUL table contains the DN of the terminator. Each AUL has one entry with a maximum of 64 entries.
- The customer table contains the prefix table number for special number dialing and the extension prefix table number for station dialing. Each customer group has one entry. There are a maximum of 32 customer groups.
- The prefix header table contains a maximum of 32 prefix numbers or numbers to a maximum of 15 digits each. There is one entry for each customer group and one POTS entry. There can be a maximum of 32 customer groups.
- The prefix table contains one entry for each ESA prefix translator. There can be a maximum of 16 entries for POTS and a maximum of eight entries for each customer group.
- The extension header table contains one entry for each customer group. There can be a maximum of 32 groups.
- The extension table contains one entry for each MDC extension translator. There can be a maximum of 256 groups.
- The ABC table contains one entry for each each DN. There can be a maximum of 640 entries. This table is not accessible.
- The DEFG table has 1000 entries and is not accessible.
- The hunt header table contains one entry for each hunt group. There can be a maximum of 26 hunt groups.
- The hunt member table contains one entry for each hunt group. There can be a maximum of 520 members.

## RLCM ESA Operation (continued)

- The office parameter table is a single entry table.
- The Digitone receiver table contains the terminal identifications (TID) of all the Digitone receivers of the RMM in the remote site. These are the TIDs of the entries in table TRKMEM, or the CLLI of ESADGTR in the RMM at the remote site. The ESA processor uses the TIDs to collect digits from Digitone phones. One entry for each Digitone receiver, with a maximum of 30 entries is present.

*Note:* The normal state of these Digitone receivers under CC control is INB (Installation Busy). This state prevents CC access when the RMM is in the InSv state.

### Downloading the ESA processor

A download of translation data to the ESA processor occurs in the following methods:

- The LOADPM CC ESADATA command downloads data to the ESA processor.
- The RTS command downloads data to the ESA processor when the ESA processor cannot do call processing with current data.
- A load of data can occur during the updates of ESA processor that occur each day. These loads occur when specified in the RLCM\_ESADUPD\_HOUR office parameter.

### Datafill sequence

A list of the tables that require datafill to implement RLCM ESA Operation appear in the following table. The tables appear in the correct entry order.

#### Datafill tables required for RLCM ESA Operation (Sheet 1 of 2)

Table	Purpose of table
OFCENG	Office Engineering. This table contains data on engineering parameters for the office. Refer to Datafilling office parameters for how RLCM ESA Operation affects office parameters.
LCMINV	Line Concentrating Module Inventory. This table lists the data assignments for each bay that associates with a line concentrating module (LCM).
XESAINV	Emergency Stand-Alone Inventory. This table identifies ESA capability for the peripherals. When ESA is available, the ESA must first appear in table LCMINV. Entry in table LCMINV adds the ESA peripheral to the DMS inventory. To add the ESA peripheral, enter the appropriate data in table XESAINV.

## RLCM ESA Operation (continued)

### Datafill tables required for RLCM ESA Operation (Sheet 2 of 2)

Table	Purpose of table
ESAPXLA	Emergency Stand-Alone Prefix Translation. This table supports RSC-S line-to-trunk, trunk-to-trunk and trunk-to-line call processing during ESA. This table contains ESAPXLA prefix translation data for POTS and IBN customers.
CUSTHEAD	Customer Group Head. This table lists the names assigned to the blocks of data in table IBNXLA. These blocks store the data for the translation of digits.

### Datafilling table LCMINV

Table LCMINV lists the data assignment for each bay that associates with the RLCM. The ESA, when available, must first appear in table LCMINV in the boolean field ESA. Enter Y when the RLCM has with the ESA option. Enter N when the RLCM does not have the ESA option.

Datafill for RLCM ESA Operation for table LCMINV appears in the following table. The fields that apply to RLCM ESA Operation appear in the table.

For a description of the other fields, refer to the *Customer Data Schema Reference Manual*.

#### Datafilling table LCMINV

Field	Subfield	Entry	Explanation and action
LCMINFO	ESA	Y or N	Boolean Y or N. Use to turn emergency stand-alone on or off.
<p><b>Note:</b> When you enter data in fields link information (LNKINFO) or link map (LNKMAP), do not assign message links to the same interface card. When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This requirement applies to all interface link types; DS-1, DS30, DS30A, or PCM-30. Table control issues a warning when you attempt to assign message links on the same interface card. When you assign message links to the same interface card an E1 outage can occur when the card fails. An E1 outage is the failure of all message links.</p>			

#### Datafill example for table LCMINV

To enter emergency stand-alone, enter the boolean for ESA in field LCMTYPE.

Sample datafill for table LCMINV appears in the following example.

## RLCM ESA Operation (continued)

### MAP example for table LCMINV

LCMNM	FRTYPE	SHPOS	FLOOR	ROW	FRPOS	EQPEC	LOAD	CSPMNO		
BICTST	ADNUM	MEMSIZE							LCMTYPE	
TRLC	40 0	OPM	4	1	D	4	6X04AA	XLCM031G	LTC	1
	N	29 256K	256K							
		LCM Y		S	48V	RLCM	(0) (2) (3) (4) (5)	\$ Y Y N	6X50AA	
TOPM	00 0	OPM	1	1	A	1	6X04AA	LCM01D	RCC	0
	N	30 64K	64K							
		LCM Y		S	48V	RLCM	(16) (18) (17) (19)	* Y Y N	6X50AA	

### Datafilling table XESAINV

Datafill in table XESAINV updates the DMS-100 inventory for all peripherals with ESA capability.

ESA is an optional part of the RLCM package. Table LCMINV must indicate if ESA is available. After operating company personnel provision table LCMINV, the DMS office can accept the ESA datafill in table XESAINV. To add the ESA, enter the appropriate data in the table XESAINV.

The data contained in this table also contains information on the default load and the circuit location data. The circuit location data provided in table XESAINV is not checked against the data in table LCMINV.

The datafill for RLCM ESA Operation for table XESAINV appears in the following table. Only the fields that apply directly to RLCM ESA Operation appear.

For a description of the other fields, refer to the *Customer Data Schema Reference Manual*.

#### Datafilling table XESAINV (Sheet 1 of 3)

Field	Subfield	Entry	Explanation and action
ESANAME		see subfields	Emergency stand-alone name. This field contains subfields ESASITE, ESAPMTYPE, and ESANO. See subfields for definitions.
	ESASITE	alphanumeric	Emergency stand-alone site. Enter the site name listed in table SITE.

**RLCM ESA Operation** (continued)

Datafilling table XESAINV (Sheet 2 of 3)

Field	Subfield	Entry	Explanation and action
	ESAPMTYPE	ESA	Emergency stand-alone peripheral module type. Enter ESA to specify the type of peripheral module (PM).
	ESANO	0 to 255	Emergency stand-alone number. Enter the number assigned to this PM.
Enter the location of this PM in fields FRNO, SHPOS, FLOOR, ROW, and FRPOS.			
LOAD		alphanumeric	Load. Enter the loadfile used to load the ESA unit.
EXECTAB		see subfields	Executive table. This table contains subfields TRMTYPE and EXEC. Enter the terminal type and the associated executive together.
EXECTAB (continued)	TRMTYPE	alphanumeric	Terminal type. Enter the type of terminal models: ESALINES for normal lines, KSET for EBS terminals, or RMM_TERM for maintenance trunks.
	EXEC	alphanumeric	Executive programs. Enter the executives associated with the terminal type (ESAEX, KSETEX, and RSMEX).
CSPM		see subfields	C-side PM. Consists of subfields HOSTLCMT and HOSTLCMN.
	HOSTLCMT	LCM	Host LCM type. Enter the remote peripheral module type in the same place as the added ESA.
	HOSTLCMN	0 to 255	Host line concentrating module number. Enter the number assigned to this LCM.

## RLCM ESA Operation (continued)

### Datafilling table XESAINV (Sheet 3 of 3)

Field	Subfield	Entry	Explanation and action
PROCPEC		alphanumeric	ESA processor PEC. The processor complex of each XPM unit contains one or more ESA processor cards. Enter the PEC corresponding to the ESA processor with the minimum firmware capabilities. Examples are 6X45AF and MX45AA.
E2LOAD		alphanumeric	Firmware file name. Enter the firmware file name. For 6X45 based cards, the only valid entry is NILLOAD.

### Datafill example for table XESAINV

Sample datafill for table XESAINV appears in the following example.

### MAP example for table XESAINV

```

      ESANAME FRTYPE FRNO SHPOS FLOOR ROW FRPOS   LOAD
                        EXECTAB

CSPM   PROCPEC   E2LOAD

-----
REM1  ESA 0  OPM      0  38    1   A   0  ESA35CR1
                        (RMM_TERM RSMEX)   (ESALINES ESAEX)$
LCM 0   MX45AA  UPFWNP02
    
```

### Datafilling table ESAPXLA

Table emergency stand-alone prefix translation (ESAPXLA) contains special prefix translation data used for POTS and MDC customer group data assignments.

During normal operation of the RLCM, under DMS CC control, this table is not used. Translations are performed normally. If the RLCM loses communication with the host and enters the ESA mode, use this table for the prefix translations.

Two parts of table ESAPXLA that are used when the RLCM enters ESA mode are present: the prefix translation key (PXLKEY) and the translation result (RESULT). The PXLKEY field defines a set of prefix digits on a specified RLCM for all POTS lines or for a specified MDC customer group. The



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**RLCM ESA Operation** (continued)

---

RESULT subfield specifies the action to take when a POTS customer group member of that RLCM dials the prefix digits.

One of the subfields of PXLKEY is the translator name (XLNAME). The user can execute the prefix translation when the prefix digits are dialed from a POTS line on the RLCM. In this event, ESAPOTS is entered in subfield XLNAME.

The user can execute the prefix translation when an MDC customer group dials these digits. In this event, an alphanumeric name of up to eight characters is entered in subfield XLNAME. This same name associates with a specified MDC customer group in table CUSTHEAD.

**Translation actions**

The six different types of action that the translation can take are as follows:

- line (L)
- treatment (T)
- hunt group (H)
- standard route (R)
- directed route (D)
- access code (A)

When the prefix digits are dialed, the different translations occur as follows:

- The L option is chosen if a connection to another line on the remote is to occur. Information that identifies the line where the connection is to occur is entered.
- The T option is chosen if a reorder tone is to occur, or a strip and translate, with or without a second dial tone is to occur and the type of treatment desired is entered.
- The H option is chosen if the call is to occur to a hunt group. The information as to which hunt group, as entered in table HUNTGRP, is entered.
- The R option is chosen if a connection to a trunk with standard routing is to occur. The information about the route, the number of digits to collect, and the code that has more than one meaning is entered.

## RLCM ESA Operation (continued)

- The D option is chosen if a connection to a trunk with directed routing is to occur. The information about the route, the number of digits to collect and second dial tone is entered.
- The A option is chosen if the digits are to be translated again. A new prefix translator name is entered and the dial tone is decided.

If XLANAME is ESATRMT (which is a reserved prefix translator name), then the PREFIX field must contain an N. The selector in the RESULT field can be L, H, T, or R. Selectors A and D are not correct.

The datafill for RLCM ESA Operation for table ESAPXLA appears in the following table. Only the fields that apply directly to RLCM ESA Operation appear.

For a description of the other fields, refer to the *Customer Data Schema Reference Manual*.

**Datafilling table ESAPXLA (Sheet 1 of 2)**

Field	Subfield	Entry	Explanation and action
PXLAKY		see subfields	Prefix translator key. This key identifies a set of prefix digits on a given site for a specified set of customers. The key comprises the following subfields: XLANAME, NODE, and PMTYPE.
	XLANAME	alphanumeric up to 8 characters	Prefix translator name. If this translation will occur for any POTS line on the remote, enter ESAPOTS.  If the function is to perform for a specified MDC customer group, enter any name to a maximum of eight characters. Relate this name to a corresponding customer group in table CUSTHEAD.
	NODE	see subfields	Node. This subfield specifies the RLCM node associated with the translator that XLANAME identifies. This field contains subfields PMTYPE, SITE, FRAME, LCMNO, and MODULE.
	PMTYPE	LCM	Peripheral module type. This subfield identifies the peripheral node as RLCM.  If LCM appears in this subfield, subfield LCMNO must be entered.

**RLCM ESA Operation** (continued)**Datafilling table ESAPXLA (Sheet 2 of 2)**

Field	Subfield	Entry	Explanation and action
	LCMNO	see subfields	LCM number. LCMNO consists of subfields SITE, FRAME, and UNIT.
	SITE	alphanumeric	Site. Enter the site name assigned to the RLCM location.
	FRAME	0 to 511	Frame. Enter the frame number of the RLCM at the site specified in subfield SITE.
	UNIT	0 or 1	LCM number. This subfield specifies the RLCM to which this translator applies.
PXLAKEY (continued)	PREFIX	numeric up to 15 digits	Prefix digits. Enter the 1 to 15 digit prefix associated with the translation.
RESULT		see subfields	Translation result. This field contains subfield SEL.

A description of the subfields L, T, H R, D, and A of subfield SEL appears in the following table. The actions to take in each occurrence also appear in the following table.

**Subfields with SEL of L (Sheet 1 of 2)**

Subfield	Entry	Explanation and action
LEN	alphanumeric	Line equipment number. This subfield defines the line on which the call terminates. The subfield contains subfields SITE, FRAME, MODULE, LSG, and CIRCUIT.
SITE	alphanumeric	Site. Enter the name assigned to the site at the location of the termination line. Because the remote is operating in ESA, there is no communication with the host. This site must match the site specified in the NODE.
FRAME	0 to 511	Frame. Enter the frame number at the site that contains the line card for the termination line.  If PMTYPE is LCM, this frame number must match the frame number specified in subfield LCMNO. The ESA in an RLCM can only support communications in the same RLCM.  If subfield PMTYPE is RCC, the support of communication occurs for all LCMs attached to the RCC.

## RLCM ESA Operation (continued)

### Subfields with SEL of L (Sheet 2 of 2)

Subfield	Entry	Explanation and action
UNIT	0 or 1	Unit. Enter the module number of the LCM in this RLCM frame at the location of the line.
LSG	0 to 19	Line subgroup. Enter the number of the line subgroup of the LCM or RLCM unit in which the line card for that line appears.
CIRCUIT	0 to 31	Line card circuit number. Enter the line card circuit number of the line subgroup where the line card appears.
AMBIG	Y or N	<p>Ambiguous.</p> <p>If the prefix digits are completely different, enter N. If a user can dial the prefix as the first digits of another number, enter Y.</p> <p>For example, digits 123 would be considered ambiguous if another acceptable number was 12356.</p> <p>If the entry is N, the switching process begins immediately after the prefix digits are dialed. If the entry is Y, the remote waits for additional digits. If digits are not entered in a specified time, the switching process begins.</p>
RNGCD	0 to 7	Ring code. Enter the code for the type of ringing associated with the line specified in the subfield LEN field.

A description of the subfield T of field SELECTOR appears in the following table.

### Subfields with SEL of T

Subfield	Entry	Explanation and action
TRMT	REORDER, SRPXL, or SRPDXLA	<p>Treatment. Enter the type of treatment that applies when these prefix digits are dialed. The REORDER specifies the reorder tone. The SRPXL specifies strip and translate. The SRPDXLA specifies strip, second dial tone, and translate.</p>

**RLCM ESA Operation** (continued)

A description of the subfield H of field SELECTOR.

**Subfields with SEL of H**

Subfield	Entry	Explanation and action
HTGRP	0 to 32767	Hunt group number. Enter the number associated with the desired hunt group. The association between this number and the hunt group occurs in table HUNTGRP.
SEQNO	0 to 255	Sequence number. Enter the number associated with one member of the hunt group. The call attempts to connect with this hunt group member first. The association between the number and the hunt group member appears in table HUNTMEM.
AMBIG	Y or N	<p>Ambiguous.</p> <p>If the prefix digits are completely different, enter N. If the user can dial the prefix digits as the first digits of another number, enter Y.</p> <p>For example, digits 123 are considered ambiguous if another acceptable number was 12356.</p> <p>If the user enters N, the switching process begins immediately after the prefix digits are dialed. If the user enters Y, the remote waits for additional digits. If digits are not entered in a given time period, the switching process begins.</p>

The following table describes the subfield R of field SELECTOR.

**Subfields with SEL of R**

Subfield	Entry	Explanation and action
RR	0 to 255	Route reference index. Specify the index of the route described in ESARTE to which translation is to proceed.
NUMDIG	0 to 15	Collect digits. Specify the number of digits to collect before outpulsing.
AMBIG	Y or N	<p>Ambiguous.</p> <p>If the prefix digits are completely different, enter N. If the user can dial the prefix digits as the first digits of another number, enter Y.</p> <p>For example, digits 123 are considered ambiguous if another acceptable number was 12356.</p> <p>If the user enters N, the switching process begins immediately after the prefix digits are dialed. If the user enters Y, the remote waits for additional digits. If digits are not entered within a given time period, the switching process begins.</p>

## RLCM ESA Operation (continued)

A description of the subfield D of field SELECTOR appears in the following table.

### Subfields with SEL of D

Subfield	Entry	Explanation and action
RR	0 to 255	Route reference index. Specify the index of the route described in ESARTE to which translation is to proceed.
NUMDIG	0 to 15	Collect digits. Specify the number of digits to collect before outpulsing.
DIALTONE	Y or N	Dial tone. Indicates when to give second dial tone after stripping the prefix digits.

A description of the subfield A of field SELECTOR appears in the following table.

### Subfields with SEL of A

Subfield	Entry	Explanation and action
XLANAME	alphanumeric up to 8 characters	Prefix translator name. A name of a maximum of eight characters that identifies the entries associated with another ESA prefix translator. This function permits access to a new set of prefix translators. A table must already be associated with this XLANAME.
DIALTONE	Y or N	Dial tone. Indicates when to give second dial tone after the prefix digits are stripped.

### Datafill example for table ESAPXLA

Sample datafill for table ESPXLA appears in the following example.

### MAP example for table ESAPXLA

		PXLAKEY			RESULT
-----		-----	-----		-----
ESAPOTS	RCC REM1	0 411 L	REM1	00 0 00 02	Y 1
IBN1	RCC REM1	0 6		T	SRPXLA
IBN1	RCC REM1	0 9		T	SRPDXLA
ESATEST	RCC REM1	0 611 L	REM1	02 2 00 01	N 1

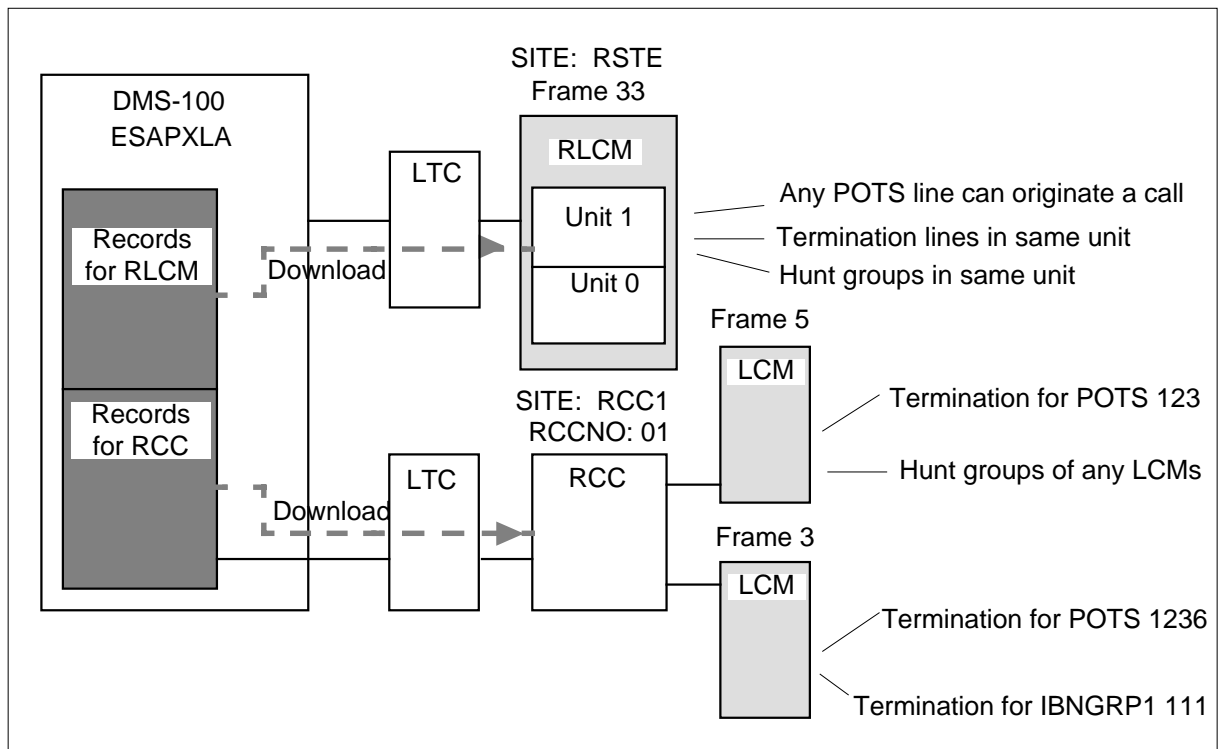
This DMS-100 host office has an RLCM and an RCC. An example of this host office appears in the following figure. Each record in table ESAPXLA applies

## RLCM ESA Operation (continued)

to one of these remotes. The NODE field specifies the remote to which the translator in this record applies.

Enter the data for table ESAPXLA into the DMS-100 host. The data downloads to the remote specified in the NODE field according to the RLCM\_ESASDUPD\_HOUR and RLCM\_ESASDUPD\_BOOL parameters.

### DMS-100 office data input example



### Prefix translations for the RLCM with the use of selectors L, T, and H during ESA

The previous figure is an example of a normal remote configuration. The following figure is an example of normal table ESAPXLA datafill. In these two examples, prefix translation for different call sources are as follows:

- If a POTS user connected to frame 33, LCM unit 0 on site RSTE dials 911, a connection occurs to hunt group number 3111. This process starts with member number 001.
- If a POTS user connected to frame 33, LCM unit 0 on site RSTE dials 123, the RLCM waits for additional digits. The RLCM does not always receive a digit in the allotted time period. In this event, the line connects to circuit 12, LSG 11, on the same RLCM unit.

**RLCM ESA Operation** (continued)

- If a POTS user connected to frame 33, LCM unit 0 on site RSTE dials 123, the RLCM waits for additional digits. The user can dial a six in the allotted time period. In this event, the line connects in circuit 09, LSG 13 on the same RLCM unit.
- A POTS user connected to frame 33, LCM unit 0 on site RSTE can dial six. In this event, the user receives another dial tone, and additional digits are translated.

**Prefix translation example for selectors L, T, and H**

C O M M A N D	X L N A M E	PXLAKY				RESULT								
		NODE				P R E F I X	U N I T	1	1 - SEL					
		PMT YPE						LEN						
		LCM	LCMNO					SITE	F R A M E	M O D U L E	L S G	C I R C U I T	A M B I G	R N G C D
			SITE	F R A M E	M O D U L E									
								T	TRMT					
RCC	SITE	RCC NO		H	HT GRP			SEQ NO	2	2-AMBIG				
INP	ESAPOTS	LCM	RSTE 33 0	911	H	3111 001 N								
	ESAPOTS	LCM	RSTE 33 0	123	L	RSTE 33 0 11 12 Y 4								
	ESAPOTS	LCM	RSTE 33 0	1236	L	RSTE 33 0 13 09 N 2								
	ESAPOTS	LCM	RSTE 33 0	6	T	SRPDXLA								
	ESAPOTS	RCC	RCCI 01	911	H	3245 001 N								
	ESAPOTS	RCC	RCCI 01	123	L	RCC1 05 0 19 31 Y 1								
	ESAPOTS	RCC	RCCI 01	1236	L	RCC1 03 0 02 03 N 7								
	IBNGRP1	RCC	RCCI 01	111	L	RCC1 03 0 01 12 N 3								
	IBNGRP2	RCC	RCCI 01	111	T	REORDER								
QUI														

**Prefix translations for an RCC with P-side trunking with the use of selectors R, D, and A during ESA.**

Prefix translation for an RCC with P-side trunking during ESA depends on the source and type of user.

The DMS-100 host office in the previous figure is an example of a normal remote configuration. The following figure is an example of a normal table



**RLCM ESA Operation** (continued)

ESAPXLA datafill. In these two examples, prefix translation for selectors R, D, and A call sources are as follows:

- A POTS user connected to an LCM on RCC1 at site REM3 can dial 366. In this event, a connection occurs to a trunk through a standard route referenced by an index of four in table ESARTE. The LCM must collect seven additional digits before outpulsing.
- A POTS user connected to an LCM on RCC1 at site REM3 can dial 9. In this event, a connection occurs to a trunk referenced by an index of 10 in table ESARTE. Dial tone begins and the ESA CC waits for eight additional digits.
- The third example is a special occurrence that requires a special treatment. This special treatment is the default treatment.
- If a member of ESAIBN connected to any LCM on RCC 1 at site REM3 dials six, the caller receives another dial tone. The ESAPOTS prefix translator translates additional digits.

**Prefix translation example for selectors R, D, and A**

C O M M A N D	X L N A M E	PXLAKY				P R E F I X	RESULT			
		NODE			366		1	1 - SEL		
		PMT YPE					R	RR	NUM DIG	AMBIG
		LCM	LCMO				D	RR	NUM DIG	DIALTONE
			SITE	F R A M E						
RCC	SITE	RCC NO		A	XLNAME		DIALTONE			
INP	ESAPOTS	RCC	REM3 01 0		366	R	04	7	N	
	ESAPOTS	RCC	REM3 01 0		9	D	10	8	Y	
	ESATRMT	RCC	REM3 01 0		N	R	10	7	N	
QUI	ESAIBN	RCC	REM3 01 0		6	A	ESAPOTS Y			

The R, D, and A selectors do not apply to an RLCM. These selectors require standard trunk routes defined in table ESARTE.

---

## RLCM ESA Operation (continued)

---

### Datafilling table CUSTHEAD

Table customer header (CUSTHEAD) links a customer group to the prefix translation table name identified in table ESAPXLA.

For MDC lines, the information in the ESAPXLA prefix tables must link to a specified customer group. The option ESAPXLA specifies the prefix translator name associated with the customer group.

With ESA, datafill the OPTION and XLANAME fields of table CUSTHEAD. If OPTION does not have the ESAPXLA option set, a prefix translation is not provided for that customer group.

The datafill for RLCM ESA Operation for table CUSTHEAD appears in the following table. Only the fields that apply directly to RLCM ESA Operation appear.

For a description of the other fields, refer to the *Customer Data Schema Reference Manual*.

The following variable entries are available for the OPTION and XLANAME fields in table CUSTHEAD.

### Datafilling table CUSTHEAD

Field	Entry	Explanation and action
OPTIONS	ESAPXLA	OPTION. Enter option ESAPXLA.
XLANAME	alphanumeric up to 8 characters	Prefix translator name. Enter the one to eight characters assigned to the prefix translator in table ESAPXLA.

**Note:** Table ESAPXLA must be entered before table CUSTHEAD.

### Datafill example for table CUSTHEAD

Sample datafill for table CUSTHEAD appears in the following example.

---

**RLCM ESA Operation (end)**


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**MAP example for table CUSTHEAD**

CUSTNAME	CUSTXLA	DGCOLNM	IDIGCOL	OPTIONS
POTSDATA	POTSXLA	POTS	NIL	
		( VACTRMT 0) ( EXTNCOS 0)\$		
COMIBN2	CXN2	IBN2	NIL	
		(VACTRMT 0) (EXTNCOS 4) (SUPERCNF) (MHOLD 10 AUDIO1)		
		(CPR Y AUDIO1 3) (ESAPXLA ESAIBN) \$		

**Tools for verifying translations**

RLCM ESA Operation do not use translation verification tools.

**SERVORD**

RLCM ESA Operation does not use SERVORD.



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## 4 Remote Line Concentrating Module

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### Understanding RLCM translations

The Remote Line Concentrating Module (RLCM) is part of a group of remote peripherals. These remote peripherals allow extended geographic coverage of the Digital Multiplex System (DMS)-100 switch.

Understand the concepts and terminology of translations before you attempt to enter the RLCM. This introduction provides a general description of the RLCM and the translations functions for the RLCM.

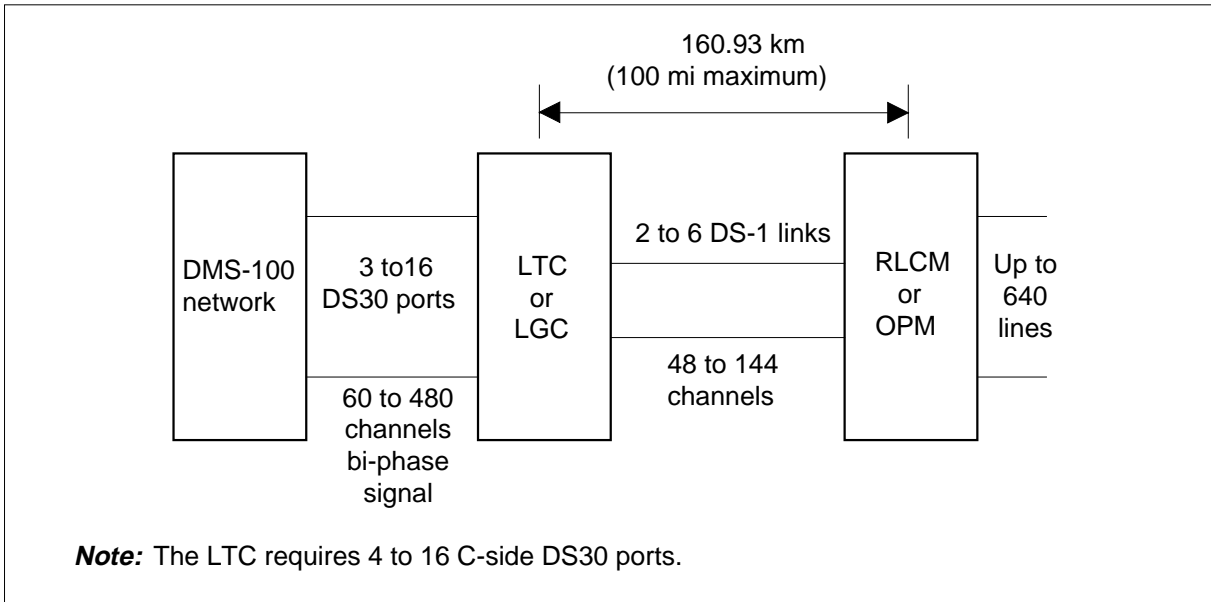
### Introduction to the RLCM

The RLCM is a single-frame, remote peripheral module (PM). The RLCM consists of standard line concentrating module (LCM) parts and a remote maintenance module (RMM).

The RLCM provides an interface between two to six DS-1 links from the line group controller (LGC) or line trunk controller (LTC). The LGC and LTC are at the host office. The DS-1 links interface with a maximum of 640 subscriber lines that connect locally. The RLCM can operate at a site that is a maximum of 160.9 km (100 mi) from the host central office. The RLCM can be configured off of a Remote Switching Center (RSC). The RLCM provides functions like a small community dial office (CDO) or private branch exchange (PBX). The RLCM can support host-directed traffic that ranges from 1100 to 4200 hundred call seconds (CCS).

The configuration of the RLCM in the DMS network appears in the following figure.

Figure 4-1 RLCM system integration



The RLCM can have additional feature packages that allow intracalling capability and emergency stand-alone (ESA) operation. The translations database allows the DMS switch to identify the software and hardware capabilities of the RLCM. The translations database allows the DMS switch to execute call processing.

## Signaling for RLCM

This section describes the signal protocols that the RLCM uses. The RLCM uses these signal protocols to communicate with the DMS-100 switch and provide subscriber services. The following subsections describe the RLCM signals and the types of subscriber services the signals provide.

### RLCM signaling links

The DS-1 interface cards (NT6X50AA) are in the host interface equipment shelf. The DS-1 interface cards (NT6X50AA) are the signal interfaces between the RLCM and the host XMS-based peripheral module (XPM). The XPM can be an LGC, an LTC, or the RCC of a RSC.

Each DS-1 interface card can receive a maximum of two DS-1 links from the host XPM. The RLCM and the host XPM exchange information over the DS-1 links through dedicated message channels. This signaling information allows the RLCM and the host XPM to perform tasks like the following:

- communicate the states of subscriber lines
- execute call processing

- assemble test configurations
- pass test results

The RLCM is subordinate to the DMS-100 switch. The host office handles the intersystem and operator signaling. Intersystem signaling is between the host and other systems. Operator signaling is from a host to a subscriber.

### **Message channels**

The RLCM requires a minimum of two DS-1 links to the host. These links are the primary links. The LCM part of the RLCM requires two message channels to the host XPM.

The LCM message channels occupy channel 1 on each of the primary DS-1 links to the host. The remote maintenance module (RMM) requires two message channels to the host XPM. These message channels occupy channel 2 on each of the primary links.

The emergency stand-alone (ESA) processor requires two message channels to the host. These channels occupy channel 3 on each of the primary links. If the ESA processor is not provisioned, channel 3 is available for speech traffic.

### **Signaling protocol**

The message channels on the primary DS-1 links have nailed-up connections to the DMS central control (CC). The message channels use the DMS-X protocol to communicate with the host.

The DMS-X is a half-duplex, byte-oriented protocol. The DMS-X is implemented with a full duplex message channel like the DS-1 link. The LCM processor handles the DMS-X message protocol on the LCM message channels to the host.

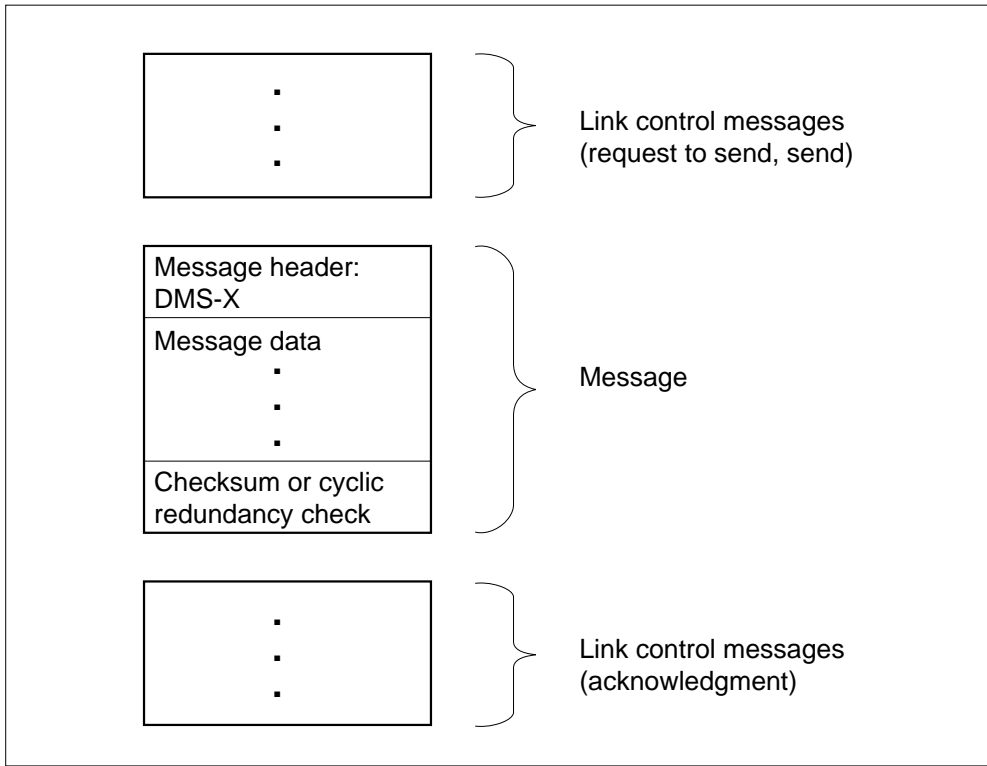
The RMM control card processes DMS-X messages, trunk messages, and pulse code modulation (PCM) data. The ESA processor communicates with the host XPM through the DMS-X protocol when the RLCM is in ESA mode.

### **DMS-X protocol**

The DMS-X protocol is a state-driven code. The DMS-X protocol requires handshake messaging between the RLCM and host at each stage of data transfer. Handshake messaging allows the terminals that communicate to delay the message transfer if a terminal is not prepared.

A general form of handshaking protocol, which forms DMS-X protocol, appears in the following figure.

Figure 4-2 DMS-X handshaking protocol



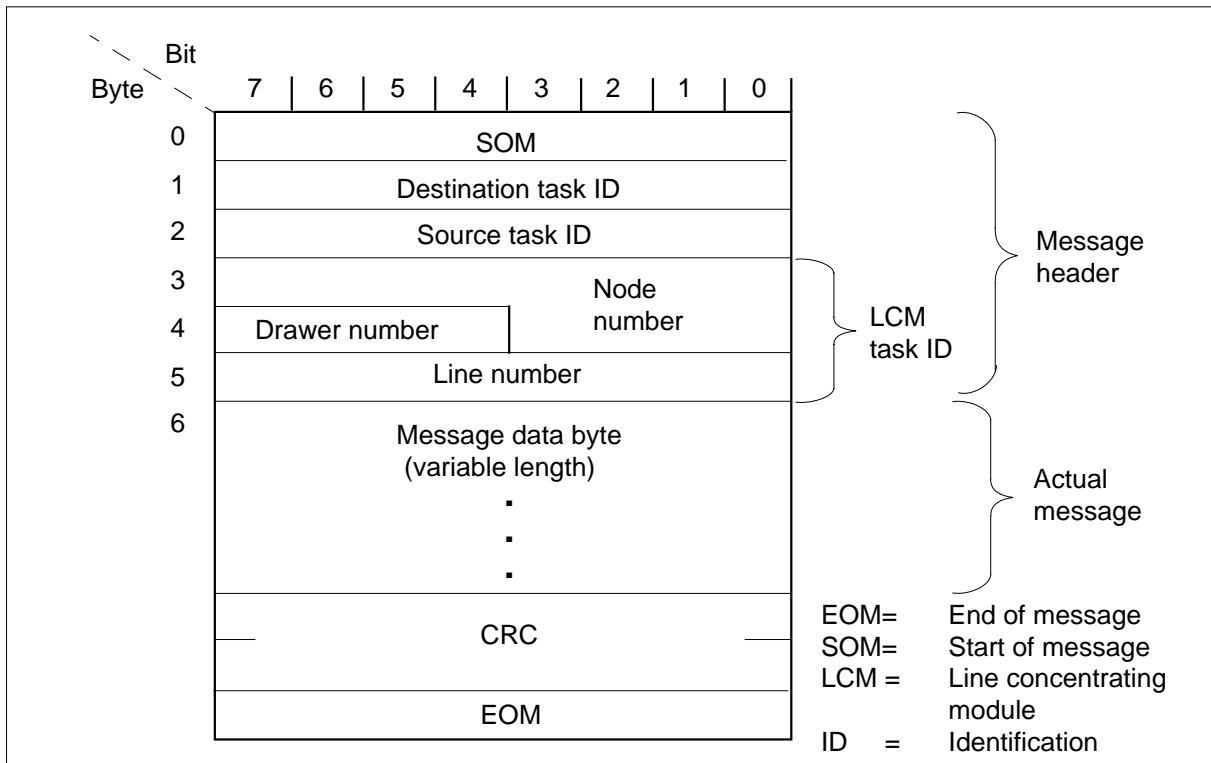
The DMS-X protocol includes a cyclic redundancy check (CRC) code to detect errors. Message time-out and message checksum or CRC calculation detect message errors.

The sending node tries the send sequence again if protocol, checksum, or CRC failure occur on an outgoing message. When an incoming message fails, the sending node routes the message again over an alternate central-side (C-side) link. Hardware redundancies provide for a minimum of one alternate path to and from a node.

The format of DMS-X messages appears in the following figure.



Figure 4-3 DMS-X message format



The first 6 bytes contain the DMS-X message header as in the following description:

- The first byte specifies the start of message (SOM).
- The second byte specifies the destination task identification (ID) of the message. Use this ID in an outgoing message to identify the process to receive the message. The process is the task in the LCM.
- The third byte specifies the source task ID. Use this ID in an incoming message to identify the LCM task that sends the message.
- The next 3 bytes specify the task ID number.

The number of bytes in the current message or data can vary. Use the CRC to detect transmission errors. The CRC occupies two bytes. The end of the message occupies one byte.

### Signaling functions

To support call processing activities, signaling allows the functions of call origination, tone generation, digit collection, and ringing to occur.

### **Call origination**

Signaling transmits the on- and off-hook signals that allow the host XPM to identify subscribers that request service.

When a subscriber lifts the handset from the cradle, a voltage source in the RLCM provides a steady flow of current through the transmitter. The LCM processor detects this current and sends an off-hook message to the central office (CO).

The CO interprets the off-hook signal as a request for service. The CO allocates a channel on a DS-1 link to serve the subscriber line. The CO applies dial tone to the line.

The subscriber line transmits open pulses or dual tone multi-frequency signals through the RLCM to the CO. The type of telephone determines if the line transmits open pulses or dual tone multi-frequency signals. The CO analyzes the digits and determines if the call is an interoffice call. The call end of the trunk is seized. The system transmits a connect signal to the called end of the trunk. A connect signal is a sustained off-hook signal. This signal indicates a request for service. This signal continues if the system holds the connection.

### **Tone generation**

The host XPM provides correctly cadenced tones. The RLCM applies the cadenced tones to subscriber lines. The tones that the host supplies and the RLCM applies are:

- dial tone
- audible ringing
- warble ringing
- busy tone
- reorder tone
- receiver off-hook (ROH) tone

### **Digit collection**

The RLCM performs the digit collection function of subscriber dialing. Dial pulse or dual tone multi-frequency (DTMF) support the types of dialing.

Use dial pulsing or multi-frequency signaling to transmit the address of a called party. Use these options for digit transmission. Combine these options with other types of signaling to provide the DS-1 links with complete signaling ability.

**Dial pulse signaling**

The LCM of the RLCM performs dial pulse digit collection. For dial pulsing, the number of on-hook intervals in a train of pulses represents the numeric value of each digit.

Short off-hook intervals separate the on-hook intervals. The system use long off-hook intervals to separate the digits. The break time is expressed as a percent of the pulse period (break + make duration). The break time is called percent break.

The three important characteristics of dial pulsing are speed, percent break, and interdigital time. The host XPM analyzes these characteristics and assigns a channel or time slot in the digital line.

**DTMF signaling**

Digitone phones send dial pulse or dual-tone multi-frequency signals. These signals transmit address information over a line. The RMM forwards this information to the host. During ESA operation, the system sends this information to a Digitone receiver in an RMM.

The DTMF signals are groups of tones that represent digits 0-9 and other special units. Special trunk interface circuits handle the accurate decoding of the tones to digits. The special trunk interface circuits are DT and MF receivers.

The RMM of the RLCM examines the output of these receivers to determine when the system receives a digit. The RMM relays the digits from the MF receiver to the host XPM. The host XPM analyzes the digits. The host XPM applies a ringing signal to the called line.

**End-to-end signaling**

End-to-end signaling allows a subscriber to send DTMF signals to the far end. A subscriber uses the keypad of a Meridian Digital Centrex (MDC) Meridian business set (MBS) to send DTMF signals to the far end. The subscriber can output DTMF signals to the machine that starts, stops, and plays back the recordings on tape at the machine. To activate the machine, the user must press keys at the MBS. After each 130 ms DTMF signal, the system connects the PCM signal again.

**Ringing**

The CO determines the type of ringing to use. The CO sends a ringing signal to the RLCM over the DS-1 channel. The DS-1 channel associates with the called subscriber line. This signal directs the RLCM to connect the ringing

generator to the subscriber line. The CO provides, and the RLCM applies the following ringing types:

- bridged ringing (single-party)
- superimposed ringing (multiparty)
- coded ringing (cadencing)
- frequency selective ringing (FSR)

### **ESA signaling**

The ESA feature is an emergency service that provides a part of call-processing abilities when communications to the host are lost. This feature includes call processing for basic station-to-station calls. These calls are in the RLCM for plain old telephone service (POTS) and MDC lines.

The RLCM that has the ESA feature package provides the same tones as a functional RLCM. The tones appear on channel 16 of the incoming C-side ports of the RLCM. The RLCM software provides the tone cadence. To interrupt the tone, the RLCM controls the time switch in the link control card (LCC).

The ESA processor sends a start cadence message to the RLCM to provide a tone in ESA mode. This message specifies the tone required, the terminal identification, and the cadence times.

On receipt of a make cadence message, the RLCM performs the following steps:

1. Break terminal current receive path connection.
2. Connect the receive path of the terminal to the correct port.
3. Assemble the specified cadence for that tone.

The treatment of idle tone uses the start cadence message. The RLCM connects the receive path to a port that provides idle tone.

## **Preparing to datafill RLCM**

### **PCL—New Software Delivery Vehicle**

After BCS36, Northern Telecom begins to deliver Product Computing-Module Loads (PCLs) and not BCS releases or Universal Software Loads (USLs).

A PCL consists of features from the development stream software product intended for a given application in a given market. The PCL contains the abilities previously divided in related NTX packages. An 8-digit ordering code replaces the NTX package codes.

The ordering code and Functional Group name required for the RLCM appear in the following table. A list of the earlier NTX packages that the Functional Group includes appears in the following table. These abilities associate with the RLCM.

**Table 4-1 RLCM ordering code**

Ordering code	Name	Former NTX package codes
BAS00012	BAS Remotes Generic	NTX146AA—Remote Line Concentrating Module  NTX147AB—Outside Plant Module Maintenance  NTX154AA—Emergency Stand-Alone Operation  NTX156AA—RLCM Intracalling

### Tasks associated with datafilling the RLCM

The RLCM tables fall have several groups. These groups comprise the tasks that associate with the entry of data in the RLCM. The groups of tables that must be entered appear in the following summary:

- test trunks, test lines, and service circuits in table CLLI
- the RLCM components and location datafill in tables SITE, LTCINV, LTCPSINV, LCMINV, RMMINV, DFINV and LNINV
- call processing translations in the lines, trunks, screening, and routing tables: TRKGRP, TRKSGRP, TRKMEM, LINEATTR, LENLINES, LENFEAT, and DNROUTE
- system alarms in tables ALMSCGRP, ALMSDGRP, ALMSD, and ALMSC
- spare scan and signal distribution points in tables SCGRP and SDGRP
- metallic test access assignments in tables MTAMDRVE, MTAVERT, and MTAHORIZ

### Procedures for datafilling the RLCM

The entry procedures that this guide describes list the field and subfield names of the key tables. These key tables must be entered for the RLCM.

Explanations of each field and subfield are provided. This guide includes information for the RLCM datafill. Examples of field entries are available for most fields and subfields.

Descriptions of the key tables for the RLCM appear in the following chapters of this guide. The data design section of the *Translations Guide* contains

#### 4-10 Remote Line Concentrating Module

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descriptions of other tables. These tables contain datafill for call processing, scan and signal distribution points, and system alarms.

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## Basic call processing

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### Functional group

Functional group BAS00012

### Release applicability

XPM05 and up

### Requirements

Basic call processing requires functional group BAS00003 to operate.

### Description

The BAS00003 functional group allows the Remote Line Concentrating Module (RLCM) to provide basic call processing capability to a maximum of 640 subscriber lines. Some of the features the RLCM provides include the following:

- line testing capability
- alarms processing
- coin capability
- operational measurements (OM)
- basic maintenance features

The RLCM also supports Meridian Digital Centrex (MDC), which provides centralized telephone exchange services for businesses.

### Operation

The RLCM connects to an line trunk controller (LTC), a line group controller (LGC), or a Remote Switching Center (RSC) by two to six DS-1 links. The RLCM functions as an interface between the DS-1 links from the host network and a maximum of 640 subscriber lines with local connections.

The RLCM has remote functions that allow the RLCM to operate at a distance from the host office. The RLCM operates at a maximum distance of 161 km (100 miles) from the host office.

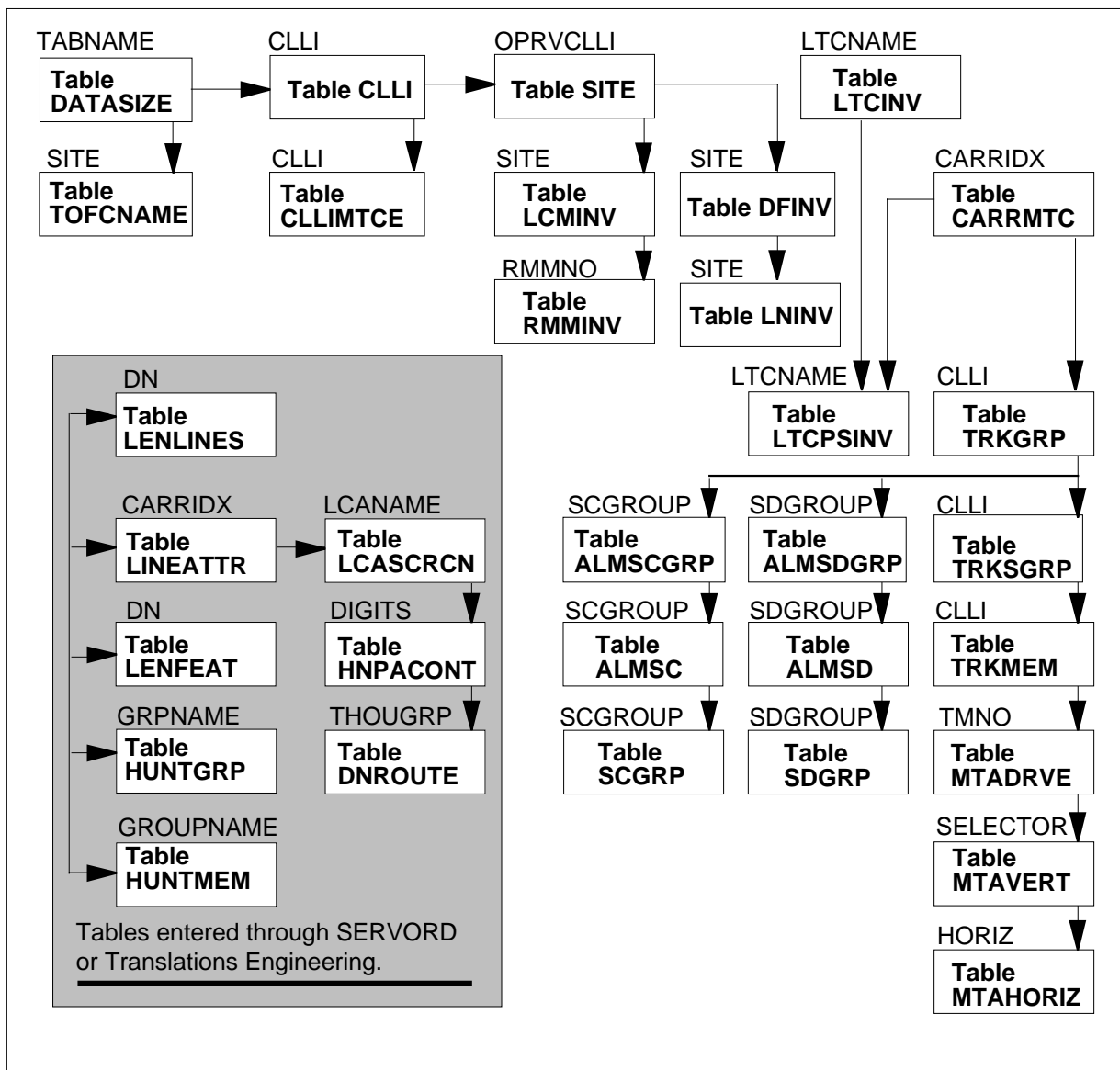
### User interface

Basic call processing does not affect user interface.

### Translations table flow

The Basic call processing translation process appears in the following flowchart.

## Basic call processing (continued)



### Limits

Basic call processing does not have limits.

### Interactions

Basic call processing does not have functionality interactions.



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## Basic call processing (continued)

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### Activation/deactivation by the end user

Basic call processing does not require activation or deactivation by the end user.

### Billing

Basic call processing does not affect billing.

### Station Message Detail Recording

Basic call processing does not affect Station Message Detail Recording.

### Datafilling office parameters

The following table shows the office parameters that Basic call processing uses. For more information about office parameters, refer to *Office Parameters Reference Manual*.

#### Office parameters Basic call processing uses (Sheet 1 of 3)

Table name	Parameter name	Explanation and action
OFCENG	#_OF_BC_LAMA_UNITS	Specifies the number of recording units required in the host office to collect call data. The recording units collect call data while the call buffer dumps to a tape or disk.
OFCENG	#_OF_NT_RECORDING_UNITS	Specifies the number of Northern Telecom (Nortel) recording units required in the host office to collect call data. The recording units collect call data when all the automatic message accounting (AMA) buffers are full.
OFCENG	MAX_NO_OF_ALT_TEST_PROCS	Allows several test processes from different automatic line testing (ALT) users to run at the same time. This event occurs under the control of one ALT process. This event occurs when the parameter speeds up ALT in the host office.

**Basic call processing** (continued)

**Office parameters Basic call processing uses (Sheet 2 of 3)**

Table name	Parameter name	Explanation and action
OFCENG	NO_OF_FTR_CONTROL_BLOCKS	Specifies the number of feature control blocks required in the host office. The host office can be provisioned with vertical features or MDC feature packages. The number of feature control blocks required changes according to the type of features provisioned to the host office.
OFCENG	NMULTIBLKS	Allocates memory, multiblocks for three-way calling and call waiting features assigned to lines in the host office.
OFCENG	NUMPERMEXT	Allocates permanent external memory for specified features in the host office when the host office requires the additional memory.
OFCENG	TALK_BATTERY_ALARM	Activates the automatic audits of the talk battery in all LCM/XLCM/LCME/RLCM/OPM/OPAC peripheral modules when set to default Y.
OFCVAR	BICRELAY_XLCM_TESTS_SCHEDULED	Allows the user to define the start time and stop time of the bus interface card (BIC) relay test (BRT). This action defines the window for the office-level test.
OFCVAR	BICRELAY_NUM_SIMUL_TESTS	Indicates the number of line concentrating module (LCM) level tests that can run at the same time.

**Basic call processing** (continued)**Office parameters Basic call processing uses (Sheet 3 of 3)**

Table name	Parameter name	Explanation and action
OFCVAR	PMSTAT_OM_CONTROL	Allows the user to activate or deactivate the data collection of processor occupancy measurements in the PMSTAT OM group.
OFCVAR	NODEREXCONTROL	Controls system routine exercise (SREX) nodes and governs execution of all SREX tests (nodes). The fields are REXON (default Y), REXSTART (default 1:30) and REXSTOP (default 3:30).  <b>Note:</b> Datafill in table REXSCHED controls separate REX test nodes.

**Office parameter #\_OF\_BC\_LAMA\_UNITS**

This parameter specifies the number of recording units required in the host office to collect call data. This event occurs while the call buffer dumps to a tape or disk. When local automatic message accounting (LAMA) system billing is provisioned in the office, the LAMA system uses the call data for billing purposes. A formula that combines MDC, Datapath and call-forwarding traffic statistics determines the value for this office parameter.

When the RLCM supports MDC or Datapath lines or lines with vertical features, the value for parameter #\_OF\_BC\_LAMA\_UNITS must increase. An example of a vertical feature is call forwarding.

**Office parameter #\_OF\_NT\_RECORDING\_UNITS**

This parameter specifies the number of Nortel recording units required in the host office to collect call data. This event occurs when all AMA buffers are full.

When the centralized automatic message accounting (CAMA) or LAMA systems are provisioned in the office, the systems use the data for billing purposes. The MDC, the inward wide-area telephone service (INWATS) and the call-forwarding traffic statistics determine the value for parameter #\_OF\_NT\_RECORDING\_UNITS.

When the RLCM supports any MDC or INWATS lines or lines that support vertical features, the value of parameter #\_OF\_NT\_RECORDING\_UNITS must increase.

## Basic call processing (continued)

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### Office parameter **MAX\_NO\_OF\_ALT\_TEST\_PROCS**

This parameter allows several test processes from different ALT users to run at the same time. This event occurs under the control of one ALT process. This event occurs when this parameter speeds up ALT procedures in the host office. The number of the test units that follow determines the value of this parameter:

- transmission test units (TTU) NT2X47
- TTU NT2X56
- line test units (LTU) NT2X10
- LTU NT2X11

The number includes TTUs and LTUs configured in the office.

For every LTU configured in the remote maintenance module (RMM) shelf of the RLCM, the value of this parameter must increase by two. The RLCM is not always provisioned with an RMM, or has an RMM without an LTU. When this event occurs, the value of this parameter does not change.

### Office parameter **NO\_OF\_FTR\_CONTROL\_BLOCKS**

This parameter specifies the number of feature control blocks required in the host office. The host office can be provisioned with vertical features or MDC feature packages. The number of feature control blocks required changes according to the type of features provisioned to the host office. The number of plain ordinary telephone service (POTS) lines in the office that supports vertical features or MDC determines the value for this parameter.

When the RLCM supports MDC lines or lines with vertical features, the user can increase the value of **NO\_OF\_FTR\_CONTROL\_BLOCKS**.

### Office parameter **NMULTIBLKS**

This parameter allocates memory (multiblocks) for Three-way Calling and Call Waiting features assigned to lines in the host office. Parameter **NO\_OF\_FTR\_CONTROL\_BLOCKS** partially determines the value of this parameter.

Refer to parameter **NO\_OF\_FTR\_CONTROL\_BLOCKS** for conditions of these parameters as the parameters apply to RLCM lines.

### Office parameter **NUMPERMEXT**

This parameter allocates permanent external memory for specified features in the host office. This event occurs when the host office requires the additional memory. The user must assign a value to parameter **NUMPERMEXT** when parameter **NO\_OF\_FTR\_CONTROL\_BLOCKS** is provisioned. Parameter

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**Basic call processing** (continued)

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NO\_OF\_FTR\_CONTROL\_BLOCKS partially determines the value of this parameter.

See NO\_OF\_FTR\_CONTROL\_BLOCKS for conditions that necessitate parameter NUMPERMEXT as this parameter applies to RLCM lines.

**Office parameter TALK\_BATTERY\_ALARM**

This parameter activates the automatic audits of the talk battery in all LCM/XLCM/LCME/RLCM/OPM/OPAC peripheral modules. When the user changes this parameter, the parameter immediately activates the audits.

**Office parameter BICRELAY\_XLCM\_TESTS\_SCHEDULED**

This parameter in table OFCVAR allows the user to define the start time (BRTST\_START\_TIME) and stop time (BRTST\_STOP\_TIME) of the BRT. The user defines the start and stop time of the BRT. When this event occurs, the user defines the window for the office-level test.

The user cannot enter the same value for the start time and the stop time. The times must indicate a window of a minimum 10 min. The last field of this parameter is BRTST\_DAYS\_OF\_TST. This field specifies the day or days of the week the office-level test can run on.

The last field of this parameter, field BRTST\_DAYS\_OF\_TST, indicates the day or days of the week the office-level test can run. The entries for this field are MON, TUE, WED, THU, FRI, SAT and SUN. The user can enter a maximum of seven days. The user cannot enter the same day twice.

**Office parameter BICRELAY\_NUM\_SIMUL\_TESTS**

This parameter in table OFCVAR indicates the number of LCM level tests that can run at the same time. You can use the same start and stop times as in BICRELAY\_XLCM\_TESTS\_SCHEDULED with this parameter to configure a window. Configure the window to best suit the number of LCMs and RLCMs in the office.

Change this parameter only when the current date and time do not fall in the scheduled window.

When you need to change the parameter immediately, you can use the command interpreter (CI) command BICRELAYOFF to stop the BRT. After you make changes, issue the BICRELAYON command to restore BRT testing.

## Basic call processing (continued)

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### Office parameter **PMSTAT\_OM\_CONTROL**

This parameter in table OFCVAR allows the user to activate and deactivate data collection. This data collection occurs for processor occupancy measurements in the PMSTAT OM group. The parameter defaults to ON.

The user can change the PMSTAT\_OM\_CONTROL parameter. When this event occurs, the system immediately sends data to all XMS-based peripheral modules (XPM). The XPMs must have subtending extended-memory line concentrating modules (XLCM) to receive this data.

If the XPM is in an in-service (InSv) or in-service trouble (ISTb) state, Maintenance and Administration (MAP) terminal displays the confirmation message of `polling activated` or `polling deactivated`.

If the XPM is in an out-of-service (OOS) or manual busy (ManB) state, the system sends data during the return-to-service (RTS) action.

An audit makes sure that all InSv or ISTb XPMs report data when the PMSTAT\_OM\_CONTROL parameter is on. When the audit determines that the XPMs do not report data, the system sends static data to the XPM again. The static data begins data collection on the XLCM from which the XPM did not report data.

*Note:* The user must only change this office parameter during low traffic periods to prevent stress on the message system.

### Office parameter **NODEREXCONTROL**

The control of routine exercise (REx) testing for line concentrating modules (LCM) transfers from parameter LCDREX\_CONTROL in table OFCVAR. The testing of LCM ring and voltage values, earlier a section of LCM\_REX, separates into an LCM converter test (LCM\_COV\_REX). Control of LCM\_REX\_TEST and LCMCOV\_REX\_TEST, now part of system REX (SREX), transfers to parameter NODEREXCONTROL in table OFCVAR. Parameter LCDREX\_CONTROL remains to control REX testing of line modules (LM).

*Note:* The user only performs the LCMCOV\_REX\_TEST on LCMs, XLCMs, OPMs, and RLCMs.

## Datfill sequence

In order for the BAS00012 functional group to operate correctly, the user must enter the following tables in the order listed. After datfill, the host XPM and the RLCM must be loaded again from the central control (CC) to activate BAS00012 functional group.

**Basic call processing** (continued)

The following table lists the tables that require datafill to implement the Basic call processing. The user must enter the following tables in the order listed.

**Datafill tables required for Basic call processing (Sheet 1 of 3)**

<b>Table</b>	<b>Purpose of table</b>
DATASIZE	Makes sure adequate system memory is present to accommodate additional entries in trunk group tables.
CLLI	Identifies the maintenance and test trunks in use in the RLCM.
SITE	Allows the DMS switch to recognize the remote equipment tied to the host.
PMNODES	Allows the CM to control XPM unit node tables.
LTCINV	Takes an inventory of various peripheral module (PM) types, except P-side link assignments.
LTCPSINV	Identifies the module type, the number and the port indication of the P-side links.
CARRMTC	Sets the maintenance and engineering parameters and characteristics for DS-1, T1 carrier spans.
LCMINV	Lists data assignment for each frame associated with an LCM unit.
RMMINV	Identifies an RMM by location, product engineering code (PEC), PM load executive program and C-side PM.
REXSCHED	Schedules frequency and number of concurrent SREX tests. Table REXSCHED controls the execution of all SREX testing with the help of parameter NODEREXCONTROL in table OFCVAR. The system adds tuples to this table after you enter data to the inventory tables.
LCASCRCN	Assigns local calling area names to area codes that serve trunk groups.
TRKGRP	Identifies the test circuits associated with the maintenance and test trunks.
TRKSGRP	Lists the additional information for each subgroup that is assigned to one of the trunk groups that table TRKGRP lists.
TRKMEM	Identifies the circuits associated with the test equipment used to test lines and trunks.
<p><b>Note 1:</b> Different versions of data schema forms are sometimes required for different table applications. Refer to the data schema section that corresponds to the table application for the appropriate form version.</p> <p><b>Note 2:</b> Additional data schema sections explain datafill for each required trunk group type.</p> <p><b>Note 3:</b> The version of office alarm equipment installed in the office determines the data schema section.</p>	

**Basic call processing** (continued)

**Datafill tables required for Basic call processing (Sheet 2 of 3)**

<b>Table</b>	<b>Purpose of table</b>
CLLIMTCE	Lists the testing parameters for each trunk group CLLI.
ALMSCGRP	Lists alarm scan circuits and their locations and card types, and serves as a head table for the correct scan points.
ALMSC	Identifies the functions that each of the assigned scan points in the alarm scan groups can perform.
ALMSDGRP	Lists alarm signal distributor (SD) circuits and the locations and card types of the circuits. Table ALMSDGRP serves as a head table for the correct SD points.
ALMSD	Identifies the functions that each of the assigned SD points in the alarm SD groups can perform.
DFINV	Identifies the location of distributing frames at the host or remote sites.
SCGRP	Lists the PEC and the location at the host or remote switching units for the spare scan groups. The spare scan groups are reserved for use as scan points for line features.
SDGRP	Lists the PEC and the location at the host or remote switching units for the spare SD groups. The spare SD groups are reserved for use as SD points for line features.
TOFCNAME	Lists all terminating offices in the switch.
LINEATTR	Assigns line attributes to normal lines in table LENLINES, Meridian stations, and attendant consoles in the MDC translations tables.
LNINV	Retains an inventory of subscriber lines and associated line cards for the RLCM.
HUNTGRP	Stores the data for the hunt groups assigned in the switching unit.
<p><b>Note 1:</b> Different versions of data schema forms are sometimes required for different table applications. Refer to the data schema section that corresponds to the table application for the appropriate form version.</p> <p><b>Note 2:</b> Additional data schema sections explain datafill for each required trunk group type.</p> <p><b>Note 3:</b> The version of office alarm equipment installed in the office determines the data schema section.</p>	



**Basic call processing** (continued)**Datafill tables required for Basic call processing (Sheet 3 of 3)**

<b>Table</b>	<b>Purpose of table</b>
LENLINES	Lists the following data for each line: <ul style="list-style-type: none"> <li>• site name, if the line is remote</li> <li>• line equipment number</li> <li>• the party to which the directory number is assigned</li> <li>• the ringing code assigned to the directory lines</li> <li>• directory number</li> <li>• signal type</li> <li>• index into table LINEATTR</li> <li>• list of options</li> </ul>
LENFEAT	Lists the features assigned to a specific line in table LENLINES.
HUNTMEM	Lists the members assigned to the hunt groups listed in table HUNTGRP.
DNROUTE	Lists information for writable directory numbers in the switch.
HNPACONT	Lists the home numbering plan area (HNPA) subtables.
MTAMDRVE	Specifies the location and the type of the minibar driver assigned to the minibar switch.
MTAVERT	Identifies the vertical connections to the MTA matrix.
MTAHORIZ	Lists the assignment to a horizontal and horizontal group of MTAMs.
<p><b>Note 1:</b> Different versions of data schema forms are sometimes required for different table applications. Refer to the data schema section that corresponds to the table application for the appropriate form version.</p> <p><b>Note 2:</b> Additional data schema sections explain datafill for each required trunk group type.</p> <p><b>Note 3:</b> The version of office alarm equipment installed in the office determines the data schema section.</p>	

**Datafill examples**

The following paragraphs describe each possible datafill table required for activation of BAS00012 functional group. Only diagrams provide sample tuples. Refer to the *Translation Guide* for more information on tables.

Datafill for all tables is not always required. Accurate office configuration and provisioning determine the need for datafill in tables. The accurate tuples for

## Basic call processing (continued)

each table also depend on office configuration. The installation of the RLCM establishes datafill needs.

The continuation mark (CONTMARK) occurs in data tables when additional data for a subfield appears on the next record. A dollar sign (\$) indicates that a vector ends.

### Datafilling in table DATASIZE

Table DATASIZE makes sure that enough system memory is present to accommodate additional entries in tables CLLI, TRKGRP, TRKSGRP, SCGRP and SDGRP. The additional entries allow the addition of RLCM maintenance facilities. You first enter datafill in the table with default values for field sizes. Use the REPLACE command to change a default value.

*Note:* After the first input of the size value for a specified table, only Nortel can change the SIZE field.

#### Datafill example for table DATASIZE

The following example shows sample datafill for table DATASIZE.

#### MAP display example for table DATASIZE

DATSKEY	SIZE
CLLI	650
:	:
SCGRP	100
SDGRP	100
:	:
TRKGRP	500
TRKSGRP	500

### Datafilling in table CLLI

The common language location identifier (CLLI) table, identifies the hardware source of each tone, announcement, trunk group, test trunk, and service circuit in the DMS-100 switch.

When the RLCM is provisioned with an RMM shelf, the RMM circuits can require additional entries. These additional entries include remote operator verification (REMOTEVER90) and remote test desk (REMOTETESTDK).

---

**Basic call processing** (continued)

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Some CLLI entries appear automatically when equivalent features are present in the DMS-100 switch. These features can be currently present in table CLLI.

When RMM circuits do not require additional entries, the user must check trunk group sizes for these entries assigned in field TRKGRSIZ. The user must check these trunk group sizes to make sure that the RMM can be accommodated.

The CLLI entries that require the user to check the trunk group size follow:

- the LTU line test unit
- the MONTALK monitor/talk connection
- the OAUSC office alarm unit scan points
- the OAUSD office alarm unit SD points
- the MTADRIVER metallic test access driver

The total number of entries to which memory is allocated in table CLLI is equal to the value of field SIZE. The field SIZE is in table DATASIZE for key CLLI.

The datafill specific to Basic call processing for table CLLI appears in the following table. Only the fields that apply directly to Basic call processing appear.

## Basic call processing (continued)

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

### Datafilling table CLLI (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
CLLI		refer to subfields (a maximum of 16 characters)	Common language location identifier. Enter the 16-character field that identifies the far end of each announcement, tone, trunk group, test trunk, national milliwatt test lines and service circuit.  The recommended method to name CLLI is PLACE, PROV, BLDG, TRAFUNIT, and SUFX.
	PLACE	alphanumeric	Place. Enter the four-character code that identifies the name of the city or town at the far end of each group.
	PROV	alphanumeric	Province or state. Enter the two-character code that identifies the province or state at the far end of the trunk group.
	BLDG	alphanumeric	Building. Enter the two-character code that identifies the building number at the far end of the trunk group.
	TRAFUNIT	alphanumeric	Traffic unit. Enter the three-character code that identifies the destination of the traffic unit at the far end of the trunk group.
	SUFX	alphanumeric	Suffix. Enter the one-character code that identifies trunk groups that terminate at the same CLLI location.
ADNUM		numeric	Administrative trunk group number. Enter a number from 0 to a number one less than the size of table CLLI shown in table DATASIZE. The value must be unique.
TRKGRSIZ		0 to 2047	Trunk group size. Enter the four-character field. This field is equal to the maximum quantity of trunk members expected to be assigned to the trunk group.
<p><b>Note:</b> The SIZE field in the DATASIZE table for the entry with field DATSKEY equal to CLLI allocates memory. The maximum number of CLLI codes is 8192.</p>			

**Basic call processing** (continued)**Datafilling table CLLI (Sheet 2 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
ADMININF		alphanumeric (a maximum of 32 characters)	Administrative information. Enter the 32-character field that the operating company uses to record administrative information.  The switching unit does not use the information in this field. The recommended subfields are TRAFCLS, OFFCLS, and TRKGRYP.
	TRAFCLS	alphanumeric	Trunk group traffic class. This field is optional input for administrative purposes only.
	OFFCLS	alphanumeric	Office class. This field is optional input for administrative purposes only.
	TRKGRYP	alphanumeric	Trunk group type. This field is optional input for administrative purposes only.

**Note:** The SIZE field in the DATASIZE table for the entry with field DATSKEY equal to CLLI allocates memory. The maximum number of CLLI codes is 8192.

**Datafill example for table CLLI**

The following example shows sample datafill for table CLLI.

**MAP display example for table CLLI**

CLLI	ADNUM	TRKGRSIZ	ADMININF
SYNCH	8	10	SYNCH/NONSYNCH
OFFHKSUP	9	10	SUPERVISION_SIGNAL_OFFHOOK
RSMVER90	23	10	REMOTE_SERVICE_MOD_VERIFICATION
OPMPES	78	198	OUTSIDE_PLANT_MODULE_PES
ALMSC	79	240	ALARM_SC
ALMSD	80	240	ALARM_SD
RLCMVER90	81	10	RLCM_REMOTE_VER_CKR

**Datafilling in table SITE**

Table SITE lists all node sites that depend on the DMS-100 switch and miscellaneous configuration information for each of these sites. The first entry in table SITE contains the site name for the host switching office.. This entry contains the operator verification trunk group VER90 for that switching office.

## Basic call processing (continued)

---

The RLCM requires an entry in this table. The entry contains the following:

- remote site name for the RLCM
- the operator verification trunk group
- the REMOTEVER90

The entry also contains the three SD points assigned to critical, major, and minor alarms for the RLCM

*Note:* This datafill reserves three of the seven SD points in one RLCM SD group. The four SD points in this SD group that remain cannot be assigned to lines for line features.

When more than one RLCM at each remote site is present, each RLCM must have a different site name.

The datafill specific to Basic call processing for table SITE appears in the following table. Only the fields that apply directly to Basic call processing appear.

**Basic call processing** (continued)

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

**Datafilling in table SITE (Sheet 1 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
NAME		alphanumeric (a maximum of 4 characters)	Site name. Enter the site name assigned to the remote switching unit. The first character must be alphabetical. Site names can be a maximum of four characters in length. Do not use a PM type name for site names.  <b>Note:</b> The first entry in this field is for the host switching unit.
LTDSN		00 to 99	The LEN test desk site number. Enter a different two-digit number required to dial the site that appears under field NAME.
MODCOUNT		0	Module count. Enter zero. The system updates this field when the user enters datafill in table LCMINV.
OPVRCLLI		alphanumeric	Operator verification CLLI. Enter the CLLI assigned to the operator verification trunk group at the remote location.
ALMDATA		refer to subfields	Alarm data. This field is for remote locations only and consists of subfields ALMTYPE, TMTYPE, TMNO, TMCKTNO and POINT.
	ALMTYPE	CR, MJ, or MN	Alarm type. Enter the alarm type: critical (CR), major (MJ), or minor (MN).
	TMTYPE	RMM	Enter the trunk module type (remote service module) to which the miscellaneous SD point is assigned to the alarm.
<b>Note 1:</b> The system allocates memory automatically for a maximum of 32 sites.			
<b>Note 2:</b> The user must make changes to fields with multiple entries in the PROMPT mode only. In the nonprompt mode, skip entries that are already present.			
<b>Note 3:</b> Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies the entry of more data or more records. Enter the end mark (\$) in fields with multiple possible entries after the last entry.			

**Basic call processing** (continued)

**Datafilling in table SITE (Sheet 2 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
	TMNO	0 to 255	Enter the number assigned to the remote service module that includes the miscellaneous SD point assigned to the alarm.
	TMCKTNO	0 to 27	Trunk module circuit number. Enter the trunk module circuit on the remote service module that includes the miscellaneous SD point assigned to the alarm.
	POINT	0 to 6	The SD point number. Enter the SD point number within the trunk module circuit number, which is assigned to the alarm.

**Note 1:** The system allocates memory automatically for a maximum of 32 sites.

**Note 2:** The user must make changes to fields with multiple entries in the PROMPT mode only. In the nonprompt mode, skip entries that are already present.

**Note 3:** Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies the entry of more data or more records. Enter the end mark (\$) in fields with multiple possible entries after the last entry.

**Datafill example for table SITE**

Sample datafill for table SITE appears in the following example.

**MAP display example for table SITE**

NAME	LTDSN	MODCOUNT	OPVRCLLI	ALMDATA
HOST				
01		34	VER90	\$
RLCM0				
02		2	RLCM0VER90	\$
RLCM1				
03		2	RLCM1VER90	\$
RCR0				
04		1	RCR0VER90	\$



**Basic call processing** (continued)**Datafilling table PMNODES**

Table Peripheral module nodes (PMNODES) is read only. The CM uses table PMNODES to control XPM unit node tables. The system automatically enters table PMNODES when you add or change entries in inventory tables. An entry is present in table PMNODES for all subtending nodes of each XPM. The system updates fields to reflect CM control of configuration data tables (CDT) in the XPM nodes. Holes can appear in the table because nodes are deleted. These holes cannot always be filled with the addition of a new node. Tuples in table PMNODES are managed so that all subtending nodes must have a higher index than their head node.

**Datafilling table PMNODES for RSC basic operation (Sheet 1 of 3)**

Field	Subfield or refinement	Entry	Explanation and action
TABKEY		0 to 4095 0 to 117	Table key. Enter the two-part key, separated by a space, that identifies the XPM that contains the unit node table. The first part is a host external node number. The second part is an internal index number. Examples: The first key of an LTC with an external node number of 25 is 25 1. The key of the first XPM attached to the LTC is 25 2.
EXTNDNUM		0 to 4095	External node number. Enter the external number that the CM assigns to the XPM identified in field TABKEY. Example: The first XPM in the TABKEY example can be an RCC with an external node of 33. In this condition, the key of 25 2 can refer to XPM external node 33 in the LTC node tuple. The RCC can also have a node tuple key of 33 1 to represent that node.
NODETYPE		refer to list	Node type of XPM. Generic type of PM node. Examples: LTC_NODE, RCC_NODE, LCM_NODE, and RCS_NODE.
PMTYPE		refer to list	PM type. Specified PM type assigned to the node. Examples: RCC, LCM, SMSR, and LTC.

**Basic call processing** (continued)

Datafilling table PMNODES for RSC basic operation (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
LEVEL		0 to 15	PM level. Enter the number of device levels that separates the XPM node from the messaging host. The number begins at level 0 for messaging (head) XPMs. Examples: An LCM at level 2 attaches to the RCC at level 1. The RCC at level 1 attaches to the HOST LTC at level 0. The same LCM is at level 1 of the RCC tuple at level 0.
MSGHOST		0 to 4095	Messaging host. Enter the external node responsible for the transfer messages to this node. A messaging host must be able to transfer transfer messages. Examples: The LTC and RCC are able to transfer messages. Examples of XPMs that cannot message hosts are RCU and SMSR.
PHYSHOST		0 to 4095	Physical host. Enter the external node to which this XPM node attaches. Example: The LCME attaches to RCC at external node 33.
PORTS		0 to 127	Number of ports. Enter the total number of P-side ports in the host that this XPM node requires.
STPORT		0 to 255	Starting port. Enter the first P-side port in the host that this XPM node requires.
TERMS		0 to 4095	Number of terminals. Enter the total number of terminals in the host that by this XPM node requires.
STTERM		0 to 8675	Starting terminal. Enter the first terminal in the HOST that this XPM node requires.
PROTOCOL		alphanumeric	Message protocol. Enter the type of message protocol that the host uses to node links. Examples: MDS30, MDMSX, MHDLC
MS		M or S	Master or slave. Enter M when this node contains the master clock.
IPML		Y or N	Inter-peripheral message link (IPML). Enter Y when configuration indicates this node is part of an IPML.

**Basic call processing** (continued)**Datafilling table PMNODES for RSC basic operation (Sheet 3 of 3)**

Field	Subfield or refinement	Entry	Explanation and action
MODE		T or P	Table entry mode. Enter T when terminal indexing makes entries in the table. Enter P when port indexing makes entries in the table.
SLLCON		Y or N	Site line load control. Enter Y when this node is at a site that uses Essential Line Service Protection (ESP) or other site line load control features.
NT6X28		N	Uses NT6X28 card. Enter Y when this XPM uses the NT6X28 card. The NT6X28 signaling interface card operates on the International Digital Trunk Controller (IDTC). Always enter N.
LCMLGMEM		Y or N	LCM large memory. Enter Y when this XPM is an LCM with large memory (256 kbyte).
RSVPORTS		Y or N	Reserved ports. Enter Y when this XPM has ports that are reserved for messaging.
RSVTERMS		Y or N	Reserved terminals. Enter Y when this XPM has terminals that are reserved for messaging.
MATENODE		Y or N	Mate node. Enter Y when this node is part of a dual configuration.
PACKED		Y or N	Packed internal tables. Enter Y when internal node tables are packed on this node. Before the creation of this feature, the node table was compressed when the XPM was RTS with the NODATASYNC option. Now, compression happens when the CM becomes out-of-service (OOS) and loads both units of an XPM.
SUPPCDT		Y Y	Support configuration data table (CDT). Enter Y for each unit when CDT management has support.
CMINCTRL		Y or N	CM node control. Enter Y when the CM controls the node.

**Datafill example for table PMNODES**

Datafill for an LTC node with an RCC node connected and an LCME connected to the RCC appears in the following example.

## Basic call processing (continued)

### MAP display example for table PMNODES (LTC tuple)

Table: PMNODES

TABKEY	EXTNDNUM	NODETYPE	PMTYPE	LEVEL	MSGHOST	PHYSHOST	PORTS
25	1	25	LTC_NODE	LTC	0	25	16

STPORT	TERMS	STTERM	PROTOCOL	MS	IPML	MODE	SLLCON	NT6X28	LCMLGMEM	RSVPORTS
0	641	1	MDS30A	S	N	P	N	N	N	Y

RSVTERMS	MATENODE	PACKED	SUPPCDT	CMINCTRL
Y	N	Y	YY	Y

### Datafilling table LTCINV

The line trunk controller inventory (LTCINV) table, contains all inventory data. Table LTCINV does not contain P-side link assignments for the line trunk controller (LTC) line group controller (LGC). The system automatically allocates memory in table LTCINV for a maximum of 255 tuples.

Table LTCINV must contain an entry for the host controller that connects the RLCM to the DMS-100 network. Table LTCINV identifies the following types:

- the type and location of the host controllers peripheral equipment
- the executive programs
- the C-side links

The C-side links connect the host controller and the network.

The datafill specific to Basic call processing for table LTCINV appears in the following table. Only the fields that apply directly to Basic call processing appear.

**Basic call processing** (continued)

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

**Datafilling table LTCINV (Sheet 1 of 3)**

Field	Subfield or refinement	Entry	Explanation and action
LTCNAME		refer to subfields	Line trunk controller name. Contains subfield XPMTYPE and XPMNO.
	XPMTYPE	LTC or LGC	XPM type. Enter LTC when trunking must be supported. Enter LGC when lines only must be supported.
	XPMNO	numeric	XPM number. Enter a number associated with the XPM. The range for NT40 is 0-127. Range for SuperNode is 0-255.
ADNUM		numeric	Peripheral module administrative number. Enter the administrative number associated with the peripheral module (PM). The range is 0-4095.  <b>Note 1:</b> The value of field ADNUM must be different across all PM inventory tables (DLMINV, IPEINV, LCMINV, LMINV, LTCINV, RCCINV, RCSINV, RCTINV, and VSRINV). The system attempts to add a PM with an ADNUM already in use. The system prompts the user for the next available ADNUM value.  <b>Note 2:</b> Field ADNUM cannot change if the operational measurements (OM) numbers for that PM are included in an Engineering and Administrative Data Acquisition System (EADAS) or data collection (DC) section. The DC section associates with the OM groups LMD or UTR.
<b>Note 1:</b> The system automatically allocates to a maximum of 128 tuples for table LTCINV.			
<b>Note 2:</b> The user must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode, skip entries that are already present.			
<b>Note 3:</b> Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies more data or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.			

**Basic call processing** (continued)

Datafilling table LTCINV (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
FRTYPE		LTE or LGE	Frame Type. Enter LTE for the LTC. Enter LGE for the LGC.  <b>Note:</b> Enter the location of this PM in fields FRNO, SHPOS, FLOOR, ROW, and FRPOS.
EQPEC		6X02AG or 6X02AH	Product equipment code. Enter 6X02AG for an LTC or 6X02AH for an LGC.
LOAD		alphanumeric	Load. Enter the PM load listed in table PMLOADS.
EXECTAB		Refer to subfields	Executive table. Contains subfields TRMTYPE and EXEC. Enter the terminal type and the associated executives together.
	TRMTYPE	alphanumeric	Terminal type. Enter one of the following types of terminal models to be used: <ul style="list-style-type: none"> <li>• POTS for regular lines</li> <li>• KSET for EBS terminals</li> <li>• ABTRK for regular trunks</li> <li>• RMM_TERM for MTC trunks</li> </ul>
	EXEC	alphanumeric	Executive Programs. Enter the executive programs associated with the terminal type (POTSEX, KSETEX, RSMEEX, and DTCEX).
CSLNKTAB		refer to subfields	C-side link table. Contains subfields NMNO and NMPORT.
	NMNO	0 to 63	Network module number. Enter the network module pair to which the PM is assigned.
	NMPORT	0 to 64	Network module port. Enter the network port that corresponds to the above network pair.
<p><b>Note 1:</b> The system automatically allocates to a maximum of 128 tuples for table LTCINV.</p> <p><b>Note 2:</b> The user must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode, skip entries that are already present.</p> <p><b>Note 3:</b> Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies more data or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p>			

**Basic call processing** (continued)**Datafilling table LTCINV (Sheet 3 of 3)**

Field	Subfield or refinement	Entry	Explanation and action
OPTCARD		alphanumeric	Optional card. Enter when the LTC includes the UTR, message, and CMR cards. If the CMR card is included, enter the CMRLOAD.
CMRLOAD		alphanumeric	Class modem resource load. Enter the CMR software load.
TONESSET		NORTHAM	Tone set. Enter NORTHAM for North America.
PECS6X45		alphanumeric	Product equipment codes 6X45. Enter the PEC of the card in LTC units 0 and 1. The PEC must reflect minimum firmware capabilities in the processor complex of each unit. PEC MX77AA was added for XPM-PLUS.
E2LOAD		alphanumeric	The EEPROM file. Contains the name of the loadfile loaded in the NTMX77AA EEPROM
OPTATTR		blank	Optional attribute. This field is for a DTC that supports CCS7. Leave this field blank.
PEC6X40		alphanumeric	The 6X40 equipment PEC. Enter the version of the NT6X40 to be used.
<p><b>Note 1:</b> The system automatically allocates to a maximum of 128 tuples for table LTCINV.</p> <p><b>Note 2:</b> The user must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode, skip entries that are already present.</p> <p><b>Note 3:</b> Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies more data or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p>			

**Datafill example for table LTCINV**

Sample datafill for table LTCINV appears in the following example.

## Basic call processing (continued)

### MAP display example for table LTCINV

```

LTCNAME
ADNUM FRTYPE FRNO SHPOS FLOOR ROW FRPOS EQPEC LOAD
                                EXECTAB
                                CSLNKTAB
                                OPTCARD

TONESET  PEC6X45
                                E2LOAD          OPTATTR

PEC6X40
-----
LTC 0
    1005 LGE      5      18      1      B 5 6X02AG NLT35ZI1
                                (POTS POTSEX) (RMM_TERM RSMEX)$
    (9 17) (13 61) (5 14)(0 29)(1 30)(2 31)(3 28)(4 29)$
                                ( UTR16) ( CMR18 CMR36A15) (MSG6X69)$
DEFAULT  MX77AA  MX77AA  MX77MA24
                                NILLOAD          $

6X40AC
    
```

### Datafilling table LTCPSINV

The line trunk controller P-side link inventor (LTCPSINV) table contains the assignments of the peripheral side links. These assignments are for the LTC, DTC, LGC, SMR, SMS, SMU and IDTC.

The key for table LTCPSINV is the same as table LTCINV. The system automatically allocates memory in table LTCPSINV for a maximum of 128 tuples.

The list of links in table LTCPSINV must include the DS-1 links that connect the LTC and the RLCM.



#### CAUTION

##### Potential extended outage

Do not change the signaling format to B8ZS for RLCM C-side links until the NT6X51 LCM processors are upgraded to NT6X51DA. If you change the signaling format to B8ZS on links to the RLCM not provisioned with the NT6X51DA, you will not be able to restore service to the RLCM if it becomes SysB or ManB. A software reload will be required and the signaling format must be changed back to ZCS before you reload and RTS the RLCM.



**Basic call processing** (continued)

The datafill specific to Basic call processing for table LTCPSINV appears in the following table. Only the fields that apply directly to Basic call processing appear.

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

**Datafilling table LTCPSINV (Sheet 1 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
LTCNAME		refer to subfields	Link trunk controller name. Contains subfields XPMTYPE and XPMNO.
	XPMTYPE	LTC or LGC	PM type. Enter LTC when the LTC connects to the RCC. Enter LGC when the LGC connects to the RCC. Only the LTC or LGC can connect to the RCC.
	XPMNO	0 to 255	PM number. Enter the peripheral module number assigned to this PM.
PSLNKTAB		0 to 19	P-side link table. Contains subfields PSLINK and PSDATA.
	PSLINK	0 to 19	P-side link. Enter the P-side port number.
	PSDATA	DS-1, DS30A, or NILTYPE	P-side data. Enter DS-1 for trunks and remote nodes. The trunks and remote nodes include the RCC and RLCM. Enter DS30A if the P-side interface is an interface to a local LCM.
<p><b>Note:</b> If PSDATA is DS-1, fill in fields CARRIDX and ACTION.</p>			
<p><b>Note 1:</b> The system automatically allocates memory for a maximum of 128 tuples for table LTCPSINV.</p>			
<p><b>Note 2:</b> The user must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode, skip entries that are already present.</p>			
<p><b>Note 3:</b> Enter the continuation mark (+) in fields with multiple possible entries when more data entry is specified on the next line or more records. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p>			

**Basic call processing** (continued)

**Datafilling table LTCPSINV (Sheet 2 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
	CARRIDX	DEFAULT	Carrier index. Enter the name to index into table CARRMTC. Enter DEFAULT for the default template in table CARRMTC.
	ACTION	N	Action. Enter Y if the carrier must be removed from service when the OOS limit for frame, slip, errored-second, or severe errored-second is exceeded.
<p><b>Note 1:</b> The system automatically allocates memory for a maximum of 128 tuples for table LTCPSINV.</p> <p><b>Note 2:</b> The user must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode, skip entries that are already present.</p> <p><b>Note 3:</b> Enter the continuation mark (+) in fields with multiple possible entries when more data entry is specified on the next line or more records. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p>			

**Datafill example for table LTCPSINV**

Sample datafill for table LTCPSINV appears in the following table.

**Basic call processing** (continued)**MAP display example for table LTCPSINV**

LTCNAME	PSLNKTAB
LTC 0	(0 DS30A) (1 DS30A) (2 DS30A) (3 DS30A) (4 DS30A) (5DS30A) (6 DS30A) (7 DS30A) (8 DS30A)(9 DS30A)(10 DS30A)(11 DS30A) (12 DS30A) (13 DS30A) (14 DS30A) (15 DS30A) (16 DS30A) (17 DS30A) (18 DS30A) (19 DS30A) \$
LTC 1	(0 DS1 Default N) (1 DS1 Default N) (2 DS1 Default N) (3 DS1 Default N) (4 DS1 Default N) (5 DS1 Default N) (6 DS1 Default N)(7 DS1 Default N) (8 DS1 Default N) (9 DS1 Default N)(10 NILTYPE)(11 NILTYPE)(12 NILTYPE) (13 NILTYPE)(14 NILTYPE)(15 NILTYPE)(16 NILTYPE)(17 NILTYPE) (18 NILTYPE)(19 NILTYPE) \$
LGC 2	(0 DS30A)(1 DS30A)(2 DS1)(3 DS1)(4 NILTYPE)(5 NILTYPE) (6 DS30A)(7 DS30A)(8 DS1)(9 DS1)(10 NILTYPE)(11 NILTYPE) (12 NILTYPE) (13 NILTYPE) (14 NILTYPE) (15 NILTYPE) (16 NILTYPE) (17 NILTYPE) (18 NILTYPE) (19 NILTYPE) \$

**Datafilling table CARRMTC**

The carrier maintenance control (CARRMTC) table allows the DMS switch administration to enter the following information:

- maintenance control information in peripherals
- out-of-service limits for alarms
- system RTS occurrences

A maximum of 16 entries are present for each type of peripheral that can provide carrier links in the switch. The user enters selection of entries for each carrier in the inventory table of the C-side peripheral, table LTCPSINV.

The following checks are made between table CARRMTC and table LTCPSINV:

- The user can enter a carrier index (CARRIDX) in table LTCPSINV. When this event occurs, an entry for the peripheral module type must already be

## **Basic call processing** (continued)

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present in table CARRMTC. A sample entry for the peripheral module type is RCC and LTC.

- When the user deletes an entry from table CARRMTC, carriers in table LTCPSINV cannot refer to that entry. When this event does not occur, the deletion command is rejected.
- The user can change an entry that is present in table CARRMTC. When this event occurs, a check of table LTCPSINV occurs to determine when InSv carriers refer to that entry. The carriers can refer to the entry. When this event occurs, the system rejects the change command and a list of the InSv carriers appears.

The datafill specific to Basic call processing for table CARRMTC appears in the following table. Only the fields that apply directly to Basic call processing appear.

**Basic call processing** (continued)

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

**Datafilling table CARRMTC (Sheet 1 of 4)**

Field	Subfield or refinement	Entry	Explanation and action
CSPMTYPE		LGC	C-side node PM type. Enter the PM type of the node on the C-side of the carrier link. LGC is a PM type of the node.
TMPLTNM		alphanumeric (a maximum of 16 characters)	Template name. Enter the template name (a maximum of 16 characters) for the PM. This entry also appears in the CARRIDX field of table RCCPSINV. The default value is DEFAULT.
RTSML		0 to 255	Return-to-service maintenance limit. Enter the number of times during the audit interval that the system can RTS a carrier RTS before a warning is issued. Value 255 disables this feature.
RTSOL		0 to 255	Return to service out-of-service limit. Enter the number of times during an audit interval that the system can RTS a carrier. When the system RTSs a carrier more than the specified limit, the carrier is placed permanently out of service. Value 255 disables this feature.
ATTR		see subfields	Attribute. This field contains subfield SELECTOR.
<p><b>Note 1:</b> The DMS switch adds the first tuple for RCC (or LTC or LGC) to table CARRMTC automatically. This event occurs during initial program load (IPL) or first restart after IPL. The designation of the entry is index 0. This entry has the value DEFAULT in the TMPLTNM field and default values for the other fields. You cannot delete this tuple, and you can only change fields ES, SES, and thresholds for frame and slip losses.</p> <p><b>Note 2:</b> You must add tuples other than the default tuple manually before the tuples can be referenced in table LTCPSINV. You can delete these tuples. Deletion of these tuples can only occur when DS1 carriers are not associated with the tuples.</p> <p><b>Note 3:</b> You can change tuples in table CARRMTC. This change can only occur when the associated DS-1 carriers are ManB or OffL.</p> <p><b>Note 4:</b> The user must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode, skip entries that are already present.</p> <p><b>Note 5:</b> Enter the continuation mark (+) in fields with multiple possible entries when more data entry is specified on the next line or more records. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p>			

**Basic call processing** (continued)

**Datafilling table CARRMTC (Sheet 2 of 4)**

Field	Subfield or refinement	Entry	Explanation and action
	SELECTOR	DS1	Selector. Enter carrier type DS-1.
	CARD	NT6X50AA or NT6X50AB	Card. Enter the product engineering code (PEC) of the DS-1 interface card. The range of values for the RCC is NT6X50AA or NT6X50AB (clear channel).  <b>Note:</b> Refer to the <i>Remote Switching Center Maintenance Guide</i> for details on retrofitting the NT6X50AB on the C-side DS-1 links for an RCC.
	VOICELAW	A_LAW or MU_LAW	Voice law. Enter the voice law for the carrier. The A_LAW is used mainly in international switches. The MU_LAW is used mainly in North American switches.
	FF	SF or ESF	Frame format. Enter SF (standard frame or super frame) in this field.
	ZLG	ZCS or B8ZS	Zero logic. Enter zero code suppression (ZCS) in the ZLG field. If all zeros are transmitted, insert a 1 in the second least significant bit position.
	BERB	BPV or CRC	Bit error rate base. Enter BPV for bipolar violation.
	DLK	NILDL	Data link. Currently, only NILDL is supported.
<p><b>Note 1:</b> The DMS switch adds the first tuple for RCC (or LTC or LGC) to table CARRMTC automatically. This event occurs during initial program load (IPL) or first restart after IPL. The designation of the entry is index 0. This entry has the value DEFAULT in the TEMPLTNM field and default values for the other fields. You cannot delete this tuple, and you can only change fields ES, SES, and thresholds for frame and slip losses.</p> <p><b>Note 2:</b> You must add tuples other than the default tuple manually before the tuples can be referenced in table LTCPSINV. You can delete these tuples. Deletion of these tuples can only occur when DS1 carriers are not associated with the tuples.</p> <p><b>Note 3:</b> You can change tuples in table CARRMTC. This change can only occur when the associated DS-1 carriers are ManB or OffL.</p> <p><b>Note 4:</b> The user must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode, skip entries that are already present.</p> <p><b>Note 5:</b> Enter the continuation mark (+) in fields with multiple possible entries when more data entry is specified on the next line or more records. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p>			

**Basic call processing** (continued)

Datafilling table CARRMTC (Sheet 3 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	IAT	Y or N	Inhibit alarm transmit. Enter Y for the IAT field to inhibit yellow alarms.
	LCGAST	1 to 9999	Local carrier group alarm set. Enter the threshold value in units of 10 ms.
	LCGACL	1 to 9999	Local carrier group alarm clear threshold. Enter the threshold value in units of 10 ms.
	RCGAST	1 to 9999	Remote carrier group alarm set. Enter the threshold value in units of 10 ms.
	RCGACL	1 to 9999	Remote carrier group alarm clear threshold. Enter the threshold value in units of 10 ms.
	AISST	1 to 9999	Alarm indication signal set threshold. Enter the threshold value in units of 10 ms.
AISCL		1 to 9999	Alarm indication signal clear threshold. Enter the threshold value in units of 10 ms.
BEROL		3 to 6	Bit error rate out-of-service limit. Enter the BEROL number expressed as the negative of the exponent of 10 (10E-n). The number 3, for example, represents a 1-in-1000 bit error rate.
<p><b>Note 1:</b> The DMS switch adds the first tuple for RCC (or LTC or LGC) to table CARRMTC automatically. This event occurs during initial program load (IPL) or first restart after IPL. The designation of the entry is index 0. This entry has the value DEFAULT in the TMPLTNM field and default values for the other fields. You cannot delete this tuple, and you can only change fields ES, SES, and thresholds for frame and slip losses.</p> <p><b>Note 2:</b> You must add tuples other than the default tuple manually before the tuples can be referenced in table LTCPSINV. You can delete these tuples. Deletion of these tuples can only occur when DS1 carriers are not associated with the tuples.</p> <p><b>Note 3:</b> You can change tuples in table CARRMTC. This change can only occur when the associated DS-1 carriers are ManB or OffL.</p> <p><b>Note 4:</b> The user must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode, skip entries that are already present.</p> <p><b>Note 5:</b> Enter the continuation mark (+) in fields with multiple possible entries when more data entry is specified on the next line or more records. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p>			

**Basic call processing** (continued)**Datafilling table CARRMTC (Sheet 4 of 4)**

<b>Field</b>	<b>Subfield or refinement</b>	<b>Entry</b>	<b>Explanation and action</b>
BERML		4 to 7	Bit error rate maintenance limit. Enter the BERML number expressed as the negative of the exponent of 10 (10E-n).
ES		0 to 9999	Error second (ES) threshold. Enter the threshold value in units of 10 ms.
SES		0 to 9999	Severe error second (SES) threshold. Enter the threshold value in units of 10 ms.
FRAMEML		0 to 9999	Frame maintenance limit. Enter the maintenance limit for frame loss.
FRAMEOL		0 to 9999	Frame loss limit. Enter the OOS limit for frame loss.  <b>Note:</b> FRAMEOL should be larger than FRAMEML.
SLIPML		0 to 9999	Slip maintenance limit. Enter the maintenance limit for slip.
SLIPOL		0 to 9999	Slip out-of-service limit. Enter the out-of-service limit for slip.  <b>Note:</b> SLIPOL should be larger than SLIPML.
<p><b>Note 1:</b> The DMS switch adds the first tuple for RCC (or LTC or LGC) to table CARRMTC automatically. This event occurs during initial program load (IPL) or first restart after IPL. The designation of the entry is index 0. This entry has the value DEFAULT in the TEMPLNM field and default values for the other fields. You cannot delete this tuple, and you can only change fields ES, SES, and thresholds for frame and slip losses.</p> <p><b>Note 2:</b> You must add tuples other than the default tuple manually before the tuples can be referenced in table LTCPSINV. You can delete these tuples. Deletion of these tuples can only occur when DS1 carriers are not associated with the tuples.</p> <p><b>Note 3:</b> You can change tuples in table CARRMTC. This change can only occur when the associated DS-1 carriers are ManB or OffL.</p> <p><b>Note 4:</b> The user must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode, skip entries that are already present.</p> <p><b>Note 5:</b> Enter the continuation mark (+) in fields with multiple possible entries when more data entry is specified on the next line or more records. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p>			



**Basic call processing** (continued)**Datafill example for table CARRMTC**

Sample datafill for table CARRMTC appears in the following table.

**MAP display example for table CARRMTC**

CSPMTYPE	TPLTNM	RTSML	RTSOL	ATTR																					
LGC	DEFAULT	255	255	DS1	NT6X50AA	MU_LAW	SF	ZCS	BPV	NILDL	N	250	1000	50	50	150	1000	3	6	864	100	17	511	4	255

**Datafilling table LCMINV**

A list of the data assignment for each frame associated with a local or remote LCM unit appears in the line concentrating module inventory (LCMINV) table. This table must include one entry for each RLCM. Only fields that require datafill specific to this feature appear in this table.

Table LCMINV associates the site name provided in table SITE with the location of the RLCM, the PM software, and ringing data. Table LCMINV also associates the site name with C-side links, and provisionable options. Provisionable options include RMM and any additional RLCM feature packages.

**Note 1:** The C-side links entered for the RLCM in table LCMINV must correspond to the links entered for the host LGC/LTC in table LTCPSINV.

**Note 2:** When LCMSELECTOR of field LCMINFO is set to RLCM, table RMMINV must also be entered.

The field BICTST was added to table LCMINV in BCS33. This field provides a boolean indication when a particular RLCM must be included in the test schedule.

The datafill specific to Basic call processing for table LCMINV appears in the following table. Only the fields that apply directly to Basic call processing appear.

**Basic call processing** (continued)

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

**Datafilling table LCMINV (Sheet 1 of 4)**

Field	Subfield or refinement	Entry	Explanation and action
LCMNM		refer to subfields	LCM name. Enter the site name, frame number and peripheral module number assigned to the remote LCM.
	SITE	alphanumeric	Site. Enter the site name assigned to the remote location.
	FRAME	0 to 511	Frame number. Enter frame number for the LCM.
	PMNO	0 to 255	Peripheral module number. Enter the peripheral module.
FRTYPE		RLCE	Frame type. Enter the frame type to which the PM equipment is mounted. For example, LCE, LCEI and CLCE are frame types.  <b>Note:</b> Enter the location of the C-side PM in fields FRNO, SHPOS, FLOOR, ROW, and FRPOS.
EQPEC		6X04AA	Equipment product engineering code. Enter the PEC of the PM. For example, 6X04AA is a PEC.
LOAD		alphanumeric	Load name. Enter the name given to the issue of PM software.
CSPMNO		refer to subfields	C-side peripheral module type and number. Enter the C-side PMTYPE and PM number.
<p><b>Note 1:</b> The user must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode, skip entries that are already present.</p> <p><b>Note 2:</b> Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies entry of more data or more records. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p> <p><b>Note 3:</b> You can enter fields link information (LNKINFO) or link map (LNKMAP). When this event occurs, make sure message links are not assigned to the same interface card. When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This condition applies to all interface link types: DS-1, DS30, DS30A, or PCM-30. Table control issues a warning when an attempt occurs to assign message links on the same interface card. If the user assigns message links to the same interface card, an E1 outage occurs because of card failure. E1 outage is a failure of all message links.</p>			

**Basic call processing** (continued)

Datafilling table LCMINV (Sheet 2 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	PMTYPE	LGC, LTC, RCC, or RCC2	PMTYPE. Enter the C-side PM type.
	PMNO	0 to 255	Peripheral module number. Enter the number assigned to the C-side PM.
BICTST		Y or N	BIC relay test (BRT). Enter Y to include the RLCM in the next LCM BRT schedule. Entry values are Y and N.
ADNUM		0 to 4095	Peripheral module administrative number. Enter the administrative number associated with the peripheral module (PM).  <b>Note 1:</b> The value of field ADNUM must be unique across all PM inventory tables (DLMINV, IPEINV, LCMINV, LMINV, LTCINV, RCCINV, RCSINV, RCTINV, and VSRINV). The system rejects attempts to add a PM with an ADNUM already in use. The system prompts the user with the next available ADNUM value.  <b>Note 2:</b> You cannot change field ADNUM cannot be changed if the operational measurements (OM) numbers for that PM are included in an Engineering and Administrative Data Acquisition System (EADAS) or data collection (DC) section associated with the OM groups LMD or UTR.
<p><b>Note 1:</b> The user must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode, skip entries that are already present.</p> <p><b>Note 2:</b> Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies entry of more data or more records. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p> <p><b>Note 3:</b> You can enter fields link information (LNKINFO) or link map (LNKMAP). When this event occurs, make sure message links are not assigned to the same interface card. When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This condition applies to all interface link types: DS-1, DS30, DS30A, or PCM-30. Table control issues a warning when an attempt occurs to assign message links on the same interface card. If the user assigns message links to the same interface card, an E1 outage occurs because of card failure. E1 outage is a failure of all message links.</p>			

**Basic call processing** (continued)

**Datafilling table LCMINV (Sheet 3 of 4)**

Field	Subfield or refinement	Entry	Explanation and action
MEMSIZE		256K	Memory size. Enter the memory size of the processor card for the LCM. Entry values are 256 kB and 64 kB. You must set the MEMSIZE field to 256 kB if BICTST is set to Y.  If MEMSIZE is set to 64 kB, you must set BICTST to N.
LCMTYPE		refer to subfields	LCMTYPE information multiple that includes ringing data, ringing type and LCMINFO.
	LCM	alphanumeric	LCMTYPE selector. Enter LCM selector multiple with ringing data and ringing type.
LCMINFO		refer to subfields	Enter LCMINFO multiple with LCMSELECTOR, LINKMAP, INTRASW, ESA, CONVERTIBLE and DS1CARD.
	LCM SELECTOR	RLCM	Enter HLCM multiple with LINKMAP when C-side link is DS30A. Enter RLCM multiple with LINKMAP, INTRASW, ESA, CONVERTIBLE.  Enter DS1CARD when C-side interface link type is DS1.
	LINKMAP	2 to 6	Enter C-side link numbers equipped; minimum of 2 links and a maximum of 6 links.
	INTRASW	Y or N	Intraswitching. Boolean Y or N to turn intraswitching ON or OFF
<p><b>Note 1:</b> The user must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode, skip entries that are already present.</p> <p><b>Note 2:</b> Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies entry of more data or more records. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p> <p><b>Note 3:</b> You can enter fields link information (LNKINFO) or link map (LNKMAP). When this event occurs, make sure message links are not assigned to the same interface card. When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This condition applies to all interface link types: DS-1, DS30, DS30A, or PCM-30. Table control issues a warning when an attempt occurs to assign message links on the same interface card. If the user assigns message links to the same interface card, an E1 outage occurs because of card failure. E1 outage is a failure of all message links.</p>			

**Basic call processing** (continued)**Datafilling table LCMINV (Sheet 4 of 4)**

Field	Subfield or refinement	Entry	Explanation and action
	ESA	Y or N	Emergency stand-alone. Boolean Y or N to turn emergency stand-alone ON or OFF
	CONV	Y or N	Boolean Y or N if this RLCM can covert to an RSC.
	DS1CARD	6X50AA or 6X65AB	Enter the C-side DS1 interface card type 6X50AA or 6X50AB.

**Note 1:** The user must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode, skip entries that are already present.

**Note 2:** Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies entry of more data or more records. Enter the end mark (\$) in fields with multiple possible entries after the last entry.

**Note 3:** You can enter fields link information (LNKINFO) or link map (LNKMAP). When this event occurs, make sure message links are not assigned to the same interface card. When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This condition applies to all interface link types: DS-1, DS30, DS30A, or PCM-30. Table control issues a warning when an attempt occurs to assign message links on the same interface card. If the user assigns message links to the same interface card, an E1 outage occurs because of card failure. E1 outage is a failure of all message links.

**Datafill example for table LCMINV**

Sample datafill for table LCMINV appears in the following example.

**MAP display example for table LCMINV**

LCMNM	FRTYPE	SHPOS	FLOOR	ROW	FRPOS	EQPEC	LOAD	CSPMNO	LCMTYPE
BICTST	ADNUM	MEMSIZE							
HOST	00 0	LCE	4	1	B 6	6X04AA	XLCM031G	LGC	0
N	22	256K 256K							
		LCM	Y	S	48V	HLCM	( 2 ) ( 3 ) ( 6 ) ( 7 ) ( 10 ) ( 11 )		\$

**Datafilling table RMMINV**

The remote maintenance module inventory (RMMINV) table identifies an RMM by RLCM, OPM or RSC site. Table RMMINV includes the location

## Basic call processing (continued)

and equipment product engineering code (EQPEC). This site also includes the following:

- PM load
- the executive program
- the attached C-side peripheral module

The system continuously allocates memory in this table. The maximum size is 255 entries. Table RMMINV requires an entry when the RLCM is provisioned with an RMM shelf.

The datafill specific to Basic call processing for table RMMINV appears in the following table. Only the fields that apply directly to Basic call processing appear.

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

### Datafilling table RMMINV (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
RMMNAME		alphanumeric	RMM name. Enter the name for the RMM. Contains subfields SITENM, PMTYPE, and RMMNO.
	SITENM	Location	Site. Enter the site name assigned to the remote location. This entry must also appear in table RCCINV, LCMINV, and SITE.
	PMTYPE	RMM	PM type. Enter RMM.
	RMMNO	0 to 255	RMM number. Enter the number assigned to this RMM.
<p><b>Note 1:</b> When the RMMSELECTOR is set to RMMRCC, the RMM is in an RCE frame. Port 0 of the RCC extends through backplane wiring to shelf position 51 and port 1 is to shelf position 65.</p> <p><b>Note 2:</b> The user must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode, skip entries that are already present.</p> <p><b>Note 3:</b> Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies entry of more data or more records. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p>			

**Basic call processing** (continued)**Datafilling table RMMINV (Sheet 2 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
FRTYPE		RLCE	Frame Type. Enter RLCE for the RLCM.  <b>Note:</b> Enter the location of the RCC in fields FRNO, SHPOS, FLOOR, ROW, and FRPOS.
EQPEC		6X13AA	Equipment PEC. Enter 6X13AA for a normal RMM.
LOAD			Load. Enter the load for the RMM. Make sure that table PMLOADS contains the load and table name.
EXECS		RSMEX	Exec table. Enter the appropriate execs. For the RMM, the exec is RSMEX.
CSPMINFO		refer to subfields	C-side PM information. Contains subfields RMMSELECTOR, CSIDEPM, and CSIDPORT.
	RMMSELECTOR	RMMLCM	The RMM selector. Enter the selector for the type of module on the C-side of the RMM. The selector can be RMMRCC or RMMLCM.
CSIDEPM		refer to subfields	The C-side peripheral module. Contains subfields PMT and EXT_PMNO.
	PMT	LCM	PM type. The value in field RMMSELECTOR determines the PM type. Enter RCC or LCM.
	EXTPMNO	0 to 255	External PM number. Enter the external PM number to which the RMM is attached. This number must also appear in table LCMINV or RCCINV for the C-side PM.
	CSIDPORT	0 or 1	C-side port. Enter the C-side port connected to the RMM.
<p><b>Note 1:</b> When the RMMSELECTOR is set to RMMRCC, the RMM is in an RCE frame. Port 0 of the RCC extends through backplane wiring to shelf position 51 and port 1 is to shelf position 65.</p> <p><b>Note 2:</b> The user must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode, skip entries that are already present.</p> <p><b>Note 3:</b> Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies entry of more data or more records. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p>			

## Basic call processing (continued)

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### Datafill example for table RMMINV

Sample datafill for table RMMINV appears in the following example.

### MAP display example for table RMMINV

RMMNAME	FRTYPE	FRNO	SHPOS	FLOOR	ROW	FRPOS	EQPEC	LOAD	EXECS		
CSPMINFO											
TRSC	RMM	1	RCE	0	51	1	D	2	6X13AA	RMM34C	RSMEX
RMMRCC	RCC		0	0							

### Datafilling table REXSCHED

The routine exercise schedule (REXSCHED) table contains the SREX test scheduling information required by the REX controller.



**Basic call processing** (continued)

The datafill specific to LCM REX testing appears in the following table. Only the fields that apply directly to LCM REX appear. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

**Datafilling table REXSCHEd for RSC-S basic operation (Sheet 1 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
REXTSTID		refer to subfield	REx tests identification. Contains subfield REX_TEST_ID
	REX_TEST_ID	refer to list	<p>REx test ID. The system automatically defines REx test identifiers when you enter data in inventory tables. Examples of the REx test identifiers are as follows:</p> <ul style="list-style-type: none"> <li>• MS_REX_TEST</li> <li>• CM_REX_TEST</li> <li>• SLM_REX_TEST</li> <li>• LGC_REX_TEST</li> <li>• MSB_REX_TEST</li> <li>• LCM_REX_TEST</li> <li>• LCMCOV_REX_TEST</li> </ul>
ENABLE		Y or N	Enable REx test. Enable test schedule for specific REx identifier. The default is Y.
PERIOD		1 to 7 inclusive	Minimum number of days between consecutive REs schedules. Each REx test must run a minimum of time each week. The default is 1 to run REx every day.
<p><b>Note 1:</b> The LCMCOV_REX_TEST runs only on LCMs, XLCMs, OPMs, and RLCMs.</p> <p><b>Note 2:</b> The user must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode, skip entries that are present already.</p> <p><b>Note 3:</b> Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies entry of more data or more records. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p>			

**Basic call processing** (continued)

**Datafilling table REXSCHED for RSC-S basic operation (Sheet 2 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
PARALLEL		1 to 99	Number of specific REx tests that run parallel. Limit of REx tests that run at the same time for a node type. For LCM_REX, the maximum concurrent tests that can run is 4. For LCMCOV_REX tests, the availability of only one line test unit (LTU) in an LCM requires a maximum of 1. The default is 1.
DAYSDBL		refer to list	Days to disable REx testing. A list of days when REx testing must be disabled. Enter MON, TUE, WED, THU, FRI, SAT, SUN, ALL or NONE. Each REx test must run a minimum of one time a week. The ALL option suspends a REx test to facilitate system maintenance. The default is NONE.

**Note 1:** The LCMCOV\_REX\_TEST runs only on LCMs, XLCMs, OPMs, and RLCMs.

**Note 2:** The user must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode, skip entries that are present already.

**Note 3:** Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies entry of more data or more records. Enter the end mark (\$) in fields with multiple possible entries after the last entry.

**Datafill example for table REXSCHED**

Sample datafill for table REXSCHED appears in the following example.

**MAP display example for table REXSCHED**

Table: REXSCHED

REXTSTID	ENABLE	PERIOD	PARALLEL	DAYSDBL
MS_REX_TEST	Y	1	1	NONE
CM_REX_TEST	Y	1	1	NONE
SLM_REX_TEST	Y	1	1	NONE
LGC_REX_TEST	Y	1	1	NONE
MSB_REX_TEST	Y	1	1	NONE
LCM_REX_TEST	Y	1	4	NONE
LCMCOV_REX_TEST	Y	1	1	NONE

**Basic call processing** (continued)**Datafilling table LCASCRCN.LCASCRCN**

The local calling area screening (LCASCA) subtable maps numbering plan areas (NPA) geographically against trunk groups in the DMS-100 switch for billing purposes. Subtable LCASCRCN is one of two subtables the local calling area screening control table (LCASCRCN) controls.

Control table LCASCRCN assigns selected local calling area names to serving trunk group area codes. Each trunk group area code, along with the assigned name, represents a key in subtable LCASCRCN. You can use the command SUB LCASCRCN to access this subtable from table LCASCRCN.

Each key in subtable LCASCRCN is assigned ranges of local area codes, or NPA, assigned to that trunk group. Any NPA that the RLCM serves, must also be assigned to a trunk group, defined in table LCASCRCN. These assignments are made in subtable LCASCRCN.LCASCRCN.

The datafill specific to Basic call processing for table LCASCRCN appears in the following table. Table LCASCRCN is a subtable of table LCASCRCN. You must access table LCASCRCN through table LCASCRCN. Only the fields that apply directly to Basic call processing appear.

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

**Datafilling table LCASCRCN**

Field	Subfield or refinement	Entry	Explanation and action
FROMDIGS		000 to 999	From digits. Enter the three-digit prefix (NNX) code. This number represents a single code, or the first number in a block of consecutive local NNX codes.
TODIGS		000 to 999	To digits. Field FROMDIGS can represent the first number of a block of consecutive local NNX codes. When this event occurs, enter the last NNX code in the block.  When field FROMDIGS represents a single local NNX code, enter the NNX code entered in FROMDIGS.

**Datafill example for table LCASCRCN.LCASCRCN**

Sample datafill for table LCASCRCN.LCASCRCN appears in the following example.

## Basic call processing (continued)

### MAP display example for table LCASCRN.LCASCR

POS 904 FLA1; SUB LCASCR;POS 305;LIST 3	
FROMDIGS	TODIGS
305	305
813	813
912	912

### Datafilling table TRKGRP

Table trunk group (TRKGRP) defines data for each trunk group associated with the switching unit. Each trunk group entry in table TRKGRP contains a different CLLI for the trunk group and several fields the trunk group type (field GRPTYP) determines.

List any incoming or outgoing test trunk card, like NT2X90AC, provisioned in the RMM, in table TRKGRP as REMOTETESTDK or REMOTEVER90.

The datafill for Basic call processing for table TRKGRP appear in the following table. Only fields that apply directly to Basic call processing appear.

#### Datafilling table TRKGRP (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
GRPKEY		see subfields	Group key. This field contains the subfield CLLI. Enter the CLLI code for the trunk group assigned in table CLLI.
	CLLI	alphanumeric	Group key. This field contains the subfield CLLI. Enter the CLLI code for the trunk group assigned in table CLLI.
<p><b>Note 1:</b> The total number of trunk groups, where memory is allocated in table TRKGRP, equals the value of field SIZE in table DATASIZE for key TRKGRP.</p> <p><b>Note 2:</b> Assign one or two subgroups defined in table TRKSGRP to each trunk group in table TRKGRP.</p> <p><b>Note 3:</b> Table TRKMEM lists the location of all analog or digital trunks assigned to the trunk groups in table TRKGRP.</p>			

**Basic call processing** (continued)**Datafilling table TRKGRP (Sheet 2 of 2)**

<b>Field</b>	<b>Subfield or refinement</b>	<b>Entry</b>	<b>Explanation and action</b>
GRPINFO		GRPTYP, TRAFSNO, PADGRP, NCCLS, and CARD	Variable group data. When trunk group type is MAINT, this field contains subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, and CARD.
	GRPTYP	ITL2, TTL2, LOOPA, MAINT, or SOCKET	Group type. Enter the group type for the trunk group. For maintenance and test trunks, the range is ITL2, TTL2, LOOPA, MAINT, or SOCKET.
	TRAFSNO	0 to 127	Traffic separation number. Traffic separation number is not required for maintenance and test trunks.
	PADGRP	alphanumeric	Pad group. Enter the name of the pad group assigned to the trunk group in table PADDATA. For maintenance and test trunks, enter IAO (intra-office trunks) or enter NPDGP.
	NCCLS	NCRT	Circuit class is not present. Enter NCRT (no circuit).
	CARD	alphanumeric	Card code. Enter the product engineering code of the maintenance and test trunk.
<p><b>Note 1:</b> The total number of trunk groups, where memory is allocated in table TRKGRP, equals the value of field SIZE in table DATASIZE for key TRKGRP.</p> <p><b>Note 2:</b> Assign one or two subgroups defined in table TRKSGRP to each trunk group in table TRKGRP.</p> <p><b>Note 3:</b> Table TRKMEM lists the location of all analog or digital trunks assigned to the trunk groups in table TRKGRP.</p>			

**Datafill example for table TRKGRP**

Sample datafill for table TRKGRP appears in the following example.

## Basic call processing (continued)

### MAP display example for table TRKGRP

GRPKEY		GRPINFO				
VER90	MAINT 0	NPDGP	NCRT	2X90AB		
TTT	MAINT 0	IAO	NCRT	2X96AA		
TTU	MAINT 0	IAO	NCRT	2X47AA		
LTU	MAINT 0	IAO	NCRT	2X11AA		
RLCMVER90	VR 0	TLD	NCRT		VR	
OG_1	TO 0	TLD	NCRT	IE MIDL	7	N
OG_2	TO 0	TLD	NCRT	IE MIDL	4	N
OG_3	TO 0	TLD	NCRT	IE MIDL	4	N
OG_4	TO 0	TLD	NCRT	IE MIDL	4	N
OG_5	TO 0	TLD	NCRT	IE MIDL	4	N
OG_6	TO 0	TLD	NCRT	IE MIDL	4	N

### Datafilling table TRKSGRP

Table TRKSGRP (trunk subgroup) lists additional information for each subgroup assigned to trunk groups in table TRKGRP. Specify input data for a minimum of, or a maximum of two subgroups, for each trunk group in table TRKGRP. Do not specify date for trunk groups defined in TRKGRP as maintenance group type (MAINT).

Data is not required in the trunk subgroup table for the MAINT trunk group type.

For each REMOTETESTDK or REMOTEVER90 provisioned in the RMM of the RLCM, you must assign corresponding subgroup in table TRKSGRP. Sample datafill for table TRKSGRP appears in the following example.

**Note:** The total number of trunk groups for which memory is allocated in table TRKSGRP equals the value of field SIZE in table DATASIZE for key TRKSGRP.

**Basic call processing** (continued)

The datafill for Basic call processing for table TRKSGRP appears in the following table. Only fields that apply directly to Basic call processing appear in the table

**Datafilling table TRKSGRP (Sheet 1 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
SGRPKEY		see subfields	Subgroup key. This field contains subfields CLLI and SGRP.
	CLLI	alphanumeric	Common language location identifier. This subfield contains the code assigned in the CLLI table to the trunk group where the subgroup belongs.
	SGRP	0 or 1	Subgroup number. This subfield contains the number assigned to the trunk subgroup.
CARDCODE		alphanumeric	Card code. This field lists the maintenance and test trunk PEC.
SGRPVAR		STD, DSOTL, STDTL, C7UP, ISDN, FST, X75	Subgroup variable signaling data selector. Defines type of signaling data for trunk subgroup.
SGRPVAR	DIR	IC, OG, 2W	Variable subgroup data. Consists of subfield direction (DIR). Refinements are defined for directions of incoming (IC) outgoing (OG) or two way (2W) trunk traffic.
		OG	For outgoing trunks enter the following refinements.
	OPULSTYP	DP, DT, MF, or blank	Outgoing type of pulsing. For maintenance and test trunks, the entry is no pulsing (NP).
	OSTARTSG	DD, IM, LS, GS, or WK	Outgoing start dial signal. For maintenance and test trunks, the entry is wink (WK).
	IDGTIME	0 to 100 or blank	Interdigital timing. For maintenance and test trunks, this value is 2.
	<b>Note 1:</b> The SIZE field in table DATASIZE for the entry with field DATSKEY equal to TRKSGRP allocates memory for the number of trunk subgroups.		
	<b>Note 2:</b> The maximum number of trunk subgroups is equal to twice the number of trunk groups.		
<b>Note 3:</b> The maximum number of trunk subgroups that can be assigned is 4096.			

**Basic call processing** (continued)

**Datafilling table TRKSGRP (Sheet 2 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
	NUMSTOPS	0 to 3, or blank	Number of stop/goes. For maintenance and test trunks, this value is 0.
	CCONT	MW or NO	Coin control. For maintenance and test trunks, the entry is MW (multiwink).
	RNGBCK	IB or N	Ringback. For maintenance and test trunks, the entry is inband (IB).
	ESUPR	F, H, or N	Echo suppressor. For maintenance and test trunks, the entry is no echo suppressor, N.
	SAT	Y or N	Satellite. For maintenance and test trunks, the entry is no satellite, N.
	REMBSY	Y or N	Remote make busy. For maintenance and test trunks, the entry is feature not assigned, N.
	TRKGDTIM	16	Trunk guard timing. For maintenance and test trunks, this value is 16. The value 16 indicates 160 ms elapse time interval before the trunk returns to the idle link list after trunk disconnect).

**Note 1:** The SIZE field in table DATASIZE for the entry with field DATSKEY equal to TRKSGRP allocates memory for the number of trunk subgroups.

**Note 2:** The maximum number of trunk subgroups is equal to twice the number of trunk groups.

**Note 3:** The maximum number of trunk subgroups that can be assigned is 4096.

**Datafill example for table TRKSGRP**

Sample datafill for table TRKSGRP appears in the following example.



**Basic call processing** (continued)**MAP display example for table TRKSGRP**

SGRPVAR	SGRPKEY	CARDCODE						SGRPVAR
	VER90 0	2X90AB						
STD		OG NP	WK	0 0	NO	N F N N	17	
	TTT 0	2X96AA						
STD		OG NP	WK	0 0	NO	N F N N	17	
	TTU 0	2X47AA						
STD		OG NP	WK	0 0	NO	N F N N	17	
	LTU 0	2X11AA						
STD		OG NP	WK	0 0	NO	N F N N	17	
	RLCMVER90	2X90AB						
STD		OG NP	WK	0 0	NO	N F N N	17	
	OG_1	DS1SIG						
STD		OG DP	IM	70 0	NO	N N N N	70	

**Datafilling TRKMEM**

Table TRKMEM (trunk member) contains data for each analog or digital trunk assigned to one of the trunk groups and subgroups in tables TRKGRP and TRKSGRP. A sample datafill for table TRKMEM appears in the following example.

Include entries for each circuit supplied in the remote maintenance module (RMM):

- Do not duplicate external trunk numbers, field EXTRKNM, when you assign these RMM circuits to current CLI (LTU, MONTALK).
- The PMTYPE must be RMM for analog RLCM RMM circuits listed in table TRKMEM.

## Basic call processing (continued)

Datafill for Basic call processing for table TRKMEM appears in the following table. Only fields that apply directly to Basic call processing appear in the table.

### Datafilling table TRKMEM

Field	Subfield or refinement	Entry	Explanation and action
CLLI		alphanumeric	Common language location identifier. Enter the code assigned in table CLLI to the trunk group where the trunk is a member.
EXTRKNM		0 to 9999	External trunk number. Enter the external trunk number assigned to the trunk.
SGRP		0 to 1	Subgroup number. Enter the subgroup number where the trunk is assigned. Enter 0 for maintenance and test trunks, 1 for others.
MEMVAR		see subfields	Variable data for members. For RSC applications, this field changes according to whether the trunk is part of an interoffice trunk or a maintenance trunk. For an interoffice trunk, the subfields are PMTYPE, RCCNO, RCCCKTNO, and RCCCKTS.
	PMTYPE	RMM	Peripheral module type. Enter the PM type where the trunk is mounted.
	RMMNO	0 to 2047	RMM number. Enter the number assigned to this remote maintenance module.
	TMCKTNO	0 to 29	RMM circuit number. Enter the RMM circuit number to which the TRKGRP member is assigned.
<p><b>Note 1:</b> Memory is allocated for the total number of trunks specified in field TRKGRSIZ in table CLLI for the correct trunk groups.</p> <p><b>Note 2:</b> To increase table size with data present, change field TRKGRSIZ in table CLLI for the correct trunk groups.</p>			

### Datafill example for table TRKMEM

Sample datafill for table TRKMEM appears in the following example.

**Basic call processing** (continued)**MAP display example for table TRKMEM**

```

>Table TRKMEM;LIS;POS RSMVER90
TABLE: TRKMEM
      CLLI                EXTRKNM SGRP                MEMVAR
-----
RSMVER90                0    0                RMM  2  4
RSMVER90                1    0                MTM  2  2
MONTALK 3                2    0                RMM  2  6
LTU 3                    3    0                RMM  2  3
LTU 5                    4    0                RMM  2  5
MONTALK 5                5    0                RMM  2  8
ESADGTR 0                6    0                RMM  2 10
ESADGTR 1                7    0                RMM  2 11

```

**Datafilling table CLLIMTCE**

Table common language location identifier maintenance ( CLLIMTCE) contains the following information for each trunk group CLLI:

- abbreviated CLLI code for maintenance personnel to use
- percentage of service circuits that the user can remove before specified alarms appear
- type of test equipment at the far end
- index to test line control
- index to milliwatt data table
- signaling test runs after diagnostic test
- additional digits the user can prefix in addition to the four digits of subtable test line number.

When the user enters datafill in table CLLI, the system automatically enters table CLLIMTCE. Check table CLLIMTCE for accuracy and maintenance as required.

**Datafill example for table CLLIMTCE**

Sample datafill for table CLLIMTCE appears in the following example.

## Basic call processing (continued)

### MAP display example for table CLLIMTCE

CLLI	SCLLI	MINALM	MAJALM	CRITALM	SYNCTYPE	TSTNOIND
MWIDX	SIGTST	PRFXDIGS	DIAGDATA			
RSMVER90	RSMVER90	5	10	50	SYN	0
0	Y	N	( 2 )			

### Datafilling table ALMSCGRP

Table alarm scan group (ALMSCGRP) contains DMS-100 alarm scan circuits (alarm sensors), and the locations, and card types. If the RLCM is provisioned with an RMM shelf that contains a miscellaneous scan card (NT0X10), table ALMSCGRP must contain the RLCM.

#### Datafill example for table ALMSCGRP

Sample datafill for table ALMSCGRP appears in the following example.

#### MAP display example for table ALMSCGRP

SCGROUP	TMTYPE	TMNO	TMCKTNO	CARDCODE
0	MTM	1	1	3X82AA
1	MTM	3	1	3X82AA
2	MTM	1	7	3X84AA
3	MTM	1	10	0X10AA
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
15	RSM	1	7	0X10AA
.	.	.	.	.
.	.	.	.	.
20	RMM	0	10	0X10AA
21	RMM	0	11	0X10AA

### Datafilling table ALMSC

Table alarm scan (ALMSC) identifies the function of the assigned scan points in the alarm scan groups. If the RLCM must contain an RMM shelf with an NT0X10 card, list the scan points for the RLCM. Assign the scan points to scan groups in table ALMSC. Table SCGRP defines scan groups.

**Basic call processing** (continued)**Datafill example for table ALMSC**

Sample datafill for table ALMSC appears in the following example.

**MAP display example for table ALMSC**

FUNCTION	SCGROUP	POINT	NORMALST	REPORT	ALM	LOGIC
TSTSCAN	0	0	1	Y	NA	Y
:		:		:		
ABSRLCM	11	0	0	Y MN N	(RLCMAUD N N)	
					(RLCMABS N N)	
					(MNXFER N Y)	\$
PDCRLCM	11	1	0	Y MJ N	(RLCMAUD N N)	
					(RLCMPDC N N)	
					(MJXFER N Y)	\$
AISARLCM	11	2	0	Y MJ N	(RLCMMAJ N N)	
					(RLCMAUD N N)	
:		:		:		
MNRLCM	12	3	0	Y MN N	(RLCMAUD N N)	\$
MJRLCM	12	4	0	Y MJ N	(RLCMAUD N N)	\$
CRRLCM	12	5	0	Y CR	(RLCMAUD N N)	\$

**Datafilling table ALMSDGRP**

Table alarm signal distribution group (ALMSDGRP) contains DMS-100 alarm SD circuits (alarm drivers). Table ALMSDGRP also contains the locations and card types of DMS-100 alarm SD circuits. If the RLCM is provisioned with an RMM shelf that contains an NT2X57 card, table ALMSDGRP must contain an NT2X57 card.

**Datafill example for table ALMSDGRP**

Sample datafill for table ALMSDGRP appears in the following example.

**Basic call processing** (continued)**MAP display example for table ALMSDGRP**

SDGROUP	TMTYPE	TMNO	TMCKTNO	CARDCODE
0	MTM	1	0	3X82AA
1	MTM	3	0	3X82AA
2	MTM	1	6	3X84AA
4	MTM	1	4	2X57AA
5	MTM	1	5	2X57AA
6	MTM	1	18	2X57AA
7	MTM	1	19	2X57AA
8	MTM	6	18	2X57AA
9	MTM	6	19	2X57AA
10	MTM	9	18	2X57AA
11	MTM	9	19	2X57AA
12	RMM	0	22	2X57AA
8	RMM	0	23	2X57AA
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
22	MTM	12	18	2X57AA
23	MTM	12	19	2X57AA

**Datafilling table ALMSD**

Table alarm signal distribution (ALMSD) identifies the function of each of the assigned SD points in the SD groups. If the RLCM contains an RMM shelf with an NT2X57 card, list the SD points for the RLCM. Assign the SD points to SD groups in table ALMSD. Table SDGRP defines the SD groups.

**Datafill example for table ALMSD**

Sample datafill for table ALMSD appears in the following table.

**Basic call processing** (continued)**MAP display example for table ALMSD**

FUNCTION	SDGROUP	POINT	NORMALST	AUDIBLE	LAMPTEST
EXPILPWR	2	6	0	N	N
EXPILDMS	2	5	0	N	N
NTALMXFR	2	4	0	N	N
LN101TST	2	3	0	N	N
OAUFALL	0	0	1	N	N
.	.	.	.	.	.
.	.	.	.	.	.
.	.	.	.	.	.
LMMNV	6	6	0	Y	N
PREFLRF	0	6	0	N	N

**Datafilling table DFINV**

Table distribution frame inventory (DFINV) stores information for a maximum of 31 distribution frames at the host computer or in remote locations. Northern Telecom provides the information in table DFINV.

Include an entry in table DFINV corresponding to the RLCM for the RLCM to operate correctly. Table DFINV associates the site name for the RLCM with a different distributing frame name in field DFNAME. The user enters datafill in table DFINV to support automatic line testing (ALT).

**Datafill example for table DFINV**

Sample datafill for table DFINV appears in the following example.

**MAP display example for table DFINV**

DFNO	DFNAME	MAXZONE	SITE
0	HOST	4	HOST
1	RLCM	4	REM3

**Datafilling table SCGRP**

The scan group (SCGRP) table contains the PECs and location of scan groups that provide scan points for line features. Each miscellaneous scan card, NT0X10, provides 14 single-lead scan points.

## Basic call processing (continued)

Card NT0X10 divides into two scan groups. Each scan group contains seven scan points. The scan points are 0-6. Assign each scan point to an RMM circuit number in table ALMSC.

The total number of trunk groups, where memory is allocated in table SCGRP is equal to the value of field SIZE. The field SIZE is in table DATASIZE for key SCGRP.

The seven scan points in the scan group are available to assign to MDC, business set, or normal lines. The MDC, business set or normal lines must have the line features remote make busy (RMB) or stop hunt (SHU) which require scan points.

### Datafill example for table SCGRP

Sample datafill for table SCGRP appears in the following example.

#### MAP display example for table SCGRP

SCGRPNO	TMTYPE	TMNO	TMCKTNO	CARDCODE
0	OAU	0	22	0X10AA
1	RMM	0	10	0X10AA
2	RMM	0	11	0X10AA

### Datafilling table SDGRP

Table signal distribution group (SDGRP) contains the PECs and location of signal distributor (SD) circuits on the RMM that is assigned to line features. Each SD card provides 14 SD points subdivided into two SD groups. Assign each SD group to a trunk module circuit number.

*Note:* Assign lines at a remote location to SD points that belong to SD groups at the remote location.

### Datafill example for table SDGRP

Sample datafill for table SDGRP appears in the following example.



**Basic call processing** (continued)**MAP display example for table SDGRP**

SDGRPNO	TMTYPE	TMNO	TMCKTNO	CARDCODE
0	RSM	0	15	2X57AA
1	OAU	0	20	2X57AA
2	MTM	0	6	2X57AA
3	MTM	0	7	2X57AA
4	RMM	0	25	2X57AA

**Datafilling table TOFCNAME**

Table terminating office name (TOFCNAME) replaces table THOUGRP for BCS33 and up. Table TOFCNAME contains all terminating offices in the switch. A terminating office is a combination of area code and office code.

The common directory number (DN) system can identify a maximum of 1024 TOFCs. North American offices can identify only 100 TOFCs.

The AREACODE field identifies the area code of the location of the terminating office. Table SNPANAME or table HNPACONT defined the area code.

The OFCCODE field identifies the second part of the terminating office code (TOFC) and is a subarea of AREACODE. A number cannot be both an AREACODE and an OFCCODE. For example, if 613 is an AREACODE, 613 cannot be an OFCCODE in any AREACODE.

The user must enter datafill in table TOFCNAME after tables that define the serving numbering plan area (SNPA) and before any table that assigns directory numbers. Tables that define the SNPA can be HNPACONT, DNHEAD, and SNPANAME. Tables that assign directory numbers can be HUNTGRP, LENLINES, or IBNLINES.

**Datafill example for table TOFCNAME**

Sample datafill for table TOFCNAME appears in the following table.

**MAP display example for table TOFCNAME**

AREACODE	OFCCODE
613	621
819	622
613	722
613	222
819	221

**Basic call processing** (continued)

**Datafilling LINEATTR**

Table line attribute (LINEATTR) assigns line class codes (LCC) and billing and screening information to lines in the DMS switch. In table LINEATTR, identify all lines the RLCM supports as private, coin, or private branch exchange (PBX).

Each tuple of table LINEATTR equals one tuple in table LENLINES, which identifies the location of the line circuit. The index field of table LINEATTR matches the tuples.

**Datafill example for table LINEATTR**

Sample datafill for table LINEATTR appears in the following table.

**MAP display example for table LINEATTR**

LAXD	LCC	CHGCLSS	COST	SCRNCL	LTG	STS	PRTNM	LCANAME	LCABILL
SFC	LATANM	MDI	IXNAME	DGCLAME	FANIDIGS	ZEROMPOS	TRAFSNO	MRSA	
	RESINFO				OPTIONS				
0	1FR	NONE	NT	FR01	0	613	POTS	LCA1	N
							CTOP	20	NIL
NILSFC	NILLATA		0	NIL		NIL	00		
		N					(HOT)\$		
2	1FR	NONE	NT	NSCR	0	819	POTS	LCA1	N
							CTOP	21	NIL
NILSFC	NILLATA1		0	NIL		NIL	00		
		N					(HOT)\$		
3	1MR	NONE	NT	NSCR	0	819	POTS	LCA1	N
							CTOP	22	NIL
NILSFC	NILLATA2		0	NIL					
		N					\$		
4	CCF	NONE	LO	FR01	0	613	POTS	LCA1	N
							CTOP	23	NIL
NILSFC	NILLATA1		0	NIL					
		N					\$		

**Basic call processing** (continued)**Datafilling table LNINV**

Table line inventory (LNINV) associates the site name from table SITE to each line circuit in the RLCM. Table LNINV defines the line equipment number (LEN) of a line, indicates the software location and the hardware characteristics of the line. A tuple in table LNINV must represent each line card in the RLCM.

The subfields that identify the line card are altered so that a LEN can identify an RLCM line card. In a LEN for an LCM, the fields for the LEN are defined as follows:

- SITE
- FRAME
- UNIT
- SUBGROUP
- CIRCUIT

Note the following table interactions:

- The line assignment for coin lines occurs in table LENLINES. The LNATTIX field equals the line class code, coin first (CCF), coin dial-tone first (CDF), or coin semi-postpay (CSP), in table LINEATTR.
- POTS lines LCMLSG do not have equal tuples in keyset-type tables.
- For Meridian business sets, (MBS), the VARTYPE in table LCMINV must be NTPROP.

The datafill for Basic call processing for table LNINV. Only fields that apply directly to Basic call processing appear in the table.

**Datafilling table LNINV (Sheet 1 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
LEN		alphanumeric	Line equipment number. This field contains the: SITE, FRAME, UNIT, SUBGROUP, and CIRCUIT subfields.
	SITE	alphanumeric	Site. Enter the location of the LCM (four-character alphanumeric). This entry is not optional, and a default value is not assigned to the entry.

**Basic call processing** (continued)

Datafilling table LNINV (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	FRAME	0 to 511	LCM frame. Enter the LCM frame number, which is not a frame. The LCM frame number is a software entity that represents the group the LCM belongs to at the site.
	UNIT	0 to 1	LCM unit. Enter the number that represents the LCM unit in the group.
	SUBGROUP	0 to 19	LCM subgroup. Enter the number of subgroups in the line drawers.
	CIRCUIT	0 to 31	LCM circuit. Enter the number of circuits in the subgroups. The range is 0-31.
CARDCODE		alphanumeric	Card code. Enter the PEC of the line card or line card carrier.
PADGRP		STDLN, UNBAL, PPHON, LRLM, and NPDGP.	Pad group. Enter the name of the pad group assigned to the line circuit in the pad data table. The values can be STDLN, UNBAL, PPHON, LRLM, and NPDGP.
STATUS		HASU, WORKING, UNEQUIP, CUTOFF, and RESERVED.	Status. Enter the line inventory availability status. The values can be HASU, WORKING, UNEQUIP, CUTOFF, and RESERVED.
GND		Y or N	Ground. Where line is ground start, enter Y or enter N for loop start.
BNV		NL	Balanced network value. Enter L when line circuit is configured for a loaded network or enter NL for nonloaded network.
MNO		N	Manual override. Enter Y so that on-hook balance network test does not update field BNV in this table.  If you do not enter Y, enter N to allow off-hook balance network test to update field BNV in this table.
CARDINFO		NIL	Card information. The NIL value is the default. The values are NIL, SSLCC, or ISLCC.

**Basic call processing** (continued)**Datafill example for table LNINV**

Sample datafill for table LNINV appears in the following example.

**MAP display example for table LNINV**

LEN	CARDCODE	PADGRP	STATUS	GND	BNV	MNO	CARDINFO
REM1	00 0 0	1	2X17AB	STD LN	HASU	N	NL N NIL
REM1	00 0 0	2	2X17AB	STD LN	HASU	N	NL N NIL
REM1	00 0 0	3	2X17AB	STD LN	HASU	N	NL N NIL
REM1	00 0 0	4	2X17AB	STD LN	WORKING	N	NL N NIL
REM1	00 0 0	5	2X17AB	STD LN	HASU	N	NL N NIL
REM1	00 0 0	6	2X17AB	STD LN	RESERVED	N	NL N NIL
REM1	00 0 0	7	2X17AB	STD LN	HASU	N	NL N NIL
REM1	00 0 0	8	2X18AD	STD LN	HASU	N	NL N NIL
REM1	00 0 0	9	2X18AD	STD LN	HASU	N	NL N NIL
REM1	00 0 0	10	2X18AD	STD LN	HASU	Y	NL N NIL
REM1	00 0 5	0	2X17AB	STD LN	HASU	N	NL N NIL
REM1	00 0 5	1	2X17AB	STD LN	HASU	N	NL N NIL

**Datafilling table HUNTGRP**

Table hunt group (HUNTGRP) contains groups of subscriber lines assigned for specific MDC features to work. Enter the pilot DN for all hunt groups for the RLCM.

**CAUTION**

Use the **SERVORD** system to add and delete tuples to and from table **HUNTGRP**.

If you use the table editor to enter datafill in this table incompatible features can be assigned to the line.

**Datafill example for table HUNTGRP**

Sample datafill for table HUNTGRP appears in the following example.

**Basic call processing** (continued)**MAP display example for table HUNTGRP**

HTGRP	SNPA	DN	GRPTTYPE	GRPDATA
21	919	7820280	DNH Y N N	RCVD N
			N	N
			N	3 \$
19	919	7821111	DLH Y N N	RCVD N
			N	N
			N	1 \$

**Datafilling table LENLINES**

Table line equipment number to lines (LENLINES) associates each line circuit by LEN with the remote location and attributes of the line from table LINEATTR. A tuple in table LENLINES must represent each line card in the RLCM.

**CAUTION**

**Use the SERVORD system to add and delete tuples to and from table LENLINES.**

If you use the table editor to enter datafill in this table, incompatible features can be assigned to the line.

Table LENLINES contains the following data:

- site name assigned to remote location
- party that you assign a DN to
- ringing code assigned to a DN

*Note:* For BCS33 and up, the DN field of table LENLINES accommodates up to 15 digits.

**Basic call processing** (continued)

The datafill specific to Basic call processing for table LENLINES appears in the following table. Only fields that apply directly to Basic call processing appear in the table.

**Datafilling table LENLINES (Sheet 1 of 2)**

<b>Field</b>	<b>Subfield or refinement</b>	<b>Entry</b>	<b>Explanation and action</b>
LEN		alphanumeric	Line equipment number. This field contains the SITE, FRAME, UNIT, SHELF, and SLOT subfields.
	SITE	alphanumeric	Site. Enter the four-character alphanumeric value that represents the PM location.
	FRAME	0 to 99	Frame. Enter the number that represents the group the RLCM belongs to at the site.
	UNIT	0 to 1	Unit. Enter the number that represents the RLCM unit within the group.
	SHELF	numeric	Shelf number. Enter the number that represents the shelf number of the RLCM.
	SLOT	numeric	Slot number. Enter the number that represents the slot number of the RLCM.
PTY		R1 to R15, T1 to T15 <i>or</i> single	Party and ringing combination. When the line is assigned to a two-, four-, eight-, or ten-party line, enter the party of the DN assigned to the line.  The range is R1 through R5 and T1 through T5. If the range is assigned to a separate line, enter S, single party.
RINGCODE		0 to 7	Ring code. Enter the ring code assigned to the line.
DN		numeric	Directory number. Enter the DN assigned to the line.
SIGTYPE		DP <i>or</i> DT	Signal type. Enter the type of pulsing expected, DP (dial pulse) or DT (Digitone).

**Basic call processing** (continued)

**Datafilling table LENLINES (Sheet 2 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
LNATTIDX		0 to 1023	Line attribute index. Enter the index into the line attribute table LINEATTR.
OPTLIST		alphanumeric	Option list. Enter a list of a maximum of 20 basic options assigned to the DN. Each three-character option must be separated by a blank. Enter invalid data to display the list of available options.

**Datafill example for table LENLINES**

Sample datafill for table LENLINES appears in the following example.

**MAP display example for table LENLINES**

		LEN	PTY	RINGCODE	DN	SIGTYPE	LNATTIDX	OPTLIST
REM1	LM	0	0	0 23	S	0	6213010	
							DP	0 \$
REM1	LM	0	0	0 24	S	0	6213030	
							DP	0 \$
REM1	LM	0	0	0 26	S	0	6213050	
							DT	0 \$
REM1	LM	0	0	0 28	S	0	6213060	
							DP	0 \$
REM1	LM	0	0	0 29	S	0	6213070	
							DP	0 \$
REM1	LM	0	0	0 30	S	0	7771113	
							DT	160 \$
REM1	LM	0	0	05 10	R1	0	6213300	
							DT	200 \$
REM1	LM	0	0	05 10	T1	0	6213301	
							DT	200 \$
REM1	LM	0	0	05 10	R2	0	6213302	
							DT	200 \$



**Basic call processing** (continued)**Datafilling table LENFEAT**

Table line equipment number feature (LENFEAT) contains assignments of any special line features for each line circuit. If a line does not have features, a tuple for the line does not appear in this table.

**CAUTION**

**Use the SERVORD system to add and delete tuples to and from table LENFEAT.**

If you use the table editor to enter datafill in this table, incompatible features can be assigned to the line.

**Datafill example for table LENFEAT**

Sample datafill for table LENFEAT appears in the following example.

**MAP display example for table LENFEAT**

LEN	PTY	DF	DATA
REM1 LM 00 0 0 26 S PIC PIC			TR1 Y
REM1 LM 00 0 5 26 S PIC PIC			TR1 Y
REM1 LM 00 0 10 26 S PIC PIC			TR1 Y
REM1 LM 00 0 15 26 S PIC PIC			TR1 Y
REM1 LM 00 1 0 26 S PIC PIC			TR1 Y
REM1 LM 00 1 5 26 S PIC PIC			TR1 Y
REM1 LM 00 1 10 26 S PIC PIC			TR1 Y
REM1 LM 00 1 15 26 S PIC PIC			TR1 Y
REM1 LM 00 0 5 28 S PIC PIC			TR1 Y
REM1 LM 00 0 15 28 S PIC PIC			TR1 Y
REM1 LM 00 1 15 28 S PIC PIC			TR1 Y

## Basic call processing (continued)

### Datafilling table HUNTMEM

Table hunt group member (HUNTMEM) contains the members assigned to the hunt groups in table HUNTGRP. Enter all members assigned to RLCM line hunt groups.



#### CAUTION

Use the **SERVORD** system to add and delete tuples to and from table **HUNTMEM**.

If you use the table editor to enter datafill in this table, in incompatible features can be assigned to the line.



#### WARNING

*Use the **SERVORD** system to add and delete tuples to and from table **HUNTMEM**.*

If you use the table editor to enter datafill in this table, in incompatible features can be assigned to the line.

### Datafill example for table HUNTMEM

Sample datafill for table HUNTMEM appears in the following example.

#### MAP display example for table HUNTMEM

HTGRP	SEQNO	INSERT	HTMCDATA						
50	0	N	L	RLCM	00	02	24	N	
50	1	N			D	6211902	N		
50	2	N			D	6211903	N		
51	0	N			D	6211904	N		
51	1	N			D	6211905	N		
51	2	N			D	6211906	N		
51	3	N			D	6211907	N		
52	0	N			D	6211908	N		
52	1	N			D	6211909	N		

### Datafilling table DNROUTE

For BCS33 and up, table directory number route (DNROUTE) replaces table WRDN. Table DNROUTE contains information for DNs that can be written in the switch. The tuples DN\_SEL=FEAT, FEATURE=MEETME, and FEATURE=PC, which formerly appeared in table WRDN, do not appear in table DNROUTE.

---

## Basic call processing (continued)

---

The AREACODE and OFCCODE fields are the same as they appear in table TOFCNAME. Specify these fields in table TOFCNAME. The STNCODE field is DEFG in North America.

The DNRESULT field is the same as in table DN. Enter numbers in these categories that occur when an RLCM is provisioned.

**Note:** Table DN is read only and contains data for all assigned directory numbers and directory numbers not assigned. This data includes data for directory numbers in DNROUTE. Input is not necessary for table DN.

### Datafill example for table DNROUTE

Sample datafill for table DNROUTE appears in the following example.

#### MAP display example for table DNROUTE

AREACODE	OFCCODE	STNCODE	DNRESULT
613	621	1000	FEAT DISA IBNTST 0 N N N Y \$
613	621	1010	FEAT DISA IBNTST 0 N N N Y \$
613	621	1096	
613	621	1117	
613	621	1181	
613	621	1251	

### Datafilling table HNPACONT.HNPACODE

Subtable home numbering plan area code (HNPACONT.HNPACODE) contains the route, treatment, or table where a translation must route for the three-digit codes, 000-999. A translation must route for the three-digit codes, 000-999 in each serving number plan area (SNPA) or serving translation schemes, (STS), assigned in table HNPACONT.

You can expand each three-digit code into 10 or more digits, if required for compatibility with office equipment and other datafill.

Assign the code station ringer test, (SRT), to the NPA. The RLCM serves the NPA. If table TOFCNAME changes, change subfield NXX of the CDRRTMT field to the DN where the SRT is assigned.

### Datafill example for table HNPACONT.HNPACODE

Sample datafill for table HNPACONT.HNPACODE appears in the following example.

**Basic call processing** (continued)

**MAP display example for table HNPACONT.HNPACODE**

POSITION ON (NPA) sub HNPACODE			CDRRTMT
FROMDIGS	TODIGS		
1150	1150	STRG	24
1155	1155	OPC4	25
141	141	OPC3	22
181	181	OPC3	23
201	201	VCT	HNPI
228	228	HRTE	1
229	229	HRTE	1
303	303	FNPA	0
404	404	FNPA	0
418	418	FRTE	29
514	514	FRTD	10

**Datafilling table MTAMDRVE**

The metallic test access minibar driver (MTAMDRVE) network is a matrix of vertical and horizontal crosspoints. The matrix of vertical and horizontal crosspoints connect specified verticals to horizontal in the network.

The MTA network connects testing equipment on the horizontal crosspoints to circuits that require testing on the vertical crosspoints.

Table MTAMDRVE specifies the location and the type of the minibar driver assigned to a minibar switch. The NT3X09 driver has relays on the card and does not require an associated minibar switch.

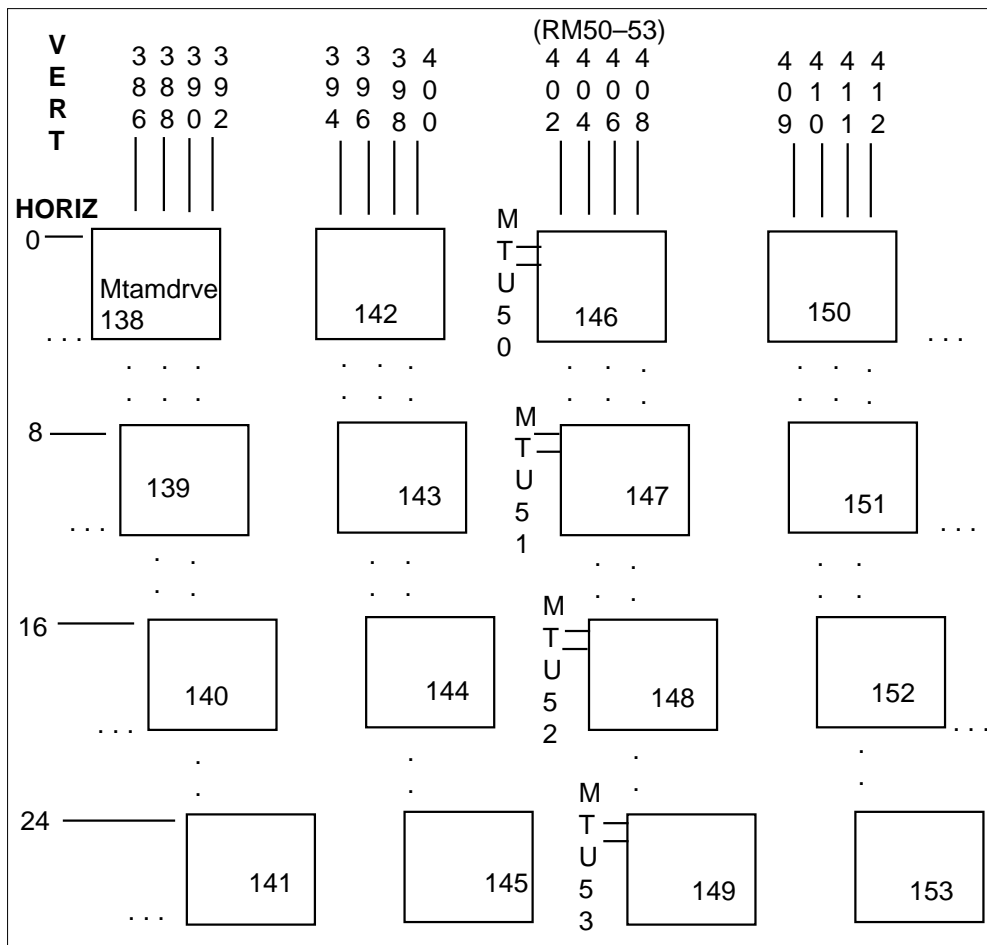
If the RLCM is provisioned with a remote MTA in its RMM, table MTAMDRVE requires an entry that identifies the NT3X09 card. The 0, 0 crosspoint in the matrix identifies each minibar driver.

**Basic call processing** (continued)

**Many remotes in an MTA**

An MTA supports up to 509 remotes. This number of remotes is supported by adding up to four horizontal rows with an offset of two verticals. This configuration (the additional rows with an offset of two verticals) works with either NT3X09AA or NT3X09BA MTAMDRVE cards. See the following figure.

**Example configuration for an MTA with many remotes**



The following MAP display example shows table MTAMDRVE datafill for the previous example. In addition, MAP display examples related to the configuration example mentioned above are provided for table MTAHORIZ and table MTAVERT.

**Basic call processing** (continued)

**Datafill example for table MTAMDRVE**

MTAMEM	VERT	HORIZ	TMTYPE	TMNO	TMCKTNO	MTACARD
146	402	0	RMM	50	18	3X09BA
147	404	8	RMM	51	18	3X09BA
148	406	16	RMM	52	18	3X09BA
149	408	24	RMM	53	18	3X09BA

The following MAP display example shows table MTAHORIZ datafill for the previous example.

**Datafill example for table MTAHORIZ**

HORIZ	HORIZGRP	HORIZAGT			MTAGRP
0	5	L	MTU	50 Y	(146 0) \$
8	5	L	MTU	51 Y	(147 0) \$
16	5	L	MTU	52 Y	(148 0) \$
24	5	L	MTU	53 Y	(149 0) \$

The following MAP display example shows table MTAVERT datafill for the previous example.

**Datafill example for table MTAVERT**

VERT	VERTCONN		
402	S	L	RM50 0 0
404	S	L	RM51 0 0
406	S	L	RM52 0 0
408	S	L	RM53 0 0

**Basic call processing** (continued)

The following table shows the datafill specific to Basic call processing for table MTAMDRVE. Only fields that apply directly to Basic call processing appear in the table.

**Datafilling table MTAMDRVE**

Field	Subfield or refinement	Entry	Explanation and action
MTAMEM		0 to 255	Metallic test access minibar driver member. Enter the MTA driver member number. This number is the key to the table.
VERT		0 to 639	MTAM driver vertical start location. Enter the vertical start location for the MTAM driver.
HORIZ		0 to 127	MTAM driver horizontal start location. Enter the horizontal start location for the MTAM driver.
TMTYPE		RMM	Trunk module type. Enter the type of trunk module where the minibar driver is mounted. In this condition, RMM is the type of module where the minibar is mounted.
TMNO		0 to 255	Trunk module number. Enter the number assigned to the remote maintenance trunk module.
TMCKTNO		0 to 27	Trunk module circuit number. Enter the circuit number of the trunk module where the minibar driver is assigned.
MTACARD		NT3X09AA or NT3X09BA	MTAM driver card. Enter the card code for the MTAM driver card. The AA version is a 4 by 8 matrix. The BA version is an 8 by 8 matrix.

**Datafill example for table MTAMDRVE**

Sample datafill for table MTAMDRVE appears in the following example.

**MAP display example for table MTAMDRVE**

MTAMEM	VERT	HORIZ	TMTYPE	TMNO	TMCKTNO	MTACARD
0	0	0	RMM	0	12	3X09AA

## Basic call processing (continued)

### Datafilling table MTAVERT

Table metallic test access vertical (MTAVERT) identifies the minibar switch verticals that connect the RLCM to the MTA matrix. The type of connection is single or multiple.

The datafill for Basic call processing for table MTAVERT appears in the following table. Only fields that apply directly to Basic call processing appear in the table.

#### Datafilling table MTAVERT

Field	Subfield or refinement	Entry	Explanation and action
VERT		0 to 639	Vertical. Enter the MTA vertical connection number.
VERTCONN		S or M	Vertical connection. Enter S or M to indicate single or multiple connections.
	SELECTOR	L or T	Selector. When selector L is used, the entry in VERTCONN is S. Enter datafill in subfields SITE, FRAME, and UNIT.
	SITE	alphanumeric	Site name. Enter the site name selected for the remote location.
	FRAME	0 to 99	Frame number. Enter the frame number.
	UNIT	0 to 1	Unit number. Enter the unit number.

#### Datafill example for table MTAVERT

Sample datafill for table MTAVERT appears in the following.

#### MAP display example for table MTAVERT

VERT	VERTCONN
0	S L RCM 01 0

### Datafilling table MTAHORIZ

Table metallic test access horizontal (MTAHORIZ) contains the assignment of horizontal agents to a horizontal and horizontal group of MTA minibars, (MTAM).



---

**Basic call processing** (continued)

---

Horizontal agents include line test units, (LTU), metallic test units, (MTU), operator verification, metallic jacks, incoming test access trunks, extended MTA, and short circuits.

Different horizontal agents can use the same horizontal but must associate with different MTAMs or horizontal groups. A maximum of 160 different horizontal agents is allowed for a given horizontal.

Group a maximum of 32 MTAMs to connect to a single horizontal agent. A horizontal agent can only be used once.

The datafill for to Basic call processing for table MTAHORIZ. Only fields that apply directly to Basic call processing appear in this table.

**Note 1:** Horizontals are not reserved for dedicated LTUs. The LTUs that are not dedicated do not have assignment restriction.

**Note 2:** The user can assign an LTU to a host switching unit. The horizontal where the user assigns an LTU is multiplied to all minibar switches and assigned to the host switching unit. The user can assign an LTU to a remote location. The horizontal where the user assigned an LTU is multiplied to all minibar switches also assigned to the remote location.

**Note 3:** The minibar switch can be at a host switching unit. When this event occurs assignment restrictions are not present for the assignment of incoming test and operator verification trunks. Each incoming test access trunk and operator verification trunk requires one horizontal.

**Note 4:** The MTA configuration is small or medium. The horizontals where the incoming test access and operator verification trunks are assigned, are multiplied to all minibar switches located at the host switching unit.

**Note 5:** The minibar switch is remote from the host switching unit. All horizontals are available for the assignment of incoming test access trunks, operator verification trunks, and for the extension of the metallic test access feature.

**Note 6:** Each incoming test access trunk, operator verification trunk, and vertical on the host minibar switch requires one horizontal. The vertical is assigned to a horizontal on the minibar switch located at the remote or host location.

**Note 7:** Restrict the number of metallic jacks in each DMS office to 256.

**Note 8:** For assignment of LTUs, incoming test access, operator verification trunks-to-trunk group, trunk subgroup, and trunk member tables, see tables CLLI, TRKGRP, TRKSGRP, and TRKMEM.

**Basic call processing** (continued)

**Note 9:** Enter an LTU or MTU in table TRKMEM before you add the LTU or MTU to table MTAHORIZ. If an LTU or MTU is deleted from table TRKMEM, mark the equivalent tuple in table MTAHORIZ as deleted. The equivalent tuple is automatically restored if the LTU or MTU is added again to table TRKMEM.

**Note 10:** The memory for this table is dynamically allocated up to a maximum of 2000 tuples.

**Datafilling table MTAHORIZ (Sheet 1 of 3)**

Field	Subfield or refinement	Entry	Explanation and action
HORIZ		0 to 127	MTA horizontal. Enter the MTA horizontal where the test equipment, horizontal agent connects.
HORIZGRP		0 to 159	MTA horizontal group. Enter the horizontal group number that identifies the horizontal and the horizontal agent as a different tuple. The group allows assignment of different test equipment on the same MTA horizontal.
HORIZAGT		see subfield	This field contains several subfields. The value of the SELECTOR used determines the subfields.
SELECTOR			Selector. Range: S, L, T, B, E, MJ, J, and LA.
		S	Enter S for a timed short circuit.
		L	Enter L for LTU or MTU assignment. Complete subfields CLLI, EXTRKNM, and ALTUSE.
		T	Enter T for incoming test access or operator verification trunk assignment. Complete subfields CLLI and EXTRKNM.
		B	Enter B for a board-to-board dedicated horizontal. Complete subfield BBTNR.
		E	Enter E to multiply a horizontal of a minibar switch from a host or remote to the vertical of a host minibar switch. Complete subfield EMTAVERT.
		MJ	Enter MJ for metallic connection to the tip and ring of the subscriber line. Complete subfields CLLI and MJACKNUM.
	Selector	J or LA	Selectors J and LA are for licensee use only.

**Basic call processing** (continued)

Datafilling table MTAHORIZ (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	CLLI	see list	Common language location identifier. Enter LTU for a line test unit or MTU for a metallic test unit. For operator verification or an incoming test access trunk, enter the alphanumeric code that represents this trunk group in table CLLI.
		LTU	Enter LTU for line test unit.
		MTU	Enter MTU for metallic test unit.
		CLLI	For operator verification of an incoming test access trunk, enter the alphanumeric code that represents this trunk group in table CLLI.
		MJACK	Enter MJACK for metallic jack.
	EXTRKNM	0 to 9999	External trunk number. Enter the external trunk number assigned in table TRKMEM to the line test unit, metallic test unit, operator verification trunk, or the incoming test access trunk.
	ALTUSE	Y or N	Automatic line test use. Enter Y to use line test equipment for automatic line testing (ALT). Otherwise enter N.
	BBTNR	0 to 7	Board-to-board testing number. Enter the number of the board-to-board set with which this horizontal associates.
	EMTAVERT	0 to 639	Extended metallic test access column. Enter the associated vertical on the MTA in the host where the horizontal connects.
	MJACKNUM	1 to 256	Metallic jack number. Where the entry in subfield CLLI is MJACK, enter the metallic jack number.
MTAGRP		MTAMEM, HORIZ, and CONTMARK	MTA group. This field contains a list of MTA drivers that multiply to the test equipment. This field is a vector of up to 32 multiples of subfields MTAMEM, HORIZ, and CONTMARK.
	MTAMEM	0 to 255	MTA minibar driver member. Enter the MTAM driver member number where the horizontal connects.

## Basic call processing (continued)

### Datafilling table MTAHORIZ (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	HORIZ	0	Horizontal. This is read-only field. This field provides information about the horizontal where the MTA drivers connect. Enter 0 to satisfy table control.
	CONTMARK	+ or \$	Continuation mark. Enter a plus sign (+) when the next record specifies additional data. Otherwise, enter dollar sign (\$) after last record.

### Datafill example for table MTAHORIZ

Sample datafill for table MTAHORIZ appears in the following example.

### MAP display example for table MTAHORIZ

HORIZ	HORIZGRP	HORIZAGT MTAGRP
0	0	L LTU 0 ( 0 0 )\$

## Translation verification tools

Basic call processing does not use translation verification tools.

## SERVORD

The Service Order System (SERVORD) provides operating companies with the best ways to perform the following operations:

- add or remove subscriber service lines
- add or delete line service options
- change the LEN or DN of lines that are present
- add to or delete features from lines

The SERVORD updates tables LENLINES, LENFEAT, HUNTGRP, HUNTMEM, and DNINV.

---

## Basic call processing (continued)

---

If a line is already entered in table LNINV, SERVORD automatically enters datafill in the correct line attribute number for the line in table LENLINES. SERVORD also enters the correct line options and feature information after SERVORD enters the option, feature, or both.



### CAUTION

**Do not use the table editor to datafill SERVORD tables.** If you do not use SERVORD commands to enter datafill in tables LENLINES, LENFEAT, HUNTGRP, HUNTMEM, and DNINV, incompatible features can be assigned to lines.

### SERVORD commands

A list and description of the service order commands appear in the following table.

#### Service order commands

Command	Description
SERVORD	Accesses the service order software
ADD	Adds a line or lines to a hunt group that is present. Adds lines that are present to a call pickup group
ADO	Adds options to lines. Adds lines that are present to a directory number hunt (DNH) group
DEL	Deletes a line or lines from a hunt group. Applicable to hunt group members except pilot
DEO	Deletes options from lines.
NEW	Establishes new service. Applicable to separate nonhunt lines and party lines
OUT	Removes service. Applicable to separate lines and the pilot of hunt group

### SERVORD limits

Basic call processing does not have SERVORD limits.

### SERVORD prompts

You can enter a service order in the prompt mode. The system prompts user for input, or nonprompt mode. Enter all input in one command string.

## Basic call processing (continued)

When entry of a service order is complete, the system displays the service order for verification purposes. The system prompts for a Y, N, or E. Enter N to abort the service order or E to edit the service order in prompt mode. When you enter Y, the system verifies the service order.

If the system detects an error, the system rejects the service order. When you enter a service order without a service order number (SONUMBER), the system accepts the service order for immediate activation.

The following table shows the SERVORD prompts to assign, delete, add, or change Basic call processing to or from a destination.

The following table shows the service order prompts that implement separate line options as appear in the example service orders.

### SERVORD prompts for Basic call processing

Prompt	Valid input	Explanation
DN	Seven digits, entered with no spaces or hyphens	Directory number with the service to establish, modify, or delete
LCC	1FR	Line class code of the service to establish, modify, or delete. The 1FR is the separate flat rate, residence, and business.
LATANAME	NILLATA The LATA name table LATANAME	The calling local access and transport area (LATA) name associated with the originator of the call.
LTG	0-255	Line treatment group number. Calculates the line attribute index when the DN and link control card (LCC) are not enough to find an correct index
LEN_OR_LTID	alphanumeric	Line equipment number or logical terminal identification. Associated with a service to establish, modify, or delete, where <ul style="list-style-type: none"> <li>• site is the site name (defaults to host)</li> <li>• ff is the frame number</li> <li>• u is the unit number</li> <li>• dd is the drawer number of the line spread group</li> <li>• cc is the line circuit number</li> </ul>
OPTION	\$	There are no line service options.

**Basic call processing** (continued)**SERVORD example to add, delete, and change Basic call processing**

The following service order examples show how to perform the following:

- establish an separate line without options
- add an option to an separate line
- delete an option from an separate line
- remove a current individual line service

**SERVORD example for Basic call processing in prompt mode**

```

> SERVORD
SO:
> NEW
SONUMBER:
> <RETURN>
DN
> 5320105
LCC:
> 1FR
LATANAME
> NILLATA
LTG: 0
> 230
LEN_ORLTID
> REM1 00 0 01 27
OPTION
> $
COMMAND AS ENTERED:
NEW NOW 90 11 13 PM 5320105 1FR NILLATA 230 REM1 00 0
01 27 $
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
> Y

```

**SERVORD example for Basic call processing in no-prompt mode**

```
> NEW $ 5320105 1FR NILLATA 230 REM1 00 0 01 27 $
```

## Basic call processing (continued)

---

### Example of adding the negate partial ground (NPGD) option in the prompt mode

```
>ADO
SONUMBER:      SR 12345 Q 95  4 13 PM
>
DN_OR_LEN:
>4817251
OPTION:
>NPGD
OPTION:
>$
```

### Example of adding the NPGD option in the no-prompt mode

```
>ADO $ 4817251 NPGD $
```

### SERVORD example of deleting an option from a separate line in prompt mode

```
>SERVORD
SO:
>DEO
SONUMBER:
><RETURN>
DN_OR_LEN
>REM1 00 0 01 27
OPTION:
>DGT
OPTION:
>$
COMMAND AS ENTERED:
DEO NOW 90 11 13 PM REM1 00 0 01 27 ( DGT ) $
ENTER Y TO CONFIRM, N TO REJECT TO E TO EDIT
>Y
```

### SERVORD example for deleting an option from a separate line in non-prompt mode

```
>DEO $ REM1 00 0 01 27 DGT $
```



---

## Basic call processing (end)

---

### SERVORD example for removing current individual line service in prompt mode

```

>SERVORD
SO:
>OUT
SONUMBER:
><RETURN>
DN:
>5320105
LEN_OR_LTID
>REM1 00 0 01 27
INTERCEPT_NAME
>BLDN
LEN:
>$
COMMAND AS ENTERED:
OUT NOW 90 11 13 PM $ 5320105 REM1 00 0 01 27 BLDN
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
>Y

```

### SERVORD example for removing an existing individual line service in non-prompt mode

```

>OUT $ 5320105 REM1 00 0 01 27 BLDN $

```

### How SERVORD affects tables LENLINES, LINEATTR, and LENFEAT

If a line is entered in table LNINV, SERVORD automatically enters the line attribute number for the line in tables LINEATTR and LENLINES. SERVORD also enters the correct line options and feature information in table LENFEAT after SERVORD enters the option or feature, or both.

## ESA Operation RLCM

---

### Functional group

Functional group: BAS00012

### Feature package

Feature package: NTX154AA, RLCM Emergency Stand ALone (ESA) Operation

### Release applicability

BCS 35 and later versions

### Requirements

The ESA Operation RLCM has the following requirements:

Functional group: BAS00003

### Description

The emergency stand-alone (ESA) operation is an optional feature available for the RLCM. The ESA module provides limited call processing ability to the RLCM when the RCLM loses communication with the host site.

The additional hardware contains the ESA processor NT6X45AF, a 4MB memory card, NT6X47AC, and the ESA clock and tone card NT6X75AA. The contents of the additional hardware are in the host interface equipment (HIE) shelf.

The clock and tone card provide clocking, tones, and an interface. The card provides an interface that allows the ESA processor to message to the host, the line concentrating module (LCM), and the remote maintenance module (RMM).

The RMM must have the ESA digitone receivers NT2X48AA/AB.

### Operation

Communication to the ESA processor occurs over the same DS-1 links that connect the RLCM to the host unit. A special ESA channel transmits messages over the DS-1 links to the host. The status of the messaging link between the host and the RLCM determines entry in ESA mode.

The system switches the ESA channel to the ESA processor from the link control card (LCC). With restored communication to the host, the ESA processor can request an exit from ESA mode.

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**ESA Operation RLCM** (continued)

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The RLCM monitors the state of the DMS-X message channel to the following:

- the host XPM
- a line trunk controller (LTC)
- line group controller (LGC)
- remote cluster controller (RCC)

The RLCM monitors the receiver framing status for the DS-1 link that carries the message channel.

If ESA is enabled, the RLCM checks for an LTC response to periodic loop-around messages. If a link fails, the LTC sends a message to the DMS CC. This message informs the CC that the link failed. The DMS CC uses this information to update a flag that indicates a mate link failure.

If the host XPM has a messaging channel to the LCM, the XPM sends a message to report the DMS-X failure. If a link fails or failure message appears when ESA is enabled, the RLCM determines if the RLCM must enter ESA.

If the RLCM link is bad and the mate unit of the LCM has a failed link, the mate is inactive. If the inter-unit communication (IUC) link fails, a request for ESA occurs. With both RLCM units active, the units must request ESA from the ESA processor.

If the IUC fails and the messaging link of one RLCM unit fails, the unit with the failed link requests ESA. The mate unit can continue to communicate with the DMS host. The LCC hardware does not connect the RLCM unit to the ESA processor.

After a timeout, the unit that requests ESA determines that the unit cannot message to the ESA processor. The unit removes the ESA request and drops activity. This event causes the mate unit to take control of calls of the affected unit. The mate unit continues to communicate with the host.

To allow for applications where brief link interruptions occur, you can enter data in the RLCM. This action delays ESA requests until a link failure condition continues for a number of seconds. If messaging to the host restores during this period, an ESA request occurs. An optional datafill message from the host sets the value of N. The value of N provides the delay in units of 500 ms from 0 to 127. A default delay is available.

The messaging link from the RLCM goes to the ESA processor and controls all calls. When the ESA processor regains the link to the host, the processor

## ESA Operation RLCM (continued)

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can surrender control. When the processor can surrender control, the processor sends a command to both units of the RLCM to request an ESA exit.

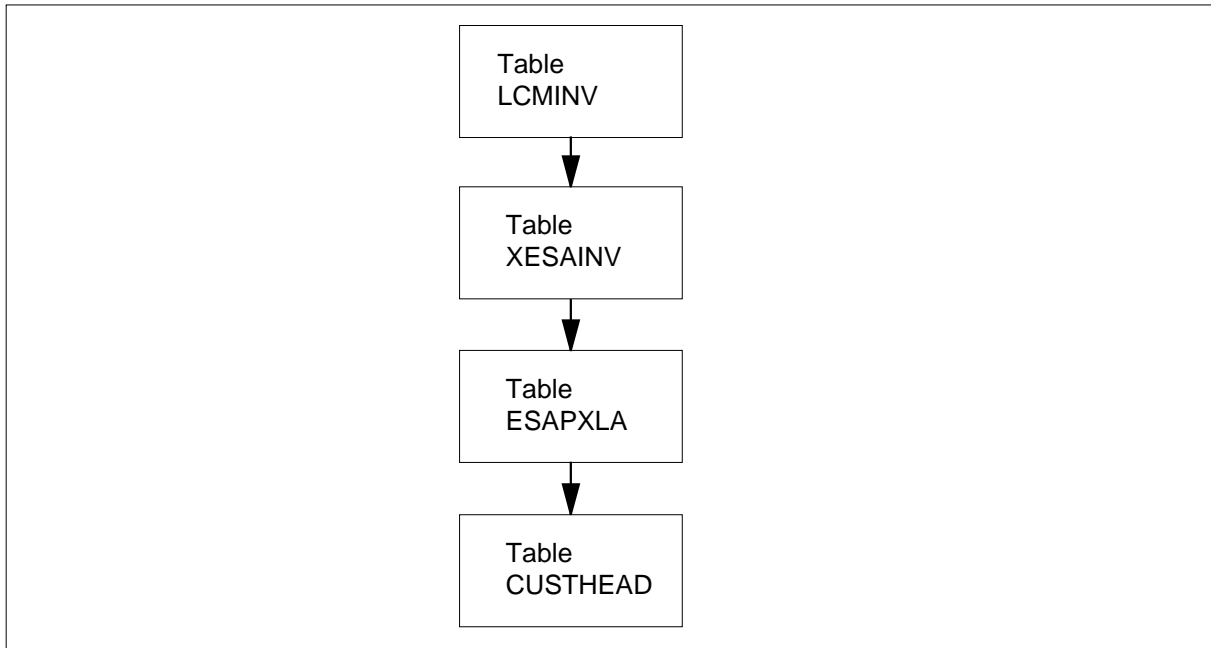
### Translations table flow

The following tables are ESA Operation RLCM translations tables:

- LCMINV
- XESAINV
- ESAPXLA
- CUSTHEAD

The ESA Operation RLCM translation process appears in the following flowchart.

#### Table flow for ESA Operation RLCM



### Limits

The following limits apply to ESA Operation RLCM:

- When the ESA module exits the ESA state, the system drops all calls in progress.
- When a party calls the party number that belongs to the party, a busy tone does not occur. The busy tone does not occur because the system does not perform automatic number identification (ANI).

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## ESA Operation RLCM (continued)

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- The NTX154AA feature package does not support party line circle digits during ESA.
- The NTX154AA supports a maximum of 64 Automatic Lines (AUL) in ESA.

### Interactions

The CC provides special support for ESA call processing. Basic maintenance, ESA entry and exit, and translation data support is available in feature group BAS00012.

### Activation/deactivation by the end user

The following procedure describes the steps to activate the ESA feature package.

#### *Activation/deactivation of ESA Operation RLCM by the end user*

- 1 Make sure the DMS switch has a software load of BCS21 or greater.
- 2 Change the ESA field in table LCMINV from N to Y to enable the ESA feature.
- 3 Enter data in table XESAINV.
- 4 When necessary, change the office parameters.
- 5 When necessary, enter data in table ESAPXLA.
- 6 The following actions at the PM MAP level activate the ESA feature for both units of the RLCM:
  - At PM level of MAP, post ESA n
  - BSY the ESA module
  - LOADPM CC ESADATA
  - RTS the ESA module
- 7 When necessary, enter data in table CUSTHEAD.

### Billing

ESA Operation RLCM does not affect billing.

### Station Message Detail Recording

ESA Operation RLCM does not affect Station Message Detail Recording.

### Datafilling office parameters

Office parameters help the operating company prepare the office-dependent data for the switching unit. The ESA Operation RLCM uses office parameters. The office parameters appear in the following table.

## ESA Operation RLCM (continued)

For additional information about office parameters, refer to *Office Parameters Reference Manual*.

The office parameters for ESA operation, the table names, and the associated forms appear in the following table.

### Office parameters that ESA Operation RLCM

Table name	Parameter name	Explanation and action
OFCENG	RLCM_ESAENTRY_BADLINK	Used to control the performance of the RLCM ESA feature when a carrier alarm is present.
OFCENG	RLCM_ESAENTRY_BADCSIDE	Used to control the performance of the RLCM ESA feature when a carrier alarm is not present.
OFCENG	RLCM_XPMESAEXIT	Used to control the performance of the RLCM ESA feature when communications to the host are restored.
OFCENG	RLCM_ESASDUPD_HOUR	Used to set the start time to download ESA static data to all RLCM/OPMs in sequence according to data in table LCMINV.
OFCENG	RLCM_ESASDUPD_BOOL	Used to determine if the system must download ESA static data. The system downloads data during the update of the static data of all RLCM/OPMs equipped with ESA.
OFCENG	RLCM_ESA_NOTIFY_TONE	Used to provide a special ESA notification tone to the customer in the ESA mode.

The office parameters support ESA applications as follows:

- RLCM\_ESAENTRY\_BADLINK: DS-1 failure timeouts
- RLCM\_ESAENTRY\_BADCSIDE: loop-around message audit failure timeouts
- RLCM\_XPMESAEXIT: ESA EXIT timeout
- RLCM\_ESASDUPD\_HOUR: RLCM ESA static data updates (each night)
- RLCM\_ESASDUPD\_BOOL: RLCM ESA static data updates (each night)
- RLCM\_ESA\_NOTIFY\_TONE: dial-tone alert

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**ESA Operation RLCM** (continued)

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The five office parameters and examples of the parameters appear in the following pages.

For additional information about office parameters, refer to *Office Parameters Reference Manual*.

**Office parameter RLCM\_ESAENTRY\_BADLINK**

The correct delay between link failure and the time the RLCM drops in the ESA mode is the office parameter. Intervals of 10 s determine the delay time. The value 6 indicates 60 s.

The default value for this parameter is 3 with a range of 3 to 100. Load the ESA data to activate a change in the parameter. Use the LOADPDM command to load the ESA data. The LOADPDM command is at the PM level of the MAP terminal. The ESA processor is posted.

**Office parameter RLCM\_ESAENTRY\_BADCSIDE**

This office parameter is the delay between the following condition. The failure of RLCM communication with the C-side peripheral and the time the RLCM drops to the ESA mode. The loop-around message mechanism detects this parameter.

Intervals of 1 min determine the delay time. The value 6 indicates 6 min.

The default value for this parameter is 15 with a range of five to 60. Load the ESA data with the LOADPDM command to activate a change in the parameter. The LOADPDM command is at the PM level of the MAP terminal. The ESA processor is posted.

**Office parameter RLCM\_XPMESAEXIT**

The office parameter is the delay between the following condition. The recovery of communication links with the C-side peripheral and exit of the RLCM out of ESA mode. Intervals of ten seconds define the delay time. The value 2 indicates 20 s.

A default value of 0 indicates that the RLCM waits for manual RTS. The value is 0 to 100. Activation occurs when you change the parameter.

**Office parameter RLCM\_ESASDUPD\_HOUR**

This office parameter is the daily start time to download ESA static data to all RLCMs in sequence. The data in table LCMINV defines the download sequence. Intervals of 1 h define the time. The value 4 indicates 4 A.M. and 14 means 2 P.M.

## ESA Operation RLCM (continued)

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The specified time value must comply with the following conditions:

- The switch has low traffic at the specified time.
- The weekly LCM routine exercise (REX) test does not occur during the specified time.
- The Remote Switching Center (RSC) nightly update does not occur during the specified time. Refer to parameter RSC\_ESASDUPD\_HOUR in table OFCENG.

The default for this parameter is four with a range of 0 to 23. Activation is immediate when you change this parameter.

*Note:* The RLCM and RCC must not be on the same static data update hour. Static data corruption can occur for the RLCM and RCC.

### Office parameter RLCM\_ESASDUPD\_BOOL

This parameter determines if an overload of ESA static data must occur. The system downloads this data during the update of the RLCM ESA static data for all RLCMs equipped with ESA. This update occurs every night.

If the value does not change from the default value of Y, the static data is downloaded at the update. The update occurs every night.

If the value changes to N, the download of the static data does not occur at the update. The update occurs every night. Activation is immediate when you change the parameter.

### Office parameter RLCM\_ESA\_NOTIFY\_TONE

This parameter controls if the subscriber hears a distinctive dial-tone burst. The burst is 0.25 s on, 0.25 s off, for 7 s. This burst alerts the subscriber that the RLCM is in ESA mode.

## ESA control of translation facilities

When the RLCM is under host control, the DMS CC completes translations. When the RLCM is in ESA mode, the ESA processor uses a subset of translation data from the DMS CC to complete translations. This subset is a snapshot of the DMS CC data required for ESA call processing. The translation data in the snapshot is static data.

The download of static data to the ESA processor from the DMS CC truncates some of the translation data. The ESA system generates logs when the downloaded data exceeds the RLCM ESA maximum.



**ESA Operation RLCM** (continued)

The RLCM does not enter ESA mode until the ESA processor contains the static data.

The download of ESA static data from the DMS CC to the ESA processor must occur. The data must transfer to the processor if any of the following tables change:

- translation data tables
- table ESAPXLA
- table CUSTHEAD

The translation data tables, entries, maximum entry types, and ESA logs for download errors appear in the following table.

**Static data for ESA translations (Sheet 1 of 2)**

Table	Type	Entries	
		Max	Download warning log
Terminal data	Terminal data	640	N/A
Automatic line	1 for each AUL	64	ESA101
Customer group	1 for each group	32	ESA102
Prefix header	1 for each customer group	32	N/A
Prefix table	1 for each ESA prefix translator		ESA103
	plain old telephone service (POTS)	16	
	customer group	8	
Extension header	1 for each customer group	32	ESA104
Extension table	1 for each MDC extension translator	256	
ABC	1 for each directory number (DN)	640	ESA105
DEFG	DEFG	1000	
Hunt header	1 for each hunt group	26	ESA106

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**ESA Operation RLCM** (continued)
 

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**Static data for ESA translations (Sheet 2 of 2)**

Table	Type	Entries	
		Max	Download warning log
Hunt member	1 for each hunt group	520	ESA107
Office parameter	1	1	N/A
Digitone receiver	1 for each Digitone receiver	30	N/A

**Translation data tables**

Translation data tables in static data are as follows:

- The terminal data table determines how to set up a call. Terminal data include the following:
  - line type
  - DP or Digitone/DP signaling
  - automatic or coin line
  - AUL index to AUL data table
  - customer group index to customer group data table
  - customer group number for a Meridian Digital Centrex (MDC) line

Each terminal has one entry and a maximum of 640 terminals.

- The AUL table contains the DN of the terminator. Each AUL has one entry. A maximum of 64 entries can be present.
- The customer table contains the prefix table number. This number allows you to dial special numbers. The customer table contains the extension prefix table number for station dialing. Each customer group has one entry. A maximum of 32 customer groups can be present.
- The prefix header table contains a maximum of 32 prefix numbers or special numbers. Each number contains a maximum of 15 digits. One entry is present for each customer group and one POTS entry. A maximum of 32 customer groups can be present.
- The prefix table contains one entry for each ESA prefix translator. A maximum of 16 entries for POTS and a maximum of eight entries for each customer group can be present.
- The extension header table contains one entry for each customer group. A maximum of 32 groups can be present.

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**ESA Operation RLCM** (continued)

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- The extension table contains one entry for each MDC extension translator. A maximum of 256 groups can be present.
- ABC table contains one entry for each each DN. A maximum of 640 entries can be present. You cannot access this table.
- The DEFG table has 1000 entries. You cannot access the DEFG table.
- The hunt header table contains one entry for each hunt group. A maximum of 26 hunt groups can be present.
- The hunt member table contains one entry for each hunt group. There can be a maximum of 520 members present.
- The office parameter table is a single entry table.
- The Digitone receiver table contains the terminal identifications (TID) of the Digitone receivers of the RMM in the remote site. These TIDs are the TIDs of the entries in table TRKMEM. These TIDs are the CLLI of ESADGTR in the RMM at the remote site. The ESA processor uses the TIDs to collect digits from Digitone phones. Each Digitone receiver has one entry, with a maximum of 30 entries.

**Note:** The normal state of digitone receivers under CC control is INB (Installation Busy). Installation Busy prevents CC access when the RMM is InSv.

**Downloading the ESA processor**

Use the following methods to download translation data to the ESA processor:

- The LOADPM CC ESADATA command downloads data to the ESA processor.
- The RTS command downloads data automatically to the ESA processor if the processor cannot use available data to perform call processing.
- The RLCM\_ESADUPD\_HOUR office parameter can specify that the system can load data at regular intervals during daily updates of the ESA processor.

## ESA Operation RLCM (continued)

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### Datafill sequence

The tables that require datafill to implement ESA Operation RLCM appear in the following table. The tables appear in the correct entry order.

#### Datafill tables required for ESA Operation RLCM

Table	Purpose of table
OFCENG	Office Engineering. This table contains data on engineering parameters for the office. Refer to How to enter office parameters for how ESA Operation RLCM affects office parameters.
LCMINV	Line Concentrating Module Inventory. The data assignments for each bay associated with a line concentrating module (LCM) appear in table LCMINV.
XESAINV	Emergency Stand-alone Inventory. The XASAINV table identifies ESA ability for the peripherals. Table LCMINV must indicate that ESA is available. Enter the correct data in table XESAINV to add the ESA peripheral to the DMS inventory.
ESAPXLA	Emergency Stand-Alone Prefix Translation. The ESAPXLA table supports RSC-S line-to-trunk, trunk-to-trunk, and trunk-to-line call processing during ESA. The table contains ESAPXLA special prefix translation data for POTS and IBN customers.
CUSTHEAD	Customer Group Head. The names assigned to the blocks of data in table IBNXLA appear in table CUSTHEAD. The blocks of data in table IBNXLA store data for digit translation.

### Datafilling table LCMINV

The data assignment for each bay associated with the RLCM appears in table LCMINV. The boolean field ESA in table LCMINV must indicate if ESA is available. Enter Y if the RLCM has the ESA option. Enter N if the RLCM does not have the ESA option.

The datafill for ESA Operation RLCM for table LCMINV appears in the following table. The fields that appear apply directly to ESA Operation RLCM.

**ESA Operation RLCM** (continued)

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

**Datafilling table LCMINV**

Field	Subfield or refinement	Entry	Explanation and action
LCMINFO	ESA	Y or N	Boolean Y or N. Use to turn emergency stand-alone on or off.

**Datafill example for table LCMINV**

There is only one required entry to enter data for emergency stand-alone. This entry is the boolean for ESA in field LCMTYPE.

Sample datafill for table LCMINV appears in the following example.

**MAP example for table LCMINV**

LCMNM	FRTYPE	SHPOS	FLOOR	ROW	FRPOS	EQPEC	LOAD	CSPMNO	LCMTYPE
BICTST	ADNUM	MEMSIZE							
TRLC	40 0	RLCM	4 1	D	4	6X04AA	XLCM031G	LTC	1
	N	29 256K	256K						
		LCM Y	S 48V	RLCM	(0) (2) (3) (4) (5)	\$ Y Y N	6X50AA		
TOPM	00 0	RLCM	1 1	A	1	6X04AA	LCM01D	RCC	0
	N	30 64K	64K						
		LCM Y	S 48V	RLCM	(16) (18) (17) (19)	* Y Y N	6X50AA		

**Datafilling table XESAINV**

Datafill in table XESAINV updates the DMS-100 inventory for all peripherals with ESA ability.

Table LCMINV must indicate if ESA is available. The ESA is an optional part of the RLCM package. Enter the correct data in table XESAINV to add ESA to the inventory of the DMS office.

The data in this table contains information on the default load and the circuit location data. The system does not check the circuit location data in table XESAINV against the data in table LCMINV.

The datafill for ESA Operation RLCM for table XESAINV appears in the following table. The fields that appear apply directly to ESA Operation

**ESA Operation RLCM** (continued)

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

**Datafilling table XESAINV (Sheet 1 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
ESANAME		refer to subfields	Emergency stand-alone name. The subfields ESASITE, ESAPMTYPE, and ESANO. comprise this field. See subfields for descriptions.
	ESASITE	alphanumeric	Emergency stand-alone site. Enter the site name that appears in table SITE.
	ESAPMTYPE	ESA	Emergency stand-alone peripheral module type. Enter ESA to specify the type of peripheral module (PM).
	ESANO	0 to 255	Emergency stand-alone number. Enter the number assigned to this PM.
Enter the location of the this PM in fields FRNO, SHPOS, FLOOR, ROW, and FRPOS.			
LOAD		alphanumeric	Load. Enter the loadfile used to load the ESA unit.
EXECTAB		refer to subfields	Executive table. Contains subfields TRMTYPE and EXEC. The terminal type and the associated execs are entered together.
	TRMTYPE	alphanumeric	Terminal type. Enter the type of terminal models to use. Enter ESALINES for normal lines, KSET for EBS terminals, or RMM_TERM for maintenance trunks.
	EXEC	alphanumeric	Executive Programs. Enter the execs associated with the terminal type (ESAEX, KSETEX, and RSMEX).
CSPM		refer to subfields	C-side PM. Contains subfields HOSTLCMT and HOSTLCMN
	HOSTLCMT	LCM	Host lcm type. Enter the remote peripheral module type where you add the ESA.

**ESA Operation RLCM** (continued)**Datafilling table XESAINV (Sheet 2 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
CSPM (continued)	HOSTLCMN	0 to 255	Host line concentrating module number. Enter the number assigned to this LCM.
PEC6X45		alphanumeric	6X45 equipment PEC. The processor complex of each XPM unit contains a minimum of one NT6X45 cards. Enter the PEC that corresponds to the NT6X45 with the minimum firmware capabilities.

**Datafill example for table XESAINV**

The sample datafill for table XESAINV appears in the following example.

**MAP example for table XESAINV**

```

      ESANAME  FRTYPE  FRNO  SHPOS  FLOOR  ROW  FRPOS  LOAD
                                EXECTAB
CSPM      PEC6X45
-----
REM1  ESA 0  RLCM      0   38     1   A   0   ESA35CR1
                                (RMM_TERM  RSMEX)   (ESALINES  ESAEX)$
LCM 0    6X45AF

```

**Datafilling table ESAPXLA**

Table emergency stand-alone prefix translation (ESAPXLA), contains special prefix translation data used for POTS and MDC customer group data assignments.

The normal operation of the RLCM under DMS CC control does not use this table. If there is lost host communication, the prefix translations use this table. If the RLCM enters the ESA mode, the prefix translations use this table.

There are two parts of table ESAPXLA used. When the RLCM enters ESA mode, the RLCM uses the following two parts of table ESAPXLA:

- the prefix translation key (PXLKEY)
- the translation result (RESULT)

## ESA Operation RLCM (continued)

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The PXLKEY field defines a set of prefix digits on an RLCM for all POTS lines. The PXLKEY field defines a set of prefix digits on an RLCM for an MDC customer group. The RESULT subfield specifies the action to take when a POTS customer group member of the RLCM dials the prefix digits.

One of the subfields of PXLKEY is the translator name (XLNAME). The system can perform prefix translation when you dial the prefix digits from a POTS line on the RLCM. Enter ESAPOTS in subfield XLNAME.

The system can perform the prefix translation when an MDC customer group dials these digits. Enter an alphanumeric name of a maximum of eight characters in subfield XLNAME. This same name must associate with a specified MDC customer group in table CUSTHEAD.

### Translation actions

There are six different types of action that the translation can take:

- line (L)
- treatment (T)
- hunt group (H)
- standard route (R)
- directed route (D)
- access code (A)

When the subscriber dials the prefix digits, the translations occur as follows:

- The system chooses the L option to make a connection to another line on the remote. Enter information that identifies the line to which the system must make the connection.
- The system chooses the T option that provides a reorder tone or that performs a strip and translate. The system can provide a strip and translate with or without a second dial tone. Enter the desired type of treatment.
- The system chooses the H option to route the call to a hunt group. Enter the hunt group to which the system routes information in table HUNTGRP.
- The system chooses the R option to make a connection to a trunk with standard routing. The system enters information about the route, the number of digits to collect, and the ambiguity of the code.



**ESA Operation RLCM** (continued)

- The system chooses the D option to make a connection to a trunk with directed routing. The system enters information about the route, the number of digits to collect and second dial tone.
- The system chooses the A option to translate the digits again. The system enters a new prefix translator name. The system determines the dial tone.

The name ESATRMT is a reserved prefix translator name. If subfield XLANAME is ESATRMT, the PREFIX field must contain an N. The selector in the RESULT field can be L, H, T, or R. Selectors A and D are not valid.

The datafill for ESA Operation RLCM for table ESAPXLA appears in the following table. The fields that appear apply directly to ESA Operation RLCM.

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

**Datafilling table ESAPXLA (Sheet 1 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
PXLAKY		refer to subfields	Prefix translator key. This key identifies a set of prefix digits on a specified site for a specific set of customers. The key comprises the following subfields: XLANAME, NODE, and PMTYPE.
	XLANAME	alphanumeric to a maximum of 8 characters	Prefix translator name. Enter ESAPOTS if the system must perform this translation for any POTS line on the remote.  If the system must perform this translation for a specific MDC customer group, enter any name to a maximum of eight characters. Relate this name to an associated customer group in table CUSTHEAD.
PXLAKY (continued)	NODE	see subfields	Node. This subfield specifies the RLCM node associated with the translator that XLANAME identifies. This field contains subfields PMTYPE, SITE, FRAME, LCMNO, and MODULE.
	PMTYPE	LCM	Peripheral module type. This subfield identifies the peripheral node as RLCM.  If this subfield specifies LCM, you must enter data in subfield LCMNO.

**ESA Operation RLCM** (continued)

**Datafilling table ESAPXLA (Sheet 2 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
	LCMNO	refer to subfields	LCM Number. LCMNO contains subfields SITE, FRAME, and UNIT.
	SITE	alphanumeric	Site. Enter the site name assigned to the RLCM location.
	FRAME	0 to 511	Frame. Enter the frame number of the RLCM at the site specified in subfield SITE.
	UNIT	0 or 1	LCM number. This subfield specifies the RLCM to which this translator applies.
	PREFIX	numeric to a maximum of 15 digits	Prefix digits. Enter the one to 15 digit prefix associated with the translation.
RESULT		refer to subfields	Translation result. This field contains subfield SEL.

The subfields L, T, H R, D, and A of subfield SEL appear in the following table. This table describes the actions to take for each subfield.

**Subfields with SEL of L (Sheet 1 of 2)**

Subfield	Entry	Explanation and action
LEN	alphanumeric	Line equipment number. This subfield defines the line on which the call must end. The subfield contains subfields SITE, FRAME, MODULE, LSG, and CIRCUIT.
SITE	alphanumeric	Site. Enter the name assigned to the site of the termination line. The remote operates in ESA. Communication with the host cannot occur. This site must match the site specified in the NODE.
FRAME	0 to 511	Frame. Enter the frame number at the site that contains the line card for the termination line.  If PMTYPE is LCM, this frame number must match the frame number specified in subfield LCMNO. The ESA in an RLCM only can support communications in the same RLCM.  If subfield PMTYPE is RCC, the ESA supports communication for all LCMs attached to the RCC.
UNIT	0 or 1	Unit. Enter the module number of the LCM in this RLCM frame of the assigned line.

**ESA Operation RLCM** (continued)**Subfields with SEL of L (Sheet 2 of 2)**

Subfield	Entry	Explanation and action
LSG	0 to 19	Line subgroup. Enter the number of the line subgroup of the LCM or RLCM unit of the assigned line card for that line.
CIRCUIT	0 to 31	Line card circuit number. Enter the line card circuit number of the line subgroup of the assigned line card.
AMBIG	Y or N	Ambiguous.  If the prefix digits are different, enter N. If the prefix digits are the same as the first digits of another number, enter Y.  For example, digits 123 are ambiguous if another acceptable number is 12356.  After the prefix digits are dialed, the switching process begins if you enter N. If you enter Y, the remote waits for additional digits. If you do not enter digits in a specified time, the switching process begins.
RNGCD	0 to 7	Ring code. Enter the code for the type of ringing associated with the line specified in the subfield LEN field.

The following table describes the subfield T of field SELECTOR.

**Subfields with SEL of T**

Subfield	Entry	Explanation and action
TRMT	REORDER, SRPXLA, or SRPDXLA	Treatment. Enter the type of treatment to apply when these prefix digits are dialed. REORDER specifies the reorder tone, and SRPXLA specifies strip and translate. SRPDXLA specifies strip, second dial tone, and translate.

The following table describes the subfield H of field SELECTOR.

**Subfields with SEL of H (Sheet 1 of 2)**

Subfield	Entry	Explanation and action
HTGRP	0 to 32767	Hunt group number. Enter the number associated with the hunt group. Table HUNTGRP makes the association between this number and the hunt group.

**ESA Operation RLCM** (continued)

**Subfields with SEL of H (Sheet 2 of 2)**

Subfield	Entry	Explanation and action
SEQNO	0 to 255	Sequence number. Enter the number associated with one member of the hunt group. The call attempts to connect with the hunt group member first. Table HUNTMEM specifies the association between the number and the hunt group member.
AMBIG	Y or N	<p>Ambiguous.</p> <p>If the prefix digits are different, enter N. Enter Y if the prefix digits are the same as the first digits of another number.</p> <p>For example, digits 123 are ambiguous if another acceptable number is 12356.</p> <p>After you dial the prefix digits, the switching process begins if you enter N. If you enter Y, the remote waits for additional digits. If you do not enter digits in a given time period, the switching process begins.</p>

The following table describes the subfield R of field SELECTOR.

**Subfields with SEL of R**

Subfield	Entry	Explanation and action
RR	0 to 255	Route reference index. Specify the index of the route that ESARTE describes to which translation must proceed.
NUMDIG	0 to 15	Collect digits. Specify the number of digits to collect before outpulsing.
AMBIG	Y or N	<p>Ambiguous.</p> <p>If the prefix digits are different, enter N. If the prefix digits are the same as the first digits of another number, enter Y.</p> <p>For example, digits 123 are ambiguous if another acceptable number is 12356.</p> <p>After you dial the prefix digits, the switching process begins if you enter N. If you enter Y, the remote waits for additional digits. If you do not enter digits in a given time, the switching process begins.</p>

**ESA Operation RLCM** (continued)

The following table describes subfield D of field SELECTOR.

**Subfields with SEL of D**

Subfield	Entry	Explanation and action
RR	0 to 255	Route reference index. Specify the index of the route to which translation must proceed. The ESARTE describes the route.
NUMDIG	0 to 15	Collect digits. Specify the number of digits to collect before outpulsing occurs.
DIALTONE	Y or N	Dial tone. Indicates if a second dial tone must occur after the prefix digits are stripped.

The following table describes the subfield A of field SELECTOR.

**Subfields with SEL of A**

Subfield	Entry	Explanation and action
XLANAME	alphanumeric up to 8 characters	Prefix translator name. A name of up to eight characters that identifies the entries associated with another ESA prefix translator. The name permits access to a new set of prefix translators. A table must already be associated with this XLANAME.
DIALTONE	Y or N	Dial tone. Indicates when to give second dial tone after the prefix digits are stripped.

**Datafill example for table ESAPXLA**

Sample datafill for table ESPXLA appears in the following example.

**MAP display example for table ESAPXLA**

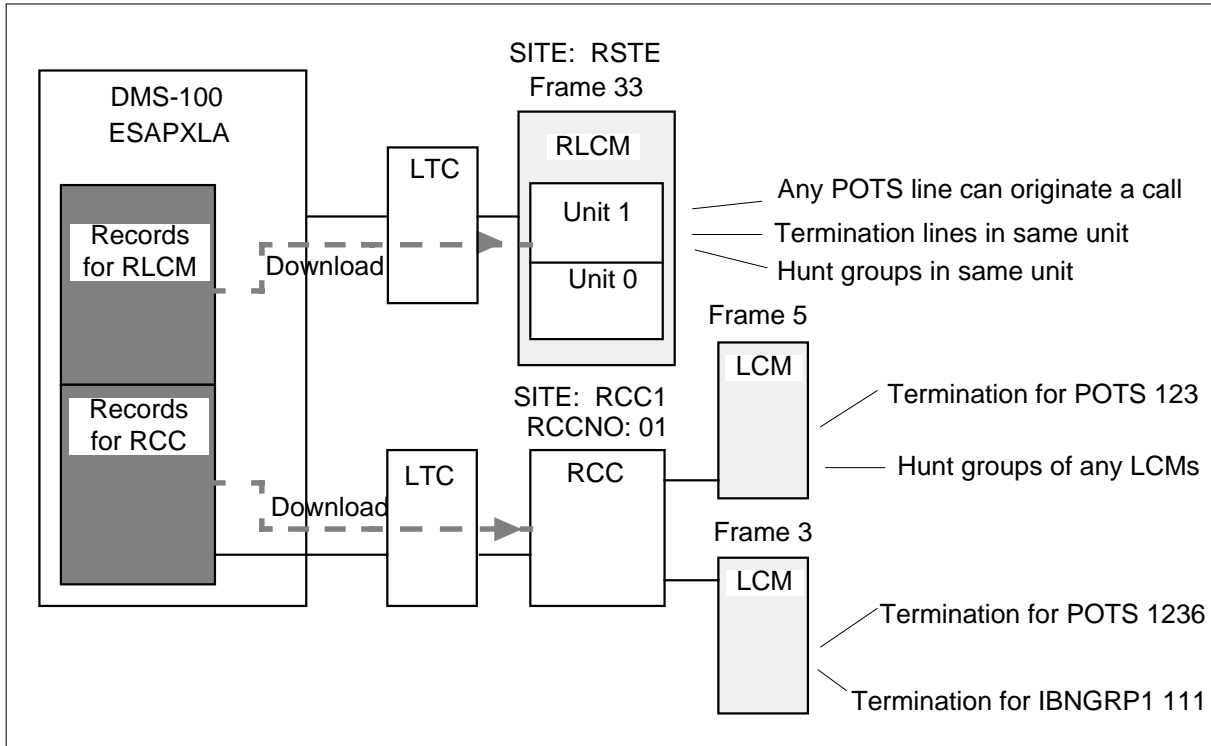
PXLAKKEY										RESULT		
ESAPOTS	RCC	REM1	0	411	L	REM1	00	0	00	02	Y	1
IBN1	RCC	REM1	0	6					T	SRP	XLA	
IBN1	RCC	REM1	0	9					T	SRP	DXLA	
ESATEST	RCC	REM1	0	611	L	REM1	02	2	00	01	N	1

There are two remotes off this DMS-100 host office. The two remotes are an RLCM and an RCC. Each record in table ESAPXLA applies to one of these remotes. The NODE field specifies the remote to which the translator in this record applies.

**ESA Operation RLCM** (continued)

Enter the data for table ESAPXLA in the DMS-100 host. The DMS-100 host downloads the data to the remote that the NODE field specifies. The RLCM\_ESASDUPD\_HOUR and RLCM\_ESASDUPD\_BOOL parameters determine the download of data.

**DMS-100 office data input example**



**Prefix translations for the RLCM using selectors L, T, and H during ESA**

The above figure is an example of a standard remote configuration. The following figure is an example of standard table ESAPXLA datafill. Prefix translation for different call sources, in relation to the two figures, are as follows:

- A POTS user that connects to frame 33, LCM unit 0 on site RSTE can dial 911. This process creates a connection to hunt group number 3111. The connection starts with member number 001.
- A POTS user that connects to frame 33, LCM unit 0 on site RSTE dials 123 and the RLCM waits for additional digits. If the RLCM does not receive a digit in the allotted time period, the line connects to circuit 12, LSG 11. Circuit 12, LSG 11 is on the same RLCM unit.
- A POTS user that connects to frame 33, LCM unit 0 on site RSTE dials 123 and the RLCM waits for additional digits. If the user dials 6 in the allotted

**ESA Operation RLCM (continued)**

time period, the line connects in circuit 09, LSG 13. Circuit 09, LSG 13 is on the same RLCM unit.

- If a POTS user that connects to frame 33, LCM unit 0 on site RSTE dials 6, and the user receives another dial tone. The system translates additional digits.

**Prefix translation example for selectors L, T, and H**

C O M M A N D	PXLAKY					RESULT						
	X L N A M E	NODE			P R E F I X	U N I T	1 - SEL					
		PMT Y P E					L					
		L C M	L C M N O				L E N			A M B I G	R N G C D	
			S I T E	F R A M E			M O D U L E	S I T E	F R A M E			M O D U L E
			S I T E	F R A M E			M O D U L E	T	T R M T			
R C C	S I T E	R C C N O		H	H T G R P	S E Q N O	2	2-AMBIG				
INP	ESAPOTS	LCM	RSTE 33 0	911	H	3111 001 N						
	ESAPOTS	LCM	RSTE 33 0	123	L	RSTE 33 0 11 12 Y 4						
	ESAPOTS	LCM	RSTE 33 0	1236	L	RSTE 33 0 13 09 N 2						
	ESAPOTS	LCM	RSTE 33 0	6	T	SRPDXLA						
	ESAPOTS	RCC	RCCI 01	911	H	3245 001 N						
	ESAPOTS	RCC	RCCI 01	123	L	RCC1 05 0 19 31 Y 1						
	ESAPOTS	RCC	RCCI 01	1236	L	RCC1 03 0 02 03 N 7						
	IBNGRP1	RCC	RCCI 01	111	L	RCC1 03 0 01 12 N 3						
QUI	IBNGRP2	RCC	RCCI 01	111	T	REORDER						

**Prefix translations for an RCC with P-side trunking that uses selectors R, D, and A during ESA.**

Prefix translation for an RCC with P-side trunking during ESA depends on the source and type of user.

The above DMS-100 host office is an example of standard remote configuration. The following figure is an example of standard table

**ESA Operation RLCM** (continued)

ESAPXLA datafill. Prefix translation for selectors R, D, and A call sources follows:

- If any POTS user connected to an LCM on RCC1 at site REM3 dials 366, a trunk connection occurs. The connection occurs through a standard route referenced by an index of 4 in table ESARTE. There are seven additional digits collected before outpulsing.
- A POTS user that connects to an LCM on RCC1 at site REM3 can dial 9. This process creates a connection to a trunk that table ESARTE references by an index of 10 in. A dial tone activates, and the ESA CC waits for eight additional digits.
- The third example is a special condition that requires a special treatment. This is the default treatment.
- If a member of ESAIBN that connects to any LCM on RCC 1 at site REM3 dials 6, the caller receives another dial tone. The ESAPOTS prefix translator translates additional digits.

An example of a standard table ESAPXLA datafill, prefix translation for selectors R, D, and A call sources appears in the following figure.

**Prefix translation example for selectors R, D, and A**

C O M M A N D	X L N A M E	PXLKEY					RESULT			
		NODE					1	1 - SEL		
		PMT YPE					R	RR	NUM DIG	AMBIG
			LCM	LCMO						
		SITE		F R A M E	M O D U L E	D	RR	NUM DIG	DIALTONE	
RCC	SITE									RCC NO
INP	ESAPOTS	RCC	REM3	01	0	366	R	04	7	N
	ESAPOTS	RCC	REM3	01	0	9	D	10	8	Y
	ESATRMT	RCC	REM3	01	0	N	R	10	7	N
QUI	ESAIBN	RCC	REM3	01	0	6	A	ESAPOTS Y		

The R, D, and A selectors do not apply to an RLCM. These selectors require standard trunk routes defined in table ESARTE.



**ESA Operation RLCM** (continued)**Datafilling table CUSTHEAD**

Table customer header (CUSTHEAD) links a customer group to the prefix translation table name identified in table ESAPXLA.

For MDC lines, information in the ESAPXLA prefix tables must link to a customer group. The option ESAPXLA specifies the prefix translator name associated with the customer group.

Enter the OPTION and XLANAME fields of table CUSTHEAD with ESA. If OPTION does not have the ESAPXLA option set, the system does not provide a prefix translation for the customer group.

The datafill for ESA Operation RLCM for table CUSTHEAD appears in the following table. The table includes fields that apply directly to ESA Operation RLCM.

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

The following variable entries are available for the OPTION and XLANAME fields in table CUSTHEAD.

**Datafilling table CUSTHEAD**

Field	Entry	Explanation and action
OPTIONS	ESAPXLA	OPTION. Enter option ESAPXLA.
XLANAME	alphanumeric to a maximum of eight characters	Prefix translator name. Enter the one to eight characters assigned to the prefix translator in table ESAPXLA.

**Note:** You must enter data in table ESAPXLA before table CUSTHEAD.

**Datafill example for table CUSTHEAD**

Sample datafill for table CUSTHEAD appears in the following example.

## ESA Operation RLCM (end)

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### MAP example for table CUSTHEAD

CUSTNAME	CUSTXLA	DGCOLNM	IDIGCOL	OPTIONS
POTSDATA	POTSXLA	POTS	NIL	( VACTRMT 0 ) ( EXTNCOS 0 )\$
COMIBN2	CXN2	IBN2	NIL	(VACTRMT 0) (EXTNCOS 4) (SUPERCNF) (MHOLD 10 AUDIO1) (CPR Y AUDIO1 3) (ESAPXLA ESAIBN) \$

### Tools for verifying translations

The ESA Operation RLCM does not use translation verification tools.

### SERVORD

The ESA Operation RLCM does not use SERVORD.

## **HSTP0 DMS ADSL Capability**

---

### **Ordering codes**

Functional group ordering code: HSTP0002

Functionality ordering code: Not Applicable

### **Release applicability**

NA008/XPM81 and up

HSTP0 DMS ADSL Capability was introduced in CCM07.

### **Prerequisites**

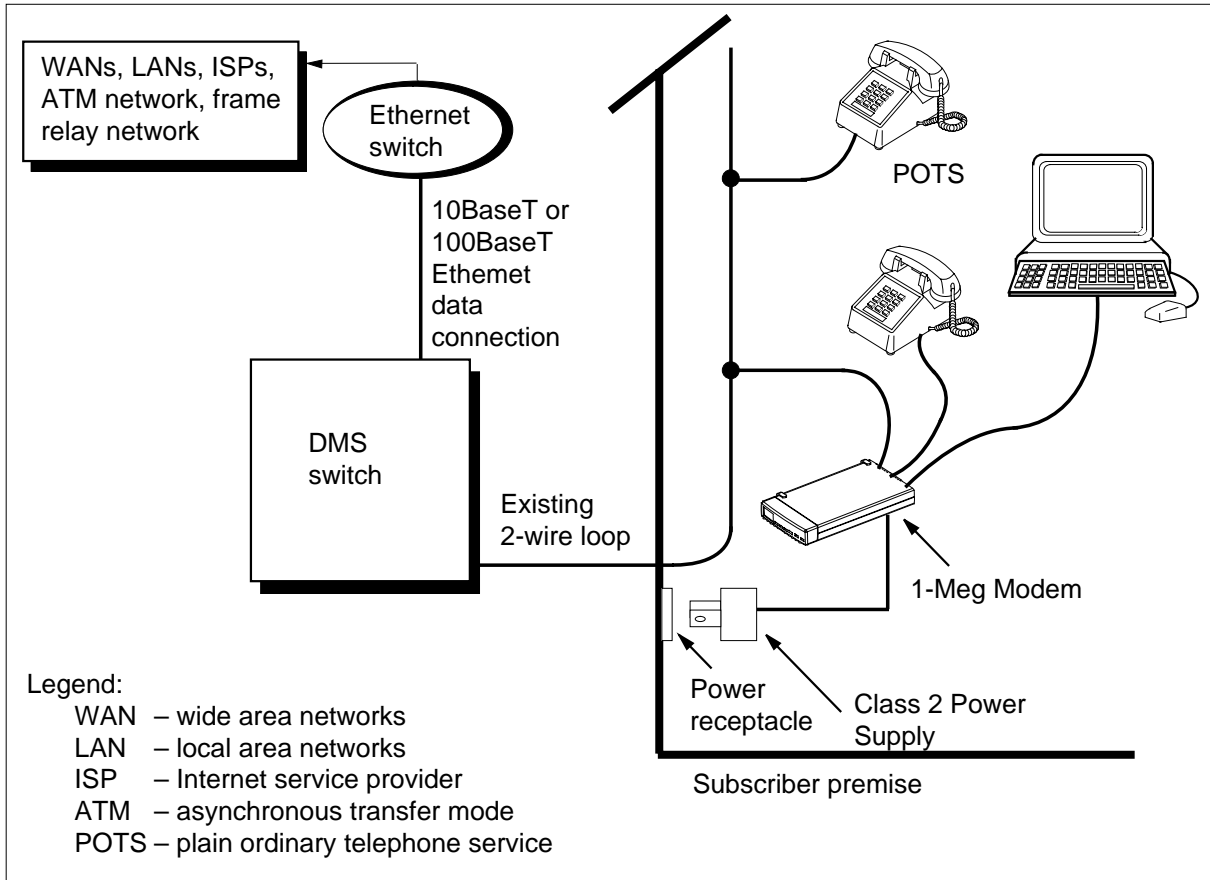
HSTP0 DMS ADSL Capability has no prerequisites.

### **Description**

HSTP0 DMS ADSL Capability provides the software to allow an line concentrating module (LCM) located at a remote site to provision and maintain 1-Meg Modem Service hardware. The following figure illustrates the 1-Meg Modem Service.

## HSTP0 DMS ADSL Capability (continued)

### 1-Meg Modem Service network



## Operation

Before to this enhancement, LCM subscribers were limited to analog modem speed rates of 56 kbit/s. With analog modems, the subscriber cannot use POTS and data services at the same time. Additionally, data calls typically have longer holding times that reduce the operating company's traffic call hundredth seconds (CCS) values. HSTP0 DMS ADSL Capability addresses these limitations by:

- supports simultaneous use of data and all voice services
- increases data transmission rates
  - up to 1280 kbit/s downstream
  - up to 320 kbit/s upstream
- routing data traffic away from the DMS-100, to reduce the impact on the office's CCS values.

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## HSTP0 DMS ADSL Capability (continued)

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### Components

The 1-Meg Modem Service includes the following components:

- The 1-Meg Modem (1-Meg Modem) is customer-premise equipment (CPE) that connects the telephone line, extension telephone, and personal computer (PC). To the subscriber, the modem installs like a regular voice band modem, except the modem uses a 10BaseT Ethernet connection to the computer. Voice and data circuits are kept separate on the loop. This allows simultaneous voice and data traffic with no impact to other telephony features.
- An xDSL line card (xLC) replaces the subscriber's line card in an existing line concentrating module (LCM) drawer. The card provides full voice service in parallel with high-speed data communication with the 1-Meg Modem.
- A data-enhanced bus interface card (DBIC) replaces the existing bus interface card (BIC) in the existing LCM drawer. The card provides a concentrating function for the voice and data connections within a single LCM drawer. The card also separates the voice and data traffic for routing to the appropriate networks.
- The xDSL Element Management System (xEMS) provides operations, administration, maintenance, and provisioning (OAM&P) functions from a Hewlett-Packard (HP) or Sun workstation. Based on HP OpenView, the xEMS is a graphical user interface (GUI) that uses icons and pull-down menus.

The DBIC and xLCs are backwards compatible with the current bus interface (BIC) and line card (LC) architecture. You can add either component without affecting existing subscriber features or services. The LCM handles all 1-Meg Modem Service voice traffic like existing plain old telephone service (POTS) calls.

### Human machine interface (HMI)

This feature introduces a new command interpreter (CI) command: QXNET. Enter the QXNET command to query the engineering rules validation routines and format the output.

### Translations table flow

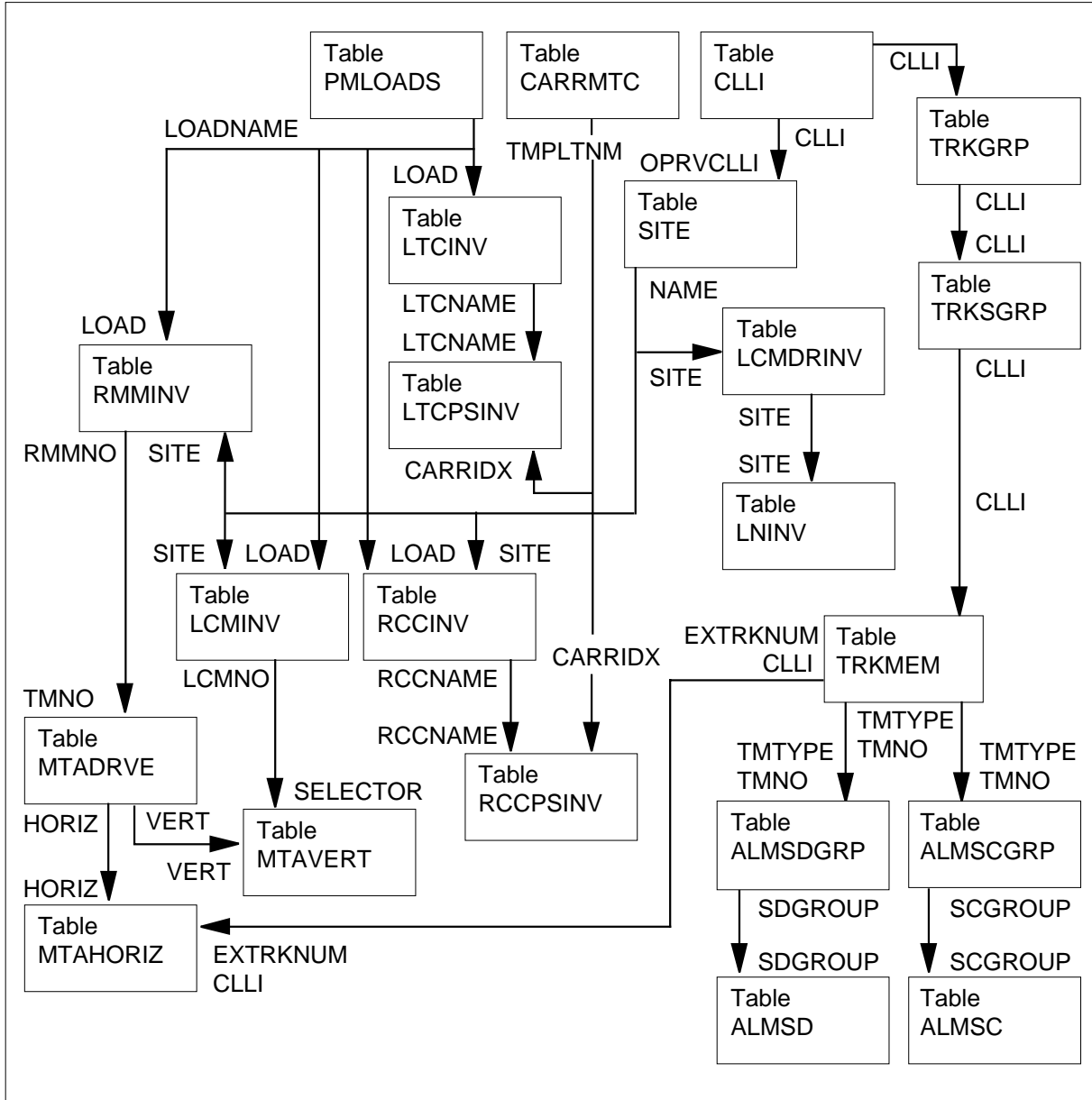
The HSTP0 DMS ADSL Capability translations tables are described in the following list:

- Table LCMDRINV
- Table LNINV

## HSTP0 DMS ADSL Capability (continued)

The following figure illustrates the HSTP0 DMS ADSL Capability translation process.

### Translations process for HSTP0 DMS ADSL Capability

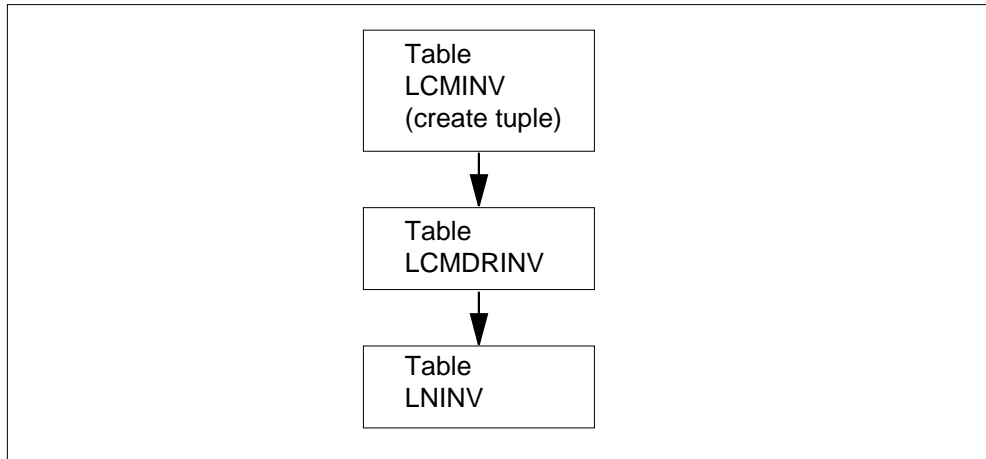


The following figure illustrates the table flow to datafill HSTP0 DMS ADSL Capability.

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**HSTP0 DMS ADSL Capability** (continued)

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**HSTP0 DMS ADSL Capability table flow**

The datafill content for the tables in the previous flowchart follows:

- Table LCMINV lists data assignments for each LCM or remote LCM (RLCM). Field SITE in table LCMINV matches the NAME tuple from table SITE. This field identifies the equipment for the switching unit and for all remote locations connected to the unit. Field LOAD in table LCMINV matches the LOADNAME tuple from table PMLOADS. This field stores the device location of each PM load file.
- Table LCMDRINV lists the LCM name, physical drawer numbers, product engineering code (PEC) of the drawers, drawer loadname, and media access control (MAC) address for each LCM or RLCM. The line drawer applications use the information in this table to determine the functionality supported in each physical drawer.

Table LCMDRINV only supports change operations and does not support manual additions or deletions. The switch automatically adds and deletes tuples to this table when a matching entry is made in table LCMINV.

- Table LNINV lists the site name with the line equipment number (LEN), and other data for each line card circuit in an office.

## HSTP0 DMS ADSL Capability (continued)

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### Limitations and restrictions

The following limitations and restrictions apply to HSTP0 DMS ADSL Capability:

- Each drawer entered in table LCMDRINV to support HSTP0 DMS ADSL Capability must have a DBIC.
- Each drawer with a DBIC must have an xLC to support HSTP0 DMS ADSL Capability. If the drawer does not have a DBIC, the xLC will only provide voice services.
- The 1-Meg Modem Service subscriber must have a 1-Meg Modem.
- When a tuple is added or deleted in table LCMINV, a corresponding tuple is automatically added or deleted in table LCMDRINV.

### Interactions

HSTP0 DMS ADSL Capability has no functionality interactions.

### Activation/deactivation by the end user

HSTP0 DMS ADSL Capability requires no activation or deactivation by the end user.

### Billing

HSTP0 DMS ADSL Capability does not affect billing.

### Station Message Detail Recording

HSTP0 DMS ADSL Capability does not affect Station Message Detail Recording (SMDR).

### Datafilling office parameters

HSTP0 DMS ADSL Capability does not affect office parameters.

### Datafill sequence

The following table lists the tables that require datafill to implement HSTP0 DMS ADSL Capability. The tables are listed in the order in which they are to be datafilled.

#### Datafill tables required for HSTP0 DMS ADSL Capability

Table	Purpose of table
LCMDRINV	Line Concentrating Module Drawer Inventory. Lists data assignment for each drawer for a LCM unit.
LNINV	Line Circuit Inventory. Lists the data for each line card slot.



---

**HSTP0 DMS ADSL Capability** (continued)

---

**Datafilling table LCMDRINV**

Verify the following datafill related to HSTP0 DMS ADSL Capability for table LCMDRINV. The following table only lists the fields that apply to HSTP0 DMS ADSL Capability. Refer to the *Translations Guide* for a description of the other fields.

**Datafilling table LCMDRINV (Sheet 1 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
LCMNM			LCM name. Entry made up of subfields SITE, PM_type, and PM_no.
	SITE	REM1	Site name. Enter the name of the site of this RLCM.
	FRAME	0 to 511	Frame number. Enter the LCM frame number.
	PM_NO	0 to 255	Peripheral module number. Enter PM number for this RLCM.
DRWRTAB			Drawer table. This field is made up of subfields PHYDRNO, DRWRDATA, LDCPEC, and MACADDRESS.
	PHYDRNO	0 to 9	The physical drawer number.
	LDCPEC	NTEX54CA	Line drawer control card PEC. Enter the PEC code of the DBIC.
	DRWRPEC	NT6X05AA, NT6X05BA, NT6X05CA, NT6X05DA, NT6X05EA, NTBX32BA	The physical line drawer PEC
<p><b>Note 1:</b> Changes to fields with multiple entries should be made in the PROMPT mode only. In nonprompt mode it is possible to leave out existing entries.</p> <p><b>Note 2:</b> Enter the continuation mark (+) in fields with multiple possible entries when more data is specified on the next line or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p>			

## HSTP0 DMS ADSL Capability (continued)

Datafilling table LCMDRINV (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	MACADDRESS	12 hexadecimal digits	Media Access Control (MAC) layer address. The Ethernet address, also known as the hardware physical address, obtained from stamping on the DBIC. This number must be unique and correspond to the number on the DBIC.
	IPADDR	4 digits, with each digit ranging from 0 to 255	IP Address The Internet Protocol (IP) address of the LCM line drawer. The default is 0 0 0 0. This subfield only applies when you use the 1MMS option in SERVORD to provision 1-Meg Modem Service. The value in this subfield can be the default (0 0 0 0) or any IP value if the office does not support 1-Meg Modem Service or you do not use SERVORD to provision 1-Meg Modem Service.
<p><b>Note 1:</b> Changes to fields with multiple entries should be made in the PROMPT mode only. In nonprompt mode it is possible to leave out existing entries.</p> <p><b>Note 2:</b> Enter the continuation mark (+) in fields with multiple possible entries when more data is specified on the next line or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p>			

### Datafill example for table LCMDRINV

The following example shows sample datafill for table LCMDRINV.

### MAP display example for table LCMDRINV

```
TABLE LCMDRINV
LCMNM DRWRTAB
_____
REM1 00 0
(0 NT6X54AA NT6X05AA) (1 NILDRWR) (2 NTEX54CA NT6X05EA
EEFF00010203 0 0 0 0) (3 NILDRWR) (4 NTEX54CA NT6X05EA
FF0001020304 0 0 0 0) (5 NILDRWR) (6 NILDRWR) (7 NILDRWR) (6
NTEX54CA NT6X05EA 000102030405 0 0 0 0) (7 NTEX54CA NT6X05EA
010203040506 0 0 0 0) (8 NTEX54CA NT6X05EA 010203040507 0 0
0 0) (9 NILDRWR )$
```

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**HSTP0 DMS ADSL Capability** (continued)

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**Error messages for table LCMDRINV**

The following error messages apply to table LCMDRINV.

**Error messages for table LCMDRINV**

Error message	Explanation and action
Tuple Addition occurs when the corresponding entry is added into the LCMDRINV table.	An attempt was made to manually add a tuple entry into table LCMDRINV.
Tuple Deletion occurs when the corresponding entry is deleted from the LCMDRINV table.	An attempt was made to manually delete a tuple entry from table LCMDRINV.

**Datafilling table LNINV**

Table LNINV matches the site name from table SITE to each physical line circuit in the LCM. This table defines the LEN of a line and indicates the software location and its hardware characteristics. Each line card in the LCM has a tuple in table LNINV.

The subfields used to identify the line card are changed so a LEN can identify an LCM line card. In a LEN for an LCM, the fields for the LEN are defined as follows:

- SITE
- FRAME
- UNIT
- SUBGROUP
- CIRCUIT

Note the following table interactions:

- The line assignment for coin lines is made in table LENLINES. The LNATTIX field matches to the line class, code, coin first (CCF), coin dial tone first (CDF), or coin semi-postpay (CSP), in table LINEATTR.
- POTS lines LCMLSG do not have matching tuples in keyset-type tables.
- For Meridian business sets (MBS), the VARTYPE in table LCMDRINV must be NTPROP.

The following table shows the datafill related to HSTP0 DMS ADSL Capability for table LNINV. The table only lists those fields that apply directly to HSTP0 DMS ADSL Capability.

**HSTP0 DMS ADSL Capability** (continued)

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

**Datafilling table LNINV (Sheet 1 of 2)**

<b>Field</b>	<b>Subfield or refinement</b>	<b>Entry</b>	<b>Explanation and action</b>
LEN		alphanumeric	Line equipment number. This field contains the following subfields: SITE, FRAME, UNIT, SUBGROUP, and CIRCUIT.
	SITE	alphanumeric	Site. Enter the location of the LCM (four-character alphanumeric). This entry is not optional, and there is no default value assigned to it.
	FRAME	0 to 511	Frame. Enter the LCM frame number, which is not a physical frame but a software entity that represents the group the LCM belongs to at the site.
	UNIT	0 to 1	Unit. Enter the number representing the LCM unit within the group.
	SUBGROUP	0 to 19	Subgroup. Enter the number of subgroups in the line drawers.
	CIRCUIT	0 to 31	Circuit. Enter the number of circuits in the subgroups. The range is 0-31.
CARDCODE		EX17DA	Card code. Enter the PEC of the line card or line card carrier.
PADGRP		STDLN, UNBAL, PPHON, LRLM, NPDGP and ONS	Pad group. Enter the name of the pad group assigned to the line circuit in the pad data table. The values include STDLN, UNBAL, PPHON, LRLM, NPDGP, and ONS.
STATUS		HASU, WORKING, UNEQUIP, CUTOFF, and RESERVED.	Status. Enter the line inventory availability status. The values include HASU, WORKING, UNEQUIP, CUTOFF, and RESERVED.

**HSTP0 DMS ADSL Capability** (continued)

Datafilling table LNINV (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
GND		Y or N	Ground. Where line is ground start, enter Y. Otherwise, enter N (for loop start).
BNV		L or NL	Balanced network value. Enter L when line circuit is configured for a loaded network. Otherwise, enter NL (for nonloaded network).
MNO		Y or N	Manual override. Enter Y when on-hook balance network test is to be prevented from updating field BNV in this table.  Otherwise, enter N to allow off-hook balance network test to update field BNV in this table.
CARDINFO		NIL	Card information. The NIL value is the default. The values are NIL, SSLCC, or ISLCC.

**Datafill example for table LNINV**

The following example shows sample datafill for table LNINV.

**MAP display example for table LNINV**

LEN	CARDCODE	PADGRP	STATUS	GND	BNV	MNO	CARDINFO
REM1	00 0 0	01	EX17DA	STDLN	HASU	N NL	N NIL
REM1	00 0 0	02	EX17DA	STDLN	HASU	N NL	N NIL
REM1	00 0 0	03	EX17DA	STDLN	WORKING	N NL	N NIL
REM1	00 0 0	04	EX17DA	STDLN	WORKING	N NL	N NIL
REM1	00 0 0	05	EX17DA	STDLN	HASU	N NL	N NIL
REM1	00 0 0	06	EX17DA	STDLN	HASU	N NL	N NIL
REM1	00 0 0	07	EX17DA	STDLN	WORKING	N NL	N NIL
REM1	00 0 0	08	EX17DA	STDLN	WORKING	N NL	N NIL
REM1	00 0 0	09	EX17DA	STDLN	HASU	N NL	N NIL
REM1	00 0 0	10	EX17DA	STDLN	HASU	Y NL	N NIL
REM1	00 0 5	00	EX17DA	STDLN	HASU	N NL	N NIL
REM1	00 0 5	01	EX17DA	STDLN	HASU	N NL	N NIL

## **HSTP0 DMS ADSL Capability (end)**

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### **Translation verification tools**

HSTP0 DMS ADSL Capability tables LCMINV and LCMDRINV support 1-Meg Modem Service specific checks through the following table control commands:

>CHECK

>CHECK ALL

### **SERVORD**

HSTP0 DMS ADSL Capability SERVORD rejects attempts to add the cut-off-on-disconnect (COD) to an xDSL line. Operation of the cut-off-relay interrupts data services on an xDSL line including the COD feature.

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## RLCM Intracalling

---

### Functional group

Functional group: BAS00012

### Feature package

Feature package: NTX156AA RLCM Intracalling

### Release applicability

BCS35 and later versions

### Requirements

The RLCM Intracalling requires BAS00003 to operate. The BAS00003 includes the following:

- Bilge NTX000AA
- Common Basic NTX001AA
- Remote Line Concentrating Module NTX146AA
- New Peripheral Maintenance Package NTX270AA
- Local Features II NTX901AA

### Description

The RLCM/OPM Intracalling functional group allows calls between subscribers on the same RLCM/OPM to connect without the host network. This connection reduces the use of the DS-1 links to the host.

The following are the two parts of Intracalling:

- 1 *intraswitching*—This part connects calls between subscribers that have the same LCM unit from an RLCM/OPM. This part uses the RLCM/OPM intraswitching channels. This part does not use the host network.
- 2 *interswitching*—This part connects calls between subscribers that have different LCM units from an RLCM/OPM. This part uses the RLCM/OPM interswitching channels. This part does not use the host network.

### Operation

The link control cards (LCC) on the host interface equipment (HIE) shelf connect intraswitching an interswitching. The LCC connects in sequence to the DS30A ports of each line concentrating array (LCA) of the LCM.

## **RLCM Intracalling** (continued)

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An LCA has eight DS30A ports. The ports can have equipped or unequipped host links. An equipped port has 24 channels of the DS-1 link mapped to a 32-channel DS30A port.

Six of the unmapped DS30A channels are for intraswitching. Two of the channels are for control and signaling. For the DS30A ports without host links, the LCC provides the following:

- 18 channels for intraswitching
- 12 channels for interswitching
- 2 channels for control and signaling

When the LCC provides intraswitching and interswitching channels for connection of internal calls, on the DS-1 links the additional channels are free. The additional channels allow the host network to handle external calls. This feature maximizes the use of the DS-1 links. The DS-1 links are a limited resource.

### **Translations table flow**

This package does not affect the standard translations table flow.

### **Limits**

There are limits on the types of lines that can intraswitch. The following lines can intraswitch:

- One-party and two-party flat rate lines
- Meridian Digital Centrex (MDC) lines
- lines connected to P-phones and data units

Lines with call waiting and call forwarding features can intraswitch. When the features are active, the call reverts to a normal network connection. Coin phone calls cannot intraswitch.

Multiple access directory number (MADN) line originations from any primary or secondary MADN member, are intra/interswitched when possible. Terminations to MADN lines are only intra/interswitched for the primary directory number (PDN). There is a maximum of 73 intra/interswitched calls at a time.

### **Interactions**

The RLCM Intracalling does not have functionality interactions.



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## RLCM Intracalling (continued)

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### End user activation and deactivation

For the RLCM/OPM Intracalling functional group to operate, the intraswitch field in table LCMINV must be Y.

### Billing

The RLCM Intracalling does not affect billing.

### Station Message Detail Recording

The RLCM Intracalling does not affect Station Message Detail Recording.

### Datafilling office parameters

The RLCM Intracalling does not affect office parameters.

### Datafill sequence

The following table lists the tables that require data to start the RLCM Intracalling. The tables appear in the order to enter data.

#### Datafill tables required for RLCM Intracalling

Table	Purpose of table
LCMINV	Lists the data assignment for each frame associated with an LCM unit.

### Datafilling table LCMINV

The following table shows the datafill that relates to RLCM Intracalling for table LCMINV. Only the fields that apply directly to RLCM Intracalling are listed.

**RLCM Intracalling** (continued)

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

**Datafilling table LCMINV (Sheet 1 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
LCMTYPE		LCM, ILCM, SRU, LCMI, LCME, ELCM, or ALCM	<p><i>LCM type</i></p> <p>Enter the LCM type that corresponds to the entry in field EQPEC as follows:</p> <ul style="list-style-type: none"> <li>• 6X04AA - LCM</li> <li>• 6X04BA - ILCM</li> <li>• 8X95AB - SRU</li> <li>• BX30AA - LCMI</li> <li>• BX30AB - LCME</li> <li>• NX1201 - ELCM</li> </ul> <p><b>Note:</b> The RLCM PEC is 6X04AA. Enter the RLCM PEC as LCM.</p>
	LCMINFO	see subfield	<p><i>Line concentrating module information</i></p> <p>This field contains subfield LCMSELECTOR.</p>
	LCM-SELECTOR	HLCM or RLCM	<p><i>LCM selector</i></p> <p>Enter RLCM for a remote LCM and enter refinements LINKMAP, INTRASW, ESA, CONV, and DS1CARD.</p>
<p><b>Note:</b> When you enter data for link information (LNKINFO) or link map (LNKMAP), do not assign message links to the same interface card. When the interface card supports two or more links, separate the links with the number of links on the interface cards. This instruction applies to every interface link type. The link types are DS-1, DS30, DS30A, or PCM-30. Table control generates a warning if you attempt to assign message links on the same interface card. An E1 outage can occur if you assign message links to the same interface card and the card fails. An E1 outage occurs when every message link fails.</p>			

**RLCM Intracalling** (continued)**Datafilling table LCMINV (Sheet 2 of 2)**

<b>Field</b>	<b>Subfield or refinement</b>	<b>Entry</b>	<b>Explanation and action</b>
LCMTYPE (continued)	LINKMAP	0 to 63 (vector of up to 6 values)	<i>P-side link information</i>  Enter the LGC links or the LTC links (0 to 19), or both. Enter the links on which a remote LCM is assigned corresponding C-side links LK0 to LK5 of the RLCM. The first link is also the MSG link to LCA 0. The second link is the MSG link to LCA 1. Assign the first link and the second link to different DS-1 cards on the line group assembly and line trunk assembly (LGA/LTA) shelf array. The first link is the first entry in the field. The second link is the second entry in the field.
	INTRASW	Y or N	<i>Intraswitch</i>  Enter Y (yes) if the entry in field LCMSELECTOR is RLCM and the RLCM has internal links. The internal links the intrabay (IA) or interbay (IR) link option. If not, enter N (no).
<p><b>Note:</b> When you enter data for link information (LNKINFO) or link map (LNKMAP), do not assign message links to the same interface card. When the interface card supports two or more links, separate the links with the number of links on the interface cards. This instruction applies to every interface link type. The link types are DS-1, DS30, DS30A, or PCM-30. Table control generates a warning if you attempt to assign message links on the same interface card. An E1 outage can occur if you assign message links to the same interface card and the card fails. An E1 outage occurs when every message link fails.</p>			

**Datafill example for table LCMINV**

The system only requires the boolean for intraswitching in field LCMTYPE to enter data in the intracalling feature.

Sample datafill for table LCMINV appear in the following example.

**RLCM Intracalling** (end)

**MAP example for table LCMINV**

LCMNM	FRTYPE	SHPOS	FLOOR	ROW	FRPOS	EQPEC	LOAD	CSPMNO	LCMTYPE
BICTST	ADNUM	MEMSIZE							
TRSC	30 1	LCE	38	1	D	3 6X04AA	LCM01D	RCC	1
	N 28	64K 64K							
			LCM Y		S 48V	HLCM ( 2) ( 3) ( 4) ( 5) ( 6) ( 7)\$			
TRLC	40 0	RLCM	4	1	D	4 6X04AA	XLCM031G	LTC	1
	N 29	256K 256K							
			LCM Y		S 48V	RLCM ( 0) ( 2) ( 3) ( 4) ( 5)\$		Y Y N	6X50AA
TOPM	00 0	RLCM	1	1	A	1 6X04AA	LCM01D	RCC	0
	N 30	64K 64K							
			LCM Y		S 48V	RLCM (16) (13) (17) (19)\$		Y Y N	6X50AA
RSCS	00 0	CRSC	4	1	ZZ	1 BX30AB	LCME031F	RCC2	0
	N 31	256K 256K							
LCME	Y S	48V	(36) (34) (33) (31) (32) (30)						\$

**SERVORD**

The RLCM Intracalling does not use SERVORD.

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## 5 Outside Plant Access Cabinet

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### Understanding OPAC translations

The Outside Plant Access Side (OPAC) offers a, single enclosure solution to current service delivery needs. The OPAC has the functions of multiple outside plant enclosures. The OPAC can address a range of application requirements in current and future access networks.

The OPAC is a remote peripheral module (PM) that allows extended geographic coverage for the Digital Multiplex System-100 (DMS-100) switch. The OPAC can operate at a maximum distance of 160.93 km (100 mi) from the host office.

The OPAC is a freestanding reconfiguration of the Remote Line Concentrating Module (RLCM). A special weatherproof cabinet contains the OPAC. The cabinet provides a controlled environment for the OPAC electronic equipment. The design of the OPAC is for outside use. The OPAC provides space for operating company equipment.

The OPAC contains the following parts:

- standard line concentrating module (LCM) parts
- host interface equipment (HIE)
- a remote maintenance module (RMM)

The OPAC provides an interface between two to six DS-1 links and a maximum of 640 subscriber lines that connect locally. The links are the line group controller (LGC) or the line trunk controller (LTC). A Remote Switching Center (RSC) based on LTC technology can provide host functions to the OPAC. The OPAC configuration supports a maximum of 640 lines.

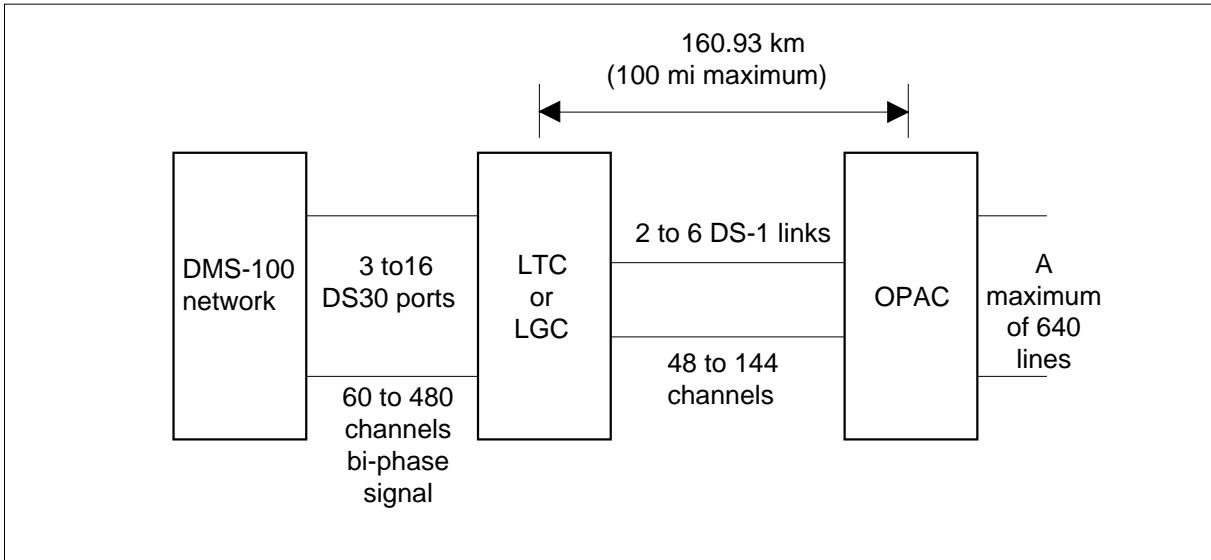
### Introduction to OPAC translations

Before you attempt to enter data in the OPAC, you must understand the plans and terminology of translations. This introduction provides a general description of the OPAC and the relationship of the translations functions to the OPAC.

The OPAC provides functions like a small community dial office (CDO) or private branch exchange (PBX). The OPAC can support host-directed traffic that ranges from 1100 to 4200 hundred call seconds (CCS).

*Note:* This guide uses the terms RLCM and Outside Plant Module (OPM) in conjunction with the OPAC. The OPM is a reconfigured RLCM packaged in an environmentally-protected cabinet. An OPM in the Series 800E Cabinet is the OPAC. The OPAC does not require software changes to the RLCM or the OPM. Some feature packages, office parameters and translations datafill are known by the original design names. Software module names and functions, MAP levels and commands are known by original design names. Examples of design names that do not change are RLCM and OPM. The term power and environmental system (PES) that applies to the OPM also applies to the OPAC. The PES applies to the environmental control and alarm features of the Series 800E Cabinet integration with the OPAC. The configuration of the OPAC in the DMS-100 network appears in the following figure.

Figure 5-1 The OPAC system integration



The OPAC can have additional feature packages that allow intracalling ability and emergency stand-alone (ESA) operation. The translations database allows the DMS-100 switch to recognize the software and hardware abilities of the OPAC. This database allows the DMS-100 to execute call processing.

### Signaling for OPAC

This section describes the signaling OPAC uses to communicate with the DMS-100 switch and to provide subscriber services. The following chapters discuss OPAC signaling protocols and the types of subscriber services that the protocols support.

**OPAC signaling links**

The DS-1 interface cards (NT6X50AA, AB) are in the host interface equipment shelf. The DS-1 interface cards are the signaling interfaces between the OPAC and the host XMS-based peripheral module (XPM). The XPM can be one of the following:

- a line group controller (LGC)
- a line trunk controller (LTC)
- the remote cluster controller (RCC) of a Remote Switching Center (RSC)

Each DS-1 interface card can accept a maximum of two DS-1 links from the host XPM. A minimum of two and a maximum of six DS-1 links connect OPAC equipment to the DMS-100 switch. Six temporary DS-1 links connect systems configured by the operating company to the DMS-100.

The OPAC and the host XPM exchange information over the DS-1 links through dedicated message channels. This signaling information allows the OPAC and the host XPM to perform the following actions:

- communicate the states of subscriber lines
- execute call processing
- set test configurations
- pass test results

The OPAC is of a lower order than the DMS-100 switch. The host office handles all intersystem signaling between the host and other systems. The host office handles operator host to subscriber signaling.

**Message channels**

The OPAC requires a minimum of two DS-1 links to the host. These links are the primary links. The LCM part of the OPAC requires two message channels to the host XPM.

The LCM message channels occupy channel 1 on each of the primary DS-1 links to the host. The remote maintenance module (RMM) requires two message channels to the host XPM. These channels occupy channel 2 on each of the primary links.

The emergency stand-alone (ESA) processor requires two message channels to the host. These message channels occupy channel 3 on each of the primary links. If the OPAC does not have an ESA processor, channel 3 is available for speech traffic.

### Signaling protocol

The message channels on the primary DS-1 links have (nailed-up) connections to the DMS central control (CC). The message channels use the DMS-X protocol to communicate with the host.

The DMS-X is a half-duplex, byte-oriented protocol. A full duplex message channel, like the DS-1 links implements the DMS-X. The LCM processor handles the DMS-X message protocol on LCM message channels to the host.

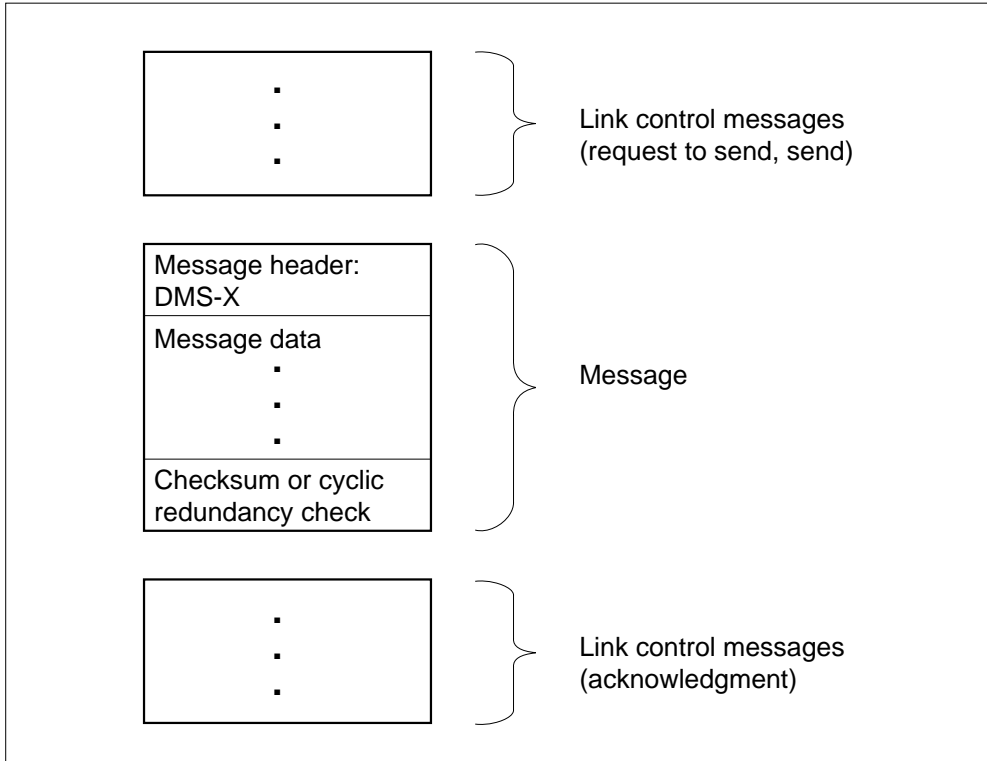
The RMM control card processes DMS-X messages, trunk messages, and pulse code modulation (PCM) data. The ESA processor communicates with the host XPM through the use of DMS-X protocol when the OPAC is in ESA mode.

### The DMS-X protocol

The DMS-X protocol is a state-driven code that requires handshake messaging between the OPAC and host at each stage of data transfer. The DMS-X allows the terminals in communication to delay the message transfer if a terminal is not ready.

The DMS-X handshaking protocol appears in the following figure:

**Figure 5-2 The DMS-X handshaking protocol**



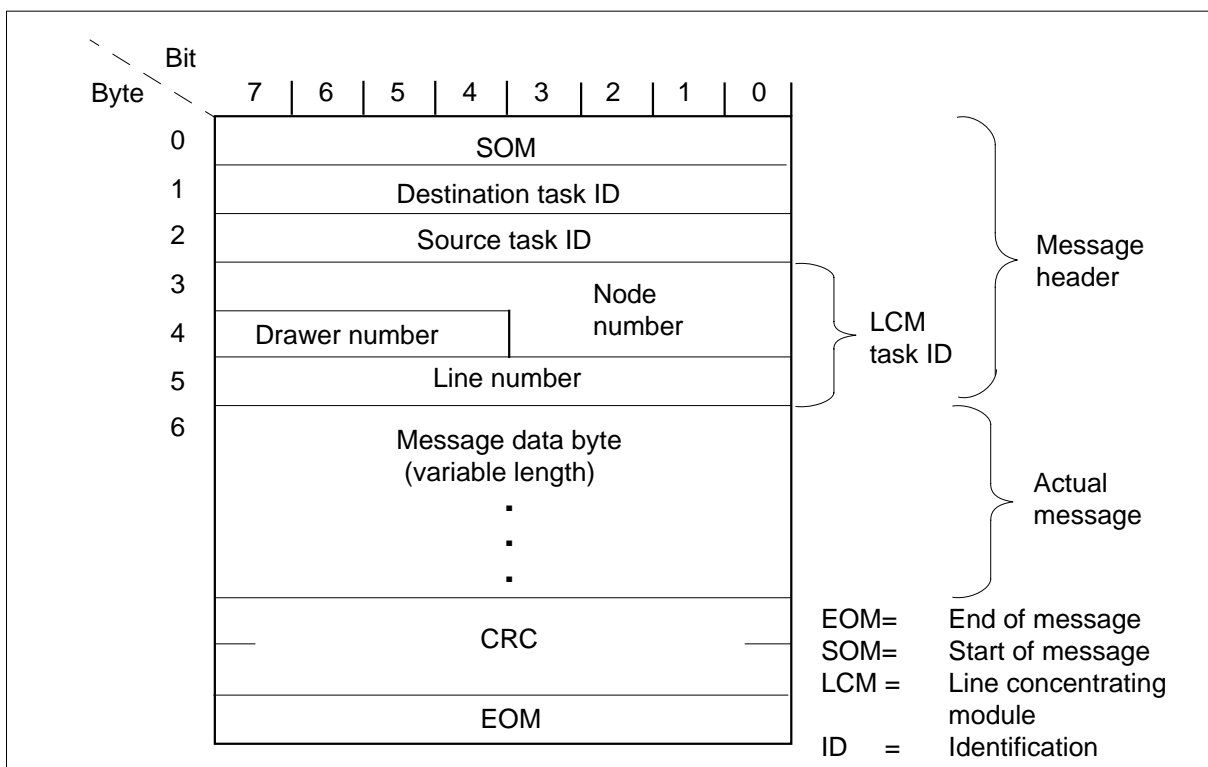


The DMS-X protocol includes a cyclic redundancy check (CRC) code for error detection. Message time-out and message checksum or CRC calculation performs message error detection.

When a protocol, checksum or CRC fails on an outgoing message, the sending node attempts the send sequence again. When an incoming message fails, the sending node reroutes the message through an alternate central-side (C-side) link. Hardware redundancies provide one or more alternative path to and from a node.

The format of DMS-X messages appears in the following figure.

**Figure 5-3 The DMS-X message format**



The DMS-X message header is in the first 6 bytes as follows:

- the first byte specifies the start of message (SOM)
- the second byte specifies the destination task identification (ID) of the message. An outgoing message uses this ID to identify the process that must receive the message. This process is a task in the LCM
- the third byte specifies the source task ID. An incoming message uses this ID to identify the LCM task that sent the message.
- the next 3 bytes specify the task ID number

The number of bytes in the message or data is variable. The CRC occupies 2 bytes and detects transmission errors. The end of message occupies 1 byte.

### **Signaling functions**

Signaling supports call processing activities. Signaling allows call origination, tone generation, digit collection and ringing.

### **Call origination**

Signaling transmits the on-hook and off-hook signals that allow the host XPM to identify subscribers that request service.

When a subscriber lifts the handset from the cradle, a voltage source in the OPAC provides a steady flow of current. The current flows through the transmitter. The LCM processor detects this current and sends an off-hook message to the central office (CO).

The CO explains the off-hook signal as a request for service. The CO allocates a channel on a DS-1 link to serve the subscriber line. The CO applies dial tone to the line.

The subscriber line transmits open pulses or dual-tone multifrequency (DTMF) signals through the OPAC to the CO. The type of telephone determines the type of signal. The CO analyzes the digits and determines if the call is an interoffice call. The system seizes calling end of the trunk. A connect signal is a sustained off-hook signal. The connect signal transmits forward to the called end of the trunk. This signal indicates a request for service and continues for the duration of the connection.

### **Tone generation**

The host XPM provides all correctly cadenced tones. The OPAC applies these tones when the subscriber lines need the tones. The following are the tones that the host supports and the OPAC applies:

- the dial tone
- audible ringing
- warble ringing
- the busy tone
- the reorder tone
- the receiver off-hook (ROH) tone

### **Digit collection**

The OPAC performs the digit collection function of subscriber dialing. The OPAC supports dial pulse or dual tone multifrequency (DTMF) dialing.

Dial pulse or multifrequency signaling can transmit the address of a called party. Dial pulse or multifrequency signaling provide digit transmission. These signals combine with other types of signals to provide the DS-1 links with complete signaling ability.

### **Dial pulsing**

The LCM of the OPAC performs dial pulse digit collection. In dial pulsing, the number of on-hook intervals in a list of pulses represents the numeric value of each digit.

Short off-hook intervals separate the on-hook intervals of each digit. Long off-hook intervals separate the digits. The break time expressed as a percent of the pulse period (break + make duration) is the percent break.

The parts of dial pulsing are speed, percent break and interdigital time. The host XPM analyzes these characteristics and assigns a channel or time slot in the digital line.

### **The DTMF signaling**

Digitone telephones send dial pulse or dual-tone multifrequency signals to transmit address information over a line. The remote maintenance module (RMM) forwards this signal to the host. In ESA operation, an RMM sends this information to a Digitone receiver.

The DTMF signals are specified groups of tones that represent single digits 0-9 and other special units. The DT and MF change tones to digits. The DT and MF receivers are special trunk interface circuits.

The RMM of the OPAC examines the output of the DT and MF to determine when a digit is received. The RMM relays the digits from the MF receiver to the host XPM. The host XPM analyzes the digits and applies a ringing signal to the called line.

### **End-to-end**

End-to-end signaling allows a subscriber to send DTMF signals to the far end. The subscriber uses the keypad of a Meridian Digital Centrex (MDC) Meridian business set (MBS). The subscriber can press specified keys at the MBS to send DTMF signals to the machine. The signals can start, stop, rewind and playback the recordings on tape at the machine. The PCM signal reconnects after each 130 ms DTMF signal.

### **Ringing**

The CO determines the type of ringing to use. The CO sends a ringing signal to the OPAC over the DS-1 channel associated with the called subscriber line. This signal directs the OPAC to connect the ringing generator to the specified line.

The CO provides, and the OPAC applies, the following ringing types:

- bridged ringing (single-party)
- superimposed ringing (multiparty)
- coded ringing (cadencing)
- frequency selective ringing (FSR)

### **The ESA signaling feature**

The ESA feature is an emergency service. The ESA feature provides a subset of call processing capabilities when a loss of communication to the host occurs. This feature includes call processing for basic station-to-station calls in the OPAC for plain ordinary telephone service (POTS) and MDC lines.

An OPAC with the ESA feature package provides the same tones as an operating OPAC. The tones appear on channel 16 of the incoming C-side ports of the OPAC. The OPAC software provides tone cadence. The OPAC software controls the time switching in the link control card (LCC) to interrupt the tone.

The ESA processor sends a start cadence message to the OPAC to provide a tone in ESA mode. This message specifies the tone required, the terminal identification and the cadence times.

When the OPAC receives a make cadence message, the OPAC performs the following steps:

- breaks the connection of the terminal current receive path
- connects the receive path of the terminal to the correct port
- sets up the specified cadence for the tone

The handling of the idle tone uses the start cadence message. The OPAC connects the receive path to a port that provides an idle tone.

## **How to enter data in the OPAC**

### **The PCL—New Software Delivery Vehicle**

After the BCS36 version, Northern Telecom (Nortel) delivers Product Computing-Module Loads (PCL) instead of BCS releases or Universal Software Loads (USL).

A PCL contains features from the development stream software product for a specified application in a specified market. The PCL contains the capabilities already divided between many related NTX packages. An eight-digit ordering code replaces the NTX package codes.

The ordering code and Functional Group name for the OPAC appears in the following table. A list of earlier NTX packages in the Functional Group appears in the following table. These abilities associate with the OPAC.

**Table 5-1 OPAC ordering code**

Ordering code	Name	Former NTX package codes
BAS00012	BAS Remotes Generic	NTX146AA—Remote Line Concentrating Module  NTX147AB—Outside Plant Module Maintenance  NTX154AA—Emergency Stand-Alone Operation  NTX156AA—RLCM Intracalling

**Tasks associated with entering data in the OPAC**

The OPAC tables make up several groups. These groups contain tasks associated with the entries of the OPAC. The following are tables and groups that require data:

- test trunks, test lines and service circuits in table CLLI
- the OPAC components and location datafill in tables SITE, LTCINV, LTCPSINV, LCMINV, RMMINV and LNINV
- call processing translations in the lines, trunks, screening and routing tables like TRKGRP, TRKSGRP, TRKMEM, LINEATTR, LENLINES, LENFEAT and DNROUTE
- system alarms in tables ALMSCGRP, ALMSDGRP, ALMSD and ALMSC
- scan and signal distribution points in tables SCGRP and SDGRP
- metallic test access assignments in tables MTAMDRVE, MTAVERT and MTAHORIZ

**Procedures for datafilling the OPAC**

This guide lists the field and subfield names of the tables that require data entry for the OPAC. This guide describes each field and subfield. This guide provides information about to the OPAC data required. The guide provides examples of field entries for most fields and subfields.

The following chapters of this guide describe the key tables for the OPAC. The data schema section of the *Translations Guide* describes other tables. These tables contain datafill for call processing, scan and signal distribution points and system alarms.

## Basic call processing

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### Functional group

Functional group: BAS00012

### Feature package

Feature package: NTX146AA

### Release applicability

XPM05 and up

### Prerequisites

To operate, Basic call processing has the following prerequisites:

- Bilge, NTX000AA
- Common Basic, NTX001AA
- New Peripheral Maintenance Package, NTX270AA
- Local Features I, NTX901AA

### Description

The OPAC is a reconfigured RLCM packaged in an environmentally controlled cabinet. The NTX146AA package allows the OPAC to provide basic call processing capability for up to 640 subscriber lines.

Some of the features it provides include line testing capability, alarms processing, coin capability, operational measurements (OM), and basic maintenance features. The OPAC also supports plain old telephone service (POTS) and Meridian Digital Centrex (MDC), which provides centralized telephone exchange services for businesses.

### Operation

The OPAC is connected to an LTC, line group controller (LGC), or Remote Switching Center (RSC) by two to six DS-1 links, thus functioning as an interface between the DS-1 links from the host network and up to 640 subscriber lines connected locally. The OPAC has remote functions allowing it to operate at a distance of up to 160.93 km (100 mi) from the host office.

### Translations table flow

Basic call processing does not affect translations table flow.

### Limitations and restrictions

Basic call processing has no limitations or restrictions.

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## Basic call processing (continued)

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### Interactions

Basic call processing has no functionality interactions.

### Activation/deactivation by the end user

Basic call processing requires no activation or deactivation by the end user.

### Billing

Basic call processing does not affect billing.

### Station Message Detail Recording

Basic call processing does not affect Station Message Detail Recording.

### Datafilling office parameters

The following table shows the office parameters used by Basic call processing.

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

**Note:** Some of the office parameters, translations datafill, software module names and functions, and MAP levels and commands will still be known by their original design names, such as RLCM or OPM.

#### Office parameters used by basic call processing (Sheet 1 of 3)

Table name	Parameter name	Explanation and action
OFCENG	#_OF_BC_LAMA_UNITS	Specifies the number of recording units required in the host office to collect call data while the call buffer is dumping to a tape or disk.
OFCENG	#_OF_NT_RECORDING_UNITS	Specifies the number of Northern Telecom recording units required in the host office to collect call data, while all the automatic message accounting (AMA) buffers are full.
OFCENG	MAX_NO_OF_ALT_TEST_PROCS	Speeds up automatic line testing (ALT) in the host office by allowing several test processes from different ALT users to run simultaneously under the control of one ALT process.

**Basic call processing** (continued)

**Office parameters used by basic call processing (Sheet 2 of 3)**

Table name	Parameter name	Explanation and action
OFCENG	NO_OF_FTR_CONTROL_BLOCKS	Specifies the number of feature control blocks required in the host office if it is provisioned with vertical features or MDC feature packages.
OFCENG	NMULTIBLKS	Allocates multiblock memory for three-way calling and call waiting features assigned to lines in the host office.
OFCENG	NUMPERMEXT	Allocates permanent external memory that may be required for certain features in the host office.
OFCENG	TALK_BATTERY_ALARM	Turns on the automatic audits of the talk battery in all LCM/XLCM/LCME/RLCM/OPM/O PAC peripheral modules when set to default Y.
OFCVAR	BICRELAY_XLCM_TESTS_SCHEDULED	Allows the user to define the start time (BRTST_START_TIME) and stop time (BRTST_STOP_TIME) of the bus interface card relay test to define the window for the office-level test.  These times cannot be datafilled with the same value, and they must indicate a window of at least 10 minutes.
OFCVAR	BICRELAY NUM SIMUL TESTS	Allows the number of line concentrating module level tests that can be run simultaneously.



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**Basic call processing** (continued)
 

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**Office parameters used by basic call processing (Sheet 3 of 3)**

Table name	Parameter name	Explanation and action
OFCVAR	PMSTAT OM CONTROL	Allows the user to globally turn on and off data collection for processor occupancy measurements in the PMSTAT OM group. It defaults to ON.
OFCVAR	NODEREXCONTROL	Governs execution of all SREX tests (nodes). Fields are REXON (default: Y), REXSTART (default: 1:30), and REXSTOP (default: 3:30).  <b>Note:</b> Individual REX test nodes are controlled by datafill in table REXSCHED.

**Office parameter #\_OF\_BC\_LAMA\_UNITS**

This parameter specifies the number of recording units required in the host office to collect call data while the call buffer is dumping to a tape or disk. The call data is used for local automatic message accounting (LAMA) system billing purposes, if provisioned in the office. The value for this office parameter is based on a formula that combines MDC, Datapath, and call-forwarding traffic statistics.

If the OPAC supports any MDC or Datapath lines, or lines with vertical features, such as call forwarding, the value for #\_OF\_BC\_LAMA\_UNITS should be increased.

**Office parameter #\_OF\_NT\_RECORDING\_UNITS**

This parameter specifies the number of Northern Telecom recording units required in the host office to collect call data, while all the automatic message accounting (AMA) buffers are full.

The data is used for billing purposes, if the centralized automatic message accounting (CAMA) or LAMA systems are provisioned in the office. The value for #\_OF\_NT\_RECORDING\_UNITS is derived from MDC, inward wide-area telephone service (INWATS), and call-forwarding traffic statistics.

If the OPAC supports any MDC or INWATS lines, or lines that support vertical features such as call forwarding, the value of #\_OF\_NT\_RECORDING\_UNITS should be increased.

## Basic call processing (continued)

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### Office parameter **MAX\_NO\_OF\_ALT\_TEST\_PROCS**

This parameter speeds up automatic line testing (ALT) in the host office by allowing several test processes from different ALT users to run simultaneously under the control of one ALT process. The parameter's value is based on the number of transmission test units (TTU—NT6X46 and NT6X47) and line test units (LTU—NT6X10 and NT6X11) configured in the office.

For every LTU configured in the remote maintenance module (RMM) shelf of the OPAC, the value of this parameter should be increased by two. If the RMM is not provisioned with an LTU, this parameter is not affected.

### Office parameter **NO\_OF\_FTR\_CONTROL\_BLOCKS**

This parameter specifies the number of feature control blocks required in the host office if it is provisioned with vertical features or MDC feature packages. The value for this parameter is based on the number of plain old telephone service (POTS) lines in the office supporting vertical features or MDC.

If the OPAC supports MDC lines or lines with vertical features, the value of NO\_OF\_FTR\_CONTROL\_BLOCKS may need to be increased.

### Office parameter **NMULTIBLKS**

This parameter allocates multiblock memory for three-way calling and call-waiting features assigned to lines in the host office. Its value is partially based on parameter NO\_OF\_FTR\_CONTROL\_BLOCKS.

See the previous description of NO\_OF\_FTR\_CONTROL\_BLOCKS for conditions that necessitate both of these parameters as they apply to OPAC lines.

### Office parameter **NUMPERMEXT**

This parameter allocates permanent external memory that may be required for certain features in the host office. A value must be assigned to parameter NUMPERMEXT, if parameter NO\_OF\_FTR\_CONTROL\_BLOCKS is provisioned. As with NMULTIBLKS, the value of NUMPERMEXT is based partially on the feature control blocks parameter.

See NO\_OF\_FTR\_CONTROL\_BLOCKS for conditions that necessitate parameter NUMPERMEXT as it applies to OPAC lines.

### Office parameter **TALK\_BATTERY\_ALARM**

This parameter turns on the automatic audits of the talk battery in all LCM/XLCM/LCME/RLCM/OPM/OPAC peripheral modules. When this parameter is changed, activation is immediate.

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**Basic call processing** (continued)

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**Office parameter BICRELAY\_XLCM\_TESTS\_SCHEDULED**

This parameter in table OFCVAR allows the user to define the start time (BRTST\_START\_TIME) and stop time (BRTST\_STOP\_TIME) of the bus interface card (BIC) relay test (BRT) to define the window for the office-level test. These times cannot be datafilled with the same value, and they must indicate a window of at least 10 minutes.

The last field of this parameter (BRTST\_DAYS\_OF\_TST) specifies the day or days of the week the office-level test is to be run. The entries for this field are MON, TUE, WED, THU, FRI, SAT, and SUN. Up to seven days can be datafilled. The same day cannot be datafilled twice.

**Office parameter BICRELAY\_NUM\_SIMUL\_TESTS**

This parameter in table OFCVAR indicates the number of line concentrating module (LCM) level tests that can be run simultaneously. The start and stop times used in BICRELAY\_XLCM\_TESTS\_SCHEDULED can be used with this parameter to configure a window that best suits the number of LCMs RLCMs, OPMs, and OPACs attached to the DMS-100 network.

This parameter may only be changed when the current date and time do not fall within the scheduled window.

If changes are needed immediately, the user may stop the BRT using the command interpreter (CI) command BICRELAYOFF. After changes are made, the BICRELAYON command must be issued to restore BRT testing.

**Office parameter PMSTAT\_OM\_CONTROL**

This parameter in table OFCVAR allows the user to globally turn on and off data collection for processor occupancy measurements in the PMSTAT OM group. It defaults to ON.

If the PMSTAT\_OM\_CONTROL parameter is changed, data is sent immediately to all XMS-based peripheral modules (XPM) that have subtending extended-memory line concentrating modules (XLCM).

A confirmation message of `polling activated` or `polling deactivated` is displayed at the MAP terminal if the XPM is in an in-service (InSv) or in-service trouble (ISTb) state.

If the XPM is in an out-of-service (OOS) or manual busy (ManB) state, the data is sent during the return-to-service (RTS) action.

An audit will ensure that all InSv or ISTb XPMs are reporting data when the PMSTAT\_OM\_CONTROL parameter is ON. If the audit determines that data

## Basic call processing (continued)

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is not being reported, static data will be sent again to the XPM to begin data collection on the XLCM that was not reporting.

*Note:* This office parameter should only be changed during low traffic periods.

### Office parameter NODEREXCONTROL

Control of routine exercise (REX) testing for line concentrating modules (LCM) is transferred from parameter LCDREX\_CONTROL in table OFCVAR. Testing of LCM ring and voltage values, previously a section of LCM\_REX, is separated into an LCM converter test (LCM\_COV\_REX). Control of LCM\_REX\_TEST and LCMCOV\_REX\_TEST, now part of system REX (SREX), is transferred to parameter NODEREXCONTROL in table OFCVAR. Parameter LCDREX\_CONTROL is retained to control REX testing of line modules (LM).

*Note:* The LCMCOV\_REX\_TEST is performed only on LCMs, XLCMs, OPMs, and RLCMs.

### Datafill sequence

The following table lists the tables that require datafill to implement Basic call processing. The tables are listed in the order in which they are to be datafilled. For more information about these tables, refer to the data schema section of this document.

For more information about these tables, refer to the data schema section of this document. After datafill, both the host XPM and the OPAC must be reloaded from the central control (CC) to activate the NTX146AA package.

## Basic call processing (continued)

Datafill is performed using the usual DMS-100 table editor commands. For more information on the table editor, refer to *Basic Translations Tools Guide*.

### Datafill tables required for OPAC basic call processing (Sheet 1 of 4)

Table	Purpose of table
DATASIZE	Data Size. Ensures adequate system memory to accommodate additional entries in trunk group tables.
CLLI	Common Language Location Identifier. Identifies the maintenance and test trunks used in the OPAC.
SITE	Site. Allows the DMS-100 switch to recognize the remote equipment tied to the host.
PMNODES	Peripheral module node table. Table Peripheral module nodes is read only, used by the CM to control XPM unit node tables. Table PMNODES is automatically datafilled when entries are added or changed in inventory tables. An entry will exist in table PMNODES for all subtending nodes of each XPM. Fields will be updated to reflect CM control of configuration data tables (CDT) in the XPM nodes.
LTCINV	Line Trunk Controller Inventory. Inventories various peripheral module (PM) types, excluding peripheral side (P-side) link assignments.
LTCPSINV	Line Trunk controller Remote P-Side Link Inventory. Identifies the module type and number and the port designation of the P-side links.
CARRMTC	Carrier Maintenance Control. Sets the maintenance and engineering parameters and characteristics for DS-1 carrier spans.
LCMINV	Line Concentrating Module Inventory. Lists data assignment for each frame associated with an LCM unit.
RMMINV	Remote Maintenance Module. Identifies an RMM by its location, product engineering code (PEC), PM load executive program, and central side (C-side) PM.
<p><b>Note 1:</b> Different versions of data schema forms are sometimes required for different table applications. See the corresponding data schema section for the appropriate form version.</p> <p><b>Note 2:</b> Additional data schema sections explain datafill for each required trunk group type.</p> <p><b>Note 3:</b> The data schema section depends on the version of office alarm equipment installed in the office.</p> <p><b>Note 4:</b> 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.</p>	

**Basic call processing** (continued)

**Datafill tables required for OPAC basic call processing (Sheet 2 of 4)**

<b>Table</b>	<b>Purpose of table</b>
REXSCHED	System REX scheduling of frequency and number of concurrent SREX tests. Used along with parameter NODEREXCONTROL in table OFCVAR to control the execution of all SREX testing. Tuples are automatically added to this table after inventory tables are datafilled.
<i>Subtable</i>	<i>Purpose of subtable</i>
LCASCRCN.LCASCRCR	Local Calling Area Screening Subtable. Assigns local calling area names to serving trunk group area codes.
<i>Table</i>	<i>Purpose of table</i>
TRKGRP	Trunk Group. Identifies the test circuits associated with the maintenance and test trunks.
TRKSGRP	Trunk Subgroup. Lists the supplementary information for each subgroup assigned to one of the trunk groups listed in table TRKGRP.
TRKMEM	Trunk Member. Identifies the circuits associated with the test equipment used to test lines and trunks.
CLLIMTCE	CLLI Maintenance. Lists the testing parameters for each CLLI trunk group.
ALMSCGRP	Alarm Scan Group. Lists alarm scan circuits and their locations and card types, and serves as a head table for the respective scan points.
ALMSC	Alarm Scan. Identifies the functions to be performed by each of the assigned scan points in the alarm scan groups.
ALMSDGRP	Lists alarm signal distribution (SD) circuits and their locations and card types, and serves as a head table for the respective SD points.
ALMSD	Identifies the function to be performed by each of the assigned SD points in the alarm SD groups.
DFINV	Distribution Frame Inventory. Identifies the location of distributing frames at the host or remote sites.
<p><b>Note 1:</b> Different versions of data schema forms are sometimes required for different table applications. See the corresponding data schema section for the appropriate form version.</p> <p><b>Note 2:</b> Additional data schema sections explain datafill for each required trunk group type.</p> <p><b>Note 3:</b> The data schema section depends on the version of office alarm equipment installed in the office.</p> <p><b>Note 4:</b> 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.</p>	

**Basic call processing** (continued)**Datafill tables required for OPAC basic call processing (Sheet 3 of 4)**

<b>Table</b>	<b>Purpose of table</b>
SCGRP	Scan Group. Lists the PEC and the physical location at the host or remote switching units for the scan groups reserved for use as scan points for line features.
SDGRP	Signal Distributor Group. Lists the PEC and the physical location at the host or remote switching units for the SD groups reserved for use as SD points for line features.
TOFCNAME	Terminating Office Name. Lists all terminating offices in the switch.
LINEATTR	Line Attribute. Assigns line attributes to regular lines in table LENLINES, Meridian stations, and attendant consoles in the MDC translations tables.
LNINV	Line Circuit Inventory. Retains an inventory of subscriber lines and associated line cards for the OPAC.
HUNTGRP (Notes 1-4)	Hunt Group. Stores the data for the hunt groups assigned in the switching unit.
LENLINES (Notes 1-4)	Line Assignment. Lists the following data for each line: <ul style="list-style-type: none"> <li>• site name, if the line is remote</li> <li>• line equipment number</li> <li>• specifies the party where the directory number is assigned</li> <li>• specifies the ringing code assigned to the directory lines</li> <li>• directory number</li> <li>• signal type</li> <li>• index into table LINEATTR</li> <li>• list of options</li> </ul>
LENFEAT (Notes 1-4)	Line Feature. Lists the features assigned to a specific line in table LENLINES.
<p><b>Note 1:</b> Different versions of data schema forms are sometimes required for different table applications. See the corresponding data schema section for the appropriate form version.</p> <p><b>Note 2:</b> Additional data schema sections explain datafill for each required trunk group type.</p> <p><b>Note 3:</b> The data schema section depends on the version of office alarm equipment installed in the office.</p> <p><b>Note 4:</b> 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.</p>	

## Basic call processing (continued)

### Datafill tables required for OPAC basic call processing (Sheet 4 of 4)

Table	Purpose of table
HUNTMEM (Notes 1-4)	Hunt Group Member. Lists the members assigned to the hunt groups listed in table HUNTGRP.
DNROUTE	Directory Number Route. HNPA Code. Lists information for writable directory numbers in the switch.
<i>Subtable</i>	<i>Purpose of subtable</i>
HNPACONT. HNPACODE	Lists the home numbering plan area (HNPA) subtables.
<i>Table</i>	<i>Purpose of table</i>
MTAMDRVE	Metallic Test Access Minibar Driver. Specifies the physical location and the type of the minibar driver assigned to the minibar switch.
MTAVERT	Metallic Test Access Vertical Connection. Identifies the vertical connectivity to the MTA matrix.
MTAHORIZ	Metallic Test Access Horizontal Connection. Lists the assignment to a horizontal or horizontal group of MTA minibars (MTAM).
<p><b>Note 1:</b> Different versions of data schema forms are sometimes required for different table applications. See the corresponding data schema section for the appropriate form version.</p> <p><b>Note 2:</b> Additional data schema sections explain datafill for each required trunk group type.</p> <p><b>Note 3:</b> The data schema section depends on the version of office alarm equipment installed in the office.</p> <p><b>Note 4:</b> 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.</p>	

## Data tables

This section provides the user with possible DMS-100 table entries in the datafill sequence required for implementation of the NTX146AA package.

### Datafill examples

Each possible table whose datafill is required for activation of the NTX146AA package is briefly described here. Sample tuples are provided as illustrations only.

For more information on tables, refer to the data schema section of this document.



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## Basic call processing (continued)

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Datafill for all tables may not be required, depending on actual office configuration and provisioning. The actual tuples for each table also depend on office configuration. Datafill needs are established at the installation of the OPAC.

The CONTMARK (continuation mark), where a plus sign (+) is used as a continuation mark, occurs in data tables when additional data for a subfield is indicated on the next record. A dollar sign (\$) is entered to end the vector.

### Datafilling table DATASIZE

Table DATASIZE ensures there is enough system memory to accommodate additional entries in tables CLLI, TRKGRP, TRKSGRP, SCGRP, and SDGRP, allowing the addition of OPAC maintenance facilities. The table is initially datafilled with default values for field sizes. To change a default value, use the REPLACE command.

*Note:* After the initial input of the size value for a given table, the SIZE field can only be changed by Northern Telecom.

### Datafill example for table DATASIZE

The following example shows sample datafill for table DATASIZE.

#### MAP display example for table DATASIZE

TABLE: DATASIZE	
DATSKEY	SIZE
CLLI	650
:	:
SCGRP	100
SDGRP	100
:	:
TRKGRP	500
TRKSGRP	500

### Datafilling table CLLI

Table CLLI (common language location identifier) uniquely identifies the hardware source of each tone, announcement, trunk group, test trunk, and service circuit in the DMS-100 switch.

## Basic call processing (continued)

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Additional entries may be required for RMM circuits, such as remote operator verification (REMOTEVER90) and remote test desk (REMOTETESTDK).

Some CLLI entries are created automatically when corresponding features are present in the DMS-100 switch and may already be present in table CLLI.

But if additional entries are not required for RMM circuits, the trunk group sizes for these entries (assigned in field TRKGRSIZ) should be checked to ensure that the RMM can be accommodated.

CLLI entries whose trunk group size may need to be checked are as follows:

- LTU—line test unit
- MONTALK—monitor/talk connection
- OAUSC—office alarm unit scan points
- OAUSD—office alarm unit SD points
- MTADRIVER—metallic test access driver

The total number of entries where memory is allocated in table CLLI is equal to the value of field SIZE in table DATASIZE for key CLLI.

The following table shows the datafill specific to Basic call processing for table CLLI. Only those fields that apply directly to Basic call processing are shown.

**Basic call processing** (continued)

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

**Datafilling table CLLI (Sheet 1 of 2)**

<b>Field</b>	<b>Subfield or refinement</b>	<b>Entry</b>	<b>Explanation and action</b>
CLLI		see subfields (up to 16 characters)	Common language location identifier. This sixteen-character field uniquely identifies the far end of each announcement, tone, trunk group, test trunk, national milliwatt test lines, and service circuit. The recommended subfields are PLACE, PROV, BLDG, TRAFUNIT, and SUFX.
	PLACE	alphanumeric	Place. This four-character code is used to identify the name of the city or town at the far end of each group.
	PROV	alphanumeric	Province or state. This two-character code identifies the province or state at the far end of the trunk group.
	BLDG	alphanumeric	Bldg. This two-character code identifies the building number at the far end of the trunk group.
	TRAFUNIT	alphanumeric	Traffic unit. This three-character code identifies the destination of the traffic unit at the far end of the trunk group.
	SUFX	alphanumeric	Suffix. This one-character code uniquely identifies trunk groups that terminate at the same CLLI location.
ADNUM		numeric	Administrative trunk group number. Enter a number from 0 through a number that is one less than the size of table CLLI shown in table DATASIZE. The value must be unique.
TRKGRPSIZ		0 to 2047	Trunk group size. This four-character field is equal to the maximum quantity of trunk members that are expected to be assigned to the trunk group.
<p><b>Note 1:</b> Memory is allocated by the SIZE field in table DATASIZE for the entry with field DATSKEY equal to CLLI.</p> <p><b>Note 2:</b> The maximum number of CLLI codes is 8192.</p>			

## Basic call processing (continued)

### Datafilling table CLLI (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
ADMININF		alphanumeric (up to 32 characters)	Administrative information. This 32-character field is used by the operating company to record administrative information. The information in this field is not used by the switching unit. The recommended subfields are TRAFCLS, OFFCLS, and TRKGRTYP.
	TRAFCLS	alphanumeric	Trunk group traffic class. This field is optional and is for administrative purposes only.
	OFFCLS	alphanumeric	Office class. This field is optional and is for administrative purposes only.
	TRKGRTYP	alphanumeric	Trunk group type. This field is optional and is for administrative purposes only.

**Note 1:** Memory is allocated by the SIZE field in table DATASIZE for the entry with field DATSKEY equal to CLLI.

**Note 2:** The maximum number of CLLI codes is 8192.

### Datafill example for table CLLI

The following example shows sample datafill for table CLLI.

### MAP display example for table CLLI

```

TABLE: CLLI
CLLI      ADNUM  TRKGRSIZ      ADMININF
-----
SYNCH      8      10              SYNCH/NONSYNCH
OFFHKSUP   9      10      SUPERVISION_SIGNAL_OFFHOOK
RSMVER90   23     10      REMOTE_SERVICE_MOD_VERIFICATION
OPMPES     78     198     OUTSIDE_PLANT_MODULE_PES
ALMSC      79     240              ALARM_SC
ALMSD      80     240              ALARM_SD
RLCMVER90  81      10      RLCM_REMOTE_VER_CKR
    
```

### Datafilling table SITE

Table SITE lists all node sites that depend on the DMS-100 switch and miscellaneous configuration information for each of these sites. The first entry

**Basic call processing** (continued)

in table SITE contains the site name for the host switching office, along with its operator verification trunk group (VER90).

The OPAC requires an entry in this table. The entry contains the remote site name for the OPAC, its operator verification trunk group (REMOTEVER90), and the three SD points assigned to critical, major, and minor alarms for the OPAC.

**Note:** This datafill reserves three of the seven SD points in one OPAC SD group. The four remaining SD points in this SD group cannot be assigned to lines for line features.

If there is more than one OPAC at each remote site, each OPAC should be given a different site name.

The following table shows the datafill specific to Basic call processing for table SITE. Only those fields that apply directly to Basic call processing are shown.

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

**Datafilling table SITE (Sheet 1 of 3)**

Field	Subfield or refinement	Entry	Explanation and action
NAME		alphanumeric (1 to 16 characters)	<p>Site name. Enter the site name assigned to the remote switching unit.</p> <p>The first character must be alphabetic. Site names may be up to four characters in length. PM type names cannot be used for site names.</p> <p><b>Note:</b> The first entry in this field is for the host switching unit.</p>
LTDSN		00 to 99	LEN test desk site number. Enter a unique two-digit number required to dial the site that appears under field NAME.
MODCOUNT		0	Module count. Enter 0. The value is automatically updated to reflect the number of LMs that are added to tables LMINV and LCMINV.
<p><b>Note 1:</b> Memory is automatically allocated for a maximum of 32 sites.</p> <p><b>Note 2:</b> The first entry in the NAME field is for the host switching unit.</p>			

**Basic call processing** (continued)

**Datafilling table SITE (Sheet 2 of 3)**

Field	Subfield or refinement	Entry	Explanation and action
OPVRCLLI		VER90 or alphanumeric	Operator verification CLLI. Enter the CLLI assigned to the operator verification trunk group at the remote location.
ALMDATA		see subfields	Alarm data. This field is for remote locations only and consists of subfields ALMTYPE, TMTYPE, TMNO, TMCKTNO, POINT.
	ALMTYPE	CR, MJ, MN, or NA	Alarm type. If the entry is for a remote location, enter the alarm type. Critical (CR), major (MJ), or minor (MN). If the entry is for the host switching unit, enter NA.
	TMTYPE	RMM, RSM or blank	Trunk module type. If the entry is for a remote location, enter the trunk module type, RSM or RMM, on which the miscellaneous SD point assigned to the alarm is located.
	TMNO	0 to 2047	Trunk module number. If the entry is for a remote location. Enter the number assigned to the RSM on which the miscellaneous SD point assigned to the alarm is located.
ALMDATA (continued)	TMCKTNO	0 to 29 or blank	Trunk module circuit number. If the entry is for a remote location, enter the TM circuit number of the RSM or RMM on which the miscellaneous SD point assigned to the alarm is located. If the entry is for the host switching unit, leave blank.
	POINT	0 to 7 or blank	Point. If the entry is for a remote location, enter the SD point number which is assigned to the alarm. If the entry is for the host switching unit, leave blank.
	TMCKTNO		Enter the trunk module circuit on the remote service module where the miscellaneous SD point assigned to the alarm is located. The range is 0-23.
<p><b>Note 1:</b> Memory is automatically allocated for a maximum of 32 sites.</p> <p><b>Note 2:</b> The first entry in the NAME field is for the host switching unit.</p>			

**Basic call processing** (continued)

**Datafilling table SITE (Sheet 3 of 3)**

Field	Subfield or refinement	Entry	Explanation and action
	POINT		Enter the SD point number within the trunk module circuit number, which is assigned to the alarm. The range is 0-6.
	CONTRMARK		Enter a plus sign (+) when additional data is specified on the next record. Enter a dollar sign (\$) when this record is the last record for the site.
<b>Note 1:</b> Memory is automatically allocated for a maximum of 32 sites.			
<b>Note 2:</b> The first entry in the NAME field is for the host switching unit.			

**Datafill example for table SITE**

The following example shows sample datafill for table SITE.

**MAP display example for table SITE**

```

TABLE: SITE

      NAME
LTDSN  MODCOUNT      OPVRCLLI      ALMDATA
      HOST
01          34          VER90
          RLCM0
02          2          RLCM0VER90
          RLCM1
03          2          RLCM1VER90
          RCR0
04          1          RCR0VER90
    
```

**Datafilling table PMNODES**

Table Peripheral module nodes (PMNODES) is read only, used by the CM to control XPM unit node tables. Table PMNODES is automatically datafilled when entries are added or changed in inventory tables. An entry will exist in table PMNODES for all subtending nodes of each XPM. Fields will be updated to reflect CM control of configuration data tables (CDT) in the XPM nodes. As nodes are deleted holes may appear in the table. These can not

**Basic call processing** (continued)

always be filled when a new node is added. Tuples in table PMNODES are managed so that all subtending nodes must have a higher index than their head node.

**Datafilling table PMNODES for RSC basic operation (Sheet 1 of 3)**

Field	Subfield or refinement	Entry	Explanation and action
TABKEY		0 to 4095 0 to 117	Table key. Two-part key, separated by a space, identifying the XPM where the unit node table is. The first part is host external node number. The second part is internal index number. Examples: The first key of an LTC with an external node number of 25 would be 25 1. The key of the first XPM attached to the LTC would be 25 2.
EXTNDNUM		0 to 4095	External node number. External number assigned by CM to the XPM identified in field TABKEY. Example: If the first XPM in the example above was an RCC with an external node of 33 the key of 25 2 would reference XPM external node 33 in the LTC node tuple. The RCC would also have a node tuple key of 33 1 to represent that node.
NODETYPE		see list	Node type of XPM. Generic type of PM node. Examples: LTC_NODE, RCC_NODE, LCM_NODE, and RCS_NODE.
PMTYPE		see list	PM type. Specific PM type assigned to the node. Examples: RCC, LCM, SMSR, and LTC.
LEVEL		0 to 15	PM level. The number of device levels the XPM node is separated from the messaging host. Begins at level 0 for messaging (head) XPMs. Examples: An LCM at level 2, attached to the RCC at level 1, which is attached to the HOST LTC at level 0. The same LCM would be at level 1 of the RCC tuple at level 0.
MSGHOST		0 to 4095	Messaging host. External node responsible for transferring messages to this node. A messaging host must be capable of transferring messages. Examples: LTC and RCC. Examples of XPMs not capable of being a messaging host are: RCU and SMSR.



**Basic call processing** (continued)**Datafilling table PMNODES for RSC basic operation (Sheet 2 of 3)**

<b>Field</b>	<b>Subfield or refinement</b>	<b>Entry</b>	<b>Explanation and action</b>
PHYSHOST		0 to 4095	Physical host. External node to which this XPM node is physically attached. Example: The LCME is physically attached to RCC at external node 33.
PORTS		0 to 127	Number of ports. Total number of P-side ports in the physical host required by this XPM node.
STPORT		0 to 255	Starting port. First P-side port in the physical host used by this XPM node.
TERMS		0 to 4095	Number of terminals. Total number of terminals in the physical host required by this XPM node.
STTERM		0 to 8675	Starting terminal. First terminal in the physical HOST used by this XPM node.
PROTOCOL		alphanumeric	Message protocol. Type of message protocol used by the physical host to node links. Examples: MDS30, MDMSX, MHDLC
MS		M or S	Master or slave. M if this node contains the master clock.
IPML		Y or N	Inter-peripheral message link (IPML). Y if this node is configured as part of an IPML.
MODE		T or P	Table entry mode. Entries in table are made by terminal (T) or port (P) indexing.
SLLCON		Y or N	Site line load control. Y if this node is at a site using Essential Line Service Protection (ESP) or other site line load control features.
NT6X28		N	Uses NT6X28 card. Y if this XPM uses the NT6X28 card. The NT6X28 signaling interface card is used on the International Digital Trunk Controller (IDTC). Always enter N.
LCMLGMEM		Y or N	LCM large memory. Y if this XPM is an LCM with large memory (256k bytes).
RSVPORTS		Y or N	Reserved ports. Y if this XPM has ports that are reserved for messaging.

## Basic call processing (continued)

### Datafilling table PMNODES for RSC basic operation (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
RSVTERMS		Y or N	Reserved terminals. Y if this XPM has terminals that are reserved for messaging.
MATENODE		Y or N	Mate node. Y if this node is part of a dual configuration.
PACKED		Y or N	Packed internal tables. Y if internal node tables are packed on this node. Prior to this feature the node table was compressed when the XPM was RTS with the NODATASYNC option. Compression will now only happen when both units of an XPM are taken out-of-service (OOS) and loaded by the CM.
SUPPCDT		Y Y	Support configuration data table (CDT). Y for each unit if CDT management is supported.
CMINCTRL		Y or N	CM node control. Y if the node is under CM control.

### Datafill example for table PMNODES

The following examples show datafill for an LTC node with an RCC node connected and an LCME connected to the RCC.

#### MAP display example for table PMNODES (LTC tuple)

```

Table: PMNODES

  TABKEY  EXTNDNUM  NODETYPE  PMTYPE  LEVEL  MSGHOST  PHYSHOST  PORTS
    25     1         25    LTC_NODE    LTC      0         25         25     16

STPORT  TERMS  STTERM  PROTOCOL  MS  IPML  MODE  SLLCON  NT6X28  LCMLGMEM  RSVPORTS
   0     641     1    MDS30A   S   N    P     N       N         N         N         Y

RSVTERMS  MATENODE  PACKED  SUPPCDT  CMINCTRL
          Y         N         Y         YY         Y
    
```

### Datafilling table LTCINV

Table LTCINV (line trunk controller inventory) contains all inventory data except P-side link assignment for the following PMs: LTC, LGC, digital trunk controller (DTC), Subscriber Carrier Module-100 Rural (SMR), Subscriber

**Basic call processing** (continued)

Carrier Module-100S (SMS), Subscriber Carrier Module-100 Urban (SMU), and International Digital Trunk Controller (IDTC).

Table LTCINV must contain an entry for the host controller that connects the OPAC to the DMS-100 network. Table LTCINV identifies the type and location of host controller peripheral equipment, its executive programs, and its C-side links between the host controller and the network.

The following table shows the datafill specific to Basic call processing for table LTCINV. Only those fields that apply directly to Basic call processing are shown.

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

**Datafilling table LTCINV (Sheet 1 of 3)**

Field	Subfield or refinement	Entry	Explanation and action
LTCNAME		see subfields	Line trunk controller name. Contains subfield XPMTYPE and XPMNO.
	XPMTYPE	LTC or LGC	XPM type. Enter LTC if trunking is to be supported. Enter LGC if lines only are to be supported.
	XPMNO	0 to 255	XPM number. The value range is 0 to 255.
FRTYPE		LTE or LGE	Frame type. Enter LTE for the LTC; enter LGE for the LGC.
FRNO		0 to 511	Frame number. Enter the frame number of the frame type on which the PM is mounted.
SHPOS		18, 32, 51, or 65.	Shelf position. Enter the shelf position where the PM is located.
FLOOR		0 to 99	Floor. Enter the floor on which the PM frame is to be located.
ROW		A to H, J to N, P to Z, AA to HH, JJ to NN, or PP to ZZ	Row. Enter the row on the floor where the PM equipment frame is located.
FRPOS		0 to 99	Frame position. Enter the bay position of the PM equipment frame.

**Basic call processing** (continued)

**Datafilling table LTCINV (Sheet 2 of 3)**

Field	Subfield or refinement	Entry	Explanation and action
EQPEC		6X02AG/AH	Product equipment code. Enter 6X02AG/AH for the LTC.
LOAD		alphanumeric (up to 8 characters)	Load. Enter the load the PM is to use. It should display a load listed table PMLOADS.
EXECTAB		see subfields	Executive table. Contains subfields TRMTYPE, EXEC, and CONTMARK. The terminal type and its associated execs are datafilled together.
	TRMTYPE	POTS, KSET, ABTRK, or RMM_TERM	Terminal type. Enter the type of terminal models to be used. POTS is for regular lines, KSET is for EBS terminals, ABTRK is for regular trunks, RMM_TERM is for MTC trunks.
	EXEC	alphanumeric	Executive programs. Enter the execs that are associated with the terminal type.
CSLNKTAB		see subfields	C-side link table. Contains subfields NMNO, NMPORT, and CONTMARK.
	NMPAIR	0 to 31	Network module pair number. Enter the network link on which the PM is assigned, corresponding to C-side links 0-15 of the PM.
	NMPORT	0 to 63	Network module port. Enter the network port corresponding to the above link.
OPTCARD			Optional card. This field is a vector which may have up to ten entries. Enter this when the LTC includes the UTR, TONE, and message card.  If the CMR card is included, enter the CMRLOAD. New values for this field include CMR5, UTR6, and UTR7.
TONASET		NORTHAM or NORTHAA	Tone set. Enter the name of the tone set for the switch being datafilled. For example, NORTHAM or NORTHAA for the ADSI-compliant tone set card (6X69AD).

**Basic call processing** (continued)

**Datafilling table LTCINV (Sheet 3 of 3)**

Field	Subfield or refinement	Entry	Explanation and action
PECS6X45		6X45 or MX77	6X45 equipment pecs. One PEC is required for each LTC unit. Enter the PEC for unit 0 first. The PEC must reflect the minimum firmware capabilities in the processor complex of each unit. For the LTC+, the value MX77 has been added.
E2LOAD		alphanumeric	EEPROM file. Contains the name of the loadfile that is loaded in the NTMX77AA EEPROM.
OPTATTR		leave blank	Optional attribute. Since this is not a DTC for CCS7, leave blank.
PEC6X40		6X40AA,AB, AC,BA,CA or FA	6X40 equipment PEC. Enter the version of the 6X40 to be used.

**Datafill example for table LTCINV**

The following example shows sample datafill for table LTCINV.

**MAP display example for table LTCINV**

```

TABLE: LTCINV

LTCNAME
  FRTYPE FRNO SHPOS FLOOR ROW FRPOS  EQPEC  LOAD
-----
                                EXECTAB
                                CSLNKTAB
                                OPTCARD
      TONESET  PECS6X45
                                E2LOAD          OPTATTR
PEC6X40
-----
LTC 0
  LGE      5      18      1  B      5  6X02AA NLT35ZI1
                                (POTS POTSEX) (RMM_TERM RSMEX)$
(9 17) (13 61) (5 14)(0 29)(1 30)(2 31)(3 28)(4 29)$
                                (MSG6X69)$
DEFAULT  6X45BA  6X45BA
                                NILLOAD          $
6X40AC
    
```

## Basic call processing (continued)

### Datafilling table LTCPSINV

Table LTCPSINV (line trunk controller P-side link inventory) contains the assignments of the P-side links for the LTC, DTC, LGC, SMR, SMS, SMU, and IDTC. The key for table LTCPSINV is the same as table LTCINV.

The list of links in table LTCPSINV should include the DS-1 links that connect the LTC and the OPAC.



#### CAUTION

##### Potential extended outage

Do not change the signaling format to B8ZS for OPAC C-side links until the NT6X51 LCM processors are upgraded to NT6X51DA. If you change the signaling format to B8ZS on links to the OPAC not provisioned with the NT6X51DA, you will not be able to restore service to the OPAC if it becomes SysB or ManB. A software reload will be required and the signaling format must be changed back to ZCS before you reload and RTS the OPAC.

The following table shows the datafill specific to Basic call processing for table LTCPSINV. Only those fields that apply directly to Basic call processing are shown.

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

#### Datafilling table LTCPSINV (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
LTCNAME			Line trunk controller name. This field contains subfields XPMTYPE and XPMNO.
	XPMTYPE		PM type. Enter the type of PM. This entry must match what is in LTCINV.
	XPMNO		PM number. Enter 0-127.
PSLNKTAB			P-side link table. This field comprises subfields PSLINK, PSDATA, CARRIDX, ACTION, and CONTMARK. Vector from 0-19.
<b>Note:</b> Memory is automatically allocated for a maximum of 128 tuples for table LTCPSINV.			

**Basic call processing** (continued)

**Datafilling table LTCPSINV (Sheet 2 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
	PSLINK	0 to 19	P-side link. Enter the P-side port number. The range is 0-19.
	PSDATA		P-side data. Enter DS-1 for links to remote nodes, in this case, the OPAC.
If PSDATA is DS-1, fill in fields CARRIDIX and ACTION.			
	CARRIDX		Carrier index. The default value is DEFAULT. The range is DEFAULT or NO_YELLOW_ALM. Enter the same value for the template name in table CARRMTC.
	ACTION		Action. Enter Y if the carrier should be removed from service when the out-of-service limit for frame, slip, errored-second, or severe errored-second is exceeded. Otherwise, enter N.
<b>Note:</b> Memory is automatically allocated for a maximum of 128 tuples for table LTCPSINV.			

**Datafill example for table LTCPSINV**

The following example shows sample datafill for table LTCPSINV.

## Basic call processing (continued)

### MAP display example for table LTCPSINV

```

TABLE: LTCPSINV
LTCNAME
                                PSLNKTAB
-----

LTC  0
(0 DS30A) (1 DS30A) (2 DS30A) (3 DS30A) (4 DS30A) (5 DS30A)
(6 DS30A) (7 DS30A) (8 DS30A) (9 DS30A) (10 DS30A) (11 DS30A)
(12 DS30A) (13 DS30A) (14 DS30A) (15 DS30A) (16 DS30A)
(17 DS30A) (18 DS30A) (19 DS30A) $

LTC  1
(0 DS1) (1 DS1) (2 DS1) (3 DS1) (4 DS1) (5 DS1) (6 DS1)
(7 DS1) (8 DS1) (9 DS1) (10 NILTYPE) (11 NILTYPE) (12 NILTYPE)
(13 NILTYPE) (14 NILTYPE) (15 NILTYPE) (16 NILTYPE) (17 NILTYPE)
(18 NILTYPE) (19 NILTYPE) $

LGC  2
(0 DS30A) (1 DS30A) (2 DS1) (3 DS1) (4 NILTYPE) (5 NILTYPE)
(6 DS30A) (7 DS30A) (8 DS1) (9 DS1) (10 NILTYPE) (11 NILTYPE)
(12 NILTYPE) (13 NILTYPE) (14 NILTYPE) (15 NILTYPE)
(16 NILTYPE) (17 NILTYPE) (18 NILTYPE) (19 NILTYPE) $

DTC  0
(0 DS1) (1 DS1) (2 DS1) (3 DS1) (4 DS1) (5 DS1) (6 DS1) $

```

### Datafilling table CARRMTC

Table CARRMTC (carrier maintenance control) allows the DMS-100 switch administration to datafill maintenance control information in peripherals, out-of-service limits for alarms, and system return-to-service occurrences.

Up to 16 entries exist for each type of peripheral that can provide carrier links in the switch. The choice of entries for each carrier is datafilled in the inventory table of the C-side peripheral, table LTCPSINV.

The following checks are made between table CARRMTC and table LTCPSINV:

- When a carrier index (CARRIDX) is datafilled in table LTCPSINV, an entry for the PM type, in this case, remote cluster controller (RCC) and LTC, must already be present in table CARRMTC.
- When an entry is deleted from table CARRMTC, that entry cannot be referenced by any carriers in table LTCPSINV. Otherwise, the deletion command is rejected.
- When an existing entry in table CARRMTC is changed, table LTCPSINV is checked to determine if that entry is referenced by in-service carriers. If



**Basic call processing** (continued)

so, the change command is rejected and a list of the in-service carriers is displayed.

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

**Datafilling table CARRMTC (Sheet 1 of 3)**

Field	Subfield or refinement	Entry	Explanation and action
CSPMTYPE			C-side node PM type. Enter the PM type of the node on the C-side of the carrier link.
TMPLTNM		alphanumeric (up to 16 characters)	Template name. Enter the template name (up to 16 characters) for the PM. This entry also appears in the CARRIDX field of table LTCPSINV. The default value is DEFAULT.
RTSML		0 to 255	Return to service maintenance limit. Enter the number of times, within the audit interval, a carrier may be returned to service by the system before a warning is issued. Value 255 disables this feature. The range is 0-255.
RTSOL		0 to 255	Return to service out of service limit. Enter the number of times, within the audit interval, a carrier may be returned to service by the system before the carrier is placed permanently out of service. Value 255 disables this feature. The range is 0-55.
ATTR		see subfield	Attribute. This field comprises subfield SELECTOR.
<p><b>Note 1:</b> The DMS-100 switch adds the first tuple for RCC (or LTC or LGC) to table CARRMTC automatically during initial program load (IPL) or first restart after IPL. The entry is designated as index 0 and has the value DEFAULT in the TMPLTNM field and default values for the other fields. This tuple cannot be deleted, and only fields ES, SES, and thresholds for frame and slip losses can be changed.</p> <p><b>Note 2:</b> Tuples other than the default tuple must be added manually before they can be referenced in table LTCPSINV. These tuples can be deleted only if no DS-1 carriers are associated with them.</p> <p><b>Note 3:</b> Tuples can be changed in table CARRMTC only if the associated DS-1 carriers are ManB or OffL.</p>			

**Basic call processing** (continued)

**Datafilling table CARRMTC (Sheet 2 of 3)**

Field	Subfield or refinement	Entry	Explanation and action
	SELECTOR	DS1	Selector. Enter carrier type DS-1. If the entry for subfield SELECTOR is DS1, datafill subfield CARD.
LCGAST			Local carrier group alarm set threshold. Enter the threshold value in units of 10 ms. The range is 1-9999.
LCGACL			Local carrier group alarm clear threshold. Enter the threshold value in units of 10 ms. The range is 1-9999.
RCGAST			Remote carrier group alarm set threshold. Enter the threshold value in units of 10 ms. The range is 1-9999.
RCGACL			Remote carrier group alarm clear threshold. Enter the threshold value in units of 10 ms. The range is 1-9999.
AISST			Alarm indication signal set threshold. Enter the threshold value in units of 10 ms. The range is 1-9999.
AISCL			Alarm indication signal clear threshold. Enter the threshold value in units of 10 ms. The range is 1-9999.
BEROL			Bit error rate out of service limit. Enter the bit error rate out-of-service limit expressed as the negative of the exponent of 10 (10E-n). Three, for example, represents 1 in 1000 bit error rate. The range is 1-6.
<p><b>Note 1:</b> The DMS-100 switch adds the first tuple for RCC (or LTC or LGC) to table CARRMTC automatically during initial program load (IPL) or first restart after IPL. The entry is designated as index 0 and has the value DEFAULT in the TMPLTNM field and default values for the other fields. This tuple cannot be deleted, and only fields ES, SES, and thresholds for frame and slip losses can be changed.</p> <p><b>Note 2:</b> Tuples other than the default tuple must be added manually before they can be referenced in table LTCPSINV. These tuples can be deleted only if no DS-1 carriers are associated with them.</p> <p><b>Note 3:</b> Tuples can be changed in table CARRMTC only if the associated DS-1 carriers are ManB or OffL.</p>			

**Basic call processing** (continued)

**Datafilling table CARRMTC (Sheet 3 of 3)**

Field	Subfield or refinement	Entry	Explanation and action
BERML			Bit error rate maintenance limit. Enter the bit error rate maintenance limit expressed as the negative of the exponent of 10 (10E-n). The range is 4-7.
ES			Error second threshold. Enter the threshold value in units of 10 ms. The range is 0-9999.
SES			Severe error second threshold. Enter the threshold value in units of 10 ms. The range is 0-9999.
FRAMEML			Frame maintenance limit. Enter the maintenance limit for frame loss. The range is 0-9999.
FRAMEOL			Frame loss limit. Enter the out-of-service limit for frame loss. Note that FRAMEOL should be larger than FRAMEML. The range is 0-9999.
SLIPML			Slip maintenance limit. Enter the maintenance limit for slip. The range is 0-9999.
SLIPOL			Slip out of service limit. Enter the out-of-service limit for slip. Note that SLIPOL should be larger than SLIPML. The range is 0-9999.
<p><b>Note 1:</b> The DMS-100 switch adds the first tuple for RCC (or LTC or LGC) to table CARRMTC automatically during initial program load (IPL) or first restart after IPL. The entry is designated as index 0 and has the value DEFAULT in the TMPLTNM field and default values for the other fields. This tuple cannot be deleted, and only fields ES, SES, and thresholds for frame and slip losses can be changed.</p> <p><b>Note 2:</b> Tuples other than the default tuple must be added manually before they can be referenced in table LTCPSINV. These tuples can be deleted only if no DS-1 carriers are associated with them.</p> <p><b>Note 3:</b> Tuples can be changed in table CARRMTC only if the associated DS-1 carriers are ManB or OffL.</p>			

**Datafill example for table CARRMTC**

The following example shows sample datafill for table CARRMTC.

## Basic call processing (continued)

### MAP display example for table CARRMTC

CSPMTYPE	TMPLTNM	RTSML	RTSOL	ATTR			
RCC	DEFAULT	255	255	DS1	NT6X50AA	MU_LAW	SF
				ZCS	BPV	NILDL	Y 100
				300	50	50	150 1000 3 6
				864	100	17	511 4 255

### Datafilling table LCMINV

Table LCMINV (line concentrating module inventory) lists the data assignment for each frame associated with a local or remote LCM unit. This table should include one entry for each OPAC. Only fields requiring datafill specific to this feature are shown.

Table LCMINV associates the site name provided in table SITE with the location of the OPAC, its PM software, ringing data, C-side links, and provisionable options (any additional OPAC feature packages).

**Note 1:** The C-side links datafilled for the OPAC in table LCMINV must correspond to those datafilled for the host LGC/LTC in table LTCPSINV.

**Note 2:** Option RMM of field LCMINFO should be set to Y, therefore, table RMMINV must be datafilled also.

The field BICTST provides a boolean indication of whether a particular OPAC is to be included in the test schedule.

The following table shows the datafill specific to Basic call processing for table LCMINV. Only those fields that apply directly to Basic call processing are shown.

**Basic call processing** (continued)

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

**Datafilling table LCMINV**

Field	Subfield or refinement	Entry	Explanation and action
LCMNM	SITE	alphanumeric	Site. Enter the site name assigned to the remote location.
CSPMNO		0 to 99	C-side PM number. Enter a number for the PM that is connected to the C-side of the OPAC.
BICTST		Y or N	BIC relay test (BRT). Set to Y (yes) to include the LCM in the next LCM BRT schedule. Entry values are Y and N. See instructions for the MEMSIZE field.
MEMSIZE		256 k or 64k	Memory size. Enter the memory size of the processor card used in the LCM. Entry values are 256k and 64k. The MEMSIZE field must be set to 256k if BICTST is set to Y. If MEMSIZE is set to 64k, BICTST must be set to N.

**Note:** When datafilling fields link information (LNKINFO) or link map (LNKMAP), assure message links are not assigned to the same physical interface card. When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This applies to all interface link types; DS-1, DS30, DS30A, or PCM-30. Table control will issue a warning if an attempt is made to assign message links on the same interface card. Assigning message links to the same interface card can cause an E1 outage (failure of all message links) if the card fails.

**Datafill example for table LCMINV**

The following example shows sample datafill for table LCMINV.

**MAP display example for table LCMINV**

```

TABLE: LCMINV

      LCMNM  FRTYPE SHPOS FLOOR ROW FRPOS  EQPEC  LOAD
CSPMNO  BICTST  ADNUM  MEMSIZE

                                     LCMTYPE
-----
REM3    02 0  RLCM   0    1    A 0    6X04AA  LCM19I
LGC     0  Y   142  256K  $ 48V  RLCM
        ( 2) ( 6) ( 3) ( 7) $  Y N N          6X50AA
    
```

**Basic call processing** (continued)

**Datafilling table RMMINV**

Table RMMINV (remote maintenance module inventory) identifies an RMM by OPAC or RSC site including the physical location, equipment product engineering code, PM load, executive program, and attached C-side PM.

The following table shows the datafill specific to Basic call processing for table RMMINV. Only those fields that apply directly to Basic call processing are shown.

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

**Datafilling table RMMINV (Sheet 1 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
RMMNAME		alphanumeric	RMM name. Enter the name for the RMM. Contains subfields SITENM, PMTYPE, and RMMNO.
	SITENM	alphanumeric	Site. Enter the site name assigned to the remote location.
	PMTYPE	RMM	PM type. Enter RMM.
	RMMNO	0 to 63	RMM number. This number is unique by office and not by site.
FRTYPE		RLCM	Frame type. For the OPAC, enter RLCM.
Enter the location of the OPAC in fields FRNO, SHPOS, FLOOR, ROW, and FRPOS.			
EQPEC			Equipment PEC. Enter 6X13Ab for a regular RMM.
LOAD			Load. Enter the load for the RMM. Ensure that table PMLOADS contains this table.
EXECS		RSMEX	Executive programs. Enter the appropriate execs. For the RMM, the exec would be RSMEX.
CSPMINFO			C-side PM information. Contains subfields RMMSELECTOR, CSIDEPM, and CSIDPORT.
	RMMSELECT OR		RMM selector. Enter the type of module where the RMM is located, either RMMLCM or RMMRCC.

**Basic call processing** (continued)

**Datafilling table RMMINV (Sheet 2 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
	CSIDEPM	see subfields	C-side PM. Contains subfields PMT and EXTPMNO.
	PMT		PM type. Based on the value in field RMMSELECTOR.
	EXTPMNO	0 to 63	External PM number. Enter the external PM number where the RMM is attached.
	CSIDPORT	0 or 1	C-side port. Enter the C-side port connected to the RMM.

**Datafill example for table RMMINV**

The following example shows sample datafill for table RMMINV.

**MAP display example for table RMMINV**

```

TABLE: RMMINV

RMMNAME FRTYPE FRNO SHPOS FLOOR ROW FRPOS EQPEC
LOAD EXECS
          CSPMINFO
-----
REM3 RMM 0 RLCM 0 56 1 A 1 6X13AB RMM35B
RSMEX
RMMLCM LCM 0
    
```

**Datafilling table REXSCHED**

Table routine exercise schedule (REXSCHED) contains the SREX test scheduling information required by the REX controller.

**Basic call processing** (continued)

The following table shows the datafill specific to LCM REX testing. Only those fields that apply directly to LCM REX are shown. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

**Datafilling table REXSCHED for OPAC basic operation**

Field	Subfield or refinement	Entry	Explanation and action
REXTSTID		see subfield	REX tests identification. Contains subfield REX_TEST_ID
	REX_TEST_ID	see list	REX test ID. REX test identifiers are defined automatically by the system when inventory tables are datafilled. Examples: MS_REX_TEST, CM_REX_TEST, SLM_REX_TEST, LGC_REX_TEXT, MSB_REX_TEST, LCM_REX_TEST, and LCMCOV_REX_TEST.
ENABLE		Y or N	Enable REX test. Enable test schedule for specific REX identifier. Default: Y
PERIOD		1 to 7 inclusive	Minimum number of days between consecutive REX schedules. Each REX test must be run at least once a week. Default: 1 (run REX every day).
PARALLEL		1 to 99	Number of specific REX tests running parallel. Limit of concurrent REX tests running for a node type. For LCM_REX, the maximum concurrent tests that can be run is 4. For LCMCOV_REX tests, the availability of only one line test unit (LTU) in an LCM requires a maximum of 1. Default: 1.
DAYSDBL		see list	Days to disable REX testing. A list of days when REX testing will be disabled. values: MON, TUE, WED, THU, FRI, SAT, SUN, ALL or NONE. Each REX test must run at least once a week. The ALL option is included to suspend a REX test to facilitate system maintenance. Default: none.
<b>Note:</b> The LCMCOV_REX_TEST is performed only on LCMs, XLCMs, OPMs, OPACs, and RLCMs.			

**Datafill example for table REXSCHED**

The following example shows sample datafill for table REXSCHED.



**Basic call processing** (continued)**MAP display example for table REXSCHED**

Table: REXSCHED

REXTSTID	ENABLE	PERIOD	PARALLEL	DAYSDBL
MS_REX_TEST	Y	1	1	NONE
CM_REX_TEST	Y	1	1	NONE
SLM_REX_TEST	Y	1	1	NONE
LGC_REX_TEST	Y	1	1	NONE
MSB_REX_TEST	Y	1	1	NONE
LCM_REX_TEST	Y	1	4	NONE
LCMCOV_REX_TEST	Y	1	1	NONE

**Datafilling subtable LCASCRCN.LCASCRCN**

Subtable LCASCRCN (local calling area screening) maps numbering plan areas (NPA) geographically against trunk groups in the DMS-100 switch for billing purposes. Subtable LCASCRCN (expansion) is one of two subtables controlled by the local calling area screening control table (LCASCRCN).

Control table LCASCRCN assigns selected local calling area names to serving trunk group area codes. Each trunk group area code, along with its assigned name, represents a key in subtable LCASCRCN. This subtable is accessed from within table LCASCRCN, using the command SUB LCASCRCN.

Each key in subtable LCASCRCN is assigned ranges of local area codes, or NPA, assigned to that trunk group. Any NPA served by the OPAC should be assigned to such a trunk group, defined in table LCASCRCN. These assignments are made in subtable LCASCRCN.LCASCRCN.

**Datafill example for subtable LCASCRCN.LCASCRCN**

The following example shows sample datafill for subtable LCASCRCN.LCASCRCN.

---

## Basic call processing (continued)

---

### MAP display example for subtable LCASCRCN.LCASCRCN

TABLE: LCASCRCN		
POS 904 FLA1; SUB LCASCRCN; LIST		
FROMDIGS	TODIGS	
30	5	305
81	3	813
91	2	912

### Datavfilling table TRKGRP

Table TRKGRP (trunk group) defines data for each trunk group associated with the switching unit. Each trunk group entry in table TRKGRP consists of a unique CLLI for the trunk group and several fields determined by the trunk group type (field GRPTYP).

Any incoming or outgoing test trunk card (NT2X90AD) provisioned in the RMM should be listed in table TRKGRP as REMOTETESTDK or REMOTEVER90. The following example shows a sample datavfill for table TRKGRP.

**Note 1:** The total number of trunk groups where memory is allocated in table TRKGRP is equal to the value of field SIZE in table DATASIZE for key TRKGRP.

**Note 2:** Each trunk group in table TRKGRP is to be assigned one or two subgroups defined in table TRKSGRP.

**Note 3:** The physical location of all analog or digital trunks assigned to the trunk groups in table TRKGRP are listed in table TRKMEM.

The following table shows the datavfill specific to Basic call processing for table TRKGRP. Only those fields that apply directly to Basic call processing are shown.

**Basic call processing** (continued)

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

**Datafilling table TRKGRP**

Field	Subfield or refinement	Entry	Explanation and action
GRPKEY		see subfields	Group key. Consists of subfield CLLI
	CLLI	alphanumeric	Common language location identifier. Enter code assigned in the CLLI table to the subgroup's trunk group.
GRPINFO		see subfields	Variable group data. When the trunk group type is MAINT, consists of subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, and CARD.
	GRPTYP	ITL2, TTL2, LOOPA, MAINT, SOCKT	Group type. Enter the group type for the trunk group.
	TRAFSNO	0 to 127	Traffic separation number. Not required for maintenance and test trunks. Enter 0.
	PADGRP	alphanumeric	Pad group. Enter the name of the pad group assigned to the trunk group in table PADDATA. For maintenance and test trunks, enter IAO (intraoffice trunks).
	NCCLS	NCRT	No circuit class.
	CARD	alphanumeric	Card code. Enter the PEC of the maintenance and test trunk.
<p><b>Note 1:</b> Table TRKGRP has up to 2,047 trunk groups. The actual number is restricted by the number of CLLIs available to name the trunk groups.</p> <p><b>Note 2:</b> The set of trunk group types available in a specific office is a function of the hardware and software features and feature packages provided for the office by the operating company.</p>			

**Datafill example for table TRKGRP**

The following example shows sample datafill for table TRKGRP.

**Basic call processing** (continued)

**MAP display example for table TRKGRP**

TABLE: TRKGRP							
GRPKEY				GRPINFO			
VER90	MAINT	0	NPDGP NCRT	2X90AB			
TTT	MAINT	0	IAONCRT	2X96AA			
TTU	MAINT	0	IAONCRT	2X47AA			
LTU	MAINT	0	IAONCRT	2X11AA			
RLCMVER90	VR	0	TLDNCRT	VR			
OG_1	TO	0	TLD NCRT	IE MIDL	7	N	
OG_2	TO	0	TLD NCRT	IE MIDL	4	N	
OG_3	TO	0	TLD NCRT	IE MIDL	4	N	
OG_4	TO	0	TLD NCRT	IE MIDL	4	N	
OG_5	TO	0	TLD NCRT	IE MIDL	4	N	
OG_6	TO	0	TLD NCRT	IE MIDL	4	N	

**Datafilling table TRKSGRP**

Table TRKSGRP (trunk subgroup) lists supplementary information for each subgroup assigned to trunk groups listed in table TRKGRP. Input data must be specified for at least one or a maximum of two subgroups for each trunk group, listed in table TRKGRP, excluding trunk groups defined in TRKGRP as a maintenance group type (MAINT). No data is required in the trunk subgroup table for the MAINT trunk group type.

Each REMOTETESTDK or REMOTEVER90 provisioned in the RMM of the OPAC should be assigned a corresponding subgroup in this table.

**Note:** The total number of trunk groups where memory is allocated in table TRKSGRP is equal to the value of field SIZE in table DATASIZE for key TRKSGRP.

The following table shows the datafill specific to Basic call processing for table TRKSGRP. Only those fields that apply directly to Basic call processing are shown.

**Basic call processing** (continued)

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

**Datafilling table TRKSGRP (Sheet 1 of 3)**

Field	Subfield or refinement	Entry	Explanation and action
SGRPKEY		see subfields	Subgroup key. Consists of subfields CLLI and SGRP.
	CLLI	alphanumeric	Common language location identifier. Enter code assigned in table CLLI to the subgroup's trunk group.
	SGRP	0 or 1	Subgroup number. Enter the number assigned to the trunk subgroup.
CARDCODE		alphanumeric	Card code. Enter the PEC of the maintenance and test trunk.
SGRPVAR		see subfields	Variable subgroup data. For standard signaling, consists of the following subfields: SIGDATA, DIR, OPULSTYP, OSTARTSG, IDGTIME, NUMSTOPS, CCONT, RNGBCK, ESUPR, SAT, REMBSY, DIALMODE, TRKGDTIM.
	SIGDATA	STD	Signaling data. Enter the signaling code (STD for standard signaling).
	DIR	IC, OG, or 2W	Direction. Enter trunk group direction, incoming (IC), outgoing (OG), or two-way (2W).
	OPULSTYP	DP, DT, MF, MFC, NP, RP, or blank	Outgoing type of pulsing. Leave blank if trunk is incoming. (Notes 1-5)
<p><b>Note 1:</b> If the code is TERM102T, subfields OPULSTYP and OSTARTSG are equal to MF and WK respectively.</p> <p><b>Note 2:</b> If the code is SOCKT, subfield OSTARTSG is equal to IM.</p> <p><b>Note 3:</b> Memory is allocated for the number of trunk subgroups by the SIZE field in table DATASIZE for the entry with field DATSKEY equal to TRKSGRP.</p> <p><b>Note 4:</b> The number of trunk subgroups is equal to twice the number of trunk groups.</p> <p><b>Note 5:</b> The maximum number of trunk subgroups that can be assigned is 4,096.</p>			

**Basic call processing** (continued)

Datafilling table TRKSGRP (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
	OSTARTSG	DD, IM, GO, GS, LO, LS, SZ, WK, XD, or blank	Outgoing start dial signal. If the trunk is outgoing or two-way and the outgoing pulse type is DP, MF, or DT, enter the type of start dial signal required. Leave subfield blank if trunk group is incoming. (Notes 1 and 2)
	IDGTIME	0 to 100, or blank	Interdigital timing. For maintenance and test trunks, enter 2.
	NUMSTOPS	0 to 3, or blank	Number of stop/goes. For maintenance and test trunks, enter 0.
	GLAREYD	Y or N, or blank	Yield to glare. If the trunk group is two-way and the trunk subgroup is to yield to glare, enter Y. Otherwise enter N. Leave blank if the trunk group is incoming or outgoing.
	CCONT	EI, IB, LN, MW, TR, 3W, or NO	Coin control. If the trunk subgroup is arranged for coin control, enter the type of coin control required.
	RNGBCK	C6, C7_RING, EI, IB, LN, MW, SX, WK, or NO	Ringback. If the trunk subgroup is arranged for ring back signal, enter the type of ring back signal required.
	ESUPR	F, H, or N	Echo suppressor. For maintenance and test trunks, enter N (no echo suppressor).
	SAT	Y or N	Satellite. If the trunk subgroup is arranged to switch by satellite, enter Y. For maintenance and test trunks, enter N (no satellite).

**Note 1:** If the code is TERM102T, subfields OPULSTYP and OSTARTSG are equal to MF and WK respectively.

**Note 2:** If the code is SOCKT, subfield OSTARTSG is equal to IM.

**Note 3:** Memory is allocated for the number of trunk subgroups by the SIZE field in table DATASIZE for the entry with field DATSKEY equal to TRKSGRP.

**Note 4:** The number of trunk subgroups is equal to twice the number of trunk groups.

**Note 5:** The maximum number of trunk subgroups that can be assigned is 4,096.

**Basic call processing** (continued)**Datafilling table TRKSGRP (Sheet 3 of 3)**

<b>Field</b>	<b>Subfield or refinement</b>	<b>Entry</b>	<b>Explanation and action</b>
	REMBSY	Y or N	Remote make busy. Enter Y if the trunk subgroup is assigned the Remote Make Busy feature. Otherwise, enter N.
	DIALMODE	C, M, or blank	Dial mode. If the trunk subgroup is incoming or two-way, enter C if digits originate from a customer. Otherwise, enter M if the incoming digits are machine produced. For maintenance and test trunks, this subfield is blank.
	TRKGDTIM	1 to 255, or blank	Trunk guard timing. If the trunk group is outgoing or two-way, enter the time, in 10 ms intervals, that the trunk waits, after sending on hook signal to the far end, before putting the trunk in idle queue.  For maintenance and test trunks, enter 16 (160 ms elapsed time interval before the trunk returns to the idle link list after trunk disconnect).
<p><b>Note 1:</b> If the code is TERM102T, subfields OPULSTYP and OSTARTSG are equal to MF and WK respectively.</p> <p><b>Note 2:</b> If the code is SOCKT, subfield OSTARTSG is equal to IM.</p> <p><b>Note 3:</b> Memory is allocated for the number of trunk subgroups by the SIZE field in table DATASIZE for the entry with field DATSKEY equal to TRKSGRP.</p> <p><b>Note 4:</b> The number of trunk subgroups is equal to twice the number of trunk groups.</p> <p><b>Note 5:</b> The maximum number of trunk subgroups that can be assigned is 4,096.</p>			

**Datafill example for table TRKSGRP**

The following example shows sample datafill for table TRKSGRP.

**Basic call processing** (continued)

**MAP display example for table TRKSGRP**

TABLE: TRKSGRP													
SGRPKEY	CARDCODE	SGRPVAR											
VER90 0	2X90AB	STD	OG	NP	WK	0	0	NO	NO	F	N	N	17
TTT 0	2X96AA	STD	OG	NP	WK	0	0	NO	NO	F	N	N	17
TTU 0	2X47AA	STD	OG	NP	WK	0	0	NO	NO	F	N	N	17
LTU 0	2X11AA	STD	OG	NP	WK	0	0	NO	NO	F	N	N	17
RLCMVER90	2X90AB	STD	OG	NP	WK	0	0	NO	NO	F	N	N	17
OG_1	DS1SIG	STD	OG	DP	IM	70	0	NO	NO	N	N	N	70

**Datafilling table TRKMEM**

Table TRKMEM (trunk member) lists data associated with each analog or digital trunk assigned to one of the trunk groups, and subgroups in tables TRKGRP and TRKSGRP. The following example shows a sample datafill for table TRKMEM.

Entries should be included for each circuit provisioned in the RMM.

**Note 1:** No external trunk numbers (field EXTRKNM) should be duplicated in assigning these RMM circuits to existing CLLI (LTU and MONTALK).

**Note 2:** The PMTYPE should be RMM for analog OPAC RMM circuits listed in table TRKMEM.

The following table shows the datafill specific to Basic call processing for table TRKMEM. Only those fields that apply directly to Basic call processing are shown.



**Basic call processing** (continued)

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

**Datafilling table TRKMEM**

Field	Subfield or refinement	Entry	Explanation and action
CLLI		alphanumeric (1 to 16 characters)	Common language location identifier. Enter the code assigned in table CLLI to the trunk group of which the trunk is a member.
EXTRKNM		0 to 9999	External trunk number. Enter the external trunk number assigned to the trunk.
SGRP		0 or 1	Subgroup number. Enter the subgroup number where the trunk is assigned.
MEMVAR		see subfields	Variable data for members. For SMS-R/RCS, consists of subfields PMTYPE, TMNO, and TMCKTNO.
	PMTYPE	alphanumeric	PM type. Enter the PM type where the trunk is mounted.
	TMNO	0 to 2047	Trunk module number. Enter the number assigned to the trunk module where the trunk group member is assigned.
	TMCKTNO	0 to 29	Trunk module circuit number. Enter the trunk module circuit number where the trunk group member is assigned.
<p><b>Note 1:</b> Memory is allocated for the total number of trunks specified in field TRKGRSIZ in table CLLI for the appropriate trunk groups.</p> <p><b>Note 2:</b> Table size can be increased with data present by changing field TRKGRSIZ in table CLLI for the appropriate trunk groups.</p>			

**Datafill example for table TRKMEM**

The following example shows sample datafill for table TRKMEM.

## Basic call processing (continued)

### MAP display example for table TRKMEM

TABLE: TRKMEM			
CLLI	EXTRKNM	SGRP	MEMVAR
RLCMVER90	0	0	RMM 2 4

### Datafilling table CLLIMTCE

Table CLLIMTCE (common language location identifier maintenance) lists the following information for each trunk group CLLI:

- abbreviated CLLI code for use by maintenance staff
- percentage of service circuits that can be removed before specific alarms are displayed
- type of test equipment at the far end
- index to test line control
- index to milliwatt data table
- signaling test runs after diagnostic test
- additional digits to be prefixed, in addition to the four digits of the test line number subtable

### Datafill example for table CLLIMTCE

The following example shows sample datafill for table CLLIMTCE.

### MAP display example for table CLLIMTCE

TABLE: CLLIMTCE						
CLLI	SCLLI	MINALM	MAJALM	CRITALM	SYNCTYPE	TSTNOIND
MWIDX	SIGTST	PRFXDIGS	DIAGDATA			
OTWANON23CG00	0COESS	10	5	50	SYN	0
0	Y	N ( 0 )				

### Datafilling table ALMSCGRP

Table ALMSCGRP (alarm scan group) lists DMS-100 alarm scan circuits (alarm sensors), their locations, and their card types. If the RMM shelf

**Basic call processing** (continued)

contains a miscellaneous scan card (NT0X10AA), it should be listed in table ALMSCGRP.

The following table shows the datafill specific to Basic call processing for table ALMSCGRP. Only those fields that apply directly to Basic call processing are shown.

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

**Datafilling table ALMSCGRP**

<b>Field</b>	<b>Subfield or refinement</b>	<b>Entry</b>	<b>Explanation and action</b>
SCGROUP		0 to 255	Scan group. Enter the scan group number.
TMTYPE		ATM, CTM, DTM, ISM, MTM, OAU, RMM, RSM, TM8	Trunk module type. Enter the type of trunk module where the circuit is mounted.
TMNO		0 to 2047	Trunk module number. Enter the number of the trunk module where the circuit is mounted. If TMTYPE is OAU, enter 0.
TMCKTNO		0 to 29	Trunk module circuit number. Enter the trunk module circuit number where the circuit is assigned.
CARDCODE		3X82AA, 3X82AB, 3X83AA, 3X84AA, 3X85AA, 0X10AA	Product engineering code. Enter the PEC of the alarm card.

**Datafill example for table ALMSCGRP**

The following example shows sample datafill for table ALMSCGRP.

**Basic call processing** (continued)

**MAP display example for table ALMSCGRP**

TABLE :		ALMSCGRP			
SCGROUP	TMTYPE	TMNO	TMCKTNO	CARDCODE	
0	MTM	1	1	3X82AA	
1	MTM	3	1	3X82AA	
2	MTM	1	7	3X84AA	
3	MTM	1	10	0X10AA	
.			.	.	
.			.	.	
.			.	.	
15	RSM	1	7	0X10AA	
.	.	.	.	.	
.	.	.	.	.	
20	RMM	0	10	0X10AA	
21	RMM	0	11	0X10AA	

**Datafilling table ALMSC**

Table ALMSC (alarm scan) identifies the function of the assigned scan points in the alarm scan groups. The scan points for the OPAC should be listed and assigned to scan groups in table ALMSC. Scan groups are defined in table SCGRP.

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

**Datafilling table ALMSC (Sheet 1 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
FUNCTION		alphanumeric (up to 16 characters)	Function. Enter the alarm function.
SCGROUP		0 to 255	Scan group. Enter the scan group number where the scan point belongs.
POINT		0 to 6	Scan point. Enter the scan point number within the scan group.

**Basic call processing** (continued)**Datafilling table ALMSC (Sheet 2 of 2)**

<b>Field</b>	<b>Subfield or refinement</b>	<b>Entry</b>	<b>Explanation and action</b>
NORMALST		0 to 1	Normal state. Enter the normal state of the scan point. Enter 0 if the scan point is normally off or open; enter 1 if the scan point is normally on or closed.
REPORT		Y or N	Report. Enter Y if an alarm report is logged; otherwise, enter N.
ALM		CR, MJ, MN, or NA	Alarm. Enter the type of alarm to be activated: critical (CR), major (MJ), minor (MN), or no alarm (NA).
LOGIC		see subfields	Logic. Consists of subfields FIX_LOGIC, SDFUNCT, ALMGRP, ALMXFR.
	FIX_LOGIC	Y or N	Fix logic. Enter Y if the logic associated with the function is fixed. Otherwise enter N. Enter Y if logic associated with the function is fixed; otherwise, enter N.
	SDFUNCT	alphanumeric	Signal distribution function. Enter the SD function or functions associated with a specific scan point.
	ALMGRP	Y or N	Alarm grouping. Enter Y to cause the alarm function when the alarm grouping key is activated. Enter N to cause the alarm function at all times, regardless of the alarm grouping key.
	ALMXFR	Y or N	Alarm transfer. Enter Y to cause the alarm function when the alarm transfer key is activated; otherwise enter N.

**Datafill example for table ALMSC**

The following example shows sample datafill for table ALMSC.

**Basic call processing** (continued)

**MAP display example for table ALMSC**

TABLE: ALMSC									
FUNCTION	SCGROUP	POINT	NORMALST		REPORT	ALM	LOGIC		
TSTSCAN	0	0	1	Y	NA				Y
:		:			:				
ABSRLCM	11	0	0	Y	MN N	(RLCMAUD N N)			
						(RLCMABS N N)			
						(MNXFER N Y)			\$
PDCRLCM	11	1	0	Y	MJ N	(RLCMAUD N N)			
						(RLCMPDC N N)			
						(MJXFER N Y)			\$
AISARLCM	11	2	0	Y	MJ N	(RLCMMAJ N N)			
						(RLCMAUD N N)			
:		:			:				
MNRLCM	12	3	0	Y	MN N	LCMAUD N N)			\$
MJRLCM	12	4	0	Y	MJ N	(RLCMAUD N N)			\$
CRRLCM	12	5	0	Y	CR	(RLCMAUD N N)			\$

**Datafilling table ALMSDGRP**

Table ALMSDGRP (alarm signal distribution group) lists DMS-100 alarm SD circuits (alarm drivers), their locations, and their card types. If the RMM shelf contains an NT2X57AA card, the card should be listed in table ALMSDGRP.

The following table shows the datafill specific to Basic call processing for table ALMSDGRP. Only those fields that apply directly to Basic call processing are

**Basic call processing** (continued)

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

**Datafilling table ALMSDGRP**

Field	Subfield or refinement	Entry	Explanation and action
SDGROUP		0 to 255	Signal distribution group. Enter the signal distribution group number.
TMTYPE		ATM, CTM, DTM, ISM, MTM, OAU, RSM, RMM, STM, TM8	Trunk module type. Enter the type of trunk module where the circuit is mounted.
TMNO		0 to 2047	Trunk module number. Enter the number of the trunk module where the circuit is mounted. If TMTYPE is OAU, enter 0. Range if TMTYPE is MTM: 0 to 255
TMCKTNO		0 to 29	Trunk module circuit number. Enter the trunk module circuit number where the circuit is assigned.
CARDCODE		3X82AA, 3X82AB, 3X83AA, 3X84AA, 3X85AA, 2X55AA, or 2X57AA	Product engineering code. Enter the PEC of the alarm card.

**Datafill example for table ALMSDGRP**

The following example shows sample datafill for table ALMSDGRP.

**Basic call processing** (continued)

**MAP display example for table ALMSDGRP**

TABLE: ALMSDGRP				
SDGROUP	TMTYPE	TMNO	TMCKTNO	CARDCODE
0	MTM	1	0	3X82AA
1	MTM	3	0	3X82AA
2	MTM	1	6	3X84AA
4	MTM	1	4	2X57AA
5	MTM	1	5	2X57AA
6	MTM	1	18	2X57AA
7	MTM	1	19	2X57AA
8	MTM	6	18	2X57AA
9	MTM	6	19	2X57AA
10	MTM	9	18	2X57AA
11	MTM	9	19	2X57AA
12	RMM	0	22	2X57AA
8	RMM	0	23	2X57AA
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
22	MTM	12	18	2X57AA
23	MTM	12	19	2X57AA

**Datafilling table ALMSD**

Table ALMSD (alarm signal distribution) identifies the function of each of the assigned SD points in the SD groups. If the RMM shelf contains an NT2X57AA card, the SD points for the OPAC should be listed and assigned to SD groups in table ALMSD. Table SDGRP defines the SD groups.

The following table shows the datafill specific to Basic call processing for table ALMSD. Only those fields that apply directly to Basic call processing are



**Basic call processing** (continued)

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

**Datafilling table ALMSD**

<b>Field</b>	<b>Subfield or refinement</b>	<b>Entry</b>	<b>Explanation and action</b>
FUNCTION		alphanumeric (up to 16 characters)	Function. Enter the alarm function.
SDGROUP		0 to 255	Signal distribution group. Enter the signal distribution group number where the SD point belongs.
POINT		0 to 7	Signal distribution point. Enter the signal distribution point number within the SD group.
NORMALST		0 to 1	Normal state. Enter the normal state of the signal distribution point. Enter 0 if the SD point is normally off or open. Enter 1 if the SD point is normally on or closed.
AUDIBLE		Y or N	Audible. Enter Y if the SD point is reset when the audible alarm reset key is operated; otherwise, enter N.
LAMPTEST		Y or N	Lamp test. Enter Y if the SD point is included in the lamp test; otherwise, enter N.

**Datafill example for table ALMSD**

The following example shows sample datafill for table ALMSD.

**Basic call processing** (continued)

**MAP display example for table ALMSD**

TABLE: ALMSD					
FUNCTION	SDGROUP	POINT	NORMALST	AUDIBLE	LAMPTEST
EXPILPWR	2	6	0	N	N
EXPILDMS	2	5	0	N	N
NTALMXFR	2	4	0	N	N
LN101TST	2	3	0	N	N
OAUFAIL	0	0	1	N	N
.	.	.	.	.	.
.	.	.	.	.	.
.	.	.	.	.	.
LMMNV	6	6	0	Y	N
PREFLRP	0	6	0	N	N

**Datafilling table DFINV**

Table DFINV (distribution frame inventory) stores information for up to 31 distribution frames located at the host or in remote locations. The information in this table is provided by Northern Telecom.

An entry in table DFINV corresponding to the OPAC must be included for the OPAC to operate properly. Table DFINV associates the site name for the OPAC with a unique distributing frame name (field DFNAME).

**Datafill example for table DFINV**

The following example shows sample datafill for table DFINV.

**MAP display example for table DFINV**

TABLE: DFINV			
DFNO	DFNAME	MAXZONE	SITE
0	HOST	4	HOST
1	RLCM	4	REM3

**Datafilling table SCGRP**

The SCGRP (scan group) table lists the PECs and physical location of scan groups that provide scan points for line features. Each miscellaneous scan card (NT0X10AA) provides 14 single-lead scan points. The card is divided into

---

**Basic call processing** (continued)

---

two scan groups, each group comprising seven scan points (0-6). Each scan point is assigned to a trunk module (or RMM) circuit number in table ALMSC.

The total number of trunk groups for which memory is allocated in table SCGRP is equal to the value of field SIZE in table DATASIZE for key SCGRP.

The seven scan points in the scan group are available for assignment to MDC, business set, or regular lines that have the line features remote make busy (RMB) or stop hunt (SHU), which require scan points.

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

**Datafilling table SCGRP**

Field	Subfield or refinement	Entry	Explanation and action
SCGRPNO		0 to 511	Scan group. Enter the scan group number.
TMTYPE		MTM, RSM, or RMM	Trunk module type. Enter the type of trunk module where the miscellaneous scan card is mounted, MTM or remote maintenance module (RMM).
TMNO		0 to 255	Trunk module number. Enter the number assigned to the MTM or RMM where the miscellaneous scan card is mounted.
TMCKTNO		0 to 23	Trunk module circuit number. Enter the trunk module circuit number on the MTM or RMM where the scan group is assigned.
CARDCODE		0X10AA	Product engineering code. Enter the PEC of the scan card.

**Datafill example for table SCGRP**

The following example shows sample datafill for table SCGRP.

## Basic call processing (continued)

### MAP display example for table SCGRP

TABLE: SCGRP				
SCGRPNO	TMTYPE	TMNO	TMCKTNO	CARDCODE
0	OAU	0	22	0X10AA
1	RMM	0	10	0X10AA
2	RMM	0	11	0X10AA

### Datafilling table SDGRP

Table SDGRP (signal distribution group) lists the PECs and physical location of SD circuits on the RMM that are assigned to line features. Each SD card provides fourteen SD points subdivided into two SD groups. Each SD group is assigned to a trunk module circuit number.

*Note:* Lines at a remote location must be assigned to SD points belonging to SD groups at the remote location.

### Datafill example for table SDGRP

The following example shows sample datafill for table SDGRP.

### MAP display example for table SDGRP

TABLE: SDGRP				
SDGRPNO	TMTYPE	TMNO	TMCKTNO	CARDCODE
0	RSM	0	15	2X57AA
1	OAU	0	20	2X57AA
2	MTM	0	6	2X57AA
3	MTM	0	7	2X57AA
4	RMM	0	25	2X57AA

### Datafilling table TOFCNAME

Table TOFCNAME (terminating office name) is used to list all terminating offices in the switch. A terminating office is a unique combination of area code and office code. The table can accommodate up to 100 terminating offices.

The AREACODE field identifies the area code where the terminating office resides. The area code is defined in table SNPANAME or table HNPACONT.

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## Basic call processing (continued)

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The OFCCODE field identifies the second part of the terminating office code (TOFC) and is a subarea of AREACODE. A number may not be both an AREACODE and an OFCCODE. For instance, if 613 is an AREACODE, then it may not be an OFCCODE within any AREACODE.

**Note:** This table must be datafilled after tables that define the serving numbering plan area (SNPA), that is, HNPACONT and SNPANAME, and before any table that assigns directory numbers, such as HUNTGRP, LENLINES, or IBNLINES.

### Datafill example for table TOFCNAME

The following example shows sample datafill for table TOFCNAME.

#### MAP display example for table TOFCNAME

TABLE: TOFCNAME	
AREACODE	OFCCODE
613	621
819	622
613	722
613	222
819	221

### Datafilling table LINEATTR

Table LINEATTR (line attribute) assigns line class codes (LCC) and billing and screening information to lines in the DMS-100 switch. In this table, all lines supported by the OPAC should be identified as private, coin, or private branch exchange (PBX).

Each tuple of table LINEATTR corresponds to one tuple in table LENLINES, which identifies the physical location of the line circuit. The tuples are matched through the index field of table LINEATTR.

### Datafill example for table LINEATTR

The following example shows sample datafill for table LINEATTR.

## Basic call processing (continued)

### MAP display example for table LINEATTR

```

TABLE: LINEATTR

LAI DX LCC
      CHGCLSS COST SCR NCL LTG STS PR TNM LCA NAME LCA BILL
                                ZEROMPOS HOT TRAFSNO
                                0
M RSA  SFC  LATANM MDI  IXNAME DGCLAME FANIDIGS
      RESINFO
-----
0 1FR
      NONE  NT   FR01  0   613   POTS  LCA1  N
                                CTOP   N   20
      NIL  NILSFC NILLATA  0  NIL   NIL   00
                                N
2 1FR
      NONE  NT   NSCR   0   819   POTS  LCA1  N
                                CTOP   N   21
      NIL  NILSFC NILLATA1 0  NIL   NIL   00
                                N
3 1MR
      NONE  NT   NSCR   0   819   POTS  LCA1  N
                                CTOP   N   22
      NIL  NILSFC NILLATA2 0  NIL
                                N
4 CCF
      NONE  LO   FR01  0   613   POTS  LCA1  N
                                CTOP   N   23
      NIL  NILSFC NILLATA1 0  NIL
                                N
    
```

### Datafilling table LNINV

Table LNINV (line inventory) associates the site name from table SITE to each physical line circuit in the OPAC. This table defines the LEN of a line which indicates the software location and its hardware characteristics. Each line card in the OPAC should be represented by a tuple in table LNINV.

The subfields used to identify the line card have been altered so a LEN can identify an OPAC line card. In an LEN for an LCM, the fields for the LEN are defined as follows:

- SITE
- FRAME
- UNIT
- SUBGROUP
- CIRCUIT

---

**Basic call processing** (continued)

---

Note the following table interactions:

- The line assignment for coin lines is made in table LENLINES. The LNATTIX field corresponds to the line class code (coin first [CCF], coin dial-tone first [CDF], or coin semi-postpay [CSP]) in table LINEATTR.
- POTS lines (LCMLSG) do not have corresponding tuples in keyset-type tables.
- For Meridian business sets (MBS), the VARTYPE in table LCMINV must be NTPROP.

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

**Datafilling table LNINV (Sheet 1 of 4)**

Field	Subfield or refinement	Entry	Explanation and action
LEN		see subfields	Line equipment number. This field contains the following subfields: SITE, FRAME, UNIT, LSG, SUBGROUP, and CIRCUIT.
	SITE	alphanumeric	Site. Enter the location of the LCM. This entry is not optional, and there is no default value assigned to it.
	FRAME	0 to 99	LCM frame. Enter the LCM frame number, which is not a physical frame but a software entity that represents the group the LCM belongs to at the site. The range is 0-511.
	UNIT	0 to 9	Unit. Enter the number representing the LCM unit within the group. The range is 0-9.
	SUBGROUP		LCM subgroup. Enter the number of subgroups in the line drawers. The range is 0-19.
	LSG	0 to 3	Line subgroup. Enter the line subgroup of the RCS where the line is assigned.
	CIRCUIT	0 to 31	LCM circuit. Enter the number of circuits in the subgroups. The range is 0-31.

**Basic call processing** (continued)

Datafilling table LNINV (Sheet 2 of 4)

Field	Subfield or refinement	Entry	Explanation and action
CARDCODE		SCD203, SCD221, SCD233, SCD271, SCDFSR, or NAILUP	<p>Card code. Enter the PEC of the line card. Range includes: See the Notes that follow.</p> <p><b>Note:</b> Multiparty cards are not used in an RCS set up for FSR. If an SCD221 card code is datafilled in table LNINV for line cards on an RCS that has FSR datafilled, the following error message is displayed:</p> <p>SCD221 IS NOT VALID FOR RCS WITH FSR RNGTYPE</p> <p><b>Note 1:</b> Datafill SCD222 900 Ω and SCD252 1500 Ω FSR cards as SCDFSR for frequency selective ringing.</p> <p><b>Note 2:</b> If the SCDFSR card code is datafilled in table LNINV for line cards on an RCS that has S datafilled in the RNGTYPE field of table RCSINV, the following error message is displayed:</p> <p>SCDFSR IS NOT VALID FOR RCS WITH SUPERIMPOSED RNGTYPE</p> <p><b>Note:</b> The SPOTS card is used for single-party or special services. When used for special services, it must be datafilled as NAILUP. Both circuits in the SPOTS card must be datafilled as either loop start or ground start. Datafill the GND field either Y for both circuits or N for both circuits.</p>



**Basic call processing** (continued)

Datafilling table LNINV (Sheet 3 of 4)

Field	Subfield or refinement	Entry	Explanation and action
CARDCODE			<p><b>Note 1:</b> It is recommended not to datafill SPOTS cards in a mode III RCS because equipment in mode III multiplexes 48 time slots onto two DS-1 lines and expects only single-circuit cards. If SPOTS cards are datafilled, only even-numbered circuits for the cards are used.</p> <p><b>Note 2:</b> When changing from an SCD233 coin card to an SCD203 POTS card or to an SCD271 SPOTS card, ensure that the even and odd circuits on the same line card have the same cardcode. Before changing the CARDCODE field, delete the odd circuit, change the CARDCODE field in the even circuit, and then add the odd circuit.</p>
PADGRP		alphanumeric	Pad group. Enter the name of the pad group assigned to the line circuit in table PADDATA.
STATUS		HASU, WORKING, CUTOFF, RESERVED or UNEQUIPPED	Status. Enter the line inventory availability status.
GND		Y or N	Ground. If line is ground start, enter Y; otherwise, enter N (for loop start).
BNV		L or NL	Balanced network value. Enter L when the line circuit is configured for a loaded network. Otherwise, enter NL for nonloaded network.
MNO		Y or N	Manual override. Enter Y to prevent an on-hook balance network test from updating field BNV in this table. Otherwise, enter N to allow an off-hook balance network test to update field BNV in this table.

**Basic call processing** (continued)

**Datafilling table LNINV (Sheet 4 of 4)**

Field	Subfield or refinement	Entry	Explanation and action
CARDINFO		see subfield	Card information. This field consists of subfield CARDTYPE.
	CARDTYPE	ISLCC, SSLCC, REUEPOTS, RCUPOTS, or NIL	Card type. NIL is the default.

**Datafill example for table LNINV**

The following example shows sample datafill for table LNINV.

**MAP display example for table LNINV**

```

TABLE: LNINV

      LEN  CARDCODE  PADGRP  STATUS  GND  BNV  MNO  CARDINFO
-----
REM1  00  0  0   1  2X17AB  STDLN   HASU   N  NL  N  NIL
REM1  00  0  0   2  2X17AB  STDLN   HASU   N  NL  N  NIL
REM1  00  0  0   3  2X17AB  STDLN   HASU   N  NL  N  NIL
REM1  00  0  0   4  2X17AB  STDLN   WORKING N  NL  N  NIL
REM1  00  0  0   5  2X17AB  STDLN   HASU   N  NL  N  NIL
REM1  00  0  0   6  2X17AB  STDLN  RESERVED N  NL  N  NIL
REM1  00  0  0   7  2X17AB  STDLN   HASU   N  NL  N  NIL
REM1  00  0  0   8  2X18AD  STDLN   HASU   N  NL  N  NIL
REM1  00  0  0   9  2X18AD  STDLN   HASU   N  NL  N  NIL
REM1  00  0  0  10  2X18AD  STDLN   HASU   Y  NL  N  NIL
REM1  00  0  5   0  2X17AB  STDLN   HASU   N  NL  N  NIL
REM1  00  0  5   1  2X17AB  STDLN   HASU   N  NL  N  NIL
    
```

**Datafilling table DNROUTE**

Table DNROUTE (directory number route) lists information for writable DNs in the switch.

The AREACODE and OFCCODE fields are the same as they appear in table TOFCNAME, and must have been previously specified there. The STNCODE

**Basic call processing** (continued)

field is DEFG in North America. The DNRESULT field is the same as in table DN. Enter numbers in these categories resulting from provisioning an OPAC.

*Note:* Table DN is read only and contains data for all assigned and unassigned DNs, including those in DNROUTE. No input is necessary for this table.

**Datafill example for table DNROUTE**

The following example shows sample datafill for table DNROUTE.

**MAP display example for table DNROUTE**

TABLE : DNROUTE			
AREACODE	OFCCODE	STNCODE	DNRESULT
613	621	1000	FEAT DISA IBNTST 0 N N N Y \$
613	621	1010	FEAT DISA IBNTST 0 N N N Y \$
613	621	1096	
613	621	1117	
613	621	1181	
613	621	1251	

**Datafilling subtable HNPACONT.HNPACODE**

Subtable HNPACONT.HNPACODE (home numbering plan area code) lists the route, treatment, or table where a translation must route for three-digit codes (000-999) within each SNPA, or serving translation schemes (STS), assigned in table HNPACONT. Each three-digit code can be expanded into ten or more digits, if required for compatibility with office equipment and other datafill.

Assign the code station ringer test (SRT) to the NPA served by the OPAC. If table TOFCNAME is changed, change subfield NXX of the CDRRTMT field to the DN where the SRT is assigned.

**Datafill example for subtable HNPACONT.HNPACODE**

The following example shows sample datafill for subtable HNPACONT.HNPACODE.

**Basic call processing** (continued)

**MAP display example for subtable HNPACONT.HNPACODE**

TABLE: HNPACONT			
POSITION ON (NPA) sub HNPACODE			
FROMDIGS	TODIGS		CDRRTMT
1150	1150	STRG	24
1155	1155	OPC4	25
141	141	OPC3	22
181	181	OPC3	23
201	201	VCT	HNPI
228	228	HRTE	1
229	229	HRTE	1
303	303	FNPA	0
404	404	FNPA	0
418	418	FRTE	29
514	514	FRTD	10

**Datafilling table MTAMDRVE**

The metallic test access (MTA) network is a matrix of vertical and horizontal crosspoints, comparable to a minibar, that connect specified verticals to horizontal within the network. The MTA network is used to connect testing equipment on the horizontal crosspoints to circuits requiring testing on the vertical crosspoints.

Table MTAMDRVE (metallic test access minibar driver) specifies the physical location and the type of minibar driver assigned to a minibar switch. The NT3X09 driver has relays on the card itself and does not require an associated minibar switch.

---

**Basic call processing** (continued)
 

---

If the OPAC is provisioned with a remote MTA in its RMM, an entry identifying the NT3X09 card is required in table MTAMDRVE. Each minibar driver is identified by its 0,0 crosspoint in the matrix.

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

**Datafilling table MTAMDRVE**

Field	Subfield or refinement	Entry	Explanation and action
MTAMEM		0 to 255	Metallic test access minibar driver member. Enter the MTA driver member number. This is the key to the table.
VERT		0 to 639	MTAM driver vertical start location. Enter the vertical start location for the MTAM driver.
HORIZ		0 to 127	MTAM driver horizontal start location. Enter the horizontal start location for the MTAM driver.
TMTYPE		RMM	Trunk module type. Enter the type of trunk module where the minibar driver is mounted, in this case, RMM.
TMNO		0 to 255	Trunk module number. Enter the number assigned to the maintenance trunk module.
TMCKTNO		0 to 99	Trunk module circuit number. Enter the circuit number of the trunk module where the minibar driver is assigned.
MTACARD		alphanumeric	MTAM driver card. Enter the card code for the MTAM driver card.

**Datafill example for table MTAMDRVE**

The following example shows sample datafill for table MTAMDRVE.

**Basic call processing** (continued)

**MAP display example for table MTAMDRVE**

TABLE : MTAMDRVE						
MTAMEM	VERT	HORIZ	TMTYPE	TMNO	TMCKTNO	MTACARD
0	0	0	RMM	0	12	3X09AA

**Datafilling table MTAVERT**

Table MTAVERT (metallic test access vertical connection) identifies the minibar switch verticals that connect the OPAC to the MTA matrix. The type of connection is either single or multiple.

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

**Datafilling table MTAVERT**

Field	Subfield or refinement	Entry	Explanation and action
VERT		0 to 99	Vertical. Enter the MTA vertical connection number.
VERTCONN		S or M. See subfields	Vertical connection. Enter either S or M to indicate single or multiple connections. Contains subfields SELECTOR, SITE, FRAME, and UNIT.
	SELECTOR	L	Selector. When selector L is used, the entry in VERTCONN is S. The subfields SITE, FRAME, and UNIT must be datafilled.
	SITE	alphanumeric	Site name. Enter the name selected for the remote location.
	FRAME	0 to 99	Frame number. Enter the frame number.
	UNIT	0 to 99	Unit number. Enter the unit number.

**Datafill example for table MTAVERT**

The following example shows sample datafill for table MTAVERT.

**Basic call processing** (continued)

**MAP display example for table MTAVERT**

TABLE: MTAVERT	
VERT	VERTCONN
0	S L RCM 01 0

**Datafilling table MTAHORIZ**

Table MTAHORIZ (metallic test access horizontal connection) lists the assignment of horizontal agents to an MTA horizontal and horizontal group of MTA minibars (MTAM). Horizontal agents include line test units (LTU), multiline test units (MTU), operator verification, metallic jacks, incoming test access trunks, extended MTA, and short circuits.

Different horizontal agents may use the same horizontal but must be associated with different MTAMs, or horizontal groups. A maximum of 160 different horizontal agents is allowed for a given horizontal.

A maximum of 32 MTAMs can be grouped to connect to a single horizontal agent. A horizontal agent can only be used once.

The following table shows the datafill specific to Basic call processing for table MTAHORIZ. Only those fields that apply directly to Basic call processing are shown.

## Basic call processing (continued)

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

**Datafilling table MTAHORIZ (Sheet 1 of 7)**

Field	Subfield or refinement	Entry	Explanation and action
HORIZ		0 to 127	MTA horizontal. Enter the MTA horizontal where the horizontal agent test equipment is connected.
HORIZGRP		0 to 159	MTA horizontal group. Enter the horizontal group number that identifies the horizontal and its horizontal agent as a unique tuple. The purpose of the horizontal group is to allow assignment of different test equipment on the same MTA horizontal.
<p><b>Note 1:</b> No horizontals are reserved for dedicated LTUs, and nondedicated LTUs have no restriction on assignment.</p> <p><b>Note 2:</b> When an LTU is assigned to the host switching unit, the horizontal where it is assigned is multiplied to all minibar switches assigned to the host switching unit. When an LTU is assigned to a remote location, the horizontal where it is assigned is connected to all minibar switches assigned to the remote location.</p> <p><b>Note 3:</b> When the minibar switch is located at the host switching unit, no assignment restriction exists for the assignment of incoming/outgoing test and operator verification trunks. One horizontal is required for each incoming/outgoing test trunk and operator verification trunk.</p> <p><b>Note 4:</b> Where the MTA configuration is small or medium, the horizontals where the incoming/outgoing test and operator verification trunks are connected to all minibar switches located at the host switching unit.</p> <p><b>Note 5:</b> When the minibar switch is remote from the host switching unit, all horizontals are available for the assignment of incoming/outgoing test trunks, operator verification trunks, and for the extension of the MTA feature. One horizontal is required for each incoming/outgoing test trunk, operator verification trunk, and each vertical on the host minibar switch assigned to a horizontal on the minibar switch, located at the remote or host location.</p> <p><b>Note 6:</b> The number of metallic jacks in each DMS office is restricted to 256.</p> <p><b>Note 7:</b> For assignment of the LTUs, incoming test access, and operator verification trunks to trunk group, trunk subgroup, and trunk member tables, see tables TRKGRP, TRKSGRP, and TRKMEM.</p> <p><b>Note 8:</b> An LTU or MTU must be datafilled in table TRKMEM before being added to table MTAHORIZ. If the LTU or MTU is deleted from table TRKMEM, the corresponding tuple in table MTAHORIZ is marked as deleted, but is automatically restored if the LTU or MTU is added again to table TRKMEM.</p> <p><b>Note 9:</b> The memory for this table is dynamically allocated up to a maximum of 2000 tuples.</p>			



**Basic call processing** (continued)

**Datafilling table MTAHORIZ (Sheet 2 of 7)**

Field	Subfield or refinement	Entry	Explanation and action
HORIZAGT		see subfield	Horizontal agent. This field contains several subfields that depend on the value of SELECTOR used.
<p><b>Note 1:</b> No horizontals are reserved for dedicated LTUs, and nondedicated LTUs have no restriction on assignment.</p> <p><b>Note 2:</b> When an LTU is assigned to the host switching unit, the horizontal where it is assigned is multiplied to all minibar switches assigned to the host switching unit. When an LTU is assigned to a remote location, the horizontal where it is assigned is connected to all minibar switches assigned to the remote location.</p> <p><b>Note 3:</b> When the minibar switch is located at the host switching unit, no assignment restriction exists for the assignment of incoming/outgoing test and operator verification trunks. One horizontal is required for each incoming/outgoing test trunk and operator verification trunk.</p> <p><b>Note 4:</b> Where the MTA configuration is small or medium, the horizontals where the incoming/outgoing test and operator verification trunks are connected to all minibar switches located at the host switching unit.</p> <p><b>Note 5:</b> When the minibar switch is remote from the host switching unit, all horizontals are available for the assignment of incoming/outgoing test trunks, operator verification trunks, and for the extension of the MTA feature. One horizontal is required for each incoming/outgoing test trunk, operator verification trunk, and each vertical on the host minibar switch assigned to a horizontal on the minibar switch, located at the remote or host location.</p> <p><b>Note 6:</b> The number of metallic jacks in each DMS office is restricted to 256.</p> <p><b>Note 7:</b> For assignment of the LTUs, incoming test access, and operator verification trunks to trunk group, trunk subgroup, and trunk member tables, see tables TRKGRP, TRKSGRP, and TRKMEM.</p> <p><b>Note 8:</b> An LTU or MTU must be datafilled in table TRKMEM before being added to table MTAHORIZ. If the LTU or MTU is deleted from table TRKMEM, the corresponding tuple in table MTAHORIZ is marked as deleted, but is automatically restored if the LTU or MTU is added again to table TRKMEM.</p> <p><b>Note 9:</b> The memory for this table is dynamically allocated up to a maximum of 2000 tuples.</p>			

**Basic call processing** (continued)

**Datafilling table MTAHORIZ (Sheet 3 of 7)**

Field	Subfield or refinement	Entry	Explanation and action
HORIZAGT (continued)	SELECTOR		<p>Selector. The range is S, L, T, B, E, MJ, J, and LA. Enter S for a timed short circuit. Enter L for LTU or MTU assignment and complete subfields CLLI, EXTRKNM, and ALTUSE. Enter T for incoming/outgoing test or operator verification trunk assignment and complete subfields CLLI and EXTRKNM. Enter B for a board-to-board dedicated horizontal and complete subfield BBTNR. Enter MJ for metallic connection to the tip and ring of the subscriber line and complete subfields CLLI and MJACKNUM. Enter E to multiply a horizontal of a minibar switch from a host or remote to the vertical of a host minibar switch. Then, complete subfield EMTAVERT. Selectors J and LA are for licensee use only.</p>
<p><b>Note 1:</b> No horizontals are reserved for dedicated LTUs, and nondedicated LTUs have no restriction on assignment.</p> <p><b>Note 2:</b> When an LTU is assigned to the host switching unit, the horizontal where it is assigned is multiplied to all minibar switches assigned to the host switching unit. When an LTU is assigned to a remote location, the horizontal where it is assigned is connected to all minibar switches assigned to the remote location.</p> <p><b>Note 3:</b> When the minibar switch is located at the host switching unit, no assignment restriction exists for the assignment of incoming/outgoing test and operator verification trunks. One horizontal is required for each incoming/outgoing test trunk and operator verification trunk.</p> <p><b>Note 4:</b> Where the MTA configuration is small or medium, the horizontals where the incoming/outgoing test and operator verification trunks are connected to all minibar switches located at the host switching unit.</p> <p><b>Note 5:</b> When the minibar switch is remote from the host switching unit, all horizontals are available for the assignment of incoming/outgoing test trunks, operator verification trunks, and for the extension of the MTA feature. One horizontal is required for each incoming/outgoing test trunk, operator verification trunk, and each vertical on the host minibar switch assigned to a horizontal on the minibar switch, located at the remote or host location.</p> <p><b>Note 6:</b> The number of metallic jacks in each DMS office is restricted to 256.</p> <p><b>Note 7:</b> For assignment of the LTUs, incoming test access, and operator verification trunks to trunk group, trunk subgroup, and trunk member tables, see tables TRKGRP, TRKSGRP, and TRKMEM.</p> <p><b>Note 8:</b> An LTU or MTU must be datafilled in table TRKMEM before being added to table MTAHORIZ. If the LTU or MTU is deleted from table TRKMEM, the corresponding tuple in table MTAHORIZ is marked as deleted, but is automatically restored if the LTU or MTU is added again to table TRKMEM.</p> <p><b>Note 9:</b> The memory for this table is dynamically allocated up to a maximum of 2000 tuples.</p>			

**Basic call processing** (continued)

**Datafilling table MTAHORIZ (Sheet 4 of 7)**

Field	Subfield or refinement	Entry	Explanation and action
HORIZAGT (continued)	CLLI	LTU, MTU, MJACK or alphanumeric	Common language location identifier. Enter LTU for line test unit.  Enter MTU for multiline test unit.  For operator verification or an incoming/outgoing test trunk, enter the alphanumeric code that represents this trunk group in table CLLI.  Enter MJACK for metallic jack.
	EXTRKNM	0 to 9999	External trunk number. Enter the external trunk number assigned in table TRKMEM to the LTU, MTU, operator verification trunk, or the incoming/outgoing test trunk.
<p><b>Note 1:</b> No horizontals are reserved for dedicated LTUs, and nondedicated LTUs have no restriction on assignment.</p> <p><b>Note 2:</b> When an LTU is assigned to the host switching unit, the horizontal where it is assigned is multiplied to all minibar switches assigned to the host switching unit. When an LTU is assigned to a remote location, the horizontal where it is assigned is connected to all minibar switches assigned to the remote location.</p> <p><b>Note 3:</b> When the minibar switch is located at the host switching unit, no assignment restriction exists for the assignment of incoming/outgoing test and operator verification trunks. One horizontal is required for each incoming/outgoing test trunk and operator verification trunk.</p> <p><b>Note 4:</b> Where the MTA configuration is small or medium, the horizontals where the incoming/outgoing test and operator verification trunks are connected to all minibar switches located at the host switching unit.</p> <p><b>Note 5:</b> When the minibar switch is remote from the host switching unit, all horizontals are available for the assignment of incoming/outgoing test trunks, operator verification trunks, and for the extension of the MTA feature. One horizontal is required for each incoming/outgoing test trunk, operator verification trunk, and each vertical on the host minibar switch assigned to a horizontal on the minibar switch, located at the remote or host location.</p> <p><b>Note 6:</b> The number of metallic jacks in each DMS office is restricted to 256.</p> <p><b>Note 7:</b> For assignment of the LTUs, incoming test access, and operator verification trunks to trunk group, trunk subgroup, and trunk member tables, see tables TRKGRP, TRKSGRP, and TRKMEM.</p> <p><b>Note 8:</b> An LTU or MTU must be datafilled in table TRKMEM before being added to table MTAHORIZ. If the LTU or MTU is deleted from table TRKMEM, the corresponding tuple in table MTAHORIZ is marked as deleted, but is automatically restored if the LTU or MTU is added again to table TRKMEM.</p> <p><b>Note 9:</b> The memory for this table is dynamically allocated up to a maximum of 2000 tuples.</p>			

**Basic call processing** (continued)

**Datafilling table MTAHORIZ (Sheet 5 of 7)**

Field	Subfield or refinement	Entry	Explanation and action
HORIZAGT (continued)	ALTUSE	Y or N	Automatic line test use. Enter Y to use line test equipment for automatic line testing (ALT). Otherwise, enter N.
	BBTNR	0 to 7	Board to board test number. Enter the number of the board-to-board set with which this horizontal is associated.
	EMTAVERT	0 to 639	Extended metallic test access column. Enter the associated vertical on the MTA in the host where the horizontal is connected.

**Note 1:** No horizontals are reserved for dedicated LTUs, and nondedicated LTUs have no restriction on assignment.

**Note 2:** When an LTU is assigned to the host switching unit, the horizontal where it is assigned is multiplied to all minibar switches assigned to the host switching unit. When an LTU is assigned to a remote location, the horizontal where it is assigned is connected to all minibar switches assigned to the remote location.

**Note 3:** When the minibar switch is located at the host switching unit, no assignment restriction exists for the assignment of incoming/outgoing test and operator verification trunks. One horizontal is required for each incoming/outgoing test trunk and operator verification trunk.

**Note 4:** Where the MTA configuration is small or medium, the horizontals where the incoming/outgoing test and operator verification trunks are connected to all minibar switches located at the host switching unit.

**Note 5:** When the minibar switch is remote from the host switching unit, all horizontals are available for the assignment of incoming/outgoing test trunks, operator verification trunks, and for the extension of the MTA feature. One horizontal is required for each incoming/outgoing test trunk, operator verification trunk, and each vertical on the host minibar switch assigned to a horizontal on the minibar switch, located at the remote or host location.

**Note 6:** The number of metallic jacks in each DMS office is restricted to 256.

**Note 7:** For assignment of the LTUs, incoming test access, and operator verification trunks to trunk group, trunk subgroup, and trunk member tables, see tables TRKGRP, TRKSGRP, and TRKMEM.

**Note 8:** An LTU or MTU must be datafilled in table TRKMEM before being added to table MTAHORIZ. If the LTU or MTU is deleted from table TRKMEM, the corresponding tuple in table MTAHORIZ is marked as deleted, but is automatically restored if the LTU or MTU is added again to table TRKMEM.

**Note 9:** The memory for this table is dynamically allocated up to a maximum of 2000 tuples.

**Basic call processing** (continued)

Datafilling table MTAHORIZ (Sheet 6 of 7)

Field	Subfield or refinement	Entry	Explanation and action
MTAGRP	MJACKNUM	1 to 256	<p>Metallic jack number. Where the entry in subfield CLLI is MJACK, enter the metallic jack number, 1-256.</p> <p>MTA group. This field contains a list of MTA drivers that are connected to the test equipment. This field is a vector of up to 32 groups of subfields MTAMEM and HORIZ.</p>
<p><b>Note 1:</b> No horizontals are reserved for dedicated LTUs, and nondedicated LTUs have no restriction on assignment.</p> <p><b>Note 2:</b> When an LTU is assigned to the host switching unit, the horizontal where it is assigned is multiplied to all minibar switches assigned to the host switching unit. When an LTU is assigned to a remote location, the horizontal where it is assigned is connected to all minibar switches assigned to the remote location.</p> <p><b>Note 3:</b> When the minibar switch is located at the host switching unit, no assignment restriction exists for the assignment of incoming/outgoing test and operator verification trunks. One horizontal is required for each incoming/outgoing test trunk and operator verification trunk.</p> <p><b>Note 4:</b> Where the MTA configuration is small or medium, the horizontals where the incoming/outgoing test and operator verification trunks are connected to all minibar switches located at the host switching unit.</p> <p><b>Note 5:</b> When the minibar switch is remote from the host switching unit, all horizontals are available for the assignment of incoming/outgoing test trunks, operator verification trunks, and for the extension of the MTA feature. One horizontal is required for each incoming/outgoing test trunk, operator verification trunk, and each vertical on the host minibar switch assigned to a horizontal on the minibar switch, located at the remote or host location.</p> <p><b>Note 6:</b> The number of metallic jacks in each DMS office is restricted to 256.</p> <p><b>Note 7:</b> For assignment of the LTUs, incoming test access, and operator verification trunks to trunk group, trunk subgroup, and trunk member tables, see tables TRKGRP, TRKSGRP, and TRKMEM.</p> <p><b>Note 8:</b> An LTU or MTU must be datafilled in table TRKMEM before being added to table MTAHORIZ. If the LTU or MTU is deleted from table TRKMEM, the corresponding tuple in table MTAHORIZ is marked as deleted, but is automatically restored if the LTU or MTU is added again to table TRKMEM.</p> <p><b>Note 9:</b> The memory for this table is dynamically allocated up to a maximum of 2000 tuples.</p>			

**Basic call processing** (continued)

**Datafilling table MTAHORIZ (Sheet 7 of 7)**

Field	Subfield or refinement	Entry	Explanation and action
	MTAMEM	0 to 255	MTA minibar driver member. Enter the MTAM driver member number where the horizontal is connected.
	HORIZ		This field is read-only. It provides information about the physical horizontal where the MTA drivers are connected. Enter 0 to satisfy table control.
<p><b>Note 1:</b> No horizontals are reserved for dedicated LTUs, and nondedicated LTUs have no restriction on assignment.</p> <p><b>Note 2:</b> When an LTU is assigned to the host switching unit, the horizontal where it is assigned is multiplied to all minibar switches assigned to the host switching unit. When an LTU is assigned to a remote location, the horizontal where it is assigned is connected to all minibar switches assigned to the remote location.</p> <p><b>Note 3:</b> When the minibar switch is located at the host switching unit, no assignment restriction exists for the assignment of incoming/outgoing test and operator verification trunks. One horizontal is required for each incoming/outgoing test trunk and operator verification trunk.</p> <p><b>Note 4:</b> Where the MTA configuration is small or medium, the horizontals where the incoming/outgoing test and operator verification trunks are connected to all minibar switches located at the host switching unit.</p> <p><b>Note 5:</b> When the minibar switch is remote from the host switching unit, all horizontals are available for the assignment of incoming/outgoing test trunks, operator verification trunks, and for the extension of the MTA feature. One horizontal is required for each incoming/outgoing test trunk, operator verification trunk, and each vertical on the host minibar switch assigned to a horizontal on the minibar switch, located at the remote or host location.</p> <p><b>Note 6:</b> The number of metallic jacks in each DMS office is restricted to 256.</p> <p><b>Note 7:</b> For assignment of the LTUs, incoming test access, and operator verification trunks to trunk group, trunk subgroup, and trunk member tables, see tables TRKGRP, TRKSGRP, and TRKMEM.</p> <p><b>Note 8:</b> An LTU or MTU must be datafilled in table TRKMEM before being added to table MTAHORIZ. If the LTU or MTU is deleted from table TRKMEM, the corresponding tuple in table MTAHORIZ is marked as deleted, but is automatically restored if the LTU or MTU is added again to table TRKMEM.</p> <p><b>Note 9:</b> The memory for this table is dynamically allocated up to a maximum of 2000 tuples.</p>			

**Datafill example for table MTAHORIZ**

The following example shows sample datafill for table MTAHORIZ.

**Basic call processing** (continued)**MAP display example for table MTAHORIZ**

TABLE: MTAHORIZ					
HORIZ	HORIZGRP		HORIZAGT		MTAGRP
0	0	L	LTU	0	( 0 0 )\$

**Translation verification tools**

Basic call processing does not use translation verification tools.

**SERVORD****Service orders****CAUTION**

**Do not use the table editor to datafill SERVORD tables.**  
If SERVORD commands are not used to datafill tables LENLINES, LENFEAT, HUNTGRP, HUNTMEM, and DNINV, incompatible features may be assigned to lines.

The Service Order System (SERVORD) provides operating companies with an efficient means of performing the following operations:

- adding or removing subscriber service lines
- adding or deleting line service options
- changing the line equipment number (LEN) or directory number (DN) of existing lines
- adding or deleting features from lines.

Tables LENLINES, LENFEAT, HUNTGRP, HUNTMEM, LINEATTR, and DNINV are updated through SERVORD.

If a line is already datafilled in table LNINV, SERVORD automatically datafills the proper line attribute number for the line in table LENLINES. SERVORD also datafills the appropriate line options and feature information after the option, feature, or both have been entered using SERVORD.

## Basic call processing (continued)

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### SERVORD commands

The following table contains a list and description of the service order commands.

#### Service order commands

Command	Description
SERVORD	Accesses the service order software
ADD	Adds a line or lines to an existing hunt group. Adds existing lines to a call pickup group.
ADO	Adds options to lines. Adds existing lines to a directory number hunt (DNH) group.
DEL	Deletes a line or lines from a hunt group, applicable to hunt group members except pilot.
DEO	Deletes options from lines.
NEW	Establishes new service applicable to individual nonhunt lines and party lines.
OUT	Removes service applicable to individual lines and the pilot of hunt group.

### SERVORD limitations and restrictions

Basic call processing has no SERVORD limitations and restrictions.

### SERVORD prompts

An SO order may be entered in the prompt mode (system prompts user for input) or nonprompt mode (all input is entered in one command string).

When entry of a service order is complete, the entire service order is displayed for verification purposes. The system then prompts for a Y (yes), N (no), or E (edit). Enter N to abort the service order or E to edit the service order in prompt mode. On entry of a Y, the system verifies the service order. If an error is detected, the service order is rejected.

A service order entered without a service order number (SONUMBER) is accepted by the system for immediate activation.



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**Basic call processing** (continued)
 

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The following table shows the SERVORD prompts used to implement individual line options as shown in the example service orders.

**SERVORD prompts for implementing individual line options Basic call processing**

Prompt	Valid input	Explanation
DN	Seven digits, entered with no spaces or hyphens	Directory number associated with the service to be established, modified, or deleted
LCC	1FR	Line class code of the service to be established, modified, or deleted. 1FR is the individual flat rate, residence and business.
LATANAME	NILLATA (LATA name defined in table LATANAME)	The calling local access and transport area (LATA) name associated with the originator of the call.
LTG	0-255	Line treatment group number. Calculates the line attribute index when the DN and link control card (LCC) are insufficient to find an appropriate index.
LEN_OR_LTID	<site>ffuddcc	Line equipment number or logical terminal identification. Associated with a service to be established, modified, or deleted, where <ul style="list-style-type: none"> <li>• site is the site name (defaults to host)</li> <li>• ff is the frame number</li> <li>• u is the unit number</li> <li>• dd is the drawer number of the line spread group</li> <li>• cc is the line circuit number</li> </ul>
OPTION	\$	No line service options

**SERVORD example for implementing individual line options Basic call processing**

The following table shows how to establish an individual line without options, add an option to an individual line, delete an option from an individual line, and remove an existing individual line service.

## Basic call processing (continued)

### SERVORD example for Basic call processing in prompt mode

```

> SERVORD
SO:
> NEW
SONUMBER:
> <RETURN>
DN
> 5320105
LCC:
> 1FR
LATANAME
> NILLATA
LTG: 0
> 230
LEN_ORLTID
> REM1 00 0 01 27
OPTION
> $
COMMAND AS ENTERED:
NEW NOW 90 11 13 PM 5320105 1FR NILLATA 230 REM1 00 0
01 27 $
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
> Y

```

### SERVORD example for Basic call processing in no-prompt mode

```
> NEW $ 5320105 1FR NILLATA 230 00 0 01 27 $
```

*Note:* Tables HUNTGRP, HUNTMEM, LENFEAT, and LENLINES are automatically datafilled when Remote Line concentrating Module (RLCM) is assigned using SERVORD.

## Datafilling table CLLIMTCE

Table CLLIMTCE (common language location identifier maintenance) lists information for each trunk group CLI as follows:

- abbreviated CLI code for use by maintenance personnel
- percentage of service circuits that can be removed before specified alarms display
- type of test equipment at the far end
- index to test line control

**Basic call processing** (continued)

- index to milliwatt data table
- signaling test runs after diagnostic test
- additional digits to prefix, in addition to the four digits of the test line number subtable

**Entry example for table CLLIMTCE**

The following is an example of entry for Table CLLIMTCE.

**MAP display example for table CLLIMTCE**

```

TABLE: CLLIMTCE

CLLI   SCLLI   MINALM  MAJALM  CRITALM  SYNCTYPE  TSTNOIND
MWIDX  SIGTST  PRFXDIGS  DIAGDATA
-----
OTWANON23CG00  0COESS 10    5    50    SYN    0
0           Y      N ( 0 )
    
```

**Datafilling table ALMSCGRP**

Table ALMSCGRP (alarm scan group) lists DMS-100 alarm scan circuits (alarm sensors), with locations, and card types. If the RMM shelf has a miscellaneous scan card (NT0X10AA), Table ALMSCGRP must list the card.

The table that follows indicates the entry for basic call processing for Table ALMSCGRP. This table indicates the fields that apply to basic call processing.

**Datafilling table ALMSCGRP (Sheet 1 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
SCGROUP		0 to 255	Scan group. Enter the scan group number.
TMTYPE		ATM, CTM, DTM, ISM, MTM, OAU, RMM, RSM, TM8	Trunk module type. Enter the type of trunk module that contains the circuit.
TMNO		0 to 2047	Trunk module number. Enter the number of the trunk module that contains the circuit. The range is from 0 to 2047. If TMTYPE is OAU, enter 0.

## Basic call processing (continued)

### Datafilling table ALMSCGRP (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
TMCKTNO		0 to 29	Trunk module circuit number. Enter the trunk module circuit number where the circuit is assigned. The range is from 0 to 29.
CARDCODE		3X82AA, 3X82AB, 3X83AA, 3X84AA, 3X85AA, 0X10AA	Product engineering code. Enter the PEC of the alarm card.

### Entry example for table ALMSCGRP

The following is an example of entries for Table ALMSCGRP.

### MAP display example for Table ALMSCGRP

TABLE : ALMSCGRP					
SCGROUP	TMTYPE	TMNO	TMCKTNO	CARDCODE	
0	MTM	1	1	3X82AA	
1	MTM	3	1	3X82AA	
2	MTM	1	7	3X84AA	
3	MTM	1	10	0X10AA	
.			.	.	.
.			.	.	.
.			.	.	.
15	RSM	1	7	0X10AA	
.	.	.	.	.	.
.	.	.	.	.	.
20	RMM	0	10	0X10AA	
21	RMM	0	11	0X10AA	

### Datafilling table ALMSC

Table ALMSC (alarm scan) identifies the function of the assigned scan points in the alarm scan groups. The table lists the scan points for the OPAC and assigns the points to scan groups in Table ALMSC. Table SCGRP defines the scan groups.

**Basic call processing** (continued)

The table that follows shows the entries for Basic Call Processing for Table ALMSC. This table indicates the fields that apply to Basic Call Processing.

**Datafilling table ALMSC (Sheet 1 of 2)**

<b>Field</b>	<b>Subfield or refinement</b>	<b>Entry</b>	<b>Explanation and action</b>
FUNCTION		alphanumeric (a maximum of 16 characters)	Function. Enter the alarm function.
SCGROUP		0 to 255	Scan group. Enter the scan group number where the scan point belongs. The range is from 0 to 255.
POINT		0 to 6	Scan point. Enter the scan point number in the scan group. The range is 0 to 6.
NORMALST		0 to 1	Normal state. Enter the normal state of the scan point. Enter 0 if the scan point is normally off or open. Enter 1 if the scan point is normally on or closed.
REPORT		Y or N	Report. Enter Y if an alarm report is logged. Enter N if an alarm report is not logged.
ALM		CR, MJ, MN, or NA	Alarm. Enter the type of alarm to activate: critical (CR), major (MJ), minor (MN), or no alarm (NA).
LOGIC		refer to subfields	Logic. Field LOGIC has subfields FIX_LOGIC, SDFUNCT, ALMGRP, ALMXFR.
	FIX_LOGIC	Y or N	Fix logic. Enter Y if the logic that associates with the function is fixed. If the logic is not fixed, enter N. Enter Y if logic that associates with the function is fixed. Otherwise, enter N.
	SDFUNCT	alphanumeric	Signal distribution function. Enter the SD function or functions associated with a specified scan point.

## Basic call processing (continued)

### Datafilling table ALMSC (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	ALMGRP	Y or N	Alarm grouping. Enter Y to start the alarm function when the alarm grouping key is active. Enter N to cause the alarm function at all times if the alarm grouping key is active.
	ALMXFR	Y or N	Alarm transfer. Enter Y to cause the alarm function when the alarm transfer key is active. If the key is active, enter N.

### Datafilling example for table ALMSC

The following is an example of entries for Table ALMSC.

### MAP display example for Table ALMSC

TABLE: ALMSC						
FUNCTION	SCGROUP	POINT	NORMALST	REPORT	ALM	LOGIC
TSTSCAN	0	0	1 Y	NA		Y
:		:		:		
ABSRLCM	11	0	0 Y	MN N	(RLCMAUD N N) (RLCMABS N N) (MNXFER N Y)	\$
PDCRLCM	11	1	0 Y	MJ N	(RLCMAUD N N) (RLCMPDC N N) (MJXFER N Y)	\$
AISARLCM	11	2	0 Y	MJ N	(RLCMMAJ N N) (RLCMAUD N N)	
:		:		:		
MNRLCM	12	3	0 Y	MN N	LCMAUD N N)	\$
MJRLCM	12	4	0 Y	MJ N	(RLCMAUD N N)	\$
CRRLCM	12	5	0 Y	CR	(RLCMAUD N N)	\$

### Datafilling table ALMSDGRP

Table ALMSDGRP (alarm signal distribution group) lists DMS-100 alarm SD circuits (alarm drivers), with locations, and card types. If the RMM shelf contains an NT2X57AA card, Table ALMSDGRP must list the card.

**Basic call processing** (continued)

The table that follows indicates the entry for Basic Call Processing for Table ALMSDGRP. This table indicates the fields that apply to Basic Call Processing.

**Datafilling table ALMSDGRP**

<b>Field</b>	<b>Subfield or refinement</b>	<b>Entry</b>	<b>Explanation and action</b>
SDGROUP		0 to 255	Signal distribution group. Enter the signal distribution group number.
TMTYPE		ATM, CTM, DTM, ISM, MTM, OAU, RSM, RMM, STM, TM8	Trunk module type. Enter the type of trunk module that contains the circuit.
TMNO		0 to 2047	Trunk module number. Enter the number of the trunk module that contains the circuit. If TMTYPE is OAU, enter 0. Range if TMTYPE is MTM: 0 to 255
TMCKTNO		0 to 29	Trunk module circuit number. Enter the trunk module circuit number where the circuit is assigned. The range of circuit numbers is from 0 to 29.
CARDCODE		3X82AA, 3X82AB, 3X83AA, 3X84AA, 3X85AA, 2X55AA, or 2X57AA	Product engineering code. Enter the PEC of the alarm card.

**Entry example for table ALMSDGRP**

The following is an example of entry for Table ALMSDGRP.

**Basic call processing** (continued)

**MAP display example for Table ALMSDGRP**

TABLE: ALMSDGRP

SDGROUP	TMTYPE	TMNO	TMCKTNO	CARDCODE
0	MTM	1	0	3X82AA
1	MTM	3	0	3X82AA
2	MTM	1	6	3X84AA
4	MTM	1	4	2X57AA
5	MTM	1	5	2X57AA
6	MTM	1	18	2X57AA
7	MTM	1	19	2X57AA
8	MTM	6	18	2X57AA
9	MTM	6	19	2X57AA
10	MTM	9	18	2X57AA
11	MTM	9	19	2X57AA
12	RMM	0	22	2X57AA
8	RMM	0	23	2X57AA
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
22	MTM	12	18	2X57AA
23	MTM	12	19	2X57AA

**Datafilling table ALMSD**

Table ALMSD (alarm signal distribution) identifies the function of each of the assigned SD points in the SD groups. If the RMM shelf has an NT2X57AA card, Table ALMSD lists the SD points for the OPAC. Table ALMSD assigns the SD points to SD groups. Table SDGRP defines the SD groups.

The table that follows indicates the entry for Basic Call Processing for Table ALMSD. This table indicates the fields that apply to Basic Call Processing.

**Datafilling table ALMSD (Sheet 1 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
FUNCTION		alphanumeric	Function. Enter the alarm function. The maximum number of characters is 16.
SDGROUP		0 to 255	Signal distribution group. Enter the signal distribution group number where the SD point belongs. The values range from 0 to 255.



**Basic call processing** (continued)

**Datafilling table ALMSD (Sheet 2 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
POINT		0 to 7	Signal distribution point. Enter the signal distribution point number in the SD group. The range is from 0 to 7.
NORMALST		0 to 1	Normal state. Enter the normal state of the signal distribution point. Enter 0 if the SD point is normally off or open. Enter 1 if the SD point is normally on or closed.
AUDIBLE		Y or N	Audible. Enter Y if the SD point is reset when the audible alarm reset key operates. If not, enter N.
LAMPTEST		Y or N	Lamp test. Enter Y to include the SD point in the lamp test. If not, enter N.

**Entry example for table ALMSD**

The following is an example of entries for table ALMSD.

**MAP display example for table ALMSD**

TABLE: ALMSD						
FUNCTION	SDGROUP	POINT	NORMALST	AUDIBLE	LAMPTEST	
EXPILPWR	2	6	0	N	N	
EXPILDMS	2	5	0	N	N	
NTALMXFR	2	4	0	N	N	
LN101TST	2	3	0	N	N	
OAUFALL	0	0	1	N	N	
.	.	.	.	.	.	
.	.	.	.	.	.	
.	.	.	.	.	.	
LMMNV	6	6	0	Y	N	
PREFLRF	0	6	0	N	N	

**Datafilling table DFINV**

Table DFINV (distribution frame inventory) stores information for a maximum of 31 distribution frames at the host or in remote locations. Nortel provides the information for this table.

## Basic call processing (continued)

Include an entry in Table DFINV that corresponds to the OPAC for the OPAC to operate correctly. Table DFINV associates the site name for the OPAC with a different distributing frame name (field DFNAME).

### Entry example for table DFINV

The following is an example of entries for Table DFINV.

### MAP display example for table DFINV

TABLE: DFINV			
DFNO	DFNAME	MAXZONE	SITE
0	HOST	4	HOST
1	RLCM	4	REM3

## Datafilling table SCGRP

The SCGRP (scan group) table lists the PECs and location of scan groups that provide scan points for line features. Each miscellaneous scan card (NT0X10AA) provides 14 single-lead scan points. The card has two scan groups. Each group has seven scan points (0-6). Each scan point is assigned to a trunk module (or RMM) circuit number in Table ALMSC.

The total number of trunk groups for which the system allocates memory in Table SCGRP equals to the value of field SIZE. Table DATASIZE has field SIZE for key SCGRP.

The seven scan points in the scan group are available for assignment to MDC or business set. The scan points are also available for assignment to normal lines. The line features for the line are remote make busy (RMB) or stop hunt (SHU). The SHU requires scan points.

**Basic call processing** (continued)

The table that follows indicates the entries for Basic Call Processing for Table SCGRP. The table indicates the fields that apply to Basic Call Processing.

**Datafilling table SCGRP**

Field	Subfield or refinement	Entry	Explanation and action
SCGRPNO		0 to 511	Scan group. Enter the scan group number. The range is from 0 to 511.
TMTYPE		MTM, RSM, or RMM	Trunk module type. Enter the type of trunk module that contains the miscellaneous scan card, MTM or remote maintenance module (RMM).
TMNO		0 to 255	Trunk module number. Enter the number assigned to the MTM or RMM that contains the miscellaneous scan card. Module numbers range for 0 to 255.
TMCKTNO		0 to 23	Trunk module circuit number. Enter the trunk module circuit number on the MTM or RMM where the scan group is assigned. The range is from 0 to 23.
CARDCODE		0X10AA	Product engineering code. Enter the PEC of the scan card.

**Entry example for table SCGRP**

The following is an example of entries for table SCGRP.

**MAP display example for table SCGRP**

TABLE: SCGRP				
SCGRPNO	TMTYPE	TMNO	TMCKTNO	CARDCODE
0	OAU	0	22	0X10AA
1	RMM	0	10	0X10AA
2	RMM	0	11	0X10AA

**Datafilling table SDGRP**

Table SDGRP (signal distribution group) lists the PECs and the location of SD circuits on the RMM. These PECs and locations are assigned to line features.

## Basic call processing (continued)

Each SD card has two SD groups. Each group has seven SD points. Each SD group has an assigned trunk module circuit number.

*Note:* Assign lines at a remote location to SD points that belong to SD groups at the remote location.

### Entry example for table SDGRP

The following is an example of entries for Table SDGRP.

### MAP display example for table SDGRP

TABLE: SDGRP				
SDGRPNO	TMTYPE	TMNO	TMCKTNO	CARDCODE
0	RSM	0	15	2X57AA
1	OAU	0	20	2X57AA
2	MTM	0	6	2X57AA
3	MTM	0	7	2X57AA
4	RMM	0	25	2X57AA

## Datafilling table TOFCNAME

Use Table TOFCNAME (terminating office name) to list all terminating offices in the switch. A terminating office is a group of area code and office code. The table can handle a maximum of 100 terminating offices.

The AREACODE field identifies the area code where the terminating office resides. Table SNPANAME or Table HNPACONT defines the area code.

The OFCCODE field identifies the second part of the terminating office code (TOFC) and is a subarea of AREACODE. A number cannot be an AREACODE and an OFCCODE. For example, if 613 is an AREACODE, the number may not be an OFCCODE in an AREACODE.

*Note:* Enter data in this table after you enter data in tables that define the serving numbering plan area (SNPA). Examples of tables that define the SNPA are HNPACONT and SNPANAME. Enter data in this table before you enter data in any table that assigns directory numbers, like HUNTGRP, LENLINES, or IBNLINES.

### Enter example for table TOFCNAME

The following is an example of entries for Table TOFCNAME.

---

**Basic call processing** (continued)
 

---

**MAP display example for table TOFCNAME**

TABLE: TOFCNAME	
AREACODE	OFCCODE
613	621
819	622
613	722
613	222
819	221

**Datafilling table LINEATTR**

Table LINEATTR (line attribute) assigns line class codes (LCC) and billing and screening information to lines in the DMS-100 switch. In this table, identify all lines that the OPAC supports as private, coin, or private branch exchange (PBX).

Each tuple of Table LINEATTR corresponds to one tuple in table LENLINES. Table LENLINES identifies the location of the line circuit. Match the tuples through the index field of table LINEATTR.

**Enter example for table LINEATTR**

The following is an example of entries for table LINEATTR.

**Basic call processing** (continued)

**MAP display example for table LINEATTR**

```

TABLE: LINEATTR

LAIIDX LCC
  CHGCLSS COST SCRNL LG STS PRTNM LCANAME LCABILL
                                ZEROMPOS HOT TRAFSNO
                                0
MRSA  SFC  LATANM  MDI  IXNAME  DGCLAME  FANIDIGS
                                RESINFO
-----
0 1FR
    NONE  NT   FR01   0   613   POTS   LCA1   N
      CTOP   N     20
    NIL NILSFC  NILLATA  0  NIL   NIL   00
      N
2 1FR
    NONE  NT   NSCR   0   819   POTS   LCA1   N
      CTOP   N     21
    NIL NILSFC  NILLATA1 0  NIL   NIL   00
      N
3 1MR
    NONE  NT   NSCR   0   819   POTS   LCA1   N
      CTOP   N     22
    NIL NILSFC  NILLATA2 0  NIL
      N
4 CCF
    NONE  LO   FR01   0   613   POTS   LCA1   N
      CTOP   N     23
    NIL NILSFC  NILLATA1 0  NIL
      N
    
```

**Datafilling table LNINV**

Table LNINV (line inventory) associates the site name from Table SITE to each line circuit in the OPAC. This table defines the line equipment number (LEN) of a line that indicates the software location and hardware characteristics. A tuple in table LNINV must represent each line card in the OPAC.

A LEN can identify an OPAC line card. In an LEN for an LCM, the fields for the LEN are defined as follows:

- SITE
- FRAME
- UNIT
- SUBGROUP
- CIRCUIT

**Basic call processing** (continued)

Note the following actions between tables:

- Assign coin lines in Table LENLINES. The LNATTIX field corresponds to the line class code in Table LINEATTR. The line class code is coin first (CCF), coin dial-tone first (CDF), or coin semi-postpay (CSP).
- The POTS lines (LCMLSG) do not have tuples that correspond in keyset-type tables.
- For Meridian business sets (MBS), the VARTYPE in Table LCMINV must be NTPROP.

The table that follows indicates the entries for Basic Call Processing for Table LNINV. This table indicates the fields that apply to Basic Call Processing.

**Datafilling table LNINV (Sheet 1 of 4)**

Field	Subfield or refinement	Entry	Explanation and action
LEN		refer to subfields	Line equipment number. This field contains the following subfields: SITE, FRAME, UNIT, LSG, SUBGROUP, and CIRCUIT.
	SITE	alphanumeric	Site. Enter the location of the LCM. This entry is not optional. There is no default value.
	FRAME	0 to 99	LCM frame. Enter the LCM frame number. The LCM frame is not a frame. The LCM frame is a software entity that represents the group the LCM belongs to at the site. The range is 0-99.
	UNIT	0 to 9	Unit. Enter the number that represents the LCM unit in the group. The range is 0-9.
	SUBGROUP	0 to 19	LCM subgroup. Enter the number of subgroups in the line drawers. The range is 0-19.
	LSG	0 to 3	Line subgroup. Enter the line subgroup of the RCS where the line is assigned.
	CIRCUIT	0 to 31	LCM circuit. Enter the number of circuits in the subgroups. The range is 0-31.

**Basic call processing** (continued)

## Datafilling table LNINV (Sheet 2 of 4)

Field	Subfield or refinement	Entry	Explanation and action
CARDCODE		SCD203, SCD221, SCD233, SCD271, SCDFSR, or NAILUP	<p>Card code. Enter the PEC of the line card. Range includes: Refer to the Notes that follow.</p> <p><b>Note:</b> An RCS set up for FSR does not use multiparty cards. If Table LNINV has an SCD221 card code for line cards on an RCS with FSR entered, a message appears. The message displays the following error:</p> <p>SCD221 IS NOT VALID FOR RCS WITH FSR RNGTYPE</p> <p><b>Note 1:</b> Enter SCD222 900 <math>\Omega</math> and SCD252 1500 <math>\Omega</math> FSR cards as SCDFSR for frequency selective ringing.</p> <p><b>Note 2:</b> If Table LNINV has an SCDFSR card code for line cards on an RCS with S entered, a message appears. A message appears if the RCS has S entered in RNGTYPE field of Table RCSINV. The message displays the following error:</p> <p>SCDFSR IS NOT VALID FOR RCS WITH SUPERIMPOSED RNGTYPE</p> <p><b>Note:</b> Use the SPOTS card for single-party or special services. For special services, enter the card as NAILUP. Enter the circuits in the SPOTS card as loop start or ground start. Enter the GND field Y or N for both circuits.</p>



**Basic call processing** (continued)

Datafilling table LNINV (Sheet 3 of 4)

Field	Subfield or refinement	Entry	Explanation and action
			<p><b>Note 1:</b> Do not enter data in SPOTS cards in a mode III RCS. Equipment in mode III multiplexes 48 time slots on two DS-1 lines and expects single-circuit cards. If SPOTS cards have data, use even-numbered circuits for the cards.</p> <p><b>Note 2:</b> If you change an SCD233 coin card to an SCD203 POTS card or SCD271 SPOTS card, check the card codes. Make sure that the even and odd circuits on the same line card have the same cardcode. Before you change the CARDCODE field, delete the odd circuit. Change the CARDCODE field in the even circuit, and add the odd circuit.</p>
PADGRP		alphanumeric	Pad group. Enter the name of the pad group assigned to the line circuit in Table PADDATA.
STATUS		HASU, WORKING, CUTOFF, RESERVED or UNEQUIPPE D	Status. Enter the line inventory availability status.
GND		Y or N	Ground. If line is ground start, enter Y. Or enter N (for loop start).
BNV		L or NL	Balanced network value. Enter L when the line circuit is configured for a loaded network. Or enter NL for nonloaded network.
MNO		Y or N	Manual override. Enter Y to prevent an on-hook balance network test from updating field BNV in this table. Enter N to allow an off-hook balance network test to update field BNV in this table.

**Basic call processing** (continued)**Datafilling table LNINV (Sheet 4 of 4)**

Field	Subfield or refinement	Entry	Explanation and action
CARDINFO		refer to subfield	Card information. This field has subfield CARDTYPE.
	CARDTYPE	ISLCC, SSLCC, REUEPOTS, RCUPOTS, or NIL	Card type. The default is NIL.

**Entry example for table LNINV**

The following is an example of entries for table LNINV.

**MAP display example for table LNINV**

TABLE: LNINV											
	LEN	CARDCODE	PADGRP	STATUS	GND	BNV	MNO	CARDINFO			
REM1	00	0	0	1	2X17AB	STDLN	HASU	N	NL	N	NIL
REM1	00	0	0	2	2X17AB	STDLN	HASU	N	NL	N	NIL
REM1	00	0	0	3	2X17AB	STDLN	HASU	N	NL	N	NIL
REM1	00	0	0	4	2X17AB	STDLN	WORKING	N	NL	N	NIL
REM1	00	0	0	5	2X17AB	STDLN	HASU	N	NL	N	NIL
REM1	00	0	0	6	2X17AB	STDLN	RESERVED	N	NL	N	NIL
REM1	00	0	0	7	2X17AB	STDLN	HASU	N	NL	N	NIL
REM1	00	0	0	8	2X18AD	STDLN	HASU	N	NL	N	NIL
REM1	00	0	0	9	2X18AD	STDLN	HASU	N	NL	N	NIL
REM1	00	0	0	10	2X18AD	STDLN	HASU	Y	NL	N	NIL
REM1	00	0	5	0	2X17AB	STDLN	HASU	N	NL	N	NIL
REM1	00	0	5	1	2X17AB	STDLN	HASU	N	NL	N	NIL

**Datafilling table DNROUTE**

Table DNROUTE (directory number route) lists information for DNs that can be written in the switch.

The AREACODE and OFCCODE fields are the same as the fields that appear in Table TOFCNAME. These fields must have been specified before in the table. The STNCODE field is DEFG in North America. The DNRESULT

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**Basic call processing** (continued)
 

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field is the same as in Table DN. Enter numbers in these categories. These categories result from provisioning an OPAC.

**Note:** Table DN is read only. Table DN has data for all assigned and unassigned DNs. This data includes DNs in DNROUTE. This table does not require input.

**Entry example for table DNROUTE**

The following is an example of entries for table DNROUTE.

**MAP display example for table DNROUTE**

TABLE: DNROUTE			
AREACODE	OFCCODE	STNCODE	DNRESULT
613	621	1000	FEAT DISA IBNTST 0 N N N Y \$
613	621	1010	FEAT DISA IBNTST 0 N N N Y \$
613	621	1096	
613	621	1117	
613	621	1181	
613	621	1251	

**Datafilling subtable HNPACONT.HNPACODE**

Subtable HNPACONT.HNPACODE (home numbering plan area code) lists the route, treatment, or table to which a translation must route. These translations must route for three-digit codes (000-999) in each SNPA, or serving translation schemes (STS), assigned in table HNPACONT. Each three-digit code can be expanded to ten or more digits for compatibility with office equipment and other entries.

Assign the code station ringer test (SRT) to the NPA that the OPAC serves. If Table TOFCNAME changes, change subfield NXX of the CDRRTMT field to the DN where the system assigns the SRT.

**Entry example for subtable HNPACONT.HNPACODE**

The following is an example of entries for subtable HNPACONT.HNPACODE.

**Basic call processing** (continued)

**MAP display example for subtable HNPACONT.HNPACODE**

TABLE: HNPACONT			
POSITION ON (NPA) sub HNPACODE			
FROMDIGS	TODIGS		CDRRTMT
1150	1150	STRG	24
1155	1155	OPC4	25
141	141	OPC3	22
181	181	OPC3	23
201	201	VCT	HNPI
228	228	HRTE	1
229	229	HRTE	1
303	303	FNPA	0
404	404	FNPA	0
418	418	FRTE	29
514	514	FRTD	10

**Datafilling table MTAMDRVE**

The metallic test access (MTA) network is a matrix of vertical and horizontal crosspoints like a minibar. These crosspoints connect specified verticals to horizontal in the network. The MTA connects test equipment on the horizontal crosspoints to circuits that require tests on vertical crosspoints.

Table MTAMDRVE (metallic test access minibar driver) specifies the location and the type of minibar driver assigned to a minibar switch. The NT3X09 driver has relays on the card and does not require an associated minibar switch.

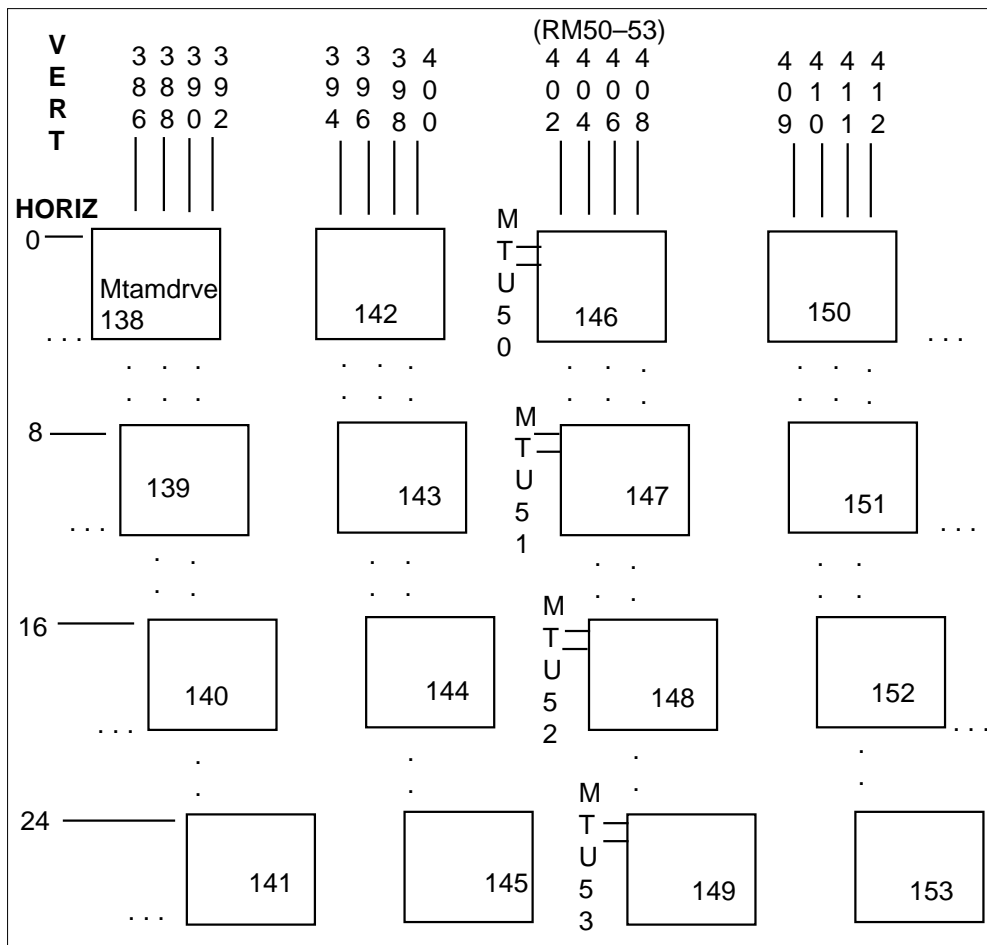
If the RMM of the OPAC has a remote MTA, table MTAMDRVE must have an entry to identify the NT3X09 card. The 0,0 crosspoint in the matrix identifies each minibar.

**Basic call processing** (continued)

**Many remotes in an MTA**

An MTA supports up to 509 remotes. This number of remotes is supported by adding up to four horizontal rows with an offset of two verticals. This configuration (the additional rows with an offset of two verticals) works with either NT3X09AA or NT3X09BA MTAMDRVE cards. See the following figure.

**Example configuration for an MTA with many remotes**



The following MAP display example shows table MTAMDRVE datafill for the previous example. In addition, MAP display examples related to the configuration example mentioned above are provided for table MTAHORIZ and table MTAVERT.

## Basic call processing (continued)

### Datafill example for table MTAMDRVE

MTAMEM	VERT	HORIZ	TMTYPE	TMNO	TMCKTNO	MTACARD
146	402	0	RMM	50	18	3X09BA
147	404	8	RMM	51	18	3X09BA
148	406	16	RMM	52	18	3X09BA
149	408	24	RMM	53	18	3X09BA

The following MAP display example shows table MTAHORIZ datafill for the previous example.

### Datafill example for table MTAHORIZ

HORIZ	HORIZGRP	HORIZAGT			MTAGRP
0	5	L	MTU	50 Y	(146 0) \$
8	5	L	MTU	51 Y	(147 0) \$
16	5	L	MTU	52 Y	(148 0) \$
24	5	L	MTU	53 Y	(149 0) \$

The following MAP display example shows table MTAVERT datafill for the previous example.

### Datafill example for table MTAVERT

VERT	VERTCONN		
402	S	L	RM50 0 0
404	S	L	RM51 0 0
406	S	L	RM52 0 0
408	S	L	RM53 0 0

**Basic call processing** (continued)

The table that follows indicates the entries for Basic Call Processing for Table MTAMDRVE. This table indicates the fields that apply to Basic Call Processing.

**Datafilling table MTAMDRVE**

<b>Field</b>	<b>Subfield or refinement</b>	<b>Entry</b>	<b>Explanation and action</b>
MTAMEM		0 to 255	Metallic test access minibar driver member. Enter the MTA driver member number. This number is the key to the table. The range is from 0 to 255.
VERT		0 to 639	The MTAM driver vertical start location. Enter the vertical start location for the MTAM driver. The range is 0-639.
HORIZ		0 to 127	The MTAM driver horizontal start location. Enter the horizontal start location for the MTAM driver. Start locations range 0-127.
TMTYPE		RMM	Trunk module type. Enter the type of trunk module with the minibar driver. In this example, RMM.
TMNO		0 to 255	Trunk module number. Enter the number assigned to the maintenance trunk module. The range is from 0 to 255.
TMCKTNO		0 to 99	Trunk module circuit number. Enter the circuit number of the trunk module to which the minibar driver is assigned. Circuit numbers range from 0 to 99.
MTACARD		alphanumeric	MTAM driver card. Enter the card code for the MTAM driver card.

**Entry example for table MTAMDRVE**

The following is an example of entries for Table MTAMDRVE.

## Basic call processing (continued)

### MAP display example for table MTAMDRVE

TABLE: MTAMDRVE						
MTAMEM	VERT	HORIZ	TMTYPE	TMNO	TMCKTNO	MTACARD
0	0	0	RMM	0	12	3X09AA

### Datafilling table MTAVERT

Table MTAVERT (metallic test access vertical connection) identifies the minibar switch verticals that connect the OPAC to the MTA matrix. The type of connection is single or multiple.

The table that follows indicates the entries for Basic Call Processing for Table MTAVERT. This table indicates the fields that apply to Basic Call Processing.

### Datafilling table MTAVERT

Field	Subfield or refinement	Entry	Explanation and action
VERT		0 to 99	Vertical. Enter the MTA vertical connection number from 0 to 99.
VERTCONN		S or M. Refer to subfields	Vertical connection. Enter S or M to indicate single or multiple connections. Has subfields SELECTOR, SITE, FRAME, and UNIT.
	SELECTOR	L	Selector. When the value of selector is L, the entry in VERTCONN is S. The subfields SITE, FRAME, and UNIT must have data.
	SITE	alphanumeric	Site name. Enter the name selected for the remote location.
	FRAME	0 to 99	Frame number. Enter the frame number from 0 to 99.
	UNIT	0 to 99	Unit number. Enter the unit number from 0 to 99.

### Enter example for table MTAVERT

The following is an example of entries for Table MTAVERT.



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**Basic call processing** (continued)
 

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**MAP display example for table MTAVERT**

TABLE: MTAVERT	
VERT	VERTCONN
0	S L RCM 01 0

**Datafilling table MTAHORIZ**

Table MTAHORIZ (metallic test access horizontal connection) lists the assignment of horizontal agents to an MTA horizontal. Table MTAHORIZ also lists the horizontal group of MTA minibars (MTAM).

Horizontal agents include

- line test units (LTU)
- multiline test units (MTU)
- operator verification
- metallic jacks
- incoming test access trunks
- extended MTA
- short circuits.

Different horizontal agents can use the same horizontal. The agents must associate with different MTAMs or horizontal groups. The system allows a maximum of 160 different horizontal agents for a given horizontal.

A group of a maximum of 32 MTAMs can connect to a single horizontal agent. Use a horizontal agent only once.

**Basic call processing** (continued)

---

The table that follows indicates the entries for Basic Call Processing for table MTAHORIZ. The table indicates the fields that apply to Basic Call Processing.

**Basic call processing** (continued)

Datafilling table MTAHORIZ (Sheet 1 of 7)

Field	Subfield or refinement	Entry	Explanation and action
HORIZ		0 to 127	MTA horizontal. Enter the MTA horizontal where the horizontal agent test equipment connects. Values are from 0 to 127.
HORIZGRP		0 to 159	MTA horizontal group. Enter the horizontal group number that identifies the horizontal and the horizontal agent as a different tuple. The horizontal group allows assignment of different test equipment on the same MTA horizontal. Group numbers range from 0 to 159.
<p><b>Note 1:</b> Horizontals are not reserved for dedicated LTUs. Assignment of nondedicated LTUs is not restricted.</p> <p><b>Note 2:</b> For an LTU assigned to the host switching unit, the horizontal to which the LTU is assigned is multiplied to all minibar switches. The horizontal is multiplied to all minibar switches assigned to the host switching unit. For an LTU assigned to a remote location, the horizontal where the LTU is assigned is connected to all minibar switches. The horizontal is multiplied to all minibars assigned to the remote location.</p> <p><b>Note 3:</b> When the minibar switch is on the host switching unit, an assignment restriction is not present. The assignment of incoming/outgoing test and operator verification trunks is not restricted. Each incoming/outgoing test trunk and operator verification trunk requires one horizontal.</p> <p><b>Note 4:</b> The MTA configuration is small or medium. The horizontals are where the incoming/outgoing test and operator verification trunks connect to all minibar switches. These horizontals are on the host switching unit.</p> <p><b>Note 5:</b> When the minibar switch is remote from the host switching unit, all horizontals are available. All horizontals are available for the assignment of incoming/outgoing test trunks and for operator verification trunks. All horizontals are also available for the extension of the MTA feature. Each incoming/outgoing test trunk and operator verification trunk requires one horizontal. Each vertical on the host minibar switch assigned to a horizontal on the minibar switch requires one horizontal. This vertical on the host minibar is at the remote or host location.</p> <p><b>Note 6:</b> For assignment of the LTUs, incoming test access, and operator verification trunks to trunk group, refer to tables TRKGRP, TRKSGRP, AND TRKMEM. Refer to Tables TRKGRP, TRKSGRP and TRKMEM for assignment of trunk subgroup trunk member tables.</p> <p><b>Note 7:</b> Enter an LTU or MTU in Table TRKMEM before you add an LTU or MTU to Table MTAHORIZ. If you delete the LTU or MTU from Table TRKMEM, the system marks the corresponding tuple in Table MTAHORIZ as deleted. The system restores the corresponding if you add the LTU or MTU again to Table TRKMEM.</p> <p><b>Note 8:</b> The memory for this table is dynamically allocated for a maximum of 2000 tuples.</p>			

**Basic call processing** (continued)

Datafilling table MTAHORIZ (Sheet 2 of 7)

Field	Subfield or refinement	Entry	Explanation and action
HORIZAGT	SELECTOR	see subfield	<p>Horizontal agent. This field has several subfields that depend on the value of SELECTOR used.</p> <p>Selector. The range is S, L, T, B, E, MJ, J, and LA.</p> <ul style="list-style-type: none"> <li>• Enter S for a timed short circuit.</li> <li>• Enter L for LTU or MTU assignment and complete subfields CLLI, EXTRKNM, and ALTUSE.</li> <li>• Enter T for incoming/outgoing test or operator verification trunk assignment and complete subfields CLLI and EXTRKNM.</li> </ul>
<p><b>Note 1:</b> Horizontals are not reserved for dedicated LTUs. Assignment of nondedicated LTUs is not restricted.</p> <p><b>Note 2:</b> For an LTU assigned to the host switching unit, the horizontal to which the LTU is assigned is multiplied to all minibar switches. The horizontal is multiplied to all minibar switches assigned to the host switching unit. For an LTU assigned to a remote location, the horizontal where the LTU is assigned is connected to all minibar switches. The horizontal is multiplied to all minibars assigned to the remote location.</p> <p><b>Note 3:</b> When the minibar switch is on the host switching unit, an assignment restriction is not present. The assignment of incoming/outgoing test and operator verification trunks is not restricted. Each incoming/outgoing test trunk and operator verification trunk requires one horizontal.</p> <p><b>Note 4:</b> The MTA configuration is small or medium. The horizontals are where the incoming/outgoing test and operator verification trunks connect to all minibar switches. These horizontals are on the host switching unit.</p> <p><b>Note 5:</b> When the minibar switch is remote from the host switching unit, all horizontals are available. All horizontals are available for the assignment of incoming/outgoing test trunks and for operator verification trunks. All horizontals are also available for the extension of the MTA feature. Each incoming/outgoing test trunk and operator verification trunk requires one horizontal. Each vertical on the host minibar switch assigned to a horizontal on the minibar switch requires one horizontal. This vertical on the host minibar is at the remote or host location.</p> <p><b>Note 6:</b> For assignment of the LTUs, incoming test access, and operator verification trunks to trunk group, refer to tables TRKGRP, TRKSGRP, AND TRKMEM. Refer to Tables TRKGRP, TRKSGRP and TRKMEM for assignment of trunk subgroup trunk member tables.</p> <p><b>Note 7:</b> Enter an LTU or MTU in Table TRKMEM before you add an LTU or MTU to Table MTAHORIZ. If you delete the LTU or MTU from Table TRKMEM, the system marks the corresponding tuple in Table MTAHORIZ as deleted. The system restores the corresponding if you add the LTU or MTU again to Table TRKMEM.</p> <p><b>Note 8:</b> The memory for this table is dynamically allocated for a maximum of 2000 tuples.</p>			

**Basic call processing** (continued)

Datafilling table MTAHORIZ (Sheet 3 of 7)

Field	Subfield or refinement	Entry	Explanation and action
	SELECTOR (contd)		<p>Selector (continued).</p> <ul style="list-style-type: none"> <li>• Enter B for a board-to-board dedicated horizontal and complete subfield BBTNR.</li> <li>• Enter MJ for metallic connection to the tip and ring of the subscriber line and complete subfields CLLI and MJACKNUM.</li> <li>• Enter E to multiply a horizontal of a minibar switch from a host or remote to the vertical of a host minibar switch. Complete subfield EMTAVERT.</li> <li>• Selectors J and LA are for licensee use.</li> </ul>
<p><b>Note 1:</b> Horizontals are not reserved for dedicated LTUs. Assignment of nondedicated LTUs is not restricted.</p> <p><b>Note 2:</b> For an LTU assigned to the host switching unit, the horizontal to which the LTU is assigned is multiplied to all minibar switches. The horizontal is multiplied to all minibar switches assigned to the host switching unit. For an LTU assigned to a remote location, the horizontal where the LTU is assigned is connected to all minibar switches. The horizontal is multiplied to all minibars assigned to the remote location.</p> <p><b>Note 3:</b> When the minibar switch is on the host switching unit, an assignment restriction is not present. The assignment of incoming/outgoing test and operator verification trunks is not restricted. Each incoming/outgoing test trunk and operator verification trunk requires one horizontal.</p> <p><b>Note 4:</b> The MTA configuration is small or medium. The horizontals are where the incoming/outgoing test and operator verification trunks connect to all minibar switches. These horizontals are on the host switching unit.</p> <p><b>Note 5:</b> When the minibar switch is remote from the host switching unit, all horizontals are available. All horizontals are available for the assignment of incoming/outgoing test trunks and for operator verification trunks. All horizontals are also available for the extension of the MTA feature. Each incoming/outgoing test trunk and operator verification trunk requires one horizontal. Each vertical on the host minibar switch assigned to a horizontal on the minibar switch requires one horizontal. This vertical on the host minibar is at the remote or host location.</p> <p><b>Note 6:</b> For assignment of the LTUs, incoming test access, and operator verification trunks to trunk group, refer to tables TRKGRP, TRKSGRP, AND TRKMEM. Refer to Tables TRKGRP, TRKSGRP and TRKMEM for assignment of trunk subgroup trunk member tables.</p> <p><b>Note 7:</b> Enter an LTU or MTU in Table TRKMEM before you add an LTU or MTU to Table MTAHORIZ. If you delete the LTU or MTU from Table TRKMEM, the system marks the corresponding tuple in Table MTAHORIZ as deleted. The system restores the corresponding if you add the LTU or MTU again to Table TRKMEM.</p> <p><b>Note 8:</b> The memory for this table is dynamically allocated for a maximum of 2000 tuples.</p>			

**Basic call processing** (continued)

**Datafilling table MTAHORIZ (Sheet 4 of 7)**

Field	Subfield or refinement	Entry	Explanation and action
	CLLI	LTU, MTU, MJACK or alphanumeric	Common language location identifier. <ul style="list-style-type: none"> <li>• Enter LTU for line test unit.</li> <li>• Enter MTU for multiline test unit.</li> <li>• For operator verification or an incoming/outgoing test trunk, enter the alphanumeric code that represents this trunk group in Table CLLI.</li> <li>• Enter MJACK for metallic jack.</li> </ul>
<p><b>Note 1:</b> Horizontals are not reserved for dedicated LTUs. Assignment of nondedicated LTUs is not restricted.</p> <p><b>Note 2:</b> For an LTU assigned to the host switching unit, the horizontal to which the LTU is assigned is multiplied to all minibar switches. The horizontal is multiplied to all minibar switches assigned to the host switching unit. For an LTU assigned to a remote location, the horizontal where the LTU is assigned is connected to all minibar switches. The horizontal is multiplied to all minibars assigned to the remote location.</p> <p><b>Note 3:</b> When the minibar switch is on the host switching unit, an assignment restriction is not present. The assignment of incoming/outgoing test and operator verification trunks is not restricted. Each incoming/outgoing test trunk and operator verification trunk requires one horizontal.</p> <p><b>Note 4:</b> The MTA configuration is small or medium. The horizontals are where the incoming/outgoing test and operator verification trunks connect to all minibar switches. These horizontals are on the host switching unit.</p> <p><b>Note 5:</b> When the minibar switch is remote from the host switching unit, all horizontals are available. All horizontals are available for the assignment of incoming/outgoing test trunks and for operator verification trunks. All horizontals are also available for the extension of the MTA feature. Each incoming/outgoing test trunk and operator verification trunk requires one horizontal. Each vertical on the host minibar switch assigned to a horizontal on the minibar switch requires one horizontal. This vertical on the host minibar is at the remote or host location.</p> <p><b>Note 6:</b> For assignment of the LTUs, incoming test access, and operator verification trunks to trunk group, refer to tables TRKGRP, TRKSGRP, AND TRKMEM. Refer to Tables TRKGRP, TRKSGRP and TRKMEM for assignment of trunk subgroup trunk member tables.</p> <p><b>Note 7:</b> Enter an LTU or MTU in Table TRKMEM before you add an LTU or MTU to Table MTAHORIZ. If you delete the LTU or MTU from Table TRKMEM, the system marks the corresponding tuple in Table MTAHORIZ as deleted. The system restores the corresponding if you add the LTU or MTU again to Table TRKMEM.</p> <p><b>Note 8:</b> The memory for this table is dynamically allocated for a maximum of 2000 tuples.</p>			

**Basic call processing** (continued)

Datafilling table MTAHORIZ (Sheet 5 of 7)

Field	Subfield or refinement	Entry	Explanation and action
	EXTRKNM	0 to 9999	External trunk number. Enter the external trunk number assigned in Table TRKMEM to the LTU, MTU, operator verification trunk, or the incoming/outgoing test trunk from 0 to 9999.
	ALTUSE	Y or N	Automatic line test use. Enter Y to use line test equipment for automatic line testing (ALT). If not, enter N.
	BBTNR	0 to 7	Board-to-board test number. Enter the number of the board-to-board set with which this horizontal associates from 0 to 7.
<p><b>Note 1:</b> Horizontals are not reserved for dedicated LTUs. Assignment of nondedicated LTUs is not restricted.</p> <p><b>Note 2:</b> For an LTU assigned to the host switching unit, the horizontal to which the LTU is assigned is multiplied to all minibar switches. The horizontal is multiplied to all minibar switches assigned to the host switching unit. For an LTU assigned to a remote location, the horizontal where the LTU is assigned is connected to all minibar switches. The horizontal is multiplied to all minibars assigned to the remote location.</p> <p><b>Note 3:</b> When the minibar switch is on the host switching unit, an assignment restriction is not present. The assignment of incoming/outgoing test and operator verification trunks is not restricted. Each incoming/outgoing test trunk and operator verification trunk requires one horizontal.</p> <p><b>Note 4:</b> The MTA configuration is small or medium. The horizontals are where the incoming/outgoing test and operator verification trunks connect to all minibar switches. These horizontals are on the host switching unit.</p> <p><b>Note 5:</b> When the minibar switch is remote from the host switching unit, all horizontals are available. All horizontals are available for the assignment of incoming/outgoing test trunks and for operator verification trunks. All horizontals are also available for the extension of the MTA feature. Each incoming/outgoing test trunk and operator verification trunk requires one horizontal. Each vertical on the host minibar switch assigned to a horizontal on the minibar switch requires one horizontal. This vertical on the host minibar is at the remote or host location.</p> <p><b>Note 6:</b> For assignment of the LTUs, incoming test access, and operator verification trunks to trunk group, refer to tables TRKGRP, TRKSGRP, AND TRKMEM. Refer to Tables TRKGRP, TRKSGRP and TRKMEM for assignment of trunk subgroup trunk member tables.</p> <p><b>Note 7:</b> Enter an LTU or MTU in Table TRKMEM before you add an LTU or MTU to Table MTAHORIZ. If you delete the LTU or MTU from Table TRKMEM, the system marks the corresponding tuple in Table MTAHORIZ as deleted. The system restores the corresponding if you add the LTU or MTU again to Table TRKMEM.</p> <p><b>Note 8:</b> The memory for this table is dynamically allocated for a maximum of 2000 tuples.</p>			

**Basic call processing** (continued)

Datafilling table MTAHORIZ (Sheet 6 of 7)

Field	Subfield or refinement	Entry	Explanation and action
	EMTAVERT	0 to 639	Extended metallic test access column. Enter the associated vertical on the MTA in the host where the horizontal connects from 0 to 639.
	MJACKNUM	1 to 256	<p>Metallic jack number. Where the entry in subfield CLLI is MJACK, enter the metallic jack number, 1 to 256.</p> <p><b>Note:</b> The number of metallic jacks in each DMS office cannot exceed 256.</p>
<p><b>Note 1:</b> Horizontals are not reserved for dedicated LTUs. Assignment of nondedicated LTUs is not restricted.</p> <p><b>Note 2:</b> For an LTU assigned to the host switching unit, the horizontal to which the LTU is assigned is multiplied to all minibar switches. The horizontal is multiplied to all minibar switches assigned to the host switching unit. For an LTU assigned to a remote location, the horizontal where the LTU is assigned is connected to all minibar switches. The horizontal is multiplied to all minibars assigned to the remote location.</p> <p><b>Note 3:</b> When the minibar switch is on the host switching unit, an assignment restriction is not present. The assignment of incoming/outgoing test and operator verification trunks is not restricted. Each incoming/outgoing test trunk and operator verification trunk requires one horizontal.</p> <p><b>Note 4:</b> The MTA configuration is small or medium. The horizontals are where the incoming/outgoing test and operator verification trunks connect to all minibar switches. These horizontals are on the host switching unit.</p> <p><b>Note 5:</b> When the minibar switch is remote from the host switching unit, all horizontals are available. All horizontals are available for the assignment of incoming/outgoing test trunks and for operator verification trunks. All horizontals are also available for the extension of the MTA feature. Each incoming/outgoing test trunk and operator verification trunk requires one horizontal. Each vertical on the host minibar switch assigned to a horizontal on the minibar switch requires one horizontal. This vertical on the host minibar is at the remote or host location.</p> <p><b>Note 6:</b> For assignment of the LTUs, incoming test access, and operator verification trunks to trunk group, refer to tables TRKGRP, TRKSGRP, AND TRKMEM. Refer to Tables TRKGRP, TRKSGRP and TRKMEM for assignment of trunk subgroup trunk member tables.</p> <p><b>Note 7:</b> Enter an LTU or MTU in Table TRKMEM before you add an LTU or MTU to Table MTAHORIZ. If you delete the LTU or MTU from Table TRKMEM, the system marks the corresponding tuple in Table MTAHORIZ as deleted. The system restores the corresponding if you add the LTU or MTU again to Table TRKMEM.</p> <p><b>Note 8:</b> The memory for this table is dynamically allocated for a maximum of 2000 tuples.</p>			



**Basic call processing** (continued)**Datafilling table MTAHORIZ (Sheet 7 of 7)**

Field	Subfield or refinement	Entry	Explanation and action
MTAGRP			MTA group. This field has a list of MTA drivers that connect to the test equipment. This field is a vector of a maximum of 32 groups of subfields MTAMEM and HORIZ.
	MTAMEM	0 to 255	The MTA minibar driver member. Enter the MTAM driver member number where the horizontal connects. The range is from 0 to 255.
	HORIZ	0	This field is read-only. This field provides information about the horizontal where the MTA drivers connect. Enter 0 to satisfy table control.
<p><b>Note 1:</b> Horizontals are not reserved for dedicated LTUs. Assignment of nondedicated LTUs is not restricted.</p> <p><b>Note 2:</b> For an LTU assigned to the host switching unit, the horizontal to which the LTU is assigned is multiplied to all minibar switches. The horizontal is multiplied to all minibar switches assigned to the host switching unit. For an LTU assigned to a remote location, the horizontal where the LTU is assigned is connected to all minibar switches. The horizontal is multiplied to all minibars assigned to the remote location.</p> <p><b>Note 3:</b> When the minibar switch is on the host switching unit, an assignment restriction is not present. The assignment of incoming/outgoing test and operator verification trunks is not restricted. Each incoming/outgoing test trunk and operator verification trunk requires one horizontal.</p> <p><b>Note 4:</b> The MTA configuration is small or medium. The horizontals are where the incoming/outgoing test and operator verification trunks connect to all minibar switches. These horizontals are on the host switching unit.</p> <p><b>Note 5:</b> When the minibar switch is remote from the host switching unit, all horizontals are available. All horizontals are available for the assignment of incoming/outgoing test trunks and for operator verification trunks. All horizontals are also available for the extension of the MTA feature. Each incoming/outgoing test trunk and operator verification trunk requires one horizontal. Each vertical on the host minibar switch assigned to a horizontal on the minibar switch requires one horizontal. This vertical on the host minibar is at the remote or host location.</p> <p><b>Note 6:</b> For assignment of the LTUs, incoming test access, and operator verification trunks to trunk group, refer to tables TRKGRP, TRKSGRP, AND TRKMEM. Refer to Tables TRKGRP, TRKSGRP and TRKMEM for assignment of trunk subgroup trunk member tables.</p> <p><b>Note 7:</b> Enter an LTU or MTU in Table TRKMEM before you add an LTU or MTU to Table MTAHORIZ. If you delete the LTU or MTU from Table TRKMEM, the system marks the corresponding tuple in Table MTAHORIZ as deleted. The system restores the corresponding if you add the LTU or MTU again to Table TRKMEM.</p> <p><b>Note 8:</b> The memory for this table is dynamically allocated for a maximum of 2000 tuples.</p>			

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## Basic call processing (continued)

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### Entry example for table MTAHORIZ

The following is an example of entries for Table MTAHORIZ.

### MAP display example for table MTAHORIZ

TABLE:	MTAHORIZ				
HORIZ	HORIZGRP		HORIZAGT		MTAGRP
<hr/>					
0	0	L	LTU	0	( 0 0 )\$

### Translation verification tools

Basic Call Processing does not apply.

## SERVORD

### Service orders



#### CAUTION

**Do not use the table editor to enter data in SERVORD tables.**

Use SERVORD commands to enter data in Tables LENLINES, LENFEAT, HUNTGRP, HUNTMEM, and DNINV. If you do not use SERVORD commands, features that are not compatible can be assigned to lines.

The Service Order System (SERVORD) allows operating companies to perform the following operations:

- add or remove subscriber service lines
- add or delete line service options
- change LEN or DN of current lines
- add or delete features from lines.

Update Tables LENLINES, LENFEAT, HUNTGRP, HUNTMEM, LINEATTR, and DNINV through SERVORD.

---

**Basic call processing** (continued)

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If Table LNINV has a line, SERVORD automatically enters the correct line attribute number for the line in Table LENLINES. Enter the option, the feature, or both through SERVORD. The SERVORD command enters the correct line options and feature information.

**SERVORD commands**

The table that follows has a list and description of the service order commands.

**Service order commands**

Command	Description
SERVORD	Accesses the service order software
ADD	Adds a line or lines to a hunt group. Adds current lines to a call pickup group.
ADO	Adds options to lines. Adds current lines to a directory number hunt (DNH) group.
DEL	Deletes a line or lines from a hunt group. This command applies to hunt group members except pilot.
DEO	Deletes options from lines.
NEW	Establishes new service that applies to separate nonhunt lines and party lines.
OUT	Removes service that applies to separate lines and the pilot of the hunt group.

**SERVORD limits**

Basic Call Processing does not have SERVORD limits.

**SERVORD prompts**

Enter an SO order in the prompt mode or nonprompt mode. In the prompt mode, the system prompts you for input. In the nonprompt mode, you enter all input in one command string.

When you complete the entry of a service order, the system displays the complete service order for verification purposes. The system prompts for a Y (yes), N (no), or E (edit). Enter N to abort the service order or E to edit the service order in prompt mode. If you enter Y, the system verifies the service order. If the system detects an error, the system rejects the service order.

The system accepts, service orders entered without a service order number (SONUMBER) for immediate activation.

## Basic call processing (continued)

The table that follows indicates the SERVORD prompts to start separate line options appears in the example service orders.

### SERVORD prompts on starting separate line options Basic Call Processing

Prompt	Valid input	Explanation
DN	Seven digits, entered without spaces or hyphens	Directory number of the service to establish, modify, or delete.
LCC	1FR	Line class code of the service to establish, modify, or delete. The 1FR is the separate flat rate, residence and business.
LATANAME	NILLATA (LATA name defined in Table LATANAME)	The calling local access and transport area (LATA) name that associates with the originator of the call.
LTG	0-255	Line treatment group number. Calculates the line attribute index when the DN and link control card (LCC) are not enough to find a correct index.
LEN_OR_LTID	<site>ffuddcc	Line equipment number or logical terminal identification. Associates with a service to establish, modify, or delete, where <ul style="list-style-type: none"> <li>• site is the site name (defaults to host)</li> <li>• ff is the frame number</li> <li>• u is the unit number</li> <li>• dd is the drawer number of the line spread group</li> <li>• cc is the line circuit number</li> </ul>
OPTION	\$	There are no line service options.

### SERVORD example on starting separate line options Basic Call Processing

The table that follows indicates how to establish a separate line without options. The table also indicates how to add an option to a separate line. The following table also indicates how to delete an option from a separate line and remove separate line service.

---

**Basic call processing** (continued)
 

---

**SERVORD example for Basic Call Processing in prompt mode**

```

> SERVORD
SO:
> NEW
SONUMBER:
> <RETURN>
DN
> 5320105
LCC:
> 1FR
LATANAME
> NILLATA
LTG: 0
> 230
LEN_ORLTID
> REM1 00 0 01 27
OPTION
> $
COMMAND AS ENTERED:
NEW NOW 90 11 13 PM 5320105 1FR NILLATA 230 REM1 00 0
01 27 $
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
> Y

```

**SERVORD example for Basic Call Processing in no-prompt mode**

```

> NEW $ 5320105 1FR NILLATA 230 REM1 00 0 01 27 $

```

**Example of adding the negate partial ground (NPGD) option in the prompt mode**

```

>ADO
SONUMBER:      SR 12345 Q 95  4 13 PM
>
DN_OR_LEN:
>4817251
OPTION:
>NPGD
OPTION:
>$

```

## Basic call processing (continued)

---

Example of adding the NPGD option in the no-prompt mode

```
>ADO $ 4817251 NPGD $
```

SERVORD example of deleting an option from an separate line in prompt mode

```
>SERVORD
SO:
>DEO
SONUMBER:
><RETURN>
DN_OR_LEN
>REM1 00 0 01 27
OPTION:
>DGT
OPTION:
>$
COMMAND AS ENTERED:
DEO NOW 90 11 13 PM REM1 00 0 01 27 ( DGT ) $
ENTER Y TO CONFIRM, N TO REJECT TO E TO EDIT
>Y
```

SERVORD example of deleting an option from an separate line in non-prompt mode

```
>DEO $ REM1 00 0 01 27 DGT $
```

---

**Basic call processing (end)**


---

**SERVORD example of removing a current separate line service in prompt mode**

```

>SERVORD
SO:
>OUT
SONUMBER:
><RETURN>
DN:
>5320105
LEN_OR_LTID
>REMI 00 0 01 27
INTERCEPT_NAME
>BLDN
LEN:
>$
COMMAND AS ENTERED:
OUT NOW 90 11 13 PM $ 5320105 REMI 00 0 01 27 BLDN
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
>Y

```

**SERVORD example of removing a current separate line service in non-prompt mode**

```

>OUT $ 5320105 REMI1 00 0 01 27 BLDN $

```

**How SERVORD affects Tables LENLINES, LINEATTR, and LENFEAT**

If Table LNINV has a line, the SERVORD command automatically enters the line attribute number in Tables LINEATTR and LENLINES. The SERVORD command also enters the correct line options and feature information in Table LENFEAT. The SERVORD command enters the correct line options and the feature information after you enter one or both through SERVORD.

## ESA Operation RLCM

---

### Functional group

Functional group: BAS00012

### Feature package

Feature package: NTX154AA, RLCM Emergency Stand-alone (ESA) Operation

### Release applicability

BCS36 and later versions

### Requirements

The ESA Operation RLCM for the Outside Plant Access Cabinet (OPAC) has the following requirements:

- Bilge, NTX000AA
- Common Basic, NTX001AA
- Remote Line Concentrating Module, NTX146AA
- New Peripheral Maintenance Package, NTX270AA
- Local Features II, NTX901AA

### Description

The ESA operation is an optional feature for the OPAC. The ESA module provides limited call processing capability to the OPAC when the OPAC loses communication with the host site.

1. The ESA hardware has two possible configurations. The first configuration includes the following equipment:

- NTMX45AA ESA processor
- NT6X75AA ESA clock and tone card

2. The second possible configuration uses the following equipment:

- NT6X45AF ESA processor
- NT6X47AC 4 Mbyte ESA memory card
- NT6X75AA ESA clock and tone card

The MX45 based configuration enables in-service firmware downloads and duplicate NXX in ESA mode. This processor has on card memory and a filler plate occupies the memory card slot for this configuration. All components for



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**ESA Operation RLCM** (continued)

---

either configuration are in the host interface equipment (HIE) shelf of the RLCM.

The clock and tone card provides clocking and tones. The card provides an interface that allows the ESA processor to message to the host, the line concentrating module (LCM), and the remote maintenance module (RMM).

The RMM must have ESA Digitone receivers (NT2X48AB).

## Operation

Communication to the ESA processor occurs over the same DS-1 links that connect the OPAC to the host unit. A special ESA channel transmits messages over the DS-link to the host. The status of the messaging link between the host and the OPAC determines entry in ESA mode.

The switch of the ESA channel to the ESA processor occurs from the link control card (LCC). A command from the ESA processor causes the OPAC to exit ESA. If the OPAC cannot communicate with the ESA processor, the OPAC exits ESA.

The LCM unit requests ESA when the mate unit can communicate with the DMS-100 switch. The mate can communicate with the switch and the following two conditions occur.

- the IUC fails
- one of the messaging links of the LCM unit fails

When this condition occurs, the LCC hardware does not connect the LCM unit of the OPAC to the ESA processor. After a timeout, the unit that requested ESA determines the unit cannot send a message to the ESA processor. The unit removes the ESA request and drops activity. This condition causes the mate unit to take control of the affected calls of the unit. The mate unit is in contact with the host.

Applications can have brief link interruptions that occur often. To correct this condition, enter data in the OPAC to delay an ESA request. This delay occurs until a link failure condition continues for a specified number (N) of seconds.

If messaging to the host starts again, an ESA request does not occur. An optional datafill message from the host sets the value of N. This datafill gives the delay in units of 500 ms from 0 through 127. The system provides a default delay.

When in ESA, the messaging link from the OPAC goes to the ESA processor. The ESA processor has complete control over all calls. The ESA processor

## ESA Operation RLCM (continued)

---

regains the link to the host. The ESA processor sends a command to both LCM units of the OPAC to request an ESA exit.

### Translations table flow

The ESA Operation RLCM does not affect translations table flow.

### Limits

The following limits apply to ESA Operation RLCM:

- When the ESA module exits the ESA state, the system drops all calls in progress.
- A busy tone does not occur for a party that calls the party number of that party. This condition occurs because this feature does not perform automatic number identification (ANI).
- The system does not support party line circle digits during ESA.
- The system supports a maximum of 64 automatic lines (AUL) in ESA.

### Interactions

There are no ESA Operation RLCM functionality interactions.

### Activation/deactivation by the end user

The following procedure shows how to activate and deactivate ESA Operation RLCM.

#### Activation of ESA Operation RLCM by the end user

##### *At the MAP*

- 1 Make sure the DMS-100 switch has a software load of BCS21 or greater.
- 2 If necessary, change the office parameters.
- 3 If necessary, enter data in table ESAPXLA.
- 4 If necessary, enter data in table CUSTHEAD.
- 5 Change the ESA field in table LCMINV from N to Y to enable the ESA feature.
- 6 Enter data in table XESAINV.
- 7 Perform the following actions at the peripheral module (PM) MAP level to activate the host LTC or LGC unit:
  1. Manual busy (ManB) the LTC or LGC.
  2. Return to service (RTS) the inactive LTC or LGC.
  3. Warm switch of activity (SWACT) the host LTC or LGC.

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## ESA Operation RLCM (continued)

---

- 8 Perform the following actions at the LCM MAP level to activate the ESA feature for both units of the LCM:
  1. ManB the OPAC.
  2. RTS the inactive OPAC.
- 9 Perform the following actions at the ESA MAP level to load the ESA feature:
  1. ManB the ESA processor.
  2. Load the ESA node with the static data. Use the LOADPM command.
  3. RTS the ESA processor.
- 10 Activation is complete.

### Billing

The ESA Operation RLCM does not affect billing.

### Station Message Detail Recording

The ESA Operation RLCM does not affect Station Message Detail Recording.

### Datafilling office parameters

Office parameters help the operating company prepare the office-dependent data for the switching unit. The required office parameters for the NTX154AA feature package ESA Operation RLCM appear in the following table.

For more information on office parameters, refer to *Office Parameters Reference Manual*.

**Note:** Some of the office parameters, translations datafill, software module names and functions, and MAP levels and commands are known by the original design names. Examples of these design names are RLCM or OPM.

#### Office parameters that ESA Operation (Sheet 1 of 2)

Table name	Parameter name	Explanation and action
OFCENG	RLCM_ESAENTRY_BADLINK	Indicates the specified delay between link failure and when the OPAC drops to the ESA mode.
OFCENG	RLCM_ESAENTRY_BADCSIDE	Indicates the specified delay between when OPAC communication with the C-side peripheral fails and when the OPAC enters ESA mode. The loop around message mechanism detects this condition.

## ESA Operation RLCM (continued)

### Office parameters that ESA Operation (Sheet 2 of 2)

Table name	Parameter name	Explanation and action
OFCENG	RLCM_XPMESAEXIT	Indicates the specified delay between restored links or communication with C-side peripheral and when the OPAC exits ESA mode.
OFCENG	RLCM_ESASDUPD_HOUR	Indicates the daily start time to download ESA static data to all OPACs in a sequence. Data in table LCMINV determines this time.
OFCENG	RLCM_ESASDUPD_BOOL	Determines if ESA static data must download to the update each night of the OPAC ESA static data for all ESA equipped OPACs.
OFCENG	RLCM_ESA_NOTIFY_TONE	Controls if the subscriber hears a different dial tone burst to indicate that the OPAC is in ESA mode.

The office parameters support ESA applications as follows:

- RLCM\_ESAENTRY\_BADLINK: DS-1 failure timeouts
- RLCM\_ESAENTRY\_BADCSIDE: loop-around message audit failure timeouts
- RLCM\_XPMESAEXIT: ESA EXIT timeout
- RLCM\_ESASDUPD\_HOUR: RLCM ESA static data updates (each night)
- RLCM\_ESASDUPD\_BOOL: RLCM ESA static data updates (each night)
- RLCM\_ESA\_NOTIFY\_TONE: dial-tone alert

The following sections describe the six office parameters and provide examples of each parameter.

For more information on office parameters, refer to *Office Parameters Reference Manual*.

### Office parameter RLCM\_ESAENTRY\_BADLINK

This parameter is the specified delay between link failure and when the OPAC enters the ESA mode. The parameter defines the delay time in 10 s intervals. For example, 6 indicates 60 s.

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**ESA Operation RLCM** (continued)

---

The default value for this parameter is 3 with a range of 3 through 100. To activate a change in the parameter, first busy and then RTS the OPAC.

**Office parameter RLCM\_ESAENTRY\_BADCSIDE**

This parameter is the specified delay between when OPAC communication with the C-side peripheral fails and when the OPAC enters the ESA mode. The loop-around message mechanism detects this condition.

The parameter defines the delay time in 1 min intervals. For example, 6 indicates 6 min.

The default value for this parameter is 15 with a range of 5 through 60. To activate a change in the parameter, first busy and then RTS the OPAC.

**Office parameter RLCM\_XPMESAEXIT**

This parameter is the specified delay between the restoration of the links, recovery of C-side peripheral communication and when the OPAC exits ESA mode. The parameter defines the time in 10-s intervals. For example, 2 indicates 20 s.

The default value is 0, which means the OPAC waits for manual RTS. The range of value is 0 through 100. The activation is immediate when the change occurs to the parameter.

**Office parameter RLCM\_ESASDUPD\_HOUR**

This parameter is the daily start time for the download of ESA static data to all OPACs in sequence. The data in table LCMINV determines this start time. The parameter defines the time in 1 h intervals. For example, 4 indicates 4 a.m. and 14 indicates 2 p.m.

The specified value must comply with the following conditions:

- The time is a time of low traffic on the switch.
- The time is not the same time as the weekly LCM routine exercise (REX) test.
- The time is not the same time as the Remote Switching Center (RSC) nightly update. Refer to parameter RSC\_ESASDUPD\_HOUR in table OFCENG.

The default for this parameter is 4 with a range of 0 through 23. The activation is immediate when the change to the parameter occurs.

## ESA Operation RLCM (continued)

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### Office parameter RLCM\_ESASDUPD\_BOOL

This parameter determines if the download of ESA static data must occur to the update each night of the OPAC ESA static data. This data is for all ESA equipped OPACs.

If the value does not change from the default value of Y (yes), the download of the static data occurs at the update each night.

If the value changes to N (no), the download of static data does not occur at the update each night. The activation is immediate when the change occurs to the parameter.

### Office parameter RLCM\_ESA\_NOTIFY\_TONE

This parameter controls if the subscriber hears a dial tone burst to alert the subscriber that the OPAC is in ESA mode. The dial tone burst is 0.25 s for on, and 0.25 s for off.

## ESA control of translation facilities

When the host controls the OPAC, the DMS CC performs the translations. When the OPAC is in ESA mode, the ESA processor performs the translations. The ESA processor uses a subset of translation data from the DMS CC. This subset is a snapshot of the DMS CC data that ESA call processing requires. The translation data in the snapshot is static data.

The download of the static data to the ESA processor from the DMS CC truncates some of the translation data. The system generates ESA logs when the downloaded data exceeds the OPAC ESA maximum.

The system does not enter OPAC ESA mode until the ESA processor is loaded with static data.

The download of ESA static data must occur from the DMS CC to the ESA processor if changes occur to any of the following tables:

- translation data tables
- table ESAPXLA
- table CUSTHEAD

**ESA Operation RLCM** (continued)

The translation data tables, entries, maximum entry types, and applicable ESA logs to download errors appear in the following table.

**Static data for ESA translations**

<b>Table</b>	<b>Type</b>	<b>Max</b>	<b>Down load warning log</b>
Terminal data	1 for each terminal	640	N/A
Automatic line	1 for each AUL	64	ESA101
Customer group	Customer group	32	ESA102
Prefix head	1 for each customer group	32	N/A
Prefix table	1 for each ESA prefix translator		ESA103
	plain old telephone service (POTS)	16	
	customer group	customer group	
Extension head	1 for each customer group	32	ESA104
Extension table	1 for each MDC extension translator	256	
ABC	1 for each directory number (DN)	640	ESA105
DEFG	1 for each hunt group	520	ESA107
Office parameter	1	1	N/A
Digitone receiver	1 for each Digitone receiver	30	N/A

## ESA Operation RLCM (continued)

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### Translation data tables

Translation data tables in static data are as follows:

- The terminal data table determines how to set up a call. One entry for each terminal and a maximum of 640 terminals are present. Terminal data contains the following:
  - line type
  - DP or Digitone/DP signaling
  - automatic or coin line
  - AUL index to AUL data table
  - customer group index to customer group data table
  - customer group number for a Meridian Digital Centrex (MDC) line
- The AUL table contains the DN of the terminator. One entry for each AUL with a maximum of 64 entries are present.
- The customer table contains the prefix table number for special number dialing and an extension prefix table number for station dialing. One entry for each customer group is present. A maximum of 32 customer groups can be present.
- The prefix header table contains a maximum of 32 prefix numbers or special numbers with a maximum of 15 digits each. There is one entry for each customer group and one POTS entry. There can be a maximum of 32 customer groups.
- The prefix table contains one entry for each ESA prefix translator. There can be a maximum of 16 entries for POTS and a maximum of 8 entries for each customer group.
- The extension header table contains one entry for each customer group. There can be a maximum of 32 groups.
- The extension table contains one entry for each MDC extension translator. There can be a maximum of 256 groups.
- Table ABC contains one entry for each each DN. There can be a maximum of 640 entries. There is no access to this table.
- Table DEFG has 1000 entries. There is no access to this table.
- The hunt header table contains one entry for each hunt group. There can be a maximum of 26 hunt groups.
- The hunt member table contains one entry for each hunt group. There can be a maximum of 520 members.



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## ESA Operation RLCM (continued)

---

- The office parameter table is a single entry table.
- The Digitone receiver table contains the terminal identifications (TID) of all the Digitone receivers of the RMM in the remote site. These TIDs are the TIDs of the entries in table TRKMEM. These entries are the CLLI of ESADGTR in the RMM at the remote site. The ESA processor uses the TIDs to collect digits from Digitone telephones. One entry for each Digitone receiver, with a maximum of 30 entries is present.

### Download of the ESA processor

The download of translation data occurs to the ESA processor in the following ways:

- The LOADPM command downloads data to the ESA processor.
- The RTS command downloads data automatically to the ESA processor. This condition occurs if the processor cannot perform call processing with current data.
- The load of data can occur routinely during daily updates of the ESA processor. This condition occurs if specified in the RLCM\_ESADUPD\_HOUR office parameter.

### Datafill sequence

The following table lists the tables that require datafill to implement ESA Operation RLCM. The tables appear in the order in which data entry occurs.

#### Datafill tables required for ESA Operation RLCM

Table	Purpose of table
LCMINV	Line Concentrating Module Inventory. Lists the data assignment for each bay associated with an OPAC. Includes the boolean field ESA.
XESAINV	Emergency Stand Alone Inventory. Identifies ESA capability for the peripherals. If ESA is available, table LCMINV must first indicate the ESA. The entry of the correct data in table XESAINV can add the ESA peripheral to the DMS inventory.
ESAPXLA	Emergency Stand Alone Prefix Translation. Contains special prefix translations for POTS and MDC customer group data assignments.  <b>Note:</b> Use of this table occurs in the ESA mode.
CUSTHEAD	Customer Group Head. Links a customer group to the prefix translation table name that table ESAPXLA identifies.

## ESA Operation RLCM (continued)

### Datafilling table LCMINV

Table LCMINV lists the data assignment for each bay associated with the OPAC. If ESA is available, table LCMINV must first indicate the ESA in the boolean field. Enter Y (yes) if the OPAC has the ESA option. Enter N (no) if the OPAC does not have the ESA option.

The following table shows the datafill for ESA Operation RLCM for table LCMINV. Only those fields that apply directly to ESA Operation RLCM appear.

For a description of the other fields, refer to the *Customer Data Schema Reference Manual*.

### Datafilling table LCMINV

Field	Subfield	Entry	Explanation and action
LCMINFO		see subfield	Line concentrating module information. This field contains subfield LCMSELECTOR.
	LCMSELECTOR	HLCM or RLCM	LCM selector. Specifies the selector. Enter HLCM for a host LCM. Enter RLCM for a remote LCM.
	ESA	Y or N	Emergency stand alone. Enter Y if the entry in subfield LCMSELECTOR is RLCM and the RLCM is arranged for the ESA option. For any other condition, enter N.  <b>Note:</b> Enter data in table XESAINV if the entry is Y. Entries in table XESAINV must be deleted first before this field can be reset to N.
<p><b>Note:</b> When you enter data in fields link information (LNKINFO) or link map (LNKMAP), do not assign message links to the same physical interface card. When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This condition applies to all interface link types; DS-1, DS30, DS30A, or PCM-30. Table control issues a warning if an attempt occurs to assign message links on the same interface card. The assignment of message links to the same interface card can cause an E1 outage if the card fails. An E1 outage is the failure of all message links.</p>			

### Datafill example for table LCMINV

The following example shows sample datafill for table LCMINV.

**ESA Operation RLCM** (continued)

**MAP example for table LCMINV**

```

TABLE: LCMINV

      LCMNM  FRTYPE SHPOS FLOOR ROW FRPOS  EQPEC  LOAD
CSPMNO  BICTST  MEMSIZE

                                LCMTYPE
-----
REM3 02 0   RLCM   0   1   A 0   6X04AA  LCM19I
LGC  0   Y   64K   $ 48V  RLCM
      ( 2) ( 6) ( 3) ( 7)$ Y N N
                                6X50AA
    
```

**Datafilling table XESAINV**

Datafill in table XESAINV updates the DMS-100 inventory for all peripherals with ESA capability.

The ESA is an optional feature available for the OPAC. Table LCMINV must indicate if this feature is available. When this condition occurs, enter the correct data in table XESAINV. This datafill adds the ESA to the inventory of the DMS office.

The data in this table contains information on the default load and the circuit location data. A check does not occur for the circuit location data in table XESAINV against data in table LCMINV.

The following table shows the datafill for ESA Operation RLCM for table XESAINV. Only fields that apply directly to ESA Operation RLCM appear.

For a description of the other fields, refer to the *Customer Data Schema Reference Manual*.

**Datafilling table XESAINV (Sheet 1 of 2)**

Field	Subfield	Entry	Explanation and action
ESANAME		see subfields	Emergency stand-alone name. This field contains subfields ESASITE, ESAPMTYPE, and ESANO. See subfields for definitions.
	ESASITE	alphanumeric	Emergency stand-alone site. Enter the site name listed in table SITE.

**ESA Operation RLCM** (continued)

**Datafilling table XESAINV (Sheet 2 of 2)**

	ESAPMTYPE	ESA	Emergency stand-alone peripheral module type. Enter ESA to specify the type of peripheral module (PM).
	ESANO	0 to 255	Emergency stand-alone number. Enter the number assigned to this PM.
Enter the location of this PM in fields FRNO, SHPOS, FLOOR, ROW, and FRPOS.			
LOAD		alphanumeric	Load. Enter the loadfile used to load the ESA unit.
EXECTAB		see subfields	Executive table. This table contains subfields TRMTYPE and EXEC. Enter the terminal type and the associated executive together.
EXECTAB (continued)	TRMTYPE	alphanumeric	Terminal type. Enter the type of terminal models: ESALINES for normal lines, KSET for EBS terminals, or RMM_TERM for maintenance trunks.
	EXEC	alphanumeric	Executive programs. Enter the executives associated with the terminal type (ESAEX, KSETEX, and RSMEX).
CSPM		see subfields	C-side PM. Consists of subfields HOSTLCMT and HOSTLCMN.
	HOSTLCMT	LCM	Host LCM type. Enter the remote peripheral module type in the same place as the added ESA.
	HOSTLCMN	0 to 255	Host line concentrating module number. Enter the number assigned to this LCM.
PROCPEC		alphanumeric	ESA processor PEC. The processor complex of each XPM unit contains one or more ESA processor cards. Enter the PEC corresponding to the ESA processor with the minimum firmware capabilities. Examples are 6X45AF and MX45AA.
E2LOAD		alphanumeric	Firmware file name. Enter the firmware file name. For 6X45 based cards, the only valid entry is NILLOAD.

**ESA Operation RLCM** (continued)**Datafill example for table XESAINV**

Sample datafill for table XESAINV appears in the following example.

**MAP example for table XESAINV**

ESANAME	FRTYPE	FRNO	SHPOS	FLOOR	ROW	FRPOS	LOAD	EXECTAB
CSPM	PROCPEC	E2LOAD						
REM1	ESA 0	RLCM	0	38	1	A	0	ESA35CR1
			(RMM_TERM	RSMEX)		(ESALINES	ESAEX)	\$
LCM 0	MX45AA	UPFWNP02						

**Datafilling table ESAPXLA**

Table emergency stand-alone prefix translation (ESAPXLA) contains special prefix translation data used for POTS and MDC customer group data assignments. During normal operation of the OPAC, or of a remote cluster controller (RCC), use of this table does not occur. Translations are performed normally.

If loss of communication with the host occurs and the OPAC or an RCC enters ESA mode, use of this table occurs in prefix translations.

There are two parameters of table ESAPXLA that are used when the OPAC enters ESA mode. These parameters are the prefix translation key (PXLKEY) and the translation result (RESULT). The PXLKEY parameter is a field of table ESAPXLA. The RESULT parameter is a subfield of the field PMTYPE.

The PXLKEY field defines a set of prefix digits on a specified OPAC for all POTS lines or for a specified MDC customer group. The RESULT subfield specifies the action to take when a POTS customer group member of that OPAC dials the prefix digits.

One of the subfields of PXLKEY is the translator name (XLNAME). The prefix translation can execute when the prefix digits are dialed from a POTS line on the OPAC. If this event occurs, ESAPOTS is entered in subfield XLNAME.

The prefix translation can execute when an MDC customer group dials these digits. If this event occurs, an alphanumeric name is entered in subfield

## ESA Operation RLCM (continued)

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XLANAME. This name has a maximum of eight characters. This name must be associated with an MDC customer group in table CUSTHEAD.

### Translation actions

There are six different types of action the translation can take. These actions are line (L), treatment (T), hunt group (H), standard route (R), directed route (D), or access code (A).

When the prefix digits are dialed, the different translations occur as follows:

- The L option is chosen if a connection must occur to another line on the remote. Information that identifies the line where the datafilled connection must occur.
- The T option is chosen if a reorder tone must be given or a strip and translate must be performed, and the type of treatment desired is entered.
- The H option is chosen if the system is to route the call to a hunt group. The information that identifies the hunt group is entered. This information is in table HUNTGRP.
- The R option is chosen if a connection is to occur to a trunk with standard routing. Information on the route, the number of digits to collect, and the problem of the code is entered.
- The D option is chosen if a connection is to occur to a trunk with directed routing. The information on the route, the number of digits to collect, and second dial tone is entered.
- The A option is chosen if retranslation of the digits is to occur. A new prefix translator name is entered, and dial tone is decided.

If XLANAME is ESATRMT, field PREFIX must contain an N. The selector in the RESULT field can be L, H, T, or R, and A and D are not valid. The ESATRMT is a reserved prefix translator name.

The following procedure describes the field and subfields of table ESAPXLA in the order of datafill. The procedure provides an explanation and correct action to take for the required datafill. Only fields that apply directly to ESA Operation RLCM appear.

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**ESA Operation RLCM** (continued)
 

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For a description of the other fields, refer to the *Customer Data Schema Reference Manual*.

**Datafilling table ESAPXLA (Sheet 1 of 2)**

Field	Subfield	Entry	Explanation and action
PXLKEY		see subfields	Prefix translator key. This key identifies a set of prefix digits on a site for a specified set of customers. The key comprises the subfields XLANAME, NODE, and PMTYPE.
	XLANAME	ESAPOTS or alphanumeric	Prefix translator name. If this translation is to occur for any POTS line on the remote, enter ESAPOTS.  If this translation is to occur for a specified MDC customer group, enter any name. The name can have a maximum of eight characters. Relate this name to an associated customer group in table CUSTHEAD.
	NODE	see subfields	Node. This subfield specifies the OPAC, that appears as RLCM, or RCC node where the translator that XLANAME identifies is associated. This subfield comprises the subfields PMTYPE, LCMNO, SITE, and RCCNO.
	PMTYPE	LCM or RCC	Peripheral module type. This subfield identifies the peripheral node as an OPAC, that appears as LCM, or an RCC.  <b>Note:</b> If this subfield specifies LCM, data entry must occur for subfield LCMNO. If this subfield specifies RCC, data entry must occur for SITE and RCCNO.
	LCMNO	see subfields	LCM number. This subfield specifies the OPAC where this translator applies. The LCMNO comprises the subfields SITE, FRAME, and UNIT.
	SITE	alphanumeric	Site. Enter the site name assigned to the OPAC location.

**ESA Operation RLCM** (continued)

**Datafilling table ESAPXLA (Sheet 2 of 2)**

Field	Subfield	Entry	Explanation and action
	FRAME	0-63	Frame. Enter the frame number of the OPAC at the site subfield SITE specifies.
	UNIT	0-1	Unit. Enter the unit number of the OPAC in the frame. The lower unit in the frame is unit 0, and the upper unit is unit 1.

Subfield PMTYPE has subfields PREFIX, RESULT, and SEL for which data entry must also occur. The following table shows the entries for these subfields.

**Datafilling table ESAXPLA**

Field	Subfield	Entry	Explanation and action
	PREFIX	numeric	Prefix digits. Enter the 1- to 15-digit prefix where the translation is associated.
	RESULT	alphanumeric	Translation result. This subfield defines the action to take when the earlier defined prefix digits are dialed on the remote. This subfield comprises the subfields SEL, LEN, RNGCD, TRMT, HTGRP, SEQNO, AMBIG, NUMDIG, DIALTONE, XLANAME, and RR.
	SEL	L, T, H, R, D, or A	<p>Selector. If the prefix digits entered in the PREFIX subfield specify a line, enter L. Fill in subfields LEN, AMBIG, and RNGCD.</p> <p>If the prefix digits specify a treatment, enter a T and fill in subfield TRMT.</p> <p>If the prefix digits specify a hunt group, enter H and fill in subfields HTGRP, SEQNO, and AMBIG.</p> <p>If the prefix digits specify a standard route, enter R and fill in subfields RR, NUMDIG, and AMBIG.</p> <p>If the prefix digits specify a directed route, enter D and fill in subfields RR, NUMDIG, and DIALTONE.</p> <p>If the prefix digits specify an access code, enter A and fill in subfields XLANAME and DIALTONE.</p>



**ESA Operation RLCM** (continued)

The following tables describe the subfields L, T, H R, D, and A of subfield SEL, and show the actions to take for each.

**Datafilling table ESAXPLA with subfields with SEL of L (Sheet 1 of 2)**

Field	Subfield	Entry	Explanation and action
	LEN	alphanumeric	Line equipment number. This subfield defines the line to which the call terminates. The subfield comprises the subfields SITE, FRAME, UNIT, LSG, and CIRCUIT.
	SITE	alphanumeric	Site. Enter the name assigned to the site which contains the termination line. The remote operates in ESA and communication does not occur with the host. This site must match the site the NODE specifies.
	FRAME	0-99	Frame. Enter the frame number at the site that contains the line card for the termination line.  If PMTYPE is LCM, this frame number must match the frame number that subfield LCMNO specifies. This match must occur because ESA in an OPAC can support communications only in the same OPAC. If subfield PMTYPE is RCC, the system supports communication for all LCMs attached to the RCC.
	UNIT	0-1	Unit. Enter the unit number of the LCM of the OPAC with the assigned line. If subfield PMTYPE is LCM, this unit number must match the unit number subfield LCMNO specifies. The lower LCM in the frame is unit 0 and the upper LCM is unit 1.
	LSG	0-19	Line subgroup. Enter the number of the line subgroup of the LCM of the OPAC where the line card for that line is assigned.
	CIRCUIT	0-31	Line card circuit number. Enter the line card circuit number of the line subgroup which the assigned line card.

**ESA Operation RLCM** (continued)

**Datafilling table ESAXPLA with subfields with SEL of L (Sheet 2 of 2)**

Field	Subfield	Entry	Explanation and action
	AMBIG	Y or N	<p>Not clear. If the prefix digits are completely different, enter N. If the prefix digits can be dialed as the first digits of another number, enter Y.</p> <p>For example, digits 123 are not clear if another acceptable number is 12356. If N is the entry, the switching process begins immediately after the prefix digits are dialed. If Y is the entry, the remote waits for additional digits.</p> <p>If the entry of digits does not occur in a specified time, the switching process begins.</p>
	RNGCD	0-7	<p>Ring code. Enter the code for the type of ringing associated with the line subfield LEN field specifies.</p>

Subfields with SEL of T datafill follow.

**Datafilling table ESAXPLA with subfields with SEL of T**

Field	Subfield	Entry	Explanation and action
	TRMT	REORDER, SRPXLA, or SRPDXLA	<p>Treatment. Enter the type of treatment to apply when these prefix digits are dialed. The REORDER specifies the reorder tone. The SRPXLA specifies strip and translate. The SRPDXLA specifies strip, second dial tone, and translate.</p>

**Datafilling table ESAXPLA with subfields with SEL of H (Sheet 1 of 2)**

Field	Subfield	Entry	Explanation and action
	HTGRP	HTGRP	<p>Hunt group number. Enter the number associated with the desired hunt group. The association between this number and the hunt group occurs in table HUNTGRP.</p>

**ESA Operation RLCM** (continued)**Datafilling table ESAXPLA with subfields with SEL of H (Sheet 2 of 2)**

Field	Subfield	Entry	Explanation and action
	SEQNO	0-255	Sequence number. Enter the number associated with one member of the hunt group. The call attempts to connect to this hunt group member first. Table HUNTMEM specifies the association between the number and the hunt group member.
	AMBIG	Y or N	<p>Not clear. If the prefix digits are completely different, enter N. If the prefix digits can be dialed as the first digits of another number, enter Y.</p> <p>For example, digits 123 are not clear if another acceptable number is 12356. If the entry is N, the switching process begins immediately after the prefix digits are dialed. If the entry is Y, the remote waits for more digits.</p> <p>If the entry of digits does not occur in a given time period, the switching process begins.</p>

**Datafilling table ESAXPLA with subfields with SEL of R**

Field	Subfield	Entry	Explanation and action
	RR	0-255	Route reference index. Specify the index of the route that ESARTE describes where translation is to proceed.
	NUMDIG	0-15	Collect digits. Specify the number of digits to collect before outpulsing.
	AMBIG	Y or N	<p>Not clear. If the prefix digits are completely different, enter N. If the prefix digits can be dialed as the first digits of another number, enter Y.</p> <p>For example, digits 123 are not clear if another acceptable number is 12356. If the entry is N, the switching process begins immediately after the prefix digits are dialed. If the entry is Y, the remote waits for additional digits.</p> <p>If the entry of digits does not occur in a given time period, the switching process begins.</p>

**ESA Operation RLCM** (continued)

**Datafilling table ESAXPLA with subfields with SEL of D**

Field	Subfield	Entry	Explanation and action
	RR	0-255	Route reference index. Specify the index of the route that ESARTE describes where translation is to proceed.
	NUMDIG	0-15	Collect digits. Specify the number of digits to collect before outpulsing.
	DIALTONE	Y or N	Dial tone. Indicates if the system is to give second dial tone after the system strips the prefix digits.

**Datafilling table ESAXPLA with subfields with SEL of A**

Field	Subfield	Entry	Explanation and action
PXLAKEY		see subfields	Prefix translator key. This key identifies a set of prefix digits on a site for a specified set of customers. This entry comprises subfields XLANAME, and DIALTONE.
	XLANAME	ESAPOTS or alphanumeric	Prefix translator name. If this translation must occur for any POTS line on the remote, enter ESAPOTS.  If this translation must occur for a specified IBN customer group, enter any name. This name can have a maximum of eight characters. Relate this name to a customer group in table CUSTHEAD. This entry is alphanumeric.
	DIALTONE	Y or N	Dial tone. Indicates if the system is to give second dial tone after the system strips prefix digits.

**Datafill example for table ESAPXLA**

Datafill for table ESAPXLA appears in the following example.

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**ESA Operation RLCM (continued)**


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**MAP display example for table ESAXPLA**

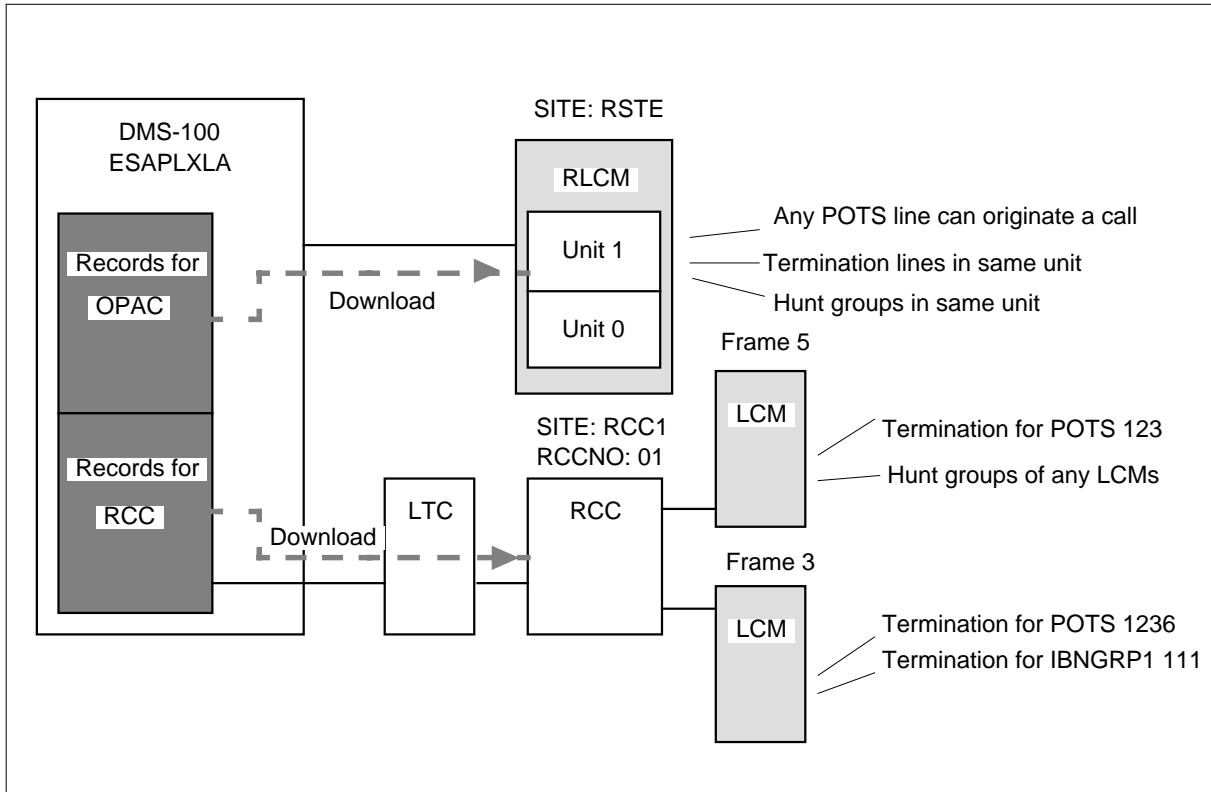
TABLE: ESAPXLA				PXLKEY				RESULT				
ESAPOTS	RLCM	RSC0	0	411	L	RSC0	00	0	00	02	Y	1
IBN1	RLCM	RSC0	0	6							T	SRPXL
IBN1	RLCM	RSC0	0	9							T	SRPDXLA
ESATEST	RLCM	RSC0	0	611	L	RSC0	00	1	02	20	N	1

The following figure shows that two remotes off this DMS-100 unit are present. These remotes are an OPAC and an RCC. Each record in table ESAPXLA applies to one of these remotes. The NODE field specifies the remote where the translator in this record applies.

The data for table ESAPXLA is entered in the DMS-100 host. The data downloads to the remote the NODE field specifies according to the RSC\_ESASDUPD\_HOUR and RSC\_ESASDUPD\_BOOL parameters.

**ESA Operation RLCM** (continued)

**DMS-100 office data input example**



**Prefix translations for the OPAC during ESA**

The source type and the type of user determines prefix translation for an OPAC during ESA. The above figure is an example of a normal remote configuration. The following figures are examples of normal table ESAPXLA datafill.

Prefix translation for different call sources are as follows:

- A POTS user connected to frame 33, LCM unit 0 on site RSTE can dial 911. In this event, the system makes a connection to hunt group number 3111. The connections start with member number 001.
- If any POTS user connected to frame 33, LCM unit 0 on site RSTE dials 123, the OPAC waits for more digits. If the OPAC does not receive a digit in the allotted time period, circuit 12, LSG 11, on the same OPAC unit connects the line.
- If any POTS user connected to frame 33, LCM unit 0 on site RSTE dials 123, the OPAC waits for more digits. If the POTS user dials a 6 in the

**ESA Operation RLCM (continued)**

allotted time period, the line is connected in circuit 09, LSG 13 on the same OPAC unit.

- A POTS user connected to frame 33, LCM unit 0 on site RSTE can dial 6. In this event, the user receives another dial tone and more digits are translated.

**Prefix translation example for selectors L, T, and H**

C O M M A N D	PXLKEY					RESULT					
	X L N A M E	NODE			P R E F I X	1	1 - SEL				
		PMT Y P E				L	L E N			A M B I G	R N G C D
		L C M	L C M O			S I T E	F R A M E	U N I T	L S G		
			S I T E	F R A M E						U N I T	T
R C C	S I T E	R C C N O		H	H T G R P	S E Q N O	2	2-AMBIG			
INP	ESAPOTS	LCM	RSTE 33 0	911	H	3111 001 N					
	ESAPOTS	LCM	RSTE 33 0	123	L	RSTE 33 0 11 12 Y 4					
	ESAPOTS	LCM	RSTE 33 0	1236	L	RSTE 33 0 13 09 N 2					
	ESAPOTS	LCM	RSTE 33 0	6	T	SRPDXLA					
	ESAPOTS	RCC	RCCI 01	911	H	3245 001 N					
	ESAPOTS	RCC	RCCI 01	123	L	RCC1 05 0 19 31 Y 1					
	ESAPOTS	RCC	RCCI 01	1236	L	RCC1 03 0 02 03 N 7					
	IBNGRP1	RCC	RCCI 01	111	L	RCC1 03 0 01 12 N 3					
QUI	IBNGRP2	RCC	RCCI 01	111	T	REORDER					

**ESA Operation RLCM** (continued)

**Prefix translation example for selectors R, D, and A**

C O M M A N D	X L N A M E	PXLKEY				RESULT			
		NODE				1	1 - SEL		
		PMT YPE				R	RR	NUM DIG	AMBIG
		LCM	LCMO			D	RR	NUM DIG	DIALTONE
			SITE	F R A M E	U N I T				
		RCC	SITE	RCC NO		A	XLNAME		DIALTONE
INP	ESAPOTS	RCC	REM3 01 0	366	R	04	007 N		
	ESAPOTS	RCC	REM3 01 0	009	D	10	008 Y		
	ESATRMT	RCC	REM3 01 0	N	R	10	007 N		
QUI	ESAIBN	RCC	REM3 01 0	006	A	ESAPOTS Y			

**Datafilling table CUSTHEAD**

Table CUSTHEAD (customer header) links a customer group to the prefix translation table name in table ESAPXLA.

For MDC lines information in the ESAPXLA prefix tables must be linked to a customer group. The option ESAPXLA specifies the prefix translator name associated with the customer group.

For ESA, enter data for OPTION and XLANAME fields of table CUSTHEAD. If OPTION does not have the ESAPXLA option set, the system does not provide prefix translation for that customer group.

The following variable entries are available for the OPTION and XLANAME fields in table CUSTHEAD. Only those fields that apply directly to ESA Operation RLCM appear.



**ESA Operation RLCM (end)**

For a description of the other fields, refer to the *Customer Data Schema Reference Manual*.

**Datafilling table CUSTHEAD**

Field	Subfield	Entry	Explanation and action
OPTIONS		ESAPXLA	Option. Enter option ESAPXLA.  <b>Note:</b> Enter table ESAPXLA before table CUSTHEAD.
XLANAME		1 to 8 characters	Prefix Translator Name. Enter the one to eight characters assigned to the prefix translator in table ESAPXLA.

**Datafill example for table CUSTHEAD**

**MAP display example for table CUSTHEAD**

```

TABLE: CUSTHEAD

CUSTNAME      CUSTXLA      DGCOLNM      IDIGCOL      OPTIONS
-----
POTSDATA      POT SXLA      POTS         NIL
              ( VACTRMT 0) ( EXTNCOS 0)$
COMIBN2       CXN2         IBN2         NIL
              (VACTRMT 0) (EXTNCOS 4) (SUPERCNF) (MHOLD 10 AUDIO1)
              (CPR Y AUDIO1 3) (ESAPXLA IBN1) $
    
```

**Tools for verifying translations**

The ESTATRAVER tool allows the technician to perform a translations verification (TRAVR) on ESA specified translations.

For more information on this tool, refer to *DMS-100 Family Commands Reference Manual*, 297-1001-822.

**SERVORD**

The ESA Operation RLCM does not use SERVORD.

## OPM Maintenance

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### Functional group

Functional group: BAS00012

### Feature package

Feature package: NTX147AB OPM Maintenance

### Release applicability

The BCS36 and later versions

### Requirements

The OPM Maintenance has the following requirements:

- Bilge NTX000AA
- Common Basic NTX001AA
- Remote Line Concentrating Module (RLCM) NTX146AA
- New Peripheral Maintenance Package NTX270AA
- Local Features II NTX901AA.

### Description

The Outside Plant Access Cabinet (OPAC) is a reconfigured RLCM packaged in an environmentally controlled Series 800E cabinet.

The Series 800E Cabinet contains the following:

- electronics compartment that has the electronics and batteries
- attached ac power pedestal
- outside plant cable termination and service protection compartment that contains the cable and wire termination, protection and cross-connections.

The OPAC is configured with four-equipment bays. From the front with the cabinet doors open, bay 0 is on the left and bay 1 is on the right. From the back with the cabinet doors open, bay 2 is on the left and bay 3 is on the right.

The OPAC is available in a configuration that supports a maximum of 640 lines.

### Operation

The OPAC must withstand outdoor weather conditions, like heat, cold or heavy dust. The environmental control equipment of the OPAC must function

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**OPM Maintenance** (continued)

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correctly. The environmental control equipment consists of fans, heaters, temperature sensors, air filters and vents.

For additional information about the environmental control equipment, refer to *Outside Plant Access Cabinet (OPAC) Maintenance Guide* .

The OPAC maintenance that includes PES maintenance is referred to as OPM-PES. Alarms and circuit states monitor the condition of the PES. The table that gives control of the OPM-PES data is OPMIN.V.

Battery maintenance audits monitor the status of the power backup system. The OPAC uses the following tasks to perform this maintenance function:

- automatic battery rotation
- load bus diagnostic
- charge bus diagnostic.

To maintain charged batteries, every pair of battery strings connects to the charge bus for one day in rotation.

If a commercial ac power failure occurs, the system interrupts the rotation. The system forces every battery string on the load bus for the duration of the outage. The power backup mechanism provides power for a minimum of 6.6 h when the six battery strings are equipped and charged. The power backup mechanism also provides power. This mechanism provides backup when the OPAC is configured to support the maximum of 15 A of additional equipment. The operating company provides the additional equipment.

After the battery strings recover ac power, the battery strings remain on the load bus. The battery strings remain on the load bus for a minimum of 24 h before the battery strings resume normal rotation.

When the voltage measurement of the load bus indicates low voltage, the system triggers a major alarm. The alarm appears in the peripheral module (PM) top level of the MAP display. The system generates a log that indicates the low voltage in the load bus. Use the QueryPES command at the MAP terminal to determine the source of the problem.

The OPAC battery audit provides a charge bus diagnostic. The diagnostic tests the voltage measurement of the battery control unit (BCU) charge buses.

If the charge bus does not supply the correct energy to the batteries, the system generates a log. The log indicates the defective battery charge controller

## **OPM Maintenance** (continued)

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(BCC) board. The PM top level of the MAP display reports a minor alarm. The QueryPES command indicates the source of the unit that has problems.

### **Translations table flow**

The OPM Maintenance does not affect translations table flow.

### **Limits**

The following limits apply to the OPM Maintenance:

- An OPAC PES differs by office, not by site.
- Battery string switching to the load bus or to the charge bus must first be in an open circuit state.
- Change battery string equipped states in the table OPMINV. Change the states if the battery charge controller battery charge control driver (BCCDVR) is in the offline state.
- The audit is inactive on the circuit marked M (manual busy), O (offline) or P (peripheral made busy).
- Alarm displays remain in the earlier updated state when the PES alarm detector (PESALRM) is M, O or P.
- The BCCDVR and PESALRM must be offline to delete the OPAC PES from the OPMINV table.
- The battery string pairs cannot switch when a condition that is not safe is present.
- When you perform a return-to-service (RTS) command on PESALRM from the MAP terminal, a test occurs before the RTS completes. If the system detects a failure, the RTS does not perform. An M continues to appear on the MAP terminal and in PESALRM state memory.

### **Interactions**

The OPM Maintenance does not have functionality interactions.

### **Activation/deactivation by the end user**

The OPM Maintenance does not require activation or deactivation by the end user.

### **Billing**

The OPM Maintenance does not affect billing.

### **Station Message Detail Recording**

The OPM Maintenance does not affect Station Message Detail Recording.

**OPM Maintenance** (continued)**Datafilling office parameters**

Office parameters help the operating company prepare the office-dependent data for the switching unit. The office parameters that OPM Maintenance uses appear in the following table.

For additional information about office parameters refer to *Office Parameters Reference Manual*.

**Note:** Some of the following parts of feature packages maintain the original design names, like the RLCM or OPM.

- office parameters
- translations datafill
- software module names and functions
- MAP levels
- commands

**Office parameter that OPM maintenance uses (Sheet 1 of 2)**

Table name	Parameter name	Description
OFCSTD	OPM_CHARGE_START_TIME	Indicates the hour when battery string pairs connect to the charge bus. The connection occurs during charge cycles and the test and charge cycle.
OFCSTD	OPM_CHARGE_DURATION	Indicates the length of time in hours that a battery string pair connects to the charge bus.
OFCSTD	OPM_DISCHARGE_TIME	Indicates the length of discharge through the test load resistor in the BCC card, nT8X02. Indicates the length of discharge in 15 min intervals.
OFCSTD	OPM_MIN_CHG_VOLT	Indicates the minimum measured voltage required for a battery string to connect to the charge bus. Measurement is in tenths of a volt.
OFCSTD	OPM_VOLT_TST_OCC	Indicates the voltage threshold for the battery voltage test. Measurement is in tenths of a volt.
OFCSTD	OPM_VOLT_TST_DIS	Indicates the voltage threshold for the battery voltage test that follows the discharge interval. Measurement is in tenths of a volt.

## OPM Maintenance (continued)

### Office parameter that OPM maintenance uses (Sheet 2 of 2)

Table name	Parameter name	Description
OFCSTD	OPM_VOLT_TST_CHG	Indicates the voltage threshold for the battery voltage test that follows the post charge open circuit interval. Measurements are in tenths of a volt.
OFCSTD	OPM_VOLT_TST_LTU_ADJUSTMENT	Indicates the adjustments that apply to the OPM_VOLT_TST values. The adjustments are in tenths of a volt. The adjustment occurs when an LTU is used for the measurements and not a MTU.

Charge and test OPAC battery strings in accordance to parameters entered in the office parameters table OFCSTD.


### Office parameter OPM\_CHARGE\_START\_TIME

The OPM\_CHARGE\_START\_TIME indicates the hour when battery string pairs connect to the charge bus. Battery string pairs connect to the charge bus during charge cycles and the test-and-charge cycle. The range is 0 through 23. The number 0 indicates twelve midnight, or 00:00 A.M. The number twenty-three (23) indicates 11:00 P.M. The default value is 23.

The OPMPES level of the MAP terminal displays the current states of the battery strings. At the specified start time each Monday through Friday, the appropriate battery string pair changes to the CHARGE (CHG) state. This action occurs when the battery rotation audit is enabled.

Charge battery strings at low temperatures. If you charge battery strings at high temperatures, the battery cases can crack, break or incur other damage. The recommended start time is 23:00 h after the OPAC cools down from the heat of the day.

### Office parameter OPM\_CHARGE\_DURATION



**WARNING**  
**Do not overcharge batteries.**  
 If you overcharge the batteries, the batteries can crack.

The OPM\_CHARGE\_DURATION indicates the length of time, in hours, that a battery string pair connects to the charge bus. The range of the parameter is 0 through 20. The default value is 7.

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**OPM Maintenance** (continued)

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After the specified number of hours, the states of the batteries change to open circuit (OCC). The states change to indicate that the batteries are open-circuited before the batteries return to the load bus. The states of the batteries appear at the OPMPE level of the MAP terminal.

**Office parameter OPM\_DISCHARGE\_TIME**

The OPM\_DISCHARGE\_TIME indicates the length of discharge through the test load resistor in the BCC card, NT8X02. The length of discharge is in 15 min intervals. The range is 0 through 4.

For example, a 0 does not indicate a discharge time. The 4 indicates 60 min of discharge time. The recommended default value is 4 for Eagle-Picher batteries.

The NT8X02 card does not dissipate the heat of discharging for more than 1 h a week.

The states of the battery string pair in the test-and-charge cycle appear at the OPMPE level of the MAP terminal. The states appear in the MAP terminal as discharge (DIS) for the specified number of minutes. This event occurs on Mondays for a specified number of minutes.

**Office parameter OPM\_MIN\_CHG\_VOLT**

The OPM\_MIN\_CHG\_VOLT indicates the minimum measured voltage required for a battery string to connect to the charge bus. Measurement is in tenths of a volt. The range is -400 through -500.

For example, -420 represents -42.0V. Enter a value greater than the value for parameter OPM\_VOLT\_TST\_DIS. The default value is -420.

The rotation schedule calls for a string pair to be charged. When the voltage of a string pair is less than -42.0, the system does not place the pair on the charge bus. The system generates a PES115 log.

**Office parameter OPM\_VOLT\_TST\_OCC**

The OPM\_VOLT\_TST\_OCC indicates the voltage threshold for the battery voltage test. Measurement is in tenths of a volt.

A value of zero indicates that the system cannot perform the test. The range is 0 through -600. The default value is -504 which represents -50.4V. This value is the recommended value for Eagle-Picher batteries.

## **OPM Maintenance** (continued)

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The value used for OPACs that have a line test unit (LTU) instead of a metallic test unit (MTU), is adjusted. Office parameter OPM\_VOLT\_TST\_LTU\_ADJUSTMENT explains the adjustment.

If an incorrect value is specified for the batteries, the system can mark good battery strings as failed. An incorrect value can also cause the system to fail to detect bad strings.

The system tests each equipped battery string one time every month. The system does not test battery strings if the audit is disabled, ENABATST is N or an ac failure occurs. The system marks battery strings that fail two tests in a row as failed. The system removes the failed battery strings from the rotation. The system generates a PES117 log.

### **Office parameter OPM\_VOLT\_TST\_DIS**

The OPM\_VOLT\_TST\_DIS indicates the voltage threshold for the battery voltage test following the discharge interval. The threshold is in tenths of a volt. A value of 0 indicates that the system must not perform the discharge or the test. The range is 0 to -600.

For example, -495 represents -49.5 V. The value must be greater than the value of parameter OPM\_MIN\_CHG\_VOLT. The default value is -495 V. This value is the recommended default value for Eagle-Picher batteries.

The value used for OPACs that have an LTU and not an MTU is adjusted. Office parameter OPM\_VOLT\_TST\_LTU\_ADJUSTMENT explains the adjustment.

If an incorrect value is specified for the batteries, the system can mark good battery strings as failed. An incorrect value can also cause the system to fail to detect bad strings.

The system tests each equipped battery string one time every month. The system does not test each battery string if the audit is disabled, ENABATST is N or an ac failure occurs. Battery strings that fail two tests in a row are marked as failed. The system removes the failed batteries strings from the rotation. The system generates a PES117 log.

### **Office parameter OPM\_VOLT\_TST\_CHG**

The OPM\_VOLT\_TST\_CHG indicates the voltage threshold for the battery voltage test that follows the post charge open-circuit interval. Measurement is in tenths of a volt. A value of zero indicates the system must not perform the test.



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**OPM Maintenance** (continued)

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The voltage range is 0 through -600. For example, -509 represents -50.9 V. The default value is -509. This value is recommended for Eagle-Picher batteries.

The value for OPACs that have an LTU and not an MTU is adjusted. Office parameter OPM\_VOLT\_TST\_LTU\_ADJUSTMENT explains the adjustment.

If an incorrect value is specified for the batteries, the system can mark good battery strings as failed. An incorrect value can also cause the system to fail to detect bad strings.

The system tests each equipped battery string one time every month. The system does not test battery strings if the audit is disabled, ENABATST is N or an ac failure occurs. The system marks battery strings that fail two tests in a row as failed. The system removes the failed battery strings from the rotation. The system generates a PES117 log.

**Office parameter OPM\_VOLT\_TST\_LTU\_ADJUSTMENT**

The OPM\_VOLT\_TST\_LTU\_ADJUSTMENT indicates the adjustments to be applied to the OPM\_VOLT\_TST values. The adjustments are applied when an LTU is used for the measurements and not a MTU. The adjustments are in tenths of a volt.

The voltage range is 0 through 50. The default value of 10 represents 1.0 V. This value is the recommended value to compensate for LTU dc volt measurement accuracy.

The value of this parameter increments the OPM\_VOLT\_TST\_(OCC, DIS, OR CHG) value. The result is truncated to an integral volt. For example, the OPM\_VOLT\_TST\_CHG default value of -509 becomes -49.0 ( $-50.9 + 1.0 = -49.9$ , truncated to -49.0) when an LTU is used and not an MTU.

If an incorrect value is specified for the batteries, the system can mark good battery strings as failed. An incorrect value can also cause the system to fail to detect bad strings.

For OPACs that are provisioned with LTUs and not MTUs, the measured values of the battery strings can fail the tests. These tests appear in the previous descriptions. The battery strings fail the tests if the values fail the adjusted values that the system computes with the OPM\_VOLT\_TST value.

## OPM Maintenance (continued)

### Datafill sequence

The tables that require datafill to implement OPM Maintenance appear in the following table. The tables appear in the correct entry order.

#### Datafill tables required for OPM Maintenance

Table	Form and Purpose of table
OPMINV	Outside Plant Module Inventory. Lists the information for the OPAC and the battery setup.

### Datafilling table OPMINV

Table OPMINV lists data for each OPAC and the battery equipment, if included.

Enter table OPMINV after tables CLLI, LCMINV, and RMMINV. Offline the BCCDVR card at the OPMPES MAP level before you change the BATTINFO field.

To change the RLCMNM, TMTYPE, and TMNM fields, delete or add the tuple. Change the ENABATST field while the BCCDVR card is in service. Memory in this table is dynamically allocated.

The datafill for OPM Maintenance for table OPMINV appears in the following table. Fields that apply directly to OPM Maintenance appear in the table.

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

#### Datafilling table OPMINV (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Description
OPMPESK			The OPAC PES key. Enter the key to this table. The maximum number of PMs that the office allows limits this number.
RLCMNM		refer to subfields	The OPAC information. Contains LCM information about the OPAC. The subfields are SITE, FRAME, and UNIT.
	SITE	alphanumeric	Site name. Enter the site name assigned to the location of the OPAC.

**OPM Maintenance** (continued)

Datafilling table OPMINV (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Description
	FRAME	0 to 63	Frame number. Enter the frame number of the LCM in the OPAC, at the site specified in field SITE. The range is 0-63.
	UNIT	0 or 1	Unit number. Enter the unit number of the LCM in the OPAC (0 or 1).
TMTYPE		RMM or RCCI	Trunk module type. Enter RMM or RCCI.
TMNM		0 to 2047	Trunk module number. Enter the module number for the RMM or the RCCI. The range is 0-2047.
BATTINFO		Y or N	Table of battery information. This table indicates that a battery string is present (Y) or is not present (N). The position of the boolean Y or N indicates the string.  For example, YYNYYYN indicates that battery strings 0, 1, 2, 4, 5, and 6 are present. Battery strings 3 and 7 are not present.
ENABATST		Y or N	Enable battery test. When set to N, the system does not test batteries and the audit continues. When set to Y, the system takes three measurement types on Sunday of each week.

**ENABATST field**

The ENABATST field (enable battery test) enables or disables automatic audit tests of battery equipment in an OPAC.

The ENABATST field has a value of Y (yes) or N (no). If set to Y, the test-and-charge cycle can start on one of the battery string pairs of that OPAC. The cycle occurs on the Sunday of each week.

The test-and-charge cycle includes three measurements of battery voltages:

- at the end of the 24 h open-circuit period
- after the discharge period
- at the end of the open-circuit period that follows the charge period

As a result of this testing, the system can mark a battery string pair as failed and remove the battery from the charge rotation.

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## OPM Maintenance (end)

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If the ENABATST field is set to N, a test-and-charge cycle becomes a charge-only cycle. A first open-circuit or discharge does not occur before the charge period. The system does not take or use one of the three measurements to determine failed strings.

The system continues to take voltage measurements of the load bus, charge bus and the strings each Sunday. The system continues to output the PES116 log to record the value of these measurements as the audit continues.

*Note:* The recommended value for a test facility with many restarts a day is N. The N disables battery testing. Tests occur when the test and charge procedure runs from Sunday at 10:00 p.m. until Tuesday at 11:00 p.m. These tests occur through the use of default parameters. Reloads or restarts that occur during this time cancel the procedure.

### Datafill example for table OPMINV

Sample datafill for table OPMINV appear in the following example.

An OPAC with a key OPMPEK of 5 appears in the datafill example. The OPAC has an RLCM number of REM5 02 0. The OPAC has an RMM with trunk number 5. The OPAC has a battery string with 0, 1, 2, 4, 5, and 6 equipped. The battery test is not enabled.

### The MAP display example for table OPMINV

TABLE: OPMINV						
OPMPESK	RLCMNM	TMTYPE	TMNM	BATTINFO	ENBATST	
INP						
5	REM5 02 0	RMM	5	YYNYYYN	N	

## Tools for verifying translations

The OPM Maintenance does not use translation verification tools.

## SERVORD

The OPM Maintenance does not use SERVORD.

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## RLCM Intracalling

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### Functional group

Functional group: BAS00012

### Feature package

Feature package: NTX156AA RLCM Intracalling

### Release applicability

BCS35 and later versions

### Requirements

The RLCM Intracalling feature requires BAS00003 to operate. Functional group BAS00003 includes the following feature packages:

- the Bilge, NTX000AA
- the Common Basic, NTX001AA
- the Remote Line Concentrating Module (RLCM), NTX146AA
- the New Peripheral Maintenance Package, NTX270AA
- the Local Features II, NTX901AA

### Description

The Remote Line Concentrating Module (RLCM) Intracalling feature package allows calls between subscribers on the same Outside Plant Access Cabinet (OPAC). These subscribers can connect without the host network. The RLCM intracalling feature package reduces the use of the DS-1 links to the host.

Intracalling has the following two components:

- intraswitching—This component connects calls between subscribers that have the same line concentrating module LCM unit from an OPAC. This component uses the OPAC intraswitch channels instead of the host network.
- interswitching—This component connects calls between subscribers that have different LCM units from an OPAC. This component uses the OPAC interswitch channels instead of the host network.

### Operation

Intraswitching and interswitching connections are achieved through the link control cards (LCC) on the host interface equipment (HIE) shelf. The LCC connects in sequence to the DS30A ports of each line concentrating array (LCA) of the LCM.

## **RLCM Intracalling** (continued)

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An LCA has eight DS30A ports that can be equipped or unequipped with host links. An equipped port has 24 channels of the DS-1 link mapped to a 32-channel DS30A port. Six of the unmapped channels are used for intraswitching, and two are used for control and signaling.

For unequipped DS30A ports, the LCC provides the following:

- 18 channels for intraswitching
- 12 channels for interswitching
- two channels for control and signaling

When the LCC provides intraswitching and interswitching channels to connect internal calls, the additional channels on the DS-1 links are free. These channels allow the host network to handle external calls. The DS-1 links are a limited resource. This feature maximizes the use of DS-1 links.

### **Translations table flow**

The RLCM Intracalling feature does not affect the translations table flow.

### **Limits**

There are restrictions on the type of lines that can intraswitch. Examples of lines that can provide intraswitching are as follows:

- one-party and two-party flat-rate lines
- Meridian Digital Centrex (MDC) lines
- lines connected to p-phones and data units
- lines with call waiting and call forwarding features can be intraswitched

After the features are applied to the lines the call reverts to a normal network connection. Coin phone calls cannot be intraswitched.

### **Interactions**

There are no functionality interactions for the RLCM Intracalling feature.

### **Activation/deactivation by the end user**

The intraswitch field must be set to Y (yes) in table LCMINV for the RLCM intracalling feature package to operate.

### **Billing**

The RLCM Intracalling feature does not affect billing.

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**RLCM Intracalling** (continued)
 

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**Station Message Detail Recording**

The RLCM Intracalling feature does not affect Station Message Detail Recording.

**Datafilling office parameters**

The RLCM Intracalling feature does not affect the office parameters.

**Datafill sequence**

The following table lists the tables that require datafill to implement RLCM Intracalling. The tables appear in the order that you must enter the tables with data.

**Datafill tables required for RLCM Intracalling**

Table	Function and purpose of table
LCMINV	<i>Line Concentrating Module Inventory. Lists the data assignment for each frame associated with an LCM unit.</i>

**Datafilling table LCMINV**

The datafill that relates to RLCM Intracalling for table LCMINV appears in the following table. Only the fields that apply directly to RLCM Intracalling are listed. For a description of the other fields, refer to the data schema section of this document.

## RLCM Intracalling (continued)

The datafill for the intracalling feature only requires one entry. The entry is the boolean for intraswitching in field LCMTYPE.

### Datafilling table LCMINV

Field	Subfield or refinement	Entry	Explanation and action
LCMTYPE		refer to list	LCM type. Specifies the LCM type that corresponds to the entry in field EQPEC. Enter ALCM, ELCM, ILCM, LCM, LCME, LCMI or SRU.
LCMINFO		refer to subfield	Line concentrating module information. This field contains subfield LCMSELECTOR.
	LCMSELECTOR	HLCM or RLCM	LCM selector. Enter HLCM for a host LCM. Enter RLCM for a remote LCM.
	INTRASW	Y	Intraswitch. Enter Y if the entry in subfield LCMSELECTOR is RLCM and the RLCM has internal links. Enter N if the entry is other than listed here.

**Note:** When you enter data in link information (LNKINFO) or link map (LNKMAP), make sure message links are not assigned to the same interface card. When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This instruction applies to interface link types DS-1, DS30, DS30A or PCM-30. Table control issues a warning if you attempt to assign message links on the same interface card. A card fails when message links are assigned to the same interface card. Card failure causes an E1 outage. An E1 outage indicates the failure of every message link.

### Datafill example for table LCMINV

Sample datafill for table LCMINV appears in the following example.

### MAP example for table LCMINV

```

Table: LCMINV

LCMNM FRTYPE SHPOS FLOOR ROW FRPOS EQPEC LOAD CSPMNO
BICTST ADNUM MEMSIZE

LCMTYPE
-----
HOST 02 0 LCEI 4 3 D 1 6X04AA LCM36xx LGC 0
N 256K 256K
LCME Y S 48V HLCM (12) (14) (13) (15) $ Y
    
```



## **RLCM Intracalling** (end)

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### **Tools for verifying translations**

The RLCM Intracalling feature does not use translation verification tools.

### **SERVORD**

The RLCM Intracalling feature does not use SERVORD.



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## 6 Remote Switching Center

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### Understanding RSC translations

Before datafilling the Remote Switching Center (RSC) product, it is necessary to have an understanding of the RSC concepts and terminology. This chapter describes the product in general terms as a background to datafilling the RSC.

### RSC development

An RSC is a remote switching system made up of a family of advanced remote peripherals.

The Northern Telecom (NT) Digital Multiplex System-100 (DMS-100) Remote Access Family includes the Remote Line Concentrating Module (RLCM), the Outside Plant Module (OPM), and the RSC. This product line has been developed to extend the DMS-100 central office features and services to remotely-located subscribers in an economically feasible way.

The RSC is specifically designed to serve medium-sized remote applications. Its application flexibility makes the RSC an ideal vehicle for community dial offices (CDO), private branch exchange (PBX) replacement, central office capping, and medium-sized single- or multiple-customer business applications such as Meridian Digital Centrex (MDC).

As a business vehicle, the RSC delivers full Meridian Digital Centrex (MDC) feature transparency which provides cost-effective networking for advanced business services. The RSC also supports direct digital trunking to CDOs and PBXs and provides remote-off-remote configurations for the RLCM and OPM.

### Software functionality

Software features are provisioned in the central control (CC) through RSC packages.

For basic call processing the RSC provides improved capabilities for intraswitching, subtending remotes, dynamic trunking, and emergency stand-alone (ESA) failure contingency services which include:

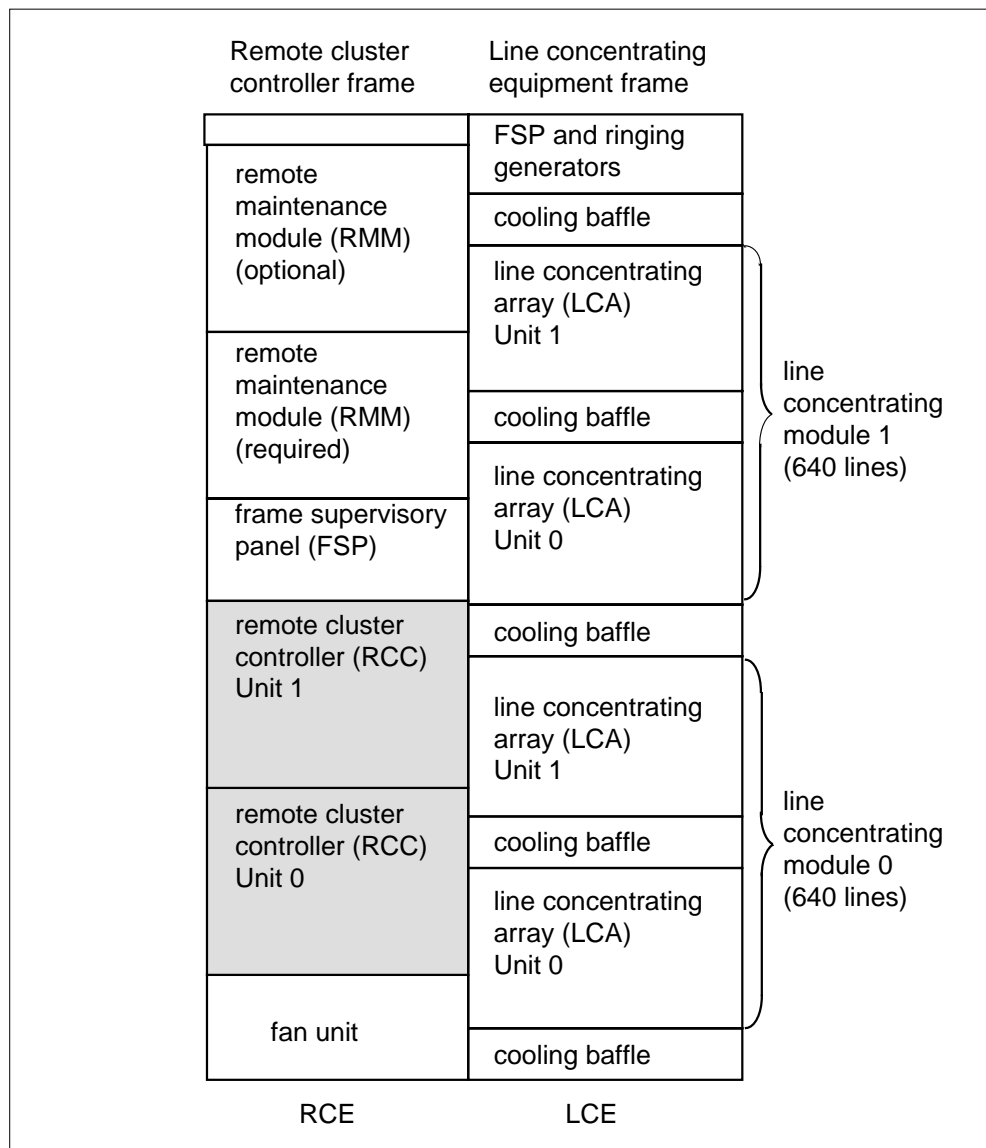
- Intraswitching allows calls originating and terminating on the same RSC to be intraswitched without using host links.
- Remote-off-remote allows subtending remotes off the RSC.
- Dynamic trunking provides calls to and from subtending trunks supporting CDOs and PBXs.
- ESA allows the continuation of service within the RSC if communication with the host is lost.
- Dual RSC configuration doubles the capacity of a single RSC and supports all the features of the single RSC.

### **Packaging**

To support the RSC, the host office controller must be equipped with the common circuit card fill, NT6X02AH, AL for an LGC and NT6XAG, AK for an LTC.

The RCC is a two-shelf common circuit pack module, NT6X12AG provisioned in the NT6X10AC frame with a maximum of two remote maintenance modules (RMM) and up to 9 line concentrating modules (LCM) in 5 line concentrating equipment (LCE) bays as seen in the following figure.

Figure 6-1 RSC component frames



**RMMs in an RCE** Two RMMs are provisioned in shelf positions 51 and 65 however, only shelf position 51 is required. The RMMs provides service circuits, diagnostic circuits, or both. The RMM is provisioned in two different kits, the first being the NT6X10AB for the remote control equipment kit and secondly in the NT6X13AB RMM common circuit pack fill.

**Cooling unit NT3X90AC** One cooling unit is required for each frame. The AC version replaces the AB.

**RCE Frame Supervisory Panel (NT0X28AS)** A new FSP is required to supply a C-power feed for use by the C-side NT6X50 cards.

**Miscellaneous equipment frame (NT0X02AB)** The RME miscellaneous equipment frame (NT0X02AB) serves as frame space for power fuse panels, spare circuit card cages, or other operating company defined miscellaneous frame space.

**Remote alarm panel (NT0X63AC)** The Remote Alarm Panel (NT0X63AC) can be used at the RSC site. This is an Alarm Control and Display Panel with Common Accessibility.

**RLCM/RSC Maintenance Tool Kit (NT0X58AD)** An RSC/RLCM tool kit can be used for the RSC office. It is provisioned similarly to host tool kits.

### **RSC services**

The application diversity of RSC can be attributed not only to its inherently flexible design but also to the wide range of interfaces and services it offers to operating companies. Examples of these services are:

- plain ordinary telephone service (POTS) 500/2500 sets
- multiparty lines
- coin lines
- PBX interfaces
- MDC 500/2500 sets
- Electronic business sets (EBS), P\_Phones
- Datapath/DIALAN
- attendant console
- Custom Local Area Signaling Services (CLASS)
- DS-1-based local trunking

This range of choices equips the RSC with a complement of capabilities to address CDO modernization, business access remote, analog switch capping, and digital overlay networks.

### **RSC configurations**

NT offers the basic RSC and dual RSC, and offers these two configurations with or without trunking. The first figure illustrates a basic single RSC without trunking. The second illustrates the dual RSC configuration without trunking. The third figure illustrates a basic single RSC with trunking configuration. The last figure illustrates the dual RSC with trunking configuration.

Figure 6-2 Basic single RSC configuration without trunking

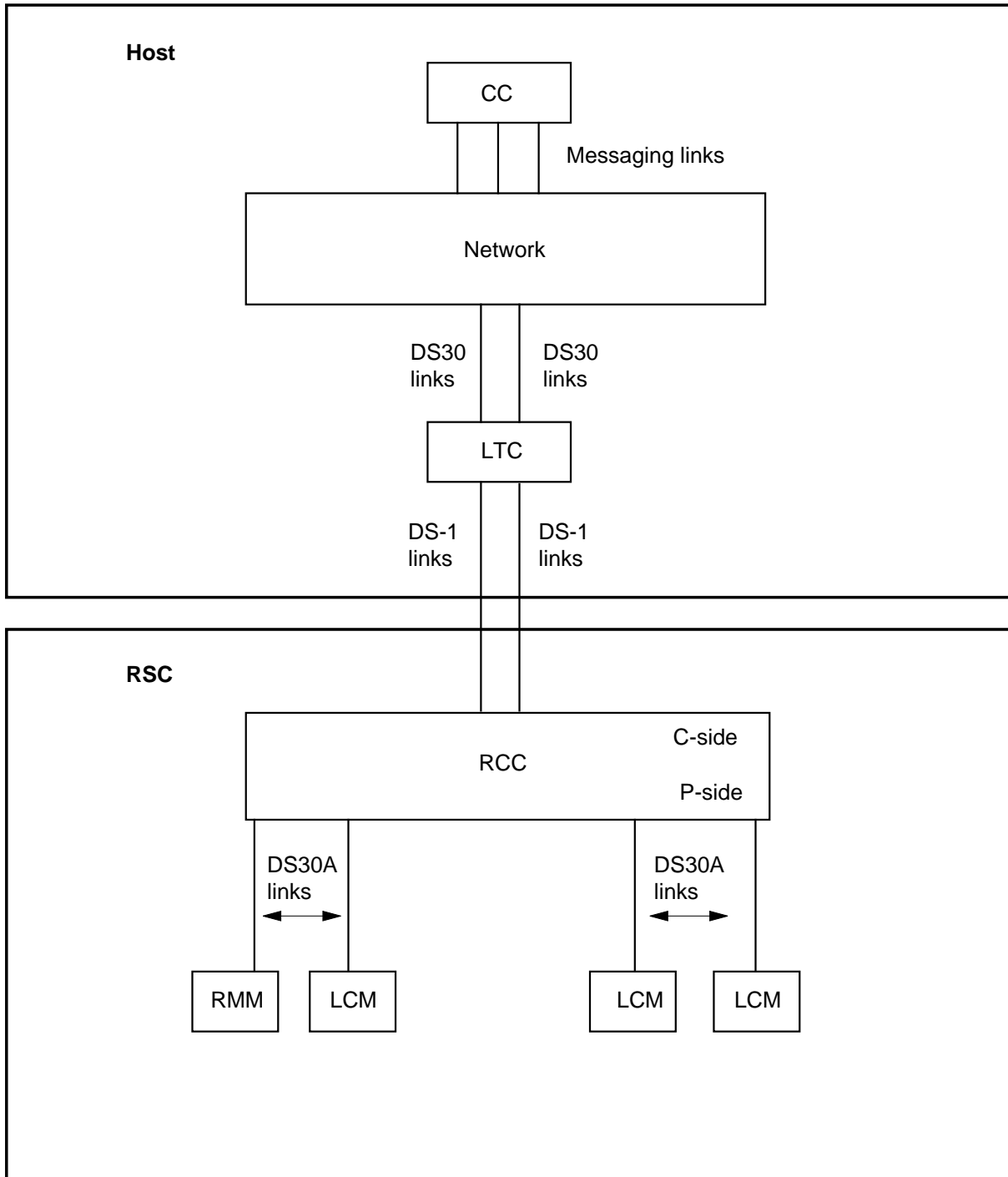


Figure 6-3 Dual RSC configuration without trunking

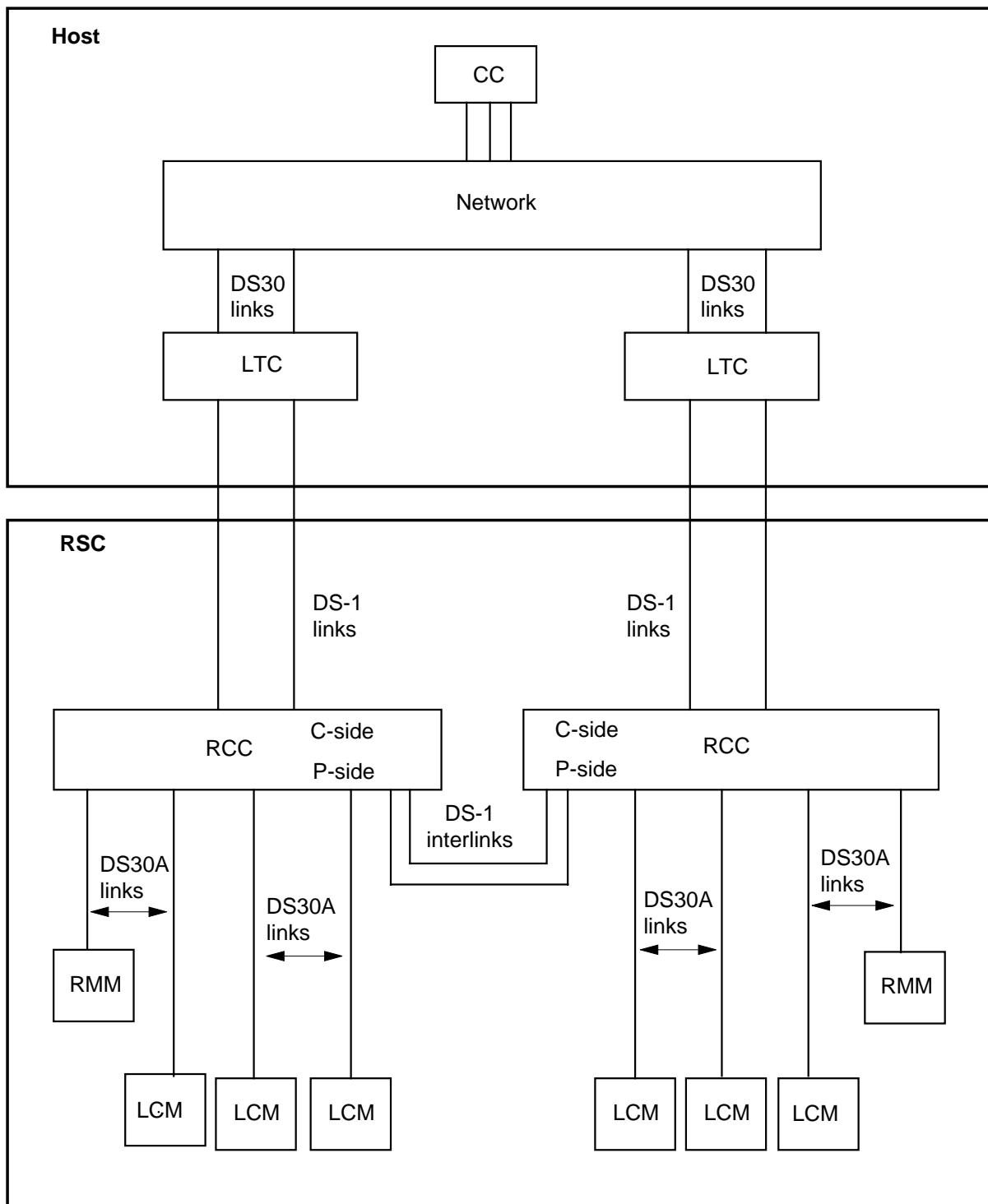




Figure 6-4 Basic single RSC with trunking

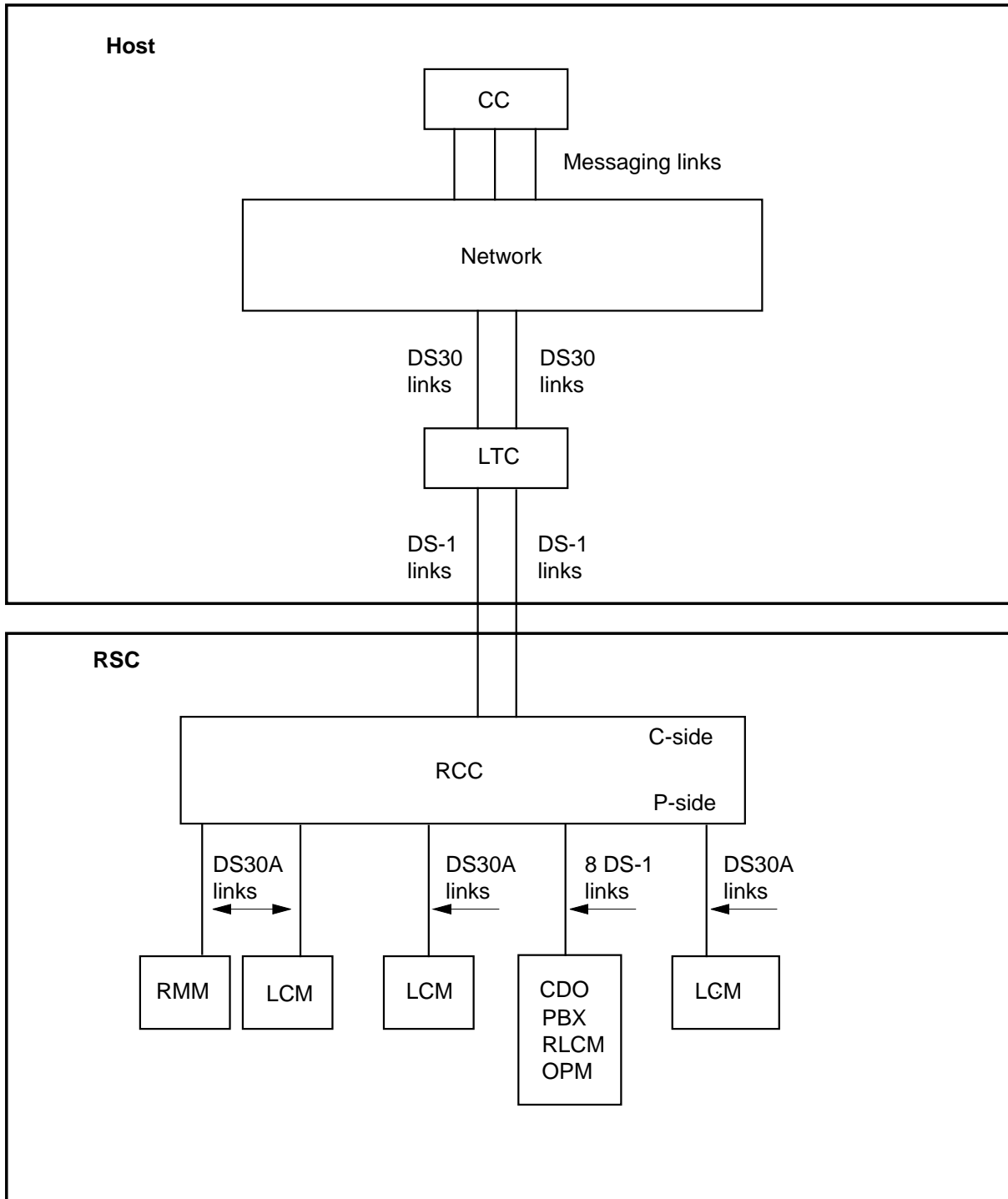
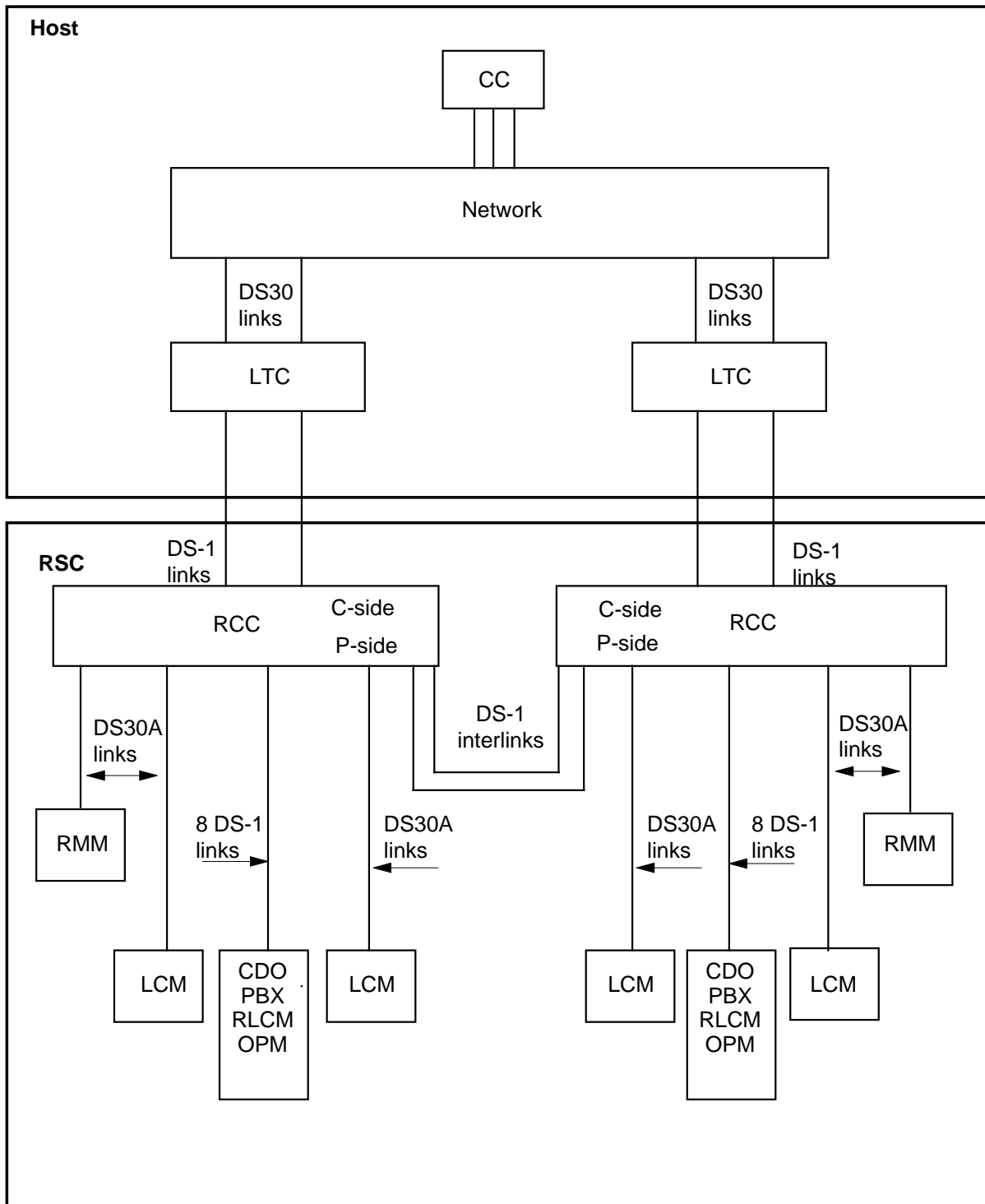


Figure 6-5 Dual RSC with trunking



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## **DS-1 electrical interface**

RSC is designed to interface to a host DMS SuperNode. RSC is linked to the host office by electrical digital signal 1 (DS-1) facilities on the C-side of the RSC.

The supporting lines for RSC electrical DS-1 applications terminate on a line group controller (LGC) at the host office. Two LGCs are included in the DRCC configuration.

The supporting trunks and lines for electrical DS-1 applications of the RSC terminate on a line trunk controller (LTC) at the host.

When supporting lines only, the RSC is connected to a DMS host office by the LGC over standard DS-1 electrical interfaces. When supporting lines and trunks, it is connected to an LTC over standard DS-1 electrical interfaces. If an RSC is planned to support trunks, an LTC must be provisioned. An LGC can be used as the host peripheral if P-side RSC trunking originates only from an RLCM or OPM hosting off the RSC.

The capacity of links between the RSC and the host is from 2 to 16 DS-1s (382 DS-0s) for each RCC. This assumes a single DS-0 time slot per service circuit. In a dual configuration assuming P-side interlinks, up to 764 DS-0s are supported to the host.

It is recommended that each LTC interface with only one RCC. All DS-1 links from one RCC must terminate on the same LTC at the host. The dual RCC configuration requires an LTC in the host switch for each RCC.

Transmission between the RSC and LTC can be accomplished by DS-1 based T-carrier or digital microwave radio.

DS-1 interface is provided by dual pulse code modulation (PCM) carrier cards provisioned in the RCC shelf. Each interface card provides two DS-1 interfaces, for a total of up to eight DS-1 interfaces for each unit. Up to eight DS1 interface cards can be provisioned in the RCC shelf.

## **Preparing to datafill RSC**

### **PCL—New Software Delivery Vehicle**

After BCS36, Northern Telecom will begin delivering Product Computing-Module Loads (PCL) instead of BCS releases or Universal Software Loads (USL).

A PCL consists of features selected from the development stream software product intended for a particular application in a particular market. The PCL contains the capabilities previously divided among many related NTX packages. An eight-digit ordering code replaces the NTX package codes.

In the following table are the ordering codes and Functional Group names required for the RSC, as well as a listing of the former NTX packages included in the Functional Group. These capabilities are associated with the RSC.

**Table 6-1 RSC ordering codes**

Ordering code	Functional group name	Former NTX package codes
BAS00003	BAS Generic	NTX000AA—Bilge NTX001AA—Common basic NTX142AA—DS-1 64 Kbps Clear NTX143AA—DS-1 ESF NTX269AA—Universal tone receiver NTX270AA—New peripheral maintenance NTX901AA—Local features II
BAS00012	BAS Remotes Generic	NTX145AA—Remote Switching Center NTX149AB—RSC ESA-Lines and Trunks NTX150AA—RSC-Intra RSC Calling NTX152AB—RSC Trunking NTX380AA—Dual Remote Cluster Controller NTX381AA—RSC Remote-Off-Remote NTXN82AB—RSC Enhanced ESA (Lines and Trunks) NTXQ12AA—RSC Enhanced ESA (Lines)

**Overview of datafill requirements**

Many aspects of datafill are unique to the functions of the RSC. The following sections highlight these functions, the tables that are used, and where to find procedural information.

**Activating the RSC**

The field operator verification common language location identifier (OPVRCLLI) in table CLLI must be datafilled first for RSC. This tuple in table CLLI forms a field in table SITE. Other tables are datafilled in the order specified in the data schema section of the *Translations Guide*.

### **Datafilling dynamic trunks**

Dynamic trunks are assigned on a trunk group basis. Table ISTRKGRP is used, containing the CLLI of the trunk groups, whose members are dynamic trunks. The normal datafill sequence is followed for static trunks, those that are always assigned channels through the host. A section in this chapter explains the datafill sequence in detail for each type of trunk group.

To execute call processing and maintenance for the RCC and the subtending nodes, the RCC must know what system options it contains, as well as its P-side and central side (C-side) link configurations. This information is loaded from the CC and is called static data because the RCC does not change this data autonomously. This is in contrast to dynamic data, such as specific call processing channels that change as calls are set up and broken down.

The DMS host and RCC must have the same static data. Otherwise, the CC and RCC may have different configurations, such as which C-side and P-side links exist, and calls may be lost. The following sections highlight the conditions under which static data needs to be updated and how to update static data so the time interval when the RCC cannot process calls is kept to a minimum.

### **When to update the RCC static data**

Static data needs to be updated in the RCC under the following conditions if:

- links on the RCC P-side or C-side in tables RCCINV, RCCPSINV, or LTCPSINV are added, changed, or deleted
- the nodes off of the RCC or the links associated with those nodes are added, changed, or deleted in tables LCMINV, RMMINV, or RCCPSINV
- the cards in the card list of the RCC or nodes off of the RCC are added, changed, or deleted in tables LCMINV, RMMINV, or RCCPSINV
- the exec data for the RCC is added, changed, or deleted in table RCCINV
- any global office parameters are changed that affect the RSC configuration
- in table RCCINV, turning ESA on or off
- in table IRLNKINV, changing interlinks or ESAFORCE field

### **How to update RCC static data**

When updating static data, the operating company must keep call processing disruptions to a minimum.

Strategies for updating static data are as follows:

- Busy and return to service (RTS) the entire RCC.
- Busy and RTS the inactive unit of the RCC and perform a cold SWACT.

- Perform two cold SWACTs.
- Busy the inactive unit of the RCC, and RTS using the NODATASYNC option and then performing a cold SWACT.

*Note:* *Note:* NODATASYNC is the preferred option.

**Alarms produced when there is a static data mismatch** When the static data for the CC has been updated at the CC and the static data at the RCC has not been updated, a PM128 log is produced with the following message:

```
STATIC DATA MISMATCH WITH CC
```

For more information on this procedure, refer to the *Advanced Maintenance Guide*.

### **TUPC logs for static data updates**

With the DMS, the journal file (JF) can be used to track changes made to DMS data tables, which includes data modification orders (DMO) and service orders. Whenever there is a reload of the office, these JFs must be applied before starting a new JF. If this is not done, the data changes that were made are not recorded.

In BCS33 and up, a log is produced that records changes made to inventory tables. The following data tables are included in this log:

- LCMINV
- LTCINV
- LTCPSINV
- RMMINV
- RCCINV
- RCCPSINV

The log is generated on a per-tuple basis. The main types of information included are the table name, the original tuple, and the tuple resulting from the change.

**Types of TUPC logs** Following are the numbers for the TUPC (tuple change) logs:

- TUPC100 (A tuple has been added.)
- TUPC101 (A tuple has been deleted.)

- TUPC102 (A tuple has been changed.)

*Note:* This log contains the old tuple.

- TUPC103 (A tuple has been changed.)

*Note:* This log contains the new tuple.

**TUPC log format** The TUPC log contains a header that shows the TUPC log number, the date, the time, the table name, and the action taken on the table (added, changed, or deleted). The relevant tuple or tuples then are displayed.

*Note:* TUPC logs, although useful for tracking inventory changes, are to be used by Northern Telecom personnel for solving field problems. This log should not be used in place of the JF utility.

## Basic call processing

---

### Functional group

Functional group: BAS00012

### Feature packages

Feature package: Remote Switching Center NTX145AA

Feature package: Intra RSC Calling NTX150AA

Feature package: XPM PLUS in the RSC NTXS05AA

### Release applicability

XPM05 and up

### Prerequisites

To operate in standard DMS, Basic call processing has the following prerequisites:

- Bilge NTX000AA
- Common Basic NTX001AA

To operate for basic remote switching center (RSC), Basic call processing has the following prerequisites:

- Universal Tone Receiver NTX269AA
- New Peripheral Maintenance NTX270AA
- Local Features I NTX901AA

To implement remote-off-remote, Basic call processing requires RSC Remote-Off-Remote, NTX381AA.

**Note:** Intra RSC calling includes Intraswitched CMR on RSC. If the terminating party has the CLASS display feature, calls between agents off of the same RCC are intraswitched.

### Description

Basic call processing and Remote-off-Remote for the RSC is obtained through a combination of software products for DMS operation, standard RSC packages, and the RSC basic package. Individual features are provisioned through RSC packages, while the RSC basic package activates these features and provides all RSC capabilities.



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**Basic call processing** (continued)

---

Basic call processing tables provide datafill for the following:

- DMS recognition of the switching unit and all remote locations
- physical device location identification data
- link assignments for the RCC and peripherals
- recovery
- trunks and trunk groups
- alarm functions
- circuit test equipment
- maintenance control for peripherals

**DMS recognition of the switching unit and all remote locations**

Table SITE contains data which allows the DMS switch to recognize the equipment for the switching unit and for all remote locations that use it. This table defines site names for the remote location. Table SITE uses codes entered in table CLLI for switching unit trunk groups and the remote location. Table CLLI uniquely identifies the far end of each announcement, tone, trunk group, test trunk, national milliwatt test lines, and service circuit.

**Physical device location identification data**

Device location data for the major RSC components are located in the inventory tables. These include tables RCCINV, LCMINV, and RMMINV.

**Link assignments for the RCC and peripherals**

Link assignments are datafilled in tables LTCINV, LTCPSINV, RCCPSINV.

**Recovery**

Table PMLOADS stores the device location of every peripheral module (PM) load file to map between the load names and devices where the loads reside. This permits autoload to locate load files, without the intervention of personnel, and autonomously reload PMs suspected of having a corrupt load.

**Trunks and trunk groups**

Tables TRKGRP, ISTRKGRP, TRKSGRP, and TRKMEM define each trunk group associated with the switching unit, supplementary information for subgroups assigned to the trunk groups, and data associated with each trunk, trunk group, and subgroup. Other table datafill identifies circuits associated with static trunks, dynamic trunks, and equipment used to test lines and trunks.

## Basic call processing (continued)

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### Alarm functions

Tables ALMSCGRP, ALMSDGRP, ALMSD, and ALMSC record information for scan points and signal distribution points. This information includes circuit equipment, location, and type of circuit pack. This datafill also includes the functions performed by the assigned scan points and signal distribution points in the alarm scan groups.

### Circuit test equipment

Table TRKMEM identifies the circuits associated with static trunks, dynamic trunks, and test equipment used to test lines and trunks. Tables MTAMDRVE, MTAVERT, and MTAHORIZ include datafill for connecting test equipment to a circuit that requires testing.

### Maintenance control for peripherals

Table CARRMTC datafill includes maintenance control information in peripherals, out-of-service (OOS) limits for alarms, and system return-to-service (RTS) occurrences.

## Operation

The RSC handles call traffic from line concentrating modules (LCM), intraswitched calls in the RCC, and trunks set up through the host with NTX145AA and NTX150AA.

Individual features are provisioned through RSC basic packages which activate these features and provide capabilities specific to the RSC.

### Conditional routing

The RSC allows conditional routing. With RSC, the SITE subselector is added to all plain ordinary telephone service (POTS), Meridian Digital Centrex (MDC), and call routing. It is datafilled as a subselector of the CND selector of table IBNRTE, table OFRT, and the RTEREF subtables. The SITE subselector of field CONDITION can be used with route types ST, SK, and T.

The SITE option is added to field CONDITION. Field SITE must be datafilled when CONDITION equals SITE. This change affects the following tables when the selector is set to CND:

- table IBNRTE
- table OFRT
- subtable HNPACONT.RTEREF
- subtable FNPACONT.RTEREF

---

## Basic call processing (continued)

---

For information about these tables and subtables, refer to the *Translations Guide*

The CND selector is required for conditional routes. Certain conditions must be specified before a call is routed. If the specified conditions are met, the instructions in the route list are executed. If the conditions are not met, translations looks to the next element in the route list. This feature adds the SITE routing condition. Refer to the data schema section of the *Translations Guide* for a complete list and explanation of each routing condition.

The SITE condition allows a call to be transferred to a route list or an element in a route list, based on the call origin. The site of the call origin is compared with the site defined in field SITE. If the two match, the call proceeds as indicated in field RTETYPE and its refinements. Otherwise, the call proceeds to the next route element in the route list.

**Note:** To optimize this feature, trunk groups must be unique by site and all members of each trunk group should belong to that specific site.

The following pages detail the fields datafilled in tables OFRT and IBNRTE for conditional routing. Fields in table OFRT are also the same for subtables HNPACONT.RTEREF and FNPACONT.RTEREF.

In an RSC, subselector SITE applies to all POTS and MDC call routing. It is datafilled as a subselector of selector CND of tables IBNRTE, OFRT, and of RTEREF subtables. Subselector SITE of field CONDITION can be used with route types ST, SK, and T.

Actual tables for and the method of datafilling does not change. However, routing is modified to reflect a call's origin. This allows selection of a route list, depending on the site of the originating call. The operating company specifies the priority of possible routes.

Basic call processing translations tables are described in

- table OFRT
- table IBNRTE

### Overview of data tables

Option SITE in field CONDITION must be datafilled when CONDITION equals SITE. This affects the tables in the following list, when the selector is

## Basic call processing (continued)

---

set to `CND`. For a detailed description of these tables, refer to the data schema section of the *Translations Guide*.

- table `OFRT`
- table `IBNRTE`
- subtable `HNPACONT.RTEREF`
- subtable `FNPACONT.RTEREF`

Selector `CND` is required for conditional routes. Certain conditions must be specified before a call is routed. If the conditions are met, instructions in the route list are executed. If the conditions are not met, translations looks to the next element in the route list. For a detailed description of each routing condition, refer to the data schema section of the *Translations Guide*.

The `SITE` condition allows a call to be transferred to a route list, or to an element in a route list, based on the call's origin. The site of the call's origin is compared with the site defined in field `SITE`. If the two match, the call proceeds as indicated in field `RTETYPE` and its refinements. Otherwise, the call proceeds to the next route element in the route list.

**Note:** To optimize this feature, trunk groups must be unique by site and all the members of each trunk group should belong to that specific site.

The following pages provide the fields that are datafilled in tables `OFRT` and `IBNRTE` for conditional routing. Fields in table `OFRT` are the same for subtables `HNPACONT.RTEREF` and `FNPACONT.RTEREF`.

**Basic call processing** (continued)**Table OFRT**

The following procedure provides an overview of field definitions for conditional routing in table OFRT. For a detailed description of the other fields, refer to the data schema section of the *Translations Guide*.

**Datafilling table OFRT for basic call processing (Sheet 1 of 3)**

Field	Subfield or refinement	Entry	Explanation and action
RTE		1 through 1023 or blank	Extended route reference index. If the record is the first in the route list, enter the route reference number assigned to the route list. Otherwise, leave the entry blank.
RTELIST		see subfields	Route list. This field contains subfields RTESEL and the RTESEL set-equal-to-CND refinements CONDITION and CONDRTE.
	RTESEL	CND	Route selector. CND sets conditional routing.
CONDITION	CNDSEL	see subfields	Condition. This field contains condition selector CNDSEL and refinement subfields ALWAYS, CALLCHR, COSMAP, EA, INTERLATA, RAND, SITE, TOD, and TOPEACLS. A match of selected conditions affects transfer to the routing specified in field CONDRTE. If no match is made, call routing proceeds as specified in the next tuple.
		ALWAYS	Always. Transfer to routing specified.
		CALLCHR	The selected condition is a match of field CALLCHR. Use a call characteristic from table CALLCHR. Do next entry.
	CALLCHR	alphanumeric	Enter the name of the selected call characteristic from table CALLCHR.
		COSMAP	The selected condition is a match to class of service map (COSMAP) field. Do next entry.
	COSMAP	alphanumeric	Enter the name of the selected NCOS mapping entry from table COSMAP.
<p><b>Note 1:</b> Enter + for field CONTMARK when more data for the route list is specified on the next record. Enter \$ for field CONTMARK when the record is the last for the route list.</p> <p><b>Note 2:</b> Field SITE can only be datafilled after table SITE has been datafilled. Any entry in field SITE must be already defined in table SITE.</p>			

**Basic call processing** (continued)**Datafilling table OFRT for basic call processing (Sheet 2 of 3)**

Field	Subfield or refinement	Entry	Explanation and action
		EA	The selected condition is use equal-access conditional routing, as defined in field EA_CND_RTE. Do next entry.
	EA_CND_RTE	CAC, INTNL, or PIC	Enter one of the following selectors: CAC (carrier access code), INTNL (international access), or PIC (presubscribed inter-exchange carrier).
		INTERLATA	Index into table TRKLATA to obtain originating LATA of calling number. Index into table LATA_XLA of called number to determine inter-LATA or intra-LATA status.
	CNDSEL	RND	The selected condition to match is a percent of randomly selected calls. Do next entry.
	PERCENT	0 to 100	Enter percentage of calls.
		SITE	The selected condition is a match of the site where the call originated. Do next entry.
	SITE	HOST or alphanumeric	Enter HOST or a site name datafilled in table SITE.
		TOD	The selected condition to match is time of day. Do next entry.
	TODNAME	alphanumeric	Enter the name assigned to the entry in the table TIMEODAY.
	TIMES	0 to 9 or A to F	Enter in field TIMES the time when the transfer to another route listing occurs.
		TOPEACLS	The selected condition is a match of the incoming call class-of-service to the entry in field TOP_CND_RTE. Do next entry.
	TOP_CND_RTE	alphanumeric	Enter the selected TOPS class-of-service that the call should match.
<p><b>Note 1:</b> Enter + for field CONTMARK when more data for the route list is specified on the next record. Enter \$ for field CONTMARK when the record is the last for the route list.</p> <p><b>Note 2:</b> Field SITE can only be datafilled after table SITE has been datafilled. Any entry in field SITE must be already defined in table SITE.</p>			

**Basic call processing** (continued)**Datafilling table OFRT for basic call processing (Sheet 3 of 3)**

Field	Subfield or refinement	Entry	Explanation and action
CONDRTE		see subfields	If selected by a match in CNDSEL, the conditional route is defined by subfields RTETYPE, RTEREF, SKIPNUM, EXTREID, TABNAME, INDEX.
	RTETYPE	ST, SK,T	Route type of the selected transfer. Refinements are another route list in the same table (ST), skip (SK) entries in route table, and route to specified table (T) and index. See the following entries.
	RTEREF	1 to 1023	Same table (ST) specified. Enter the number of the route reference element to transfer call routing.
	SKIPNUM	0 to 7	Skip (SK) in same table specified. Enter into field SKIPNUM the number of elements to skip in the route reference list.
	EXTREID	see subfields	Transfer (T) to index in table specified. Contains subfields TABNAME and INDEX. Do the next entries.
	TABNAME	OVRT, OFR2 OFR3, OFR4	Table name. Enter the office route table name.
	INDEX	1 to 1023	Index. Enter the route reference index number in the office route table.
<p><b>Note 1:</b> Enter + for field CONTMARK when more data for the route list is specified on the next record. Enter \$ for field CONTMARK when the record is the last for the route list.</p> <p><b>Note 2:</b> Field SITE can only be datafilled after table SITE has been datafilled. Any entry in field SITE must be already defined in table SITE.</p>			

**When CONDITION is set equal to SITE**

CONDITION can be used in an RSC where trunks are connected to remotes, creating a network of alternate routes for completing a call. The most efficient route for a specific call depends on the site of the originator. The site of the originator of the call is compared with the site defined, when CNDSEL is set equal to SITE, in subfield SITE. If the two match, the call proceeds according to field RTETYPE and its refinements. Otherwise, the call proceeds to the next route element in the route list.

## Basic call processing (continued)

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To optimize this feature, trunk groups must be unique by site. All the trunk members of that trunk group should belong to that specific site. Complete field CNDSSEL by entering SITE as the type of condition to be tested. Complete field SITE by entering HOST or a site name known to table SITE.

### Routing options

Each of the previously listed formats with route selector CND have field CONDRTE. This field contains the following subfields:

- RTETYPE
- RTEREF
- SKIPNUM
- EXTREID
- TABNAME
- INDEX

### Route to a specified route list in the same table

If a call is to be transferred to another route list in the same table, complete field RTETYPE by entering ST as the route type. Complete field RTEREF by entering the route reference number.

*Note:* The route reference number must have a higher number in the same table where translations have to transfer when the condition is met.

### Route after skipping specified number of route elements

If call is to skip to another route element in the same route list, complete field RTETYPE by entering SK as the route type. Complete field SKIPNUM by entering the number of elements, 0 through 7, to skip in the same route list where translations have to route when the condition is met.

### Route to specified table at specified index

If call is to be transferred to another route list in table OFRT, complete fields RTETYPE and EXTREID. Field RTETYPE is completed by entering T as the route type.

Field EXTRTEID has two subfields, TABNAME and INDEX. Complete TABNAME by entering table name OFRT where translation has to transfer when the condition is met. Complete INDEX by entering the route reference



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**Basic call processing** (continued)

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index number, 1 through 1023, in table OFRT where translation must transfer when the condition is met.

*Note:* Enter + for field CONTMARK when more data for the route list is specified on the next record. Enter \$ for field CONTMARK when the record is the last for the route list.

**Table IBNRTE**

Table IBNRTE controls basic call processing when routing

- to a specified route list in the same table
- after skipping a specified number of route elements
- to a specified table at a specified index

**When the MDC route selector is set equal to CND**

This route selector is required for conditional routes. The route selector controls whether a call skips to another route list in the same table, skips a number of elements in the same route list, or transfers to a route list in a different route table. This action is based on whether the call meets one of six parameters:

- always
- time of day
- class of service
- call characteristic
- random
- site

The following procedure provides field definitions for table IBNRTE.

**Datafilling table IBNRTE for basic call processing (Sheet 1 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
RTE		1 through 1023 or blank	Extended route reference index. If the record is the first on the route list, enter the route reference number assigned to the route list. Otherwise, leave the entry blank.
RTELIST		see subfields	Route list. The field contains subfields IBNRTSEL, CONDITION, and CONDRTE.
	IBNRTSEL	CND	IBN route selector.

## Basic call processing (continued)

### Datafilling table IBNRTE for basic call processing (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
CONDITION		see subfields	Condition. This field contains subfields CONDSEL, SITE, TODNAME, TIMES, COSMAP, and CALLCHR.
	CONDSEL	SITE or other selector condition	Condition selector. Enter SITE as the type of condition if the selection is based on origin.
	SITE	alphanumeric	Site. Enter the name of the site to be datafilled in table SITE for the selection.

### Datafill example for table IBNRTE

The following example shows sample datafill for table IBNRTE.

### MAP display example for table IBNRTE

RTE	RTELIST	IBNRTESEL	CONDSEL	SITE
CONDRITE				
1	(CND SITE HOST ST 2)	(CND SITE REM1 ST 3)	(CNS SITE REM2 ST 4)	
2	(S N N N G0)	(S N N N G1)	(S N N N G2)	
3	(S N N N G1)	(S N N N G0)	(S N N N G2)	
4	(S N N N G2)	(S N N N G0)	(S N N N G1)	

In this figure, route list 1, element 1 sends the call to route list 2 if the call origination is HOST. If the call originated at REM1, the DMS sends the call to route list 3. If the call originated at REM2, the call is sent to route list 4.

Once the call has been sent to the appropriate route list, the first element in that route list is tried. If that fails, the DMS tries the next one and those that follow. For example, if a call originated at site REM1, the DMS sends the call to route list 3. The call will be sent over trunk group G1 because that is the first element in the route list and has priority. If trunk group G1 is unavailable, the call is sent out on trunk group G0 and those trunk groups that follow.

### TRK111 Log—routing problems

A TRK111 log report is generated for routing-related problems. Refer to *Log Report Reference Manual* for detailed information on the TRK111 log report.

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## Basic call processing (continued)

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### OM GNCT—route list not datafilled

The GNCT register in operational measurement (OM) group TRMT2 is pegged for calls that attempt a route list that is not datafilled. Refer to *Operational Measurements Reference Manual* for details on operational measurements.

Although there are no specific parameters for basic RSC, there are parameters associated with basic RSC capabilities, such as emergency stand-alone (ESA).

### DMS recognition of the switching unit and all remote locations

Table SITE contains data that allows the DMS system to recognize the equipment for the switching unit and for all remote locations that home on to it. This table defines the site names for the remote location. Table SITE uses codes entered in table CLLI for switching unit trunk groups and the remote location. Table CLLI uniquely identifies the far end of each announcement, tone, trunk group, test trunk, national milliwatt test lines, and service circuit.

Feature AF5678, XPM Node Table Sync Redesign, consolidates critical XPM node information in one table, PMNODES. To ensure XPM units maintain synchronization of internal node and port tables, the CM maintains a copy for each XPM unit. The XPM units do not have to derive any data for the internal node or port tables. The active XPM unit no longer updates the inactive unit tables which caused possible differences in the datafill of the tables. The CM downloads the same information to both XPM units during updates.



#### **DANGER**

**An attempt to add or change tuples in any inventory table may be rejected by the system if table space or node resources are not available.**

Attempted changes in the inventory tables with Table Editor may be rejected. The system displays an explanation and possible corrective actions. Usually BSYing and RTSing an XPM defragments the node tables, thus freeing required space. If XPM resources are not available, the following message is displayed.

The new node cannot be supported on <XPMNAME>

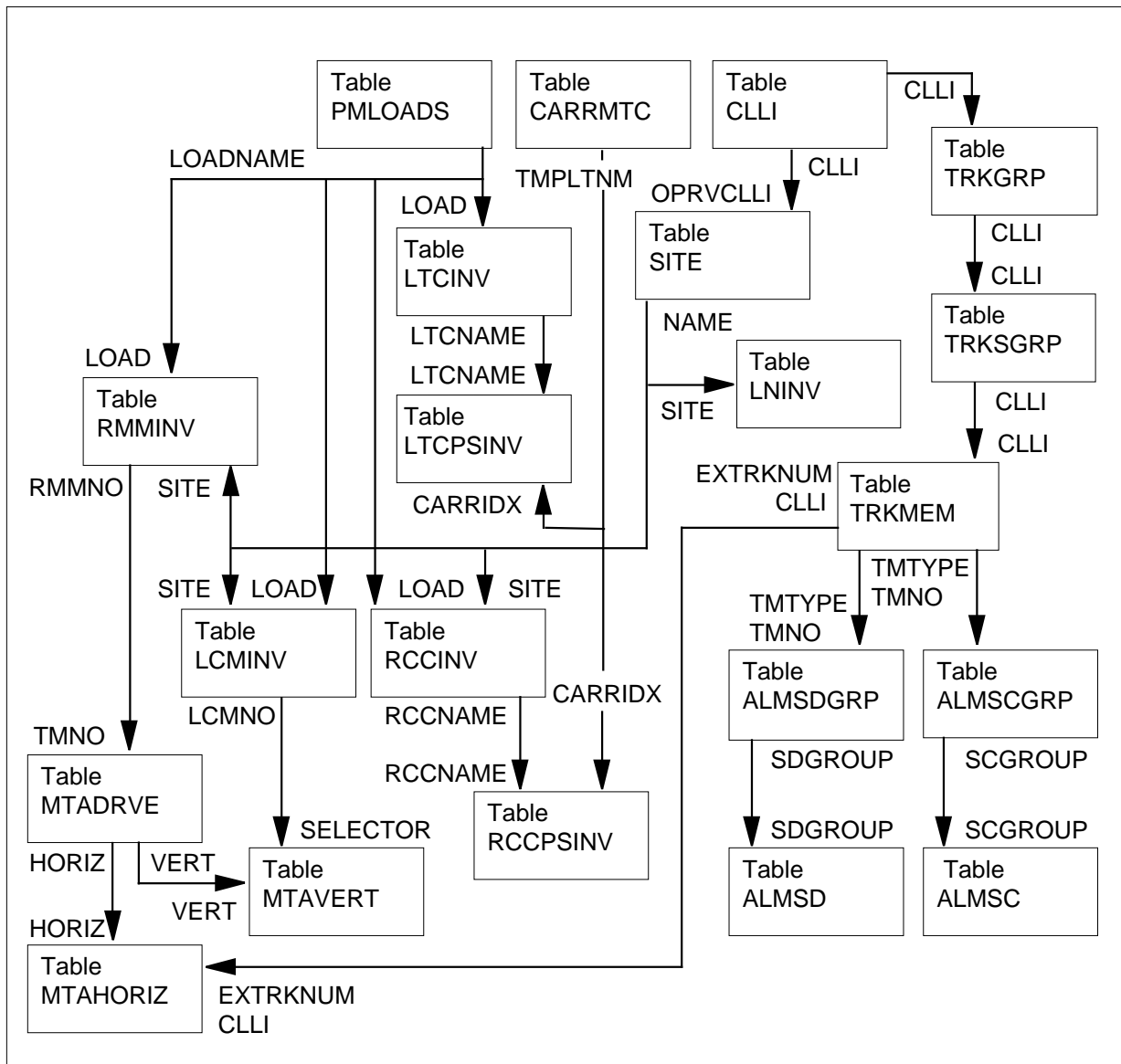
*ACTION:* None, resources have been exceeded on this XPM

## Basic call processing (continued)

*Note:* Table PMNODES must be shown as datafilled before any inventory tables in the datafill sequence list..

### Translations table flow

The Basic call processing translation process is shown in the flowchart that follows.



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**Basic call processing** (continued)

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Table CLLI uniquely identifies the far end of the trunk group by the name of the city or town, the state or province, the building group, the destination of the traffic unit, and the code identifying trunk groups that terminate at the same CLLI location. Table CLLI also stores the maximum number of trunk groups expected to be assigned to the trunk group and a miscellaneous entry for administrative information not used by the switching unit.

Some CLLI codes are added automatically to table CLLI when the feature is present in the switch. Other codes must be added to table CLLI. After datafilling table CLLI, CLLI codes are reflected in trunk group tables, the scan and distribution point table, and MTA tables. The CLLI tuple for operator verification must be duplicated in field OPVRCLLI in table SITE.

**Note:** Some data tables must be datafilled according to the kind of trunk group type required. Each trunk group type requires a specific form. Valid trunk group types are TI, TO, T2, IBNTI, IBNTO, IBNT2, PX, and ES.

Table SITE identifies equipment for the switching unit and for all remote locations that use it. This table must be datafilled before any LEN can be assigned or a PM can be datafilled. The host switching unit is the first entry in field NAME. Field LTDSN is associated with the number required to dial the site and with alarm data for remote sites. Table SITE uses the same CLLI tuple for operator verification as the one datafilled in table CLLI.

Field SITE in table LCMINV, field SITENM in tables RCCINV and RMMINV, and subfield SITE\_ID in table ISTRKGRP must be known to table SITE, field NAME.

Table PMLOADS stores the device location of every peripheral module (PM) load file to map between the load names and devices where loads reside. The PM load files must be datafilled in table PMLOADS before they can be used in the inventory tables.

Load information is datafilled in field LOADNAME. Corresponding entries are datafilled in field LOAD for tables LTCINV, LCMINV, and RMMINV.

Table PMNODES is read only, used by the CM to control XPM unit node tables. Table PMNODES is automatically datafilled when entries are added or changed in inventory tables. An entry will exist in table PMNODES for all subtending nodes of each XPM. Fields will be updated to reflect CM control of configuration data tables (CDT) in the XPM nodes.

Table LTCINV contains the inventory data, except the P-side link assignment, for PM types. This table defines the line group controller (LGC) or line and trunk controller (LTC) on the C-side of the RCC. Load information for this

## Basic call processing (continued)

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table is datafilled in field LOAD and corresponds to the LOADNAME tuple from table PMLOADS.

Field LTCNAME in table LTCINV corresponds to field LTCNAME in table LTCPSINV.

Table CARRMTC allows the DMS switch administration to datafill maintenance control information in peripherals, out-of-service (OOS) limits for alarms, and system return-to-service (RTS) occurrences. The Tmpltnm tuple in table CARRMTC corresponds to field CARRIDX in tables LTCPSINV and RCCPSINV.

Table LTCPSINV contains the assignment of P-side links for host PMs. If DS-1 is datafilled, field CARRIDX indexes table CARRMTC for maintenance control information about the peripheral.

Table RCCINV maintains a list of RCCs datafilled in the DMS switch and containing inventory data, except P-side link assignments, for the RCCs. Table information identifies where the RCC is located, the load and exec lineups required, and the network link connections. C-side DS-1 assignments for the RCC are datafilled in table RCCINV. In addition, intraswitching and ESA are datafilled in table RCCINV.

Load information is datafilled in field LOAD and corresponds to the LOADNAME tuple from table PMLOADS. The RCCNAME tuple in table RCCINV corresponds to the RCCNAME tuple from table RCCPSINV. Field RCCNAME stores site information, originally entered in field NAME from table SITE, PM type, and PM number.

Table RCCPSINV contains only the peripheral side , p-side, link assignments for the RCC. When a tuple is added in table RCCINV, a corresponding tuple is added automatically in table RCCPSINV. This table uses field LOAD to identify load information. LOAD corresponds to the LOADNAME tuple from table PMLOADS. Field CARRIDX indexes into table CARRMTC for maintenance control information about the peripheral. Also, the RCCNAME tuple in table RCCPSINV corresponds to the RCCNAME tuple from table RCCINV and stores site information, originally entered in field NAME from table SITE the PM type, and PM number.

Table LCMINV lists the data assignment for each bay associated with a local line concentrating module (LCM) or remote line concentrating module (RLCM) unit. Field SITE in table LCMINV corresponds to the NAME tuple from table SITE. This field identifies the equipment for the switching unit and for all remote locations that use it. Field LOAD in table LCMINV corresponds

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**Basic call processing** (continued)

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to the LOADNAME tuple from table PMLOADS. This field stores the device location of each PM load file.

Table RMMINV identifies a remote RLCM, RSC, or outside plant module (OPM) site with the frame type, frame number, floor, row, frame position, product equipment engineering code (PEC) code, PM and executive program loads, and C-side PM attached to each remote maintenance module (RMM). Subfield SITENM in table RMMINV corresponds to field NAME in table SITE. This field identifies the equipment for the switching unit and all remote locations that use it. Field LOAD in table RMMINV corresponds to the LOADNAME tuple from table PMLOADS. This field stores the device location of each PM load file.

Table REXSCHED schedules the frequency and number of REX tests. Tuples are automatically added to table REXSCHED after the inventory tables are datafilled.

Table TRKGRP defines data for each trunk group associated with the switching unit. Field CLLI in table TRKGRP corresponds to the CLLI code for the trunk group.

Table TRKSGRP lists the supplementary information for each subgroup assigned to one of the trunk groups listed in table TRKGRP. Field CLLI in table TRKSGRP corresponds to the CLLI code for the trunk group.

Table TRKMEM lists the data associated with each trunk assigned to one of the trunk groups and subgroups specified in tables TRKGRP and TRKSGRP. This table identifies the circuits associated with static trunks, dynamic trunks, and the test equipment used to test lines and trunks. Field CLLI in table TRKMEM corresponds to the CLLI code for the trunk group.

Table ALMSCGRP records the circuit equipment, location, and type of circuit pack containing scan points. Datafill in field SCGROUP in table ALMSC should correspond to SCGROUP entries in table ALMSCGRP.

Table ALMSDGRP records the circuit equipment, location, and type of circuit pack containing signal distribution (SD) points. Datafill in field SDGROUP in table ALMSD should correspond to SDGROUP entries in table ALMSDGRP.

Table ALMSD identifies the function performed by each of the assigned signal distribution points in the alarm signal distributor groups. Field SDGROUP identifies the circuit equipment, location, and type of circuit pack containing signal distribution (SD) points. Field SDGROUP corresponds to an entry in table ALMSDGRP.

## **Basic call processing** (continued)

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Table ALMSC identifies the function performed by each of the assigned scan points in the alarm scan groups. Field SCGROUP identifies a scan group number and corresponds to the SCGROUP entry in table ALMSCGRP.

Table MTAMDRVE locates an MTAM driver in the MTA structure. MTA connects test equipment to a circuit that requires testing. The metallic test access (MTA) network is a matrix of vertical and horizontal crosspoints, comparable to a minibar, that connect specified horizontal to vertical connections in the network.

There are 20 vertical connections for each minibar. Each vertical connection can connect to one of 320 lines in a line module. For this reason, a line module, which can hold up to 640 lines, is always joined to the test access network with two vertical connections.

Table MTAVERT identifies the vertical connection points of the MTA matrix. For RSC, the connection is single rather than multiple. Field SITE in table MTAVERT must correspond to field NAME in table SITE to identify the equipment for the switching unit and for all remote locations that use it.

Table MTAHORIZ lists the assignment of horizontal agents to a horizontal connection and horizontal group of metallic test Access minibar (MTAM) Drivers. A horizontal connection connects to test equipment or diagnostic machinery, such as line or test units or local test desks. There are 16 horizontal connections for each minibar.

Table MTAHORIZ uses CLLI codes from table CLLI for host and remote line test units, metallic test units (multiline), operator verification trunks, metallic jacks (MJACK) and incoming test access trunks. Field EXTRKNM in this table is the external trunk number assigned to the line test unit or the metallic test unit. The EXTRKNM entry must correspond to an entry in table TRKMEM in field EXTRKNM.

### **Limitations and restrictions**

Basic call processing has no limitations or restrictions.

### **Interactions**

Basic call processing has no functionality interactions.

### **Activation/deactivation by the end user**

Basic call processing requires no activation or deactivation by the end user.

### **Billing**

Basic call processing does not affect billing.



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## Basic call processing (continued)

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### Station Message Detail Recording

Basic call processing does not affect Station Message Detail Recording.

### Datafilling office parameters

There are no parameters specific to the basic RSC configuration. However, there are parameters associated with capabilities the RSC can have, such as ESA. These capabilities are addressed in their respective chapters.

### Datavill sequence

The following table lists the tables that require datavill to implement Basic call processing. The tables are listed in the order in which they are to be datavilled.

#### Datafill tables required for Basic call processing (Sheet 1 of 3)

Table	Purpose of table
CLLI	Common language location identifier. Codes are used to uniquely identify the far end of each announcement, tone, trunk group, test trunk, national milliwatt test lines, and service circuit.
SITE	Site. Contains data that allows the DMS system to recognize the equipment for the switching unit and for all remote locations that use it.
PMLOADS	Peripheral module loads. Stores the device location of every PM load file in order to map between the load names and devices where the loads reside. This permits autoloading to locate load files without the intervention of personnel. Expanded peripheral module (XPM) load files must be datavilled in table PMLOADS before they can be used in XPM inventory tables.
PMNODES	Peripheral module node table. Table Peripheral module nodes is read only, used by the CM to control XPM unit node tables. Table PMNODES is automatically datavilled when entries are added or changed in inventory tables. An entry will exist in table PMNODES for all subtending nodes of each XPM. Fields will be updated to reflect CM control of configuration data tables (CDT) in the XPM nodes.
LTCINV	Line trunk controller inventory. Contains the inventory data, except the P-side link assignment, for PM types. This table defines the line and trunk controller (LTC) or line group controller (LGC) on the C-side of the RCC.
CARRMTC	Carrier maintenance control. Allows the DMS switch administration to datavill maintenance control information in peripherals, OOS limits for alarms, and system return-to-service (RTS) occurrences.
<p><b>Note:</b> Some data tables must be datavilled according to the trunk group type required. Each trunk group type requires a specific form. Valid trunk group types are TI, TO, T2, IBNT1, IBNTO, IBNT2, PX, and ES.</p>	

## Basic call processing (continued)

### Datafill tables required for Basic call processing (Sheet 2 of 3)

Table	Purpose of table
LTCPSINV	Line trunk controller P-side link inventory. Contains the assignment of the P-side links for XPM peripherals.
RCCINV	Remote Cluster Controller Inventory. Contains inventory data, except P-side link assignments, for the RCC. C-side DS-1 assignments for the RCC are datafilled in table RCCINV.
RCCPSINV	Remote cluster controller P-side link inventory. Contains only the P-side link assignments for the RCC.
LCMINV	Line concentrating module inventory. Lists data assignments for each bay associated with a local line concentrating module (LCM) or remote line concentrating module (RLCM) unit.
RMMINV	Remote maintenance module inventory. Identifies an RLCM, RSC, or outside plant module (OPM) site with the frame type, frame number, floor, row, frame position, product equipment engineering code (PEC) code, PM load and executive program loaded, and C-side PM attached to each remote maintenance module (RMM).
REXSCHED	System REX scheduling of frequency and number of concurrent SREX tests. Used along with parameter NODEREXCONTROL in table OFCVAR to control the execution of all SREX testing. Tuples are automatically added to this table after inventory tables are datafilled.
TRKGRP	Trunk group. Defines data for each trunk group associated with the switching unit.
TRKSGRP	Trunk subgroup. Lists supplementary information for each subgroup assigned to one of the trunk groups listed in table TRKGRP.
TRKMEM	Trunk member. Lists data associated with each trunk assigned to one of the trunk groups and subgroups specified in tables TRKGRP and TRKSGRP. This table identifies the circuits associated with static trunks, dynamic trunks, and the test equipment used to test lines and trunks.
ALMSCGRP	Alarm scan group. Records the circuit equipment, location, and type of circuit pack containing scan points.
ALMSDGRP	Alarm signal distributor group. Records the circuit equipment, location, and type of circuit pack containing signal distribution (SD) points.
<p><b>Note:</b> Some data tables must be datafilled according to the trunk group type required. Each trunk group type requires a specific form. Valid trunk group types are TI, TO, T2, IBNTI, IBNTO, IBNT2, PX, and ES.</p>	

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## Basic call processing (continued)

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### Datafill tables required for Basic call processing (Sheet 3 of 3)

Table	Purpose of table
ALMSD	Alarm signal distributor point. Identifies the function performed by each of the assigned signal distribution points in the alarm signal distributor groups.
ALMSC	Alarm scan. Identifies the function performed by each of the assigned scan points in the alarm scan groups.
MTAMDRVE	Metallic test access (MTA) minibar driver. The MTA network is a matrix of vertical and horizontal crosspoints, comparable to a minibar, that connect specified vertical connections to horizontal connections in the network. MTA is used to connect test equipment to a circuit that requires testing.
MTAVERT	Metallic test access vertical connection table. Identifies the vertical connectivity to the MTA matrix.
MTAHORIZ	Metallic test access horizontal. Lists the assignment of horizontal agents to a horizontal connection and horizontal group of MTAMs.
<p><b>Note:</b> Some data tables must be datafilled according to the trunk group type required. Each trunk group type requires a specific form. Valid trunk group types are TI, TO, T2, IBNTI, IBNTO, IBNT2, PX, and ES.</p>	

### Datafilling table OFCVAR

The following table shows the datafill specific to Basic call processing for table OFCVAR. Only those fields that apply directly to Basic call processing are

## Basic call processing (continued)

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

**Datafilling table OFCVAR (Sheet 1 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
PARMNAME			Parameter name. Enter the parameter names: BICRELAY_XLCM_TEST_SCHEDULE, PMSTAT_OM_CONTROL, and XLCM_NUM_SIMUL_TESTS.  <b>Note:</b> PMSTAT_OM_CONTROL activates and deactivates processor occupancy measurements for OM group PMSTAT. It applies to the XLCM and the LCME.
BICRELAY_XLCM_TEST_SCHEDULE			BIC relay test (BRT) schedule. This parameter contains subfields BRTST_START_TIME, BRTST_STOP_TIME, and BRTST_DAYS_OF_TST. It indicates the period of time in which the test can run.
	BRTST_START_TIME	hours 0-23, mins 0-59, default: 3, 0	BRT start time. Enter the hours (0 to 23) and the minutes (0 to 59) to begin BRT tests.
	BRTST_STOP_TIME	hours 0-23, mins 0-59, default: 5, 0	BRT stop time. Enter the hours (0 to 23) and the minutes (0 to 59) to stop BRT tests.
	BRTST_DAYS_OF_TST	MON, TUE, WED, THU, FRI, SAT, SUN default: SUN	BRT test days. Enter combinations of MON, TUE, WED, THU, FRI, SAT, SUN to indicate days the BRT is to be run.  <b>Note:</b> All hours are in military time. This field can include any combination of days, as long as there are no duplication of days.

**Basic call processing** (continued)**Datafilling table OFCVAR (Sheet 2 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
BICRELAY_ XLCM_NUM_ SIMUL TESTS		1-3default: 1	<p>Number of simultaneous (BRT) tests. Enter the total number of BIC relay tests that can run simultaneously.</p> <p><b>Note 1:</b> The time period should be set according to the number of XLCMs to be included in the office BRT. The test takes approximately one minute per XLCM. It is recommended a test be run only once per week.</p> <p><b>Note 2:</b> If an office does not have the necessary test equipment to run a number of simultaneous tests greater than 1, the number must remain at 1.</p>
PARMVAL		Y or N	<p>Parameter value. Enter the value where the parameter is set. Values for PMSTAT_OM_CONTROL are Y and N. Default value: Y.</p> <p><b>Note:</b> The default value Y reduces operating company, (OC), personnel work during a one-night process (ONP). If the parameter is set to Y after an ONP, an audit is triggered.</p>
	NODEREXC ONTROL		<p>Control of SREX nodes. Governs execution of all SREX tests (nodes). Fields are REXON (default: Y), REXSTART (default: 1:30), and REXSTOP (default: 3:30).</p> <p><b>Note:</b> Individual REX test nodes are controlled by datafill in table REXSCHED.</p>

**Datafill example for table OFCVAR**

The following example shows sample datafill for table OFCVAR. The sample datafill table lists only the two new parameters required for enabling the enhanced BIC relay test (BRT). For more information about office parameters, refer to *Office Parameters Reference Manual*.

## Basic call processing (continued)

### Example of OFCVAR table MAP display

Table OFCVAR	
PARAMNAME	PARMVAL
BICRELAY_XLCM_TEST_SCHEDULE	3 0 5 0 SUN\$
BICRELAY_NUM_SIMUL_TESTS	1
PMSTAT_OM_CONTROL	Y
●	●
NODEREXCONTROL	Y

### Parameter PMSTAT\_OM\_CONTROL

The PARMVAL parameter PMSTAT\_OM\_CONTROL globally turns data collection for the OM group PMSTAT either ON (Y) or OFF (N); the default is ON (Y). A restart is not required if this parameter is changed from ON to OFF.

If the value of the PMSTAT\_OM\_CONTROL parameter is changed, data is sent immediately to all either in-service (InSv) or in-service trouble (ISTb) RCC peripherals that have subtending XLCMs. Depending on the change, the MAP screen displays one of the following messages:

Polling activated  
*or*  
 Polling deactivated

If the RCC is either out of service (OOS) or manually busy (ManB), data is sent during the return to service (RTS). The system initiates an audit to ensure proper handling of data collection on all InSv and ISTb XLCMs. If any peripheral is InSv or ISTb and is not reporting data when PMSTAT\_OM\_CONTROL is turned on, static data is resent to the RCC to begin data collection on the XLCM not reporting.

The following restrictions apply to parameter PMSTAT\_OM\_CONTROL:

- A small memory LCM does not contain the larger memory (256K) 6X51AB board required to support the parameter. Therefore, PMSTAT\_OM\_CONTROL is not available with small memory LCMs.
- If the XLCM goes into takeover mode, OMs continue to be collected from the InSV or ISTb XLCM unit. Data collection resumes on the busy XLCM unit when it returns to service.
- If an XLCM is in overload, changing the PMSTAT\_OM\_CONTROL value does not affect the XLCM. The XLCM cannot receive external messages. Also, if an XLCM is in overload during a polling period, it keeps the

---

## Basic call processing (continued)

---

average available time for up to one hour and fifteen minutes before it exits the overload. After this time, data collection is reset.

- If a SWACT occurs in the RCC where an XLCM is connected, data for the 15 minute period during the SWACT is lost.
- This parameter feature is not supported in frozen XPM loads.

### Parameter NODEREXCONTROL

Control of routine exercise (REX) testing for line concentrating modules (LCM) is transferred from parameter LCDREX\_CONTROL in table OFCVAR. Testing of LCM ring and voltage values, previously a section of LCM\_REX, is separated into an LCM converter test (LCM\_COV\_REX). Control of LCM\_REX\_TEST and LCMCOV\_REX\_TEST, now part of system REX (SREX), is transferred to parameter NODEREXCONTROL in table OFCVAR. Parameter LCDREX\_CONTROL is retained to control REX testing of line modules (LM).

*Note:* The LCMCOV\_REX\_TEST is performed only on LCMs, XLCMs, OPMs, and RLCMs.

## Datavfilling table OFCENG

The following table shows the datafill specific to Basic call processing for table OFCENG. Only those fields that apply directly to Basic call processing are shown. For more information about office parameters, refer to *Office Parameters Reference Manual*.

### Datavfilling table OFCENG

Field	Entry	Explanation and action
TALK_BATTERY_ALARM	Y or N Default is Y	TALK_BATTERY_ALARM. This parameter turns on the automatic audits of the talk battery in all LCM/XLCM/LCME/RLCM/OPM/OPAC peripheral modules.

### Datavfill example for table OFCENG

The following example shows sample datafill for table OFCENG. The sample datafill table lists only the two new parameters required for enabling the talk battery alarm audit. For more information about office parameters, refer to *Office Parameters Reference Manual*.

## Basic call processing (continued)

### Example of OFCVAR table MAP display

Table OFCENG		
	PARMNAME	PARMVAL
	TALK_BATTERY_ALARM	Y

### Parameter TALK\_BATTERY\_ALARM

This parameter turns on the automatic audits of the talk battery in all LCM/XLCM/LCME/RLCM/OPM/OPAC peripheral modules. When this parameter is changed, activation is immediate.

## Datafilling table CLLI

The following table shows the datafill specific to Basic call processing for table CLLI. Only those fields that apply directly to Basic call processing are shown. For a detailed description of the other fields, refer to the data schema section of the *Translations Guide*.

### Datfill procedure for table CLLI (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
CLLI		see subfields (up to 16 characters)	Common language location identifier. This 16-character field uniquely identifies the far end of each announcement, tone, trunk group, test trunk, national milliwatt test line, and service circuit. The recommended subfields are PLACE, PROV, BLDG, TRAFUNIT, and SUFX.
	PLACE	alphanumeric	Place. This four-character code identifies the name of the city or town at the far end of each group.
	PROV	alphanumeric	Province or state. This two-character code identifies the province or state at the far end of the trunk group.
	BLDG	alphanumeric	Building. This two-character code identifies the building number at the far end of the trunk group.
<p><b>Note:</b> Memory is allocated by field SIZE in table DATASIZE for the entry with field DATSKEY equal to CLLI. The maximum number of CLLI codes is 8192.</p>			



**Basic call processing** (continued)**Datafill procedure for table CLLI (Sheet 2 of 2)**

<b>Field</b>	<b>Subfield or refinement</b>	<b>Entry</b>	<b>Explanation and action</b>
	TRAFUNIT	alphanumeric	Traffic unit. This three-character code identifies the destination of the traffic unit at the far end of the trunk group.
	SUFIX	alphanumeric	Suffix. This one-character code uniquely identifies trunk groups that terminate at the same CLLI location.
ADNUM		numeric	Administrative trunk group number. Enter a number from zero through a number that is one less than the size of table CLLI shown in table DATASIZE. The value must be unique.
TRKGRPSIZ		0 to 2047	Trunk group size. This four-character field is equal to the maximum quantity of trunk members that are expected to be assigned to the trunk group.
ADMININF		alphanumeric (up to 32 characters)	Administrative information. This 32-character field is used by the OC to record administrative information. The information in this field is not used by the switching unit. The recommended subfields are TRAFCLS, OFFCLS, and TRKGRRTYP.
	TRAFCLS	alphanumeric	Trunk group traffic class. This field is optional and is for administrative purposes only.
	OFFCLS	alphanumeric	Office class. This field is optional and is for administrative purposes only.
	TRKGRRTYP	alphanumeric	Trunk group type. This optional field is for administrative purposes only.
<b>Note:</b> Memory is allocated by field SIZE in table DATASIZE for the entry with field DATSKEY equal to CLLI. The maximum number of CLLI codes is 8192.			

**Datafill example for table CLLI**

The following example shows sample datafill for table CLLI.

**Basic call processing** (continued)

**MAP display example for table CLLI**

CLLI	ADNUM	TRKGRPSIZ	ADMININF
SYNC	23	10	SYNCH/NONSYNCH
OFFHKSUP	45	10	SUPERVISION-SIGNAL-OFFHOOK
RSMVER90	47	10	REMOTE-SERVICE-MOD-VERIFICATION
ALMSC	58	240	ALARM-SC
RMMVER90	79	10	ALARM-SD
LTU	177	10	LINE-TEST-UNIT

**Datafilling table SITE**

The following table shows the datafill specific to Basic call processing for table SITE. Only those fields that apply directly to Basic call processing are shown. For a detailed description of the other fields, refer to the data schema section of the *Translations Guide*.

**Datafill procedure for table SITE (Sheet 1 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
NAME		alphanumeric (up to 4 characters)	Site name. Enter the site name assigned to the remote switching unit. Site names are up to four characters in length. Extended peripheral modules (XPM) type names cannot be used for site names. The first entry in this field is for the host switching unit.
LTDSN		00 to 99	LEN test desk site number. Enter a unique two-digit number required to dial the site that appears under field NAME.
MODCOUNT		0	Module count. Enter 0.
OPVRCLLI		alphanumeric	Operator verification common language location identifier. Enter the CLLI assigned to the operator verification trunk group at the remote location.
ALMDATA		see subfields	Alarm data. This field is for remote locations only and contains subfields TYPE, TYPE, NO, CKTNO, POINT, and CONTMARK.
<b>Note:</b> Memory is automatically allocated for a maximum of 32 sites.			

**Basic call processing** (continued)**Datafill procedure for table SITE (Sheet 2 of 2)**

Field	Subfield or refinement	Entry	Explanation and action
ALMDATA (continued)	ALMTYPE	CR, MJ, MN, or NA	Alarm type. For a remote location, enter the alarm type: CR (critical), MJ (major), or MN (minor). For the host switching unit, enter NA.
	TMTYPE	RMM	Trunk module type. For a remote location, enter the trunk module type, RMM, on which the miscellaneous SD point assigned to the alarm is located.
	TMNO	0 to 2047	Trunk module number. For a remote location, enter the number of the RMM on which the miscellaneous SD point assigned to the alarm is located.
	TMCKTNO	0 to 29 or blank	Trunk module circuit number. For a remote location, enter the TM circuit number of the RMM on which the miscellaneous SD point assigned to the alarm is located. For the host switching unit, leave blank.
	POINT	0 to 7 or blank	Point. For a remote location, enter the SD point number which is assigned to the alarm. For the host switching unit, leave blank.
<b>Note:</b> Memory is automatically allocated for a maximum of 32 sites.			

**Datafill example for table SITE**

Table SITE contains data for a switching unit and for all remote locations connected to it. Before a line equipment number (LEN) can be assigned and before a peripheral module (PM) can be datafilled, table SITE must be datafilled to enable the DMS system to recognize the equipment. The first entry in table SITE must be HOST for the host switching unit. The site names for the remote locations are defined by the OC.

**Note:** To use site names for a remote location, be sure tables OFCOPT (USINGSITE) and OFCENG (UNIQUE\_BY\_SITE\_NUMBERING) are correctly datafilled, both parameters set to Y.

The following example shows sample datafill for table SITE.

## Basic call processing (continued)

### MAP display example for table SITE

LTDSN	NAME	MODCOUNT	OPVRCLLI	ALMTYPE	TMTYPE	TMNO	CONTMARK	
TMCKTNO	POINT							
00	HOST	0	VER90					\$
02	REM1	2	RMMVER90	CR	RMM	0	4	0
				MJ	RMM	0	4	1
				MN	RMM	0	4	2

## Datafilling table PMLOADS

Table PMLOADS stores the device location of every PM loadfile. This permits the XPM automatic loading feature to locate load files without the intervention of operating company personnel.

Table PMLOADS lists the active and a backup loadfiles. The active loadfile is always the default load used with the LOADPM command and most system activities. The backup loadfile is used if there is a problem in loading or returning to service the active loadfile. The backup loadfile is always the unpatched loadfile that Northern Telecom shipped. The active and backup loadfiles are used when applying and removing patches.

Table PMLOADS stores data for

- the name of the active loadfile, which is the default load used with the LOADPM command and most system initiated activities
- the name of the backup loadfile, which is the load used if there is a problem in loading or returning to service the active loadfile. The backup loadfile is always the unpatched loadfile shipped with the SMS.
- the file locations
- the update active loadfile field, which indicates if the site wants the active fileid updated automatically.. The feature allows the patched loadfile to be loaded into the XPM should a reload be necessary which simplifies reload and recovery of the XPM. The active file information is updated through loadfile patching, if loadfile patching is enabled.

The active and backup files are used by the system as part of loading and recovery.

---

## Basic call processing (continued)

---

The XPM load files must be datafilled in table PMLOADS before they can be datafilled in table LTCINV. Table LTCINV enforces this rule.

*Note:* An exception to this rule occurs during initial datafill, and during dump and restore. During these times, tuples in table PMLOADS are automatically datafilled when LTCINV tuples are datafilled.

### Pre-patched XPM loads

#### Pre-patched XPM loads background

Pre-patched XPM loads (PPXLs) are XPM loadfiles that have corrective patches built into the loadfile. PPXLs are incremental loads that are built using patch updates. The patch updates were originally used to create patch files which have been released to the field. Hence there is no functional or technical difference between a regular XPM load with patches versus a PPXL where the patches have been incorporated into the load. In summary, PPXLs are analogous to CM loads that have patches built in based on date of shipment.

#### Implementation of PPXLs

At the beginning of each PPXL loadfile there is a 1K data block containing the patch IDs for the patches that have been included within the PPXL. Even though the patches have been built into the PPXL, the corresponding patch files for each patchid listed in the 1K data block must be present when the PPXL is datafilled in table PMLOADS.

When the PPXL is datafilled in table PMLOADS, the loadset is either modified if one already exists for the base load, or the loadset is initially created if the base load is new to the DMS-100 switch.

*Note:* Loadsets are used to group all peripheral units loaded with the same load together. To view all loadsets on the DMS-100 switch, access the PATCHER CI level and enter the command string INFORM PMALL.

After the PPXL has been added to table PMLOADS, it can be loaded manually, or automatically, by the system recovery controller (SRC). When the PPXL is loaded, by either method, the patching performed after loading the PPXL will be reduced, or eliminated entirely, because most or all of the patches have already been included in the load.

Once the PPXL is loaded, it can have additional patches applied to it or removed from it exactly in the same fashion as a regular XPM load can. Also, any patches that have been built into the PPXL can be removed, as long as their corresponding patch files are present.

Any patches added or removed following loading of a PPXL will be automatically applied or removed upon subsequent reloads of the PPXL.

## Basic call processing (continued)

---

### PPXL naming convention

PPXL file names have “\_<date>” appended to the end of their corresponding base load name. For example, a PPXL load file created for base load ESR03AU would be named ESR03AU\_941129. The base load name, however, always remains the same. Base loads can be identified as any load not having the \_<date> suffix.

The inherent value then becomes the preservation of the patch stream with the ability to up-issue a PPXL as required. A PPXL's vintage can always be identified using the date identifier.

### PPXL storage requirements

When preparing to load PPXLs, Telcos are advised to double their XPM load storage requirements to accommodate the PPXLs. PPXLs require that the PPXL loadfile be stored on the ACTVOL device and the base load file be stored on the BKPVOL device.

### Loading a PPXL

There are two methods of adding PPXLs to an office. The first is for upgrading an office to a new base load lineup, that is, when the base loadname is not currently in table PMLOADS. The second method is for adding PPXLs to offices that already have the base loadname in table PMLOADS, for example, ESR03AU (the existing loadname) is appended to ESR03AU\_950105 (the PPXL added to the baseload). The two methods follow:

1. PPXLs are only supported on BCS36 or higher CM loads.
2. PATCH JCK19 must be applied to the CM before continuing.

### Upgrading the base load

To load a PPXL in an office where the baseload is new to the office, use the following procedure:

- 1 Copy the base loadfile and the PPXL loadfiles to the disk volumes to be used for PM loads.

**Note:** Both the base load and the PPXL load should be copied to two disk volumes for redundancy.

- 2 Copy the patches associated with the PPXL loads to the same disk volume used in the step 1. A list of patches associated with each PPXL load is included in the load tape shipment. After the PPXL file is present on disk, obtain a list of patches included in the PPXL by typing

```
>XPMLFP
```

and pressing the Enter key.

```
>PATCHLIST FILE ppxl_filename
```

---

## Basic call processing (continued)

---

and pressing the Enter key.

*where*

**ppxl\_filename**

is the filename of the PPXL loaded added to the baseload

- 3 Add a new tuple for the base load to table PMLOADS. Enter the base load for the LOADNAME, the base loadname for the ACTFILE and the base load name again for the BKPFIL.
- 4 Add the base loadname to the appropriate inventory table, for example LTCINV.
- 5 Edit the tuple added in step 3 to change the ACTFILE field from the base loadfile name to the PPXL filename. See the datafill example for table PMLOADS to see what this tuple looks like.
- 6 Set the loadset against both units of the XPM by typing

>PATCHER

and pressing the Enter key.

>SET loadname PM pm\_type device\_no unit\_no

and pressing the Enter key.

*where*

**loadname**

is the name of the loadfile

**pm\_type**

is the type of PM requiring the loadset

**device\_no**

is the device number with a range of 0-255

**unit\_no**

is the unit number, 0 or 1

- 7 Load the PPXL into each unit of the XPM by typing
 

>BSY UNIT unit\_no

 and pressing the Enter key.
 

>LOADPM UNIT unit\_no

 and pressing the Enter key.
 

>RTS UNIT unit\_no

 and pressing the Enter key.

*where*

**unit\_no**

is the unit number of the XPM to be loaded

- 8 Perform a SWACT of the XPM and repeat step 7.

**Note 1:** Once loaded, the XPM may have additional patches applied or removed in the same manner used with XPM loads in the past. Also, any patches built into the PPXL may be removed from the load as long as the actual patch file is present on disk.

## Basic call processing (continued)

---

**Note 2:** Any patches added or removed following loading of a PPXL will be automatically applied or removed upon subsequent reloads of the PPXL.

**Note 3:** Non-PPXL patches are not removed when the PPXL is reloaded since there is no need to remove them because the removed patches are already out of the loadset.

### Adding PPXLs to an existing PM load lineup

To add PPXLs to an existing XPM load lineup, use the following procedure:

- 1 Verify all patch\_ids associated with the PPXL are present on the disk volume identified in table PMLOADS, field ACTVOL. If not present, copy the patches from tape to the correct volume. A list of the patches contained in each PPXL is included with the PM tape shipment. Once the PPXLs are copied to disk, list the patches in the PPXL by typing

```
>XPMLFP
```

and pressing the Enter key.

```
>PATCHLIST FILE ppxl_filename
```

and pressing the Enter key.

where

**ppxl\_filename**

is the filename of the PPXL loaded to disk

- 2 Copy the PPXL file (filename\_date) to the disk volume used in step 1.
- 3 Copy the baseload to the disk volume identified in table PMLOADS, field BKPVOL.
- 4 Modify table PMLOADS as follows: If the XPM base loadname does not currently exist in table PMLOADS add a new tuple using the previous "Upgrading baseload lineup" procedure. Otherwise, change the ACTFILE field to the PPXL filename (filename\_date). At this point the loadset will be upgraded if one currently exists or one will be created if not.
- 5 Set the loadset against both units of the XPM by typing

```
>PATCHER
```

and pressing the Enter key.

```
>SET loadname PM pm_type device_no unit_no
```

and pressing the Enter key.

where

**loadname**

is the name of the loadfile

**pm\_type**

is the type of PM requiring the loadset

**device\_no**

is the device number with a range of 0-255



---

## Basic call processing (continued)

---

- unit\_no**  
is the unit number, 0 or 1
- 6** Each unit of the XPM may now be loaded with the PPXL by typing
- ```
>BSY UNIT unit_no
```
- and pressing the Enter key.
- ```
>LOADPM UNIT unit_no
```
- and pressing the Enter key.
- ```
>RTS UNIT unit_no
```
- and pressing the Enter key.
- where*
- unit\_no**  
is the unit number of the XPM to be loaded
- 7** Perform a SWACT of the XPM and repeat step 6.
- Note 1:** Once loaded, the XPM may have additional patches applied or removed in the same manner used with XPM loads in the past. Also, any patches built into the PPXL may be removed from the load as long as the actual patch file is present on disk.
- Note 2:** Any patches added or removed following loading of a PPXL will be automatically applied or removed upon subsequently reloads of the PPXL.

The following table shows the datafill specific to Basic call processing for table PMLOADS. Only those fields that apply directly to Basic call processing are shown.

**Datafilling table PMLOADS (Sheet 1 of 2)**

| Field    | Subfield or refinement | Entry        | Explanation and action                                                                                                                                                                                                                        |
|----------|------------------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LOADNAME |                        | alphanumeric | Peripheral module load name. Enter the XPM load file name. The range is up to eight characters.                                                                                                                                               |
| ACTFILE  |                        | alphanumeric | Active load file name. The name of the active XPM loadfile. This could be the original loadfile or a patched loadfile (PPXL). Range is up to 32 characters.                                                                                   |
| ACTVOL   |                        | alphanumeric | Active volume. Identifies the device where the active loadfile is stored. Range is the set of disk drive unit (DDU) volumes and system load module (SLM) disks that are available to the CM (that is, S00DXPM). Range is up to 16 characters. |

## Basic call processing (continued)

### Datafilling table PMLOADS (Sheet 2 of 2)

| Field  | Subfield or refinement | Entry        | Explanation and action                                                                                                                                                                      |
|--------|------------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BKPFIL |                        | alphanumeric | Backup load file name. Identifies the name of the backup XPM loadfile. It should be the same name as the LOADNAME field. Range is up to 32 characters                                       |
| BKPVOL |                        | alphanumeric | Backup volume. The device where the backup loadfile is stored. Range is the set of DDU volumes and SLM disks that are available to the CM (that is, S00DXPM). Range is up to 16 characters. |
| UPDACT |                        | alphanumeric | Update active filename. Currently not used. The default value is N.                                                                                                                         |

### Datafill example for table PMLOADS

The following example shows sample datafill for table PMLOADS.

### MAP display example for table PMLOADS

| LOADNAME       | ACTFILE | ACTVOL  | BKPFIL | BKPVOL | UPDACT |
|----------------|---------|---------|--------|--------|--------|
| -----          |         |         |        |        |        |
| ESR06AZ        |         |         |        |        |        |
| ESR03AU_950205 |         | S00DXPM |        |        |        |
| ESR06AZ        |         | S01DXPM |        |        | N      |

### Datafilling table PMNODES

Table Peripheral module nodes (PMNODES) is read only, used by the CM to control XPM unit node tables. Table PMNODES is automatically datafilled when entries are added or changed in inventory tables. An entry will exist in table PMNODES for all subtending nodes of each XPM. Fields will be updated to reflect CM control of configuration data tables (CDT) in the XPM nodes. As nodes are deleted holes may appear in the table. These can not always be filled when a new node is added. Tuples in table PMNODES are

**Basic call processing** (continued)

managed so that all subtending nodes must have a higher index than their head node.

**Datafilling table PMNODES for RSC basic operation (Sheet 1 of 3)**

| <b>Field</b> | <b>Subfield or refinement</b> | <b>Entry</b>          | <b>Explanation and action</b>                                                                                                                                                                                                                                                                                                           |
|--------------|-------------------------------|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TABKEY       |                               | 0 to 4095<br>0 to 117 | Table key. Two-part key, separated by a space, identifying the XPM where the unit node table is. The first part is host external node number. The second part is internal index number. Examples: The first key of an LTC with an external node number of 25 would be 25 1. The key of the first XPM attached to the LTC would be 25 2. |
| EXTNDNUM     |                               | 0 to 4095             | External node number. External number assigned by CM to the XPM identified in field TABKEY. Example: If the first XPM in the example above was an RCC with an external node of 33 the key of 25 2 would reference XPM external node 33 in the LTC node tuple. The RCC would also have a node tuple key of 33 1 to represent that node.  |
| NODETYPE     |                               | see list              | Node type of XPM. Generic type of PM node. Examples: LTC_NODE, RCC_NODE, LCM_NODE, and RCS_NODE.                                                                                                                                                                                                                                        |
| PMTYPE       |                               | see list              | PM type. Specific PM type assigned to the node. Examples: RCC, LCM, SMSR, and LTC.                                                                                                                                                                                                                                                      |
| LEVEL        |                               | 0 to 15               | PM level. The number of device levels the XPM node is separated from the messaging host. Begins at level 0 for messaging (head) XPMs. Examples: An LCM at level 2, attached to the RCC at level 1, which is attached to the HOST LTC at level 0. The same LCM would be at level 1 of the RCC tuple at level 0.                          |
| MSGHOST      |                               | 0 to 4095             | Messaging host. External node responsible for transferring messages to this node. A messaging host must be capable of transferring messages. Examples: LTC and RCC. Examples of XPMs not capable of being a messaging host are: RCU and SMSR.                                                                                           |

**Basic call processing** (continued)**Datafilling table PMNODES for RSC basic operation (Sheet 2 of 3)**

| <b>Field</b> | <b>Subfield or refinement</b> | <b>Entry</b> | <b>Explanation and action</b>                                                                                                                                           |
|--------------|-------------------------------|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PHYSHOST     |                               | 0 to 4095    | Physical host. External node to which this XPM node is physically attached. Example: The LCME is physically attached to RCC at external node 33.                        |
| PORTS        |                               | 0 to 127     | Number of ports. Total number of P-side ports in the physical host required by this XPM node.                                                                           |
| STPORT       |                               | 0 to 255     | Starting port. First P-side port in the physical host used by this XPM node.                                                                                            |
| TERMS        |                               | 0 to 4095    | Number of terminals. Total number of terminals in the physical host required by this XPM node.                                                                          |
| STTERM       |                               | 0 to 8675    | Starting terminal. First terminal in the physical HOST used by this XPM node.                                                                                           |
| PROTOCOL     |                               | alphanumeric | Message protocol. Type of message protocol used by the physical host to node links. Examples: MDS30, MDMSX, MHDLC                                                       |
| MS           |                               | M or S       | Master or slave. M if this node contains the master clock.                                                                                                              |
| IPML         |                               | Y or N       | Inter-peripheral message link (IPML). Y if this node is configured as part of an IPML.                                                                                  |
| MODE         |                               | T or P       | Table entry mode. Entries in table are made by terminal (T) or port (P) indexing.                                                                                       |
| SLLCON       |                               | Y or N       | Site line load control. Y if this node is at a site using Essential Line Service Protection (ESP) or other site line load control features.                             |
| NT6X28       |                               | N            | Uses NT6X28 card. Y if this XPM uses the NT6X28 card. The NT6X28 signaling interface card is used on the International Digital Trunk Controller (IDTC). Always enter N. |
| LCMLGMEM     |                               | Y or N       | LCM large memory. Y if this XPM is an LCM with large memory (256k bytes).                                                                                               |
| RSVPORTS     |                               | Y or N       | Reserved ports. Y if this XPM has ports that are reserved for messaging.                                                                                                |

**Basic call processing** (continued)**Datafilling table PMNODES for RSC basic operation (Sheet 3 of 3)**

| Field    | Subfield or refinement | Entry  | Explanation and action                                                                                                                                                                                                                                                                          |
|----------|------------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RSVTERMS |                        | Y or N | Reserved terminals. Y if this XPM has terminals that are reserved for messaging.                                                                                                                                                                                                                |
| MATENODE |                        | Y or N | Mate node. Y if this node is part of a dual configuration.                                                                                                                                                                                                                                      |
| PACKED   |                        | Y or N | Packed internal tables. Y if internal node tables are packed on this node. Prior to this feature the node table was compressed when the XPM was RTS with the NODATASYNC option. Compression will now only happen when both units of an XPM are taken out-of-service (OOS) and loaded by the CM. |
| SUPPCDT  |                        | Y Y    | Support configuration data table (CDT). Y for each unit if CDT management is supported.                                                                                                                                                                                                         |
| CMINCTRL |                        | Y or N | CM node control. Y if the node is under CM control.                                                                                                                                                                                                                                             |

**Datafill example for table PMNODES**

The following examples show datafill for an LTC node with an RCC node connected and an LCME connected to the RCC.

**MAP display example for table PMNODES (LTC tuple)**

```

Table: PMNODES

  TABKEY  EXTNDNUM  NODETYPE  PMTYPE  LEVEL  MSGHOST  PHYSHOST  PORTS
    25     1         25    LTC_NODE    LTC     0         25         25     16

STPORT  TERMS  STTERM  PROTOCOL  MS  IPML  MODE  SLLCON  NT6X28  LCMLGMEM  RSVPORTS
   0     641     1    MDS30A   S   N    P     N       N       N         N       Y

RSVTERMS  MATENODE  PACKED  SUPPCDT  CMINCTRL
          Y         N         Y         YY         Y

```

## Basic call processing (continued)

### MAP display example for table PMNODES (LTC to RCC tuple)

Table: PMNODES

| TABKEY   | EXTNDNUM | NODETYPE | PMTYPE   | LEVEL    | MSGHOST | PHYSHOST | PORTS  |        |          |          |
|----------|----------|----------|----------|----------|---------|----------|--------|--------|----------|----------|
| 25       | 2        | 33       | RCC_NODE | RCC      | 0       | 25       | 25     | 16     |          |          |
| STPORT   | TERMS    | STTERM   | PROTOCOL | MS       | IPML    | MODE     | SLLCON | NT6X28 | LCMLGMEM | RSVPORTS |
| 16       | 641      | 642      | MDMSX    | M        | N       | P        | N      | N      | N        | Y        |
| RSVTERMS | MATENODE | PACKED   | SUPPCDT  | CMINCTRL |         |          |        |        |          |          |
| Y        | N        | Y        | YY       | Y        |         |          |        |        |          |          |

### MAP display example for table PMNODES (LTC to RCC to LCM tuple)

Table: PMNODES

| TABKEY   | EXTNDNUM | NODETYPE | PMTYPE   | LEVEL    | MSGHOST | PHYSHOST | PORTS  |        |          |          |
|----------|----------|----------|----------|----------|---------|----------|--------|--------|----------|----------|
| 25       | 3        | 74       | LCM_NODE | LCM      | 2       | 33       | 33     | 8      |          |          |
| STPORT   | TERMS    | STTERM   | PROTOCOL | MS       | IPML    | MODE     | SLLCON | NT6X28 | LCMLGMEM | RSVPORTS |
| 0        | 641      | 1        | MDMSX    | S        | N       | P        | N      | N      | Y        | N        |
| RSVTERMS | MATENODE | PACKED   | SUPPCDT  | CMINCTRL |         |          |        |        |          |          |
| N        | N        | Y        | YY       | Y        |         |          |        |        |          |          |

### MAP display example for table PMNODES (RCC tuple)

Table: PMNODES

| TABKEY   | EXTNDNUM | NODETYPE | PMTYPE   | LEVEL    | MSGHOST | PHYSHOST | PORTS  |        |          |          |
|----------|----------|----------|----------|----------|---------|----------|--------|--------|----------|----------|
| 33       | 1        | 33       | RCC_NODE | RCC      | 0       | 33       | 33     | 16     |          |          |
| STPORT   | TERMS    | STTERM   | PROTOCOL | MS       | IPML    | MODE     | SLLCON | NT6X28 | LCMLGMEM | RSVPORTS |
| 0        | 641      | 1        | MDMSX    | S        | N       | P        | N      | N      | N        | Y        |
| RSVTERMS | MATENODE | PACKED   | SUPPCDT  | CMINCTRL |         |          |        |        |          |          |
| Y        | N        | Y        | YY       | Y        |         |          |        |        |          |          |

## Basic call processing (continued)

### MAP display example for table PMNODES (RCC to LCM tuple)

| Table: PMNODES |          |          |          |          |         |          |        |        |          |          |
|----------------|----------|----------|----------|----------|---------|----------|--------|--------|----------|----------|
| TABKEY         | EXTNDNUM | NODETYPE | PMTYPE   | LEVEL    | MSGHOST | PHYSHOST | PORTS  |        |          |          |
| 33             | 2        | 74       | LCM_NODE | LCM      | 1       | 33       | 33     | 8      |          |          |
| STPRT          | TERMS    | STTERM   | PROTOCOL | MS       | IPML    | MODE     | SLLCON | NT6X28 | LCMLGMEM | RSVPORTS |
| 0              | 641      | 642      | MDMSX    | S        | N       | P        | N      | N      | Y        | N        |
| RSVTERMS       | MATENODE | PACKED   | SUPPCDT  | CMINCTRL |         |          |        |        |          |          |
| N              | N        | Y        | YY       | Y        |         |          |        |        |          |          |

**Note:** Each XPM node in the link that is capable of messaging would have a tuple in table PMNODES to address the LCM.

### Datafilling table LTCINV

Table line trunk controller inventory (LTCINV) contains inventory data, except peripheral-side (P-side) link assignments, for PM types LTC, DTC, LGC, SMR, SMS, SMU, and IDTC. With RSC, this table defines the LTC/LGC on the central side, (C-side) of an RCC.

The following table shows the datafill specific to Basic call processing for table LTCINV. Only those fields that apply directly to Basic call processing are shown. For a detailed description of the other fields, refer to the data schema section of the *Translations Guide*.

#### Datafilling table LTCINV (Sheet 1 of 4)

| Field                                                                                           | Subfield or refinement | Entry                    | Explanation and action                                                  |
|-------------------------------------------------------------------------------------------------|------------------------|--------------------------|-------------------------------------------------------------------------|
| LTCNAME                                                                                         |                        | see subfields            | Line trunk controller name. Contains subfields XPMTYPE and XPMNO.       |
|                                                                                                 | XPMTYPE                | LTC or LGC               | XPM type. Enter LTC to support trunking, and LGC to support lines only. |
|                                                                                                 | XPMNO                  | 0 to 127, or<br>0 to 255 | XPM number. Range for NT40: 0 to 127. Range for SuperNode: 0 to 255.    |
| <b>Note 1:</b> Use 6X02AG when the RCC supports lines and trunks.                               |                        |                          |                                                                         |
| <b>Note 2:</b> Use 6X02AH when the RCC supports lines only.                                     |                        |                          |                                                                         |
| <b>Note 3:</b> Use 6X40AA/AB when the peripheral interfaces a junctor network (J-NET).          |                        |                          |                                                                         |
| <b>Note 4:</b> Use 6X40AC/or higher when the peripheral interfaces an enhanced network (E-NET). |                        |                          |                                                                         |

**Basic call processing** (continued)**Datafilling table LTCINV (Sheet 2 of 4)**

| Field                                                                                           | Subfield or refinement | Entry            | Explanation and action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------------------------|------------------------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ADNUM                                                                                           |                        | 0 to 9           | Peripheral module administrative number. Enter the PM administrative number.<br><br><b>Note:</b> The value of field ADNUM must be unique in all PM inventory tables (DLMINV, IPEINV, LCMINV, LMINV, LTCINV, RCCINV, RCSINV, RCTINV, and VSRINV). Attempts to add a PM with an ADNUM already in use are rejected and the system prompts the user with the next available ADNUM value.<br><br><b>Note:</b> Field ADNUM cannot be changed if PM OM counts are included in an Engineering and Administrative Data Acquisition System (EADAS) or data collection (DC) section associated with OM groups LMD or UTR. |
| FRTYPE                                                                                          |                        | LTE or LGE       | Frame Type. Enter LTE for LTC, LGE for LGC.<br><br>Enter the location of the this PM in fields FRNO, SHPOS, FLOOR, ROW, and FRPOS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| EQPEC                                                                                           |                        | 6X02AG or 6X02AH | Product equipment code. Enter 6X02AG for LTC or 6X02AH for LGC. (Notes 1 and 2)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| LOAD                                                                                            |                        | alphanumeric     | Load. Enter the PM load in table PMLOADS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| EXECTAB                                                                                         |                        | see subfields    | Executive table. Contains subfields TRMTYPE, EXEC, and CONTMARK. The terminal type and its associated execs are datafilled together.<br><br><b>Note:</b> Changes to fields with multiple entries should be made in the PROMPT mode only.                                                                                                                                                                                                                                                                                                                                                                       |
|                                                                                                 | TRMTYPE                | alphanumeric     | Terminal type. Enter terminal type: POTS (regular lines), KSET (EBS terminals), ABTRK (regular trunks), or RMM_TERM (MTC trunks).                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Note 1:</b> Use 6X02AG when the RCC supports lines and trunks.                               |                        |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Note 2:</b> Use 6X02AH when the RCC supports lines only.                                     |                        |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Note 3:</b> Use 6X40AA/AB when the peripheral interfaces a junctor network (J-NET).          |                        |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Note 4:</b> Use 6X40AC/or higher when the peripheral interfaces an enhanced network (E-NET). |                        |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |



**Basic call processing** (continued)

Datafilling table LTCINV (Sheet 3 of 4)

| Field                                                                                           | Subfield or refinement | Entry         | Explanation and action                                                                                                                                                                                                          |
|-------------------------------------------------------------------------------------------------|------------------------|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CSLNKTAB                                                                                        | EXEC                   | alphanumeric  | Executive programs. Enter execs associated with terminal type: POTSEX, KSETEX, RSSEX, or DTCEX.                                                                                                                                 |
|                                                                                                 | CONTMARK               | + or \$       | Continuation mark. Enter + to continue, \$ to end the vector.                                                                                                                                                                   |
|                                                                                                 |                        | see subfields | C-side link table. Contains subfields NMNO, NMPORT, and CONTMARK.<br><br><b>Note:</b> Changes to fields with multiple entries should be made in the PROMPT mode only.                                                           |
|                                                                                                 | NMNO                   | 0 to 63       | Network module number. Enter the network module pair where the PM is assigned.                                                                                                                                                  |
|                                                                                                 | NMPORT                 | 0 to 64       | Network module port. Enter the network port corresponding to the above network pair.                                                                                                                                            |
| OPTCARD                                                                                         | CONTMARK               | + or \$       | Continuation mark. Enter + to continue, \$ to end the vector.                                                                                                                                                                   |
|                                                                                                 |                        | alphanumeric  | Optional card. Enter when the LTC includes the UTR, message, and CMR cards. If the CMR card is included, enter the CMRLOAD.<br><br><b>Note:</b> Changes to fields with multiple entries should be made in the PROMPT mode only. |
| CMRLOAD                                                                                         |                        | alphanumeric  | Class modem resource load. Enter the CMR software load.                                                                                                                                                                         |
| NT7X05AA                                                                                        |                        | NT7X05AA      | If 7X05AA is entered, the system prompts for the slot_number. Slot numbers for the NT7X05AA in the LTC are slots 8 to 19.                                                                                                       |
| TONESSET                                                                                        |                        | NORTHAM       | Tone set. Enter NORTHAM for North America.                                                                                                                                                                                      |
| <b>Note 1:</b> Use 6X02AG when the RCC supports lines and trunks.                               |                        |               |                                                                                                                                                                                                                                 |
| <b>Note 2:</b> Use 6X02AH when the RCC supports lines only.                                     |                        |               |                                                                                                                                                                                                                                 |
| <b>Note 3:</b> Use 6X40AA/AB when the peripheral interfaces a junctor network (J-NET).          |                        |               |                                                                                                                                                                                                                                 |
| <b>Note 4:</b> Use 6X40AC/or higher when the peripheral interfaces an enhanced network (E-NET). |                        |               |                                                                                                                                                                                                                                 |

**Basic call processing** (continued)**Datafilling table LTCINV (Sheet 4 of 4)**

| Field                                                                                           | Subfield or refinement | Entry        | Explanation and action                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------------------|------------------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PECS6X45                                                                                        |                        | alphanumeric | Product equipment codes 6X45. Enter the PEC of the card in LTC units 0 and 1. The PEC must reflect minimum firmware capabilities in the processor complex of each unit. PEC MX77AA is added for XPM PLUS. |
| E2LOAD                                                                                          |                        | alphanumeric | EEPROM file. Contains the name of the loadfile in the NTMX77AA EEPROM.                                                                                                                                    |
| OPTATTR                                                                                         |                        | blank        | Optional attribute. This field is for a DTC supporting CCS7. Leave this field blank.                                                                                                                      |
|                                                                                                 | CONTMARK               | + or \$      | Continuation mark. Enter + to continue, \$ to end the vector.                                                                                                                                             |
| PEC6X40                                                                                         |                        | alphanumeric | 6X40 equipment PEC. Enter the revision of the NT6X40 to be used. (Notes 3 and 4)                                                                                                                          |
| <b>Note 1:</b> Use 6X02AG when the RCC supports lines and trunks.                               |                        |              |                                                                                                                                                                                                           |
| <b>Note 2:</b> Use 6X02AH when the RCC supports lines only.                                     |                        |              |                                                                                                                                                                                                           |
| <b>Note 3:</b> Use 6X40AA/AB when the peripheral interfaces a junctor network (J-NET).          |                        |              |                                                                                                                                                                                                           |
| <b>Note 4:</b> Use 6X40AC/or higher when the peripheral interfaces an enhanced network (E-NET). |                        |              |                                                                                                                                                                                                           |

**Datafill example for table LTCINV**

The following example shows sample datafill for table LTCINV.

---

**Basic call processing** (continued)
 

---

Table LTCINV:

```

LTCNAME
  ADNUM  FRTYPE FRNO SHPOS FLOOR ROW FRPOS   EQPEC      LOAD
                                     EXECTAB
                                     CSLNKTAB
                                     OPTCARD

TONESET                                PECS6X45   E2LOAD
   OPTATTR

PEC6X40
-----
LTC 1
  1016  LTE    1    18    0    C    6    6X02AG   ESR06BB
( POTS POTSEX) ( KEYSET KSETEX) ( RMM_TERM RSMEX) (ABTRK DTCEX) $
  ( 9 17) (13 61) (5 14) (0 29) (1 30) (2 31) (3 28) (4 29) $
  ( UTR16) ( CMR18  CMR36A15) (MSG6X69) (NT7X05AA 17)  $
NORTHAM    MX77AA  MX77AA  MX77NH08
   $
6X40AA

```

**Note:** MSG6X69 must be datafilled in field OPTCARD for XPM PLUS modules.

### Datafilling table CARRMTC

The following table shows the datafill specific to Basic call processing for table CARRMTC. Only those fields that apply directly to Basic call processing are

**Basic call processing** (continued)

shown. For a detailed description of the other fields, refer to the data schema section of the *Translations Guide*.

**Datafilling table CARRMTC (Sheet 1 of 4)**

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Subfield or refinement | Entry                              | Explanation and action                                                                                                                                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CSPMTYPE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                        | RCC                                | C-side node pm type. Enter the PM type of the node on the C-side of the carrier link; in this case, RCC.                                                                                                                       |
| TMPLTNM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                        | alphanumeric (up to 16 characters) | Template name. Enter the template name (up to 16 characters) for the PM. This entry also appears in field CARRIDX in table RCCPSINV. Default value: DEFAULT.                                                                   |
| RTSML                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                        | 0 to 255                           | Return-to-service maintenance limit. Enter the number of times during the audit interval a carrier can be returned to service by the system before a warning is issued. Value 255 disables this feature.                       |
| RTSOL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                        | 0 to 255                           | Return to service out-of-service limit. Enter the number of times during an audit interval a carrier can be returned to service by the system before it is placed permanently out of service. Value 255 disables this feature. |
| ATTR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                        | see subfields                      | Attribute. This field is comprised of subfield SELECTOR.                                                                                                                                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | SELECTOR               | DS1                                | Selector. Enter carrier type DS-1.                                                                                                                                                                                             |
| <p><b>Note 1:</b> The DMS system adds the first tuple for RCC to table CARRMTC automatically during initial program load (IPL) or first restart after IPL. The entry is designated as index 0 and has the value DEFAULT in field TMPLTNM and default values for the other fields. This tuple cannot be deleted, and only fields ES, SES, and thresholds for frame and slip losses can be changed.</p> <p><b>Note 2:</b> Tuples other than the default tuple must be added manually before they can be referenced in table LTCPSINV. These tuples can be deleted only if no DS-1 carriers are associated with them.</p> <p><b>Note 3:</b> Tuples can be changed in table CARRMTC only if the associated DS-1 carriers are ManB or Offl, to reset the counters the link must be offlined.</p> |                        |                                    |                                                                                                                                                                                                                                |

**Basic call processing** (continued)

Datafilling table CARRMTC (Sheet 2 of 4)

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Subfield or refinement | Entry                | Explanation and action                                                                                                                                                                                                                                                                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | CARD                   | NT6X50AA or NT6X50AB | Card. Enter the product engineering code, PEC of the DS-1 interface card used. Range of values for the RCC: NT6X50AA or NT6X50AB (clear channel).<br><br><b>Note:</b> Refer to the <i>Remote Switching Center Maintenance Guide</i> , for details about retrofitting NT6X50AB on RCC C-side DS-1 links. |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | VOICELAW               | A_LAW or MU_LAW      | Voice law. Enter the voice law used in the carrier. A_LAW is used mainly in international switches. MU_LAW is used mainly in North American switches.                                                                                                                                                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | FF                     | SF or ESF            | Frame format. Enter SF (standard frame or super frame) in this field.                                                                                                                                                                                                                                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ZLG                    | ZCS or B8ZS          | Zero logic. Enter zero code suppression, ZCS in field ZLG. If all zeros are transmitted, a 1 is inserted in the second least significant bit position.                                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | BERB                   | BPV or CRC           | Bit error rate base. Enter BPV for bipolar violation.                                                                                                                                                                                                                                                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | DLK                    | NILDL                | Data link. Currently, only NILDL is supported.                                                                                                                                                                                                                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | IAT                    | Y or N               | Inhibit alarm transmit. Enter Y for field IAT to inhibit yellow alarms.                                                                                                                                                                                                                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | LCGAST                 | 1 to 9999            | Local carrier group alarm set. Enter the threshold value in units of 10 ms.                                                                                                                                                                                                                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | LCGACL                 | 1 to 9999            | Local carrier group alarm clear threshold. Enter the threshold value in units of 10 ms.                                                                                                                                                                                                                 |
| <p><b>Note 1:</b> The DMS system adds the first tuple for RCC to table CARRMTC automatically during initial program load (IPL) or first restart after IPL. The entry is designated as index 0 and has the value DEFAULT in field TEMPLNM and default values for the other fields. This tuple cannot be deleted, and only fields ES, SES, and thresholds for frame and slip losses can be changed.</p> <p><b>Note 2:</b> Tuples other than the default tuple must be added manually before they can be referenced in table LTCPSINV. These tuples can be deleted only if no DS-1 carriers are associated with them.</p> <p><b>Note 3:</b> Tuples can be changed in table CARRMTC only if the associated DS-1 carriers are ManB or Offl, to reset the counters the link must be offlined.</p> |                        |                      |                                                                                                                                                                                                                                                                                                         |

**Basic call processing** (continued)

Datafilling table CARRMTC (Sheet 3 of 4)

| Field   | Subfield or refinement | Entry     | Explanation and action                                                                                                                                                                                 |
|---------|------------------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|         | RCGAST                 | 1 to 9999 | Remote carrier group alarm set. Enter the threshold value in units of 10 ms.                                                                                                                           |
|         | CONTMARK               | +         | Continuation mark. Enter + to continue a record on the next line.                                                                                                                                      |
|         | RCGACL                 | 1 to 9999 | Remote carrier group alarm clear threshold. Enter the threshold value in units of 10 ms.                                                                                                               |
|         | AISST                  | 1 to 9999 | Alarm indication signal set threshold. Enter the threshold value in units of 10 ms.                                                                                                                    |
| AISCL   |                        | 1 to 9999 | Alarm indication signal clear threshold. Enter the threshold value in units of 10 ms.                                                                                                                  |
| BEROL   |                        | 3 to 6    | Bit error rate out-of-service limit. Enter the bit error rate out-of-service limit expressed as the negative of the exponent of 10 (10E-n). Three, for example, represents a 1-in-1000 bit error rate. |
| BERML   |                        | 4 to 7    | Bit error rate maintenance limit. Enter the bit error rate maintenance limit expressed as the negative of the exponent of 10 (10E-n).                                                                  |
| ES      |                        | 0 to 9999 | Error second threshold. Enter the threshold value in units of 10 ms.                                                                                                                                   |
| SES     |                        | 0 to 9999 | Severe error second threshold. Enter the threshold value in units of 10 ms.                                                                                                                            |
| FRAMEML |                        | 0 to 9999 | Frame maintenance limit. Enter the maintenance limit for frame loss.                                                                                                                                   |

**Note 1:** The DMS system adds the first tuple for RCC to table CARRMTC automatically during initial program load (IPL) or first restart after IPL. The entry is designated as index 0 and has the value DEFAULT in field TEMPLTNM and default values for the other fields. This tuple cannot be deleted, and only fields ES, SES, and thresholds for frame and slip losses can be changed.

**Note 2:** Tuples other than the default tuple must be added manually before they can be referenced in table LTCPSINV. These tuples can be deleted only if no DS-1 carriers are associated with them.

**Note 3:** Tuples can be changed in table CARRMTC only if the associated DS-1 carriers are ManB or Offl, to reset the counters the link must be offlined.

**Basic call processing** (continued)**Datafilling table CARRMTC (Sheet 4 of 4)**

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Subfield or refinement | Entry     | Explanation and action                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------|------------------------------------------------------------------------------------------------------------------------------|
| FRAMEOL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                        | 0 to 9999 | Frame loss limit. Enter the out-of-service limit for frame loss.<br><br><b>Note:</b> FRAMEOL should be larger than FRAMEML.  |
| SLIPML                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                        | 0 to 9999 | Slip maintenance limit. Enter the maintenance limit for slip.                                                                |
| SLIPOL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                        | 0 to 9999 | Slip out-of-service limit. Enter the out-of-service limit for slip.<br><br><b>Note:</b> SLIPOL should be larger than SLIPML. |
| <p><b>Note 1:</b> The DMS system adds the first tuple for RCC to table CARRMTC automatically during initial program load (IPL) or first restart after IPL. The entry is designated as index 0 and has the value DEFAULT in field TEMPLNM and default values for the other fields. This tuple cannot be deleted, and only fields ES, SES, and thresholds for frame and slip losses can be changed.</p> <p><b>Note 2:</b> Tuples other than the default tuple must be added manually before they can be referenced in table LTCPSINV. These tuples can be deleted only if no DS-1 carriers are associated with them.</p> <p><b>Note 3:</b> Tuples can be changed in table CARRMTC only if the associated DS-1 carriers are ManB or Offl, to reset the counters the link must be offlined.</p> |                        |           |                                                                                                                              |

**Datafill example for table CARRMTC**

The following example shows sample datafill for table CARRMTC.

**MAP display example for table CARRMTC**

| CSPMTYPE | TEMPLNM | RTSML | RTSOL | ATTR                                                                                            |
|----------|---------|-------|-------|-------------------------------------------------------------------------------------------------|
| RCC      | DEFAULT | 255   | 255   | DS1 NT6X50AA MU_LAW SF<br>ZCS BPV NILDL Y 100<br>300 50 50 150 1000 3 6<br>864 100 17 511 4 255 |

Table CARRMTC allows DMS switch administration to datafill maintenance control information in peripherals, out-of-service limits for alarms, and system return-to-service occurrences.

A carrier maintains communication on links connecting DMS peripherals to channel banks, DMS peripherals to remote DMS peripherals, or remote to

## Basic call processing (continued)

remote DMS peripherals. Up to 16 entries exist for each type of peripheral providing carrier links in the switch. Entries for each carrier is datafilled in the inventory table of the C-side peripheral, table LTCPSINV for RCC.

The following checks are made between tables CARRMTC and LTCPSINV:

- When a carrier index (CARRIDX) is datafilled in table LTCPSINV, an entry for the PM type (in this case, RCC and LTC) must already be present in table CARRMTC.
- When an entry is deleted from table CARRMTC, that entry cannot be referenced by any carriers in table LTCPSINV. Otherwise, the deletion command is rejected.
- When an existing entry in table CARRMTC is changed, table LTCPSINV is checked to determine if that entry is referenced by in-service carriers. If so, the change command is rejected and a list of in-service carriers is displayed.

### Datafilling table LTCPSINV

Table line trunk controller p-side link inventory, (LTCPSINV), contains the assignment of the P-side links for XPM-type peripherals. The key for table LTCPSINV is the same as table LTCINV. The memory is automatically allocated for a maximum of 128 tuples for table LTCPSINV.

The following table shows the datafill specific to Basic call processing for table LTCPSINV. Only those fields that apply directly to Basic call processing are shown. For a detailed description of the other fields, refer to the data schema section of the *Translations Guide*.

#### Datafilling table LTCPSINV (Sheet 1 of 2)

| Field    | Subfield or refinement | Entry         | Explanation and action                                                                       |
|----------|------------------------|---------------|----------------------------------------------------------------------------------------------|
| LTCNAME  |                        | see subfields | Link trunk controller name. Contains subfields XPMTYPE and XPMNO.                            |
|          | XPMTYPE                | LTC or LGC    | PM type. For RCC, enter LTC or LGC.                                                          |
|          | XPMNO                  | 0 to 255      | PM number. Peripheral module number assigned to this PM.                                     |
| PSLNKTAB |                        | 0 to 19       | P-side link table. Contains subfields PSLINK, PSDATA, and CONTMARK.                          |
|          |                        |               | <b>Note:</b> Changes to fields with multiple entries should be made in the PROMPT mode only. |



**Basic call processing** (continued)**Datafilling table LTCPSINV (Sheet 2 of 2)**

| Field                                                 | Subfield or refinement | Entry                  | Explanation and action                                                                                                                                             |
|-------------------------------------------------------|------------------------|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                       | PSLINK                 | 0 to 19                | P-side link. Enter the P-side port number.                                                                                                                         |
|                                                       | PSDATA                 | DS-1, DS30A or NILTYPE | P-side data. Enter DS-1 for trunks and remote nodes, including RCC and RLCM. Enter DS30A if the P-side interface is to a local LCM.                                |
|                                                       | CONTMARK               | +                      | Continuation mark. Enter + to continue, \$ to end the vector.                                                                                                      |
| If PSDATA is DS-1, fill in fields CARRIDX and ACTION. |                        |                        |                                                                                                                                                                    |
|                                                       | CARRIDX                | DEFAULT                | Carrier index. Enter the name to index into table CARRMTC. Enter DEFAULT for the default template in table CARRMTC.                                                |
|                                                       | ACTION                 | N                      | Action. Enter Y if the carrier should be removed from service when the out-of-service limit for frame, slip, errored-second, or severe errored-second is exceeded. |

**Datafill example for table LTCPSINV**

The following example shows sample datafill for table LTCPSINV.

**MAP display example for table LTCPSINV**

```

LTCNAME
   PSLNKTAB
-----
LTC  1
(0 DS1 DEFAULT N) (1 NILTYPE) (2 DS1 DEFAULT N)
(3 NILTYPE) (4 DS1 DEFAULT N) (5 DS1 DEFAULT N)
(6 DS1 DEFAULT N) (7 DS1 DEFAULT N) (8 DS1 DEFAULT N)
(9 NILTYPE) (10 NILTYPE) (11 NILTYPE) (12 NILTYPE)
(13 NILTYPE) (14 NILTYPE) (15 NILTYPE) (16 NILTYPE)
(17 NILTYPE) (18 NILTYPE) (19 NILTYPE) $

```

**Datafilling table RCCINV**

Table remote cluster controller inventory, (RCCINV) contains inventory data, except P-side link assignments, for the RCC/RCC2. The NILPORT option to

## Basic call processing (continued)

field CSLNKTAB allows ports to be skipped when datafilling RCC C-side DS-1 links.



### CAUTION

#### Possible loss of service

Possible degradation of service can occur when adding, deleting, or changing C-side links in table RCCINV. Modifying table RCCINV is a real-time intensive activity. This table modification should be done during periods of low traffic to prevent degradation of subscriber service.

The following table shows the datafill specific to Basic call processing for table RCCINV. Only those fields that apply directly to Basic call processing are shown. For a detailed description of the other fields, refer to the data schema section of the *Translations Guide*.

**Note:** ADDLMSG and HDLC information applies only when an RCE frame has been converted to an RSCE frame. The converted RSCE frame changes the functions of an RSC to those of an RSC-S by using the RCC2 controller.

### Datafilling table RCCINV (Sheet 1 of 6)

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Subfield or refinement | Entry         | Explanation and action                                                                                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------|---------------------------------------------------------------------------------------------------------|
| RCCNAME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                        | see subfields | RCC name. Contains subfields SITE, PMTYPE, and RCCNO.                                                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | SITE                   | alphanumeric  | Site. Enter the site name assigned to the remote location. This entry should also appear in table SITE. |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | PMTYPE                 | RCC           | PM type. Enter RCC.                                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | RCCNO                  | 0 to 255      | RCC number. This number is unique by office, not by site.                                               |
| <p><b>Note:</b> When datafilling field C-side link table (CSLNKTAB), assure message links are not assigned to the same physical interface card. When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This applies to all interface link types; DS-1, DS30, DS30A, or PCM-30. Table control will issue a warning if an attempt is made to assign message links on the same interface card. Assigning message links to the same interface card can cause an E1 outage (failure of all message links) if the card fails.</p> |                        |               |                                                                                                         |

**Basic call processing** (continued)**Datafilling table RCCINV (Sheet 2 of 6)**

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Subfield or refinement | Entry         | Explanation and action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ADNUM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                        | 0 to 4095     | Peripheral module administrative number. Enter the PM administrative number.<br><br><b>Note:</b> The value of field ADNUM must be unique in all PM inventory tables (DLMINV, IPEINV, LCMINV, LMINV, LTCINV, RCCINV, RCSINV, RCTINV, and VSRINV). Attempts to add a PM with an ADNUM already in use are rejected, and the system prompts the user with the next available ADNUM value.<br><br><b>Note:</b> Field ADNUM cannot be changed if PM OM counts are included in Engineering and Administrative Data Acquisition System (EADAS) or data collection (DC) section associated with OM groups LMD or UTR. |
| FRTYPE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                        | RCE           | Frame type. For the RCC, enter RCE.<br><br>Enter the location of the RCC in fields FRNO, SHPOS, FLOOR, ROW, and FRPOS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| EQPEC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                        | 6X12AA        | Equipment PEC. Enter PEC 6X12AA for RCC.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| LOAD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                        | alphanumeric  | Load. Enter the RCC load. Be sure table PMLOADS contains this load file and location.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| EXECTAB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                        | see subfields | Exec table. Contains subfields TRMTYPE, EXEC, and CONTMARK. Each terminal type is associated with its particular execs.<br><br><b>Note:</b> Changes to fields with multiple entries should be made in the PROMPT mode only.                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Note:</b> When datafilling field C-side link table (CSLNKTAB), assure message links are not assigned to the same physical interface card. When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This applies to all interface link types; DS-1, DS30, DS30A, or PCM-30. Table control will issue a warning if an attempt is made to assign message links on the same interface card. Assigning message links to the same interface card can cause an E1 outage (failure of all message links) if the card fails. |                        |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

**Basic call processing** (continued)**Datafilling table RCCINV (Sheet 3 of 6)**

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Subfield or refinement | Entry                                  | Explanation and action                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CSPM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | TRMTYPE                | alphanumeric                           | Terminal type. Enter the terminal type: POTS (regular lines), KEYSET (EBS/data lines), RMM_TERM (remote MTC trunks), ABTRK (regular trunks), ESA (Emergency stand-alone lines), MX5X09 and M5X12 (Meridian 9- and 12-button sets, respectively).                                                                                                                                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | EXEC                   | alphanumeric                           | Executive programs. Enter terminal type execs: POTSEX, KSETEX, DTCEX, ESAEX, or RSMEX.                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | CONTMARK               | + or \$                                | Continuation mark. Enter + to continue, \$ to end the vector.                                                                                                                                                                                                                                                                                                                                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                        | see subfields                          | C-side PM. Contains subfields PMTYPE and XPMNO.                                                                                                                                                                                                                                                                                                                                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | PMTYPE                 | LTC or LGC                             | PM type. Enter the peripheral type, LGC or LTC, to which the RCC is attached.                                                                                                                                                                                                                                                                                                                                         |
| CSLNKTAB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | PMNO                   | 0 to 255                               | PM number. Enter the PM number where the RCC C-side is assigned.                                                                                                                                                                                                                                                                                                                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                        | 0 to 19, or NILPORT (up to 16 entries) | C-side link table. Enter LTC P-side DS-1 links where the RCC C-side is assigned. All RCC links must be assigned to the same LTC. Message links (first and third entries) must be assigned to different XPM shelves (units) so corruption or power failure does not affect service. To skip a port, enter NILPORT.<br><br><b>Note:</b> Changes to fields with multiple entries should be made in the PROMPT mode only. |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | CONTMARK               | + or \$                                | Continuation mark. Enter + to continue, \$ to end the vector.                                                                                                                                                                                                                                                                                                                                                         |
| ESA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                        | Y or N                                 | Emergency stand-alone. Enter Y (yes) or N (no). Controls whether an RCC has ESA.                                                                                                                                                                                                                                                                                                                                      |
| <p><b>Note:</b> When datafilling field C-side link table (CSLNKTAB), assure message links are not assigned to the same physical interface card. When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This applies to all interface link types; DS-1, DS30, DS30A, or PCM-30. Table control will issue a warning if an attempt is made to assign message links on the same interface card. Assigning message links to the same interface card can cause an E1 outage (failure of all message links) if the card fails.</p> |                        |                                        |                                                                                                                                                                                                                                                                                                                                                                                                                       |

**Basic call processing** (continued)

Datafilling table RCCINV (Sheet 4 of 6)

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Subfield or refinement | Entry         | Explanation and action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| INTRASW                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                        | Y or N        | Intraswitching. Controls whether intraswitching is allowed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| ADDLMSG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                        | Y or N        | Additional message link (AML). Enter Y to enable the RCC2 with an AML for each unit and N to disable AML. Feature AN1548, InSv Upgrade DMS-x to HDLC, provides the following changes.<br><br>When AML is applied (changed from No to Yes), the RCC2 AML C-side links (4 and 6) can be in service. Conversely, when AML is removed (changed from Yes to No), RCC2 AML links (4 and 6) must be either ManB or Offl.<br><br>During th process, the user is prompted to enter "Y" or "N" to confirm or reject dropping any active calls.<br><br><b>Note:</b> Information related to ADDMSG and HDLC is only applicable to an RCC2 after an RCE frame is converted to an RSCE frame. |
| OPTCARD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                        | see subfields | Optional card. This is a vector of up to ten entries.<br><br><b>Note:</b> Changes to fields with multiple entries should be made in the PROMPT mode only.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | MSG6X69                | MSG6X69       | New messaging card. Default RCC message card. If the card version is AA, tone card 6X79AA is required in slot 18. Version AB already has the tone card on board.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | TONE6X79               | TONE6X79      | Tone card. Tone card NT6X79AA is required with message card NT6X69AA.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <p><b>Note:</b> When datafilling field C-side link table (CSLNKTAB), assure message links are not assigned to the same physical interface card. When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This applies to all interface link types; DS-1, DS30, DS30A, or PCM-30. Table control will issue a warning if an attempt is made to assign message links on the same interface card. Assigning message links to the same interface card can cause an E1 outage (failure of all message links) if the card fails.</p> |                        |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

**Basic call processing** (continued)

**Datafilling table RCCINV (Sheet 5 of 6)**

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Subfield or refinement | Entry        | Explanation and action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | MSGMX76                | MSGMX76      | <p>For the RCC2, slot 4 must be used for the ISP card. Slots 6 and 7 only can be used for the UTR card. The CMR card can occupy slot 5 in unit 0 and slot 23 in unit 1. (Satafill for the CMR and UTR cards is required for unit 0 only.) With the CMR card, only 10 DS-1s can be supported on the C-side and P-side.</p> <p>Examples: CMR5, ISP16, UTR6, and UTR7. For an RCC2 with extended distance capability (EDC), the MSGMX76 card is required. Enter MSGMX76 REM HDLC to activate dynamic InSv upgrade from DMS-X to HDLC. Default: MSG6X69 REM DMSX. DMS-X to HDLC dynamic upgrade is not allowed in the inactive CM.</p> <p><b>Note:</b> Information related to ADDMSGSL and HDLC is only applicable to an RCC2 after an RCE frame is converted to an RSCE frame.</p> |
| OPTCARD<br>(continued)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | UTRxx                  | UTRxx        | <p>Universal tone receiver. Two UTRs maximum for each shelf in slots16 (default) and 14 (the additional UTR slot).</p> <p><b>Note:</b> The xx is the physical slot position number in which the card must be installed. This number must be entered, since more that one may be provisioned.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | CMRLOAD                | alphanumeric | <p>Class modem resource load. Enter CMR and CMR loadname.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | NT7X05AA               | NT7X05AA     | <p>If NT7X05AA is entered, the system prompts for the slot_number. Slot numbers for the NT7X05AA in the RCC are slots 8 to 17.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <p><b>Note:</b> When datafilling field C-side link table (CSLNKTAB), assure message links are not assigned to the same physical interface card. When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This applies to all interface link types; DS-1, DS30, DS30A, or PCM-30. Table control will issue a warning if an attempt is made to assign message links on the same interface card. Assigning message links to the same interface card can cause an E1 outage (failure of all message links) if the card fails.</p> |                        |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

**Basic call processing** (continued)

Datafilling table RCCINV (Sheet 6 of 6)

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Subfield or refinement | Entry                            | Explanation and action                                                                                                                                                                                                                                                                                                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TONASET                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                        | NORTHAM                          | Tone set. Enter NORTHAM for North America. Otherwise, enter DEFAULT.                                                                                                                                                                                                                                                                                      |
| PECS6X45                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                        | 6X45AC, BA, BB, BC, BD or MX77AA | 6X45 PEC codes. Enter the PEC of the card in RCC units 0 and 1. The PEC must reflect minimum firmware capabilities in each unit's processor complex. For RCC, enter 6X45 and suffix AC, BA, BB, BC, or BDC. For RCC PLUS, enter MX77AA.<br><br><b>Note:</b> UP on the RCC, CC portion in XPM PLUS in the RCC requires datafilling NTMX77 in table RCCINV. |
| E2LOAD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                        | MX77MAxx                         | EEPROM file. Contains NTMX77AA EEPROM loadfile name. For example, MX77MAxx, where xx is the version number (24, for example).<br><br><b>Note:</b> In shelves equipped with processors other than NTMX77, field E2LOAD is automatically datafilled with NILLOAD.                                                                                           |
| <b>Note:</b> When datafilling field C-side link table (CSLNKTAB), assure message links are not assigned to the same physical interface card. When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This applies to all interface link types; DS-1, DS30, DS30A, or PCM-30. Table control will issue a warning if an attempt is made to assign message links on the same interface card. Assigning message links to the same interface card can cause an E1 outage (failure of all message links) if the card fails. |                        |                                  |                                                                                                                                                                                                                                                                                                                                                           |

The RCC has 20 C-side and 20 P-side ports. Sixteen C-side ports (0-15) are for network interface. Four ports (16-19) are service ports for RCC call processing and are undatafilled. The four service ports are used as follows:

- ports 16 and 17—RPCM bus used by the UTR to transmit tones to P-side peripherals
- ports 16 and 17—XPCM bus used by the UTR to receive tones from P-side peripherals
- ports 18—RCPM and XCPM buses and channels 1-10 of port 19 are used by the message card to transmit and receive messages to and from P-side peripherals
- port 19—RPCM and XPCM buses and channels 11-15 and 17-31 are used for DMSX control and status information of P-side ports

## Basic call processing (continued)

### Datafill example for table RCCINV

The following example shows sample datafill for table RCCINV.

### MAP display example for table RCCINV

```

RCCNAME
ADNUM  FRTYPE  FRNO  SHPOS  FLOOR  ROW  FRPOS  EQPEC  LOAD
   EXECTAB
CSPM
   CSLNKTAB
ESA  INTRASW
   OPTCARD
TONESET  PECS6X45  E2LOAD
-----
CARY  RCC 0
      1005  RCE  0   18   0  C   0  6X12AA  ESR06BB
(  POTS POTSEX) (  KEYSET KSETEX) (ABTRK DTCEX) (RMM_TERM RSMEX) $
(ESALINES ESAEX)
LTC 1
      (0) ( NILPORT) (2) (NILPORT) (3) (4) (5) (6) (7)$
Y      Y
      (UTR16) ( MSG6X69) ( CMR18 CMR03A) ( NT7X05AA 12)$
NORTHAM  MX77AA  MX77AA  MX77NH08
    
```

**Note:** MSG6X69 must be datafilled in field OPTCARD for XPM PLUS modules.

### Datafill example for table RCCINV

The following example shows sample datafill for RSC-S basic call processing in table RCCINV. This datafill applies only when an RCE frame has been converted to an RSCE frame, and the controller shelf is an RCC2.



**Basic call processing** (continued)**MAP display example for table RCCINV**

| Table: RCCINV                             |          |          |                                                      |         |     |       |       |      |          |         |
|-------------------------------------------|----------|----------|------------------------------------------------------|---------|-----|-------|-------|------|----------|---------|
| RCCNAME                                   | FRTYPE   | FRNO     | SHPOS                                                | FLOOR   | ROW | FRPOS | EQPEC | LOAD |          |         |
| CARY                                      | RCC2     | 0        | CRSC                                                 | 0       | 18  | 0     | C     | 0    | MX85AA   | CRI06AZ |
| -----                                     |          |          |                                                      |         |     |       |       |      |          |         |
| EXECTAB                                   |          |          |                                                      |         |     |       |       |      | CONTMARK |         |
| -----                                     |          |          |                                                      |         |     |       |       |      |          |         |
| (POTS POTSEX)(KEYSET KSETEX)(ABTRK DTCEX) |          |          |                                                      |         |     |       |       |      | +        |         |
| (RMM_TERM RSMEX) (ESALINES ESAEX)         |          |          |                                                      |         |     |       |       |      | \$       |         |
| -----                                     |          |          |                                                      |         |     |       |       |      |          |         |
| CSPM                                      | CSLNKTAB |          |                                                      |         |     |       |       |      | CONTMARK |         |
| -----                                     |          |          |                                                      |         |     |       |       |      |          |         |
| LTC                                       | 1        | (0)      | (1)                                                  | (2)     | (3) | (4)   | (5)   | (6)  | (7)      | \$      |
| -----                                     |          |          |                                                      |         |     |       |       |      |          |         |
| ESA                                       | INTRASW  | ADDLMSGL | OPTCARD                                              | CMRLOAD |     |       |       |      | CONTMARK |         |
| -----                                     |          |          |                                                      |         |     |       |       |      |          |         |
| Y                                         | Y        | Y        | (UTR6) (MSGMX76 REM HDLC)(CMR5 CMRAG03) (NT7X05AA 7) |         |     |       |       |      |          | \$      |
| -----                                     |          |          |                                                      |         |     |       |       |      |          |         |
| TOESET                                    | PECS6X45 | E2LOAD   |                                                      |         |     |       |       |      |          |         |
| -----                                     |          |          |                                                      |         |     |       |       |      |          |         |
| NORTHAM                                   | MX77AA   | MX77AA   | MX77NH08                                             |         |     |       |       |      |          |         |

**Datafilling table RCCPSINV**

The following table shows the datafill for Basic call processing for table RCCPSINV. This table shows fields that apply directly to Basic call processing.

**CAUTION****Potential extended outage**

Do not change the signaling format to B8ZS for P-side links that connect to the RLCM, OPM, and OPAC until the NT6X51 LCM processors are upgraded to NT6X51DA. If you change the signaling format to B8ZS on links to the RLCM, OPM, and OPAC not provisioned with the NT6X51DA, you will not be able to restore service to these PMs if they become SysB or ManB. A software reload will be required and the signaling format must be changed back to ZCS before you reload and RTS the PMs.

**Basic call processing** (continued)

For a detailed description of the other fields, refer to the data schema section of the *Translations Guide*.

**Datafilling table RCCPSINV (Sheet 1 of 2)**

| Field                                                 | Subfield or refinement | Entry                   | Explanation and action                                                                                                                                                                                                            |
|-------------------------------------------------------|------------------------|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RCCNAME                                               |                        | refer to subfields      | The RCC name. Enter the name of the RCC. The field contains subfields SITE, PMTYPE, and RCCNO.                                                                                                                                    |
|                                                       | SITE                   | alphanumeric            | Site. Enter the site name assigned to the remote location. The site name must appear in table SITE.                                                                                                                               |
|                                                       | PMTYPE                 | RCC                     | The PM type. Enter RCC for PM type.                                                                                                                                                                                               |
|                                                       | RCCNO                  | 0 to 255                | The RCC number. Enter the number assigned to this PM.                                                                                                                                                                             |
| PSLNKTAB                                              |                        | 0 to 19                 | The P-side link table. The field consists of subfields PSLINK, PSDATA, and CONTMARK.<br><br><b>Note:</b> Make changes to fields with multiple entries in the PROMPT mode only.                                                    |
|                                                       | PSLINK                 | 0 to 19                 | The P-side link. Enter the P-side port number.                                                                                                                                                                                    |
|                                                       | PSDATA                 | DS-1, DS30A, or NILTYPE | Data. Enter DS-1 for trunks and remote nodes and DS30A for links to RMMs or LCMs. If not, enter NILTYPE.<br><br><b>Note:</b> When you enter DS-1, you must enter the carrier index template name and action for link maintenance. |
| If PSDATA is DS-1, fill in fields CARRIDX and ACTION. |                        |                         |                                                                                                                                                                                                                                   |
| CARRIDX                                               |                        | alphanumeric            | Carrier index. Enter the name to index in table CARRMTC. Enter DEFAULT for the default template in table CARRMTC.                                                                                                                 |

**Basic call processing** (continued)**Datafilling table RCCPSINV (Sheet 2 of 2)**

| Field  | Subfield or refinement | Entry   | Explanation and action                                                                                                                                                               |
|--------|------------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ACTION |                        | Y or N  | Action. Enter Y to remove a carrier from service. Remove a carrier from service when the out-of-service limit for frame, slip, errored-second, or severe errored-second is exceeded. |
|        | CONTMARK               | + or \$ | Continuation mark. Enter + to continue, \$ to end the vector.                                                                                                                        |

**Datafill example for table RCCPSINV**

The following is an example of datafill for table RCCPSINV.

**MAP display example for table RCCPSINV**

```

RCCNAME
   PSLNKTAB
-----
REM1          RCC      1
(0 DS30A) (1 NILTYPE) (2 DS1 DEFAULT N) (3 NILTYPE)
(4 DS30A) (5 DS30A) (6 DS30A) (7 DS30A) (8 DS30A)
(9 DS30A) (10 DS30A) (11 DS30A) (12 DS1 DEFAULT N)
(13 DS1 DEFAULT N) (14 DS1 DEFAULT N) (15 DS1 DEFAULT N)
(16 NILTYPE) (17 NILTYPE) (18 NILTYPE) (19 NILTYPE)$

```

Table remote cluster controller P-side link inventory, (RCCPSINV) contains RCC P-side link assignments only. You must manually busy some links. When you change, delete, replace or add some links. Manually busy the P-side links, affected links and all following links that connect to the RCC. These links must be manually busy before you can change data in table RCCPSINV.

**Adding DS-1 Links**

This section describes adding P-side DS-1 links to an LGC or LTC to support an RCC.

**Note 1:** This procedure does not apply to P-side trunks.

**Note 2:** References, to an NT6X50 card in an RCC in this procedure apply to the NTMX87 interface card. References apply to this card when the shelf is an RCC2.

## Basic call processing (continued)

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You must change data in tables LTCPSINV and RCCINV to accommodate the addition of links. Change the action to add P-side DS-1 links in an LGC, or LTC, and C-side DS-1 links in an RCC.



### **CAUTION**

#### **Loss of service**

Make sure the following conditions are met before you add P-side DS-1 links to an LGC, or an LTC. If you do not meet these conditions, you can cause the loss of service.

Before you begin this procedure, you must meet the following conditions:

- Record all activities of these procedures on a printer.
- The XPM must be INSV with no faults and no link errors. All diagnostic tests must pass before you add DS-1 links.
- Have printed copies of the inventory tables for the affected XPMs available.
- Before you add a DS-1 (NT6X50AA/AB) card or cards, make sure that table CARRMTC contains an entry for the XPM. Make sure that the entry includes the XPM that receives the modification. You must make sure that dual inline package (DIP) switches for the new card are correct.
- Make sure the new card is available to insert in the XPM shelf slot position.

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**Basic call processing** (continued)
 

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- Make sure that all cables and wires that associate with the link or links to add are in place. This procedure involves cabling to the DSX in both the host and the remote sites, where applicable.
- Determine the slot locations to add DS-1 links. The following figures identify the links and the possible slot locations for adding DS-1 links.

**C-side DS-1 link to slot relationship for an RCC2**

| MX81 Packet | DS1 links | Slot number |
|-------------|-----------|-------------|
| 0           | 0, 1      | 9           |
| 1           | 4, 5      | 9           |
| 2           | 8, 9      | 9           |
| 3           | 12, 13    | 9           |
| 0           | 2, 3      | 19          |
| 1           | 6, 7      | 19          |
| 2           | 10, 11    | 19          |
| 3           | 14, 15    | 19          |

**P-side DS-1 link to slot relationship for an RCC2**

| MX81 Packet | DS1 links | Slot number |
|-------------|-----------|-------------|
| 0           | 0,1       | 12          |
| 1           | 2, 3      | 12          |
| 2           | 4, 5      | 12          |
| 3           | 6, 7      | 12          |
| 0           | 16,17     | 14          |
| 1           | 18,19     | 14          |
| 2           | 20, 21    | 14          |
| 3           | N/A       |             |
| 0           | 8, 9      | 16          |
| 1           | 10, 11    | 16          |
| 2           | 12, 13    | 16          |
| 3           | 14, 15    | 16          |

**Basic call processing** (continued)**DS-1 P-side link to slot relationship for an RCC**

| Unit number | DS1 links | Slot Number |
|-------------|-----------|-------------|
| 1           | 18, 19    | 1           |
| 1           | 14, 15    | 2           |
| 1           | 10, 11    | 3           |
| 1           | 6, 7      | 4           |
| 1           | 2, 3      | 5           |
| 0           | 16, 17    | 1           |
| 0           | 12, 13    | 2           |
| 0           | 8, 9      | 3           |
| 0           | 4, 5      | 4           |
| 0           | 0, 1      | 5           |

**DS-1 C-side link to slot relationship for an RCC**

| Unit number | DS1 links | Slot Number |
|-------------|-----------|-------------|
| 1           | 2, 3      | 20          |
| 1           | 6, 7      | 21          |
| 1           | 10, 11    | 22          |
| 1           | 14, 15    | 23          |
| 0           | 0, 1      | 20          |
| 0           | 4, 5      | 21          |
| 0           | 8, 9      | 22          |
| 0           | 12, 13    | 23          |

**DS-1 P-side link to slot relationship for an LTC**

| Unit number | DS1 links | Slot Number |
|-------------|-----------|-------------|
| 1           | 18, 19    | 1           |
| 1           | 14, 15    | 2           |
| 1           | 10, 11    | 3           |
| 1           | 6, 7      | 4           |
| 1           | 2, 3      | 5           |
| 0           | 16, 17    | 1           |
| 0           | 12, 13    | 2           |
| 0           | 8, 9      | 3           |
| 0           | 4, 5      | 4           |
| 0           | 0, 1      | 5           |

---

**Basic call processing** (continued)
 

---

**Adding P-side DS-1 links to an LGC or LTC**
**DANGER****Personal injury can occur**

When you add DS-1 links, observe all safety precautions to prevent personal injury.

**WARNING****Equipment damage can occur**

When you add DS-1 links, observe the following safety precautions to prevent equipment damage.

Make sure the equipment you modify works correctly.

Monitor logs that the system generate for 24 h, before you add the links and resolve equipment faults.

Put on a wrist strap. Connect the wrist strap to the FSP of the equipment frame before you remove or add cards. This prevents service degradation caused by static electricity.

After all conditions are met, use the following steps to add DS-1 links to an LGC, or an LTC.

- 1 To access the PM level of a MAP display from a MAP terminal, type  
`>MAPCI ;MTC ;PM`
- 2 To post the XPM that receives the additional P-side DS1 links, type  
`>POST xpm_type xpm_no`  
*where*  
**xpm\_type**  
 is the host XPM that supports an RCC on its P-side  
**xpm\_no**  
 is the number of the host XPM
- 3 To test the XPM, type  
`>TST PM`

| <b>If system response</b> | <b>Do</b> |
|---------------------------|-----------|
| is TEST FAILED            | step 4    |
| is TEST FAILED            | step 22   |

## Basic call processing (continued)

- 4 To determine the P-side link assignments, type

>TRNSL P

*Example of a MAP response:*

```
Link 0: RCC REM1 0 0;Cap MS;Status:OK;MsgCond: OPN
Link 2: RCC REM1 0 2;Cap MS;Status:OK;MsgCond: OPN
```

- 5 To quit all directories and clear the screen to view data table entries, type

>QUIT ALL

- 6 To access the table LTCPSINV and position on the tuple for the XPM posted in step 2, type

>TABLE LTCPSINV;POS xpm\_type xpm\_no

where

**xpm\_type**

is the host XPM that supports an RCC on its P-side

**xpm\_no**

is the number of the host XPM (0 to 255)

*Example of a MAP response:*

```
LTC 1
(0 DS1 DEFAULT N) (1 DS1 DEFAULT N) (2 DS1 DEFAULT N)
(3 DS1 DEFAULT N) (4 DS1 DEFAULT N) (5 DS1 DEFAULT N)
(6 DS1 DEFAULT N) (7 DS1 DEFAULT N) (8 DS1 DEFAULT N)
(9 NILTYPE) (10 DS30A) (11 DS30A) (12 DS30A)
(13 NILTYPE) (14 NILTYPE) (15 NILTYPE) (16 NILTYPE)
(17 NILTYPE) (18 NILTYPE) (19 NILTYPE) $
```

- 7 To change the data in the tuple, type

>CHA

*Example of a MAP response:*

**PSLINKTAB: 9 NILTYPE**

**9 DSI DEFAULT N**

**Note 1:** and press the Enter key until the system displays the link to modify.

**Note 2:** Table LTCPSINV supports three link types of DS-1, DS30A and NILTYPE. the NILTYPE link is for unequipped ports.

**Note 3:** The link type must be NILTYPE before changes can be made to the P-side port.

- 8 To verify and confirm data entries observe the MAP response. To confirm the modification, enter y.

*Example of a MAP response:*



---

**Basic call processing** (continued)
 

---

```

TUPLE TO BE CHANGED:
LTC 1
(0 DS1 DEFAULT N) (1 DS1 DEFAULT N) (2 DS1 DEFAULT N)
(3 DS1 DEFAULT N) (4 DS1 DEFAULT N) (5 DS1 DEFAULT N)
(6 DS1 DEFAULT N) (7 DS1 DEFAULT N) (8 DS1 DEFAULT N)
(9 DS1 DEFAULT N) (10 DS30A) (11 DS30A) (12 DS30A)
(13 NILTYPE) (14 NILTYPE) (15 NILTYPE) (16 NILTYPE)
(17 NILTYPE) (18 NILTYPE) (19 NILTYPE) $

ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
Y
STATIC DATA UPDATE FOR LTC 1 UNIT 0 SUBMITTED.
STATIC DATA UPDATE FOR LTC 1 UNIT 1 SUBMITTED
STATIC DATA UPDATES COMPLETED.
TUPLE CHANGED
WRITTEN TO JOURNAL FILE AS JF NUMBER 246
  
```

- 9 To quit table LTCPSINV, type  
**>QUIT**
- 10 To verify the logs that the system generates during this procedure, type  
**>LOGUTIL; OPEN PM 181**  
*Example of a MAP response:*

```

PM181 JUN24 12:33:04 3298 INFO LTC 1 UNIT 1
      Node:InSv, Unit 0 Act:InSv, Unit 1 Inact:InSv
      Static Data updated
  
```

- Note 1:** The system generates a log report for each unit. The log identifies the module that the modification affects. The modification affects the LGC or the LTC.
- Note 2:** Use BACK, FORWARD and ALL subcommands to search the log buffer for the exact log report.
- 11 To access table RCCINV and position on the tuple for the affected RCC, type  
**>TABLE RCCINV;POS site\_name RCC rcc\_no**  
*where*  
**site\_name**  
is the name of the RCC location  
**rcc\_no**  
is the number of the RCC  
*Example of a MAP response:*

## Basic call processing (continued)

```

REML RCC 1   RCE   0   18   0   C   0   6X12AA ESR06BB
( POTS POTSEX) ( KEYSET KSETEX) (ABTRK DTCEX) (RMM_TERM RSMEX) $
(ESALINES ESAEX)
LTC 1
      (0) ( NILPORT) (2) (NILPORT) (3) (4) (5) (6) (7)$
Y      Y
      (UTR16)  ( CMR18 CMRAG03) NT7X05AA 17 (MSG6X69)$
NORTHAM MX77AA MX77AA MX77MA24

```

- 12** To change the data in the tuple, type

```
>CHA CSLINKTAB
```

and press the Enter key until the link displays the link to modify.

*Example of a MAP response:*

```

CSLINKTAB: 7
CSLINKTAB:
>8
CSLINKTAB
>$

```

**Note:** After the link data tuple change, enter a \$ to indicate the end of entry.

- 13** To verify and confirm data entries, observe the MAP response and enter Y.

*Example of a MAP response:*

```

REML RCC 1   RCE   0   18   0   C   0   6X12AA ESR06BB
( POTS POTSEX) ( KEYSET KSETEX) (ABTRK DTCEX) (RMM_TERM RSMEX) $
(ESALINES ESAEX)
LTC 1
      (0) ( NILPORT) (2) (NILPORT) (3) (4) (5) (6) (7) (8)$
Y      Y
      (UTR16)  ( CMR18 CMRAG03) (7X07AA) 17 (MSG6X69)$
NORTHAM MX77AA MX77AA MX77MA24

ENTER Y TO CONFIRM, N TO REJECT, OR E TO EDIT.
Y
STATIC DATA UPDATE FOR LTC 1 UNIT 0 SUBMITTED
STATIC DATA UPDATE FOR LTC 1 UNIT 1 SUBMITTED
STATIC DATA UPDATE FOR ECC 1 UNIT 0 SUBMITTED
STATIC DATA UPDATE FOR RCC 1 UNIT 1 SUBMITTED
TUPLE CHANGED
WRITTEN TO JOURNAL FILE AS JF NUMBER 256

```

- 14** To quit table RCCINV, type

```
>QUIT
```

---

## Basic call processing (continued)

---

- 15 To check the logs that the system generates during this procedure, type  
>OPEN PM 181

*Example of a MAP response:*

```
PM181 JUN24 12:33:04 3298 INFO RCC 1 UNIT 1
Node:InSv, Unit 0 Act:InSv, Unit 1 Inact:InSv
Static Data updated
```

**Note 1:** The system generates a log report for each unit that identifies the module the modification affects (LGC, LTC or RCC).

**Note 2:** Use the BACK, FORWARD or ALL subcommands to search the log buffer for a specified log report.

*At the RSC site*

- 16 If the slot has a filler faceplate, insert the new NT6X50 card with the correct dip switch settings.

*At the Host MAP terminal*

- 17 To access the PM level of the MAP display, type

>MAPCI ;MTC ;PM

- 18 To post the previous XPM in step 2, type

>POST xpm\_type xpm\_no

*where*

**xpm\_type**

is the host XPM that supports an RCC on its P-side

**xpm\_no**

is the number of the host XPM

*At the Host XPM frame*

- 19 If the slot has a filler faceplate, insert the new NT6X50 card with the correct dip switch settings.

*At the Host MAP terminal*

- 20 To test the last link installed, type

>TST LINK link\_no

*where*

**link\_no**

is the number of the P-side link that this procedure installs.

---

| If system response | Do      |
|--------------------|---------|
| is TEST FAILED     | step 21 |
| is TEST FAILED     | step 23 |

- 21 To return the previous tested link to service, type

>RTS LINK link\_no

## Basic call processing (continued)

where

**link\_no**

is the number of the P-side link that this procedure installs.

|           | <b>If system response</b>                                                                                                                                                                               | <b>Do</b> |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|           | is TEST FAILED                                                                                                                                                                                          | step 24   |
|           | is TEST FAILED                                                                                                                                                                                          | step 25   |
| <b>22</b> | Refer to the <i>Alarm Clearing Procedure</i> section of the <i>Remote Switching Center Maintenance Guide</i> for the correct alarm type. After you clear the alarm, return to step 3 of this procedure. |           |
| <b>23</b> | Contact your maintenance support group for additional help.                                                                                                                                             |           |
| <b>24</b> | The procedure is complete.                                                                                                                                                                              |           |

## Datafilling table LCMINV

Table line concentrating module inventory (LCMINV) lists data assignments for each bay that associates with a local or remote LCM. Field BICTEST allows BIC relay test (BRT) scheduling.

The following table shows datafill for Basic call processing for table LCMINV. The table shows only fields that apply directly to Basic call processing. For a detailed description of the other fields, refer to the data schema section of the *Translations Guide*.

### Datafilling table LCMINV (Sheet 1 of 3)

| <b>Field</b>                                                                      | <b>Subfield or refinement</b> | <b>Entry</b>       | <b>Explanation and action</b>                                                     |
|-----------------------------------------------------------------------------------|-------------------------------|--------------------|-----------------------------------------------------------------------------------|
| LCMNM                                                                             |                               | refer to subfields | The LCM name. Enter the LCM site name, frame number and peripheral module number. |
|                                                                                   | SITE                          | alphanumeric       | Site. Enter the remote location site name. SITE is a subfield of field LCMNM.     |
|                                                                                   | FRAME                         | 0 to 511           | Frame number. Enter the number of the frame the system installs the LCM in.       |
|                                                                                   | PMNO                          | 0 to 255           | Peripheral module number. Enter the PM number.                                    |
| FRTYPE                                                                            |                               | LCE                | Frame type. Enter the frame type on which the PM equipment mounts, like LCE.      |
| Enter the location of the C-side PM in fields FRNO, SHPOS, FLOOR, ROW, and FRPOS. |                               |                    |                                                                                   |

**Basic call processing** (continued)

Datafilling table LCMINV (Sheet 2 of 3)

| Field   | Subfield or refinement | Entry              | Explanation and action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------|------------------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EQPEC   |                        | 6X04AA             | Equipment product engineering code. For example, enter the PEC of the PM-6X04AA.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| LOAD    |                        | alphanumeric       | Load name. Enter the name given to the issue of PM software.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| CSPMNO  |                        | refer to subfields | The C-side peripheral module type and number. Enter the C-side PMTYPE and PM number.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|         | PMTYPE                 | LGC, LTC, or RCC   | The PMTYPE. Enter the C-side PM type.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|         | PMNO                   | 0 to 255           | Peripheral module number. Enter the number assigned to this PM.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| BICTST  |                        | Y or N             | The BRT test. Enter Y to include the LCM in the next LCM BIC relay test (BRT) schedule.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| ADNUM   |                        | 0 to 4095          | Peripheral module administrative number. Enter the PM administrative number.<br><br><b>Note 1:</b> The value of field ADNUM must be different in all PM inventory tables (DLMINV, IPEINV, LCMINV, LMINV, LTCINV, RCCINV, RCSINV, RCTINV, and VSRINV). The system rejects attempts to add a PM with an ADNUM already in use. The system prompts the user with the next available ADNUM value.<br><br><b>Note 2:</b> Field ADNUM cannot change if are included in an Engineering and Administrative Data Acquisition System (EADAS) contains the OM counts of the PM. The ADNUM cannot change the data collection (DC) section associated with the OM groups LMD or UTR includes OM counts. |
| MEMSIZE |                        | 256K or 64K        | Memory size. Enter the memory size of the LCM processor card. Field MEMSIZE must be set to 256K if BICTST is set to Y. If the system implements XLCM overload feature Must be set to 256K. If MEMSIZE is set to 64K, BICTST must be set to N.                                                                                                                                                                                                                                                                                                                                                                                                                                             |

## Basic call processing (continued)

### Datafilling table LCMINV (Sheet 3 of 3)

| Field   | Subfield or refinement | Entry              | Explanation and action                                                                                                                        |
|---------|------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| LCMTYPE |                        | refer to subfields | LCMTYPE. Info is multiple with ringing data and type, and LCMINFO.                                                                            |
|         | LCM                    | alphanumeric       | LCMTYPE selector. Enter LCM selector multiple with ringing data and ringing type.                                                             |
| LCMINFO |                        | refer to subfields | The LCMINFO. Multiple with LCMSELECTOR and LINKMAP.<br><br><b>Note:</b> Make changes to fields with multiple entries in the PROMPT mode only. |
|         | LCMSELECTOR            | HLCM               | Enter HLCM multiple with LINKMAP when C-side link is DS30A.                                                                                   |
|         | LINKMAP                | 2 to 6             | Enter C-side link numbers equipped.                                                                                                           |

**Note:** When you enter fields link information (LNKINFO) or link map (LNKMAP), make sure that message links are not assigned to the same interface card. When the interface card supports two or more links, separate the message links by the number of links on the interface cards. The separation applies to all interface link types; DS-1, DS30, DS30A, or PCM-30. Table control issues a warning if you attempt to assign message links on the same interface card. Message links assigned to the same interface card can cause an E1 outage (failure of all message links) if the card fails.

### Datafill example for table LCMINV

The following is an example of datafill for table LCMINV.

### MAP display example for table LCMINV

```

LCMNM FRTYPE SHPOS FLOOR ROW FRPOS EQPEC LOAD      CSPMNO
BICTEST  ADNUM  MEMSIZE
-----
REMI 00 0 LCE    4    1  C    7 6X04AA XLCM31A  RCC  0
      Y    31   256K
      LCM Y  F  BOC  20 30 40 50 HLCM (4) (6) (5) (7)$
    
```

### Datafilling table RMMINV

Table remote maintenance module inventory (RMMINV) identifies an RLCM, RSC, or OPM site. The table identifies sites with the frame type, frame number, floor, row and frame position. The table also identifies sites with equipment PEC code, PM load and executive program loaded, and C-side PM

---

## Basic call processing (continued)

---

attached to each RMM. Memory is dynamically allocated. The maximum size of this table is 255 entries.

The following table shows the datafill for Basic call processing for table RMMINV. The table shows only fields that apply directly to Basic call processing. For a detailed description of the other fields, refer to the data schema section of the *Translations Guide*.

### Datafilling table RMMINV (Sheet 1 of 2)

| Field                                                                                                                                                                             | Subfield or refinement | Entry              | Explanation and action                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|--------------------|------------------------------------------------------------------------------------------------------------------------------|
| RMMNAME                                                                                                                                                                           |                        | refer to subfields | The RMM name. Enter the RMM name. Contains subfields SITENM, PMTYPE, and RMMNO.                                              |
|                                                                                                                                                                                   | SITENM                 | alphanumeric       | Site. Enter the site name assigned to the remote location. This entry should also appear in tables RCCINV, LCMINV, and SITE. |
|                                                                                                                                                                                   | PMTYPE                 | RMM                | The PM type. Enter RMM.                                                                                                      |
|                                                                                                                                                                                   | RMMNO                  | 0 to 255           | The RMM number. This number is different by office and not by site.                                                          |
| FRTYPE                                                                                                                                                                            |                        | RSE, RME or RCE    | Frame type. Enter RSE for RCC, and RLCM for RLCM.                                                                            |
| Enter the location of the RCC in fields FRNO, SHPOS, FLOOR, ROW, and FRPOS.                                                                                                       |                        |                    |                                                                                                                              |
| EQPEC                                                                                                                                                                             |                        | 6X13AA             | Equipment PEC. Enter 6X13AA for a normal RMM.                                                                                |
| LOAD                                                                                                                                                                              |                        |                    | The LOAD. Enter the RMM load. Make sure table PMLOADS contains the load and table name.                                      |
| EXECS                                                                                                                                                                             |                        | RSMEX              | The Execution table. Enter the correct executions. Enter RSMEX for RMM.                                                      |
| CSPMINFO                                                                                                                                                                          |                        | refer to subfields | The C-side PM information. Contains subfields RMMSELECTOR, CSIDEPM, and CSIDPORT.                                            |
|                                                                                                                                                                                   | RMMSELECTOR            | RMMRCC             | The RMM selector. Enter the type of module where the RMM is located, RMMRCC or RMMLCM.                                       |
| <p><b>Note:</b> When the RMMSELECTOR is set to RMMRCC, the RMM is in an RCE frame. Port 0 of the RCC connects to shelf position 51, and port 1 connects to shelf position 65.</p> |                        |                    |                                                                                                                              |

## Basic call processing (continued)

### Datafilling table RMMINV (Sheet 2 of 2)

| Field                                                                  | Subfield or refinement | Entry              | Explanation and action                                                                                                            |
|------------------------------------------------------------------------|------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| CSIDEPM                                                                |                        | refer to subfields | The C-side peripheral module. Contains subfields PMT and EXT_PMNO.                                                                |
|                                                                        | PMT                    | RCC                | The PM type. Based on the value in field RMMSELECTOR. Enter RCC or LCM.                                                           |
|                                                                        | EXTPMNO                | 0 to 255           | The External PM number. Enter the external PM number that attaches to the RMM. This number must appear in table LCMINV or RCCINV. |
| If field RMMSELECTOR is RMMRCC, datafill subfield CSIDPORT as follows: |                        |                    |                                                                                                                                   |
|                                                                        | CSIDPORT               | 0 or 1             | The C-side port. Enter the C-side port connected to the RMM.                                                                      |

**Note:** When the RMMSELECTOR is set to RMMRCC, the RMM is in an RCE frame. Port 0 of the RCC connects to shelf position 51, and port 1 connects to shelf position 65.

### Datafill example for table RMMINV

The following is an example of datafill for table RMMINV..

### MAP display example for table RMMINV

```

>Table RMMINV
>POS REM1 RMM 0
>LIS
      RMMNAME FRTYPE FRNO SHPOS FLOOR ROW FRPOS EQPEC  LOAD  EXECS
      CSPMINFO
-----
REM1 RMM 0    RCE   0   51    0   C    5 6X13AA RMM34C RSMEX
RMMRCC      RCC   1   0

```

### Datafilling table REXSCHED

Table routine exercise schedule (REXSCHED) contains the SREX test scheduling information that the REX controller requires.



---

**Basic call processing** (continued)
 

---

The following table shows datafill that LCM REX testing requires. The table shows only fields that apply directly to LCM REX. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

**Datafilling table REXSCHED for RSC-S basic operation**

| Field                                                                            | Subfield or refinement | Entry             | Explanation and action                                                                                                                                                                                                                                                                                        |
|----------------------------------------------------------------------------------|------------------------|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| REXTSTID                                                                         |                        | refer to subfield | The REX tests identification. This field contains subfield REX_TEST_ID                                                                                                                                                                                                                                        |
|                                                                                  | REX_TEST_ID            | refer to list     | The REX test ID. The system automatically defines REX test identifiers when data enters inventory tables. Examples: MS_REX_TEST, CM_REX_TEST, SLM_REX_TEST, LGC_REX_TEXT, MSB_REX_TEST, LCM_REX_TEST, and LCMCOV_REX_TEST.                                                                                    |
| ENABLE                                                                           |                        | Y or N            | Enable REX test. Enable test schedule for exact REX identifier. Default: Y                                                                                                                                                                                                                                    |
| PERIOD                                                                           |                        | 1 to 7 inclusive  | Minimum number of days between consecutive REX schedules. Each REX test must be run a minimum of one time each week. Default: 1 (run REX every day).                                                                                                                                                          |
| PARALLEL                                                                         |                        | 1 to 99           | Number of REX tests that run parallel. Limit of concurrent REX tests that run at the same time for a node type. For LCM_REX, the maximum number of tests that can run is 4. For LCMCOV_REX tests, the availability of only one line test unit (LTU) in an LCM requires a maximum of 1. Default: 1.            |
| DAYSDBL                                                                          |                        | refer to list     | Days to disable REX testing. A list of days when REX testing is disabled. The values of this field are: MON, TUE, WED, THU, FRI, SAT, SUN, ALL or NONE. Each REX test must run a minimum of one time each week. The ALL option suspends a REX test to allow system maintenance. Default: There is no default. |
| <p><b>Note:</b> Perform the LCMCOV_REX_TEST on LCMs, XLCMs, OPMs, and RLCMs.</p> |                        |                   |                                                                                                                                                                                                                                                                                                               |

**Datafill example for table REXSCHED**

The following is an example of datafill for table REXSCHED.

## Basic call processing (continued)

### MAP display example for table REXSCHE

| Table: REXSCHE  |        |        |          |         |  |
|-----------------|--------|--------|----------|---------|--|
| REXTSTID        | ENABLE | PERIOD | PARALLEL | DAYSDBL |  |
| MS_REX_TEST     | Y      | 1      | 1        | NONE    |  |
| CM_REX_TEST     | Y      | 1      | 1        | NONE    |  |
| SLM_REX_TEST    | Y      | 1      | 1        | NONE    |  |
| LGC_REX_TEST    | Y      | 1      | 1        | NONE    |  |
| MSB_REX_TEST    | Y      | 1      | 1        | NONE    |  |
| LCM_REX_TEST    | Y      | 1      | 4        | NONE    |  |
| LCMCOV_REX_TEST | Y      | 1      | 1        | NONE    |  |

### Datafilling table TRKGRP

Table Trunk Group (TRKGRP) defines data for each trunk group associated with a switching unit. Each trunk group entry in table TRKGRP has a different common language location identifier (CLLI) for the trunk group and a number of other fields. The trunk group type field GRPTYP. determines the type of CLLI.

The datafill for Basic call processing for table TRKGRP appears in the following table. The table shows only fields that apply directly to Basic call processing. For a detailed description of the other fields, refer to the data schema section of the *Translations Guide*.

#### Datafilling table TRKGRP (Sheet 1 of 2)

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Subfield or refinement | Entry              | Explanation and action                                                                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|--------------------|----------------------------------------------------------------------------------------------------|
| GRPKEY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                        | refer to subfields | Group key. Contains subfield CLLI. Enter the CLLI code for the trunk group assigned in table CLLI. |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | CLLI                   | alphanumeric       | Group key. Contains subfield CLLI. Enter the CLLI code for the trunk group assigned in table CLLI. |
| <p><b>Note 1:</b> Table TRKGRP can have up to 2047 trunk groups. The number of CLLIs available to name the trunk groups restricts the number of trunk groups.</p> <p><b>Note 2:</b> Hardware and software features provide the set of trunk group types available for use in an office. The operating company provides the office with feature packages.</p> <p><b>Note 3:</b> Refer to the table of contents for the procedure Adding dynamic trunks in basic call processing for more information on RSC dynamic trunking.</p> |                        |                    |                                                                                                    |

**Basic call processing** (continued)

Datafilling table TRKGRP (Sheet 2 of 2)

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Subfield or refinement | Entry                                                | Explanation and action                                                                                                                                                                                                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRPINFO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                        | GRPTYP,<br>TRAFSNO,<br>PADGRP,<br>NCCLS, and<br>CARD | Variable group data. When trunk group type is MAINT, this field contains subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, and CARD.<br><br><b>Note:</b> Make changes to fields with multiple entries in the PROMPT mode only. |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | GRPTYP                 | ITL2, TTL2,<br>LOOPA,<br>MAINT, or<br>SOCKET         | Group type. Enter the group type for the trunk group. For maintenance and test trunks, the range is ITL2, TTL2, LOOPA, MAINT, or SOCKET.                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | TRAFSNO                | 0 to 127                                             | Traffic separation number. Not required for maintenance and test trunks.                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | PADGRP                 | alphanumeric                                         | Pad group. Enter the name of the pad group assigned to the trunk group in table PADDATA. For maintenance and test trunks, enter IAO (intra-office trunks). Otherwise, enter NPDGP.                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | NCCLS                  | NCRT                                                 | No circuit class. Enter NCRT (no circuit).                                                                                                                                                                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | CARD                   | alphanumeric                                         | Card code. Enter the product engineering code of the maintenance and test trunk.                                                                                                                                       |
| <p><b>Note 1:</b> Table TRKGRP can have up to 2047 trunk groups. The number of CLLIs available to name the trunk groups restricts the number of trunk groups.</p> <p><b>Note 2:</b> Hardware and software features provide the set of trunk group types available for use in an office. The operating company provides the office with feature packages.</p> <p><b>Note 3:</b> Refer to the table of contents for the procedure Adding dynamic trunks in basic call processing for more information on RSC dynamic trunking.</p> |                        |                                                      |                                                                                                                                                                                                                        |

**Datafill example for table TRKGRP**

The following is an example of datafill for table TRKGRP.

## Basic call processing (continued)

### MAP display example for table TRKGRP

```

GRPKEY                                GRPINFO
-----
      VER90                          MAINT 0 NPDGP NCRT 2X90AB
      TTT                             MAINT 0   IAO NCRT 2X96AA
      TTU                             MAINT 0   IAO NCRT 2X47AA
      LTU                             MAINT 0   IAO NCRT 2X11AA
      RLMVER90                        MAINT 0   IAO NCRT 2X90AB
      OG_1                            TO 0 TLD NCRT   IE MIDL 7 N
      OG_2                            TO 0 TLD NCRT   IE MIDL 4 N

RSCTIP
      TI 0 ELO NCRT IE NPRT NSCR 704 LCL N N

RCC0IBNTO
      IBNTO 0 ELO NCBN RCC0 0 MIDL ANSDISC
      0 N O 1 8 9 N N N N N N N $

RCC0IBNTI
      IBNTI 0 ELO NCRT RCC0 0 0 3204001 ANSDISC
      0 Y N N Y N Y Y 0 0 N N N N N $
    
```

### Datafilling table TRKSGRP

The datafill specified for Basic call processing for table TRKSGRP appears in the following table. Only fields that apply directly to Basic call processing appear. For a detailed description of the other fields, refer to the data schema section of the *Translations Guide*.

#### 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                   | alphanumeric  | Common language location identifier. This subfield contains the code assigned in table CLLI to the trunk group to which the subgroup belongs. |
|                                                                                                                                                                                                                                                                                                                                                                                                | SGRP                   | 0 or 1        | Subgroup number. This subfield contains the number assigned to the trunk subgroup.                                                            |
| <p><b>Note 1:</b> The SIZE field in table DATASIZE allocates memory for the number of trunk groups. The SIZE field allocates memory for the entry with field DATSKEY equal to TRKSGRP.</p> <p><b>Note 2:</b> The maximum number of trunk subgroups is equal to twice the number of trunk groups.</p> <p><b>Note 3:</b> The maximum number of trunk subgroups that can be assigned is 4096.</p> |                        |               |                                                                                                                                               |

**Basic call processing** (continued)

Datafilling table TRKSGRP (Sheet 2 of 3)

| Field                                                                                                                                                                                                                                                                                                                                                                                          | Subfield or refinement | Entry                 | Explanation and action                                                                                                                                                                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CARDCODE                                                                                                                                                                                                                                                                                                                                                                                       |                        | alphanumeric          | Card code. This field lists the maintenance and test trunk PEC.                                                                                                                                              |
| SGRPVAR                                                                                                                                                                                                                                                                                                                                                                                        |                        | see subfields         | Variable subgroup data. For standard signaling, this field contains the following subfields. SIGDATA, DIR, OPULSTYP, OSTARTSG, IDGTIME, NUMSTOPS, CCONT, RNGBCK, ESUPR, SAT, REMBSY, DIALMODE, and TRKGDTIM. |
|                                                                                                                                                                                                                                                                                                                                                                                                | SIGDATA                | STD                   | Signaling data. This subfield lists the signaling code for standard signaling, (STD).                                                                                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                | DIR                    | IC, OG, or 2W         | Direction. Enter trunk group direction, incoming (IC), outgoing (OG), or two-way (2W).                                                                                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                | OPULSTYP               | DP, DT, MF, or blank  | Outgoing type of pulse. For maintenance and test trunks, enter no pulsing (NP).                                                                                                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                | OSTARTSG               | DD, IM, LS, GS, or WK | Outgoing start dial signal. For maintenance and test trunks, the entry is wink (WK).                                                                                                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                | IDGTIME                | 0 to 100, or blank    | Interdigital timing. For maintenance and test trunks, this value is 2.                                                                                                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                | NUMSTOPS               | 0 to 3, or blank      | Number of stops/goes. For maintenance and test trunks, this value is 0.                                                                                                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                | CCONT                  | MW or NO              | Coin control. For maintenance and test trunks, the entry is MW (multiwink).                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                | RNGBCK                 | IB or N               | Ringback. For maintenance and test trunks, the entry is inband (IB).                                                                                                                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                | ESUPR                  | F, H, or N            | Echo Suppressor. For maintenance and test trunks, the entry is no echo suppressor, N.                                                                                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                | SAT                    | Y or N                | Satellite. For maintenance and test trunks, the entry is no satellite, N.                                                                                                                                    |
| <p><b>Note 1:</b> The SIZE field in table DATASIZE allocates memory for the number of trunk groups. The SIZE field allocates memory for the entry with field DATSKEY equal to TRKSGRP.</p> <p><b>Note 2:</b> The maximum number of trunk subgroups is equal to twice the number of trunk groups.</p> <p><b>Note 3:</b> The maximum number of trunk subgroups that can be assigned is 4096.</p> |                        |                       |                                                                                                                                                                                                              |

## Basic call processing (continued)

### Datafilling table TRKSGRP (Sheet 3 of 3)

| Field | Subfield or refinement | Entry  | Explanation and action                                                                                                                                                         |
|-------|------------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       | REMBSY                 | Y or N | Remote make busy. For maintenance and test trunks, the entry is feature not assigned, N.                                                                                       |
|       | DIALMODE               | C or M | Dial mode. For maintenance and test trunks, this subfield is blank.                                                                                                            |
|       | TRKGDTIM               | 16     | Trunk guard timing. For maintenance and test trunks, this value is 16 (160 ms elapse time interval before the trunk is returned to the idle link list after trunk disconnect). |

**Note 1:** The SIZE field in table DATASIZE allocates memory for the number of trunk groups. The SIZE field allocates memory for the entry with field DATSKEY equal to TRKSGRP.

**Note 2:** The maximum number of trunk subgroups is equal to twice the number of trunk groups.

**Note 3:** The maximum number of trunk subgroups that can be assigned is 4096.

### Datafill example for table TRKSGRP

The following is an example of datafill for table TRKSGRP..

### MAP display example for table TRKSGRP

```

SGRPKEY  CARDCODE                                SGRPVAR
-----
VER90 0   2X90AB
          STD OG NP WK 0 0 NO NO F N N 17
TTT 0    2X96AA
          STD OG NP WK 0 0 NO NO F N 17
LTU 0    2X11AA
          STD OG NP WK 0 0 NO NO F N 17
RLMVER90 0 2X90AB
          STD OG NP WK 0 0 NO NO F N 17
OG_1   DS1SIG
          STD OG DP IM 70 0 NO NO N N 70
RCC0TO 0  DS1SIG
          STD 2W MF WK N 7 7 MF WK 7 0 N NO NO N N N M 70
    
```

Table Trunk Subgroup (TRKSGRP) lists additional information for each subgroup assigned to one of the trunk groups listed in table TRKGRP. Each input data for one subgroup or two subgroups for each trunk group listed in table TRKGRP. Do not enter input data for trunk groups defined as maintenance (MAINT) group types. The trunk group datafill automatically produces trunk subgroup data for maintenance and test trunks. The trunk

---

## Basic call processing (continued)

---

group datafill does not produce data for subgroup 1 of the trunk group with code TTU.

### Datavfilling table TRKMEM

Table trunk member (TRKMEM) lists data for each trunk assigned to a trunk group or subgroup of table TRKGRP or TRKSGRP. This table identifies circuits associated with static trunks, dynamic trunks, and test equipment used to test lines and trunks.

The following table shows datafill for Basic call processing for table TRKMEM. The table shows only fields that apply directly to Basic call processing. For a detailed description of the other fields, refer to the data schema section of the *Translations Guide*.

#### Datavfilling table TRKMEM (Sheet 1 of 2)

| Field                                                                                                                                                                                                                                                           | Subfield or refinement | Entry         | Explanation and action                                                                                                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CLLI                                                                                                                                                                                                                                                            |                        | alphanumeric  | Common language location identifier. Enter the code assigned in table CLLI to the trunk group to which the trunk is a member.                                                                                     |
| EXTRKNM                                                                                                                                                                                                                                                         |                        | 0 to 9999     | External trunk number. Enter the external trunk number assigned to the trunk.                                                                                                                                     |
| SGRP                                                                                                                                                                                                                                                            |                        | 0 to 1        | Subgroup number. Enter the subgroup number to which the trunk is assigned. Enter 0 for maintenance and test trunks, 1 for others.                                                                                 |
| MEMVAR                                                                                                                                                                                                                                                          |                        | see subfields | Variable data for members. This field varies according to whether the trunk is part of an interoffice trunk or a maintenance trunk. For an interoffice trunk, subfields are PMTYPE, RCCNO, RCCCKTNO, and RCCCKTS. |
|                                                                                                                                                                                                                                                                 | PMTYPE                 | RCC           | Peripheral module type. Enter the PM type on which the trunk is mounted.                                                                                                                                          |
|                                                                                                                                                                                                                                                                 | RCCNO                  | 0 to 511      | The RCC number. Enter the RCC number.                                                                                                                                                                             |
| <p><b>Note 1:</b> The system allocates memory for the total number of trunks specified in field TRKGRSIZ in table CLLI for the trunk groups.</p> <p><b>Note 2:</b> Change field TRKGRSIZ in table CLLI for the correct trunk groups to increase table size.</p> |                        |               |                                                                                                                                                                                                                   |

## Basic call processing (continued)

### Datafilling table TRKMEM (Sheet 2 of 2)

| Field | Subfield or refinement | Entry   | Explanation and action                                                              |
|-------|------------------------|---------|-------------------------------------------------------------------------------------|
|       | RCCCKTNO               | 0 to 19 | RCC circuit number. Enter the RCC P-side link number to the assigned TRKGRP member. |
|       | RCCCKTS                | 1 to 24 | RCC circuits. Enter the RCC time slot number to the assigned TRKGRP member.         |

**Note 1:** The system allocates memory for the total number of trunks specified in field TRKGRSIZ in table CLLI for the trunk groups.

**Note 2:** Change field TRKGRSIZ in table CLLI for the correct trunk groups to increase table size.

### Datafill example for table TRKMEM

The following is an example of datafill for table TRKMEM.

### MAP display example for table TRKMEM

```

>Table TRKMEM;LIS;POS RSMVER90
TABLE: TRKMEM
      CLLI                EXTRKNM  SGRP                MEMVAR
-----
      RSMVER90            0        0                RMM  2  4
      LTU                  1        0                MTM  2  2
      LTU                  2        0                RMM  0  6
      LTU                  2        0                RMM  0  6
      LTU                  3        0                RMM  1  6
      LTU                  4        0                RMM  2  6
      LTU                  5        0                RMM  3  6
      LTU                  6        0                RMM  4  6
      RCC0T1                0        0                RCC  0  2  4
      RCC0T2                0        0                RCC  0  2  4
  
```

### Datafilling table MTAMDRVE

The following table shows datafill for Basic call processing for table MTAMDRVE. The table shows only fields that apply directly to Basic call



**Basic call processing** (continued)

processing. For a detailed description of the other fields, refer to the data schema section of the *Translations Guide*.

**Datafilling table MTAMDRVE**

| Field   | Subfield or refinement | Entry                        | Explanation and action                                                                                                                |
|---------|------------------------|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| MTAMEM  |                        | 0 to 255                     | Metallic test access minibar driver member. Enter the MTA driver member number. The MTA driver member number is the key to the table. |
| VERT    |                        | 0 to 639                     | The MTAM driver vertical start location. Enter the vertical start location for the MTAM driver.                                       |
| HORIZ   |                        | 0 to 127                     | The MTAM driver horizontal start location. Enter the horizontal start location for the MTAM driver.                                   |
| TMTYPE  |                        | RMM                          | Trunk module type. Enter the type of trunk module on which the minibar driver mounts.                                                 |
| TMNO    |                        | 0 to 255                     | Trunk module number. Enter the number assigned to the maintenance trunk module.                                                       |
| TMCKTNO |                        | 0 to 27                      | Trunk module circuit number. Enter the circuit number of the MTM or RMM where the minibar driver is assigned.                         |
| MTACARD |                        | 2X50AB,<br>3X09AA,<br>3X09BA | The MTAM driver card. Enter the card code for the metallic test access minibar driver card.                                           |

**Datafill example for table MTAMDRVE**

The example tuple corresponds to the example configuration. The 3X09AA has four verticals with a range of 20 through 23. In the example tuples, only verticals 20 and 22 are entered.

**MAP display example for table MTAMDRVE**

| TABLE : MTAMDRVE |      |       |        |      |         |         |
|------------------|------|-------|--------|------|---------|---------|
| MTAMEM           | VERT | HORIZ | TMTYPE | TMNO | TMCKTNO | MTACARD |
| 1                | 20   | 0     | RMM    | 0    | 10      | 3X09AA  |
| 1                | 24   | 0     | RMM    | 0    | 10      | 3X09BA  |
| 2                | 32   | 0     | RMM    | 1    | 10      | 3X09BA  |

**Basic call processing** (continued)

The metallic test access (MTA) network is a matrix of vertical and horizontal crosspoints, like a minibar. The crosspoints connect specified verticals to horizontals in the network. The MTA connects test equipment connected to a horizontal for a circuit to test that connects to a vertical.

An MTA network of the required size is the connection between smaller minibar circuits, used as building block components. The NT3X09AA driver allows metallic test access to remote line concentrating devices, including LCMs off of the RCC. The NT3X09AA circuit are four-vertical by eight-horizontal. The measurements for an NT3X09BA is eight-vertical by eight-horizontal circuit.

**MTA matrix**

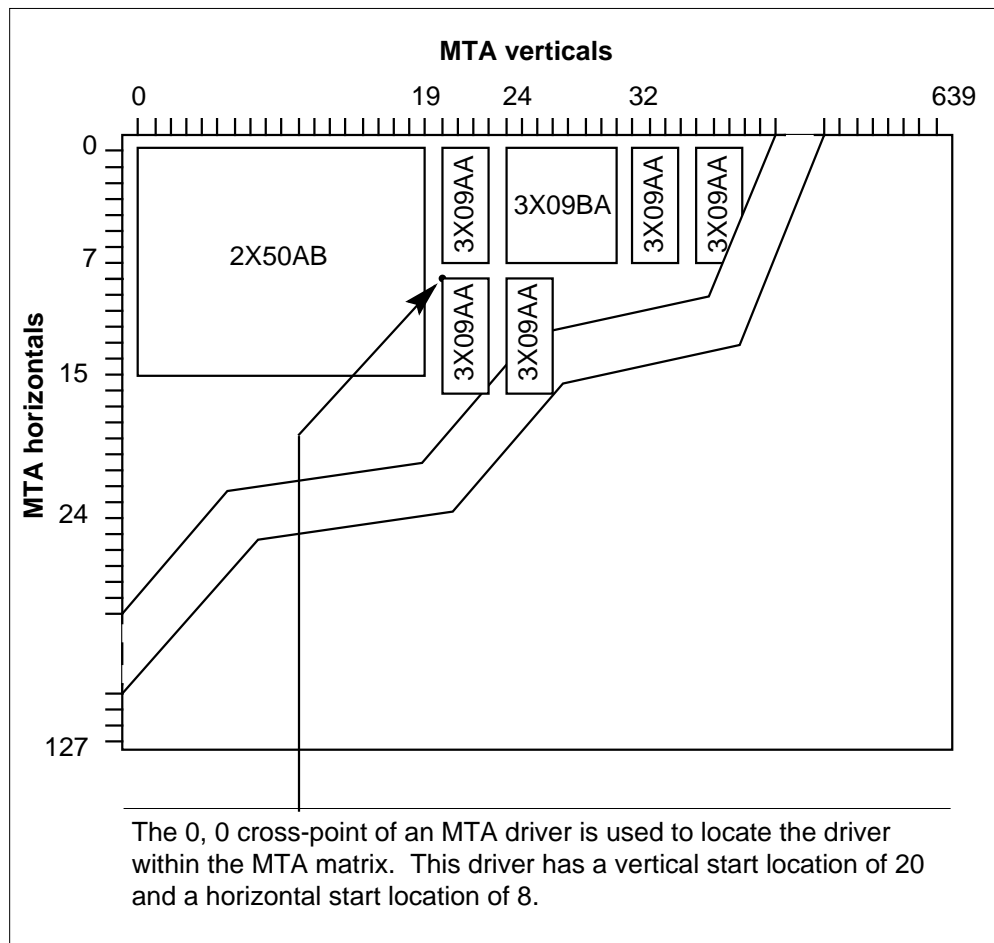
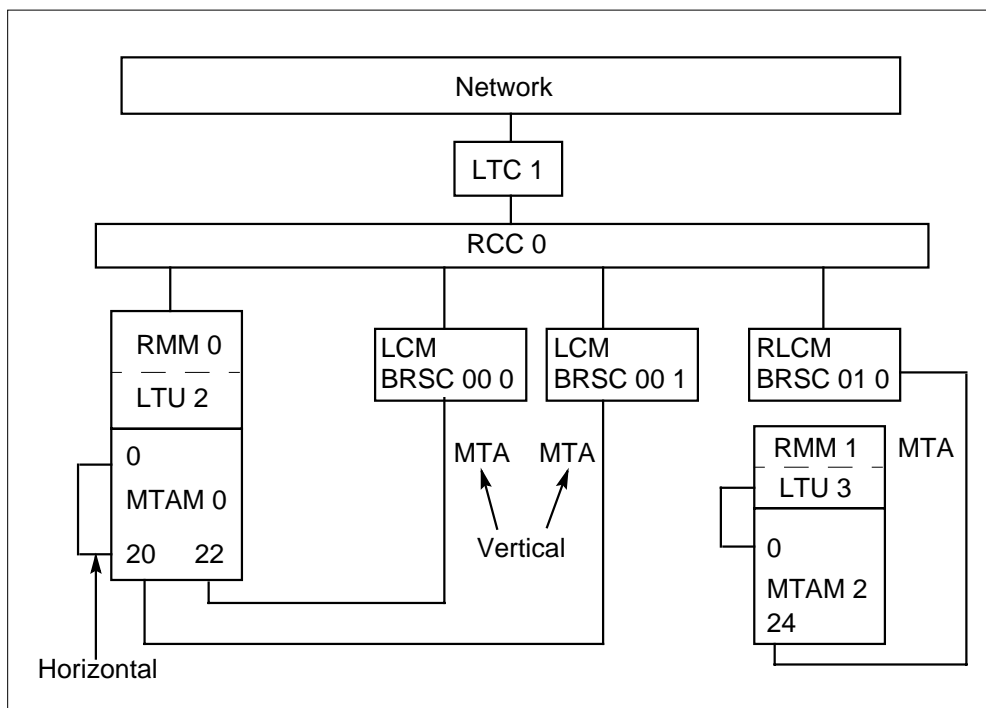


Table MTA minibar driver (MTAMDRVE) specifies the location and the type of minibar driver assigned to the minibar switch. The NT2X50AB driver is part of the NT2X46 minibar switch. The NT3X09 driver has relays on the card

**Basic call processing** (continued)

and does not require an associated minibar switch. The 0, 0 crosspoint in the matrix identifies each minibar driver. An example of MTA configuration appears in the following figure.

**Example MTA configuration**



**Datafilling table MTAVERT**

The metallic test access vertical connection table identifies the vertical connections to the MTA matrix. The type of connection is single or multiple. A maximum of 32 LCM modules can share a metal test pair.

The following table shows datafill for Basic call processing for table MTAVERT. The table shows only fields that apply directly to Basic call

**Basic call processing** (continued)

processing. For a detailed description of the other fields, refer to the data schema section of the *Translations Guide*.

**Datafilling table MTAVERT**

| Field    | Subfield or refinement | Entry              | Explanation and action                                                                                                                                                                              |
|----------|------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| VERT     |                        | 0 to 639           | Vertical. Enter the MTA vertical connection number.                                                                                                                                                 |
| VERTCONN |                        | M or S             | Vertical connection. Enter M to indicate multiple connections, S to indicate single connections. A maximum of 32 LCM modules can share a metallic test pair.                                        |
| SELECTOR |                        | refer to subfields | Selector type. Use the selector O when the entry in VERTCONN is M. The subfields SITE, FRAME, UNIT, and CONTMARK must be entered after the selector. This is a vector with a maximum of 32 entries. |
|          | SITE                   | alphanumeric       | Site name. Enter the name selected for the remote location.                                                                                                                                         |
|          | FRAME                  | 0 to 511           | Frame number. Enter the frame number.                                                                                                                                                               |
|          | UNIT                   | 0 or 1             | Unit number. Enter the unit number.                                                                                                                                                                 |
|          | CONTMARK               | +                  | Continuation mark. Enter + when additional data is specified on the next record. If additional data is not specified, enter \$ after last record.                                                   |

**Datafill example for table MTAVERT**

The following is an example of datafill for table MTAVERT.

**MAP display example for table MTAVERT**

```

TABLE: MTAVERT

VERT                                VERTCONN
-----
  20                                S L CARY 00 0
  22                                S L CARY 00 1
    
```

**Basic call processing** (continued)**Datafilling table MTAHORIZ**

Table metallic test access horizontal connection (MTAHORIZ) lists the assignment of horizontal agents to a horizontal and horizontal group of MTAMs (horizontal groups). Horizontal agents include line test units (LTU), metallic test units (MTU) and operator checks. Horizontal agents also include metal jacks (MJACK), incoming test access trunks, extended metallic test access, and short circuits.

Different horizontal agents can use the same horizontal. Each agent must associate with a different MTAM. Each horizontal can have a maximum of 160 different horizontal agents. A single horizontal agent can connect to a maximum of 32 MTAMs multiplied (grouped). Each horizontal agent can be used one time.

The following table shows datafill for Basic call processing for table MTAHORIZ. The table shows only fields that apply directly to Basic call processing. For a detailed description of the other fields, refer to the data schema section of the *Translations Guide*.

**Datafilling table MTAHORIZ (Sheet 1 of 3)**

| Field    | Subfield or refinement | Entry                        | Explanation and action                                                                                                                                                                                                        |
|----------|------------------------|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| HORIZ    |                        | 0 to 127                     | The MTA horizontal. Enter the MTA horizontal to which the test equipment, horizontal agent, connects to.                                                                                                                      |
| HORIZGRP |                        | 0 to 159                     | The MTA horizontal group. Enter the horizontal group number that identifies the horizontal and the horizontal agent as a different tuple. The group allows assignment of different test equipment on the same MTA horizontal. |
| HORIZAGT |                        | refer to subfield            | This field contains several subfields that depend on the value of the SELECTOR used.                                                                                                                                          |
| SELECTOR |                        | S, L, T, B, E, MJ, J, and LA | Selector. Enter the selector.                                                                                                                                                                                                 |
|          |                        | S                            | Enter S for a timed short circuit.                                                                                                                                                                                            |
|          |                        | L                            | Enter L for LTU or MTU assignment. Complete subfields CLLI, EXTRKNM, and ALTUSE.                                                                                                                                              |
|          |                        | T                            | Enter T for incoming test access or operator check trunk assignment, and complete subfields CLLI and EXTRKNM.                                                                                                                 |

**Basic call processing** (continued)

Datafilling table MTAHORIZ (Sheet 2 of 3)

| Field                   | Subfield or refinement | Entry     | Explanation and action                                                                                                                                                                                                                   |
|-------------------------|------------------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SELECTOR<br>(continued) |                        | B         | Enter B for a board-to-board dedicated horizontal, and complete subfield BBTNR.                                                                                                                                                          |
|                         |                        | E         | Enter E to multiply a horizontal of a minibar switch from a host. Enter E to multiply a remote to the vertical of a host minibar switch. Complete subfield EMTAVERTC.                                                                    |
|                         |                        | MJ        | Enter MJ for metal connection to the tip and ring of the subscriber line. Complete subfields CLLI and MJACKNUM.                                                                                                                          |
|                         | Selector               | J or LA   | Selectors J and LA are for licensee use only.                                                                                                                                                                                            |
|                         | CLLI                   | see list  | Common language location identifier. Enter LTU for a line test unit or MTU for a metallic test unit. For an operator check of an incoming test access trunk, enter the alphanumeric code that represents this trunk group in table CLLI. |
|                         |                        | LTU       | Enter LTU for line test unit.                                                                                                                                                                                                            |
|                         |                        | MTU       | Enter MTU for metallic test unit.                                                                                                                                                                                                        |
|                         |                        | CLLI      | For an operator check of an incoming test access trunk, enter the alphanumeric code that represents this trunk group in table CLLI.                                                                                                      |
|                         |                        | MJACK     | Enter MJACK for metal jack.                                                                                                                                                                                                              |
|                         | EXTRKNM                | 0 to 9999 | External trunk number. Enter the external trunk number assigned in table TRKMEM. Enter the number assigned to the line test unit, metallic test unit, operator check trunk, or the incoming test access trunk.                           |
|                         | ALTUSE                 | Y or N    | Automatic line test use. Enter Y to use line test equipment for automatic line testing (ALT). Otherwise enter N.                                                                                                                         |
|                         | BBTNR                  | 0 to 7    | Board-to-board testing number. Enter the number of the board-to-board set with which this horizontal associates.                                                                                                                         |

**Basic call processing** (continued)

Datafilling table MTAHORIZ (Sheet 3 of 3)

| Field  | Subfield or refinement | Entry                       | Explanation and action                                                                                                                                                                  |
|--------|------------------------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MTAGRP | EMTAVERT               | 0 to 639                    | Extended metallic test access column. Enter the connected vertical horizontal to the MTA in the host to which the horizontal connects to.                                               |
|        | MJACKNUM               | 1 to 256                    | Metallic jack number. If the entry in subfield CLLI is MJACK, enter the metallic jack number.                                                                                           |
|        |                        | MTAMEM, HORIZ, and CONTMARK | MTA group. Contains a list of MTA drivers that multiply to the test equipment. This field is a vector that contains a maximum of 32 multiples of subfields MTAMEM, HORIZ, and CONTMARK. |
|        | MTAMEM                 | 0 to 255                    | MTA minibar driver member. Enter the MTAM driver member number to which the horizontal connects to.                                                                                     |
|        | HORIZ                  | 0                           | This field is read-only. This field provides information about the horizontal to which MTA drivers connect to. Enter 0 to satisfy table control.                                        |
|        | CONTMARK               | + or \$                     | Continuation mark. Enter + when the next record specifies data. If not, enter \$ after last record.                                                                                     |

**Limits to data entry in table MTAHORIZ**

The following limits apply to data entry in table MTAHORIZ:

- Horizontals are not reserved for dedicated LTUs. The LTUs that are not dedicated do not have assignment limits.
- When an LTU is assigned to a host switching unit, the horizontal of the LTU multiplies to all minibar switches. The LTU multiplies to all switches assigned to the host switching unit. When an LTU is assigned to a remote location, the horizontal of the LTU is multiplied to all minibar switches. The minibar switches are assigned to the remote location.
- When a minibar switch is at a host switching unit, limits do not apply. Limits do not apply to the assignment of incoming test and operator check trunks. Each incoming test access trunk and operator verification trunk requires one horizontal.
- Where an MTA configuration is small or medium, the horizontals of the incoming test access and operator verification trunks multiply. The trunks multiply to all minibar switches at the host switching unit.

## Basic call processing (continued)

- When a minibar switch is remote from the host switching unit, all horizontals are available for assignment. The horizontals are available for the assignment of incoming test access trunk and operator verification trunks. The horizontals are available for the extension of metal test access.
- Each incoming test access trunk, operator verification trunk, and vertical on the host minibar switch requires one horizontal. These features are assigned to a horizontal on the minibar switch located at the remote or host location.
- The maximum number of metal jacks in each DMS office is 256.
- For assignment of LTUs, incoming test access, operator verification trunks to trunk group, trunk subgroup, and trunk member tables, see tables. These tables are CLLI, TRKGRP, TRKSGRP, and TRKMEM.
- Enter an LTU or MTU in table TRKMEM before you add an LTU or MTU to table MTAHORIZ. If you delete an LTU or MTU in table TRKMEM, the system marks the corresponding tuple in table MTAHORIZ as deleted. The system restores the tuple automatically when you add the LTU or MTU again to table TRKMEM.
- The system allocates memory continuously for this table. The system allocates a maximum of 2000 tuples.

### Datafill example for table MTAHORIZ

The following is an example of datafill for table MTAHORIZ.

### MAP display example for table MTAHORIZ

| HORIZ |   | HORIZGRP |     | HORIZAGT |   | MTAGRP  |           |
|-------|---|----------|-----|----------|---|---------|-----------|
| 8     | 0 | L        | LTU | 0        | Y | ( 0 0 ) | ( 2 0 )\$ |

### Datafilling table ALMSDGRP

Table alarm signal distributor group (ALMSDGRP) records circuit equipment, location, and the type of circuit card that contains signal distributor points.

### Datafill example for table ALMSDGRP

The following table is an example of datafill for table ALMSDGRP. For a detailed description of the other fields, refer to the data schema section of the *Translations Guide*.



**Basic call processing** (continued)**MAP display example for table ALMSDGRP**

```

>TABLE ALMSDGRP
>LIST ALL

SDGROUP  TMSTYPE  TMNO  TMCKTNO  CARDCODE
-----
      0      MTM      1       0      3X82AA
      1      MTM      3       0      3X82AA
      2      MTM      1       6      3X84AA
      4      MTM      1       4      2X57AA
      5      MTM      1       5      2X57AA
      6      MTM      1      18      2X57AA
      8      MTM      6      18      2X57AA
      9      MTM      6      19      2X57AA
     10      MTM      9      18      2X57AA
     11      MTM      9      19      2X57AA
     12      RSM      0      22      2X57AA
      .
     22      MTM     12      18      2X57AA
     23      MTM     12      19      2X57AA
BOTTOM

```

**Datafilling table ALMSCGRP**

Table alarm scan group (ALMSCGRP) records circuit equipment, location, and the type of circuit card that contains scan points.

**Datafill example for table ALMSCGRP**

The following table shows an example of datafill for table ALMSCGRP. For a detailed description of the other fields, refer to the data schema section of the *Translations Guide*.

**Basic call processing** (continued)**MAP display example for table ALMSDGRP**

```

>TABLE ALMSCGRP;LIST ALL
TABLE:  ALMSCGRP
TOP
SCGROUP  TMTYPE  TMNO  TMCKTNO  CARDCODE
-----
          0      MTM    1       1     3X82AA
          1      MTM    3       1     3X82AA
          2      MTM    1       7     3X84AA
          3      MTM    1      10     0X10AA
          .      .      .       .       .
          .      .      .       .       .
          .      .      .       .       .
          15     RSM    1       7     0X10AA
          .      .      .       .       .
          .      .      .       .       .
          .      .      .       .       .
          21     RMM    2      11     0X10AA
BOTTOM

```

**Datafilling table ALMSD**

Table alarm signal distributor point (ALMSD) identifies the function that each assigned signal distribution point in alarm signal distributor groups performs.

**Datafill example for table ALMSD**

The following is an example of datafill for table ALMSD. For a detailed description of the other fields, refer to the data schema section of the *Translations Guide*.

**Basic call processing** (continued)**MAP display example for table ALMSD**

```

>TABLE ALMSD
TABLE: ALMSD
TOP
      FUNCTION SDGROUP POINT NORMALST AUDIBLE LAMPTEST
-----
      EXPILPWR      2      6      0      N      N
      EXPILDMS      2      5      0      N      N
      NTALMXFR      2      4      0      N      N
      LN101TST      2      3      0      N      N
      OAUFAIL       0      0      1      N      N
      .             .      .      .      .      .
      .             .      .      .      .      .
      .             .      .      .      .      .
      LMMNV         6      6      0      Y      N
      PREFLRF       0      6      0      N      N
BOTTOM

```

**Datafilling table ALMSC**

Table alarm scan (ALMSC) identifies the function that each assigned scan point in alarm scan groups performs.

**Datafill example for table ALMSC**

The following is an example of datafill for table ALMSC. For a detailed description of the other fields, refer to the data schema section of the *Translations Guide*.

## Basic call processing (continued)

### MAP display example for table ALMSC

```

>TABLE ALMSC;LIST ALL
TABLE:  ALMSC

FUNCTION SCGROUP POINT NORMALST REPORT ALM          LOGIC
-----
MJSUCFLR      0      2          0  N  MJ  N (PREFLRMJ Y N
              (MJXFR N Y)
              (MJALMAUD1 N N)
              (MJOTHVIS Y N)
              (MJALMAUD2 N N) $
MNSUCFLR      0      3          0  N  MN  N (PREFLRMN Y N)
              (MNXFR N Y)
              (MNALMAUD Y N)
              (MNOTHVIS Y N) $
.
.
.
.
.
.
RSCO_ABS_ALM  20      2          0  Y  MN  N (ABAUD N N)
              (ABSVIS N N)
              (EXPILDMS N N)
              (MNXFR N Y) $

```

## Translation verification tools

Basic call processing does not use translation verification tools.

## SERVORD

The service order (SERVORD) system allows operating companies to perform the following operations:

- add or remove subscriber service from lines
- add or delete line service options
- change the LEN and DN of current lines
- add to or delete features from lines

A service order is entered in prompt mode or non prompt mode. In prompt mode, the system prompts for input. In nonprompt mode you enter all input in one command string. When you complete the entry of a service order, the system displays the whole service order. The system prompts for a Y (yes), N (no), or E (edit). Enter N to abort the service order or E to edit the service order in prompt mode. If you enter Y, the system verifies the service order. If the system detects an error, the system rejects the service order. The system accepts a service order entered without a service order number (SONUMBER) for immediate activation.

---

**Basic call processing** (continued)
 

---

**SERVORD commands**

The following table describes service order commands.

**SERVORD commands**

| Command | Description                                                                           |
|---------|---------------------------------------------------------------------------------------|
| SERVORD | Accesses service order software                                                       |
| ADD     | Adds a line to a present hunt group. Adds present lines to a call pickup group.       |
| ADO     | Adds options to lines. Adds present lines to a directory number hunt (DNH) group.     |
| DEL     | Deletes a line from a hunt group. Applies to all hunt group members except pilot.     |
| DEO     | Deletes options from lines.                                                           |
| NEW     | Establishes a new service. Applies to individual nonhunt lines and party lines.       |
| OUT     | Removes a line from service. Applies to individual lines and the pilot of hunt group. |

**SERVORD limits**

Does not apply.

**SERVORD prompts**

The service order prompts that implement separate line options appear in the following table.

**SERVORD prompts for Basic call processing (Sheet 1 of 2)**

| Prompt | Correct input                                   | Description                                                                                                                      |
|--------|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| DN     | Seven digits, entered with no spaces or hyphens | Directory number. The DN associated with service to establish, modify, or delete.                                                |
| LCC    | 1FR                                             | Line class code. The LCC of service to establish, modify, or delete. The 1FR is a separate flat rate for residence and business. |

**Basic call processing** (continued)**SERVORD prompts for Basic call processing (Sheet 2 of 2)**

| Prompt         | Correct input                                 | Description                                                                                                                                                                                                                                                                                                                           |
|----------------|-----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LATANAME       | NILLATA (LATA name defined in table LATANAME) | The calling LATA name associated with the originator of the call.                                                                                                                                                                                                                                                                     |
| LTG            | 0 to 63                                       | Line treatment group number. Calculates a line attribute index when the DN and LCC are not enough to find a correct index.                                                                                                                                                                                                            |
| LEN            | <site> ffuddcc                                | Line equipment number. The LEN associates with service to establish, modify, or delete, as follows: <ul style="list-style-type: none"> <li>• site—site name (defaults to host)</li> <li>• ff—frame number</li> <li>• u—unit number</li> <li>• dd—drawer number of the line spread group</li> <li>• cc—line circuit number.</li> </ul> |
| OPTION         | Digitone                                      | Line service options.                                                                                                                                                                                                                                                                                                                 |
| INTERCEPT_NAME | Four alphanumeric characters                  | Type of intercept required.                                                                                                                                                                                                                                                                                                           |

**SERVORD example for establishing separate line options**

The service order examples that follow shows how to establish, modify or delete options for each line. The service order that follows gives examples on how to delete an option from a separate line. The service order also shows how to remove an individual line service. The example shows how to establish an individual line without options or add an option to an individual line. The example also shows how to delete or remove an option from an individual line.

---

**Basic call processing** (continued)

---

**SERVORD example for establishing a separate line without options in prompt mode**

```
>SERVORD
SO:
>NEW
SONUMBER:
><RETURN>
DN:
>5320105
LCC:
>1FR
LATANAME:
>NILLATA
LTG: 0
>230
LEN_OR_LTID
>00 0 01 27
OPTION
>$
COMMAND AS ENTERED:
NEW NOW 90 11 13 PM 5320105 1FR NILLATA 230 HOST 00 0
01 27 $
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
>Y
```

**SERVORD example for Basic call processing in non-prompt mode**

```
>NEW $ 5320105 1FR NILLATA 230 00 0 01 27 $
```

## Basic call processing (continued)

---

### tSERVORD example for adding an option to a separate line in prompt mode

```
>SERVORD
SO:
>ADO
SONUMBER:
><RETURN>
DN_OR_LEN:
>5320105
OPTION:
>DGT
OPTION:
>$
COMMAND AS ENTERED:
ADO NOW 90 11 13 PM 5320105 ( DGT ) $
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
>Y
```

### SERVORD example for adding an option to a separate line in non-prompt mode

```
>ADO $ 5320105 DGT $
```

### Example of adding the negate partial ground (NPGD) option in the prompt mode

```
>ADO
SONUMBER:      SR 12345 Q 95  4 13 PM
>
DN_OR_LEN:
>4817251
OPTION:
>NPGD
OPTION:
>$
```

### Example of adding the NPGD option in the non-prompt mode

```
>ADO $ 4817251 NPGD $
```



---

**Basic call processing** (continued)
 

---

**SERVORD example for deleting an option from an separate line in prompt mode**

```

>SERVORD
SO:
>DEO
SONUMBER:
><RETURN>
DN_OR_LEN
>00 0 01 27
OPTION:
>DGT
OPTION:
>$
COMMAND AS ENTERED:
DEO NOW 90 11 13 PM HOST 00 0 01 27 ( DGT ) $
ENTER Y TO CONFIRM, N TO REJECT TO E TO EDIT
>Y

```

**SERVORD example for deleting an option from a separate line in non-prompt mode**

```

>DEO $ 00 0 01 27 DGT $

```

**SERVORD example for removing a separate line service in prompt mode**

```

>SERVORD
SO:
>OUT
SONUMBER:
><RETURN>
DN:
>5320105
LEN_OR_LTID
>00 0 01 27
INTERCEPT NAME:
>BLDN
LEN:
>$
COMMAND AS ENTERED:
OUT NOW 90 11 13 PM $ 5320105 HOST 00 0 01 27 BLDN
ENTER Y TO CONFIRM, N TO REJECT TO E TO EDIT
>Y

```

## Basic call processing (end)

---

**SERVORD example for removing a current individual line service in non-prompt mode**

```
>OUT $ 5322220105 00 0 01 27 BLDN $
```

### **How SERVORD affects tables LENLINES, LINEATTR, and LENFEAT**

If you enter a line in table LNINV, SERVORD automatically enters the line attribute number for the line. The SERVORD enters the line attribute number in tables LINEATTR and LENLINES. The SERVORD enters the line options and feature information in table LENFEAT. The SERVORD enters the line after the entry of the option, the feature, or both using SERVORD.

---

## Custom Local Area Signaling Service

---

### Functional group

Functional group: RES00003

### Feature package

Feature package: NTXA01AA

### Release applicability

XPM05 and up

### Prerequisites

To operate, Custom Local Area Signaling Service has the following prerequisites:

- Bilge, NTX000AA
- Common Basic, NTX001AA
- Universal Tone Receiver, NTX269AA
- New Peripheral Maintenance, NTX270AA
- Local Features I, NTX901AA
- CLASS: Calling Number Display, NTXA01AA
- Directory Number Attributes Package, NTXA40AA
- Calling Number Delivery Blocking, NTXA41AA
- Distinctive Ringing/Call Waiting, NTXA42AA
- RES (Residential Enhanced Services) Base, NTXA64AA
- CLASS Line Office Data, NTXA82AA
- Selective Call Rejection, NTXA96AA
- Selective List Editing, NTXE56AA
- CLASS: Call Waiting Display, NTXN97AB
- Downloadable Softkeys, NTP91AA
- Call Logging, NTP96AA
- ADSI services protocol, NTP91AB
- DSCWID, NTXQ91AA
- Calling Name Delivery, NTP95AA

## Custom Local Area Signaling Service (continued)

---

### CLASS features and TR compliancy

Analog Display Services Interface (ADSI) and Spontaneous Call Waiting Identification (SCWID) features provide the capability to deliver CLASS features to customer premises equipment (CPE) that are compliant with Bellcore specifications TR-30, TR-575, and TR-1273.

The Deluxe SCWID (DSCWID) feature provides an interface to CPEs compliant with Bellcore specification TR-416. ADSI and DSCWID CLASS features can be added to RES and IBN Line Class Code (LCC) subscriber lines by using the Service Order System (SERVORD).

The following prerequisites are necessary to operate Bellcore compliant CLASS features ADSI and DSCWID:

- NTXP91AB ADSI Service Protocol Enablers
- NTXN97AB Call Waiting Display
- NTXQ91AA Enhanced Call Waiting Display

### Description

These features provide the capability to deliver Custom Local Area Signaling Services (CLASS) to customer premises equipment (CPE) that is compliant to Bellcore TR-30, TR-575, and TR-1273.

The CLASS services are extended to single party residential lines connected to an LCM, served by a Remote Cluster Controller (RCC). Bulk Calling Line Identification, CLASS Message Waiting Identification, Deluxe Spontaneous Call Waiting Identification (DSCWID), and Analog Display Services Interface (ADSI) features are provided for residential lines served by the RCC.

CLASS features enable the subscriber to receive calling number information and allows a wide variety of responses. The CLASS features provided by this activity uses the CLASS modem resource (CMR) card in the RCC to transmit data between the switch and the customer premises equipment. Following is a partial list of residential (RES) subscriber features. For a complete listing of feature group options see table FTRGOPTS in the data schema section of the *Translation Guide*.

- AR—Automatic Recall
- CFDA—Call Forward Don't Answer
- CWT—CLASS Message Waiting Indicator
- CNAMD—Calling Name Display
- CND—Calling Number Display

---

## Custom Local Area Signaling Service (continued)

---

- DDN—Dialable Delivery Number
- CWT—Call Waiting
- DSCWID—Spontaneous Call Waiting With Disposition

### Operation

ADSI allows downloading softkey and display information to an ADSI-compatible CPE from the central control (CC). Static downloading feature information to the CLASS Modem Resource (CMR) card in the RCC reduces the amount of data that the CC must process in real time.

The calling number delivery (CND) feature operates when a normal termination call occurs on a line with the CND option. The CC sends only the necessary caller information to the RCC, which incorporates additional data types (time/date) into the message sent to the CPE.

After the first ring, during the first silent interval of at least 3 seconds, the RCC delivers the calling number/name, and additional data of the call, in an ADSI format, to the customer's equipment through the CMR card.

The tone card (NT6X69AD), on the RCC, supplies Bellcore compatible ADSI tones to the CPE when the CLASS features are activated. The Universal Tone Receiver (UTR) card in the RCC collects and interprets information tones from the CPE.

Locating most of the CLASS call processing activities on the RCC improves response times and off loads services from the CC.

Bulk calling line identification allows a residential customer, served by an RCC, with the Direct Inward Dial (DID) dialing plan to receive the following call-related information on incoming calls:

- date and time the call is received (optional)
- calling and called directory numbers
- called line status (busy/idle)
- calling line type (unique/nonunique)
- call forward indicator (y/n) (optional)

### Translations table flow

Standard translations data flow is unaltered by this package.

## Custom Local Area Signaling Service (continued)

---

### Limitations and restrictions

Customer premises equipment (CPE) with ADSI display capability that is compliant to Bellcore TR-30, TR-575, and TR-1273 is required to receive and display the calling number information. Noncompliant CPEs may use the CLASS features not dependent on the ADSI feature.

The CLASS feature spontaneous call waiting identification (SCWID) may not be added to a line which already has the call hold (CHD) option.

The following limitations and restrictions apply to Custom Local Area Signaling Service:

The DSCWID CLASS feature:

- is not supported on Meridian Business Sets (MBS) or ISDN lines.
- is not compatible with the Do Not Disturb (DND) feature.
- cannot be added to a line that already has the Call Hold (CHD) option.

DSCWID can be assigned to a subscriber line with no CID features assigned. If the subscriber uses ALLCID as the off-hook delivery type, at least one of the following CLASS display options must be either previously or concurrently assigned to a line.

- Calling Number Delivery (CND)
- Calling Name Delivery (CNAMD)
- Dialable Directory Number (DDN)

Assigning DSCWID to a line using SERVORD automatically assigns the Call Waiting Option (CWT) to that line and replaces any older versions of Spontaneous Call Waiting (SCWID).

The service script that must be resident in a DSCWID CPE to enable the display and control of softkey options is different for proprietary and Bellcore compliant sets. The operating company must provide the service script as part of the conversion service on the subscribers' line.

Assigning DSCWID to a line using the change service orders (SERVORD) package will automatically assign the call waiting option (CWT) to that line if no other required options have been assigned.

The service script that must be resident in a DSCWID CPE to enable the display and control of softkey options is different for proprietary and Bellcore compliant sets. The operating company must provide the service script as part of the conversion service on the subscribers' line.

---

## Custom Local Area Signaling Service (continued)

---

Additional RCC hardware requirements to implement the Bellcore compliant ADSI and SCWID CLASS features are the following:

- The combined messaging and tone generator circuit card with ADSI, NT6X69AD, must be installed in the RCC and datafilled in the OPTCARD field.
- The TONESET field in the table RCCINV must be set to North American rom-based toneset with ADSI tone (NORTHAA) when the NTX6X69AD is used.
- The peripheral processor in the RCC must be the type MX77AA Unified Processor card.
- The class modem resource (CMR) card (NTX6X78AB), in the RCC must be installed and datafilled. After datafill, the CMR must be busied and returned to service to activate the CLASS ADSI compatible features.
- A universal tone receiver (UTR) must be installed in the RCC, datafilled, and available at call time.

### Interactions

Custom Local Area Signaling Service has no functionality interactions.

### Activation/deactivation by the end user

Custom Local Area Signaling Service requires no activation or deactivation by the end user.

### Billing

CLASS services, including the Bellcore compliant DSCWID feature, do affect billing. Datafill for table AMAOPTS, when using the CLASS feature DSCWID, is explained in the following examples.

### Datafilling table AMAOPTS

The following table shows the datafill specific to the Custom Local Area Signaling Service feature, DSCWID, for table AMAOPTS. Only those fields that apply directly to Custom Local Area Signaling Service are shown. For a

## Custom Local Area Signaling Service (continued)

description of the other fields, refer to the data schema section of the *Translation Guide*.

### Datafilling table AMAOPTS

| Field    | Subfield or refinement | Entry                 | Explanation and action                                                                                                                                                                                     |
|----------|------------------------|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OPTION   | AMAOPT                 | DSCWID_<br>CONF_AUDIT | DSCWID conference audit. Key field in table AMAOPTS.                                                                                                                                                       |
| SCHEDULE | AMASEL                 | PERIODIC              | AMA option selected. Available options are OFF, PERIODIC, or DEFAULT.<br><br><b>Note:</b> To enable the DSCWID conference audit, AMASEL must be set to PERIODIC, or DEFAULT where the DEFAULT is PERIODIC. |

### Datafill example for table AMAOPTS

The following example shows sample datafill for table AMAOPTS.

### MAP display example for table AMAOPTS

```
>TABLE AMAOPTS
TABLE: AMAOPTS
>POS DSCWID_CONF_AUDIT
DSCWID_CONF_AUDIT
>CHA
TUPLE TO BE CHANGED:
DSCWID_CONF_AUDIT OFF
ENTER Y TO CONFIRM, N TO REJECT, OR E TO EDIT
>E
AMASEL: OFF
>PERIODIC
ONDATE:
>940915
ONTIME:
>0000
SCHEDULE:
>24 HRS
TUPLE TO BE CHANGED:
DSCWID_CONF_AUDIT PERIODIC 940915 0000 24 HRS
ENTER Y TO CONFIRM, N TO REJECT, OR E TO EDIT
Y
```



---

## Custom Local Area Signaling Service (continued)

---

### Station Message Detail Recording

Custom Local Area Signaling Service does not affect station message detail recording.

### Datafilling office parameters

The following table shows the office parameters used by Custom Local Area Signaling Service. For more information about office parameters, refer to *Office Parameters Reference Manual*.

#### Office parameters used by Custom Local Area Signaling Service

| Table  | Parameter name | Explanation and action                                                                                                                                                                                                                                   |
|--------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OFCOPT | VSLE_PRESENT   | Visual screen list editing. When set to N (no), the ADSI line option must be assigned to the subscriber line in order for visual screen list editing (VSLE) to be accessed. When set to Y, VSLE can be accessed without ADSI being assigned to the line. |

### Datafill sequence

The following table lists the tables that require datafill to implement Custom Local Area Signaling Service. The tables are listed in the order in which they are to be datafilled.

#### Datafill tables required for Custom Local Area Signaling Service (Sheet 1 of 2)

| Table    | Purpose of table                                                                                            |
|----------|-------------------------------------------------------------------------------------------------------------|
| RCCINV   | Remote Cluster Controller Inventory. Contains the RCC inventory data except the P-side link assignments.    |
| SOFTKEY  | Softkey. Defines softkey information of the CPE.                                                            |
| TEXTPHRS | Text Phrases. Used by visual screen list editing (VSLE) and other display features.                         |
| TEXTLOG  | Logical Display Text. Contains the logical names of the physical text phrases.                              |
| OFCOPT   | Office option. Defines office option parameters.                                                            |
| RESOFC   | Residential Office Data. Contains data pertaining to features assigned office wide.                         |
| DSCWDTYP | Deluxe Spontaneous Call Waiting Identification (DSCWID) type. Defines DSCWID treatment of subscriber lines. |

## Custom Local Area Signaling Service (continued)

### Datafill tables required for Custom Local Area Signaling Service (Sheet 2 of 2)

| Table    | Purpose of table                                                                                                                  |
|----------|-----------------------------------------------------------------------------------------------------------------------------------|
| AMA_OPTS | AMA options. Controls the activation and scheduling for automatic message accounting (AMA).                                       |
| RESFEAT  | Residential Line Feature. Contains assignments of the custom local area signaling services (CLASS) feature for residential lines. |

### Datafilling table RCCINV

Table remote cluster controller inventory (RCCINV) contains inventory data, except P-side link assignments, for the RCC. The NILPORT option to the CSLNKTAB field allows ports to be skipped when datafilling RCC C-side DS-1 link.

Table remote cluster controller inventory (RCCINV) contains the inventory data specific to Custom Local Area Signaling Service. Only those fields that apply directly to Custom Local Area Signaling Service are shown. For a description of the other fields refer to the data schema section of this document.

### Datafilling table RCCINV (Sheet 1 of 3)

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Subfield or refinement | Entry         | Explanation and action                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------|---------------------------------------------------------------------------------------------------------|
| RCCNAME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                        | see subfields | RCC name. Contains subfields SITE, PMTYPE, and RCCNO.                                                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | SITE                   | alphanumeric  | Site. Enter the site name assigned to the remote location. This entry should also appear in table SITE. |
| <p><b>Note 1:</b> Changes to fields with multiple entries should be made in the PROMPT mode only. In nonprompt mode it is possible to leave out existing entries.</p> <p><b>Note 2:</b> Enter the continuation mark (+) in fields with multiple possible entries when more data is specified on the next line or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p> <p><b>Note 3:</b> When datafilling field C-side link table (CSLNKTAB), assure message links are not assigned to the same physical interface card. When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This applies to all interface link types; DS-1, DS30, DS30A, or PCM-30. Table control will issue a warning if an attempt is made to assign message links on the same interface card. Assigning message links to the same interface card can cause an E1 outage (failure of all message links) if the card fails.</p> |                        |               |                                                                                                         |

## Custom Local Area Signaling Service (continued)

Datafilling table RCCINV (Sheet 2 of 3)

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Subfield or refinement | Entry         | Explanation and action                                                                                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OPTCARD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | PMTYPE                 | RCC           | PM type. Enter RCC for the remote cluster controller.                                                                                                                                                                                                                                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | RCCNO                  | 0-255         | RCC number. This number is unique by office, not by site.                                                                                                                                                                                                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                        | see subfields | Optional card. This is a vector of up to ten entries.<br><br><b>Note:</b> Changes to fields with multiple entries should be made in the PROMPT mode only.                                                                                                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                        | MSG6X69       | New messaging card. Message card for the RCC. The NT6X69AD with ADSI compliant tones is required.                                                                                                                                                                                                             |
| OPTCARD(co<br>ntinued)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        | UTRxx         | Universal tone receiver. Two UTRs maximum per shelf in slot positions 16, the default position, and 14, the additional UTR slot position.<br><br><b>Note:</b> The xx is the number of the slot position the card is physically installed in. This number must be entered, because you may have more than one. |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                        | NT7X05AA      | If 7X05AA is entered, the system prompts for the slot_number. Slot numbers for the NT7X05AA in the RCC are slots 8 to 17.                                                                                                                                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                        | CMR           | Class modem resource load. Enter CMR and the CMR loadname.                                                                                                                                                                                                                                                    |
| <p><b>Note 1:</b> Changes to fields with multiple entries should be made in the PROMPT mode only. In nonprompt mode it is possible to leave out existing entries.</p> <p><b>Note 2:</b> Enter the continuation mark (+) in fields with multiple possible entries when more data is specified on the next line or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p> <p><b>Note 3:</b> When datafilling field C-side link table (CSLNKTAB), assure message links are not assigned to the same physical interface card. When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This applies to all interface link types; DS-1, DS30, DS30A, or PCM-30. Table control will issue a warning if an attempt is made to assign message links on the same interface card. Assigning message links to the same interface card can cause an E1 outage (failure of all message links) if the card fails.</p> |                        |               |                                                                                                                                                                                                                                                                                                               |

## Custom Local Area Signaling Service (continued)

### Datafilling table RCCINV (Sheet 3 of 3)

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Subfield or refinement | Entry             | Explanation and action                                                                                                                                                                                                                                                                                                                               |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TOSET                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                        | NORTHAA           | Tone set. Enter NORTHAA for North America with ADSI compatible features.                                                                                                                                                                                                                                                                             |
| PECS6X45                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                        | MX77AA,<br>MX77AA | 6X45 PEC codes. Enter the PEC of the card in unit 0 and unit 1 of the RCC. The PEC must reflect minimum firmware capabilities in each units processor complex. Enter MX77AA twice for the RCC.<br><br><b>Note:</b> The feature UP card on the RCC-CC portion, in functional group TEL00001, is required to datafill the NTMX77 card in table RCCINV. |
| E2LOAD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        | MX77MAxx          | EEPROM_ File Contains the name of the loadfile that is loaded in the NTMX77AA EEPROM, such as MX77MAxx<br><br><b>Note:</b> The xx is the version number of the E2load, such as 24.                                                                                                                                                                   |
| <p><b>Note 1:</b> Changes to fields with multiple entries should be made in the PROMPT mode only. In nonprompt mode it is possible to leave out existing entries.</p> <p><b>Note 2:</b> Enter the continuation mark (+) in fields with multiple possible entries when more data is specified on the next line or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p> <p><b>Note 3:</b> When datafilling field C-side link table (CSLNKTAB), assure message links are not assigned to the same physical interface card. When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This applies to all interface link types; DS-1, DS30, DS30A, or PCM-30. Table control will issue a warning if an attempt is made to assign message links on the same interface card. Assigning message links to the same interface card can cause an E1 outage (failure of all message links) if the card fails.</p> |                        |                   |                                                                                                                                                                                                                                                                                                                                                      |

### Datafill example for table RCCINV

The following example shows sample datafill for table RCCINV.

---

## Custom Local Area Signaling Service (continued)

---

### MAP display example for table RCCINV

```

RCCNAME
ADNUM  FRTYPE  FRNO  SHPOS  FLOOR  ROW  FRPOS  EQPEC  LOAD
   EXECTAB
CSPM
   CSLNKTAB
ESA  INTRASW
   OPTCARD
TONESET  PECS6X45  E2LOAD
   EXTINFO
-----
CARY  RCC 0
      1005  RCE  0  18  0  C  0  6X12AA  ESR06BB
(  POTS POTSEX) ( KEYSET KSETEX) (ABTRK DTCEX) (RMM_TERM RSMEX) $
(ESALINES ESAEX)
LTC 1
      (0) ( NILPORT) (2) (NILPORT) (3) (4) (5) (6) (7)$
Y      Y
      (UTR16) ( MSG6X69) ( CMR18 CMR03A) ( NT7X05AA 12) $
NORTHAA  MX77AA  MX77AA  MX77NH08

```

### Datafilling table SOFTKEY

The following procedure shows the datafill for table SOFTKEY. This procedure contains only those fields that apply to Custom local area signaling service features.

#### Datafilling table SOFTKEY

| Field  | Entry              | Explanation and action                                                                                                      |
|--------|--------------------|-----------------------------------------------------------------------------------------------------------------------------|
| SERVID | 0 to 8 characters  | Contains the application service identification of the feature where softkeys will be defined. Vector of 0 to 8 characters. |
| DEFNUM | 2 to 33            | Definer number. Contains a value of 2 to 33.                                                                                |
| LLABEL | 0 to 18 characters | Long label string identifier for softkey definer. Vector of 0 to 18 characters.                                             |
| SLABEL | 0 to 7 characters  | Short label string identifier for softkey definer. Vector of 0 to 7 characters.                                             |
| RETURN | 0 to 14 characters | Return string vector. Vector of 0 to 14 characters range is 0 to 255 possible numbers.                                      |

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## Custom Local Area Signaling Service (continued)

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### Datafilling table TEXTPHRS

The following procedure shows the datafill for table TEXTPHRS (Text Phrases).

#### Datafilling table TEXTPHRS

| Field    | Subfield or refinement | Entry                          | Explanation and action                                                                         |
|----------|------------------------|--------------------------------|------------------------------------------------------------------------------------------------|
| PHRSNAME |                        | 2 to 8                         | Physical phrase name field, may be up to 8 characters in length.                               |
| PHRASE   |                        | up to 40 characters            | Physical instructional or prompting text string. Vector: up to 40 characters in single quotes. |
| HL_MODE  | POSITION               | 0 to 40                        | The first subfield POSITION specifies the character position of the change.                    |
|          | MODE                   | Normal, Reverse, Grey, or Bold | Subfield MODE Value range (Normal, Reverse, Grey, Bold).                                       |

**Note 1:** Changes to fields with multiple entries should be made in the PROMPT mode only. In nonprompt mode it is possible to leave out existing entries.

**Note 2:** Enter the continuation mark (+) in fields with multiple possible entries when more data is specified on the next line or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.

#### Datafill example for table TEXTPHRS

The following example shows sample datafill for table TEXTPHRS.

---

**Custom Local Area Signaling Service** (continued)
 

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**MAP display example for table TEXTPHRS**

| PHRSNAME | PHRASE                     | HLMODE   |
|----------|----------------------------|----------|
| CLCOUNT  | GENERIC_CALLOG_ITEM_COUNT  | \$       |
| CLNEWCT  | GENERIC_CALLOG_NEW_COUNT   | \$       |
| CLOLDCT  | GENERIC_CALLOG_OLD_COUNT   | \$       |
| CLNAMEIT | GENERIC_CALLOG_NAME_ITEM   | \$       |
| CLDNIT   | GENERIC_CALLOG_DN_ITEM     | \$       |
| CLPRIM   | GENERIC_CALLOG_PRIMARY     | \$       |
| CLCURNUM | GENERIC_CALLOG_ITEM_NUMBER | \$       |
| CLTITLE  | Call_Logging_Service       | \$       |
| CLOLD    |                            | _Old \$  |
| CLNEW    |                            | _New_ \$ |
| CLDIAL   | Dialing...'                | \$       |
| CLREMOVE | Removed...'                | \$       |
| CLERASED | Erased_All_Calls           | \$       |
| CLDNLD1  | Processing_                | \$       |
| CLDNLD2  | _Calls                     | \$       |
| CLEMPY   | No_Calls...Hang_up         | \$       |
| CLNODIAL | Cannot_Return_Call         | \$       |
| CLCLOSE  | Session_Complete           | \$       |

## Custom Local Area Signaling Service (continued)

### Datafilling table TEXTLOG

The following procedure shows the datafill for table TEXTLOG (Logical Text).

#### Datafilling table TEXTLOG (Sheet 1 of 2)

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                     | Subfield or refinement | Entry                 | Explanation and action                                                                                                                                                                                                                                                                                                                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LPHRSKEY                                                                                                                                                                                                                                                                                                                                                                                                                                  |                        | see subfields         | <p><i>Logical phrase key</i></p> <p>This field is the key of the table and consists of subfields APPLNAME, LANGUAGE, and DISPNUM.</p>                                                                                                                                                                                                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                           | APPLNAME               | CALLOG,VSLE           | <p><i>Application name</i></p> <p>Enter the name of the feature application for which this tuple is used as follows:</p> <ul style="list-style-type: none"> <li>• CALLOG (Call Logging)</li> <li>• VSLE (Visual Screen List Editing)</li> </ul>                                                                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                           | LANGUAGE               | NILANG<br>LANG1 LANG2 | <p><i>Language</i></p> <p>Enter the language used for the display: LANG1, LANG2 or NILANG (no language).</p>                                                                                                                                                                                                                                          |
| LPHRSKEY                                                                                                                                                                                                                                                                                                                                                                                                                                  | DISPNUM                | 0 to 127              | <p><i>Display number</i></p> <p>Enter the numeric index by which the feature application uniquely identifies the display data contained in the tuple.</p>                                                                                                                                                                                             |
| DISPTYPE                                                                                                                                                                                                                                                                                                                                                                                                                                  |                        | C, S, or T            | <p><i>Display type</i></p> <p>Enter C for the cursor control display. This display type provides instructions and displays softkeys, used to wait for softkey or DTMF keypad input.</p> <p>Enter S for the standard display. This display type is used to wait for softkey input from the user. Instructions are provided and softkeys displayed.</p> |
| <p><b>Note 1:</b> Changes to fields with multiple entries should be made in the PROMPT mode only. In nonprompt mode it is possible to leave out existing entries.</p> <p><b>Note 2:</b> Enter the continuation mark (+) in fields with multiple possible entries when more data is specified on the next line or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p> |                        |                       |                                                                                                                                                                                                                                                                                                                                                       |



## Custom Local Area Signaling Service (continued)

### Datafilling table TEXTLOG (Sheet 2 of 2)

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                     | Subfield or refinement                  | Entry                                                            | Explanation and action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LRCI (NA002-)                                                                                                                                                                                                                                                                                                                                                                                                                             |                                         | LEFT RIGHT<br>CENTER<br>INDENT                                   | Enter T for the transient display. This display type provides an informational display to indicate results of user actions where no input is allowed.<br><br><i>Left Right Center Indent</i><br><br>This is the display justification indicator field. Enter the desired mode of justification.                                                                                                                                                                                                                                                                                                                                                                                      |
| PHRSLIST                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                         | alphanumeric (2 to 8 characters)                                 | <i>Phrase list</i><br><br>Enter the list of up to 16 physical phrase names as defined in table TEXTPHRS which together make up a single logical display phrase. If less than 16 phrase names are required, end the list with a \$ (dollar sign). The phrase names must be previously datafilled in table TEXTPHRS.                                                                                                                                                                                                                                                                                                                                                                   |
| DEFNLIST                                                                                                                                                                                                                                                                                                                                                                                                                                  | SFTKEY<br>MODE (NA002-)<br>SKT (NA002-) | Up to 8 softkey definer lists<br><br>1 to 33<br>N, H<br>SRV, CPE | <i>Definer list</i><br><br>This field contains a vector of up to 8 softkey definer lists. The SFTKEY subfield is the softkey definer number from the list of softkey definer numbers defined in field DEFNUM of table SFTKEY. The value of the SFTKEY subfield is 1 to 33. (The integer 1 is reserved internally to allow for an unused softkey to be left blank.) The value of the MODE subfield is N for normal or H for highlight. The softkey table (SKT) subfield indicates which softkey table is loaded in the CPE. The values are SRV for server or CPE for customer premises equipment. If less than 8 softkey definers are required, end the list with a \$ (dollar sign). |
| <p><b>Note 1:</b> Changes to fields with multiple entries should be made in the PROMPT mode only. In nonprompt mode it is possible to leave out existing entries.</p> <p><b>Note 2:</b> Enter the continuation mark (+) in fields with multiple possible entries when more data is specified on the next line or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p> |                                         |                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

### Datafill example

the following example shows datafill for table TEXTLOG.

## Custom Local Area Signaling Service (continued)

### MAP display example for table Custom Local Area Signaling Service

| LPHRSKEY | DISPTYPE | LRCI | PHRSLIST | DEFNLIST                      |
|----------|----------|------|----------|-------------------------------|
| CALLOG   | LANG1    | 1    | S LEFT   | ( CLTITLE)\$<br>( 1 N SRV )\$ |

### Datafilling table RESOFC

The following procedure shows the datafill for table RESOFC. This procedure contains only those fields that apply to Custom local area signaling service features. For a description of the other fields, refer to the data schema section of this document.

For a more complete description of CLASS features, refer to *Subscriber Services Translations Guide*.

#### Datafilling table RESOFC (Sheet 1 of 4)

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Subfield or refinement | Entry                      | Explanation and action                                                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|----------------------------|-----------------------------------------------------------------------------------------------------------|
| KEY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                        | see list of CLASS features | RSCOFC table key. CLASS feature name. Feature must be applied to a line in table RESFEAT to be activated. |
| ENABLED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                        | Y or N                     | Feature enabled. When disabled (N) no line can use that CLASS feature.                                    |
| FEATDATA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ACCESS                 | SUBSCR                     | Type of access. Values: universal (UNIVER) or subscriber (SUBSCR).                                        |
| <p><b>Note 1:</b> If CFDA is not available and active and the default treatment assigned is FWD, the RING default is applied to the caller. A warning message stating the reason is displayed at the CC .</p> <p><b>Note 2:</b> Changes to fields with multiple entries should be made in the PROMPT mode only. In nonprompt mode it is possible to leave out existing entries.</p> <p><b>Note 3:</b> Enter the continuation mark (+) in fields with multiple possible entries when more data is specified on the next line or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p> |                        |                            |                                                                                                           |

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**Custom Local Area Signaling Service** (continued)
 

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Datafilling table RESOFC (Sheet 2 of 4)

| Field | Subfield or refinement | Entry    | Explanation and action                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------|------------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       | FEATNAME               | DSCWID   | CLASS feature name. Following subfields to be used if this is CLASS feature DSCWID: DTYPE, DEFTRMT, AMA, BUSYANNC, BUSYSUPV, DFLTANNC, DFLTSUPV, HOLDANNC, HOLDSUPV, REMINDER, TFLASH, TDEFAULT, THOLD, FNALANN.                                                                                                                                                                                                                                                        |
|       | DTYPE                  | see list | DSCWID type name. Name used to define DSCWID type name in table DSCWDTYP. Options are PROPRITY, ADSITIME, ADSICID, NODATA, NOCIDCW, COMPLETE. Default: COMPLETE.                                                                                                                                                                                                                                                                                                        |
|       | DEFTRMT                | see list | Default treatment. Applied to incoming call when subscriber ignores the final call waiting alert.<br><br>Options: <ul style="list-style-type: none"> <li>• RING (DEF). Allow caller to continue hearing ringing while muting the subscriber alert tones.</li> <li>• ANNC. Connect caller to a specified TELCO announcement.</li> <li>• FWD. Forward to another line. Subscriber must previously have the Call Forward Don't Answer (CFDA) feature activated.</li> </ul> |
|       | AMA                    | see list | AMA recording status. For DSWCID enter NONE or record on use of the conference (CONF) option.                                                                                                                                                                                                                                                                                                                                                                           |

**Note 1:** If CFDA is not available and active and the default treatment assigned is FWD, the RING default is applied to the caller. A warning message stating the reason is displayed at the CC .

**Note 2:** Changes to fields with multiple entries should be made in the PROMPT mode only. In nonprompt mode it is possible to leave out existing entries.

**Note 3:** Enter the continuation mark (+) in fields with multiple possible entries when more data is specified on the next line or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.

## Custom Local Area Signaling Service (continued)

### Datafilling table RESOFC (Sheet 3 of 4)

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Subfield or refinement | Entry     | Explanation and action                                                                                                                                                                                                                                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FEATDATA<br>(continued)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | BUSYANNC               | character | <p>Busy announcement. The location name of an announcement in table CLLI to be applied to the calling party if the BUSY option is chosen by the subscriber.</p> <p><b>Note:</b> If BUSYANNC is not datafilled or the CLLI code is not effective the default treatment is disconnect.</p> |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | BUSYSUPV               | Y or N    | Apply BUSY supervision. Determine if answer supervision is applied when first connecting to the BUSY announcement. Default: N.                                                                                                                                                           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | DFLTANNC               | character | <p>Default busy announcement. The location name of an announcement in table CLLI to be applied if field DEFTRMT is datafilled with ANNC and the subscriber ignores the final call waiting alert.</p> <p><b>Note:</b> May be the same CLLI code as datafilled in BUSYANNC.</p>            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | DFLTSUPV               | Y or N    | Default supervision. Determine if answer supervision is applied when first connecting to the DFLTANNC announcement. Default: N.                                                                                                                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | HOLDANNC               | character | HOLD announcement. The location name of an announcement in table CLLI to be applied to the calling party if the HOLD option is chosen by the subscriber.                                                                                                                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | HOLDSUPV               | see list  | HOLD supervision. Determine if answer supervision is applied when connecting to the HOLD announcement. Options: NO, BEFORE, or AFTER. Default: N.                                                                                                                                        |
| <p><b>Note 1:</b> If CFDA is not available and active and the default treatment assigned is FWD, the RING default is applied to the caller. A warning message stating the reason is displayed at the CC .</p> <p><b>Note 2:</b> Changes to fields with multiple entries should be made in the PROMPT mode only. In nonprompt mode it is possible to leave out existing entries.</p> <p><b>Note 3:</b> Enter the continuation mark (+) in fields with multiple possible entries when more data is specified on the next line or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p> |                        |           |                                                                                                                                                                                                                                                                                          |

## Custom Local Area Signaling Service (continued)

### Datafilling table RESOFC (Sheet 4 of 4)

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Subfield or refinement | Entry                                 | Explanation and action                                                                                                                                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FEATDATA<br>(continued)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | REMINDER               | character                             | REMINDER announcement. The location name of an announcement in table CLLI to be applied to the calling party when the T-HOLD timer expires.<br><br><b>Note:</b> Normally used to advise caller to stay on the line.                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | TFLASH                 | 10 to 80 in increments of 5. 5=.5 sec | T-FLASH timer. Timer to allow non-ADSI customer time to signal the conference option after a flash. Default: 15 (1.5 seconds)<br><br><b>Note:</b> Used for the held call state. If the T-FLASH timer expires the default treatment applied is the RETURN option. |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | TDEFAULT               | 0 to 110 in increments of 5. 5=5 sec  | T default timer. The amount of time after realert before the default treatment is applied to the calling party.                                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | THOLD                  | 0 to 12 in increments of 1. 1=10 sec  | THOLD timer. The length of time between REMINDER announcements when a call is on hold because the subscriber keyed the HOLD option.                                                                                                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | FNALANN                | character                             | Final announcement. The location name of a treatment in table CLLI to be applied to subscribers who do not subscribe to the DSCWID option.                                                                                                                       |
| <p><b>Note 1:</b> If CFDA is not available and active and the default treatment assigned is FWD, the RING default is applied to the caller. A warning message stating the reason is displayed at the CC .</p> <p><b>Note 2:</b> Changes to fields with multiple entries should be made in the PROMPT mode only. In nonprompt mode it is possible to leave out existing entries.</p> <p><b>Note 3:</b> Enter the continuation mark (+) in fields with multiple possible entries when more data is specified on the next line or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p> |                        |                                       |                                                                                                                                                                                                                                                                  |

### Datafill example for table RESOFC

The following example shows sample datafill for table RESOFC. Use table control for manual changes, and SERVORD to apply CLASS features.

## Custom Local Area Signaling Service (continued)

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### MAP display example for table RESOFC

```
TABLE RESOFC:
DSCWID Y SUBSCR DSCWID COMPLETE RING NONE NIL N NIL N NIL
NO NIL 15 15 6 $
>CHANGE
ENABLED: Y
>
ACCESS: SUBSCR
>
FEATNAME: DSCWID
>
DTYPE: COMPLETE
>
DEFTRMT: RING
>
AMA: NONE
>
BUSYANNC: NIL
>
BUSYSUPV: N
>
DFKTANNC: NIL
>
DFLTSUPV: N
>
HOLDANNC: NIL
>
HOLDSUPV: NO
>
REMINDER: NIL
>
TFLASH: 15
>
TDEFAULT: 15
>
THOLD: 6
>
FNALANN:
>$
TUPLE TO BE CHANGED:
DSCWID Y SUBSCR DSCWID COMPLETE RING NONE NIL N NIL N
NIL NO NIL 15 15 6 $
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT
```

---

## Custom Local Area Signaling Service (continued)

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### Datafilling table DSCWDTYP

The following table shows the datafill specific to Custom Local Area Signaling Service for table DSCWDTYP. Only those fields that apply directly to the DSCWID feature of Custom Local Area Signaling Service are shown. For a description of the other fields, refer to the data schema section of the *Translation Guide*.

#### Datafilling table DSCWDTYP (Sheet 1 of 2)

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Subfield or refinement | Entry                           | Explanation and action                                                                                                                                                                                                                               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NAME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                        | up to 8 characters;<br>see list | DSCWDTYP table key. The DSCWID types that can be assigned to subscriber tones. Options are PROPRITY ADSITIME, ADSICID, NODATA, NOCIDCW, and COMPLETE.<br><br><b>Note:</b> The PROPRITY tuple is fixed to accommodate the proprietary DSCWID feature. |
| ALERT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                        | see list                        | Type of tone ALERTING. The CPE will receive either SASONLY or SASCAS tones. Default: SASCAS.                                                                                                                                                         |
| CID                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                        | see list                        | Caller ID delivery. Type of CID delivered during DSCWID session. Options are no data (NOCID), all data of CID type (ALLCID), and time and date only (TIMECID). Default: ALLCID.                                                                      |
| NON ADSI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                        | Y or N                          | Allow DSCWID features to a non ADSI sets. When set to N non ADSI sets can only signal ANSWER and RETRN. When set to Y non ADSI sets can signal all options in the KEYOPTS field. Default: N.                                                         |
| <p><b>Note 1:</b> Operating company cannot change or delete the PROPRITY tuple and can only change (not delete) the other 5 initial tuples.</p> <p><b>Note 2:</b> ALERT type must be SASCAS to display ADSI complaint features.. SASONLY alerting type provides a shorter call waiting function and uses less RCC resources for non ADSI type sets.</p> <p><b>Note 3:</b> If CID type specified is ALLCID, then a CID feature must be assigned in RESOFC.</p> <p><b>Note 4:</b> Changes to fields with multiple entries should be made in the PROMPT mode only. In nonprompt mode it is possible to leave out existing entries.</p> <p><b>Note 5:</b> Enter the continuation mark (+) in fields with multiple possible entries when more data is specified on the next line or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p> |                        |                                 |                                                                                                                                                                                                                                                      |

## Custom Local Area Signaling Service (continued)

### Datafilling table DSCWDTYP (Sheet 2 of 2)

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Subfield or refinement | Entry                         | Explanation and action                                                                                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| COUNT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                        | 0 to 99,999                   | Line count. The number of lines assigned to this DSCWID type.<br><br><b>Note:</b> This field cannot be changed by the operating company and tuples can not be deleted from table DSCWDTYP unless the count is 0. Default: 0. |
| KEY OPTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                        | up to 10 characters, see list | Softkey options. Softkey options available on this DSCWID type. Options are ALL, ANSWER, RETRN, FWD, BUSY, HOLD, DROP, CONF, DROPFRST, and DROPLAST. Default is ALL.                                                         |
| <p><b>Note 1:</b> Operating company cannot change or delete the PROPRITY tuple and can only change (not delete) the other 5 initial tuples.</p> <p><b>Note 2:</b> ALERT type must be SASCAS to display ADSI complaint features.. SASONLY alerting type provides a shorter call waiting function and uses less RCC resources for non ADSI type sets.</p> <p><b>Note 3:</b> If CID type specified is ALLCID, then a CID feature must be assigned in RESOFC.</p> <p><b>Note 4:</b> Changes to fields with multiple entries should be made in the PROMPT mode only. In nonprompt mode it is possible to leave out existing entries.</p> <p><b>Note 5:</b> Enter the continuation mark (+) in fields with multiple possible entries when more data is specified on the next line or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p> |                        |                               |                                                                                                                                                                                                                              |

### Datafill example for table DSCWDTYP

The following example shows sample datafill for table DSCWDTYP.



---

**Custom Local Area Signaling Service** (continued)

---

**MAP display example for table DSCWDTYP**

| Table: DSCWDTYP |         |         |         |                                     |       |
|-----------------|---------|---------|---------|-------------------------------------|-------|
| NAME            | ALERT   | CID     | NONADSI | KEYOPTS                             | COUNT |
| PROPRITY        | SASCAS  | ALLCID  | N       | ANS RET FWD<br>BUSY HOLD<br>DROP \$ | 0     |
| ADSITIME        | SASCAS  | TIMECID | N       | ALL \$                              | 0     |
| ADSIKID         | SASCAS  | ALLCID  | N       | ALL \$                              | 0     |
| NODATA          | SASONLY | NOCID   | Y       | ALL \$                              | 0     |
| NOCIDCW         | SASCAS  | TIMECID | Y       | ALL \$                              | 0     |
| COMPLETE        | SASCAS  | ALLCID  | Y       | ALL \$                              | 0     |

**Datafilling table RESFEAT**

The following table shows the datafill specific to Custom Local Area Signaling Service for table RESFEAT. Only those fields that apply directly to Custom Local Area Signaling Service are shown. For a description of the other fields, refer to the data schema section of the *Translation Guide*.

**Note 1:** A tuple cannot be added to table RESFEAT until the line to which it is being assigned has been datafilled in table IBNLINES.

**Note 2:** Datafill for DSCWID options, previously in table IBNLINES, is moved to the RESFEAT table.

## Custom Local Area Signaling Service (continued)

SERVORD is the recommended way to assign DSCWID to a subscriber's line. However, RESFEAT Table Control does allow DSCWID to be added to a subscriber line.

### Datafilling table RESFEAT (Sheet 1 of 2)

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                     | Subfield or refinement | Entry         | Explanation and action                                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LINE                                                                                                                                                                                                                                                                                                                                                                                                                                      |                        | number        | Line equipment number. External LEN number assigned to a line. This is the first part of the key field for table RESFEAT.                                                |
| KEY                                                                                                                                                                                                                                                                                                                                                                                                                                       |                        | 0 to 69       | Business set key number. Second part of key field of table RESFEAT. Number designating the key a feature is to be assigned. Must always be set to 0 for DSCWID features. |
| FEAT                                                                                                                                                                                                                                                                                                                                                                                                                                      |                        | DSCWID        | CLASS feature name. Third part of key field of table RESFEAT. Feature to be assigned. Examples: DSCWID, CND, CNDB, ADSI, CID                                             |
| VAR                                                                                                                                                                                                                                                                                                                                                                                                                                       |                        | see subfields | Feature variable area. Modified variable area, defined for each feature. See the following subfields.                                                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                           | DF                     | DSCWID        | CLASS feature name. Subfields to be used if this is CLASS feature DSCWID: AMA, STATUS, DTYPE, DEFTRMT, DAMA, CONFPEGS.                                                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                           | AMA                    | NOAMA, AMA    | CLASS AMA status. AMA status is not used for DSCWID. Options: NOAMA and AMA.                                                                                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                           | STATUS                 | ACT           | CLASS activity status. Possible options are ACT, INACT, UNIVI, UNIVA. For DSCWID use ACT.                                                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                           | DF                     | see list      | CLASS feature name. Options: ADSI, SCRJ, SCF, SCA, DSCWID, DRCW, DDN, CND, or CNAMD                                                                                      |
| <p><b>Note 1:</b> Changes to fields with multiple entries should be made in the PROMPT mode only. In nonprompt mode it is possible to leave out existing entries.</p> <p><b>Note 2:</b> Enter the continuation mark (+) in fields with multiple possible entries when more data is specified on the next line or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p> |                        |               |                                                                                                                                                                          |

## Custom Local Area Signaling Service (continued)

### Datafilling table RESFEAT (Sheet 2 of 2)

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                     | Subfield or refinement | Entry      | Explanation and action                                                                                                                                                                                                                                                                                                                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| VAR(continued)                                                                                                                                                                                                                                                                                                                                                                                                                            | DTYPE                  | see list   | DSCWID type. Key of NAME field in table DSCWDTYP, plus the value of DEF in field DTYPE of table RESOFC. Options: PROPRITY, ADSITIME, ADSICID, NODATA, NOCIDCW, COMPLETE, and DEF.<br><br><b>Note:</b> The PROPRITY value is included for compatibility of existing proprietary CPEs. This value is blocked when adding or changing options on a line. |
|                                                                                                                                                                                                                                                                                                                                                                                                                                           | DEFTRMT                | see list   | Default treatment. When no DSCWID option is chosen by subscriber. Options: RING, FWD, ANNC, or DEF.                                                                                                                                                                                                                                                   |
| DAMA                                                                                                                                                                                                                                                                                                                                                                                                                                      |                        | see list   | AMA recording status type. Options: NONE, record on conference call CONF, or DEF.                                                                                                                                                                                                                                                                     |
| CONFPEGS                                                                                                                                                                                                                                                                                                                                                                                                                                  |                        | 0 to 32767 | AMA conference pegs. The number of successful DSCWID conference attempts made if the datafill in field DAMA is CONF.                                                                                                                                                                                                                                  |
| <p><b>Note 1:</b> Changes to fields with multiple entries should be made in the PROMPT mode only. In nonprompt mode it is possible to leave out existing entries.</p> <p><b>Note 2:</b> Enter the continuation mark (+) in fields with multiple possible entries when more data is specified on the next line or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p> |                        |            |                                                                                                                                                                                                                                                                                                                                                       |

### Translation verification tools

Custom Local Area Signaling Service does not use translation verification tools.

### SERVORD

#### SERVORD examples for adding DSCWID options to a subscriber line

The following SERVORD examples show how DSCWID feature is applied to the RSC using the ADO command. Assume that in table RESOFC the

- default DSCWID type (DTYPE) is set to ADSITIME
- DSCWID conference (AMA) status is set to NONE
- DSCWID default treatment (DEFTRMT) treatment is set to FWD

## Custom Local Area Signaling Service (continued)

---

### MAP display of SERVORD Add Option (ADO) command using defaults

```
SERVORD
SO:
>ADO
SONUMBER: NOW YY MM DD
>$
DN_OR_LEN
>6215000
OPTION:
>DSCWID
SUBOPT:
>$
OPTION:
>$
COMMAND AS ENTERED:
ADO NOW YY MM DD 6215000 (DSCWID $) $
ENTER Y TO CONFORM, N TO REJECT, OR E TO EDIT
Y
```

The previous example assigns DSCWID to 621-5000 with the default characteristics of DSCWID type ADSITIME.

---

**Custom Local Area Signaling Service (end)**


---

**MAP display of SERVORD Add Option (ADO) command with overrides**

```

SERVORD
SO:
>ADO
SONUMBER: NOW YY MM DD
>$
DN_OR_LEN
>6215000
OPTION:
>DSCWID
SUBOPT:
>DTYPE
DTYPE:
>ADSICID
SUBOPT:
>DAMA
DAMA:
>CONF
SUBOPT:
>DEFTRMT
DEFTRMT:
>ANNC
SUBOPT:
>$
OPTION:
>$
COMMAND AS ENTERED:
ADO NOW YY MM DD 6215000 (DSCWID (DTYPE ADSICID)
(DAMA NONE) (DEFTRMT ANNC)$)$
ENTER Y TO CONFORM, N TO REJECT, OR E TO EDIT
Y

```

The example assigns DSCWID to 621-5000 with the characteristics of DSCWID type ADSICID. The AMA recording status is CONF and the default treatment is ANNC.

For more information about service orders, refer to the *Subscriber Services Translations Guide*.

## Dual Remote Cluster Controller

---

### Functional group

Functional group: BAS00012

### Feature package

Feature package: Dual Remote Cluster Controller NTX380AA

### Release applicability

BCS26 and up

### Prerequisites

To operate, Dual Remote Cluster Controller has the following prerequisites:

- Bilge NTX000AA
- Common Basic NTX001AA
- Remote Switching Center NTX145AA
- RSC-Intra RSC Calling NTX150AA
- Universal Tone Receiver NTX269AA
- New Peripheral Maintenance NTX270AA
- Local Features I NTX901AA

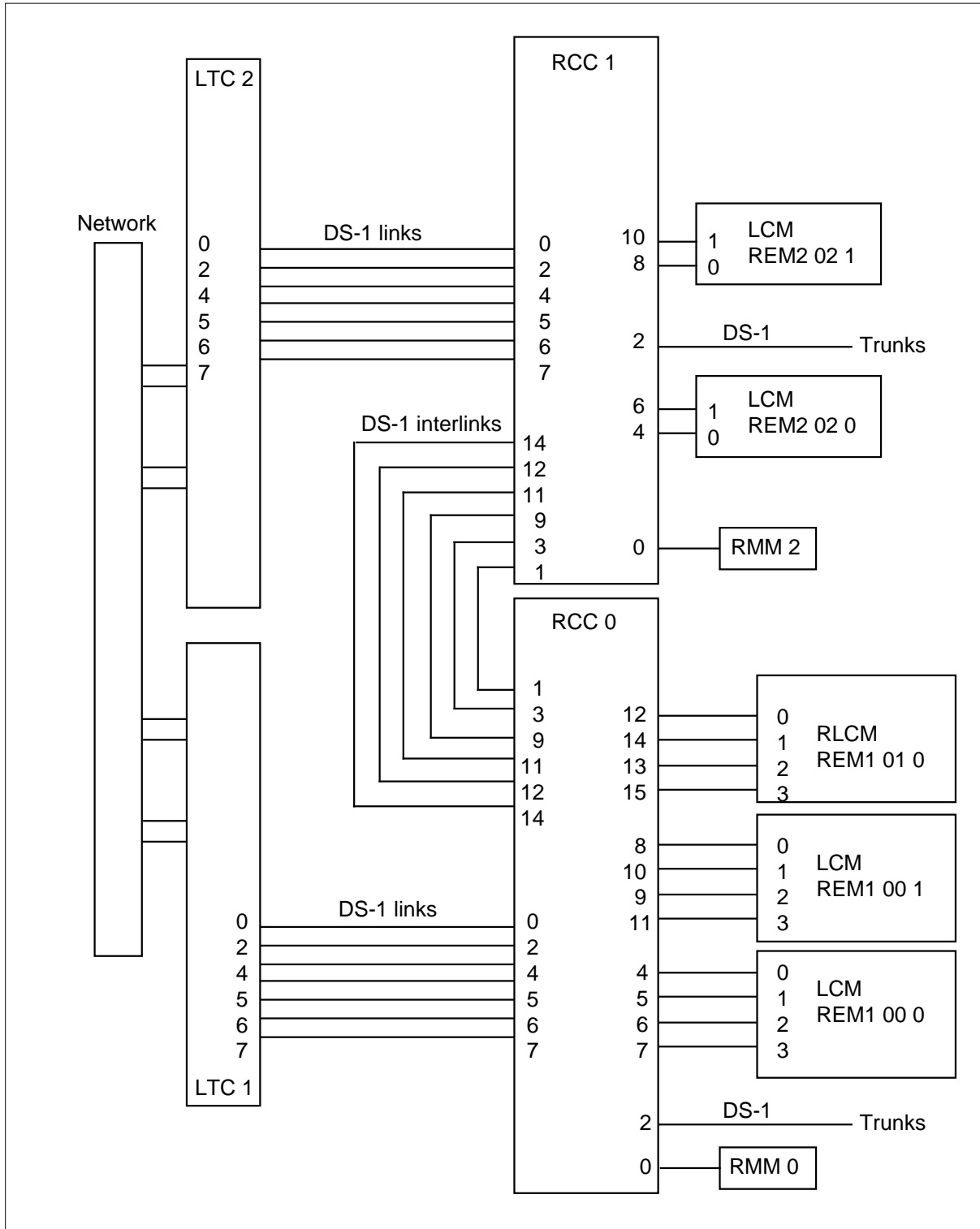
### Description

Datafill requirements are basically the same as for the single remote cluster controller (RCC). Some tables, such as IRLNKINV, apply only to DRCC configurations. This chapter highlights datafilling interlinks and how trunk groups are affected.

The following figure shows an example configuration with datafilled interlinks.

**Dual Remote Cluster Controller** (continued)

**Example DRCC configuration**



## Dual Remote Cluster Controller (continued)

---

### Operation

#### Translations table flow

There is no translations table flow for a DRCC.

#### Limitations and restrictions

##### Assigning C-side links

When altering the interlink configuration which involves changing the central-side (C-side) links, the relevant links and all subsequent links must be MBSy.

##### Assigning trunk groups

Following are the rules for assigning trunk groups.

- A trunk group cannot be split between two RCCs.
- Unequipped C-side ports cannot be reconfigured as interlinks if they are already assigned for dynamic trunks.

##### Setting up emergency stand-alone

Following are the rules for setting up emergency stand-alone (ESA):

- Entries in table ESAPXLA are not allowed to interswitch. Each RCC must have its own entries in table ESAPXLA to define the location of the trunk group.
- ESA data must be updated for both RCCs.
- A trunk group cannot be split between the two RCCs.
- Unequipped C-side ports cannot be reconfigured as interlinks if the ports are already assigned for dynamic trunks.

The following limitations and restrictions apply to setting up ESA:

- Entries in table ESAPXLA are specific to an RCC and are transparent to the mate RCC and are not allowed to interswitch. Therefore, each RCC in a dual RCC (DRCC) configuration, must have its own entries in table ESAPXLA to define the location of special translations terminations (such as 0, 011, 411, 911).
- Lines terminating on an RCC, for special translations, must be datafilled in table ESAPXLA to one of the 16 tuples allowed for that RCC. Trunks being datafilled for special translations can not terminate on the spouse RCC through table ESAPXLA. However, since the entries in table ESAPXLA are transparent to the spouse RCC, the datafilled RCC will only search its own memory, an entry must be made for both RCCs of the



---

## Dual Remote Cluster Controller (continued)

---

DRCC configuration to identify the location of the special translations interswitched trunk.

- When a line or trunk terminates on the spouse RCC, the RCC being datafilled will find the line or trunk by searching table ESAPXLA in its own ESA static data. The RCC can not search the memory of its spouse RCC.
- ESA data must be updated for both RCCs.

### Loading each RCC with ESA data

For DRCC, ESA data that is updated or reloaded for one RCC must be updated or reloaded for the interconnected RCC.

### MDC translation limitations

When a hunt group is split across two dual RCCs (DRCC), hunting for an idle member starts with the lines in the DRCC+ where the call originated. This is true even if the dialed directory number (DN) is on the originating DRCC+.

Originations from a terminal off of an originating DRCC+ to a DN on the spouse DRCC+ which belongs to a split hunt group. The call can terminate on the spouse DRCC+ only if all hunt group members of the split hunt group, of the originating DRCC+, are off-hook or call processing busy. Otherwise, the call will terminate to an idle hunt group member of the split hunt group on the originating DRCC+.

To attain the maximum number of supported hunt groups and hunt group members, it is recommended to locate all members of a hunt group off of the same DRCC+ if possible.

### Interactions

Dual Remote Cluster Controller has no functionality interactions.

### Activation/deactivation by the end user

When an RCC is configured or an existing DRCC is reconfigured, tables RCCINV and IRLNKINV must be updated to reflect the changes. The associated PMs must contain static data that reflects the new configuration. This section contains some example procedures for both configuring a DRCC from two single RCCs and reconfiguring links for an existing DRCC.

### Configuring a DRCC from two RCCs

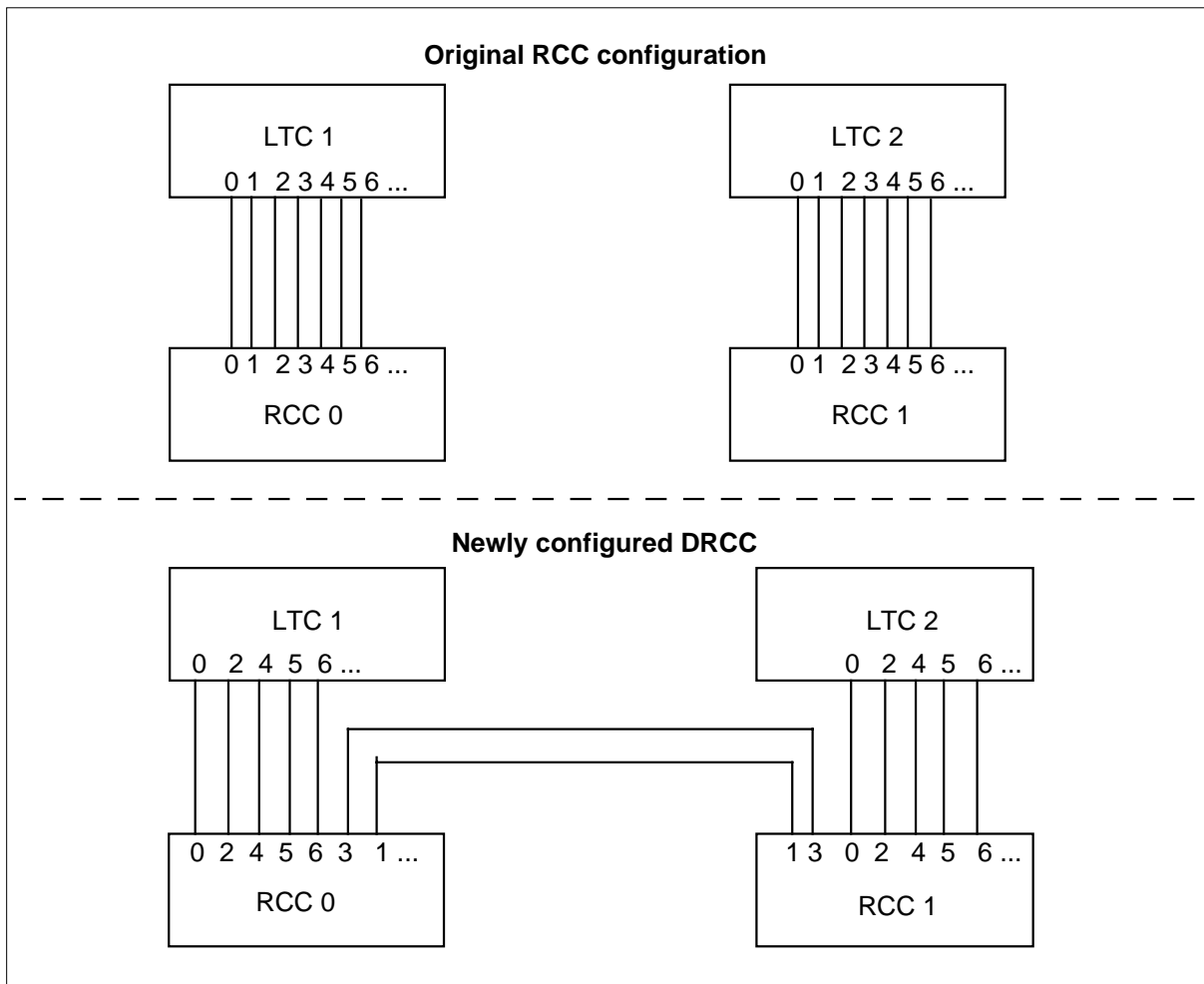
The following figure shows the beginning configuration with two RCCs and the target configuration with a DRCC.

## Dual Remote Cluster Controller (continued)

### Querying the original single RCC configuration

Perform this step only to ensure the configuration as shown in the following figure is correct. Steps include posting LTC 1 and LTC 2, example LTCs only, and entering the PM level command TRNSL P and posting the subtending, example RCC 0 and RCC 1, and entering the PM level command TRNSL C. Analyze the data in tables RCCINV and LTCPSINV for the associated LTC and RCC.

### Before and after DRCC configurations



### Preparing to busy RCC C-side links

When the C-side links to the RCCs are changed, the first link to be changed and all subsequent links must be MBsy. In this example, since link 1 is being reconfigured as an interlink, link 1 through link 6 must be man\_bused. Link

---

## Dual Remote Cluster Controller (continued)

---

0 will be the only in-service (InSv) link to the host. Perform the following steps.

**Note:** Be sure that unit 0 of both RCCs is the active unit. Perform a SWACT if necessary. This allows the RCCs to communicate with the host and process calls over link 0.

### At the MAP terminal

- 1 Access the PM level of the MAP display and post the RCCs which will constitute the DRCC by entering

```
>MAPCI;MTC;PM;POST RCC rcc_no
```

where:

**rcc\_no**

is the number of the RCCs associated with the DRCC. In this example, 0 and 1.

- 2 Busy unit 1 of both RCCs by entering

```
>BSY UNIT 1
```

**Note:** Since unit 1 is the inactive unit, call processing is not affected. If an attempt is made to busy unit 1 but try to busy C-side link 2 of an RCC, a message appears indicating that the request is invalid. Busing the link will take unit 1 out of service.

**Note:** In this example, busy links 1 through 6 for both LTC 1 and LTC 2 (for example, LTC numbers only). LTC P-side link 0 is a message-supporting link for RCC unit 0 and link 2 is a message-supporting link for RCC unit 1 of both LTCs.

### Busying relevant C-side links

#### From the LTC level of the MAP display

- 1 Post the LTC by entering

```
>POST LTC 1
```

- 2 Busy link 1 on the P-side of LTC 1 by entering

```
>BSY LINK 1
```

**Note 1:** Busy all other links (2 through 6) between LTC 1 and RCC 0.

**Note 2:** Link 0 is the message-supporting link for unit 0, and link 2 is the message-supporting link for unit 1. Both of these C-side links have a permanent loop-around from the outgoing side of channel 12 to the incoming side of channel 16. This loop-around is active when the unit it supports is in service, and prevents manually\_busing a message-supporting link. To break this loop-around, manually busy the unit.

- 3 Repeat steps 1 and 2 for LTC 2 and links 2 through 6.

---

## Dual Remote Cluster Controller (continued)

---

### Changing C-side links in table RCCINV

To change RCC links to match the example target configuration previously described, access table RCCINV and perform the following steps:

#### At the MAP terminal

- 1 Access table RCCINV and position on the first RCC of the DRCC. Enter

```
>TABLE RCCINV;POS site_name RCC rcc_no
```

where:

**site\_name**

is the name of the physical location of the RCC

**rcc\_no**

is the number of the first RCC being converted to a DRCC (in this example, RCC 0)

- 2 Change the CSLNKTAB field so that fields 1 and 3 are NILPORT by entering

```
>CHA CSLINKTAB 0 NILPORT 2 NILPORT 4 5 6 $
```

**Note:** In this example, data was entered in NOPROMPT mode, with links 1 and 3 of link type NILPORT. Links 0, 2, 4, 5, and 6 interface the host LTC. In PROMPT mode, press the RETURN key after each CSLINKTAB entry.

- 3 Confirm the change made to the tuple by entering

```
>Y
```

- 4 Position on the second RCC by entering

```
>POS site_name RCC rcc_no
```

where:

**site\_name**

is the name of the physical location of the second RCC of the DRCC

**rcc\_no**

is the number of the second RCC being converted to a DRCC (in this example, RCC 1)

- 5 Change the CSLNKTAB field so fields 1 and 3 are NILPORT by entering

```
>CHA CSLINKTAB 0 NILPORT 2 NILPORT 4 5 6 $
```

**Note:** In this example, data was entered in NOPROMPT mode, with links 1 and 3 of link type NILPORT. Links 0, 2, 4, 5, and 6 interface the host LTC. In PROMPT mode, press the RETURN key after each CSLINKTAB entry.

- 6 Confirm the change made to the tuple by entering

```
>Y
```

- 7 QUIT the table by entering

```
>QUIT
```

- 8 Access table LTCPSINV and position on LTC 1 (the LTC used in this example) by entering

```
>TABLE LTCPSINV;POS LTC 1
```

---

## Dual Remote Cluster Controller (continued)

---

- 9 Change LTC links assigned to RCC 0, the RCC used in this example, ports 1 and 3 to NILTYPE in a PROMPT mode, by entering

>CHA

*Example of a MAP response:*

```
PSLNKTAB: 0 DS1 DEFAULT N
PSLNKTAB: 1 DS1 DEFAULT N
1 NILTYPE
PSLNKTAB: 2 DS1 DEFAULT N
PSLNKTAB: 3 DS1 DEFAULT N
3 NILTYPE
```

**Note:** This change is made in PROMPT mode only. Press the ENTER or RETURN key to prompt through the remaining links.

- 10 Verify and confirm the changes made to the table by observing the MAP response and entering a Y to confirm.

*Example of a MAP response:*

```
TUPLE TO BE CHANGED:
LTC 1
(0 DS1 DEFAULT N) (1 NILTYPE) (2 DS1 DEFAULT N)
(3 NILTYPE) (4 DS1 DEFAULT N) (5 DS1 DEFAULT N)
(6 DS1 DEFAULT N) (7 NILTYPE) (8 NILTYPE) (9 NILTYPE)
(10 NILTYPE) (11 NILTYPE) (12 NILTYPE) (13 NILTYPE)
(14 NILTYPE) (15 NILTYPE) (16 NILTYPE) (17 NILTYPE)
(18 NILTYPE) (19 NILTYPE) $

ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
Y

TUPLE CHANGED
WRITTEN TO JOURNAL FILE AS JF NUMBER 253
```

Repeat steps 9 and 10 for LTC 2 and RCC 1.

- 11 Quit the table by entering

>QUIT

### Returning C-side links to service

Perform the following steps to RTS links still connected to the LTC. Do not return to service links 1 and 3, since they are now RCC interlinks (IRlinks).

## Dual Remote Cluster Controller (continued)

---

### *At the PM level of the MAP display*

- 1 Post LTC 1 by entering  
`>MAPCI;MTC;PM;POST LTC 1`
- 2 Return to service P-side links 2, 4, 5, and 6 by entering  
`>RTS LINK 2`  
**Note:** Repeat this command for links 4, 5, and 6. Links 1 and 3 are now RCC interlinks and remain NILTYPE.
- 3 Busy the In\_active unit, unit 1 in this example, by entering  
`>BSY UNIT 1`
- 4 Download static data to the LTC by entering  
`>LOADPM UNIT 1 CC DATA`
- 5 Return to service the In\_active unit by entering  
`>RTS UNIT 1`
- 6 Perform a warm SWACT by entering  
`>SWACT`
- 7 Confirm the warm SWACT by entering  
`>Y`
- 8 Busy the In\_active unit, unit 0 after the SWACT, by entering  
`>BSY UNIT 0`  
**Note:** Repeat steps 4 and 5 for unit 0.
- 9 Download the static data to one RSC, by entering  
`>POST RCC 0`
- 10 Load the In\_active unit with new static data by entering  
`>LOADPM UNIT 1 CC DATA`
- 11 Return to service the In\_active unit by entering  
`>RTS UNIT 1`
- 12 Perform a warm SWACT by entering  
`>SWACT`
- 13 Confirm the warm SWACT by entering  
`>Y`
- 14 Busy the In\_active unit, (unit 0 after the SWACT), by entering  
`>BSY UNIT 0`  
**Note:** Repeat steps 10 and 11 for unit 0.
- 15 Repeat steps 1 through 14 for the mate RSC, (RCC 1 and LTC 2).

### **Setting up interlinks in table IRLNKINV**

When no DRCCs exist, no interlinks are defined in table IRLNKINV. Perform the following steps to enter new port information for this example:

---

## Dual Remote Cluster Controller (continued)

---

**At the MAP terminal**

- 1 Access table IRLNKINV and position on one of the RCCs to be converted to a DRCC by entering

```
>TABLE IRLNKINV; POS site_name RCC rcc_no
```

where:

**site\_name**

is the name of the physical location of the RCC.

**rcc\_no**

is the number of the RCC being converted to a DRCC

**Note:** When making an initial change to a DRCC in table IRLNKINV, position on the RCC with the least number of P-side links or trunks assigned. This RCC becomes the MASTER RCC. The MASTER sets up the call path between the two RCCs for interswitched calls. The mate RCC is designated the SLAVE RCC. The CC inputs data for the SLAVE.

- 2 Enter data for a new tuple entry in PROMPT mode, when no DRCCs exist, by entering

```
>CHA
```

- 3 Enter data for the inter-RCC (the mate RCC).

```
>site_name RCC rcc_no
```

where:

**site\_name**

is the name of the physical location of the RCC.

**rcc\_no**

is the number of the RCC being converted to a DRCC.

- 4 Enter the IRLNKTAB information by entering

```
>1 1
```

```
>3 3
```

```
>$
```

**Note:** IRLNKTAB entries (1 1) and (3 3) are required, since they are message supporting links. All other links entries are for additional IR speech links.

- 5 Enter the ESAFORCE option, Y for yes or N for no.

```
>Y
```

- 6 Confirm the changes made to the tuple by entering

```
>Y
```

- 7 The following response appears when the table is updated:

*Example of a MAP response:*

---

**Dual Remote Cluster Controller** (continued)
 

---

| ESAFORCE |       | INTERRCC       | IRLNKTAB      |
|----------|-------|----------------|---------------|
| REM1     | RCC 0 | (REM2 RCC 1)\$ | (1 1) (3 3)\$ |
|          | Y     |                |               |
| REM2     | RCC 1 | (REM1 RCC 0)\$ | (1 1) (3 3)\$ |
|          | Y     |                |               |

WARNING: Static data has changed, BSY and RTS both RCCs

**Note 1:** The system makes changes for the mate RCC, while operating company personnel make changes to only one RCC.

**Note 2:** This data is not dynamically updated. Follow instructions in the warning statement to update static data.

- 8 Quit the IRLNKINV table by entering  
>QUIT

### Return the inter-RCC (IR) links to service

DS-1 links 1 and 3 routed to the host LTC, are now routed to the other RCC. RTS links 1 and 3 are interlinks. Perform the following steps:

#### At the MAP display

- 1 Post the first RCC in the DRCC and enter the IRLINK level by entering  
>POST RCC rcc\_no;IRLINK  
where:  
    **rcc\_no**  
    is the number of the first RCC in the DRCC configuration.
- 2 Query the IR links for the new DRCC by entering  
>QUERYIR
- 3 Test the IR links by entering  
>TST 0
- 4 RTS IRLink 0 by entering  
>RTS 0  
**Note:** Repeat this command for IRLINK 1.
- 5 Quit the IRLINK level by entering  
>QUIT

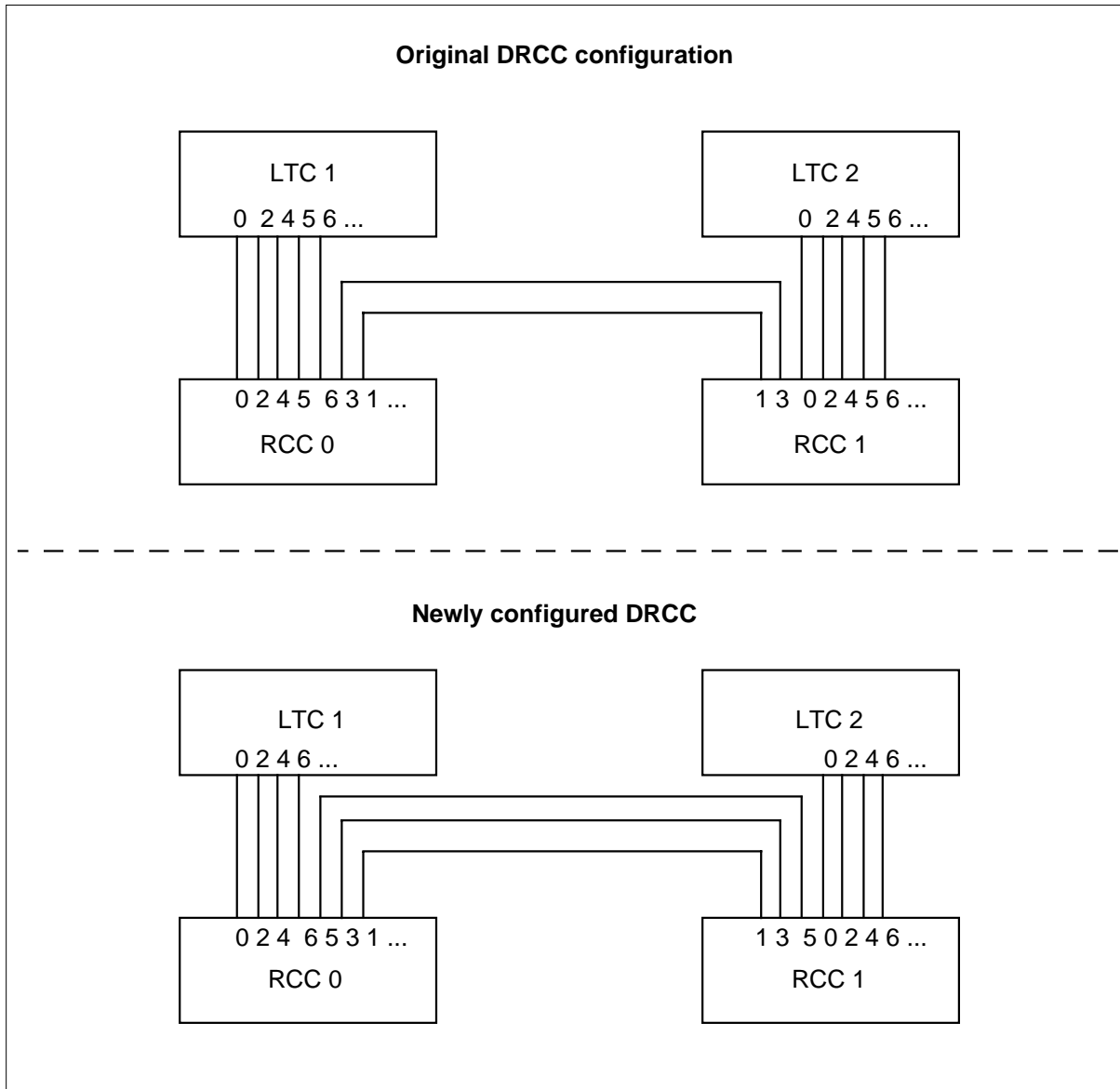


**Dual Remote Cluster Controller** (continued)

**Reconfiguring an existing DRCC**

When a DRCC is operating normally, traffic studies may indicate that the amount of interswitched traffic warrants that a C-side link to the host PM be deleted and replaced with an interlink. The following figure shows how to delete a C-side speech link and replace it with an interlink.

**Original and target DRCC configuration**



**Preparing RCCs for busy C-side links**

When RCC C-side links are changed, the first link to be changed and all subsequent links must be MBsy. In the above figure, since link 1 is being

## Dual Remote Cluster Controller (continued)

---

reconfigured as an interlink, links 1 through link 6 must be made MBsy. Since link 0 will be the only in-service link to the host, perform these steps:

### *At the MAP terminal*

- 1 Access the PM level of the MAP display and post the RCCs which will made the DRCC. Enter

```
>MAPCI;MTC;PM;POST RCC rcc_no
```

where:

#### **rcc\_no**

is the number of the RCCs associated with the DRCC. In this example, they are 0 and 1.

**Note:** Ensure that unit 0 of both RCCs is the active unit. Perform a SWACT if necessary. This allows the RCCs to still communicate with the host and process calls over link 0.

- 2 Busy unit 1 of both RCCs. Since unit 1 is the inactive unit, call processing is not affected. Enter

```
>BSY UNIT 1
```

### **Busying relevant C-side links**

Since LTC 1 P-side link 5 will be changed to an interlink at the RCC, busy this link and all subsequent links and change it to NILPORT in table RCCINV and a link type of NILTYPE in table LTCINV.

### *At the MAP terminal*

- 1 Post LTC 1, the LTC used in this example, by entering

```
>POST LTC 1
```

- 2 Busy link 5 and all subsequent links connected to the first RCC on the P-side of LTC 1 by entering

```
>BSY LINK 5
```

```
>BSY LINK 6
```

### **Changing C-side links in table RCCINV**

To change RCC links to match the example configuration, access table RCCINV and perform the following steps:

### *At the MAP terminal*

- 1 Access table RCCINV and position on the one RCCs of the DRCC by entering

```
>TABLE RCCINV;POS site_name RCC rcc_no
```

where:

#### **site\_name**

is the name of the site where the RCC is physically located.

---

## Dual Remote Cluster Controller (continued)

---

**rcc\_no**

is the number of the RCC to which the C-side links are to be reconfigured.

- 2 Change the CSLNKTAB field so that 5 is NILPORT. Enter

```
>CHA CSLNKTAB 0 NILPORT 2 NILPORT 4 NILPORT 6 $
```

**Note:** In this example, the data was entered in a NOPROMPT mode, with links 1, 3, and 5 of link type NILPORT. Links 0, 2, 4, and 6 interface the host LTC. Use the PROMPT mode by pressing the ENTER or RETURN key after each CSLINKTAB entry.

- 3 Confirm the change made to the tuple by entering

```
>Y
```

- 4 Position on the mate RCC of the DRCC and repeat steps 2 and 3. Enter

```
>POS site_name RCC rcc_no
```

where:

**site\_name**

is the name of the location where the mate RCC is physically located.

**rcc\_no**

is the number of the mate RCC to which the C-side links are to be reconfigured.

- 5 QUIT the table by entering

```
>QUIT
```

### Updating table LTCPSINV

After reconfiguring the P-side of the LTCs, update table LTCPSINV to reflect the new configuration, as follows:

#### At the MAP terminal

- 1 Access table LTCPSINV and position on LTC 1, the LTC used in this example, by entering

```
>TABLE LTCPSINV;POS LTC 1
```

- 2 Change link 5 in PSLNKTAB to 5 NILTYPE in PROMPT mode by entering

```
>CHA
```

*Example of a MAP response:*

```
PSLNKTAB: 4 DS1 DEFAULT N
PSLNKTAB: 5 DS1 DEFAULT N
5 NILTYPE
PSLNKTAB: 6 DS1 DEFAULT n
PSLNKTAB: 7 NILTYPE
```

**Note:** Press the ENTER or RETURN key to prompt the remaining links.

---

## Dual Remote Cluster Controller (continued)

---

- 3 Verify and confirm the changes made to the table by observing the MAP response and entering a **Y** to confirm.

*Example of a MAP response:*

```
TUPLE TO BE CHANGED:
LTC 1
(0 DS1 DEFAULT N) (1 NILTYPE) (2 DS1 DEFAULT N (3 NILTYPE)
(4 DS1 DEFAULT N) (5 NILTYPE) (6 DS1 DEFAULT N) (7 NILTYPE)
(8 NILTYPE) (9 NILTYPE) (10 NILTYPE) (11 NILTYPE) (12 NILTYPE)
(13 NILTYPE) (14 NILTYPE) (15 NILTYPE) (16 NILTYPE) (17 NILTYPE)
(18 NILTYPE) (19 NILTYPE) $

ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
Y

TUPLE CHANGED
WRITTEN TO JOURNAL FILE AS JF NUMBER 256
```

- 4 Position on LTC 2, and repeat steps 2 and 3 for link 5.
- 5 QUIT the table by entering  
>QUIT

### Returning C-side links to service and updating static data

To update static data perform the following procedure:

#### *At the PM level of the MAP display*

- 1 Post LTC 1 by entering  
>MAPCI;MTC;PM;POST LTC 1
- 2 Return to service P-side link 6 by entering  
>RTS LINK 6  
**Note:** Do not attempt to RTS link 5, it is now an Inter-RCC IRLink.
- 3 Busy the In\_active unit, unit 1 in this example, by entering  
>BSY UNIT 1
- 4 Download static data to the LTC by entering  
>LOADPM UNIT 1 CC DATA
- 5 Return to service the In\_active unit by entering  
>RTS UNIT 1
- 6 Perform a warm SWACT by entering  
>SWACT
- 7 Confirm the warm SWACT by entering  
>Y

---

## Dual Remote Cluster Controller (continued)

---

- 8 Busy the In\_active unit, unit 0 after the SWACT, by entering  
`>BSY UNIT 0`  
**Note:** Repeat steps 4 and 5 for unit 0.
- 9 Download the static data to one RSC, by entering  
`>POST RCC 0`
- 10 Load the In\_active unit with new static data by entering  
`>LOADPM UNIT 1 CC DATA`
- 11 Return to service the In\_active unit by entering  
`>RTS UNIT 1`
- 12 Perform a warm SWACT by entering  
`>SWACT`
- 13 Confirm the warm SWACT prompt by entering  
`>Y`
- 14 Busy the In\_active unit, unit 0 after the SWACT, by entering  
`BSY UNIT 0`  
**Note:** Repeat steps 10 and 11 for unit 0.
- 15 Repeat steps 1 through 14 for the mate RSC, RCC 1 and LTC 2.

### Physically reconfiguring the interlinks

DS-1 links routed to the host PM must now be routed to the other RCC.

### Setting up the interlinks in table IRLNKINV

Perform the following steps to enter new port information for this example:

#### At the MAP terminal

- 1 Access table IRLNKINV and position on one of the RCCs to which link changes are made by entering  
`>TABLE IRLNKINV; POS site_name RCC rcc_no`  
*where:*  
**site\_name**  
is the name of the physical location of the RCC.  
**rcc\_no**  
is the number of the RCC being converted to a DRCC.
- 2 Enter data for a new tuple entry, in PROMPT mode, when no DRCCs exist by entering  
`>CHA`
- 3 Enter the inter-RCC, the mate RCC.  
`>site_name RCC rcc_no`  
*where:*

## Dual Remote Cluster Controller (continued)

**site\_name**

is the name of the physical location of the RCC.

**rcc\_no**

is the number of the RCC being converted to a DRCC.

**Note:** Tab through the fields until reaching the end of field IRLNKTAB. Enter the new port numbers (5 5) and a \$ symbol for end of entries.

- 4 Tab through existing IR message links (1 1) and (3 3), and input data for additional IR speech links by entering

>5 5

- 5 Indicate to the system an end to the entries by entering

>\$

- 6 Enter the ESAFORCE option, Y for yes or N for no.

>Y

*Example of a MAP response in a PROMPT mode:*

```

INTERRCC: REM2      RCC 1
IRLNKTAB: 1        1
IRLNKTAB: 3        3
IRLNKTAB:
>5 5
IRLNKTAB:
>$
ESAFORCE: Y

```

- 7 Confirm the changes made to the tuple by entering

>Y

*Example of a MAP response:*

```

                INTERRCC      IRLNKTAB
ESAFORCE
-----
REM1 RCC 0      (REM2 RCC 1)$   (1 1) (3 3) (5 5)$
  Y
REM2 RCC 1      (REM1 RCC 0)$   (1 1) (3 3) (5 5)$
  Y
WARNING: Static data has changed, BSY and RTS both RCCs

```

**Note:** The system makes changes for the mate RCC, while operating company personnel make changes to only one RCC.

- 8 Quit the IRLNKINV table by entering

>QUIT

---

## Dual Remote Cluster Controller (continued)

---

### Configuring a C-side link with dynamic trunks

When reconfiguring a DRCC, it is common to delete a C-side link and replace it with an interlink. When adding interlinks, it is possible that operating company personnel may attempt to add an interlink to a port that is already reserved for dynamic trunks.

For example, if an attempt is made to add the port combination (12, 12) in table IRLNKINV and that port was reserved, a message similar to the following appears:

#### Example of a MAP response:

```
Following is the list of trunks
connected to this cside port of RCC:12
Trunks must be deleted before
adding / deleting a link on this port.
```

| CLLI   | EXTERNAL_TRUNK_NUMBER |
|--------|-----------------------|
| RCC0TO | 1                     |

If this port must be reconfigured as an interlink, delete the CLLI and all its members in the following tables in this order:

1. TRKMEM
2. TRKSGRP

**Note:** Before deleting the appropriate CLLI entries, installation busy (INB) the affected trunks.

Add the CLLI and all its members in the following tables in this order:

1. ISTRKGRP—This table shows which trunks can be used for intraswitching.
2. TRKSGRP—Add the trunk subgroup 0 or 1.
3. TRKMEM—Add all the trunk members back into this member table.

### Activation sequence

After datafilling appropriate tables, busy and RTS each RCC unit (0 and 1) of the DRCC. This activates the Dual Remote Cluster Controller feature package. Static data for table IRLNKINV is not dynamically updated.

---

## Dual Remote Cluster Controller (continued)

---

If the configuration of C-side links to the host PMs is altered, busy and RTS the host PMs and update table LTCPSINV with the link changes (NILTYPE, for example). Busy and RTS the inactive RCC unit, and SWACT the RCC.

### Billing

Dual Remote Cluster Controller does not affect billing.

### Station Message Detail Recording

Dual Remote Cluster Controller does not affect Station Message Detail Recording.

### Datafilling office parameters

Dual Remote Cluster Controller does not affect office parameters.

### Datafill sequence

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

#### Datafill tables required for Dual Remote Cluster Controller

| Table    | Purpose of table                                                                                                                                  |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| RCCINV   | Remote cluster controller inventory. Contains a list of RCCs datafilled in the DMS switch and RCC inventory data, except P-side link assignments. |
| IRLNKINV | Inter-RCC link inventory. Contains an entry for every RCC datafilled in table RCCINV, with the inter-RCC, interlinks and ESAFORCE option.         |
| LTCPSINV | Line trunk controller P-side inventory. Contains host PM P-side link assignments only.                                                            |

### Datafilling table RCCINV

Table RCCINV sets up the configuration of the C-side links to the host LGC/LTC. This table is used to change the C-side configuration when the DRCC configuration is either implemented or changed.

The following table shows the datafill specific to Dual Remote Cluster Controller for table RCCINV. Only those fields that apply directly to Dual



## Dual Remote Cluster Controller (continued)

Remote Cluster Controller are shown. For a description of the other fields, refer to the data schema section of the *Translations Guide*.

### Datafilling table RCCINV

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Subfield or refinement | Entry   | Explanation and action                                                                                                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| CSLNKTAB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                        | 0 to 15 | C-side link table. Enter NILPORT for nonconsecutive links. Links labeled NILPORT (or not datafilled at all) can be used for interlinks or intraswitching. |
| INTRASW                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                        | Y or N  | Intraswitching. The ability of a PM to intraswitch calls locally without using host facilities, except during call setup.                                 |
| <p><b>Note 1:</b> All the links may be deleted except the message links (0 and 2).</p> <p><b>Note 2:</b> When datafilling field C-side link table (CSLNKTAB), assure message links are not assigned to the same physical interface card. When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This applies to all interface link types; DS-1, DS30, DS30A, or PCM-30. Table control will issue a warning if an attempt is made to assign message links on the same interface card. Assigning message links to the same interface card can cause an E1 outage (failure of all message links) if the card fails.</p> |                        |         |                                                                                                                                                           |

### Datafill example for table RCCINV

The following example shows sample datafill for table RCCINV.

### MAP display example for table RRCCINV

```

RCCNAME      FRTYPE  FRNO  SHPOS  FLOOR  ROW  FRPOS  EQPEC  LOAD
                                EXECTAB
CSPM
                                CSLNKTAB
ESA  INTRASW
                                OPTCARD
TONESET  PECS6X45
-----
BRSC RCC 0      RCE      0      18      0      C      5      6X12AA ESR06BB
(POTS POTSEX)(KEYSET KSETEX)(ABTRK DTCEX)(RMM_TERM RSMEX)(ESALINES ESAEX)$
LTC 1
          ( 0 ) ( NILPORT ) ( 2 ) ( NILPORT ) ( 4 ) ( 5 ) ( 6 ) ( 7 ) $
Y          Y
          (UTR14)  ( MSG6X69 ) ( CMR18 CMR03A ) ( NT7X05AA 12 )  $
NORTHAM  MX77AA  MX77AA  MX77NH08  $

```

## Dual Remote Cluster Controller (continued)

### Error messages for table RCCINV

The following error messages apply to table RCCINV.

#### Error messages for table RCCINV

| Error message                | Explanation and action                                                                                                                      |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| PORT n EQUIPPED AS INTERLINK | Operating company personnel attempted to equip a C-side link on a port configured as an interlink port.                                     |
| DELETE DUAL CONFIGURATION    | Operating company personnel attempted to delete an RCC that is part of a DRCC. Table IRLNKINV allows the interconnected RCC to be detached. |

### Datafilling table IRLNKINV

Table Inter-RCC link Inventory (IRLNKINV) contains an entry for every RCC datafilled in table RCCINV. This table also gives the link assignments for the DRCC. Finally, this table contains the field, ESAFORCE, that allows the operating company the option to have the RCC enter forced ESA (FESA).

### How interswitched calls are affected by ESA Warm Entry

The ESA Warm Entry feature allows stable intraswitched calls to be preserved over ESA entry. With the DRCC, stable interswitched calls can also be preserved, but only if the ESAFORCE option is set to Y (yes). If it is set to N (no), all interswitched calls are dropped.

The following table shows the datafill specific to Dual Remote Cluster Controller for table IRLNKINV. Only those fields that apply directly to Dual Remote Cluster Controller are shown. For a description of the other fields, refer to the data schema section of the *Translations Guide*.

#### Datafilling table IRLNKINV (Sheet 1 of 2)

| Field   | Subfield or refinement | Entry         | Explanation and action                                                            |
|---------|------------------------|---------------|-----------------------------------------------------------------------------------|
| RCCNAME |                        | see subfields | Contains subfields SITE, PMTYPE, and RCCNO.                                       |
|         | SITE                   | alphanumeric  | The name assigned to the remote location. This entry should appear in table SITE. |
|         | PMTYPE                 | RCC           | The peripheral module type is RCC.                                                |
|         | RCCNO                  | 0 to 255      | RCC number. The external number assigned to the RCC.                              |

**Dual Remote Cluster Controller** (continued)**Datafilling table IRLNKINV (Sheet 2 of 2)**

| Field    | Subfield or refinement | Entry          | Explanation and action                                                                                                     |
|----------|------------------------|----------------|----------------------------------------------------------------------------------------------------------------------------|
| INTERRCC |                        | see subfields  | Interconnected RCC. The name of the interconnected RCC. Contains subfields SITE, PMT, and RCCNO.                           |
|          | SITE                   | alphanumeric   | The name assigned to the remote location. This entry should appear in table SITE.                                          |
|          | PMTYPE                 | RCC            | The peripheral module type is RCC.                                                                                         |
|          | RCCNO                  | 0 to 255       | RCC number. The external number assigned to the RCC.                                                                       |
| IRLNKTAB |                        | see subfields  | Interlink table. This field contains two to 14 port pairs for DRCC interlinks. Contains subfields RCC1_PORT and RCC2_PORT. |
|          | RCC1_PORT              | numeric0 to 13 | The port number of the RCC1 interlink. NILPORT indicates the link is not connected. It is used to disconnect an interlink. |
|          | RCC2_PORT              | numeric0 to 13 | The port number of the RCC2 interlink. NILPORT indicates the link is not connected. It is used to disconnect an interlink. |
| ESAFORCE |                        | Y or N         | Enter Y to force the RCC into ESA when the interconnected RCC enters ESA. Otherwise, enter N. Default: N                   |

**Datafill example for table IRLNKINV**

The following example shows sample datafill for table IRLNKINV. When changing a DRCC configuration to a single RCC configuration, delete the RCC configuration in the IRLNKINV table by entering the \$ symbol for the INTERRCC and carriage return, ENTER or RETURN key, for the links.

**MAP display example for table IRLNKINV (before DRCC configuration)**

|           | INTERRCC | IRLNKTAB |
|-----------|----------|----------|
| ESAFORCE  |          |          |
| BRSC RCC0 | \$       | \$       |
| BRSC RCC1 | \$       | \$       |

## Dual Remote Cluster Controller (continued)

### MAP display example for table IRLNKINV (after DRCC configuration)

| ESAFORCE                                    | INTERRCC       | IRLNKTAB |
|---------------------------------------------|----------------|----------|
| <hr/>                                       |                |          |
| BRSC RCC 0                                  | (BRSC RCC 1)\$ |          |
| (1 1) (3 3) (9 9) (11 11) (12 12) (14 14)\$ |                |          |
| Y                                           |                |          |
| BRSC RCC 1                                  | (BRSC RCC 0)\$ |          |
| (1 1) (3 3) (9 9) (11 11) (12 12) (14 14)\$ |                |          |
| Y                                           |                |          |

### Limitations for assigning interlinks

Following are the limitations for assigning interlinks.

- In the minimum configuration, port 1 of one RCC must be connected to port 1 of the interconnected RCC, and port 3 of one RCC must be connected to port 3 of the interconnected RCC.
- Up to 14 interlinks can be assigned, assuming the minimum C-side link configuration, of 0 and 2, to the host PM.
- A port allocated for dynamic trunks cannot be assigned a C-side port unless the trunks are removed from that link.
- A port already in use as a link to the host LTC/LGC cannot be assigned unless the C-side links are reconfigured.

### Changing the interconnected RCC

If a new RCC name is entered for the field INTERRCC, the existing interconnected RCC is disconnected and the new RCC is connected if the following conditions are met:

- All the existing interlinks are manually busy, or at least one of the existing RCCs of the DRCC is manually busy or offline.
- None of the C-side ports of the new interconnected RCC entered as a port pair is already in use.

### Changing an interlink assignment

Changing the interlink configuration involves adding, deleting, or relocating interlinks, as follows:

- Adding an interlink. In table IRLNKINV, add the new port pairs after the existing ones have been prompted. If a port is already used as a C-side link, interlink, or dynamic trunk, the new data is rejected.
- Deleting an interlink. Be sure that the interlink is busy, or at least one RCC is busy or offline. Then, for example, use the CHANGE command to

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## Dual Remote Cluster Controller (end)

---

change ports (8 11) to (NILPORT 11) (11 NILPORT) or (NILPORT NILPORT).

- Relocating an interlink assignment. Be sure the interlink is busy, or at least one RCC is busy or offline. Also, be sure the port that is going to become an interlink is not already in use. NILPORT the old entry and add the new link entry. In table IRLNKINV, enter the new port pair and update static data by busying and returning-to-service both RCCs.

### Error messages for table IRLNKINV

The following error messages apply to table IRLNKINV.

#### Error messages for table IRLNKINV

| Error message                                      | Explanation and action                                                                                                    |
|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| PORT n IS EQUIPPED AS C-side LINK                  | A port n entered as an interlink is already equipped as a C-side link and thus is not available for an interlink.         |
| DELETE COMMAND NOT ALLOWED, USE THE CHANGE COMMAND | Operating company personnel entered DELETE command when in table IRLNKINV. Use the CHANGE command to delete an interlink. |
| OLD PORT n ON HOST IS NOT MANBSY                   | Operating company attempted to delete an in-service link.                                                                 |
| INVALID C-side LINKS. RELOCATE NODE FAILED         | Operating company personnel attempted to delete a link, and its subsequent link is in service.                            |

### Translation verification tools

TRAVER is unchanged with the RCC, except for the following:

- TRAVER is not used for calls that route over interlinks.
- ESATOOLS can be used in verifying ESA translations for intraswitched and interswitched calls.

### SERVORD

Dual Remote Cluster Controller does not use SERVORD.

## Enhanced ESA (Lines and Trunks)

---

### Functional group

Functional group: BAS00012

### Feature packages

Feature package: RSC Enhanced ESA (Lines and Trunks) NTXN82AB

Feature package: RSC Enhanced ESA (Lines) NTXQ12AA

### Release applicability

BCS34 and up

### Requirements

The Enhanced ESA (Lines and Trunks) has the following requirements:

- Bilge NTX000AA
- Common Basic NTX001AA
- Remote Switching Center NTX145AA
- RSC ESA Operation—Lines NTX149AA (see note)
- RSC ESA Operation—Lines and Trunks NTX149AB (see note)
- RSC-Intra RSC Calling NTX150AA
- Universal Tone Receiver NTX269AA
- New Peripheral Maintenance NTX270AA
- Local Features I NTX901AA

*Note:* Requirement packages are identical for packages NTXN82AB and NTXQ12AA except for packages NTX149AA and NTX149AB. The NTX149AA is a requirement package for NTXQ12AA. The NTX149AB is a requirement package for NTXN82AB.

### Description

The enhanced emergency stand-alone (ESA) package for lines and trunks supports calls that single or dual Remote Switching Center (RSC) configurations handle. The ESA package supports calls during ESA (warm) entry and ESA (warm) exit.

This feature provides warm ESA entry for single and dual RSCs. The ESA allows a remote cluster controller (RCC) to provide local call control service with a minimal feature set during emergency conditions. The RCC can perform warm entry and exit for ESA and forced ESA (FESA).

---

## Enhanced ESA (Lines and Trunks) (continued)

---

Warm ESA entry allows stable intraswitched calls to remain active during ESA entry. The system drops host-switched calls. Stable interswitched calls return after ESA entry if the value of the ESAFORCE option in table INLNKINV is Y(yes). The Y value is for dual configuration.

Warm ESA exit preserves stable calls over the exit. Warm ESA exit provides return-to-service (RTS) procedures for additional nodes and trunks in the RSC. Messaging occurs between the RCC and the central control (CC) during a warm exit. The RCC call data allows the CC to take over supervision and release of calls.

A warm exit uses the following calls:

- calls on terminals that are manually busy (ManB) or involve ManB resources (links or nodes)
- calls that do not obtain resources in the CC
- interswitched calls on a manual exit
- calls dropped if a warm exit reverts to a cold exit because of error conditions

### Changing static data while RCC is in ESA

When static data changes, the static data of each node must change also. The ESA exit involves a complete RTS sequence that includes static data downloading.

The system preserves calls during a warm ESA exit. The system performs an abbreviated RTS sequence. Static data is not downloaded to the ESA active unit as part of the ESA exit sequence. While an RCC is in ESA, the system can make changes to the CC datafill. If a mismatch occurs between the CC datafill and RCC static data, the RCC does not perform a warm exit. The RCC returns to a full RTS sequence. The active ESA unit must contain the new static data to avoid a static data mismatch.

## Enhanced ESA (Lines and Trunks) (continued)

---

The following types of datafill changes affect static data:

- if links on the RCC peripheral side (P-side) or central side (C-side), are added, changed, or deleted, tables:
  - RCCINV
  - RCCPSINV
  - LTCPSINV
- if the nodes off the RCC or the links associated with those voices are added, changed, or deleted, tables:
  - LCMINV
  - RMMINV
  - RCCPSINV
- if the card list of the RCC or nodes of the RCC are added, changed, or deleted, tables:
  - LCMINV
  - RMMINV
  - RCCPSINV
- tables that define trunk groups, or trunks that relate to the RCC are added, changed, or deleted.
- table RCCINV, if the exec data for the RCC is added, changed or deleted
- global office parameters, if the changes affect the RSC configuration.
- table IRLNKINV, if changed.

### Operation

A change in subscriber line data does not affect the warm ESA exit sequence. When the ESA active unit of the RCC returns to service, the system flags the unit as in-service trouble (ISTb). The system response to the QUERYPM FLT command at the RCC level of the MAP is static data mismatch.

To clear the ISTb trouble indicator, operating company personnel must perform a switch of activity (SWACT). The original inactive unit with the correct data takes over call processing. The presently inactive unit performs a full RTS sequence as part of the SWACT.



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## Enhanced ESA (Lines and Trunks) (continued)

---

Changes made to line data while the RCC is in ESA affect the line after a warm exit and before a SWACT. Changes to the data that affect the line are as follows:

- A line is deleted in the CC. The RCC considers the line to be present. The RCC attempts to process originations but the CC denies the calls. This also affects intraswitched calls because the call setup involves the CC.
- A line is added in the CC. The RCC considers the line to not be present. The RCC does not allow originations from the line and does not allow terminations on the line.
- A call that is maintained during a warm ESA exit activates features. These features do not operate.
- The system changes the key mapping for a Meridian business set (MBS). The system recognizes these new mappings when the call that is maintained after an exit goes on hook.
- The Digitone option is added or deleted. The system does not recognize this change.
- The LEN is changed. The system treats this as a line that the system adds and then deletes. The system denies originations and terminations from and to that line.

### Translations table flow

The following list describes the Enhanced ESA (Lines and Trunks) translations tables:

- RCCINV
- IRLNKINV

### Limits

The following limits apply to Enhanced ESA (Lines and Trunks):

- Non-Integrated Services Digital Network (non-ISDN) configurations support this feature.
- A call that is maintained during a warm ESA exit cannot activate features on that call for the duration of the call.
- Electronic business set (EBS) terminals support the primary directory number key only.

## Enhanced ESA (Lines and Trunks) (continued)

---

The RCC or one of its subtending nodes do not go through the instant RTS sequence in the following conditions:

- The state of a subtending node changes during ESA. If the state of a subtending node changes while the RSC is in ESA, that node requires a full RTS.
- Static data changes during ESA. If the RSC configuration changes, the RCC requires a full RTS.
- The CC and the active unit cannot restore communication.
- The system restores dial tone within seconds. The amount of dial tone delay depends on the following conditions:
  - Digital Multiplex System (DMS)-100 engine (NT40 or SuperNode)
  - RSC configuration (single or dual)
  - occupancy of the central processing unit (CPU) of the CC
  - occupancy of the CPUs of the RSC and host expanded peripheral module (XPM)
  - link configuration between the RSC, the host XPM and the CC
  - distance of the RSC from the host XPM
  - call mix: plain ordinary telephone service (POTS), Meridian Digital Centrex (MDC), lines and trunks

### Interactions

Enhanced ESA (Lines and Trunks) functionality interactions.

### Activation/deactivation by the end user

Enhanced ESA (Lines and Trunks) does not require activation or deactivation by the end user.

### Billing

Enhanced ESA (Lines and Trunks) does not affect billing.

### Station Message Detail Recording

Enhanced ESA (Lines and Trunks) does not affect Station Message Detail Recording.

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## Enhanced ESA (Lines and Trunks) (continued)

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### Datafilling office parameters

The following table describes the office parameters Enhanced ESA (Lines and Trunks) uses. For more information about office parameters, refer to *Office Parameters Reference Manual*.

#### Office parameters ESA lines and trunks

| Table name | Parameter name        | Explanation and action                                                                  |
|------------|-----------------------|-----------------------------------------------------------------------------------------|
| OFCENG     | RSC_ESA_NOTIFY_TONE   | Defines if the subscriber hears a tone burst when the system enters ESA. Default: Y     |
|            | RSC_ESAENTRY_BADCSIDE | Prevents the RCO2 from entering ESA while the C-side PM performs a restart. Default: 15 |
|            | RSC_XPMESAEXIT        | Delays ESA exit to prevent bouncing links. Default: 0                                   |
|            | RSC_ESASDUPD_BOOL     | Specifies if the system must perform updates of static data each night. Default: YES    |
|            | RSC_ESASDUPD_HOUR     | Specifies the start time for daily update of ESA static data. Default: 1                |

### Datafill sequence

The following table lists the tables that require datafill to use Enhanced ESA (Lines and Trunks). The tables appear in the order that the user must enter datafill.

#### Datafill tables that Enhanced ESA (Lines and Trunks)

| Table    | Purpose of table                                                                                                                                                                       |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OFCENG   | Office Engineering. This table contains data on engineering parameters for the office. Refer to <i>Datafilling office parameters</i> for information on how affects office parameters. |
| RCCINV   | Remote cluster controller inventory. This table contains inventory data for the RCO2. This table does not contain data on P-side link assignments.                                     |
| IRLNKINV | Inter-RCC link inventory. This table contains an entry for every RCC datafilled in table RCCINV, with the inter-RCC, interlinks and ESAFORCE option.                                   |

### Datafilling table RCCINV

The ESA tuple in table RCCINV must contain a value of Y (yes).

## Enhanced ESA (Lines and Trunks) (continued)

The following table shows the datafill for Enhanced ESA (Lines and Trunks) for table RCCINV. The table only shows those fields that apply directly to Enhanced ESA (Lines and Trunks). For a description of the other fields, refer to the data schema section of the *Translations Guide*.

### Datafilling table RCCINV

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Subfield or refinement | Entry         | Explanation and action                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TERMTYPE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                        | see subfields | Terminal type. Contains subfields TRMTYPE, EXEC, and CONTMARK. Each terminal type associates with specific executive programs.                                                                                                                                                                                                                                           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | TERMTYPE               | alphanumeric  | Terminal type. Enter the type of terminal models: <ul style="list-style-type: none"> <li>• POTS (regular lines)</li> <li>• KEYSET (EBS/data lines)</li> <li>• RMM_TERM (remote MTC trunks)</li> <li>• ABTRK (regular trunks)</li> <li>• ESA (Emergency Stand Alone lines)</li> <li>• MX5X09 (Meridian 9 button set)</li> <li>• M5X12 (Meridian 12 button set)</li> </ul> |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | EXEC                   | alphanumeric  | Executive programs. Enter terminal type executive programs. Examples: <ul style="list-style-type: none"> <li>• POTSEX</li> <li>• KSETEX</li> <li>• DTCEX</li> <li>• ESAEX</li> <li>• RSMEX</li> </ul>                                                                                                                                                                    |
| ESA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                        | Y or N        | Emergency stand alone. Enter Y(yes) or N(no). Controls the RCC ESA capability.                                                                                                                                                                                                                                                                                           |
| INTRSW                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                        | Y or N        | Intraswitching. Field INTRSW is a boolean that turns intraswitching ON or OFF.                                                                                                                                                                                                                                                                                           |
| <p><b>Note:</b> When you enter data in field C-side link table (CSLNKTAB), do not assign more than one message link to each interface card. When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This step applies to all interface link types; DS-1, DS30, DS30A, and PCM-30. Table control issues a warning if you make an attempt to assign message links on the same interface card. If the system assigns message links to the same interface card, an E1 outage (failure of all message links) can occur.</p> |                        |               |                                                                                                                                                                                                                                                                                                                                                                          |

---

## Enhanced ESA (Lines and Trunks) (continued)

---

### Datafill example for table RCCINV

The following is an example of sample datafill for table RCCINV.

### MAP display example for table RCCINV

```

RCCNAME
ADNUM  FRTYPE  FRNO  SHPOS  FLOOR  ROW  FRPOS  EQPEC  LOAD
                                EXECTAB
CSPM
                                CSLNKTAB
ESA  INTRASW
                                OPTCARD
TONESET  PROCPEC  E2LOAD
-----
CARY  RCC 0
      1005  RCE   0   18   0  C   0  6X12AA  ESR06BB
(  POTS POTSEX) (  KEYSET KSETEX) (ABTRK DTCEX) (RMM_TERM RSMEX) $
(ESALINES ESAEX)
LTC 1
      (0) ( NILPORT) (2) (NILPORT) (3) (4) (5) (6) (7)$
Y      Y
      (UTR16) (  MSG6X69) (  CMR18 CMR03A) (  NT7X05AA 12) $
NORTHAM  MX77AA  MX77AA  MX77MA24

```

### Datafilling table IRLNKINV

Table Interlink Inventory (IRLNKINV) contains an entry for every RCC entered in table RCCINV. This table also provides the link assignments for the DRCC. This table also contains the field ESAFORCE. This field allows the operating company personnel to have the RCC enter forced ESA.

### Interswitching calls are affected by ESA Warm Entry

The ESA Warm Entry feature preserves stable intraswitched calls over ESA entry. The DRCC also preserves stable interswitched calls, if the ESAFORCE option is set to Y (yes). If the ESAFORCE option is set to N (no), the system drops interswitched calls.

The following table shows the datafill for Enhanced ESA (Lines and Trunks) for table IRLNKINV. Only the fields that apply directly to Enhanced ESA

**Enhanced ESA (Lines and Trunks)** (continued)

(Lines and Trunks) are shown. For a description of the other fields, refer to the data schema section of the *Translations Guide*.

**Datafilling table IRLNKINV**

| Field    | Subfield or refinement | Entry  | Explanation and action                                                                                                               |
|----------|------------------------|--------|--------------------------------------------------------------------------------------------------------------------------------------|
| ESAFORCE |                        | Y or N | Enter Y to force the RCC to enter ESA when the interconnected RCC enters ESA. Enter N to cancel this option. The default value is N. |

**Datafill example for table IRLNKINV**

The following example shows sample datafill for table IRLNKINV. When you change a DRCC configuration to a single RCC configuration, delete the RCC configuration in the IRLNKINV table. Enter the \$ for the inter-RCC and carriage returns for the links.

**MAP display example for table IRLNKINV**

| ESAFORCE                                    | INTERRCC       | IRLNKTAB |
|---------------------------------------------|----------------|----------|
| BRSC RCC 0                                  | (BRSC RCC 1)\$ |          |
| (1 1) (3 3) (9 9) (11 11) (12 12) (14 14)\$ |                |          |
| Y                                           |                |          |
| BRSC RCC 1                                  | (BRSC RCC 0)\$ |          |
| (1 1) (3 3) (9 9) (11 11) (12 12) (14 14)\$ |                |          |
| Y                                           |                |          |

---

## Enhanced ESA (Lines and Trunks) (continued)

---

### Error messages for table IRLNKINV

The following error messages apply to table IRLNKINV.

#### Error messages for table IRLNKINV

| Error message                                         | Explanation and action                                                                                                                                                                             |
|-------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| STATIC DATA HAS CHANGED, BSY<br>& RTS BOTH RCCs       | A new DRCC is configured or the interlink assignments of a current DRCC change. Busy and return to service (RTS) the inactive RCC unit and SWACT the RCC (or both RCCs of the dual configuration). |
| PORT <i>n</i> IS EQUIPPED AS C-side<br>LINK           | A port <i>n</i> enters an interlink already equipped as a C-side link and is not available for an interlink.                                                                                       |
| DELETE COMMAND NOT ALLOWED,<br>USE THE CHANGE COMMAND | Operating company personnel enter the DELETE command while in table IRLNKINV. Use the CHANGE command to delete an interlink.                                                                       |
| OLD PORT <i>n</i> ON HOST IS NOT<br>MANBSY            | Operating company personnel attempt to delete an in-service link.                                                                                                                                  |
| INVALID C-side LINKS.<br>RELOCATE NODE FAILED         | Operating company personnel attempt to delete a link, and the following link is in service.                                                                                                        |

### Translation verification tools

The following example shows the display ESATOOLS generates when it verifies Enhanced ESA (Lines and Trunks).

The ESATRAVER tool allows operating company personnel to perform a TRAVER on ESA-specific translations. The TRAVER verifies the translations that occur during ESA.

#### Example of the ESATOOLS display for Enhanced ESA (Lines and Trunks)

```

>ESATOOLS
  ESATOOLS
>SETRCC site_name RCC rcc_no
```

## Enhanced ESA (Lines and Trunks) (end)

---

*where:*

**site\_name**

is the name of the site of the RCC

**rcc\_no**

is the number of the RCC associated with the ESA trunks

```
>ESATRAVER L from_digits to_digits B
```

*where:*

**from\_digits**

is the translations directory number or incoming trunk common language location identifier (CLLI)

**to\_digits**

is the terminating end of the translations

```
>QUERYRCC TR DETAIL
```

## SERVORD

Enhanced ESA (Lines and Trunks) does not use SERVORD.



---

## ESA lines

---

### Functional group

Functional group: BAS00012

### Feature package

Feature package: Remote Switching Center—ESA Lines NTX149AA

### Release applicability

BCS20 and up

### Prerequisites

To operate, ESA lines has the following prerequisites:

- Bilge NTX000AA
- Common Basic NTX001AA
- Remote Switching Center NTX145AA
- New Peripheral Maintenance NTX270AA
- Local Features I NTX901AA

### Description

The following software feature packages are needed by the remote cluster controller (RCC) to enable emergency stand-alone (ESA) for the Remote Switching Center (RSC):

- Integrated Business Network NTX100AA
- ACD Support Software 1 NTXZ00AA

### Controlling ESA for lines

Data must be downloaded to the RCC before the RCC enters ESA. The following sections explain what this data contains.

#### Overview of ESA translations

Translation facilities for the RSC ESA mode call operations are controlled by the ESA Task software. ESA Task software consists of additional software required for ESA. ESA Task software contains the ESA Central Controller (CC) software module. The ESA CC emulates the DMS CC when the RSC is in ESA.

During ESA, Automatic Number Identification (ANI) routes over emergency service trunks from an RSC to an E911 Tandem. When in ESA, the RSC always routes the first party on a multi-party line; all hunting starts with the first party.

## ESA lines (continued)

---

If an emergency service trunk is busy, hunting continues until the list is exhausted or until a good trunk is located. In a dual configuration, each RCC has its own emergency service trunk to the E911 Tandem; ANI cannot pass over interlinks. The E911 Tandem can be a Digital Multiplex System (DMS), 1AESS, or 5ESS.

### What the ESA download data contains

ESA static data is a subset of translation data from the DMS CC. ESA logs are generated when downloaded data exceeds the RSC ESA maximum.

## Operation

RSC ESA cannot be entered until the ESA Task software is loaded with ESA static data. ESA static data must be downloaded from the DMS CC to the ESA Task software if a change is made to any of the following ESA translation data tables:

- ESAPXLA (ESA prefix translation)
- ESARTE (ESA route)
- ESAHNPA (ESA home number planning area)
- ISTRKGRP (Intraswitched trunk group)
- CUSTHEAD (customer group)
- IBNRTE (MDC routing)
- OFRT (office routing)
- HNPACONT;SUBTABLE RTETREF (NPA routing)
- FNPACONT;SUBTABLE RTEREF (FPA routing)
- LCASCRCN;SUBTABLE LCASCR (local calling area screening)

When an RSC is under host control, translations are done by DMS CC. When an RSC is in ESA mode, translations are done by ESA CC using a subset of translations data from DMS CC. This subset is a snapshot of DMS CC data needed for ESA call processing.

Because downloading ESA static data to ESA CC truncates some translations data, ESA static data is not a true subset of DMS CC. ESA logs are generated when downloaded data exceeds the RSC ESA maximum.

**ESA lines** (continued)

Refer to the following table for RSC ESA internal translation data tables, entries, maximum entry types, and applicable ESA logs for downloading errors.

**ESA CC data tables**

| Table            | Type                               | Maximum | Download warning |
|------------------|------------------------------------|---------|------------------|
| Terminal data    | One per terminal                   | 5760    |                  |
| Automatic line   | One per AUL line                   | 256     | ESA101           |
| Customer group   | One per group                      | 288     | ESA102           |
| Prefix header    | One per customer group             | 288     |                  |
| Prefix table     | One per ESA prefix translator POTS | 16      | ESA103           |
|                  | Customer group                     | 8       |                  |
| Extension header | One per customer group             | 288     | ESA103           |
| EFG              |                                    | 2304    |                  |
| ABCD             | One per directory number (DN)      | 5760    | ESA105           |
| Hunt header      | One per hunt group                 | 2000    | ESA106           |
| Hunt member      | One per hunt group                 | 5000    | ESA107           |
| Office parameter |                                    | 3       |                  |

Of the six office parameters, three are downloaded to the RSC ESA CC and three are read by the DMS CC.

The following office parameters are downloaded to the RSC ESA CC:

1. RSC\_ESA\_NOTIFY\_TONE

The following office parameters are read by the DMS CC:

1. RSC\_XPMESAEXIT (DMS CC enters the ESA timeout mode)
2. RSC\_ESASDUPD\_BOOL
3. RSC\_ESASDUPD\_HOUR

RSC ESA CC reads its parameters after communications to the host are stopped. DMS CC reads office parameters for static data updates and when communications to the RCC are restored.

## ESA lines (continued)

---

### Translations table flow

ESA lines translations does not affect translations table flow.

### Limitations and restrictions

ESA lines The maximum number of ESA hunt groups is increased at XPM05 from 200 to 2000. The maximum number of ESA hunt group members is increased from 4000 to 5000. In the dual configuration the maximum number of members assigned in table HUNTMEM is 4999 for each RCC+ or RCC2 of the dual configuration.

Defining more than 2000 hunt groups results in the generation of an ESA106 log, at the time of download. Loading of ESA DATA will fail with the reason “*esa data load failed*”, the RCC+/RCC2 will go into an ISTb state .

Defining more than 5000 hunt group members results in the generation of an ESA107 log, at the time of download. Loading of ESA DATA will fail with the reason “*esa data load failed*”, the RCC+/RCC2 will go into an ISTb state .

### Interactions

ESA lines has no functionality interactions.

### Activation/deactivation by the end user

#### Activating ESA

Perform the following steps to activate the ESA NTX149AA.

#### Activation of ESA lines by the end user

##### *At the MAP terminal*

- 1 Access table OFCENG and analyze tuples controlling RSC ESA functions.  
Enter  

```
>TABLE OFCENG
>LIST 5
```

**Note:** This command lists all 5 tuples controlling ESA functions for all RCCs in the office.
- 2 Change the office parameters, if required.
- 3 Quit table OFCENG by typing  

```
>QUIT
```
- 4 Datafill field EXEC TAB in table RCCINV to include term-type ESALINES and exec-lineup ESAEX for supporting call processing in ESA.
- 5 Change field ESA in table RCCINV from N to Y to enable the ESA feature.
- 6 Datafill table ESAPXLA, if necessary.
- 7 Activate the ESA feature in the RCC using the following procedures:

**ESA lines** (continued)

Manually busy and return the inactive RCC unit to service.  
 SWACT the RCC.  
 Manually busy and return the inactive RCC unit to service.

**Billing**

ESA lines does not affect billing.

**Station Message Detail Recording**

ESA lines does not affect Station Message Detail Recording.

**Datafilling office parameters**

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

**Office parameters used by ESA lines**

| Table name | Parameter name      | Explanation and action                                                                |
|------------|---------------------|---------------------------------------------------------------------------------------|
| OFCENG     | RSC_XPMESAEXIT      | Delays ESA exit to prevent bouncing links. Value: 6.                                  |
|            | RSC_ESASDUPD_BOOL   | Specifies whether or not nightly updates of static data are performed. Value: YES.    |
|            | RSC_ESASDUPD_HOUR   | Specifies the starting time of the daily update of ESA static data. Value: 2.         |
|            | RSC_ESA_NOTIFY_TONE | Defines whether or not a subscriber hears a tone burst when ESA is entered. Value: Y. |

**Office parameter RSC\_XPMESAEXIT (exit delay)**

The time-out, RSC\_XPMESAEXIT, is implemented in ESA-EXIT to protect against bouncing links. It allows time for a bad link to become stable after the link recovers.

During RSC\_XPMESAEXIT time-out, the RCC continues to run in ESA mode and the CC communicates with the ESA unit every ten seconds to determine if the links to the RCC are operational.

If communications fail again during RSC\_XPMESAEXIT time-out, the CC does not proceed with the ESA-EXIT procedure.

If the RSC\_XPMESAEXIT parameter is set to zero, the default value, manual intervention is required during ESA-EXIT.

## ESA lines (continued)

The RSC\_XPMESAEXIT office parameter specifies the ESA-EXIT delay time. Operating company personnel must implement manual exit if the RSC\_XPMESAEXIT office parameter is set to zero or if the RCC unit is in the ManB state. Following is an explanation of the fields and an example:

- Name: RSC\_XPMESAEXIT
- Type: EXIT\_DELAY\_TYPE
- Default: 0 (0 seconds)
- Minimum value: 0 (0 seconds)
- Maximum value: 100 (1000 seconds)

### MAP display example for office parameter RSC\_XPMESAEXIT

| PARAMNAME      | PARMVAL |
|----------------|---------|
| RSC_XPMESAEXIT | 6       |

During exit time-out, time-out status is displayed at the MAP showing time-out count down. For example, ESA T.O.10 means there are approximately ten seconds left in the time-out. Time-out status is updated approximately every ten seconds.

During the ESA-EXIT process, an ESA EXIT flag is displayed at the MAP to indicate that the RCC is exiting ESA.

### Office parameters that control the downloading of ESA static data

The following table lists the required office parameters that appear in a switching unit with NTX149AA. All office parameters are described in *Office Parameters Reference Manual*.

#### Parameters that control ESA static data updates

| Table name                                                                                                                                                                                                     | Parameter name    | Explanation and action                                                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------------------------------------------------------------------|
| OFCENG                                                                                                                                                                                                         | RSC_ESASDUPD_BOOL | Specifies if static data nightly updates should be scheduled. Default value: Y.            |
| OFCENG                                                                                                                                                                                                         | RSC_ESASDUPD_HOUR | Specifies the daily starting time for the nightly update of static data. Default value: 2. |
| <p><b>Note:</b> An RSC and RLCM should not be on the same static data update hour. Corruption of ESA static data can occur when both are at the same hour, especially in remote-off-remote configurations.</p> |                   |                                                                                            |

**ESA lines** (continued)**RSC\_ESASDUPD\_BOOL (nightly updates)**

The RSC\_ESASDUPD\_BOOL office parameter specifies whether or not static data nightly updates are scheduled. If the value is Y (the default), static data is downloaded at nightly update. Following is an explanation of the fields and an example:

- Name: RSC\_ESASDUPD\_BOOL
- Type: BOOLEAN
- Default: YES
- Range: YES or NO

**MAP display example for RSC\_ESASDUPD\_BOOL**

| PARMNAME          | PARMVAL |
|-------------------|---------|
| RSC_ESASDUPD_BOOL | Y       |

**RSC\_ESASDUPD\_HOUR (time for static download)**

The RSC\_ESASDUPD\_HOUR office parameter specifies the daily starting time for the nightly update of static data. Following is an explanation of the fields and an example:

- Name: RSC\_ESASDUPD\_HOUR
- Type: ESASDUPD\_TYPE
- Default: 1 (01:00 HR), using a 24-hour clock
- Range: 0 (00:00 HR) through 23 (23:00 HR)

**MAP display example for RSC\_ESASDUPD\_HOUR**

| PARMNAME          | PARMVAL |
|-------------------|---------|
| RSC_ESASDUPD_HOUR | 2       |

The updating of static data takes between three and five minutes. Set this parameter so that the data transfer:

- occurs during a low-traffic period
- does not occur while you are taking an office image or while system software is performing automatic routine exercise (REX) tests

## ESA lines (continued)

---

To determine when the REX is performed, view parameters CC\_REX\_SCHEDULED\_HR in table OFCENG. The CC tests take about 12 minutes, and starts 15 minutes after the time set in the parameter.

### Office parameter RSC\_ESA\_NOTIFY\_TONE

This parameter controls whether or not the subscriber hears a distinctive dial-tone burst (0.25 seconds on, 0.25 seconds off) to alert the end-user that the RCC is in ESA. The following table shows the parameters that control entering and exiting ESA.

### Modifying ESA parameters

Use the table editor to make changes to modify the following parameters:

- RSC\_ESASDUPD\_BOOL
- RSC\_ESASDUPD\_HOUR
- RSC\_XPMESAEXIT
- RSC\_ESA\_NOTIFY\_TONE

### Modifying parameters through the table editor

Use the following procedure to change an office parameter using the table editor.

#### Modifying parameters through the table editor

##### *At your current position:*

- 1 Ensure you have access to table OFCENG.
- 2 Access table OFCENG and position on the parameter by typing  
`>TABLE OFCENG`  
`>POS RSC_XPMESAEXIT`
- 3 Change the parameter to the desired value by typing  
`>CHA`
- 4 Enter the desired parameter by typing  
`>n`  
*where:*  
n is a number from 0 to 100 in 10-second increments.
- 5 Confirm the change by typing  
`>Y`
- 6 Quit table OFCENG by typing  
`>QUIT`
- 7 Post all RCCs in the office by typing  
`MAPCI;MTC;PM;POST RCC ALL`



**ESA lines** (continued)

- 8 Broadcast load ESA static data to all inactive units by typing  
>LOADPM INACTIVE CC ESADATA ALL
- 9 Perform a warm switch-of-activity by typing  
>SWACT ALL
- 10 Confirm the SWACT by typing  
>Y
- 11 Broadcast load ESA static data to all inactive units by typing  
>LOADPM INACTIVE CC ESADATA ALL
- 12 Quit the MAP levels by typing  
>QUIT ALL

**Datafill sequence**

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

**Datafill tables required for ESA lines**

| Table                                                                                                                       | Purpose of table                                                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OFCENG                                                                                                                      | Office Engineering. This table contains data on engineering parameters for the office. Refer to "Datafilling office parameters" for how ESA lines affects office parameters. |
| RCCINV                                                                                                                      | Remote Cluster Controller Inventory. This table contains the inventory data except the P-side link assignments for the remote cluster controller (RCC).                      |
| ESAPXLA                                                                                                                     | Emergency Stand-Alone (ESA) Prefix Translation. This table contains special prefix translation data used for POTS and MDC customer groups.                                   |
| CUSTHEAD                                                                                                                    | Customer Group Head. This table lists the names assigned to the blocks of data in table IBNXLA that store the data for digit translation.                                    |
| <b>Note:</b> Table CUSTHEAD is required for IBN lines. IBN lines must link to a particular customer group in table ESAPXLA. |                                                                                                                                                                              |

**ESA lines** (continued)

**Datafilling table RCCINV**

The following table shows the datafill specific to ESA lines for table RCCINV. Only those fields that apply directly to ESA lines are shown. For a description of the other fields, refer to the data schema section of the *Translations Guide*.

**Datafilling table RCCINV**

| Field              | Subfield or refinement | Entry                                                       | Explanation and action                                                                                                                                                                                                                                                                                                                                            |
|--------------------|------------------------|-------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EXECTAB            |                        | see subfields                                               | Executive table. This field consists of subfields TRMTYPE and EXEC.                                                                                                                                                                                                                                                                                               |
|                    | TRMTYPE                | KEYSET, RMM_TERM, R1_TERM, ABTRK, ESALINES                  | Terminal type. Enter PM terminals used: POTS for regular lines, KEYSET for IBN/data lines, RMM_TERM for RMM terminals, ABTRK for regular trunks, or ESALINES for Emergency Stand-Alone lines.                                                                                                                                                                     |
| EXECTAB(continued) | EXEC                   | POTSEX, KSETEX, RSMEX, DTCEX, FXODCM, DCM250, DTC300, ESAEX | Executive programs. Enter the set of executive programs required for the PM specified in field TRMTYPE: POTSEX if TRMTYPE is POTS, KSETEX if TRMTYPE is KEYSET, RSMEX if TRMTYPE is RMM_TERM, DTCEX or FXODCM (depending on the type of trunking) if TRMTYPE is ABTRK, DCM250 is TRMTYPE is AB250, DTC300 if TRMTYPE is R1_TERM, or ESAEX if TRMTYPE is ESALINES. |
| ESA                |                        | Y or N                                                      | Emergency stand-alone. Enter Y if the RSC has the ESA option. Otherwise, enter N.                                                                                                                                                                                                                                                                                 |

**Note:** When datafilling field C-side link table (CSLNKTAB), assure message links are not assigned to the same physical interface card. When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This applies to all interface link types; DS-1, DS30, DS30A, or PCM-30. Table control will issue a warning if an attempt is made to assign message links on the same interface card. Assigning message links to the same interface card can cause an E1 outage (failure of all message links) if the card fails.

**Changing the ESA flag**

When the flag changes, a warning appears at the MAP display to indicate an update of RCC static data or ESA static data is required. The RCC is marked ISTb (in-service trouble) for one of the following reasons: STATIC DATA  
ESA STATIC DATA

**ESA lines** (continued)

To change the ESA flag, perform the following steps:

1. Change the ESA field in table RCCINV to the required setting.
2. Manually busy and return-to-service the inactive RCC unit.
3. SWACT the RCC.
4. Manually busy and return-to-service the new inactive RCC unit.

**Datafill example for table RCCINV**

The following example shows sample datafill for table RCCINV.

**MAP display example for table RCCINV**

```

RCCNAME ADNUM  FRTYPE  FRNO  SHPOS  FLOOR  ROW  FRPOS  EQPEC  LOAD
                                EXECTAB
CSPM
                                CSLNKTAB
ESA  INTRASW
                                OPTCARD
TONESET  PECS6X45  E2LOAD
-----
CARY  RCC 0
      1005  RCE   0   18   0  C   0  6X12AA  ESR06BB
( POTS POTSEX) ( KEYSET KSETEX) (ABTRK DTCEX) (RMM_TERM RSMEX) $
(ESALINES ESAEX)
LTC 1
      (0) ( NILPORT) (2) (NILPORT) (3) (4) (5) (6) (7)$
Y      Y
      (UTR16) ( MSG6X69) ( CMR18 CMR03A) ( NT7X05AA 12)$
NORTHAM MX77AA  MX77AA  MX77NH08

```

**Error messages for table RCCINV**

No error messages are listed for table RCCINV.

**Datafilling table ESAPXLA**

Table Emergency Stand-Alone Prefix Translation (ESAPXLA) contains special prefix translation data used for POTS and MDC customer groups.

During regular operation of either the RCC or the remote line concentrating module (RLCM), this table is not used. That is, translations are performed in the CC. However, if communication with the host is lost and the RCC or RLCM enters ESA mode, this table is used in the prefix translations.

The following table shows the datafill specific to ESA lines for table ESAPXLA. Only those fields that apply directly to ESA lines are shown. For

**ESA lines** (continued)

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

**Datafilling table ESAPXLA (Sheet 1 of 5)**

| <b>Field</b>        | <b>Subfield or refinement</b> | <b>Entry</b>                       | <b>Explanation and action</b>                                                                                                                                                                                                                                                                                                                                        |
|---------------------|-------------------------------|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PXLAKEY             |                               | see subfields                      | Prefix translator key. This key identifies a set of prefix digits on a certain site for a particular set of customers. It consists of subfields XLANAME, NODE, and PREFIX.                                                                                                                                                                                           |
|                     | XLANAME                       | alphanumeric (up to 16 characters) | Prefix translator name. If this translation is required for any POTS line on the remote, enter ESAPOTS (emergency stand-alone [ESA] plain ordinary telephone service [POTS]). If it is required for a particular Integrated Business Network (IBN) customer group, enter any name up to eight characters and relate this name to a customer group in table CUSTHEAD. |
|                     | NODE                          | see subfields                      | Node. This field consists of subfields PMTYPE, LCMNO, SITE and RCCNO.                                                                                                                                                                                                                                                                                                |
|                     | PMTYPE                        | RCC                                | Peripheral module type. This field identifies the peripheral node with which the translator identified in subfield XLANAME is associated.<br><br>If LCM or DLM is entered, datafill refinement LCMNO.                                                                                                                                                                |
|                     | LCMNO                         | see subfields                      | Line concentrating module number. If the entry in subfield PMTYPE is LCM or DLM, datafill this refinement. This field specifies the RLCM or RDLM to which this translator applies and consists of subfields SITE, FRAME and UNIT.                                                                                                                                    |
|                     | SITE                          | alphanumeric (4 characters)        | Site. Enter the site name assigned to the location of the RLCM or RDLM.                                                                                                                                                                                                                                                                                              |
| PXLAKEY (continued) | FRAME                         | 0 to 511                           | Frame. Enter the frame number of the RLCM or the RDLM at the site specified in field SITE. If the RLCM or RDLM has an RMM, the range is 0 to 63. For RDLMs, the frame number refers to the logical frame number of the RDLM, not the physical frame number. Each physical frame number is divided into two logical frames.                                           |

**ESA lines** (continued)

Datafilling table ESAPXLA (Sheet 2 of 5)

| Field  | Subfield or refinement | Entry                       | Explanation and action                                                                                                                                                                                                                                                                                                                      |
|--------|------------------------|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RESULT | UNIT                   | 0 or 1                      | Unit. Enter the unit number of the RLCM or the RDLM in the frame. For the LCM, the lower unit in the frame is unit 0 and the upper unit in the frame is unit 1. For the DLM, this field specifies the shelf number. There are two shelves for each logical frame. The lower shelf is 0 and the upper shelf is 1.<br><br>Go to field PREFIX. |
|        | SITE                   | alphanumeric (4 characters) | Site. Enter the name assigned to the location of the peripheral module.                                                                                                                                                                                                                                                                     |
|        | RCCNO                  | 0 to 255                    | Remote cluster controller number. Enter the peripheral module number of the peripheral module.                                                                                                                                                                                                                                              |
|        | PREFIX                 | 0 to 9 (up to 15 digits)    | Prefix digits. Enter the 1 to 15 digit prefix associated with the required translation.                                                                                                                                                                                                                                                     |
|        |                        | see subfields               | Translation result. This field defines the action that is taken when the previously defined prefix digits are dialed on the remote. It consists of subfield SEL and its refinements.                                                                                                                                                        |
|        | SEL                    | L                           | Selector. If the prefix digits entered in the PREFIX field specify a line, then enter selector L and datafill refinements of: <ul style="list-style-type: none"> <li>• LEN—line equipment number multiple with the SITE, FRAME, UNIT, LSG and CIRCUIT</li> <li>• AMBIG—ambiguous, (Y or N)</li> <li>• RNGCD—ring code (0 to 7).</li> </ul>  |

**ESA lines** (continued)

Datafilling table ESAPXLA (Sheet 3 of 5)

| Field | Subfield or refinement | Entry | Explanation and action                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------|------------------------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       |                        | H     | <p>Selector. If the prefix digits entered in the PREFIX field specify a hunt group, then enter selector H multiple with hunt group number from table HUNTGRP, member number from table HUNTMEM and specify if the prefix digit is ambiguous, when terminating to a hunt group. Refinements are:</p> <ul style="list-style-type: none"> <li>• HTGRP—hunt group number ( 0 to 2000)</li> <li>• SEQNO—sequence number (0 to 255)</li> <li>• AMBIG—ambiguous, (Y or N).</li> </ul> |
|       |                        | T     | <p>Selector. If the prefix digits entered in the PREFIX field specify a treatment , then enter selector T and datafill refinements of:</p> <ul style="list-style-type: none"> <li>• REORDER—a fast busy tone</li> <li>• SRPXLA—strip the prefix digit and translate dialed digits</li> <li>• SRPDXLA—strip the prefix digit, provide a second dial tone and translate dialed digits.</li> </ul>                                                                                |
|       |                        | R     | <p>Selector. If the prefix digits entered in the PREFIX field specify routing to a trunk with standard routing, then enter selector R and datafill refinements of:</p> <ul style="list-style-type: none"> <li>• RR—route number, (0 to 255)</li> <li>• NUMDIG—number of digits</li> <li>• AMBIG—ambiguous, (Y or N).</li> </ul>                                                                                                                                                |
|       |                        | D     | <p>Selector. If the prefix digits entered in the PREFIX field specify routing to a trunk with direct routing, then enter selector D and datafill refinements of:</p> <ul style="list-style-type: none"> <li>• RR—route number, (0 to 255)</li> <li>• NUMDIG—number of digits</li> <li>• DIALTONE—second dialtone, (Y or N).</li> </ul>                                                                                                                                         |

**ESA lines** (continued)

Datafilling table ESAPXLA (Sheet 4 of 5)

| Field                 | Subfield or refinement | Entry                          | Explanation and action                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------|------------------------|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RESULT(cont<br>inued) |                        | A                              | Selector. If the prefix digits entered in the PREFIX field specify a route to an alternate selector, then enter selector A and datafill refinements of: <ul style="list-style-type: none"> <li>• XLANAME—alternate translator, default is ESAPOTS</li> <li>• DIALTONE—second dialtone, (Y or N).</li> </ul>                                                                                                                                                        |
|                       | LEN                    | see subfields                  | Line equipment number. This field defines the line on which the call is to terminate. It consists of subfields SITE, FRAME, UNIT, LSG, and CIRCUIT.                                                                                                                                                                                                                                                                                                                |
|                       | SITE                   | alphanumeric<br>(4 characters) | Site. Enter the name assigned to the site where the termination line is located. Since the remote is operating in ESA, there is no communication with the host. This site must match the site specified in the node subfield.                                                                                                                                                                                                                                      |
|                       | FRAME                  | 0 to 511                       | Frame. Enter the frame number at this site that contains the line card for the termination line. If the entry in subfield PMTYPE is DLM or LCM, this frame number must match the frame number specified in subfield LCMNO. This is because ESA in an RLCM or RDLM can support communications only within the same RLCM or RDLM.<br><br>If the entry in subfield PMTYPE is RCC, communication is supported between all of the LCMs or the DLMs attached to the RCC. |
|                       | UNIT                   | 0 or 1                         | Unit. Enter the unit number of the DLM, LCM, RDLM, or RLCM to which the line is assigned. If the entry in subfield PMTYPE is DLM or LCM, this unit number must match the unit number specified in subfield LCMNO. The lower LCM in the frame is unit 0 and the upper LCM in the frame is unit 1. For the DLM, this field specifies the shelf number. There are two shelves per logical frame. The lower shelf is 0 and the upper shelf is 1.                       |

**ESA lines** (continued)

**Datafilling table ESAPXLA (Sheet 5 of 5)**

| Field              | Subfield or refinement | Entry   | Explanation and action                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------|------------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                    | LSG                    | 0 to 19 | Line subgroup. Enter the number of the line subgroup of the DLM, LCM, RDLM, or RLCM unit in which the line card for that line is assigned.                                                                                                                                                                                                                                                                                                                                       |
|                    | CIRCUIT                | 0 to 31 | Line card circuit number. Enter the line card circuit number of the line subgroup where the line card is assigned.                                                                                                                                                                                                                                                                                                                                                               |
| RESULT(cont inued) | AMBIG                  | Y or N  | Ambiguous. If the same digits can be dialed as the first digits of another number, enter Y (yes). For example, digits 123 are ambiguous if another acceptable number is 12356. If Y is entered, the remote waits for further digits. If none are entered within a timeout period, the switching process begins.<br><br>If the prefix digits are completely unique, enter N (no). If N is entered, the switching process begins immediately after those prefix digits are dialed. |
|                    | RNGCD                  | 0 to 5  | Ring code. Enter the code for the type of ringing associated with the line specified in field LEN. This is for lines on a DLM or LCM.                                                                                                                                                                                                                                                                                                                                            |

**Datafill example for table ESAPXLA**

The following example shows sample datafill for table ESAPXLA.

**MAP display example for table ESAPXLA**

| PXLKEY  |     |      |   |     |   | RESULT |   |    |    |    |           |
|---------|-----|------|---|-----|---|--------|---|----|----|----|-----------|
| ESAPOTS | RCC | REM1 | 0 | 411 | L | REM100 | 0 | 00 | 02 | Y  | 1         |
| IBN1    | RCC | REM1 | 0 | 4   |   |        |   |    |    | T  | REORDER   |
| IBN1    | RCC | REM1 | 0 | 6   |   |        |   |    |    | T  | SRPXL     |
| IBN1    | RCC | REM1 | 0 | 9   |   |        |   |    |    | T  | SRPDXLA   |
| IBN1    | RCC | REM1 | 0 | 7   | H |        |   |    |    | 5  | 7 Y       |
| ESAPOTS | RCC | REM1 | 0 | 5   | R |        |   |    |    | 21 | 7 Y       |
| ESAPOTS | RCC | REM1 | 0 | 8   | D |        |   |    |    | 10 | 4 N       |
| ESAPOTS | RCC | REM1 | 0 | 0   | A |        |   |    |    |    | ESAPOTS Y |



**ESA lines** (continued)**Restrictions**

Restrictions for datafilling ESAPXLA are as follows:

- POTS: up to 16 entries maximum for each RCC
- MDC: up to 8 entries per MDC prefix translator name per RCC

**Error messages for table ESAPXLA**

No error messages are listed for table ESAPXLA.

**Datafilling table CUSTHEAD**

Table Customer Header (CUSTHEAD) links a customer group to the prefix translation table name identified in table ESAPXLA. For IBN lines, it is necessary to link information in the ESAPXLA prefix tables to a particular customer group. Option ESAPXLA specifies the prefix translator name associated with the customer group. If ESA is present, datafill fields OPTION and XLANAME in table CUSTHEAD. If field OPTION does not have OPTION ESAPXLA set, no prefix translation for that customer group is provided.

The following table shows the datafill specific to ESA lines for table CUSTHEAD. Only those fields that apply directly to ESA lines are shown. For a description of the other fields, refer to the data schema section of the *Translations Guide*.

**Datafilling table CUSTHEAD**

| Field                                                                | Subfield or refinement | Entry             | Explanation and action                                                                                             |
|----------------------------------------------------------------------|------------------------|-------------------|--------------------------------------------------------------------------------------------------------------------|
| OPTIONS                                                              |                        | ESAPXLA           | Option. Enter the option ESAPXLA.                                                                                  |
| XLANAME                                                              |                        | 1 to 8 characters | Prefix translator name. Enter the 1- to 8-character name assigned to the Prefix Translator table in table ESAPXLA. |
| <b>Note:</b> Table ESAPXLA must be datafilled before table CUSTHEAD. |                        |                   |                                                                                                                    |

**Datafill example for table CUSTHEAD**

The following example shows sample datafill for table CUSTHEAD.

## ESA lines (end)

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### MAP display example for table CUSTHEAD

| CUSTNAME | CUSTXLA | DGCOLNM                                              | IDIGCOL | OPTIONS |
|----------|---------|------------------------------------------------------|---------|---------|
| POTSDATA | POTSXLA | POTS                                                 | NIL     |         |
|          |         | ( VACTRMT 0) ( EXTNCOS 0)\$                          |         |         |
| COMIBN2  | CXN2    | IBN2                                                 | NIL     |         |
|          |         | (VACTRMT 0) (EXTNCOS 4) (SUPERCNF) (MHOLD 10 AUDIO1) |         |         |
|          |         | (CPR Y AUDIO1 3) (ESAPXLA ESAIBN) \$                 |         |         |

### Error messages for table CUSTHEAD

No error messages are listed for table CUSTHEAD.

### Translation verification tools

To verify the translations that occur during ESA, the ESATRAVER tool allows operating company personnel to perform a TRAVER on ESA-specific translations.

### SERVORD

ESA lines does not use SERVORD.

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## ESA (Lines and Trunks)

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### Functional group

Functional group: BAS00012

### Feature package

Feature package: RSC Emergency Stand Alone—Lines and Trunks  
NTX149AB

### Release applicability

BCS22 and up

### Prerequisites

To operate, ESA (Lines and Trunks) has the following prerequisites:

- ACD Support Software 1 NTXZ00AA
- Civic Services NTX019AA
- Digital Subscriber Service NTX094AA
- Integrated Business Network NTX100AA

ESA (Lines and Trunks) uses the following software feature packages:

- Bilge NTX000AA
- Common Basic NTX001AA
- Remote Switching Center NTX145AA
- RSC Trunking NTX152AA *or* NTX152AB
- New Peripheral Maintenance NTX270AA
- Local Features I NTX901AA

### Description

Many of the concepts that apply to datafilling emergency stand-alone (ESA) for lines apply to datafilling ESA for trunks as well.

#### What the ESA download contains

As with translation for ESA lines, a subset of translation data is used for processing calls during ESA. Also, as with ESA lines, ESA logs are generated when downloaded data exceeds the RSC ESA maximum.

The following table lists the translation data tables, entries, maximum entry types, and applicable ESA logs for downloading errors.

**ESA (Lines and Trunks)** (continued)

Terminal data and supervision templates are required to return a trunk to service and for call processing. This data is collected and sent to the peripheral module (PM) as part of ESA static data.

ESA static data must be downloaded from CC to ESA Task software if a change is made to any of the following tables.

**ESA CC data tables for ESA trunks**

| Table            | Type                                | Maximum | Download warning |
|------------------|-------------------------------------|---------|------------------|
| Terminal data    | one per terminal                    | 5760    |                  |
| Automatic line   | one per AUL line                    | 256     | ESA101           |
| Customer group   | one per group                       | 288     | ESA102           |
| Prefix header    | one per customer group              | 288     |                  |
| Prefix table     | one per ESA prefix translator       | 16      | ESA103           |
|                  | POTS                                | 8       |                  |
|                  | customer group                      |         |                  |
| ESAHNPA table    | one per customer                    |         | ESA110           |
|                  | POTS                                | 32      |                  |
|                  | customer group                      | 16      |                  |
| Extension header | one per customer group              | 288     | ESA104           |
| EFG              |                                     | 2304    |                  |
| ABCD             | one per directory number (DN)       | 5760    | ESA105           |
| Hunt header      | one per hunt group                  | 2000    | ESA106           |
| Hunt member      | one per hunt group                  | 5000    | ESA107           |
| Office parameter |                                     | 1       |                  |
| ESARTE           |                                     | 256     |                  |
| Trunk group      | subset of TRKGRP and TRKSGRP tables | N/A     | ESA109           |

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**ESA (Lines and Trunks) (continued)**

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**Automatic number identification and emergency stand-alone**

During ESA, automatic number identification (ANI) routes over emergency service trunks from an RSC to an E911 Tandem. When in ESA, the RSC always routes the first party on a multi-party line. All hunting starts with the first party.

If a corrupt emergency service trunk is encountered, hunting continues until the list is exhausted or until a good trunk is located.

In a dual configuration, each RCC has its own emergency service trunk to the E911 Tandem; ANI cannot pass over interlinks. The E911 Tandem can be a Digital Multiplex System (DMS), 1AESS, or 5ESS.

**Translations table flow****ESA trunk translations**

Table ESAPXLA contains special prefix translation data used for POTS and MDC customer groups.

ESA trunk translations always compare the dialed digits with those in table ESAPXLA before searching any other translation table. Table ESAPXLA provides directions to the translation process.

The two parts of table ESAPXLA are prefix translation (PXLKEY) and translation result (RESULT). PXLKEY defines a set of prefix digits on a specific remote for all POTS lines or for a particular MDC customer group. RESULT specifies what action to take when a POTS user or a member of a particular IBM customer group at the site dials those digits.

One of the subfields of PXLKEY is XLNAME, the translator name. If the prefix translation is to be executed when those digits are dialed from any POTS line on this remote, ESAPOTS is datafilled in XLNAME. If the prefix translation is to be executed when a certain MDC customer group dials those digits, an alphanumeric name of up to eight characters is datafilled in XLNAME. This same name must be associated with a particular MDC customer group in table CUSTHEAD.

ESA call processing determines the customer group by the data associated with the originator. Customer group data identifies the set of ESAPXLA entries that must be searched. The default is ESAPOTS.

## ESA (Lines and Trunks) (continued)

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Translations can take the following actions:

- Route to a line (ESAPXLA selector L). Connection is made to another line on the RCC. Information identifying that line is datafilled.
- Route to treatment (ESAPXLA selector T). One of the following treatments is required:
  - Reorder tone, delete prefix, and do further translation.
  - Delete prefix, give second dial tone, and do further translation.
- Route to hunt group (ESAPXLA selector H). Call is routed to a hunt group defined in table HUNTGRP. Information identifying the hunt group is entered.
- Route to trunk with standard routing (ESAPXLA selector R). Connection is made to a trunk with standard routing. Information about the route, the number of digits to collect, and the ambiguity of the code is datafilled.
- Route to trunk with direct routing (ESAPXLA selector D). Connection is made to a trunk with direct routing. Information about the route, the number of digits to collect, and second dial tone is datafilled.
- Retranslate (ESAPXLA selector A). Digits are to be retranslated. Information about another prefix translator and second dial tone is datafilled.

**Note:** When selector R or D is chosen, the trunk or route must reside on the RSC.

Table emergency stand-alone home numbering planning area (ESAHNPA) contains prefix translation data used to select outgoing trunks. This table handles normal prefix translation for trunks. Exceptions are handled by table ESAPXLA.

Table ESAHNPA has two parts, prefix translation key (HNPAKEY) and translation result (RESULT). HNPAKEY defines a set of prefix digits on a specific remote for all POTS lines, or for a particular MDC customer group. RESULT specifies what action to take when those digits are dialed.

One of the subfields of HNPAKEY is XLANAME, the translator name. If prefix translation is to be executed when digits are dialed from any POTS line at the RSC, ESAPOTS is datafilled in XLANAME. If prefix translation is to be executed when a certain MDC customer group dials, an alphanumeric name of up to eight characters is datafilled in XLANAME. This name must also be datafilled in table CUSTHEAD.

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**ESA (Lines and Trunks) (continued)**

---

Translation connects a line to a standard route. The information needed to complete the translation is the number of digits to be collected, the name of the route, and whether or not the code is ambiguous. This is datafilled in table ESAHNPA.

Table emergency stand-alone routing (ESARTE) allows greater flexibility in route selection. This table allows the operating company to plan various routes a call can take in ESA. Each entry in ESARTE identifies the ESA trunk group to terminate, and (if necessary) the number of digits to delete.

The index to the route entry is contained in table ESAPXLA or ESAHNPA.

**Translation for incoming line to outgoing trunk**

ESA line translation examines the digits dialed by the subscriber, the switch as a result of standard digit manipulation, or an automatic line. The digits are first compared with the entries in ESAPXLA.

If an entry in ESAPXLA matches the received digits, translation routes to a trunk. If there is no match in ESAPXLA, table ESAHNPA is searched.

If a match is found in ESAHNPA, translation routes to a trunk. Table ESARTE is indexed, based on the route referenced in ESAPXLA or ESAHNPA. The ESA trunk group data is identified in ESARTE. Any digit manipulation indicated for a given route is done at this time.

**Translation for incoming trunk to outgoing trunk or line**

In ESA, any digit manipulation required on the incoming digits is described in the trunk group data of the originator.

For example, for TI trunks, up to four digits can be added to the incoming digit stream or, if the number of incoming digits is variable, the minimum and maximum number expected can be specified.

Translation scans the translator specified in table ESAPXLA.

For IBNTI trunks, only two digits can be added to the incoming digit stream. Dial tone can be expected.

If the trunk is type nilpulse, a four-digit directory number can be specified as the destination. Translation scans the translator specified by the MDC customer group in table ESAPXLA.

To collect trunk group data for an RCC, trunks residing on the RCC must be identified. Trunk groups are located on the P-side of the RCC.

## ESA (Lines and Trunks) (continued)

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For each port assigned as a trunk, the CLI and external trunk number of its trunk circuits address tables TRKMEM, TRKSGRP, TRKGRP, and ISTRKGRP.

If information in the trunk tables indicates that RCC ESA can support a unique trunk, the ESA specific data is collected and sent down to the RCC.

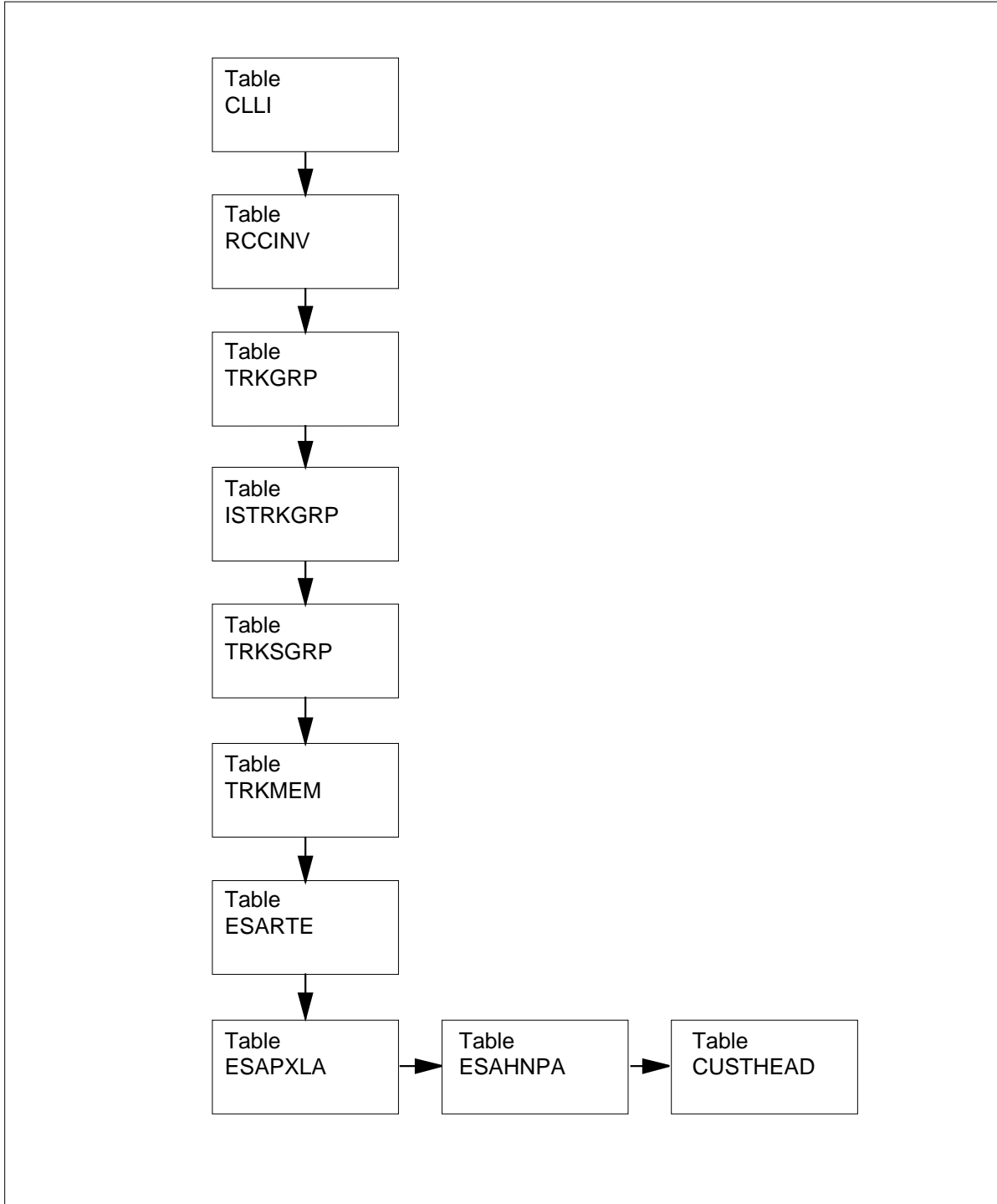
*Note:* To verify translations that occur during ESA, a special tool, ESATRAVER, allows operating company personnel to perform a TRAVER on ESA-specific translations. For more information on this tool, refer to Remote Switching Center Maintenance Guide.

ESA (Lines and Trunks) translations tables are listed here:

- CLI
- RCCINV
- TRKGRP
- ISTRKGRP
- TRKSGRP
- TRKMEM
- ESARTE
- ESAPXLA
- ESAHNPA
- CUSTHEAD

ESA (Lines and Trunks) translation process is shown in the flowchart that follows.



**ESA (Lines and Trunks) (continued)****Table flow for ESA (Lines and Trunks)**

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**ESA (Lines and Trunks) (continued)**


---

The following table lists datafill content used in the flowchart.

**Datafill example for ESA (Lines and Trunks)**

| Datafill table | Example data                                                                                                                                      |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| CLLI           | Common language location identifier. Defines the unique far end user of a trunk group, tone, or announcement.                                     |
| RCCINV         | Remote cluster controller inventory. Enables ESA mode, provides executive programs for ESA, and ESA trunking.                                     |
| TRKGRP         | Trunk group. Defines trunk attributes for trunks associated with the RSC.                                                                         |
| ISTRKGRP       | Interswitch trunk group. Defines trunk group and remote peripheral module.                                                                        |
| TRKSGRP        | Trunk subgroup. Lists supplementary information for each subgroup assigned to one of the trunk groups listed in table TRKGRP.                     |
| TRKMEM         | Trunk member. Identifies circuits associated with static trunks, dynamic trunks, and test equipment used to test lines and trunks.                |
| ESARTE         | Emergency stand-alone route. Defines 256 unique routes available to the RSC during ESA.                                                           |
| ESAPXLA        | Emergency stand-alone prefix translations. Defines 16 prefix digits for POTS and 8 for MDC used when the RSC is in ESA.                           |
| ESAHNPA        | Emergency stand-alone home number plan area. Provides 32 access codes for POTS and 16 for MDC to select ESA trunk routes defined in table ESARTE. |
| CUSTHEAD       | Customer header. Links a customer group to the prefix translation table name as identified in table ESAPXLA.                                      |

**Limitations and restrictions**

The following limitations and restrictions apply to ESA (Lines and Trunks):

- The RCC supports a maximum of eight P-side ports for DS-1 interface.
- DS-1 is the only trunking supported by the RCC
- The RCC supports a maximum of 64 trunk groups.

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## ESA (Lines and Trunks) (continued)

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- The RCC and its host peripheral both must have the executive program (EXEC) DTCEX.
- P-side ports 0 and 1 are dedicated for use by RMMs and will not support a DS-1 interface.

### Interactions

ESA (Lines and Trunks) has no functionality interactions.

### Activation/deactivation by the end user

Perform the following steps to activate ESA:

- 1 Ensure the DMS switch is equipped with a BCS23 (or greater) load.
- 2 Datafill field EXECTAB in table RCCINV to include term-type ESALINES and exec-lineup ESAEX for supporting call processing in ESA. Change fields ESA and INTRASW in table RCCINV from N to Y to enable ESA.
- 3 Datafill tables TRKGRP, ISTRKGRP, TRKSGRP, and TRKMEM with applicable trunking information.
- 4 Change the office parameters, if required.
- 5 Datafill table ESARTE with applicable routing information.
- 6 For MDC lines, link the information in the ESAPXLA prefix tables to a particular customer group. Datafill fields OPTION and XLANAME in table CUSTHEAD. If field OPTION does not have the ESAPXLA option set, no prefix translation is required.
- 7 Datafill table ESAPXLA, if necessary.
- 8 Datafill table ESAHNPA with prefix trunk entries for each customer group on each RCC node.
- 9 Activate ESA in the RCC using the following procedures:
  - a Manually busy and return-to-service the inactive RCC unit.
  - b SWACT the RCC.

### Billing

ESA (Lines and Trunks) does not affect billing.

### Station Message Detail Recording

ESA (Lines and Trunks) does not affect Station Message Detail Recording.

### Datafilling office parameters

Use the same parameters and procedures used for lines to control if and when static data is downloaded.

## ESA (Lines and Trunks) (continued)

The following table shows the office parameters used by ESA (Lines and Trunks). For more information about office parameters, refer to *Office Parameters Reference Manual*.

### Office parameters used by ESA (Lines and Trunks)

| Table name                                                                                                                                                                                                       | Parameter name    | Explanation and action                                                                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------------------------------------------------------------------|
| OFCENG                                                                                                                                                                                                           | RSC_ESASDUPD_BOOL | Specifies if static data nightly updates should be scheduled. Default value: Y.            |
|                                                                                                                                                                                                                  | RSC_ESASDUPD_HOUR | Specifies the daily starting time for the nightly update of static data. Default value: 2. |
| <p><b>Note:</b> An RSC and RLCM should not be on the same static data update hour. Corruption of ESA static data is possible when both are at the same hour, especially in remote-off-remote configurations.</p> |                   |                                                                                            |

### Datafill sequence

The following table lists the tables that require datafill to implement ESA (Lines and Trunks). The tables are listed in the order in which they are to be datafilled.

Trunk data is required to process line-to-trunk, trunk-to-line, and trunk-to-trunk calls in RCC ESA. Tables trunk group (TRKGRP) and trunk subgroup (TRKSGRP) data are collected and downloaded to the XPM as ESA trunk data. Trunk group data contains translation and signaling information relevant to trunks supported in ESA.

Tables TRKGRP, TRKSGRP, ISTRKGRP, and TRKMEM describe trunk attributes. Trunk members with the same attributes are grouped under a common trunk name or common language location identifier (CLLI).

### Datafill tables required for ESA (Lines and Trunks) (Sheet 1 of 2)

| Table    | Purpose of table                                                                                                                                                                                       |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CLLI     | Common language location identifier (CLLI). Contains codes that uniquely identify the far end of each announcement, tone, trunk group, test trunk, national milliwatt test lines, and service circuit. |
| RCCINV   | Remote cluster controller inventory (RCCINV). Contains RCC inventory data (except P-side link assignments). Table RCCINV contains C-side DS-1 assignments.                                             |
| RCCPSINV | Remote cluster controller P-side link inventory (RCCPSINV). Contains RCC P-side link assignments only.                                                                                                 |

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**ESA (Lines and Trunks) (continued)**


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**Datafill tables required for ESA (Lines and Trunks) (Sheet 2 of 2)**

| <b>Table</b> | <b>Purpose of table</b>                                                                                                                                                                                                                                                                    |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TRKGRP       | Trunk group (TRKGRP). Defines data for each trunk group associated with the switching unit.                                                                                                                                                                                                |
| ISTRKGRP     | Intra-switch trunk group (ISTRKGRP). Controls the dynamic nature of RCC trunks. An entry in this table indicates that a trunk group has dynamic capability.                                                                                                                                |
| TRKSGRP      | Trunk subgroup (TRKSGRP). Lists supplementary information for each subgroup assigned to one of the trunk groups listed in table TRKGRP.                                                                                                                                                    |
| TRKMEM       | Trunk member (TRKMEM). Lists data associated with each trunk assigned to one of the trunk groups and subgroups specified in tables TRKGRP and TRKSGRP. This table identifies circuits associated with static trunks, dynamic trunks, and the test equipment used to test lines and trunks. |
| ESARTE       | Emergency stand-alone route (ESARTE). Identifies trunks to which a call may be routed to during ESA. A maximum of 255 routes are supported and one selector, the S (standard) selector. This table must be datafilled before tables ESAHNPA and ESAPXLA.                                   |
| ESAHNPA      | Emergency stand-alone home numbering plan area (ESAHNPA). Provides a maximum of 32 access codes (prefix digits) for POTS and 16 for MDC to select trunks referenced in table ESARTE.                                                                                                       |
| ESAPXLA      | Emergency stand-alone prefix translation (ESAPXLA). Contains special prefix translation data for POTS and MDC customer groups, when the RCC is in ESA.                                                                                                                                     |
| CUSTHEAD     | Customer header (CUSTHEAD). Links a customer group to the prefix translation table name identified in table ESAPXLA.                                                                                                                                                                       |

**Datafilling table CLLI**

The following table shows the datafill specific to ESA (Lines and Trunks) for table CLLI. Only those fields that apply directly to ESA (Lines and Trunks)

**ESA (Lines and Trunks)** (continued)

are shown. For a description of the other fields, refer to the data schema section of the *Translations Guide*.

**Datafill procedure for table CLLI (Sheet 1 of 2)**

| Field                                                                                                                                                      | Subfield or refinement | Entry                             | Explanation and action                                                                                                                                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CLLI                                                                                                                                                       |                        | see subfields (max 16 characters) | Common language location identifier. A 16-character field that uniquely identifies the far end of each announcement, tone, trunk group, test trunk, national milliwatt test line, and service circuit. Recommended subfields are PLACE, PROV, BLDG, TRAFUNIT, and SUFX. |
|                                                                                                                                                            | PLACE                  | alphanumeric                      | Place. A four-character code identifying the name of the city or town at the far end of each group.                                                                                                                                                                     |
|                                                                                                                                                            | PROV                   | alphanumeric                      | Province or state. A two-character code identifying the province or state at the far end of the trunk group.                                                                                                                                                            |
|                                                                                                                                                            | BLDG                   | alphanumeric                      | Building. A two-character code identifying the building number at the far end of the trunk group.                                                                                                                                                                       |
|                                                                                                                                                            | TRAFUNIT               | alphanumeric                      | Traffic unit. A three-character code identifying the destination of the traffic unit at the far end of the trunk group.                                                                                                                                                 |
|                                                                                                                                                            | SUFX                   | alphanumeric                      | Suffix. A one-character code uniquely identifying trunk groups that terminate at the same CLLI location.                                                                                                                                                                |
| ADNUM                                                                                                                                                      |                        | numeric                           | Administrative trunk group number. Enter a number from zero through a number that is one less than the size of table CLLI shown in table DATASIZE. The value must be unique.                                                                                            |
| TRKGRPSIZ                                                                                                                                                  |                        | 0 to 2047                         | Trunk group size. A four-character field equal to the maximum quantity of trunk members that are expected to be assigned to the trunk group.                                                                                                                            |
| <b>Note:</b> Memory is allocated by field SIZE in table DATASIZE for the entry with field DATSKEY equal to CLLI. The maximum number of CLLI codes is 8192. |                        |                                   |                                                                                                                                                                                                                                                                         |

**ESA (Lines and Trunks)** (continued)**Datafill procedure for table CLLI (Sheet 2 of 2)**

| Field                   | Subfield or refinement | Entry                            | Explanation and action                                                                                                                                                                                                    |
|-------------------------|------------------------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ADMININF                |                        | alphanumeric (max 32 characters) | Administrative information. A 32-character field used by the OC to record administrative information. Information in this field is not used by the switching unit. Recommended subfields: TRAFCLS, OFFCLS, and TRKGR TYP. |
| ADMININF(co<br>ntinued) | TRAFCLS                | alphanumeric                     | Trunk group traffic class. A optional field for administrative purposes only.                                                                                                                                             |
|                         | OFFCLS                 | alphanumeric                     | Office class. An optional field for administrative purposes only.                                                                                                                                                         |
|                         | TRKGR TYP              | alphanumeric                     | Trunk group type. An optional field for administrative purposes only.                                                                                                                                                     |

**Note:** Memory is allocated by field SIZE in table DATASIZE for the entry with field DATSKEY equal to CLLI. The maximum number of CLLI codes is 8192.

**Datafill example for table CLLI**

The following example shows sample datafill for table CLLI.

**MAP display example for table CLLI**

| CLLI     | ADNUM | TRKGRPSIZ | ADMININF                        |
|----------|-------|-----------|---------------------------------|
| SYNC     | 23    | 10        | SYNCH/NONSYNCH                  |
| OFFHKSUP | 45    | 10        | SUPERVISION-SIGNAL-OFFHOOK      |
| RSMVER90 | 47    | 10        | REMOTE-SERVICE-MOD-VERIFICATION |
| ALMSC    | 58    | 240       | ALARM-SC                        |
| RMMVER90 | 79    | 10        | ALARM-SD                        |
| LTU      | 177   | 10        | LINE-TEST-UNIT                  |

**Datafilling table RCCINV**

Field ESA must be datafilled as Y to enable ESA capability. Fields terminal type (TERMTYPE) and executive program (EXEC) must be datafilled to enable P-side trunking. Other than this, there are no other changes to RCCINV.

The following table shows the datafill specific to ESA (Lines and Trunks) for table RCCINV. Only those fields that apply directly to ESA (Lines and

**ESA (Lines and Trunks)** (continued)

Trunks) are shown. For a description of the other fields, refer to the data schema section of the *Translations Guide*.

**Datafilling table RCCINV**

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Subfield or refinement | Entry         | Explanation and action                                                                                                                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TERMTYPE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                        | see subfileds | Exec table. Contains subfields TRMTYPE, EXEC, and CONTMARK. As with LTCINV, each terminal type is associated with its particular execs.                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | TERMTYPE               | alphanumeric  | Terminal type. Enter the type of terminal models to be used: POTS (regular lines), KEYSET (EBS/data lines), RMM_TERM (remote MTC trunks), ABTRK (regular trunks), ESA (Emergency Stand-Alone lines), MX5X09 and M5X12 (Meridian 9- and 12-button sets, respectively). |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | EXEC                   | alphanumeric  | Executive programs. Enter terminal type execs. Examples: POTSEX, KSETEX, DTCEX, ESAEX, and RSMEX.                                                                                                                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | CONTMARK               | + or \$       | Continuation mark. To continue or end entries.                                                                                                                                                                                                                        |
| ESA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                        | Y or N        | Emergency stand-alone. Controls whether the RCC has ESA capability. A "Y" turns ESA capability ON, an "N" turns ESA capability OFF for the datafilled RCC.                                                                                                            |
| <p><b>Note:</b> When datafilling field C-side link table (CSLNKTAB), assure message links are not assigned to the same physical interface card. When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This applies to all interface link types; DS-1, DS30, DS30A, or PCM-30. Table control will issue a warning if an attempt is made to assign message links on the same interface card. Assigning message links to the same interface card can cause an E1 outage (failure of all message links) if the card fails.</p> |                        |               |                                                                                                                                                                                                                                                                       |

**Datafill example for table RCCINV**

The following example shows sample datafill for table RCCINV.



## ESA (Lines and Trunks) (continued)

### MAP display example for table RCCINV

```

RCCNAME
ADNUM  FRTYPE  FRNO  SHPOS  FLOOR  ROW  FRPOS  EQPEC  LOAD
   EXECUTAB
CSPM
   CSLNKTAB
ESA  INTRASW
   OPTCARD
TONESET  PECS6X45  E2LOAD
-----
CARY  RCC 0
      1005  RCE  0  18  0  C  0  6X12AA  ESR06BB
(  POTS POTSEX) (  KEYSET KSETEX) (ABTRK DTCEX) (RMM_TERM RSMEX) $
(ESALINES ESAEX)
LTC 1
      (0) ( NILPORT) (2) (NILPORT) (3) (4) (5) (6) (7)$
Y      Y
(UTR16) ( MSG6X69) ( CMR18 CMRAG03) ( NT7X05AA 12) $
NORTHAM MX77AA MX77AA MX77NH08

```

### Datafilling table TRKGRP

Table TRKGRP lists the characteristics of each trunk group. Field values are unchanged for ESA trunking.

The following table shows the datafill specific to ESA (Lines and Trunks) for table TRKGRP. Only those fields that apply directly to ESA (Lines and Trunks) are shown. For a description of the other fields, refer to the data schema section of the *Translations Guide*.

#### Datafilling table TRKGRP (Sheet 1 of 2)

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Subfield or refinement | Entry         | Explanation and action                                                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------|---------------------------------------------------------------------------------------------------------------|
| GRPKEY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                        | see subfields | Group key. This field contains subfield CLLI. Enter the CLLI code for the trunk group assigned in table CLLI. |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | CLLI                   | alphanumeric  | Common language location identifier. The CLLI of the trunk group as identified in table CLLI.                 |
| <p><b>Note 1:</b> Table TRKGRP can have up to 2047 trunk groups. The actual number is restricted by the number of CLLIs available to name the trunk groups.</p> <p><b>Note 2:</b> The set of trunk group types available for use in a specific office is provided by hardware and software features, and feature packages provided for the office by the OC.</p> <p><b>Note 3:</b> Refer to the table of contents for the procedure, Adding dynamic trunks, for additional information on RSC dynamic trunking.</p> |                        |               |                                                                                                               |

**ESA (Lines and Trunks)** (continued)

Datafilling table TRKGRP (Sheet 2 of 2)

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Subfield or refinement | Entry                                    | Explanation and action                                                                                                                                                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRPINFO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                        | GRPTYP, TRAFSNO, PADGRP, NCCLS, and CARD | Variable group data. When trunk group type is MAINT, this field contains subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, and CARD.                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | GRPTYP                 | ITL2, TTL2, LOOPA, MAINT, or SOCKT       | Group type. Enter the group type for the trunk group. For maintenance and test trunks, the range is ITL2, TTL2, LOOPA, MAINT, or SOCKT.                                           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | TRAFSNO                | 0 to 127                                 | Traffic separation number. Because this is not required for maintenance and test trunks.                                                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | PADGRP                 | alphanumeric                             | Pad group. Enter the name of the pad group assigned to the trunk group in table PADATA. For maintenance and test trunks, enter IAO (intra-office trunks). Otherwise, enter NPDGP. |
| GRPINFO (continued)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | NCCLS                  | NCRT                                     | No circuit class. Enter NCRT (no circuit).                                                                                                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | CARD                   | alphanumeric                             | Card code. Enter the product engineering code of the maintenance and test trunk.                                                                                                  |
| <p><b>Note 1:</b> Table TRKGRP can have up to 2047 trunk groups. The actual number is restricted by the number of CLLIs available to name the trunk groups.</p> <p><b>Note 2:</b> The set of trunk group types available for use in a specific office is provided by hardware and software features, and feature packages provided for the office by the OC.</p> <p><b>Note 3:</b> Refer to the table of contents for the procedure, Adding dynamic trunks, for additional information on RSC dynamic trunking.</p> |                        |                                          |                                                                                                                                                                                   |

**Datafill example for table TRKGRP**

The following example shows sample datafill for table TRKGRP.

## ESA (Lines and Trunks) (continued)

### MAP display example for table TRKGRP

| GRPKEY                           | GRPINFO |     |       |      |        |      |         |         |   |   |
|----------------------------------|---------|-----|-------|------|--------|------|---------|---------|---|---|
| VER90                            | MAINT   | 0   | NPDGP | NCRT | 2X90AB |      |         |         |   |   |
| TTT                              | MAINT   | 0   | IAO   | NCRT | 2X96AA |      |         |         |   |   |
| TTU                              | MAINT   | 0   | IAO   | NCRT | 2X47AA |      |         |         |   |   |
| LTU                              | MAINT   | 0   | IAO   | NCRT | 2X11AA |      |         |         |   |   |
| RLMVER90                         | MAINT   | 0   | IAO   | NCRT | 2X90AB |      |         |         |   |   |
| OG_1                             | TO      | 0   | TLD   | NCRT | IE     | MIDL | 7       | N       |   |   |
| OG_2                             | TO      | 0   | TLD   | NCRT | IE     | MIDL | 4       | N       |   |   |
| RSCTIP                           |         |     |       |      |        |      |         |         |   |   |
| TI                               | 0       | ELO | NCRT  | IE   | NPRT   | NSCR | 704     | LCL     | N | N |
| RCC0IBNTO                        |         |     |       |      |        |      |         |         |   |   |
| IBNTO                            | 0       | ELO | NCBN  | RCC0 | 0      | MIDL | ANSDISC |         |   |   |
| 0 N O 1 8 9 N N N N N N N \$     |         |     |       |      |        |      |         |         |   |   |
| RCC0IBNTI                        |         |     |       |      |        |      |         |         |   |   |
| IBNTI                            | 0       | ELO | NCRT  | RCC0 | 0      | 0    | 3204001 | ANSDISC |   |   |
| 0 Y N N Y N Y Y 0 0 N N N N N \$ |         |     |       |      |        |      |         |         |   |   |

### Datafilling table ISTRKGRP

Table ISTRKGRP controls the dynamic nature of RCC trunks. An entry in this table indicates that a trunk group has dynamic capability. This table contains the name or CLLI of the trunk group, RCC site, and RCC where the trunk group is restricted. Field values are unchanged for ESA trunking.

The following table shows the datafill specific to ESA (Lines and Trunks) for table ISTRKGRP. Only those fields that apply directly to ESA (Lines and Trunks) are shown. For a description of the other fields, refer to the data schema section of the *Translations Guide*.

#### Datafilling table ISTRKGRP (Sheet 1 of 2)

| Field                                                                                                                                                                                                                                            | Subfield or refinement | Entry         | Explanation and action                                                                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ISTRKKEY                                                                                                                                                                                                                                         |                        | alphanumeric  | Intra-switch trunk key. Enter the CLLI name of a trunk group to be dynamic. This trunk group must be known to table TRKGRP and not known to tables TRKSGRP and TRKMEM. |
| XPMNAME                                                                                                                                                                                                                                          |                        | see subfields | Extended peripheral module name. Contains subfields SITE_ID, PMT, and EXT_PMO.                                                                                         |
| <p><b>Note:</b> For this trunk group to be supported on the P-side of the RCC as a dynamic trunk group, the RCC must have available vacant ports on its C-side. The trunk group must be of the types TI, TO, T2, IBNTI, IBNTO, IBNT2, or PX.</p> |                        |               |                                                                                                                                                                        |

**ESA (Lines and Trunks)** (continued)

**Datafilling table ISTRKGRP (Sheet 2 of 2)**

| Field | Subfield or refinement | Entry        | Explanation and action                                                                                                |
|-------|------------------------|--------------|-----------------------------------------------------------------------------------------------------------------------|
|       | SITE_ID                | alphanumeric | Site identification. Enter the remote switching center (RSC) site name. This site name must be known to table SITE.   |
|       | PMT                    | RCC          | Peripheral module type. Enter RCC for the remote cluster controller as the module type.                               |
|       | EXT_PMNO               | 0 to 63      | Extended peripheral module number. Enter the peripheral module number of the RCC where the trunk group is associated. |

**Note:** For this trunk group to be supported on the P-side of the RCC as a dynamic trunk group, the RCC must have available vacant ports on its C-side. The trunk group must be of the types TI, TO, T2, IBNTI, IBNTO, IBNT2, or PX.

**Datafill example for table ISTRKGRP**

The following example shows sample datafill for table ISTRKGRP.

**MAP display example for table ISTRKGRP**

| INSTRKKEY    | XPMNAME |     |   |
|--------------|---------|-----|---|
| OUTGOINTRK   | REM1    | RCC | 0 |
| INCOMINTRK   | REM1    | RCC | 0 |
| ANYTOWN2WTRK | REM1    | RCC | 0 |
| RCC0IBNTO    | REM1    | RCC | 0 |
| RCC0IBNT1    | REM1    | RCC | 0 |
| RCC0IBNT2    | REM1    | RCC | 0 |
| RCC0PX       | REM1    | RCC | 0 |

**Datafilling table TRKSGRP**

Table TRKSGRP lists supplementary information for each subgroup assigned to one of the trunk groups listed in table TRKGRP. Field values are unchanged for ESA trunking.

The following table shows the datafill specific to ESA (Lines and Trunks) for table TRKSGRP. Only those fields that apply directly to ESA (Lines and

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**ESA (Lines and Trunks) (continued)**


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Trunks) are shown. For a description of the other fields, refer to the data schema section of the *Translations Guide*.

**Datafilling table TRKSGRP (Sheet 1 of 2)**

| Field                                                                                                                                                                                                                                                                                                                                                              | Subfield or refinement | Entry                 | Explanation and action                                                                                                                                                             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SGRPKEY                                                                                                                                                                                                                                                                                                                                                            |                        | see subfields         | Subgroup key. Contains subfields CLLI and SGRP.                                                                                                                                    |
|                                                                                                                                                                                                                                                                                                                                                                    | CLLI                   | alphanumeric          | Common language location identifier. Contains the CLLI code assigned to the trunk group to which the subgroup belongs.                                                             |
|                                                                                                                                                                                                                                                                                                                                                                    | SGRP                   | 0 or 1                | Subgroup number. Contains the number assigned to the trunk subgroup.                                                                                                               |
| CARDCODE                                                                                                                                                                                                                                                                                                                                                           |                        | alphanumeric          | Card code. Lists maintenance and test trunk PEC.                                                                                                                                   |
| SGRPVAR                                                                                                                                                                                                                                                                                                                                                            |                        | see subfields         | Variable subgroup data. For standard signaling, contains subfields SIGDATA, DIR, OPULSTYP, OSTARTSG, IDGTIME, NUMSTOPS, CCONT, RRGBCK, ESUPR, SAT, REMBSY, DIALMODE, and TRKGDTIM. |
|                                                                                                                                                                                                                                                                                                                                                                    | SIGDATA                | STD                   | Signaling data. Lists the signaling code.                                                                                                                                          |
|                                                                                                                                                                                                                                                                                                                                                                    | DIR                    | IC, OG, or 2W         | Direction. Enter trunk group direction, incoming (IC), outgoing (OG), or two-way (2W).                                                                                             |
|                                                                                                                                                                                                                                                                                                                                                                    | OPULSTYP               | DP, DT, MF, or blank  | Outgoing type of pulsing. Leave blank if trunk is incoming.                                                                                                                        |
|                                                                                                                                                                                                                                                                                                                                                                    | OSTARTSG               | DD, IM, LS, GS, or WK | Outgoing start dial signal. For maintenance and test trunks, enter WK (wink).                                                                                                      |
|                                                                                                                                                                                                                                                                                                                                                                    | IDGTIME                | 0 to 100, or blank    | Interdigital timing. For maintenance and test trunks, enter 2.                                                                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                    | NUMSTOPS               | 0 to 3, or blank      | Number of stop/goes. For maintenance and test trunks, enter 0.                                                                                                                     |
| <p><b>Note 1:</b> Memory is allocated for the number of trunk subgroups by field SIZE in table DATASIZE for the entry with field DATSKEY equal to TRKSGRP.</p> <p><b>Note 2:</b> The maximum number of trunk subgroups is equal to twice the number of trunk groups.</p> <p><b>Note 3:</b> The maximum number of trunk subgroups that can be assigned is 4096.</p> |                        |                       |                                                                                                                                                                                    |

**ESA (Lines and Trunks)** (continued)**Datafilling table TRKSGRP (Sheet 2 of 2)**

| <b>Field</b>                                                                                                                                                                                                                                                                                                                                                       | <b>Subfield or refinement</b> | <b>Entry</b> | <b>Explanation and action</b>                                                                                                                                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                    | CCONT                         | MW or NO     | Coin control. For maintenance and test trunks, enter MW (multiwink).                                                                                                   |
|                                                                                                                                                                                                                                                                                                                                                                    | RNGBCK                        | IB or N      | Ringback. For maintenance and test trunks, enter IB (inband).                                                                                                          |
|                                                                                                                                                                                                                                                                                                                                                                    | ESUPR                         | F, H, or N   | Echo suppressor. For maintenance and test trunks, enter N (no echo suppressor).                                                                                        |
|                                                                                                                                                                                                                                                                                                                                                                    | SAT                           | Y or N       | Satellite. For maintenance and test trunks, enter N (no satellite).                                                                                                    |
|                                                                                                                                                                                                                                                                                                                                                                    | REMBSY                        | Y or N       | Remote make busy. For maintenance and test trunks, enter N (feature not assigned).                                                                                     |
| SGRPVAR<br>(continued)                                                                                                                                                                                                                                                                                                                                             | DIALMODE                      | C or M       | Dial mode. For maintenance and test trunks, this subfield is blank.                                                                                                    |
|                                                                                                                                                                                                                                                                                                                                                                    | TRKGDTIM                      | numeric      | Trunk guard timing. For maintenance and test trunks, enter 16 (160 ms elapse time interval before the trunk is returned to the idle link list after trunk disconnect). |
| <p><b>Note 1:</b> Memory is allocated for the number of trunk subgroups by field SIZE in table DATASIZE for the entry with field DATSKEY equal to TRKSGRP.</p> <p><b>Note 2:</b> The maximum number of trunk subgroups is equal to twice the number of trunk groups.</p> <p><b>Note 3:</b> The maximum number of trunk subgroups that can be assigned is 4096.</p> |                               |              |                                                                                                                                                                        |

**Datafill example for table TRKSGRP**

The following example shows sample datafill for table TRKSGRP.

**ESA (Lines and Trunks) (continued)****MAP display example for table TRKSGRP**

| SGRPKEY  | CARDCODE | SGRPVAR |    |    |    |    |   |    |    |    |   |    |                    |  |
|----------|----------|---------|----|----|----|----|---|----|----|----|---|----|--------------------|--|
| VER90    | 0 2X90AB | STD     | OG | NP | WK | 0  | 0 | NO | NO | F  | N | N  | 17                 |  |
| TTT      | 0 2X96AA | STD     | OG | NP | WK | 0  | 0 | NO | NO | F  | N | 17 |                    |  |
| LTU      | 0 2X11AA | STD     | OG | NP | WK | 0  | 0 | NO | NO | F  | N | 17 |                    |  |
| RLMVER90 | 0 2X90AB | STD     | OG | NP | WK | 0  | 0 | NO | NO | F  | N | 17 |                    |  |
| OG_1     | DS1SIG   | STD     | OG | DP | IM | 70 | 0 | NO | NO | N  | N | 70 |                    |  |
| RCC0TO   | 0 DS1SIG | STD     | 2W | MF | WK | N  | 7 | 7  | MF | WK | 7 | 0  | N NO NO N N N M 70 |  |

Table trunk subgroup (TRKSGRP) lists supplementary information for each subgroup assigned to one of the trunk groups listed in table TRKGRP. Input data must be specified for at least one subgroup, or a maximum of two subgroups, for each trunk group listed in table TRKGRP, excluding trunk groups defined as maintenance (MAINT) group types. Trunk subgroup data for maintenance and test trunks, excluding subgroup 1 of the trunk group with code TTU, is automatically produced by the trunk group datafill.

**Datafilling table TRKMEM**

Table trunk member (TRKMEM) contains the address of the actual trunk member. Each trunk member residing on an RCC has terminal data associated with it.

If the information in the trunk tables indicate that RCC ESA can support a unique trunk, ESA-specific data is collected and sent down to the XPM, but only when ESA is loaded. Field values are unchanged for ESA trunking.

The following table shows the datafill specific to ESA (Lines and Trunks) for table TRKMEM. Only those fields that apply directly to ESA (Lines and

**ESA (Lines and Trunks)** (continued)

Trunks) are shown.. For a description of the other fields, refer to the data schema section of the *Translations Guide*.

**Datafilling table TRKMEM**

| Field                                                                                                                                         | Subfield or refinement | Entry         | Explanation and action                                                                                                                                                                                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CLLI                                                                                                                                          |                        | alphanumeric  | Common language location identifier. Enter the code assigned in table CLLI to the trunk group to which the trunk is a member.                                                                                                           |
| EXTRKNM                                                                                                                                       |                        | 0 to 9999     | External trunk number. Enter the external trunk number assigned to the trunk.                                                                                                                                                           |
| SGRP                                                                                                                                          |                        | 0 to 1        | Subgroup number. Enter the subgroup number to which the trunk is assigned. Enter 0 for maintenance and test trunks, 1 for others.                                                                                                       |
| MEMVAR                                                                                                                                        |                        | see subfields | Variable data for members. For RSC applications, this field varies according to whether the trunk is part of an interoffice trunk or a maintenance trunk. For an interoffice trunk, subfields are PMTYPE, RCCNO, RCCCKTNO, and RCCCKTS. |
|                                                                                                                                               | PMTYPE                 | RCC           | Peripheral module type. Enter the PM type on which the trunk is mounted.                                                                                                                                                                |
| MEMVAR<br>(continued)                                                                                                                         | RCCNO                  | 0 to 511      | RCC number. Enter the number assigned to this RCC.                                                                                                                                                                                      |
|                                                                                                                                               | RCCCKTNO               | 0 to 19       | RCC circuit number. Enter the RCC P-side link number where the TRKGRP member is assigned.                                                                                                                                               |
|                                                                                                                                               | RCCCKTS                | 1 to 24       | RCC circuits. Enter the RCC time slot number where the TRKGRP member is assigned.                                                                                                                                                       |
| <b>Note 1:</b> Memory is allocated for the total number of trunks specified in field TRKGRSIZ in table CLLI for the appropriate trunk groups. |                        |               |                                                                                                                                                                                                                                         |
| <b>Note 2:</b> Table size may be increased with data present by changing field TRKGRSIZ in table CLLI for the appropriate trunk groups.       |                        |               |                                                                                                                                                                                                                                         |

**Datafill example for table TRKMEM**

The following example shows sample datafill for table TRKMEM.



---

**ESA (Lines and Trunks) (continued)**


---

**MAP display example for table TRKMEM**

```

>Table TRKMEM;LIS;POS RSMVER90
TABLE: TRKMEM
      CLLI                EXTRKNM  SGRP                MEMVAR
-----
RSMVER90                0      0                RMM  2  4
LTU                      1      0                MTM  2  2
LTU                      2      0                RMM  0  6
LTU                      2      0                RMM  0  6
LTU                      3      0                RMM  1  6
LTU                      4      0                RMM  2  6
LTU                      5      0                RMM  3  6
LTU                      6      0                RMM  4  6
RCC0T1                   0      0                RCC  0  2  4
RCC0T2                   0      0                RCC  0  2  4

```

**Datafilling table ESARTE**

Table emergency stand-alone route, (ESARTE) identifies trunks where a call may be routed during ESA. The format of table ESARTE format is similar to that of tables OFRT and IBNRTE. There is a maximum of 255 unique routes per RCC. One selector is supported.

The following table shows datafill specific to ESA (Lines and Trunks) for table ESARTE. Only those fields that apply directly to ESA (Lines and Trunks) are shown. For a description of the other fields, refer to the data schema section of the *Translations Guide*.

**Datafilling table ESARTE (Sheet 1 of 2)**

| Field                                                                                       | Subfield or refinement | Entry         | Explanation and action                                                                                                                                  |
|---------------------------------------------------------------------------------------------|------------------------|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| RTEKEY                                                                                      |                        | alphanumeric  | Route key. Identifies PM_type, SITE_name, RCC_number, and route_number of the trunk group supported during ESA. All entries must be entered as one key. |
| RESULT                                                                                      |                        | see subfields |                                                                                                                                                         |
|                                                                                             | SELECTOR               | S             | Selector. Enter S (standard), the only selector supported during ESA.                                                                                   |
| <b>Note:</b> Table ESARTE supports 256 routes and one selector, the S or standard selector. |                        |               |                                                                                                                                                         |

**ESA (Lines and Trunks)** (continued)

**Datafilling table ESARTE (Sheet 2 of 2)**

| Field | Subfield or refinement | Entry                   | Explanation and action                                                                                               |
|-------|------------------------|-------------------------|----------------------------------------------------------------------------------------------------------------------|
|       | CLLI                   |                         | Common language location identifier. Enter the CLLI code assigned to the trunk group to which the trunk is a member. |
|       | DELDIGS                | 0 to 15                 | Delete digits. Enter the number of digits to be deleted from the string of numbers for the outgoing trunk.           |
|       | PRFXDIGS               | numeric (max 11 digits) | Prefix digits. Enter N, if no digits are to be prefixed onto an incoming trunk. Otherwise, enter Y.                  |

**Note:** Table ESARTE supports 256 routes and one selector, the S or standard selector.

**Datafill example for table ESARTE**

The following example shows sample datafill for table ESARTE.

**MAP display example for table ESARTE**

| Table ESARTE |      |   |   |        |           |   |  |        |
|--------------|------|---|---|--------|-----------|---|--|--------|
|              |      |   |   | RTEKEY |           |   |  | RESULT |
| RCC          | REML | 0 | 0 | S      | RCC0TO    | 0 |  | N      |
| RCC          | REML | 0 | 1 | S      | RCC0T2    | 0 |  | N      |
| RCC          | REML | 0 | 2 | S      | RCC0IBNTO | 0 |  | N      |
| RCC          | REML | 0 | 3 | S      | RCC0PX    | 0 |  | N      |

**Datafilling table ESAPXLA**

Table ESAPXLA contains special prefix translation data used for POTS and MDC customer groups. During normal operation of the remote cluster controller (RCC) under CC control, this table is not used. That is, translations are performed in the CC. If, however, communication with the host is lost and the RCC enters ESA, this table is used in prefix translations.

The following table shows the datafill specific to ESA (Lines and Trunks) for table ESAPXLA. Only those fields that apply directly to ESA (Lines and

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**ESA (Lines and Trunks)** (continued)
 

---

Trunks) are shown. For a description of the other fields, refer to the data schema section of the *Translations Guide*.

**Datafilling table ESAPXLA (Sheet 1 of 2)**

| Field                                                                                                   | Subfield or refinement | Entry                   | Explanation and action                                                                                                                                                         |
|---------------------------------------------------------------------------------------------------------|------------------------|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PXLAKEY                                                                                                 |                        | see subfields           | Prefix translation key. This field identifies the prefix translator name, PM_type, SITE_name, PM_number, and prefix digits. All fields must be entered in one entry.           |
|                                                                                                         | XLANAME                | alphanumeric            | Prefix translator name. Enter the 1- to 8-character identifier. ESAPOTS is reserved for POTS. MDC identifiers must first be identified in table CUSTHEAD.                      |
| NODE DATA                                                                                               |                        | see subfields           | Node data for the RCC includes PM_type, SITE_name, and RCC_number. This data is multiple with XLANAME and PREFIX DIGITS.                                                       |
|                                                                                                         | PMT                    | RCC                     | Peripheral module type. Enter RCC as the PM_type.                                                                                                                              |
|                                                                                                         | SITE                   | alphanumeric            | Site. Enter the 4-character site name as it is in table SITE.                                                                                                                  |
|                                                                                                         | RCC_NO                 | 0 to 255                | Remote cluster controller number. Enter the number of the RCC associated with the prefix digits.                                                                               |
|                                                                                                         | PREFIX                 | numeric (max 15 digits) | Prefix digits. Enter up to 15 digits for special translations during ESA.                                                                                                      |
| RESULT                                                                                                  |                        | see subfields           | These fields specify what action ESA task software takes when a POTS user or MDC customer group member dials a set of digits during ESA.                                       |
|                                                                                                         | SELECTOR               | see subfields           | Selector. Enter the L selector multiple with the terminating line equipment number (LEN), ambiguous code (Y or N), and the ring code (0—7), when the terminating end is a LEN. |
| <b>Note:</b> Routes for the R and D selectors must be in table ESARTE before the selectors can be used. |                        |                         |                                                                                                                                                                                |

**ESA (Lines and Trunks)** (continued)

## Datafilling table ESAPXLA (Sheet 2 of 2)

| Field                                                                                                   | Subfield or refinement | Entry | Explanation and action                                                                                                                                                                                                                                                                                                             |
|---------------------------------------------------------------------------------------------------------|------------------------|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RESULT<br>(continued)                                                                                   |                        | H     | Hunt group. Enter the selector H multiple with hunt group number from table HUNTGRP, member number from table HUNTMEM and specify if the prefix digit is ambiguous, when terminating to a hunt group.                                                                                                                              |
|                                                                                                         |                        | T     | Treatment. Enter special treatments to be applied to the call. Treatments are: <ul style="list-style-type: none"> <li>• REORDER—a fast busy tone</li> <li>• SRPXLA—strip the prefix digit and translate dialed digits</li> <li>• SRPDXLA—strip the prefix digit, provide a second dial tone and translate dialed digits</li> </ul> |
|                                                                                                         |                        | R     | Route. Enter the R selector multiple with the route number from table ESARTE, number of digits to outpulse and Y or N for a second dial tone, applicable for trunks only.                                                                                                                                                          |
|                                                                                                         |                        | D     | Direct. Enter the D selector multiple with the route number from table ESARTE, number of digits to delete and Y or N for a second dial tone. When direct routing to a trunk is desired (applicable for trunks only).                                                                                                               |
|                                                                                                         |                        | A     | Alternate. Enter an A multiple with an alternate translator name, (default is ESAPOTS for POTS lines), number of digits to delete, and Y or N for a second dial tone.                                                                                                                                                              |
| <b>Note:</b> Routes for the R and D selectors must be in table ESARTE before the selectors can be used. |                        |       |                                                                                                                                                                                                                                                                                                                                    |

**Datafill example for table ESAPXLA**

The following example shows sample datafill for table ESAPXLA.

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**ESA (Lines and Trunks) (continued)**


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**MAP display example for table ESAPXLA**

|                  | PXLAKEY                | RESULT    |
|------------------|------------------------|-----------|
| ESAPOTS RCC REM1 | 0 411 L REM100 0 00 02 | Y 1       |
| IBN1 RCC REM1    | 0 4                    | T REORDER |
| IBN1 RCC REM1    | 0 6                    | T SRPXL   |
| IBN1 RCC REM1    | 0 9                    | T SRPDXLA |
| IBN1 RCC REM1    | 0 7 H                  | 5 7 Y     |
| ESAPOTS RCC REM1 | 0 5 R                  | 21 7 Y    |
| ESAPOTS RCC REM1 | 0 8 D                  | 10 4 N    |
| ESAPOTS RCC REM1 | 0 0 A                  | ESAPOTS Y |

**Datafilling table ESAHNPA**

Table ESA home numbering plan area (ESAHNPA) enables the subscriber to select one of the trunks referenced in table ESARTE. Table ESAHNPA has data structures identical to table ESAPXLA. Only one selector is applicable to trunking in table ESAHNPA.

Prefix trunk entries for each customer group on each RCC node are provided. Prefix digits identified in table ESAHNPA represent regular access codes to ESA trunk routes. A maximum of 32 access codes is available to POTS subscribers. A maximum of 16 access codes is available for each MDC customer group.

The following table shows the datafill specific to ESA (Lines and Trunks) for table ESAHNPA. Only those fields that apply directly to ESA (Lines and

**ESA (Lines and Trunks)** (continued)

Trunks) are shown. For a description of the other fields, refer to the data schema section of the *Translations Guide*.

**Datafilling table ESAHNPA**

| Field                                                                                                                                                                     | Subfield or refinement | Entry                   | Explanation and action                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| HNPAKEY                                                                                                                                                                   |                        | see subfields           | Home number plan area key. Entries in this field enable subscribers to select one of the trunks referenced in table ESARTE.                                            |
|                                                                                                                                                                           | XLANAME                | alphanumeric            | Translator name. This is a name of up to 8 characters for POTS the translator name is ESAPOTS. For MDC customer groups the name will be the same as in table CUSTHEAD. |
| NODE                                                                                                                                                                      |                        | see subfields           | NODE. Enter the noda data consisting of the SITE_name, PM_type, RCC number, a prefix digits.                                                                           |
|                                                                                                                                                                           | PMTYPE                 | RCC                     | Peripheral module type. Enter RCC for the PM type.                                                                                                                     |
|                                                                                                                                                                           | SITE                   | alphanumeric            | SITE. Enter the site name as datafilled in table SITE and associated with this RCC.                                                                                    |
| NODE<br>(continued)                                                                                                                                                       | RCCNO                  | 0 to 255                | Remote cluster controller number. Enter the number of the RCC associated with the trunk or MDC group.                                                                  |
|                                                                                                                                                                           | PREFIX                 | numeric (max 15 digits) | Prefix digits. Enter the digits which will select one of the trunks in table ESARTE.                                                                                   |
| RESULT                                                                                                                                                                    |                        | see subfields           | RESULT. Enter the selector, route number, number of digits to outpluse, and ambiguous code.                                                                            |
|                                                                                                                                                                           | SELECTOR               | R                       | Selector. Enter an R selector for route.                                                                                                                               |
|                                                                                                                                                                           | RR                     | 0 to 255                | Route. Enter the route number from table ESARTE.                                                                                                                       |
|                                                                                                                                                                           | NUMDIG                 | numeric(max1 5 digits)  | Number of digits. Enter the digits to select a trunk route in table ESARTE.                                                                                            |
|                                                                                                                                                                           | AMBIG                  | Y or N                  | Ambiguous. Enter Y if code is ambiguous, or N if code is not ambiguous.                                                                                                |
| <b>Note:</b> If a code is ambiguous, the system waits until all digits are dialed before beginning translations. Otherwise, the digits are translated as they are dialed. |                        |                         |                                                                                                                                                                        |

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**ESA (Lines and Trunks) (continued)**


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**Datafill example for table ESAHNPA**

The following example shows sample datafill for table ESAHNPA.

**MAP display example for table ESAHNPA**

| Table ESAHNPA: |     |      |   | HNPAKEY | RESULT |
|----------------|-----|------|---|---------|--------|
| ESAPOTS        | RCC | CARY | 0 | 321 R   | 1 7 N  |

**Datafilling table CUSTHEAD (MDC only)**

Table customer header (CUSTHEAD) links a customer group to the prefix translation table name identified in table ESAPXLA. For MDC lines, it is necessary to link information in ESAPXLA prefix tables to a particular customer group. Option ESAPXLA specifies the prefix translator name associated with the customer group. With ESA, datafill fields OPTION and XLANAME in table CUSTHEAD. If OPTION does not have the option ESAPXLA option, no prefix translation for that customer group is provided.

The following table shows the datafill specific to ESA (Lines and Trunks) for table CUSTHEAD. Only those fields that apply directly to ESA (Lines and Trunks) are shown. For a description of the other fields, refer to the data schema section of the *Translations Guide*.

**Datafilling table CUSTHEAD**

| Field                                                                | Subfield or refinement | Entry        | Explanation and action                                                                                  |
|----------------------------------------------------------------------|------------------------|--------------|---------------------------------------------------------------------------------------------------------|
| OPTIONS                                                              |                        |              | OPTIONS. Enter ESAPXLA to give the customer group access to table ESAPXLA.                              |
| XLANAME                                                              |                        | alphanumeric | Prefix translator name. Enter the 1 to 8 characters assigned to the prefix translator in table ESAPXLA. |
| <b>Note:</b> Table ESAPXLA must be datafilled before table CUSTHEAD. |                        |              |                                                                                                         |

**Datafill example for table CUSTHEAD ( MDC only)**

The following example shows sample datafill for table CUSTHEAD, MDC only.

## ESA (Lines and Trunks) (continued)

### MAP display example for table CUSTHEAD (MDC only)

```

Table CUSTHEAD:
CUSTNAME      CUSTXLA      DGCOLNM      OPTIONS
-----
POTS          POTSDATA      POTSDATA      ( VACTRMT 0) ( EXTNCOS  0)$
COMIBN2       CXN2          IBN2          (VACTRMT 0) (EXTNCOS 4) (SUPERCNF ) (MHOLD 10 AUDIO1)
              (CPR Y AUDIO1 3) (ESAPXLA IBN1) z
IBNGRP10B     CXN2          IBN2          (VACTRMT 0) (EXTNCOS 4) (ACCT 5) (AUTH COMIBN2 N N)
              (SUPERCNNG ) (MHOLD 10 AUDIO1) (ACR ACCT 1) (CPK B 100)
              (ESAPXLA IBN1) $
RSCTRKTST     CXN2          IBN2          (VACTRMT 0) (EXTNCOS 4) (ACCT 5) (AUTH COMIBN2 N N)
              (MHOLD 10 AUDIO1) (ACR ACCT 1) (CPK N 100)
              (ESAPXLA IBN1) $

```

## Translation verification tools

### Verification tools

To verify the translations that occur during ESA, ESATRAVER, a special tool in the CI level utility ESATOOLS, allows operating company personnel to perform a TRAVER on ESA-specific translations. For more information on this tool, refer to the *Basic Translations Tools Guide, 297-1001-360*.

The following example shows output from ESATOOLS when it is used to verify ESA (Lines and Trunks).



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**ESA (Lines and Trunks) (end)**

---

**ESATOOLS output example for ESA (Lines and Trunks)****>ESATOOLS**

ESATOOLS

**>SETRCC site\_name RCC rcc\_no***where:*

site\_name is the name of location of the RCC site

rcc\_no is the number of the RCC associated with the ESA trunks

**>ESATRAVER L from\_digits to\_digits B***where*

from\_digits is the translations directory number of incoming trunk CLLI

to\_digits is the terminating end of the translations

**>QUERYCC TR DETAIL****SERVORD**

ESA (Lines and Trunks) does not use SERVORD.

## **HSTP0 DMS ADSL Capability**

---

### **Ordering codes**

Functional group ordering code: HSTP0002

Functionality ordering code: Not Applicable

### **Release applicability**

NA008/XPM81 and up

HSTP0 DMS ADSL Capability was introduced in CCM07.

### **Prerequisites**

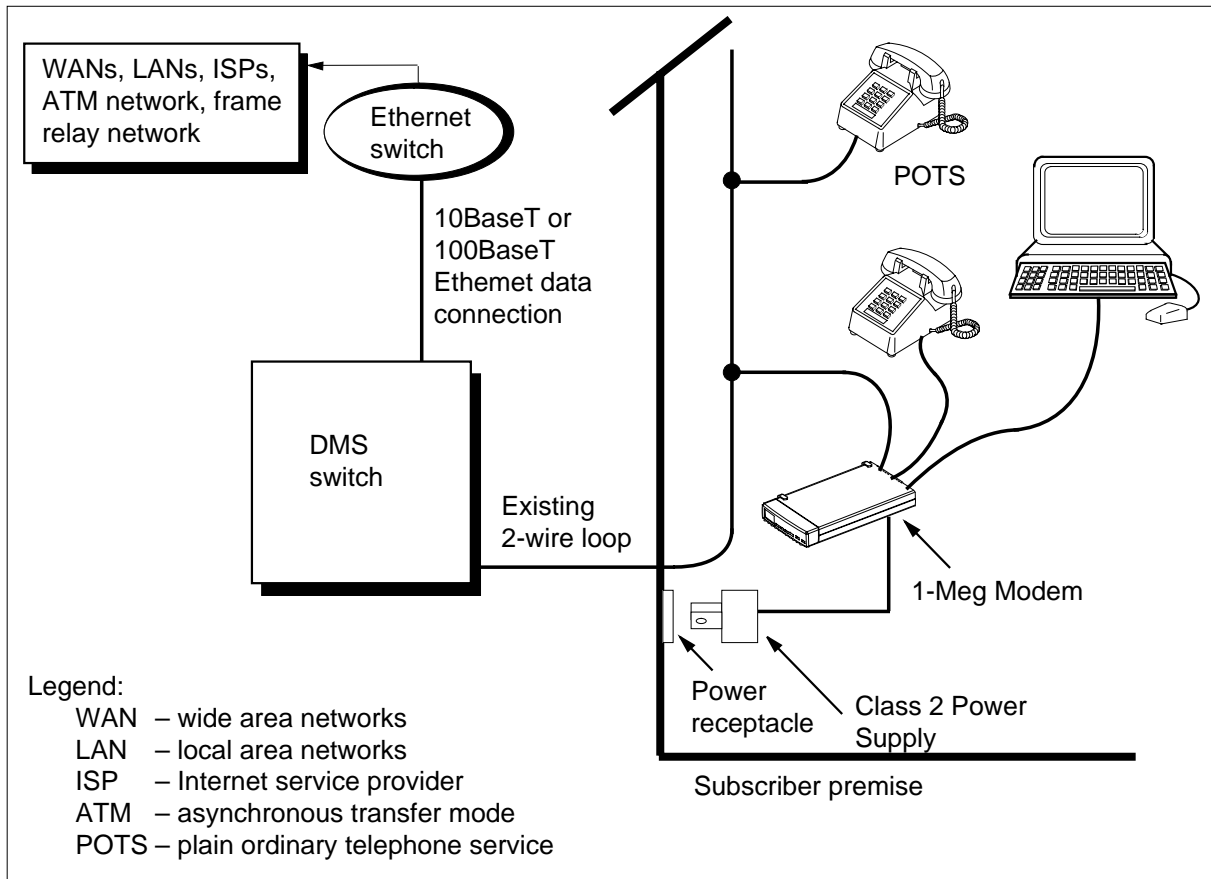
HSTP0 DMS ADSL Capability has no prerequisites.

### **Description**

HSTP0 DMS ADSL Capability provides the software to allow a line concentrating module (LCM) located at a remote site to provision and maintain 1-Meg Modem Service hardware. The following figure illustrates the 1-Meg Modem Service.

## HSTP0 DMS ADSL Capability (continued)

### 1-Meg Modem Service network



### Operation

Before to this enhancement, LCM subscribers were limited to analog modem speed rates of 56 kbit/s. With analog modems, the subscriber cannot use POTS and data services at the same time. Additionally, data calls typically have longer holding times that reduce the operating company's traffic call hundredth seconds (CCS) values. HSTP0 DMS ADSL Capability addresses these limitations by:

- supports simultaneous use of data and all voice services
- increases data transmission rates
  - up to 1280 kbit/s downstream
  - up to 320 kbit/s upstream
- routing data traffic away from the DMS-100, to reduce the impact on the office's CCS values.

## HSTP0 DMS ADSL Capability (continued)

---

### Components

The 1-Meg Modem Service includes the following components:

- The 1-Meg Modem is customer-premise equipment (CPE) that connects the telephone line, extension telephone, and personal computer (PC). To the subscriber, the modem installs like a regular voice band modem, except the modem uses a 10BaseT Ethernet connection to the computer. Voice and data circuits are kept separate on the loop. This allows simultaneous voice and data traffic with no impact to other telephony features.
- An xDSL line card (xLC) replaces the subscriber's line card in an existing line concentrating module (LCM) drawer. The card provides full voice service in parallel with high-speed data communication with the 1-Meg Modem.
- A data-enhanced bus interface card (DBIC) replaces the existing bus interface card (BIC) in the existing LCM drawer. The card provides a concentrating function for the voice and data connections within a single LCM drawer. The card also separates the voice and data traffic for routing to the appropriate networks.
- The xDSL Element Management System (xEMS) provides operations, administration, maintenance, and provisioning (OAM&P) functions from a Hewlett-Packard (HP) or Sun workstation. Based on HP OpenView, the xEMS is a graphical user interface (GUI) that uses icons and pull-down menus.

The DBIC and xLCs are backwards compatible with the current bus interface (BIC) and line card (LC) architecture. You can add either component without affecting existing subscriber features or services. The LCM handles all 1-Meg Modem Service voice traffic like existing plain old telephone service (POTS) calls.

### Human machine interface (HMI)

This feature introduces a new command interpreter (CI) command: QXNET. Enter the QXNET command to query the engineering rules validation routines and format the output.

### Translations table flow

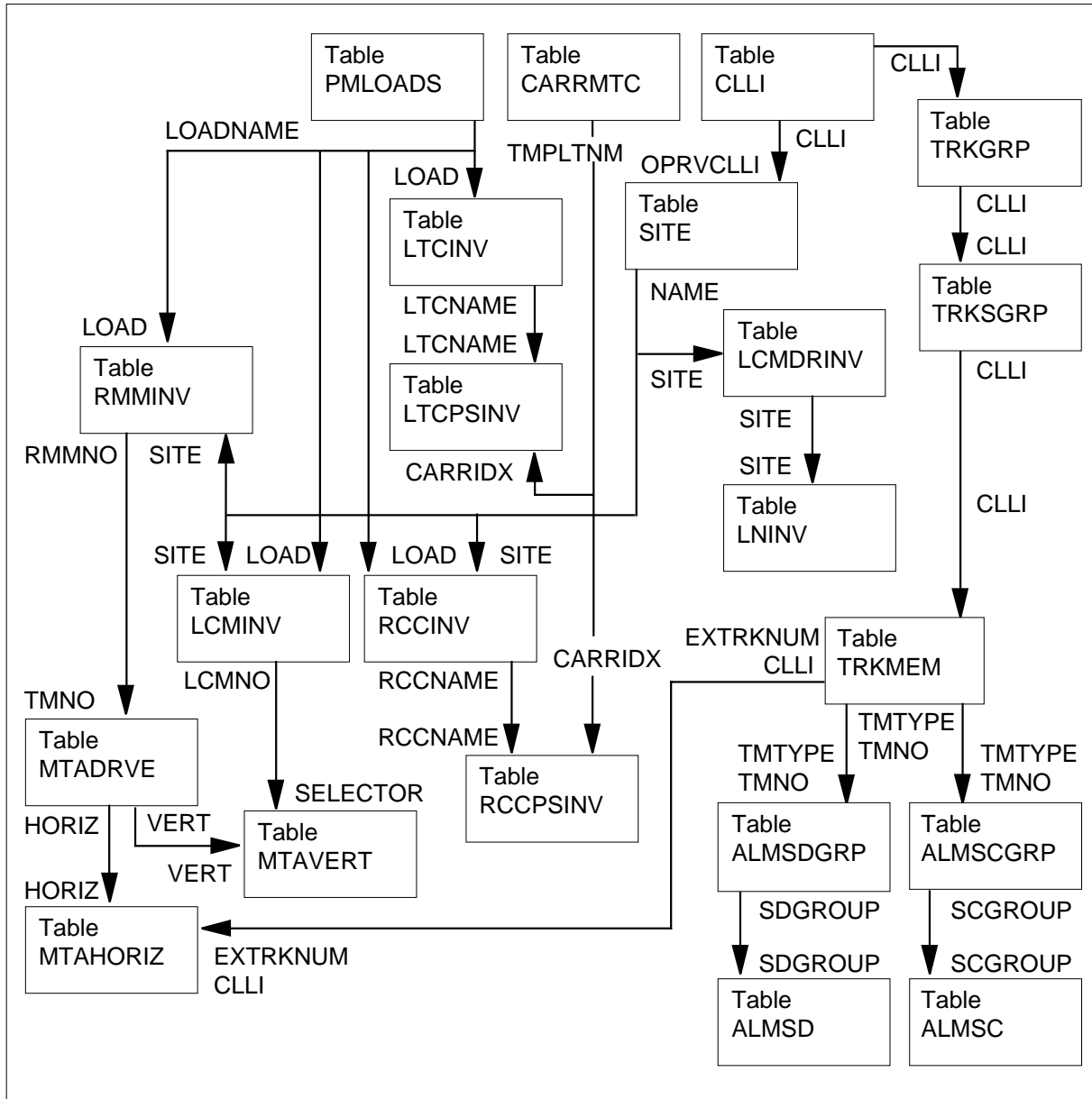
The HSTP0 DMS ADSL Capability translations tables are described in the following list:

- Table LCMDRINV
- Table LNINV

## HSTP0 DMS ADSL Capability (continued)

The following figure illustrates the HSTP0 DMS ADSL Capability translation process.

**Translations process for HSTP0 DMS ADSL Capability**

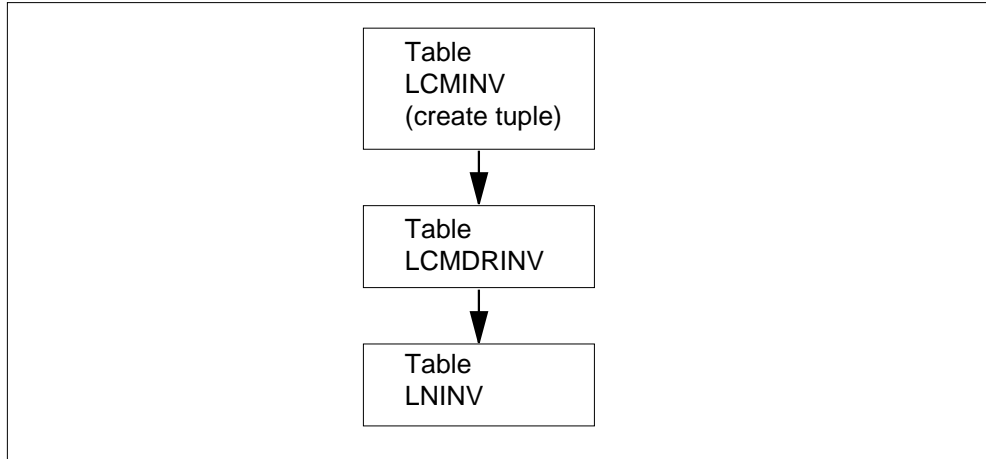


The following figure illustrates the table flow to datafill HSTP0 DMS ADSL Capability.

## HSTP0 DMS ADSL Capability (continued)

---

### HSTP0 DMS ADSL Capability table flow



The datafill content for the tables in the previous flowchart follows:

- Table LCMINV lists data assignments for each LCM or remote LCM (RLCM). Field SITE in table LCMINV matches the NAME tuple from table SITE. This field identifies the equipment for the switching unit and for all remote locations connected to the unit. Field LOAD in table LCMINV matches the LOADNAME tuple from table PMLOADS. This field stores the device location of each PM load file.
- Table LCMDRINV lists the LCM name, physical drawer numbers, product engineering code (PEC) of the drawers, drawer loadname, and media access control (MAC) address for each LCM or RLCM. The line drawer applications use the information in this table to determine the functionality supported in each physical drawer.

Table LCMDRINV only supports change operations and does not support manual additions or deletions. The switch automatically adds and deletes tuples to this table when a matching entry is made in table LCMINV.

- Table LNINV lists the site name with the line equipment number (LEN), and other data for each line card circuit in an office.

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## HSTP0 DMS ADSL Capability (continued)

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### Limitations and restrictions

The following limitations and restrictions apply to HSTP0 DMS ADSL Capability:

- Each drawer entered in table LCMDRINV to support HSTP0 DMS ADSL Capability must have a DBIC.
- Each drawer with a DBIC must have an xLC to support HSTP0 DMS ADSL Capability. If the drawer does not have a DBIC, the xLC will only provide voice services.
- The 1-Meg Modem Service subscriber must have a 1-Meg Modem.
- If the LCM is a remote LCM, the drawer supports only NTEX54CA DBICs and NTEX17DA xLCs.
- When a tuple is added or deleted in table LCMINV, a corresponding tuple is automatically added or deleted in table LCMDRINV.

### Interactions

HSTP0 DMS ADSL Capability has no functionality interactions.

### Activation/deactivation by the end user

HSTP0 DMS ADSL Capability requires no activation or deactivation by the end user.

### Billing

HSTP0 DMS ADSL Capability does not affect billing.

### Station Message Detail Recording

HSTP0 DMS ADSL Capability does not affect Station Message Detail Recording (SMDR).

### Datafilling office parameters

HSTP0 DMS ADSL Capability does not affect office parameters.

## HSTP0 DMS ADSL Capability (continued)

### Datafill sequence

The following table lists the tables that require datafill to implement HSTP0 DMS ADSL Capability. The tables are listed in the order in which they are to be datafilled.

#### Datafill tables required for HSTP0 DMS ADSL Capability

| Table    | Purpose of table                                                                                  |
|----------|---------------------------------------------------------------------------------------------------|
| LCMDRINV | Line Concentrating Module Drawer Inventory. Lists data assignment for each drawer for a LCM unit. |
| LNINV    | Line Circuit Inventory. Lists the data for each line card slot.                                   |

### Datafilling table LCMDRINV

Verify the following datafill related to HSTP0 DMS ADSL Capability for table LCMDRINV. The following table only lists the fields that apply to HSTP0 DMS ADSL Capability. Refer to the *Translations Guide* for a description of the other fields.

#### Datafilling table LCMDRINV (Sheet 1 of 2)

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                     | Subfield or refinement | Entry    | Explanation and action                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|----------|----------------------------------------------------------------|
| LCMNM                                                                                                                                                                                                                                                                                                                                                                                                                                     |                        |          | LCM name. Entry made up of subfields SITE, PM_type, and PM_no. |
|                                                                                                                                                                                                                                                                                                                                                                                                                                           | SITE                   | REM1     | Site name. Enter the name of the site of this LCM.             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                           | FRAME                  | 0 to 511 | Frame number. Enter the LCM frame number.                      |
| DRWRTAB                                                                                                                                                                                                                                                                                                                                                                                                                                   | PM_NO                  | 0 to 255 | Peripheral module number. Enter PM number for this LCM.        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                           | PHYDRNO                | 0 to 9   | The physical drawer number.                                    |
| <p><b>Note 1:</b> Changes to fields with multiple entries should be made in the PROMPT mode only. In nonprompt mode it is possible to leave out existing entries.</p> <p><b>Note 2:</b> Enter the continuation mark (+) in fields with multiple possible entries when more data is specified on the next line or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p> |                        |          |                                                                |



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**HSTP0 DMS ADSL Capability** (continued)
 

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Datafilling table LCMDRINV (Sheet 2 of 2)

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                     | Subfield or refinement | Entry                                                                     | Explanation and action                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                           | LDCPEC                 | NTEX54AA,<br>NTEX54AB,<br>NTEX54BA,<br>NTEX54CA                           | Line drawer control card PEC. Enter the PEC code of the DBIC.                                                                                                                                                                                                                                                                                                                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                           | DRWRPEC                | NT6X05AA,<br>NT6X05BA,<br>NT6X05CA,<br>NT6X05DA,<br>NT6X05EA,<br>NTBX32BA | The physical line drawer PEC                                                                                                                                                                                                                                                                                                                                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                           | MACADDRESS             | 12<br>hexidecimal<br>digits                                               | Media Access Control (MAC) layer address. The Ethernet address, also known as the hardware physical address, obtained from stamping on the DBIC. This number must be unique and correspond to the number on the DBIC.                                                                                                                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                           | IPADDR                 | 4 digits, with<br>each digit<br>ranging from<br>0 to 255                  | IP Address The Internet Protocol (IP) address of the LCM line drawer. The default is 0 0 0 0. This subfield only applies when you use the 1MMS option in SERVORD to provision 1-Meg Modem Service. The value in this subfield can be the default (0 0 0 0) or any IP value if the office does not support 1-Meg Modem Service or you do not use SERVORD to provision 1-Meg Modem Service. |
| <p><b>Note 1:</b> Changes to fields with multiple entries should be made in the PROMPT mode only. In nonprompt mode it is possible to leave out existing entries.</p> <p><b>Note 2:</b> Enter the continuation mark (+) in fields with multiple possible entries when more data is specified on the next line or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p> |                        |                                                                           |                                                                                                                                                                                                                                                                                                                                                                                           |

**Datafill example for table LCMDRINV**

The following example shows sample datafill for table LCMDRINV.

## HSTP0 DMS ADSL Capability (continued)

### MAP display example for table LCMDRINV

```

TABLE LCMDRINV

LCMNM DRWRTAB
-----
REM1 00 0
(0 NT6X54AA NT6X05AA) (1 NILDRWR) (2 NTEX54BA NT6X05EA
EEFF00010203 0 0 0 0) (3 NILDRWR) (4 NTEX54BA NT6X05EA
FF0001020304 0 0 0 0) (5 NILDRWR) (6 NILDRWR) (7 NILDRWR) (6
NTEX54BA NT6X05EA 000102030405 0 0 0 0) (7 NTEX54BA NT6X05EA
010203040506 0 0 0 0) (8 NTEX54BA NT6X05EA 010203040507 0 0
0 0) (9 NILDRWR )$
    
```

### Error messages for table LCMDRINV

The following error messages apply to table LCMDRINV.

#### Error messages for table LCMDRINV

| Error message                                                                        | Explanation and action                                                    |
|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| Tuple Addition occurs when the corresponding entry is added into the LCMINV table.   | An attempt was made to manually add a tuple entry into table LCMDRINV.    |
| Tuple Deletion occurs when the corresponding entry is deleted from the LCMINV table. | An attempt was made to manually delete a tuple entry from table LCMDRINV. |

### Datafilling table LNINV

Table LNINV matches the site name from table SITE to each physical line circuit in the LCM. This table defines the LEN of a line and indicates the software location and its hardware characteristics. Each line card in the LCM has a tuple in table LNINV.

The subfields used to identify the line card are changed so a LEN can identify an LCM line card. In a LEN for an LCM, the fields for the LEN are defined as follows:

- SITE
- FRAME
- UNIT

---

**HSTP0 DMS ADSL Capability** (continued)
 

---

- SUBGROUP
- CIRCUIT

Note the following table interactions:

- The line assignment for coin lines is made in table LENLINES. The LNATTIX field matches to the line class, code, coin first (CCF), coin dial tone first (CDF), or coin semi-postpay (CSP), in table LINEATTR.
- POTS lines LCMLSG do not have matching tuples in keyset-type tables.
- For Meridian business sets (MBS), the VARTYPE in table LCMINV must be NTPROP.

The following table shows the datafill related to HSTP0 DMS ADSL Capability for table LNINV. The table only lists those fields that apply directly to HSTP0 DMS ADSL Capability.

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

**Datafilling table LNINV (Sheet 1 of 2)**

| Field | Subfield or refinement | Entry        | Explanation and action                                                                                                                               |
|-------|------------------------|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| LEN   |                        | alphanumeric | Line equipment number. This field contains the following subfields: SITE, FRAME, UNIT, SUBGROUP, and CIRCUIT.                                        |
|       | SITE                   | alphanumeric | Site. Enter the location of the LCM (four-character alphanumeric). This entry is not optional, and there is no default value assigned to it.         |
|       | FRAME                  | 0 to 511     | LCM frame. Enter the LCM frame number, which is not a physical frame but a software entity that represents the group the LCM belongs to at the site. |
|       | UNIT                   | 0 to 1       | LCM unit. Enter the number representing the LCM unit within the group.                                                                               |
|       | SUBGROUP               | 0 to 19      | LCM subgroup. Enter the number of subgroups in the line drawers.                                                                                     |

**HSTP0 DMS ADSL Capability** (continued)

## Datafilling table LNINV (Sheet 2 of 2)

| Field    | Subfield or refinement | Entry                                         | Explanation and action                                                                                                                                                                                                   |
|----------|------------------------|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          | CIRCUIT                | 0 to 31                                       | LCM circuit. Enter the number of circuits in the subgroups. The range is 0-31.                                                                                                                                           |
| CARDCODE |                        | EX17AA, EX17BA, EX17CA, EX17DA                | Card code. Enter the PEC of the line card or line card carrier.                                                                                                                                                          |
| PADGRP   |                        | STDLN, UNBAL, PPHON, LRLM, NPDGP and ONS      | Pad group. Enter the name of the pad group assigned to the line circuit in the pad data table. The values include STDLN, UNBAL, PPHON, LRLM, NPDGP, and ONS.                                                             |
| STATUS   |                        | HASU, WORKING, UNEQUIP, CUTOFF, and RESERVED. | Status. Enter the line inventory availability status. The values include HASU, WORKING, UNEQUIP, CUTOFF, and RESERVED.                                                                                                   |
| GND      |                        | Y or N                                        | Ground. Where line is ground start, enter Y. Otherwise, enter N (for loop start).                                                                                                                                        |
| BNV      |                        | L or NL                                       | Balanced network value. Enter L when line circuit is configured for a loaded network. Otherwise, enter NL (for nonloaded network).                                                                                       |
| MNO      |                        | Y or N                                        | Manual override. Enter Y when on-hook balance network test is to be prevented from updating field BNV in this table.<br><br>Otherwise, enter N to allow off-hook balance network test to update field BNV in this table. |
| CARDINFO |                        | NIL                                           | Card information. The NIL value is the default. The values are NIL, SSLCC, or ISLCC.                                                                                                                                     |

**Datafill example for table LNINV**

The following example shows sample datafill for table LNINV.

---

**HSTP0 DMS ADSL Capability (end)**


---

**MAP display example for table LNINV**

| LEN  | CARDCODE | PADGRP | STATUS | GND   | BNV     | MNO | CARDINFO |
|------|----------|--------|--------|-------|---------|-----|----------|
| REM1 | 00 0 0   | 01     | EX17CA | STDLN | HASU    | N   | NL N NIL |
| REM1 | 00 0 0   | 02     | EX17CA | STDLN | HASU    | N   | NL N NIL |
| REM1 | 00 0 0   | 03     | EX17CA | STDLN | WORKING | N   | NL N NIL |
| REM1 | 00 0 0   | 04     | EX17CA | STDLN | WORKING | N   | NL N NIL |
| REM1 | 00 0 0   | 05     | EX17CA | STDLN | HASU    | N   | NL N NIL |
| REM1 | 00 0 0   | 06     | EX17CA | STDLN | HASU    | N   | NL N NIL |
| REM1 | 00 0 0   | 07     | EX17CA | STDLN | WORKING | N   | NL N NIL |
| REM1 | 00 0 0   | 08     | EX17CA | STDLN | WORKING | N   | NL N NIL |
| REM1 | 00 0 0   | 09     | 6X17BA | STDLN | HASU    | N   | NL N NIL |
| REM1 | 00 0 0   | 10     | 6X17BA | STDLN | HASU    | Y   | NL N NIL |
| REM1 | 00 0 5   | 00     | 6X17BA | STDLN | HASU    | N   | NL N NIL |
| REM1 | 00 0 5   | 01     | 6X17BA | STDLN | HASU    | N   | NL N NIL |

**Translation verification tools**

HSTP0 DMS ADSL Capability tables LCMINV and LCMDRINV support 1-Meg Modem Service specific checks through the following table control commands:

>CHECK

>CHECK ALL

**SERVORD**

HSTP0 DMS ADSL Capability SERVORD rejects attempts to add the cut-off-on-disconnect (COD) to an xDSL line. Operation of the cut-off-relay interrupts data services on an xDSL line including the COD feature.

## New Peripheral Maintenance

---

### Operating group

Operating group: BAS00003

### Feature package

Feature package: NTX270AA New Peripheral Maintenance

### Release applicability

BCS34 and up

### Requirements

To operate, New Peripheral Maintenance has the following requirements:

- Bilge NTX000AA
- Common Basic NTX001AA
- New Peripheral Maintenance NTX270AA

### Description

The Enhanced 6X69 Diagnostics feature adds increased diagnostic information to the messaging card MSG6X69 in active and inactive states of XPMs. The messaging protocol circuit pack for new messaging in tables line trunk controller inventory (LTCINV) replaces the messaging interface circuit card for old messaging. The pack replaces the card for remote cluster controller inventory (RCCINV).

If operating company personnel enter an optional message card, the system displays and accepts the card. If operating company personnel do not enter an optional card, the card defaults to MSG6X69. This feature affects all XPMs.

Feature Enhanced Warm SWACT allows flash-activated subscriber features to retain flash-hook capability over a controlled warm SWACT under some conditions. These conditions concern the line service options assigned to the line that survived the SWACT.

When some line service options are active, the options can disable the Enhanced Warm SWACT feature. The SWACT command can start a controlled warm SWACT. A scheduled diagnostic test can cause a controlled warm SWACT. An Enhanced Warm SWACT is active on all lines in all XPMs. Line calls that survive a warm SWACT without this feature cannot activate flash-activated subscriber features. Examples of flash-activated subscriber features are Three-Way Calling, Call Transfer, Conference Calls, Call Parking and Executive Busy Override.

---

## New Peripheral Maintenance (continued)

---

The lists in the following sections contain the line service options that do not disable the Enhanced Warm SWACT feature. The following sections are Residential and Meridian Digital Centrex features.

Active line service options that do not appear on the list can disable feature Enhanced Warm SWACT. The system handles the call the same way as nonenhanced SWACT. When the feature that is not supported is deactivated, the system restores Enhanced Warm SWACT. Enhanced Warm SWACT is active while supported features are active on a line.

**Note 1:** Enhanced and nonenhanced Warm SWACT drop dialed calls.

**Note 2:** Enhanced Warm SWACT call functionality is not guaranteed to survive an XPM BCS SWACT. The BCS compatibility problems can cause this problem.

**Note 3:** After an uncontrolled warm SWACT, the system does not restore Enhanced Warm SWACT.

### Residential

The following list contains features supported for Enhanced Warm SWACT:

- Automatic Call Back
- Automatic Recall
- Call Screening
- Calling Number Delivery Blocking
- Customer Originated Trace
- Call Pickup
- Make Set Busy

### Meridian Digital Centrex features

The following list contains features supported for Enhanced Warm SWACT:

- Automatic Call Distribution (ACD)
- ACD Name And Number
- ACD Make Set Busy
- ACD Emergency Key
- Automatic Dial
- Automatic Line
- Bell Core Line Study
- Business Set Display (Display not correct after the SWACT)

## **New Peripheral Maintenance** (continued)

---

- Call Forwarding
- Calling Line Identification
- Calling Name Inspect (Display not correct after the SWACT)
- Call Pickup
- Carrier Toll Denied
- Closed User Group
- Code Calling
- Code Restriction
- Comfort Tone
- Customer Data Change
- Cut-Through Dialing
- Data Loop Around
- Datapath DU Profile
- Datapath Modem Pooling
- Denied Call Forwarding
- Denied Incoming
- Denied Originating Service
- Denied Terminating Service
- Directed Call Pick Up No Barge In
- Direct Inward System Access
- Directory Number Network Attributes
- Direct Outward Dialing
- Electronic Switching Network
- Equal Access PIC
- Equal Access Toll Denied
- Essential Line Service
- Essential Line Service
- Expensive Route
- Hunt Groups
- Last Number Redial
- Line Screening



---

**New Peripheral Maintenance** (continued)

---

- MADN Hold (POTS)
- Make Set Busy
- Network Dial Plan Display (Display not correct after the SWACT)
- Network EBS Display (Display not correct after the SWACT)
- Network Speed Calling
- No Receiver Off-Hook Tone
- Off-Hook Queuing
- Originating Line Select Option
- Permanent Hold
- Private Business Line
- Private Business Line
- Private Network
- Private Virtual Network
- Query Time Display (Display not correct after the SWACT)
- Random Make Busy
- Requested Suspension
- Security Code
- Sleeve Leads for Public File Reporting System
- Special Billing Number
- Speed Calling Long
- Speed Calling Short
- Speed Calling User
- Star Equivalent
- Station Message Waiting
- Stop Hunt
- Subscriber Line Usage
- Terminating Line Select Option
- Toll Essential Service
- Uniform Call Distribution
- Voice Message Exchange

## **New Peripheral Maintenance** (continued)

---

Feature Call Status Preservation Across Warm SWACT supports essential line (ELN) functionality over a controlled warm SWACT. This feature affects ELNs and XPMs.

An XPM can drop call completion to busy subscriber (CCBS) requests under both of the following conditions:

- the call originates from a European Telecommunications Standards Institute (ETSI) primary rate interface (PRI) trunk or ETSI basic rate interface (BRI) point to point line
- the originator's XPM performs a warm SWACT

This feature is compatible with all subscriber features if the features are active after the Controlled Warm SWACT. This feature does not affect the operation of any subscriber feature after the feature is active.

Call status preservation across warm SWACT is compatible with the following features during the SWACT:

- Three-Way Calling
- Single-Button Transfer
- E911 Ringback
- E911 Automatic Call Distribution

### **Translations table flow**

New Peripheral Maintenance translations tables are as follows:

- LTCINV
- RCCINV

Table LTCINV contains the inventory data for PM types. The table does not contain inventory data for the peripheral side (P-side) link assignment. This table defines the line trunk controller (LTC) on the central side (C-side) of the remote cluster controller (RCC). The table defines the line group controller (LGC) for the C-side of the RCC.

You can load information for this table in field LOAD. Load information corresponds to the LOADNAME tuple from table PMLOADS.

Table RCCINV maintains a list of RCCs entered in the Digital Multiplex System (DMS). The table contains inventory data for the RCC, except P-side link assignments. The table information identifies the location of the RCC, the required load and exec lineups and network link connections.

---

## New Peripheral Maintenance (continued)

---

You can enter data for C-side digital signal 1 (DS-1) assignments for the RCC in table RCCINV. You can enter data for intraswitching in table RCCINV.

### Limits

New Peripheral Maintenance does not have limits.

### Interactions

New Peripheral Maintenance does not have functionality interactions.

### Activation/deactivation by the end user

New Peripheral Maintenance does not require the end user to activate or deactivate the feature.

### Billing

New Peripheral Maintenance does not affect billing.

### Station Message Detail Recording

New Peripheral Maintenance does not affect Station Message Detail Recording.

### Datafilling office parameters

New Peripheral Maintenance does not affect office parameters.

### Datafill sequence

The following table lists the tables that require data entry to implement the New Peripheral Maintenance. These tables are modified to establish MSG6X69 as the default value. The tables appear in the order that you must enter data.

#### Datafill requirements for New Peripheral Maintenance

| Table  | Purpose of table                                                                                                                                                                                            |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LTCINV | Line trunk controller inventory. Contains PM inventory data except P-side link assignments. This table defines the line and trunk controller (LTC) or line group controller (LGC) on the C-side of the RCC. |
| RCCINV | Remote cluster controller inventory. Contains RCC inventory data except P-side link assignments. You can enter RCC C-side DS-1 assignments in table RCCINV.                                                 |

---

## New Peripheral Maintenance (continued)

---

### Datafilling table LTCINV

The entry for New Peripheral Maintenance for table LTCINV appears in the following table. Only fields that directly apply to New Peripheral Maintenance appear. Refer to the data design section of the *Translations Guide* for a description of the other fields.

Table LTCINV identifies a host XPM-type peripheral to the DMS software. Information about the peripheral includes the location, the required load and the network link connections. This table supports the universal tone receiver (UTR) as an optional card in slot 15 or 16.

Table LTCINV defines the following types of peripherals:

- line group controller (LGC)
- line trunk controller (LTC)
- line group controller with ISDN
- line trunk controller with ISDN
- digital trunk controller (DTC)
- digital trunk controller with ISDN

The following procedure identifies the fields entered for table LTCINV datafill. Product engineering code (PEC) MX77AA is a valid option for field PROCPEC. A field that contains the name of the load file associated with the EEPROM is added. Field OPTCARD changes to establish MSG6X69 as the default value.

### Datafilling table LTCINV

| Field   | Subfield or refinement | Entry   | Explanation and action                                                                                                                                                                                   |
|---------|------------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OPTCARD | MSG6X69                | MSG6X69 | The MSG6X69 is the default messaging card. The AA version of NT6X69 card requires that you install an NT6X79AA tone card in slot 19. The AB and later versions of this card have the tone card on board. |

### Example of data entry for table LTCINV

Sample data entry for table LTCINV appears in the following example.

---

## New Peripheral Maintenance (continued)

---

### MAP display example for table LTCINV

```

Table LTCINV:
LTCNAME
  ADNUM  FRTYPE  FRNO  SHPOS  FLOOR  ROW  FRPOS      EQPEC      LOAD
                                EXECTAB
                                CSLNKTAB
                                OPTCARD

TONESET                          PROCPEC      E2LOAD
                                OPTATTR

PEC6X40
-----
LTC 1
  1016  LTE    1    18    0    C    6    6X02AG    ECL06BB
( POTS POTSEX) ( KEYSET KSETEX) ( RMM_TERM RSMEX) (ABTRK DTCEX) $
( 9 17) (13 61) (5 14) (0 29) (1 30) (2 31) (3 28) (4 29) $
( UTR16) (MSG6X69) ( CMR18  CMR03A) ( NT7X05AA 14)  $
NORTHAM  MX77AA  MX77AA  MX77NH08
                                $
6X40AA

```

### Datafilling table RCCINV

Table RCCINV contains RCC inventory data except P-side link assignments. You can enter data for RCC C-side DS-1 assignments in table RCCINV.

The following procedure identifies fields needed for table RCCINV datafill. The MX77AA is a valid option for field PROCPEC. Table RCCINV has a field that contains the name of the load file associated with the EEPROM. Only fields that directly apply to New Peripheral Maintenance appear. Refer

## New Peripheral Maintenance (continued)

to the data design section of the *Translations Guide* for a description of the other fields

### Datafilling table RCCINV

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Subfield or refinement | Entry   | Explanation and action                                                                                                                                                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| OPTCARD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | MSG6X69                | MSG6X69 | The MSG6X69 is the default messaging card. The AA version of NT6X69 card requires that you install an NT6X79AA tone card in slot 18. The AB and later versions of this card have the tone card on-board. |
| <p><b>Note:</b> When you enter data in field C-side link table (CSLNKTAB), make sure message links are not assigned to the same interface card. When the interface card supports a minimum of two links, separate the message links by the number of links on the interface cards. This action applies to all interface link types; DS-1, DS30, DS30A or PCM-30. Table control issues a warning if you attempt to assign message links on the same interface card. Message links assigned to the same interface card can cause an E1 outage (failure of all message links) if the card fails.</p> |                        |         |                                                                                                                                                                                                          |

### Datafill example for table RCCINV

Sample entries for table RCCINV appear in the following example.

### MAP display example for table RCCINV

```

RCCNAME
ADNUM  FRTYPE  FRNO  SHPOS  FLOOR  ROW  FRPOS  EQPEC  LOAD
   EXECTAB
CSPM
   CSLNKTAB
ESA  INTRASW
   OPTCARD
TONESET  PROCPEC  E2LOAD
-----
REM1  RCC 0
      1005  RCE   0   18   0  C   0  6X12AA  ESR06BB
(  POTS POTSEX) (  KEYSET KSETEX) (ABTRK DTCEX) (RMM_TERM RSMEX) $
(ESALINES ESAEX)
LTC 1
      (0) ( NILPORT) (2) (NILPORT) (3) (4) (5) (6) (7)$
Y      Y
      (UTR16) (  MSG6X69) (  CMR18 CMR03A) (  NT7X05AA 12) $
NORTHAM  MX77AA  MX77AA  MX77NH08
    
```

## Tools for verifying translations

New Peripheral Maintenance does not use translation verification tools.

---

**New Peripheral Maintenance** (end)

---

**SERVORD**

New Peripheral Maintenance does not use SERVORD.

## Trunking

---

### Functional group

Functional group: BAS00012

### Feature package

Feature package: Remote Switching Center Trunking NTX152AB

### Release applicability

BCS20 and up

### Prerequisites

To operate, Trunking has the following prerequisites:

- Bilge NTX000AA
- Common Basic NTX001AA
- Remote Switching Center NTX145AA
- RSC—Intra RSC Calling NTX150AA
- Universal Tone Receiver NTX269AA
- New Peripheral Maintenance NTX270AA

### Description

An important feature of the RSC is its ability to datafill dynamic trunks. The following sections show how dynamic trunks are datafilled and where they differ from nondynamic (static) trunks.

The dynamic capability is assigned on a trunk-group basis. Table ISTRKGRP is created for this purpose and contains the common language location identifiers (CLLI) of the trunk groups whose members are dynamic trunks. The table also contains the name of the site and the RCC to which the trunk group is restricted.

Table ISTRKGRP must be datafilled if dynamic trunking is supported at the RSC.

Table ISTRKGRP provides trunk-group-extension data. Changes, additions, or deletions to table ISTRKGRP are not allowed if subgroups of the trunk group are datafilled in table TRKSGRP or if members of the trunk group are datafilled in table TRKMEM.

Intraswitching is the capability to complete calls between subscribers connected to the same remote unit without using host resources.

Intraswitching capability is provided on a trunk group basis. Trunk groups



---

## Trunking (continued)

---

must be unique by site, and all trunk members of that group must belong to that specific site.

The DMS cannot distinguish among trunks in the same group at different sites. Therefore, all dynamic trunks must be members of a trunk group unique to one RCC only. This is enforced by table control.

### How channels are configured for each type

When adding network-only (static) trunks, table control assigns C-side channels for each static trunk evenly across all equipped links on the RCC. This process reduces the number of trunks that go out of service if a link is lost.

When adding dynamic trunks, table control attempts to allocate a preferred C-side channel on the highest unequipped C-side link. A preferred C-side channel is a channel that minimizes P-side to C-side framing delays.

If the preferred C-side channel is not available, table control attempts to allocate the same free channel on the highest unequipped port minus one.

If the preferred channel is busy on all the unequipped ports, a new preferred channel is chosen, and the search begins again at the highest unequipped port. Searching the highest unequipped port first reduces the chance of having to delete dynamic trunk members when adding C-side links.

Dynamic trunks can also be defined even if the C-side links are equipped in a noncontiguous manner.

### Adding or deleting C-side links

Table control does not allow a C-side or a P-side link to be deleted if static trunks are using channels on that link. Also, table control does not allow a C-side link to be added if dynamic trunks are using any channels on that unequipped port.

Table control lists the trunk members using the channels. These trunk members must be removed from table TRKMEM, and can be re-added after the C-side links are reconfigured.

### Data store for unequipped C-side links

Data store is allocated for the unequipped C-side links on the RCC. This results in the addition of 32 words of data store for each unequipped link. Also, 1533 words of store are required to accommodate table ISTRKGRP.

## Trunking (continued)

---

### Adding static trunks

To add static trunks to the P-side of the RCC, follow these steps:

- Datafill table CLLI.
- Datafill table TRKGRP.
- Datafill table TRKSGRP.
- Add the trunk members to table TRKMEM.

### Adding dynamic trunks

To add dynamic trunks to the P-side of the RCC, follow these steps:

- Datafill table CLLI.
- Datafill table TRKGRP.
- Datafill table ISTRKGRP.
- Datafill table TRKSGRP.
- Add the trunk members to table TRKMEM.

### Error messages

Entries into these tables could fail for the following reasons:

- Additions to table TRKSGRP fail if the trunk subgroup has an echo suppressor or if the trunk is an FX trunk. FX trunks are not allowed on dynamic trunk groups because they are not supported by the universal tone receiver (UTR).
- An entry in table TRKMEM could fail if the trunk datafilled in table TRKMEM is not on the RCC datafilled in table ISTRKGRP against the trunk group to which that trunk belongs. When this happens, the following message is displayed at the MAP terminal:

BAD DYNAMIC TRUNK LOCATION, CHECK ISTRKGRP.

- Failure can result when no intraswitch channels are available for dynamic trunks. In this case, an error message is displayed telling the user that all intraswitched channels are already assigned.

### Changing a static trunk to a dynamic trunk

To change a static trunk on an RCC to a dynamic trunk, follow these steps:

---

## Trunking (continued)

---

- 1 Delete all group members from table TRKMEM.  
**Note:** Before deleting any information from this table, the affected trunk must be installation busy. After adding all required information the trunk must be returned to service.
- 2 Delete appropriate trunk subgroups from table TRKSGRP.
- 3 Add the member entry to table ISTRKGRP.
- 4 Add the trunk subgroups to table TRKSGRP.
- 5 Add the group members to table TRKMEM.

### Changing a dynamic trunk to a static trunk

To change a dynamic trunk on an RCC to a static trunk, follow these steps:

- 1 Delete all group members from table TRKMEM.  
**Note:** Before deleting any information from this table, the affected trunk must be installation busy. After adding all required information the trunk must be returned to service.
- 2 Delete the appropriate trunk subgroups from table TRKSGRP.
- 3 Delete the member entry from table ISTRKGRP.
- 4 Add the trunk subgroups to table TRKSGRP.
- 5 Add the group members to table TRKMEM.

## Operation

Static trunks on the P-side of the RCC are used the same as any other P-side trunk group on any other peripheral. The CC sets up and breaks down the call path in the same manner.

However, since the RCC can be equipped with emergency stand-alone (ESA), the RCC could in fact be in-service in the ESA environment with the static trunks out-of-service in carrier fail (CFL). These trunks only operate when the RCC is under CC control.

Dynamic trunks on the other hand, can operate under RCC control when the links to the host are out-of-service. Dynamic trunks are designed to intra-switch the calls locally without using host facilities, after the call path is set up.

If the RCC enters into the ESA environment, it has in its own memory, a subset of the CC translations, called ESA translations, which overrides CC translations.

**Trunking** (continued)

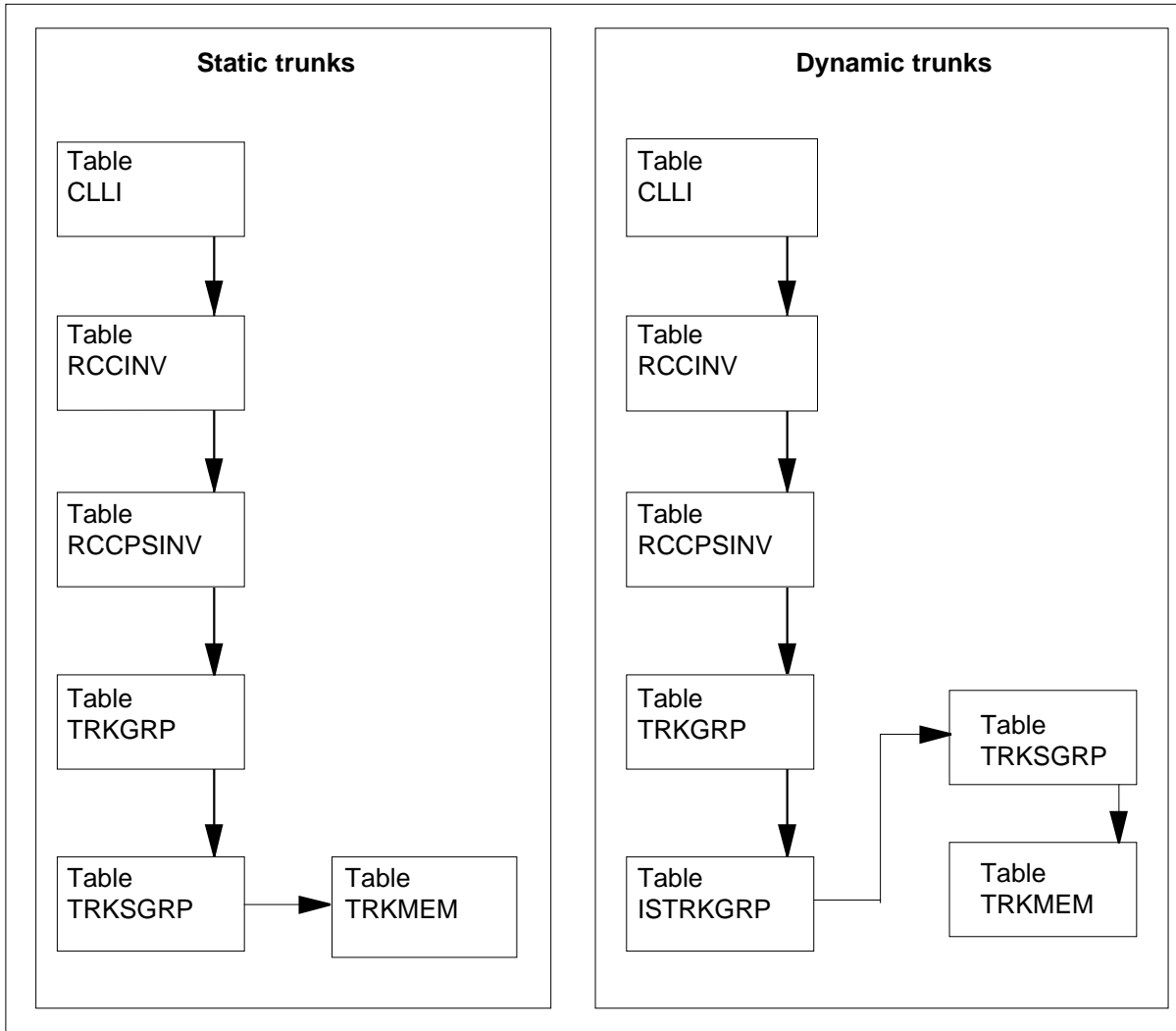
**Translations table flow**

An operating company can define priority routes for calls originating at remote locations. It can also distribute calls among trunk groups in a specific order according to the call's point of origination by datafilling a priority list in the routing tables.

Routes are given preference by the order that they are entered into the routing tables. If a call can be intraswitched, that route will always have preference and will be the first entry in the routing tables.

The following flowchart shows the trunking translation process.

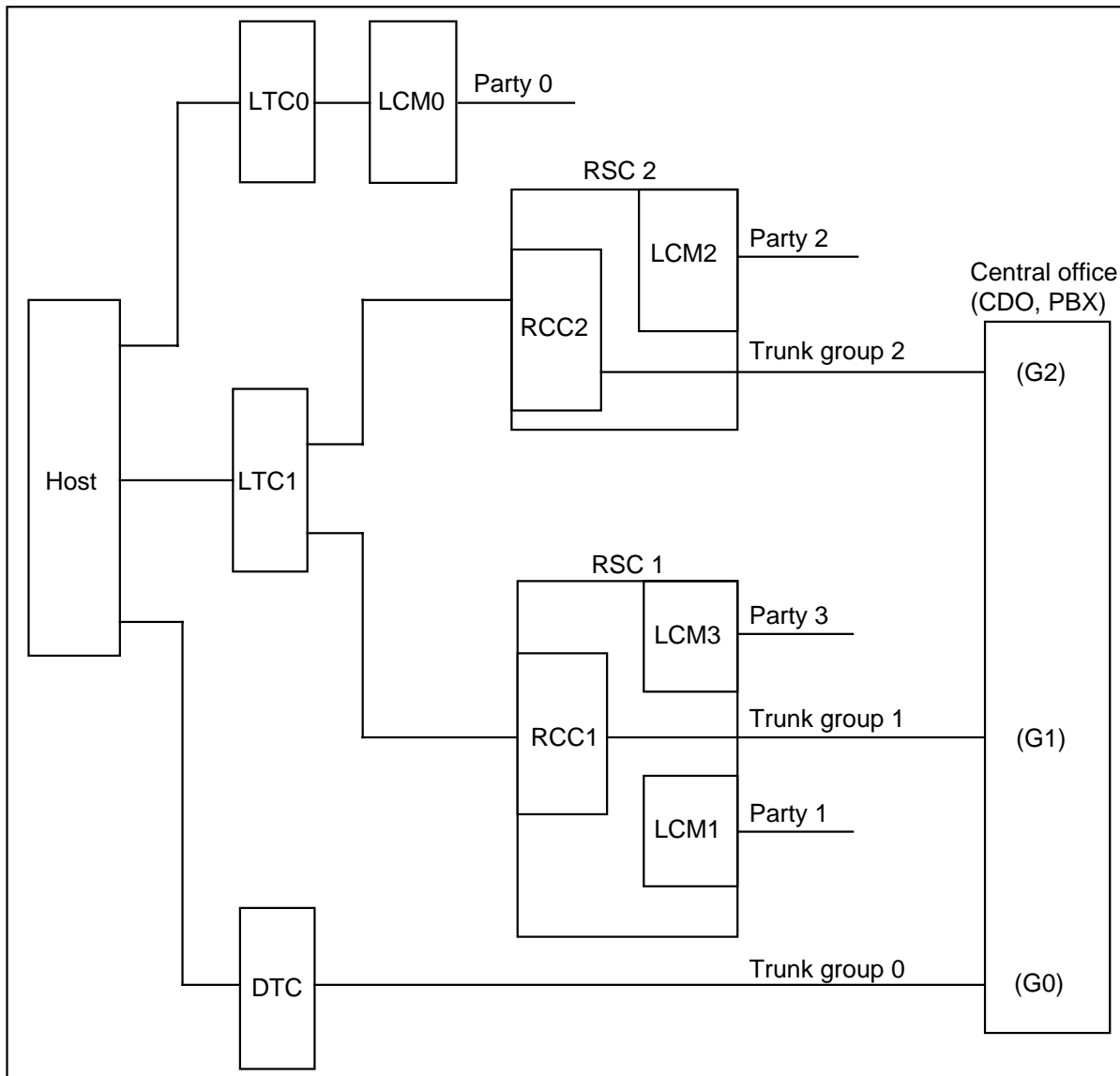
**Table flow for Trunking**



**Trunking** (continued)

In the following figure, trunk group 0 (G0) is connected to the host, trunk group 1 (G1) is connected to RCC 1, and trunk group 2 (G2) is connected to RCC 2. In this configuration, if a call originates at Party 1 and terminates at the CO, the call has the following possible routes:

- Return to the host, and use G0 to reach the CO.
- Perform a line-to-trunk intraswitch at RCC 1, and use G1 to reach the CO.
- Return to the host, go through RCC 2, then use G2 to reach the CO. (This application is limited and requires special provisioning.)

**Priority trunk routing for Trunking**

## Trunking (continued)

---

With RSC routing control, the OC datafills routes so that the shortest route has first priority. In this example, the shortest route is over G1, so the priority routing list is as follows:

- G1
- G0
- G2

A call originating from Party 2 and terminating at the CO has the following possible routes:

- G2
- G0
- G1

Route preference is specified by the order of the entry in the route tables. An optional subselector, SITE, gives route paths priority based on the location of call origination. SITE is datafilled as a subselector of selectors CND and NOT in MDC and POTS routing tables (OFRT, IBNRTE, HNPACONT.RTEREF, and FNPACONT.RTEREF).

Datafill is similar to existing datafill, such as that for ALWAYS, RND and TOD. Route types ST, SK, and T can be used together with the subselector SITE to do the following:

- Route calls to another route list in the same table using route type ST.
- Skip a number of elements (0 to 7) in the same route list using route type SK.
- Route calls to another route table using route type T.

Trunk groups must be unique by site, and all trunks members of that group should belong to that specific site.

### **Limitations and restrictions**

Trunking has no limitations or restrictions.

### **Interactions**

Trunking has no functionality interactions.

### **Activation/deactivation by the end user**

Trunking does not required the end user to activate or deactivate this feature.

**Trunking** (continued)**Billing**

Trunking does not affect billing.

**Station Message Detail Recording**

Trunking does not affect Station Message Detail Recording.

**Datafilling office parameters**

Trunking does not affect office parameters.

**Datafill sequence**

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

**Datafill tables required for Trunking**

| <b>Table</b> | <b>Purpose of table</b>                                                                                                                                                                                                                                                               |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CLLI         | Common language location identifier. CLLI codes uniquely identify the far end of each announcement, tone, trunk group, test trunk, national milliwatt test lines, and service circuit.                                                                                                |
| RCCINV       | Remote cluster controller inventory. Contains RCC inventory data, except P-side link assignments. RCC C-side DS-1 assignments are datafilled in table RCCINV.                                                                                                                         |
| RCCPSINV     | Remote cluster controller P-Side link inventory. Contains only RCC P-side link assignments.                                                                                                                                                                                           |
| TRKGRP       | Trunk group. Defines data for each trunk group associated with the switching unit.                                                                                                                                                                                                    |
| ISTRKGRP     | Interswitch trunk group. For intraswitching trunk calls at a remote site without using host facilities. It contains CLLIs of trunk groups whose members are dynamic trunks. The table also contains the site name and the RCC to which the trunk group is restricted.                 |
| TRKSGRP      | Trunk subgroup. Lists supplementary information for each subgroup assigned to one of the trunk groups listed in table TRKGRP.                                                                                                                                                         |
| TRKMEM       | Trunk member. Lists data associated with each trunk assigned to one of the trunk groups and subgroups specified in tables TRKGRP and TRKSGRP. This table identifies the circuits associated with static trunks, dynamic trunks, and the test equipment used to test lines and trunks. |

## Trunking (continued)

### Datafilling table CLLI

The following table shows the datafill specific to Trunking for table CLLI. Only those fields that apply directly to Trunking are shown. For a description of the other fields, refer to the data schema section of the *Translations Guide*.

#### Datafill procedure for table CLLI (Sheet 1 of 2)

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Subfield or refinement | Entry                             | Explanation and action                                                                                                                                                                                                                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CLLI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                        | see subfields (max 16 characters) | Common language location identifier. This 16-character field uniquely identifies the far end of each announcement, tone, trunk group, test trunk, national milliwatt test line, and service circuit. Recommended subfields: PLACE, PROV, BLDG, TRAFUNIT, and SUFX. |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | PLACE                  | alphanumeric                      | Place. This four-character code identifies the name of the city or town at the far end of each group.                                                                                                                                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | PROV                   | alphanumeric                      | Province or state. This two-character code identifies the province or state at the far end of the trunk group.                                                                                                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | BLDG                   | alphanumeric                      | Building. This two-character code identifies the building number at the far end of the trunk group.                                                                                                                                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | TRAFUNIT               | alphanumeric                      | Traffic unit. This three-character code identifies the destination of the traffic unit at the far end of the trunk group.                                                                                                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | SUFIX                  | alphanumeric                      | Suffix. This one-character code uniquely identifies trunk groups that terminate at the same CLLI location.                                                                                                                                                         |
| ADNUM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        | numeric                           | Administrative trunk group number. Enter a number from zero through a number that is one less than the size of table CLLI shown in table DATASIZE. The value must be unique.                                                                                       |
| <p><b>Note 1:</b> Memory is allocated by field SIZE in table DATASIZE for the entry with field DATSKEY equal to CLLI. The maximum number of CLLI codes is 8192.</p> <p><b>Note 2:</b> Changes to fields with multiple entries should be made in the PROMPT mode only. In nonprompt mode it is possible to leave out existing entries.</p> <p><b>Note 3:</b> Enter the continuation mark (+) in fields with multiple possible entries when more data is specified on the next line or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p> |                        |                                   |                                                                                                                                                                                                                                                                    |



**Trunking** (continued)**Datafill procedure for table CLLI (Sheet 2 of 2)**

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Subfield or refinement | Entry                            | Explanation and action                                                                                                                                                                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TRKGRPSIZ                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                        | 0 to 2047                        | Trunk group size. This four-character field is equal to the maximum quantity of trunk members that are expected to be assigned to the trunk group.                                                                            |
| ADMININF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                        | alphanumeric (max 32 characters) | Administrative information. This 32-character field is used by the OC to record administrative information. Information in this field is not used by the switching unit. Recommended subfields: TRAFCLS, OFFCLS, and TRKGRTP. |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | TRAFCLS                | alphanumeric                     | Trunk group traffic class. This field is optional and is for administrative purposes only.                                                                                                                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | OFFCLS                 | alphanumeric                     | Office class. This field is optional and is for administrative purposes only.                                                                                                                                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | TRKGRTP                | alphanumeric                     | Trunk group type. This optional field is for administrative purposes only.                                                                                                                                                    |
| <p><b>Note 1:</b> Memory is allocated by field SIZE in table DATASIZE for the entry with field DATSKEY equal to CLLI. The maximum number of CLLI codes is 8192.</p> <p><b>Note 2:</b> Changes to fields with multiple entries should be made in the PROMPT mode only. In nonprompt mode it is possible to leave out existing entries.</p> <p><b>Note 3:</b> Enter the continuation mark (+) in fields with multiple possible entries when more data is specified on the next line or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p> |                        |                                  |                                                                                                                                                                                                                               |

**Datafill example for table CLLI**

The following example shows sample datafill for table CLLI.

**MAP display example for table CLLI**

| CLLI       | ADNUM | TRKGRPSIZ | ADMININF                        |
|------------|-------|-----------|---------------------------------|
| HOST_TRUNK | 23    | 10        | HOST_INCOMING_TRUNK             |
| REM1_VER90 | 45    | 10        | REMOTE_VERIFICATION_TRUNK       |
| RSMVER90   | 47    | 10        | REMOTE-SERVICE-MOD-VERIFICATION |
| ALMSC      | 58    | 240       | ALARM-SC                        |
| RMMVER90   | 79    | 10        | ALARM-SD                        |
| REM1_OUT   | 177   | 10        | REMOTE_OUT_GOING_TRUNK          |

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**Trunking** (continued)
 

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**Datafilling table RCCINV**

The following table shows the datafill specific to Trunking for table RCCINV. Only those fields that apply directly to Trunking are shown. For a description of the other fields, refer to the data schema section of the *Translations Guide*.

**Datafilling table RCCINV**

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Subfield or refinement | Entry  | Explanation and action                                                                                                                                                                                                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| INTRASW                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                        | Y or N | Intraswitching. Controls whether calls that originate on an RCC can terminate at the same RCC without using host office facilities. A "Y" turns intraswitching ON, an "N" turns intraswitching OFF, for the datafilled RCC. |
| <p><b>Note 1:</b> Changes to fields with multiple entries should be made in the PROMPT mode only. In nonprompt mode it is possible to leave out existing entries.</p> <p><b>Note 2:</b> Enter the continuation mark (+) in fields with multiple possible entries when more data is specified on the next line or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p> <p><b>Note 3:</b> When datafilling field C-side link table (CSLNKTAB), assure message links are not assigned to the same physical interface card. When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This applies to all interface link types; DS-1, DS30, DS30A, or PCM-30. Table control will issue a warning if an attempt is made to assign message links on the same interface card. Assigning message links to the same interface card can cause an E1 outage (failure of all message links) if the card fails.</p> |                        |        |                                                                                                                                                                                                                             |

**Datafill example for table RCCINV**

The following example shows sample datafill for table RCCINV.

**Trunking** (continued)**MAP display example for table RCCINV**

```

RCCNAME
ADNUM  FRTYPE  FRNO  SHPOS  FLOOR  ROW  FRPOS  EQPEC  LOAD
   EXECTAB
CSPM
   CSLNKTAB
ESA  INTRASW
   OPTCARD
TONESET  PECS6X45  E2LOAD
-----
CARY  RCC 0
      1005  RCE  0    18    0  C    0  6X12AA  ESR06BB
(  POTS POTSEX) (  KEYSET KSETEX) (ABTRK DTCEX) (RMM_TERM RSMEX) $
(ESALINES ESAEX)
LTC 1
      (0) ( NILPORT) (2) (NILPORT) (3) (4) (5) (6) (7)$
Y      Y
      (UTR16) ( MSG6X69) ( CMR18 CMR03A) ( NT7X05AA 12)$
NORTHAM  MX77AA  MX77AA  MX77NH08

```

**Datafilling table RCCPSINV**

The following table shows the datafill specific to RSC basic call processing for table RCCPSINV. Only those fields that apply directly to RSC basic call processing are shown. For a description of the other fields, refer to the data schema section of the *Translations Guide*.

**Datafilling table RCCPSINV (Sheet 1 of 2)**

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                     | Subfield or refinement | Entry         | Explanation and action                                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------|---------------------------------------------------------------------------|
| RCCNAME                                                                                                                                                                                                                                                                                                                                                                                                                                   |                        | see subfields | RCC name. Enter the RCC name. Contains subfields SITE, PMTYPE, and RCCNO. |
|                                                                                                                                                                                                                                                                                                                                                                                                                                           | SITE                   | Site name     | Remote location site name. The site name must also appear in table SITE.  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                           | PMTYPE                 | RCC           | PM type. Enter RCC.                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                           | RCCNO                  | 0 through 63  | RCC number.                                                               |
| PSLNKTAB                                                                                                                                                                                                                                                                                                                                                                                                                                  |                        | see subfields | P-side link table. Contains subfields PSLINK and PSDATA.                  |
| <p><b>Note 1:</b> Changes to fields with multiple entries should be made in the PROMPT mode only. In nonprompt mode it is possible to leave out existing entries.</p> <p><b>Note 2:</b> Enter the continuation mark (+) in fields with multiple possible entries when more data is specified on the next line or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p> |                        |               |                                                                           |

**Trunking** (continued)

**Datafilling table RCCPSINV (Sheet 2 of 2)**

| Field   | Subfield or refinement | Entry                  | Explanation and action                                                                                                                                                    |
|---------|------------------------|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CARRIDX | PSLINK                 | 0 through 19           | P-side link. Enter the RCC P-side port number.                                                                                                                            |
|         | PSDATA                 | DS-1, DS30A or NILTYPE | P-side data. Enter DS-1 for trunks and remote nodes, and DS30A for links to RMMs or LCMs. Otherwise, enter NILTYPE. If PSDATA is DS-1, fill in fields CARRIDX and ACTION. |
|         |                        | name or blank          | Carrier index. Enter the name to index into table CARRMTC. Enter a blank for the default template in table CARRMTC.                                                       |
| ACTION  |                        | Y                      | Action. Enter Y if the carrier should be removed from service when the out-of-service limit for frame, slip, errored-second, or severe errored-second is exceeded.        |

**Note 1:** Changes to fields with multiple entries should be made in the PROMPT mode only. In nonprompt mode it is possible to leave out existing entries.

**Note 2:** Enter the continuation mark (+) in fields with multiple possible entries when more data is specified on the next line or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.

**Datafill example for table RCCPSINV**

The following example shows sample datafill for table RCCPSINV.

**MAP display example for table RCCPSINV**

```

RCCNAME
PSLNKTAB
-----
REM1      RCC      1
(0 DS30A) (1 NILTYPE) (2 DS1 DEFAULT N) (3 NILTYPE)
(4 DS30A) (5 DS30A) (6 DS30A) (7 DS30A) (8 DS30A)
(9 DS30A) (10 DS30A) (11 DS30A) (12 DS1 DEFAULT N)
(13 DS1 DEFAULT N) (14 DS1 DEFAULT N) (15 DS1 DEFAULT N)
(16 NILTYPE) (17 NILTYPE) (18 NILTYPE) (19 NILTYPE)$
    
```

**Datafilling table TRKGRP**

Table trunk group (TRKGRP) defines data for each trunk group associated with a switching unit. Each trunk group entry in table TRKGRP has a unique common language location identifier (CLLI) for the trunk group and a number of other fields determined by the trunk group type field GRPTYP.

**Trunking** (continued)

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

**Datafilling table TRKGRP (Sheet 1 of 2)**

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Subfield or refinement | Entry                              | Explanation and action                                                                                                                                                             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRPKEY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                        | see subfield                       | Group key. This field contains subfield CLLI. Enter the CLLI code for the trunk group assigned in table CLLI.                                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | CLLI                   | alphanumeric                       | Group key. This field contains subfield CLLI. Enter the CLLI code for the trunk group assigned in table CLLI.                                                                      |
| GRPINFO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                        | see subfields                      | Group information. This field contains subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, and CARD.                                                                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | GRPTYP                 | ITL2, TTL2, LOOPA, MAINT, or SOCKT | Group type. Enter the group type for the trunk group. For maintenance and test trunks, the range is ITL2, TTL2, LOOPA, MAINT, or SOCKT.                                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | TRAFSNO                | 0                                  | Traffic separation number. Enter 0, because the traffic separation number is not required for maintenance and test trunks.                                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | PADGRP                 | alphanumeric                       | Pad group. Enter the name of the pad group assigned to the trunk group in table PADDATA. For maintenance and test trunks, enter IAO (intra-office trunks). Otherwise, enter NPDGP. |
| <p><b>Note 1:</b> Table TRKGRP can have a maximum of 2047 trunk groups. The actual number is restricted by the number of CLLIs available to name the trunk groups.</p> <p><b>Note 2:</b> The set of trunk group types available for use in a specific office is provided by the hardware and software features, and feature packages provided for the office by the OC.</p> <p><b>Note 3:</b> Refer to the procedure for adding dynamic trunks for additional information on RSC dynamic trunking.</p> <p><b>Note 4:</b> Changes to fields with multiple entries should be made in the PROMPT mode only. In nonprompt mode it is possible to leave out existing entries.</p> <p><b>Note 5:</b> Enter the continuation mark (+) in fields with multiple possible entries when more data is specified on the next line or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.</p> |                        |                                    |                                                                                                                                                                                    |

**Trunking** (continued)

**Datafilling table TRKGRP (Sheet 2 of 2)**

| Field | Subfield or refinement | Entry        | Explanation and action                                                           |
|-------|------------------------|--------------|----------------------------------------------------------------------------------|
|       | NCCLS                  | NCRT         | No circuit class. Enter NCRT (no circuit).                                       |
|       | CARD                   | alphanumeric | Card code. Enter the product engineering code of the maintenance and test trunk. |

**Note 1:** Table TRKGRP can have a maximum of 2047 trunk groups. The actual number is restricted by the number of CLLIs available to name the trunk groups.

**Note 2:** The set of trunk group types available for use in a specific office is provided by the hardware and software features, and feature packages provided for the office by the OC.

**Note 3:** Refer to the procedure for adding dynamic trunks for additional information on RSC dynamic trunking.

**Note 4:** Changes to fields with multiple entries should be made in the PROMPT mode only. In nonprompt mode it is possible to leave out existing entries.

**Note 5:** Enter the continuation mark (+) in fields with multiple possible entries when more data is specified on the next line or more records will be entered. Enter the end mark (\$) in fields with multiple possible entries after the last entry.

**Datafill example for table TRKGRP**

The following example shows sample datafill for table TRKGRP.

**MAP display example for table TRKGRP**

| GRPKEY                                    | GRPINFO                   |
|-------------------------------------------|---------------------------|
| VER90                                     | MAINT 0 NPDGP NCRT 2X90AB |
| TTT                                       | MAINT 0 IAO NCRT 2X96AA   |
| TTU                                       | MAINT 0 IAO NCRT 2X47AA   |
| LTU                                       | MAINT 0 IAO NCRT 2X11AA   |
| RLMVER90                                  | MAINT 0 IAO NCRT 2X90AB   |
| OG_1                                      | TO 0 TLD NCRT IE MIDL 7 N |
| OG_2                                      | TO 0 TLD NCRT IE MIDL 4 N |
| RSC TIP                                   |                           |
| TI 0 ELO NCRT IE NPRT NSCR 704 LCL N N    |                           |
| RCC0IBNTO                                 |                           |
| IBNTO 0 ELO NCBN RCC0 0 MIDL ANSDISC      |                           |
| 0 N O 1 8 9 N N N N N N N \$              |                           |
| RCC0IBNTI                                 |                           |
| IBNTI 0 ELO NCRT RCC0 0 0 3204001 ANSDISC |                           |
| 0 Y N N Y N Y Y 0 0 N N N N N \$          |                           |

**Trunking** (continued)**Datafilling table ISTRKGRP**

Table intraswitch trunk group (ISTRKGRP) defines data for each trunk group assigned to the P-side of the RCC, designed to originate and terminate at the remote site.

Table ISTRKGRP identifies the unique common language location identifier (CLLI) and the associated RCC.

**Datafilling table ISTRKGRP**

| Field    | Subfield or refinement | Entry         | Explanation and action                                                                                                                                                                      |
|----------|------------------------|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ISTRKKEY |                        | alphanumeric  | Dynamic trunk group CLLI. Must be known to table TRKGRP and not known to tables TRKSGRP and TRKMEM. The trunk group must be TI, TO, T2, IBNTI, IBNTO, IBNT2, ES, or PX.digital (2w DID/DOD) |
| XPMNAME  |                        | see subfields | Extended peripheral name. Contains subfields SITE_ID, PMT, and EXT_PMNO.                                                                                                                    |
|          | SITE_ID                | alphanumeric  | SITE. Enter the RSC site. This must be known to table SITE (field NAME).                                                                                                                    |
|          | PM                     | RCC           | Peripheral module (PM) type. Enter RCC for PM type.                                                                                                                                         |
|          | EXT_PMNO               | numeric       | Peripheral module number. Enter RCC PM number with which the trunk group is associated.                                                                                                     |

**Datafill example for table ISTRKGRP**

The following example shows sample datafill for table ISTRKGRP.

**Trunking** (continued)

**MAP display example for table ISTRKGRP**

| TABLE ISTRKGRP: |              |       |         |    |
|-----------------|--------------|-------|---------|----|
|                 | ISTRKKEY     |       | XPMNAME |    |
| -----           |              |       |         |    |
|                 | RSCTOP       | REM1  | RCC     | 0  |
|                 | RSCTIP       | REM1  | RCC     | 0  |
|                 | RSCIBN2WP    | REM1  | RCC     | 0  |
|                 | RSCIBNTOP    | REM1  | RCC     | 0  |
|                 | RSCIBNTIP    | REM2  | RCC     | 1  |
|                 | RSCPX2WP     | REM2  | RCC     | 1  |
|                 | RSCTASEAS1WO | REM2  | RCC     | 1  |
|                 | RSCTASEAS1WI | REM12 | RCC     | 10 |
|                 | RSCTASEAS2W  | REM12 | RCC     | 10 |
|                 | RSCTASIBN1WO | REM12 | RCC     | 10 |
|                 | RSCTASIBN2W  | REM5  | RCC     | 12 |
|                 | RSCTASIBN1WI | REM5  | RCC     | 12 |
|                 | RSCTASPX2W   | REM5  | RCC     | 12 |

**Datafilling table TRKSGRP**

The following table shows the datafill specific to Trunking for table TRKSGRP. Only those fields that apply directly to Trunking are shown. For a description of the other fields, refer to the data schema section of the *Translations Guide*.

**Datafilling table TRKSGRP (Sheet 1 of 3)**

| Field                                                                                                                                                       | Subfield or refinement | Entry         | Explanation and action                                                                                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------|---------------------------------------------------------------------------------------------------------------------------------|
| SGRPKEY                                                                                                                                                     |                        | see subfields | Subgroup key. Contains subfields CLLI and SGRP.                                                                                 |
|                                                                                                                                                             | CLLI                   | alphanumeric  | Common language location identifier. Contains the code assigned in table CLLI to the trunk group to which the subgroup belongs. |
|                                                                                                                                                             | SGRP                   | 0 or 1        | Subgroup number. This subfield contains the number assigned to the trunk subgroup.                                              |
| <b>Note 1:</b> Memory is allocated for the number of trunk subgroups by the SIZE field in table DATASIZE for the entry with field DATSKEY equal to TRKSGRP. |                        |               |                                                                                                                                 |
| <b>Note 2:</b> The maximum number of trunk subgroups is equal to twice the number of trunk groups.                                                          |                        |               |                                                                                                                                 |
| <b>Note 3:</b> The maximum number of trunk subgroups that can be assigned is 4096.                                                                          |                        |               |                                                                                                                                 |



**Trunking** (continued)

Datafilling table TRKSGRP (Sheet 2 of 3)

| Field                                                                                                                                                                                                                                                                                                                                                                  | Subfield or refinement | Entry                 | Explanation and action                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CARDCODE                                                                                                                                                                                                                                                                                                                                                               |                        | alphanumeric          | Card code. Lists the maintenance and test trunk PEC.                                                                                                                                          |
| SGRPVAR                                                                                                                                                                                                                                                                                                                                                                |                        | see list              | Sub-group variable. Sub-group variable types are: STD, DSOTL, STDTL, C7UP, ISDN, FST, and X75.                                                                                                |
| SGRPVAR                                                                                                                                                                                                                                                                                                                                                                |                        | see subfields         | Variable subgroup data. For standard signaling, this field contains subfields SIGDATA, DIR, OPULSTYP, OSTARTSG, IDGTIME, NUMSTOPS, CCONT, RNGBCK, ESUPR, SAT, REMBSY, DIALMODE, and TRKGDTIM. |
|                                                                                                                                                                                                                                                                                                                                                                        | SIGDATA                | STD                   | Signaling data. Lists the signaling code.                                                                                                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                        | DIR                    | IC, OG, or 2W         | Direction. Enter trunk group direction; incoming (IC), outgoing (OG), or two-way (2W).                                                                                                        |
|                                                                                                                                                                                                                                                                                                                                                                        | OPULSTYP               | DP, DT, MF, or blank  | Outgoing type of pulsing. Leave blank if trunk is incoming.                                                                                                                                   |
|                                                                                                                                                                                                                                                                                                                                                                        | OSTARTSG               | DD, IM, LS, GS, or WK | Outgoing start dial signal. For maintenance and test trunks, enter WK (wink).                                                                                                                 |
| SGRPVAR<br>(continued)                                                                                                                                                                                                                                                                                                                                                 | IDGTIME                | 0 to 100, or blank    | Interdigital timing. For maintenance and test trunks, enter 2.                                                                                                                                |
|                                                                                                                                                                                                                                                                                                                                                                        | NUMSTOPS               | 0 to 3, or blank      | Number of stops/goes. For maintenance and test trunks, enter 0.                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                                                                        | CCONT                  | MW or NO              | Coin control. For maintenance and test trunks, enter MW (multiwink).                                                                                                                          |
|                                                                                                                                                                                                                                                                                                                                                                        | RNGBCK                 | IB or N               | Ringback. For maintenance and test trunks, enter IB (inband).                                                                                                                                 |
|                                                                                                                                                                                                                                                                                                                                                                        | ESUPR                  | F, H, or N            | Echo suppressor. For maintenance and test trunks, enter N (no echo suppressor).                                                                                                               |
| <p><b>Note 1:</b> Memory is allocated for the number of trunk subgroups by the SIZE field in table DATASIZE for the entry with field DATSKEY equal to TRKSGRP.</p> <p><b>Note 2:</b> The maximum number of trunk subgroups is equal to twice the number of trunk groups.</p> <p><b>Note 3:</b> The maximum number of trunk subgroups that can be assigned is 4096.</p> |                        |                       |                                                                                                                                                                                               |

## Trunking (continued)

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Datafilling table TRKSGRP (Sheet 3 of 3)

| Field                                                                                                                                                                                                                                                                                                                                                                  | Subfield or refinement | Entry  | Explanation and action                                                                                                                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                        | SAT                    | Y or N | Satellite. For maintenance and test trunks, enter N (no satellite).                                                                                                    |
|                                                                                                                                                                                                                                                                                                                                                                        | REMBSY                 | Y or N | Remote make busy. For maintenance and test trunks, enter N (feature not assigned).                                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                        | TRKGDTIM               | 16     | Trunk guard timing. For maintenance and test trunks, enter 16 (160 ms elapse time interval before the trunk is returned to the idle link list after trunk disconnect). |
| <p><b>Note 1:</b> Memory is allocated for the number of trunk subgroups by the SIZE field in table DATASIZE for the entry with field DATSKEY equal to TRKSGRP.</p> <p><b>Note 2:</b> The maximum number of trunk subgroups is equal to twice the number of trunk groups.</p> <p><b>Note 3:</b> The maximum number of trunk subgroups that can be assigned is 4096.</p> |                        |        |                                                                                                                                                                        |

### Datafill example for table TRKSGRP

The following example shows sample datafill for table TRKSGRP.

#### MAP display example for table TRKSGRP

|  |         |          |        |    |    |    |   |   |    |  |  |  |    |   |   |   |    |      |  |  |  |  |         |
|--|---------|----------|--------|----|----|----|---|---|----|--|--|--|----|---|---|---|----|------|--|--|--|--|---------|
|  | SGRPKEY | CARDCODE |        |    |    |    |   |   |    |  |  |  |    |   |   |   |    |      |  |  |  |  |         |
|  | SGRPVAR |          |        |    |    |    |   |   |    |  |  |  |    |   |   |   |    |      |  |  |  |  | SGRPVAR |
|  |         |          |        |    |    |    |   |   |    |  |  |  |    |   |   |   |    |      |  |  |  |  |         |
|  | TTU     | 0        | 2X47AD |    |    |    |   |   |    |  |  |  |    |   |   |   |    |      |  |  |  |  |         |
|  | STD     |          |        | 0G | NP | WE | 0 | 0 | NO |  |  |  | NO | N | N | N | 20 | UNEQ |  |  |  |  |         |

Table trunk subgroup (TRKSGRP) lists the supplementary information for each subgroup assigned to one of the trunk groups listed in table TRKGRP. Input data must be specified for at least one subgroup or a maximum of two subgroups for each trunk group listed in table TRKGRP, excluding trunk groups defined as maintenance (MAINT) group types.

The trunk subgroup data for maintenance and test trunks, excluding subgroup 1 of the trunk group with code TTU, is automatically produced by the trunk group datafill.

**Trunking** (continued)**Datafilling table TRKMEM**

Table trunk member (TRKMEM) lists the associated with each trunk assigned to one of the trunk groups and subgroups specified in tables TRKGRP and TRKSGRP. This table identifies circuits associated with static trunks, dynamic trunks, and test equipment used to test lines and trunks.

The following table shows the datafill specific to Trunking for table TRKMEM. Only those fields that apply directly to Trunking are shown. For a description of the other fields, refer to the data schema section of the *Translations Guide*.

**Datafilling table TRKMEM (Sheet 1 of 2)**

| Field                                                                                                                                     | Subfield or refinement | Entry         | Explanation and action                                                                                                                                                                                |
|-------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CLLI                                                                                                                                      |                        | alphanumeric  | Common language location identifier. Enter the code assigned in table CLLI to the trunk group to which the trunk is a member.                                                                         |
| EXTRKNM                                                                                                                                   |                        | 0 to 9999     | External trunk number. Enter the external trunk number assigned to the trunk.                                                                                                                         |
| SGRP                                                                                                                                      |                        | 0 to 1        | Subgroup number. Enter the subgroup number to which the trunk is assigned. Enter 0 for maintenance and test trunks, 1 for others.                                                                     |
| MEMVAR                                                                                                                                    |                        | see subfields | Variable data for members. This field varies according to whether the trunk is part of an interoffice trunk or a maintenance trunk. For a PMTYPE of RCC, subfields are: RCCNO, RCCCKTNO, and RCCCKTS. |
|                                                                                                                                           | PMTYPE                 | RCC           | Peripheral module type. Enter the PM type on which the trunk is mounted.                                                                                                                              |
|                                                                                                                                           | RCCNO                  | 0 to 511      | RCC number. Enter the PM number.                                                                                                                                                                      |
| <b>Note 1:</b> Memory is allocated for the total number of trunks specified in field TRKGRSIZ in table CLLI for appropriate trunk groups. |                        |               |                                                                                                                                                                                                       |
| <b>Note 2:</b> Table size can be increased with data present by changing field TRKGRSIZ in table CLLI for appropriate trunk groups.       |                        |               |                                                                                                                                                                                                       |

## Trunking (end)

### Datafilling table TRKMEM (Sheet 2 of 2)

| Field                                                                                                                                                                                                                                                                                       | Subfield or refinement | Entry   | Explanation and action                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------|----------------------------------------------------------------------------------------------|
| MEMVAR<br>(continued)                                                                                                                                                                                                                                                                       | RCCCKTNO               | 0 to 19 | RCC circuit number. Enter the RCC P-side link number to which the TRKGRP member is assigned. |
|                                                                                                                                                                                                                                                                                             | RCCCKTS                | 1 to 24 | RCC circuits. Enter the RCC time slot number to which the TRKGRP member is assigned.         |
| <p><b>Note 1:</b> Memory is allocated for the total number of trunks specified in field TRKGRSIZ in table CLLI for appropriate trunk groups.</p> <p><b>Note 2:</b> Table size can be increased with data present by changing field TRKGRSIZ in table CLLI for appropriate trunk groups.</p> |                        |         |                                                                                              |

### Datafill example for table TRKMEM

The following example shows sample datafill for table TRKMEM.

### MAP display example for table TRKMEM

```

>Table TRKMEM; LIS; POS RSMVER90
TABLE: TRKMEM
      CLLI          EXTRKNM  SGRP          MEMVAR
-----
RSMVER90          0         0          RMM  2  4
LTU                1         0          MTM  2  2
LTU                2         0          RMM  0  6
LTU                2         0          RMM  0  6
LTU                3         0          RMM  1  6
LTU                4         0          RMM  2  6
LTU                5         0          RMM  3  6
LTU                6         0          RMM  4  6
RCC0T1            0         0          RCC  0  2  4
RCC0T2            0         0          RCC  0  2  4
    
```

### Translation verification tools

Trunking does not use translation verification tools.

### SERVORD

Trunking does not use SERVORD.

---

## Firmware Downloading

---

### Functional group

The functional group is TEL00001.

### Feature package

The feature package is Firmware Downloading—NTXR42AA01.

### Release applicability

BCS34 and later versions

### Requirements

To operate, Firmware Downloading has the following requirements:

- XPM-PLUS (Product Life Upgrade Strategy) Basic—NTXR34AA *or*
- Bilge—NTX000AA
- Common Basic—NTX001AA
- New Peripheral Maintenance—NTX270AA

### Description

The MX77 Firmware Downloading enables firmware loading in the EEPROM of a unified processor (UP) (NTMX77AA) card. This card is on the XMS-based peripheral module product life upgrade strategy (XPM-PLUS) shelf.

The cost of firmware changes is high. Upgrades of program enhancements and maintenance of multiple versions of EPROMs are examples of firmware changes. A method was developed to upgrade firmware without the expense of the preparation, transmission, and changing of EPROMs on every card. The user does not return the EEPROMs on current UP cards that have a previous firmware version.

A UP has flash memory chips. The memory chips are upgraded when the user loads an image in the same way that software is loaded from a host switch. A UP card contains two flash EEPROMs, or banks, which are 256-Kbyte programmable chips. One bank is in executable mode while the other bank is in loadable mode. The executable EEPROM executes random access memory (RAM). The EEPROM used for backup is the loadable EEPROM. If the executable EEPROM is corrupt, the loadable EEPROM takes over and becomes the executable EEPROM.

## Firmware Downloading (continued)

---

### In-service firmware downloading

In-service firmware downloading permits XPM firmware loading in an XPM unit while the unit is in service (InSv). This feature reduces the amount of time one unit of the XPM is out-of-service (OOS). In-service firmware downloading supports NTMX77 and NTAX74 processors.

**Note:** In-service firmware downloading refers to the loading of the firmware while the unit is InSv. The upgrade of the firmware occurs with the XPM unit out of service (OOS).

This feature introduces the LOADFW command. The LOADFW command distinguishes the firmware load application from the firmware upgrade application. The command syntax for the LOADFW command is:

```
LOADFW: Load Firmware onto a PM or unit.
        All parameter will execute LOADFW on
        all PMs in the post set of the same
        PM type displayed on the MAP.
        LOADFW UPGRADE must be used to
        activate the new firmware.
Parms: <DEVICE> {UNIT <UNIT_NO> {0 TO 1},
                PM,
                INACTIVE,
                ACTIVE}
        [<FILENAME> STRING]
        [UPGRADE]
        [NOWAIT]
        [ALL]
```

To download firmware to the XPM, execute one of the following commands. The following are examples of the LOADFW command.

```
>LOADFW PM
```

*or*

```
>LOADFW UNIT unit_no
```

*or*

```
>LOADFW INACTIVE
```

**Note 1:** If the firmware\_file is not specified with the LOADFW command, the command applies the firmware\_file datafiled in the appropriate inventory table.

---

## Firmware Downloading (continued)

---

**Note 2:** By using the LOADFW command without the UPGRADE option, the firmware downloads to the DMS system.

XPM Firmware Loader Robustness CM Component disables the firmware option of the LOADPM command. A message is output to the user if the firmware option of the LOADPM command is used. This message states this option is not supported and to use the LOADFW command.

### Loadfile verification

Integrity checks are performed on the firmware for loadfile accuracy. A loadfile record length check ensures the file is a firmware file before submission to the XPM. If the record length is not 54, a message is output to the user and the LOADFW command fails.

Another accuracy check is a 32-bit cyclic redundancy check (CRC) along with a 16-bit checksum. The CM sends a validation message to the XPM to verify the accuracy of the firmware load. The XPM extracts the CRC and checksum that is in the firmware load. The XPM computes the CRC value and the checksum. The XPM compares the computed and extracted values to see if the values are the same. The XPM sends the result of the comparison to the CM.

To verify the firmware load enter the following command at the MAP display terminal:

```
>QUERYPM CNTRS
```

### Firmware upgrade

After loadfile verification, the XPM can be upgraded to the new firmware. To upgrade the firmware use one of the following command string sets:

```
>BSY PM
```

```
>LOADFW PM UPGRADE
```

```
>RTS PM
```

*or*

```
>BSY UNIT unit_no
```

```
>LOADFW UNIT unit_no UPGRADE
```

```
>RTS UNIT unit_no
```

*or*

```
>BSY INACTIVE
```

## Firmware Downloading (continued)

---

>LOADFW INACTIVE UPGRADE

>RTS INACTIVE

*Note:* By using the LOADFW command with the UPGRADE option, the firmware is upgraded to the new firmware load.

When this procedure is performed on a by-unit basis, perform a switch of activity (SwAct) followed by the RTS command. Execute the LOADFW command with the UPGRADE option on the now inactive unit.

### Operation

When a new firmware load is issued, the user implements downloading. The user issues the LOADPM command from the MAP terminal to implement downloading.

### Translations table flow

A description of firmware downloading translations tables appears in the following list:

- Table PMLOADS stores the device location of every peripheral module (PM) load file. The table maps peripheral module load files between load names and devices where loads reside. The PM load files must be entered in table PMLOADS before the inventory tables use the load files. Load information is entered in field LOADNAME. Corresponding entries are entered in field LOAD for tables LTCINV, LCMINV, and RMMINV.
- Table LTCINV contains PM inventory data (except P-side link assignments). This table defines the line trunk controller (LTC) or line group controller (LGC) on the central side (C-side) of the RCC. Load information for this table is entered in field LOAD and corresponds to the LOADNAME tuple from table PMLOADS.
- Table RCCINV lists RCCs entered in the DMS and contains RCC inventory data, except peripheral-side (P-side) link assignments. Table information identifies the location of the RCC, the required load and exec lineups, and the network link connections. The RCC C-side digital signal 1 (DS-1) assignments are entered in table RCCINV. Intraswitching and emergency stand alone (ESA) are entered in table RCCINV.

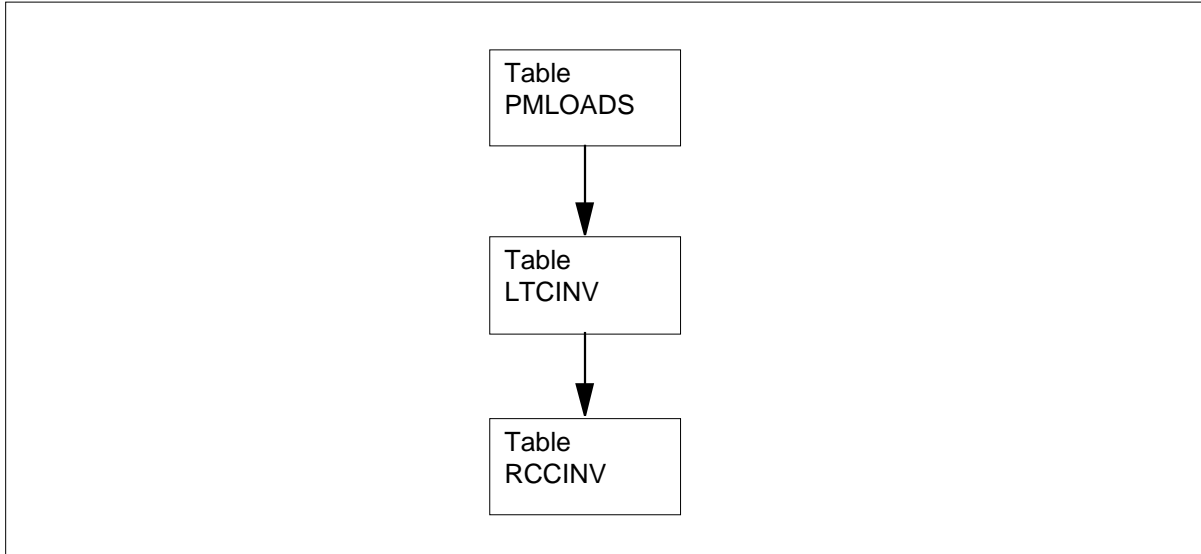
Firmware downloading translations appear in the following flowchart.



---

**Firmware Downloading** (continued)

---

**Table flow for firmware downloading****Limits**

The following limits apply to firmware downloading:

- The unit must be at task level. For example, the unit is loaded with the software load and is manually busy (ManB).
- The unit must have the NTMX77AA 0D2 card and support new messaging. The EPROM version must be equal to or higher than AB02.

**Interactions**

Firmware downloading does not have functionality interactions.

**Activation/deactivation by the end user**

Firmware downloading does not require activation or deactivation by the end user.

**Billing**

Firmware downloading does not affect billing.

**Station Message Detail Recording**

Firmware downloading does not affect Station Message Detail Recording.

**Datafilling office parameters**

Firmware downloading does not affect office parameters.

## Firmware Downloading (continued)

### Datafill sequence

Tables that require datafill to implement firmware downloading appear in the following table. The tables appear in the correct entry order.

#### Datafill tables required for firmware downloading

| Table                                                                                                                                                                               | Purpose of table                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PMLOADS                                                                                                                                                                             | Peripheral module loads. This table stores device location of every PM load file to map between load names and devices where the loads reside. As a result, autoloader can locate loadfiles without manual interruption. Expanded peripheral module (XPM) loadfiles must be entered in table PMLOADS before use in XPM inventory tables.                                                      |
| LTCINV                                                                                                                                                                              | Line trunk controller inventory. This table contains PM inventory data, except P-side link assignments. This table defines a host PM on the C-side of the remote. Load information for this table is entered in field LOAD and corresponds to the LOADNAME tuple from table PMLOADS.                                                                                                          |
| RCCINV                                                                                                                                                                              | Remote cluster controller inventory. This table lists the RCCs entered in the Digital Multiplex System (DMS) and contains RCC inventory data (except P-side link assignments). Table information identifies the location of the remote, the required load and exec lineups, and the network link connections. The RCC C-side DS-1 assignments and intraswitching are entered in table RCCINV. |
| <b>Note:</b> The NTMX77 is not a new product engineering code (PEC). The NTMX77 was introduced in BCS34. If an XPM has the NTMX77 card, the shelf is treated as an XPM-PLUS module. |                                                                                                                                                                                                                                                                                                                                                                                               |

### Datafilling table PMLOADS

Table PMLOADS stores the device location of every PM load file to map between load names and devices where the loads reside. The system loads the PMs suspected to have a corrupt load. Recovery time is reduced to permit autoloader to locate load files without personnel interruption.

Enter the PM load files in table PMLOADS before the PM load files are used in inventory tables. During the first datafill and the dump and restore process, the system adds tuples in PMLOADS. The system adds the tuples after the addition of the LTCINV and RCCINV tuples.

The addition of a dummy entry occurs if the load name is not in the table. For switch operation, change this dummy entry to include the correct storage device for the PM load file.

The datafill for firmware downloading for table PMLOADS appears in the following table. Fields that apply directly to firmware downloading appear.

---

**Firmware Downloading** (continued)

---

Refer to the data schema section of the *Translations Guide* for a description of the other fields.

**Datafilling table PMLOADS**

| Field    | Subfield or refinement | Entry                                     | Explanation and action                                                                                                                                                                                                                   |
|----------|------------------------|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LOADNAME |                        | alphanumeric (a maximum of 32 characters) | Peripheral module load name. Enter XPM loadname (must be the same as loadname entered in tables LTCINV and RCCINV).                                                                                                                      |
| ACTFILE  |                        | alphanumeric (a maximum of 32 characters) | Active loadfile name. Enter active XPM loadfile (original or patched) name. This name is the original load name before patching. The XPM loadfile patching updates the field after the load is patched for a period of time (soak time). |
| ACTVOL   |                        | alphanumeric (a maximum of 16 characters) | Active volume. Identifies the device that stores the active loadfile. Range is set of disk drive unit (DDU) volumes and system load module (SLM) disks available to the CM (S00DXPM).                                                    |
| BKPFIL   |                        | alphanumeric (a maximum of 32 characters) | Backup loadfile name. Identifies the name of the backup XPM loadfile (must be the same name as the LOADNAME field).                                                                                                                      |
| BKPVOL   |                        | alphanumeric (a maximum of 16 characters) | Backup volume. Enter the device that stores backup loadfile. Range is set of DDU volumes and SLM disks available to the CM (S00DXPM).                                                                                                    |
| UPDACT   |                        | Y or N                                    | Update active filename. Controls if a loadfile is qualified for loadfile patching. Controls if the system updates table PMLOADS fields ACTFILE and ACTVOL with the patched loadfile name.                                                |

**Datafill example for table PMLOADS**

Sample datafill for table PMLOADS appear in the following example.

## Firmware Downloading (continued)

### MAP display example for table PMLOADS

| LOADNAME | ACTFILE | ACTVOL  | BKPFIL | BKPVOL | UPDACT |
|----------|---------|---------|--------|--------|--------|
| ESR06BB  |         |         |        |        |        |
| ECL06BB  |         | S00DXPM |        |        |        |
| ECL06BB  |         | S00DXPM |        |        | Y      |

### Datafilling table LTCINV

The datafill for firmware downloading for table LTCINV appear in the following table. Fields that apply directly to firmware downloading are appear. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

The fields required for table LTCINV datafill appear in the following table. The PEC MX77AA is a valid option for field PROCPEC. The MSG6X69 card is the default value for field OPTCARD. The system adds a field that contains the name of the load file that associates with the EEPROM.

### Datafilling table LTCINV

| Field   | Subfield or refinement | Entry                                     | Description                                                                                                                                                                                           |
|---------|------------------------|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LOAD    |                        | alphanumeric (a maximum of 32 characters) | Load. Enter the load the RCC must use. The RCC must display a load that appears in table PMLOADS.                                                                                                     |
| PROCPEC |                        | MX77AA, MX77AA                            | Processor equipment product engineering codes. Each RCC unit requires one PEC. Enter the PEC for unit 0 first. The PEC must reflect minimum firmware abilities in the processor complex of each unit. |
| E2LOAD  |                        | alphanumeric (up to 8 characters)         | EEPROM file. Contains the name of the loadfile in the NTMX77AA EEPROM.                                                                                                                                |

### Datafill example for table LTCINV

Sample datafill for table LTCINV appear in the following example.

## Firmware Downloading (continued)

### MAP example for table LTCINV

Table LTCINV:

```

LTCNAME
  ADNUM  FRTYPE FRNO SHPOS FLOOR ROW FRPOS  EQPEC  LOAD
EXECTAB                                     CSLNKTAB

OPTCARD
TONESET          PROCPEC                      E2LOAD
   OPTATTR
   PEC6X40
-----
LTC 1
  1016  LTE    1   18    0   C   6   6X02AG  ECL06BB
( POTS POTSEX) ( KEYSET KSETEX) ( RMM_TERM RSMEX)
(ABTRK DTCEX) $
( 9 17) (13 61) (5 14) (0 29) (1 30) (2 31) (3 28) $

( UTR16) (MSG6X69) ( CMR18 CMR03A) ( NT7X05AA 19) $

NORTHAM      MX77AA  MX77AA  MX77NH08  $      6X40AA

```

### Datafilling table RCCINV

Table RCCINV contains inventory data, except P-side link assignments, for the RCC. The C-side DS-1 assignments are entered in table RCCINV.

The following procedure identifies fields required for table RCCINV datafill. The MX77AA is a correct option for field PROCPEC. The MSG6X69 is the default value for field OPTCARD. The system adds a field that contains the name of the loadfile that associates with the EEPROM.

#### Datafilling table RCCINV (Sheet 1 of 2)

| Field   | Subfield or refinement | Entry             | Description                                                                                                                                                                                                                    |
|---------|------------------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LOAD    |                        | alphanumeric      | LOAD. Enter the load for the RCC as identified in table PMLOADS.                                                                                                                                                               |
| PROCPEC |                        | MX77AA,<br>MX77AA | Processor equipment product engineering code. Enter the PEC of the NTMX77 card in RCC units 0 and 1. The PEC must reflect minimum firmware capabilities in the processor complex of each unit. The PEC for XPM-PLUS is MX77AA. |

## Firmware Downloading (continued)

### Datafilling table RCCINV (Sheet 2 of 2)

| Field  | Subfield or refinement | Entry                                    | Description                                                            |
|--------|------------------------|------------------------------------------|------------------------------------------------------------------------|
| E2LOAD |                        | alphanumeric (a maximum of 8 characters) | EEPROM_file. Contains the name of the loadfile in the NTMX77AA EEPROM. |

**Note:** When you enter field C-side link table (CSLNKTAB), make sure message links are not assigned to the same physical interface card. When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This condition applies to every interface link type: DS-1, DS30, DS30A, or PCM-30. Table control issues a warning if an attempt occurs to assign message links on the same interface card. An attempt to assign message links to the same interface card causes an E1 outage if the card fails. An E1 outage is a failure of the message links.

### Datafill example for table RCCINV

Sample datafill for table RCCINV appear in the following example.

### MAP example for table RCCINV

```

RCCNAME
ADNUM  FRTYPE  FRNO  SHPOS  FLOOR  ROW  FRPOS  EQPEC  LOAD
   EXECTAB
CSPM
   CSLNKTAB
ESA  INTRASW
   OPTCARD
TONESET  PROCPEC  E2LOAD
-----
REMI  RCC 0
      1005  RCE  0    18    0  C    0  6X12AA  ESR06BB
(  POTS POTSEX) (  KEYSET KSETEX) (ABTRK DTCEX) (RMM_TERM RSMEX)
(ESALINES ESAEX) $
LTC 1
      (0) (1) (2) (3) (4) (5) (6) (7) (8)$
Y      Y
(UTR16) (MSG6X69) (  CMR18 CMR03A) (  NT7X05AA 12) $
NORTHAM  MX77AA  MX77AA  MX77NH08
    
```

### Tools for verifying translation

Firmware downloading does not use tools for verifying translation.

## **Firmware Downloading** (end)

---

### **SERVORD**

Firmware downloading does not use SERVORD.

## XPM-PLUS

---

### Functional group

Functional group: BAS00003

### Feature package

Feature package: NTXR34AA/AB

### Release applicability

BCS34 and up

### Prerequisites

To operate, XPM-PLUS has the following prerequisites:

- Bilge, NTX000AA
- Common Basic, NTX001AA
- Firmware Downloading, NTXR42AA
- New Peripheral Maintenance, NTX270AA

### Description

The XMS-based peripheral module product life upgrade strategy (XPM PLUS) is to use the XPM equipped with the unified processor (UP) card NTMX77AA. The UP is the main processor in the XPM-PLUS shelf. This chapter is an overview of the translation table affected.

This feature provides central control (CC) software modifications for the UP in the line trunk controller (LTC), line group controller (LGC), and remote cluster controller (RCC) peripheral modules (PM).

### Operation

The LTC, LGC, and RCC are equipped with two M68000 processors; the master processor (MP), signaling processor (SP), and provisions for up to three memory cards. The MP, SP, and their memory cards are replaced by the UP, which contains the processor and memory. The UP card is based on the M68020 processor. The UP card provides the following advantages:

- replaces five cards with one card in each unit of the XPM
- XPM memory increases to 8 Mbyte, provisional to 16 Mbyte
- Real time capacity increases
- Common processor card between the common peripheral module (CPM) and upgraded XPM



---

**XPM-PLUS** (continued)

---

**Translations table flow**

The XPM-PLUS translations table is RCCINV.

**Limitations and restrictions**

The following limitations and restrictions apply to XPM-PLUS:

If the CC/PM identifies an NT6X45 product engineering code (PEC) mismatch by comparing the PECS6X45 field in table RCCINV with the NT6X45/NTMX77 processor PEC name in the unit, then the CC uses this information to determine the maintenance process to be used by operating company personnel. The handling of the NT6X45 PEC mismatch is in accordance with the philosophy of the 2/3 processor XPM.

**Interactions**

XPM-PLUS has no functionality interactions.

**Activation/deactivation by the end user**

XPM-PLUS requires no activation or deactivation by the end user.

**Billing**

XPM-PLUS does not affect billing.

**Station Message Detail Recording**

XPM-PLUS does not affect Station Message Detail Recording.

**Datafilling office parameters**

XPM-PLUS does not affect office parameters.

**Datafill sequence**

Table RCCINV now allows the datafill of the NTMX77 card.

NTMX77 is not a new PEC; it was introduced in a previous BCS release. When the RCC has the datafill of NTMX77, the shelf is treated as an RCC PLUS module.

The following table lists the table that requires datafill to implement XPM-PLUS.

**Datafilling table RCCINV**

Table Remote Cluster Controller Inventory (RCCINV) contains inventory data, except P-side link assignments, for the RCC. The NILPORT option to

**XPM-PLUS** (continued)

---

the CSLNKTAB field allows ports to be skipped when datafilling RCC C-side DS-1 link.

The following table shows the datafill specific to XPM-PLUS for table RCCINV. Only those fields that apply directly to XPM-PLUS are shown.

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

**Datafilling table RCCINV (Sheet 1 of 5)**

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Subfield or refinement | Entry         | Explanation and action                                                                                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------|---------------------------------------------------------------------------------------------------------|
| RCCNAME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                        | see subfields | RCC name. Contains subfields SITE, PMTYPE, and RCCNO                                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | SITE                   | alphanumeric  | Site. Enter the site name assigned to the remote location. This entry should also appear in table SITE. |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | PMTYPE                 | RCC           | PM type. Enter RCC for the remote cluster controller.                                                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | RCCNO                  | 0 to 255      | RCC number. This number is unique by office, not by site.                                               |
| <p><b>Note:</b> When datafilling field C-side link table (CSLNKTAB), assure message links are not assigned to the same physical interface card. When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This applies to all interface link types; DS-1, DS30, DS30A, or PCM-30. Table control will issue a warning if an attempt is made to assign message links on the same interface card. Assigning message links to the same interface card can cause an E1 outage (failure of all message links) if the card fails.</p> |                        |               |                                                                                                         |

**XPM-PLUS** (continued)

Datafilling table RCCINV (Sheet 2 of 5)

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Subfield or refinement | Entry         | Explanation and action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ADNUM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                        | 0 to 4095     | <p>Peripheral module administrative number. Enter the administrative number associated with the peripheral module.</p> <p><b>Note:</b> The value of field ADNUM must be unique across all PM inventory tables (DLMINV, IPEINV, LCMINV, LMINV, LTCINV, RCCINV, RCSINV, RCTINV, and VSRINV). Attempts to add a PM with an ADNUM already in use are rejected and the system prompts the user with the next available ADNUM value.</p> <p><b>Note:</b> Field ADNUM cannot be changed if the operational measurements (OM) counts for that PM are included in an Engineering and Administrative Data Acquisition System (EADAS) or data collection (DC) section associated with the OM groups LMD or UTR.</p> |
| FRTYPE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                        | RCE           | <p>Frame type. For the RCC, enter RCE.</p> <p>Enter the location of the RCC in fields FRNO, SHPOS, FLOOR, ROW, and FRPOS.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| EQPEC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                        | 6X12AA        | Equipment PEC. Enter the PEC (6X12AA) for the RCC.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| LOAD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                        | alphanumeric  | Load. Enter the load for the RCC. Ensure that table PMLOADS contains this load file and location.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| EXECTAB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                        | see subfields | Exec table. Contains subfields TRMTYPE, EXEC, and CONTMARK. As with LTCINV, each terminal type is associated with its particular execs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <p><b>Note:</b> When datafilling field C-side link table (CSLNKTAB), assure message links are not assigned to the same physical interface card. When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This applies to all interface link types; DS-1, DS30, DS30A, or PCM-30. Table control will issue a warning if an attempt is made to assign message links on the same interface card. Assigning message links to the same interface card can cause an E1 outage (failure of all message links) if the card fails.</p> |                        |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

**XPM-PLUS** (continued)**Datafilling table RCCINV (Sheet 3 of 5)**

| Field    | Subfield or refinement | Entry              | Explanation and action                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------|------------------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CSPM     | TRMTYPE                | alphanumeric       | Terminal type. Enter the type of terminal models to be used: POTS (regular lines), KEYSET (EBS/data lines), RMM_TERM (remote MTC trunks), ABTRK (regular trunks), ESA (Emergency Stand-Alone lines), MX5X09 and M5X12 (Meridian 9- and 12-button sets, respectively).                                                                                                                                                               |
|          | EXEC                   | alphanumeric       | Executive programs. Enter terminal type execs. Examples: POTSEX, KSETEX, DTCEX, ESAEX, and RSMEX.                                                                                                                                                                                                                                                                                                                                   |
|          | CONTMARK               | + or \$            | Continuation mark. Enter + to continue, \$ to end the vector.                                                                                                                                                                                                                                                                                                                                                                       |
|          |                        | see subfields      | C-side PM. Contains subfields PMTYPE and XPMNO                                                                                                                                                                                                                                                                                                                                                                                      |
|          | PMTYPE                 | LTC or LGC         | PM type. Enter the type of peripheral to which the RCC is attached. This XPM can be an LTC or LGC.                                                                                                                                                                                                                                                                                                                                  |
| CSLNKTAB | PMNO                   | 0 to 255           | PM number. Enter the PM number to which the RCC C-side is assigned.                                                                                                                                                                                                                                                                                                                                                                 |
|          |                        | 0 to 19 or NILPORT | C-side link table. This is a vector with up to 16 entries. Enter the LTC P-side DS-1 links (0 to 19) to which the RCC C-side links are assigned. Note that all links for an RCC must be assigned to the same LTC. RCC message links (first and third entries) must be assigned to different shelves (units) of the host XPM so that corruption or power failure does not affect service. If a port is to be skipped, enter NILPORT. |
|          | CONTMARK               | + or \$            | Continuation mark. Enter + to continue, \$ to end the vector.                                                                                                                                                                                                                                                                                                                                                                       |

**Note:** When datafilling field C-side link table (CSLNKTAB), assure message links are not assigned to the same physical interface card. When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This applies to all interface link types; DS-1, DS30, DS30A, or PCM-30. Table control will issue a warning if an attempt is made to assign message links on the same interface card. Assigning message links to the same interface card can cause an E1 outage (failure of all message links) if the card fails.

**XPM-PLUS** (continued)

Datafilling table RCCINV (Sheet 4 of 5)

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Subfield or refinement | Entry         | Explanation and action                                                                                                                                                                                                                                                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ESA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        | Y or N        | Emergency stand-alone. Enter Y(yes) or N(no). This field controls whether the RCC has ESA capability.                                                                                                                                                                                                         |
| INTRASW                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                        | Y or N        | Intrасwitching. Controls whether intrасwitching is allowed                                                                                                                                                                                                                                                    |
| OPTCARD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                        | see subfields | Optional card. This is a vector of up to ten entries.                                                                                                                                                                                                                                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | MSG6X69                | MSG6X69       | New messaging card. Default message card for the RCC. If the card is the AA version, a tone card NT6X79AA is required in slot position 18. The AB version has the tone card onboard.                                                                                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | TONE6X79               | TONE6X79      | Tone card. The NT6X79AA tone card is required with the message card version NT6X69AA.                                                                                                                                                                                                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | UTRxx                  | UTRxx         | Universal tone receiver. Two UTRs maximum per shelf in slot positions 16, the default position, and 14, the additional UTR slot position.<br><br><b>Note:</b> The xx is the number of the slot position the card is physically installed in. This number must be entered, because you may have more than one. |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | CMRLOAD                | alphanumeric  | Class modem resource load. Enter CMR and the CMR loadname.                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | NT7X05AA               | NT7X05AA      | If NT7X05AA is entered, the system prompts for the slot_number. Slot numbers for the NT7X05AA in the RCC are slots 8 to 17.                                                                                                                                                                                   |
| TONESSET                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                        | NORTHAM       | Tone set. Enter NORTHAM for North America; otherwise, enter DEFAULT.                                                                                                                                                                                                                                          |
| <b>Note:</b> When datafilling field C-side link table (CSLNKTAB), assure message links are not assigned to the same physical interface card. When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This applies to all interface link types; DS-1, DS30, DS30A, or PCM-30. Table control will issue a warning if an attempt is made to assign message links on the same interface card. Assigning message links to the same interface card can cause an E1 outage (failure of all message links) if the card fails. |                        |               |                                                                                                                                                                                                                                                                                                               |

**XPM-PLUS** (continued)

**Datafilling table RCCINV (Sheet 5 of 5)**

| Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Subfield or refinement | Entry                             | Explanation and action                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PECS6X45                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                        | 6X45AC, BA, BB, BC, BD, or MX77AA | <p>6X45 PEC codes. Enter the PEC of the card in unit 0 and unit 1 of the RCC. The PEC must reflect minimum firmware capabilities in each units processor complex. Enter PEC 6X45 and the card suffix, (AC, BA, BB, BC, or BD), for the RCC or MX77AA for the RCC PLUS.</p> <p><b>Note:</b> Feature UP card on the RCC, CC portion in XPM PLUS in the RCC is required to datafill the NTMX77 card in table RCCINV.</p> |
| E2LOAD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                        | MX77MAxx                          | <p>EEPROM_ file. Contains the name of the loadfile loaded in the NTMX77AA EEPROM, such as MX77MAxx.</p> <p><b>Note:</b> The xx is the version number, for example, 24. If the shelf is equipped with a processor other than NTMX77, field E2LOAD is automatically datafilled with NILLOAD.</p>                                                                                                                        |
| <p><b>Note:</b> When datafilling field C-side link table (CSLNKTAB), assure message links are not assigned to the same physical interface card. When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This applies to all interface link types; DS-1, DS30, DS30A, or PCM-30. Table control will issue a warning if an attempt is made to assign message links on the same interface card. Assigning message links to the same interface card can cause an E1 outage (failure of all message links) if the card fails.</p> |                        |                                   |                                                                                                                                                                                                                                                                                                                                                                                                                       |

**Datafill example for table RCCINV**

The following example shows sample datafill for table RCCINV.

**XPM-PLUS** (end)**MAP display example for table RCCINV**

```

RCCNAME
ADNUM  FRTYPE  FRNO  SHPOS  FLOOR  ROW  FRPOS  EQPEC  LOAD
   EXECTAB
CSPM
   CSLNKTAB
ESA  INTRASW
   OPTCARD
TONESET  PECS6X45  E2LOAD
-----
CARY  RCC 0
      1005  RCE  0   18   0  C   0  6X12AA  ESR06BB
(  POTS POTSEX) (  KEYSET KSETEX) (ABTRK DTCEX) (RMM_TERM RSMEX) $
(ESALINES ESAEX)
LTC 1
      (0) ( NILPORT) (2) (NILPORT) (3) (4) (5) (6) (7)$
  Y      Y
      (UTR16) (  MSG6X69) (  CMR18 CMR03A) (  NT7X05AA 12) $
NORTHAM  MX77AA  MX77AA  MX77NH08

```

**Error messages for table RCCINV**

The following error messages apply to table RCCINV.

**Error messages for table RCCINV**

| Error message                                                                       | Explanation and action                                                                                                        |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| The MX77AA processor requires the MSG6X69 optional card in this type of peripheral. | MX77 is defined in field PECS6X45 in table RCCINV. The PM type is RCC and the NT6X69 card is not defined as an optional card. |
| The MX77AA processor is not supported by this type of peripheral.                   | MX77 is defined in field PECS6X45 in table RCCINV. The PM type differs from RCC).                                             |

**Translation verification tools**

XPM-PLUS does not use translation verification tools.

**SERVORD**

XPM-PLUS does not use SERVORD.





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DMS-100 Family

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Extended Peripheral Module Translations Reference Manual

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