Critical Release Notice

Publication number: 297-8331-815
Publication release: Standard 10.02

The content of this customer NTP supports the SN06 (DMS) and ISN06 (TDM) software releases.

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

Bookmark Color Legend

Black: Applies to new or modified content for the baseline NTP that is valid through the current release.

Red: Applies to new or modified content for NA017/ISN04 (TDM) that is valid through the current release.

Blue: Applies to new or modified content for NA018 (SN05 DMS)/ISN05 (TDM) that is valid through the current release.

Green: Applies to new or modified content for SN06 (DMS)/ISN06 (TDM) that is valid through the current release.

Attention!
Adobe® Acrobat® Reader™ 5.0 is required to view bookmarks in color.

Publication History

March 2004

Standard release 10.02 for software release SN06 (DMS) and ISN06 (TDM).

Changes in section “Remote Switching Center Multi-access (RSC-M)” due to CR Q00693785:

- Change of range of FRAME parameter in “Datafilling table GPPTRNSL”
- Additional error message in “Error messages for table GPPTRNSL”

Change of phone number for Nortel Networks documentation support from 1-800-684-2273 to 1-877-662-5669, Option 4 + 1.

297-8331-815

DMS-100 Family

Extended Peripheral Module

International Translations Reference Manual

XPM12 and up Standard 10.01 August 1999

NORTEL NETWORKS™
How the world shares ideas.

DMS-100 Family

Extended Peripheral Module

International Translations Reference Manual

Publication number: 297-8331-815
Product release: XPM12 and up
Document release: Standard 10.01
Date: August 1999

Contents

About this document

When to use this document

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 the *DMS-10 and DMS-100 Family Product Documentation Directory,* 297-8991-001.

This document is written for all DMS-100 Family offices. More than one version of this document may exist. To determine whether you have the latest version of this document and how documentation for your product is organized, check the release information in the *DMS-10 and DMS-100 Family Product Documentation Directory,* 297-8991-001.

References in this document

The following documents are referred to in this document:

- *Log Report Reference Manual*
- *Office Parameters Reference Manual*
- *Operational Measurements Reference Manual*
- *Product Documentation Directory,* 297-8991-001

- *SERVORD Reference Manual*
- *Translations Guide*

What precautionary messages mean

The types of precautionary messages used in Nortel Networks 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

ATTENTION

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.

DANGER Possibility of personal injury

DANGER

Risk of electrocution

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.

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.
```

The following excerpt from a procedure shows the command syntax used in this document:

1 Manually busy the CTRL on the inactive plane by typing

>BSY CTRL ctrl_no
and pressing the Enter key.

where

ctrl_no is the number of the CTRL (0 or 1)

Example of a MAP response:

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

XPM International Translations Introduction

This extended peripheral module (XPM) translations reference manual provides the following information:

- product overview
- translations datafill procedures
- description of basic and optional XPM feature abilities
- description of how specified tables activate, deactivate, or alter product abilities for Remote Switching Center-SONET (Synchronous Optical Network) (RSC-S) international systems

Section 3 describes translation table datafill for international systems. Section 4 includes the specified differences for UK/Europe.

Introduction to data tables

The translations database contains many data tables. Each table has a purpose and contains a specified type of data. When you enter datafill, you enter specified data in a table. The following section describes the structure of data tables.

Data associated with hardware and software systems of the Digital Multiplex System (DMS) switch are stored in tables.

A table contains rows and columns. A row is 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 different field name that contains a maximum of eight characters. The field name is a prompt for data input.

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

Tuple properties

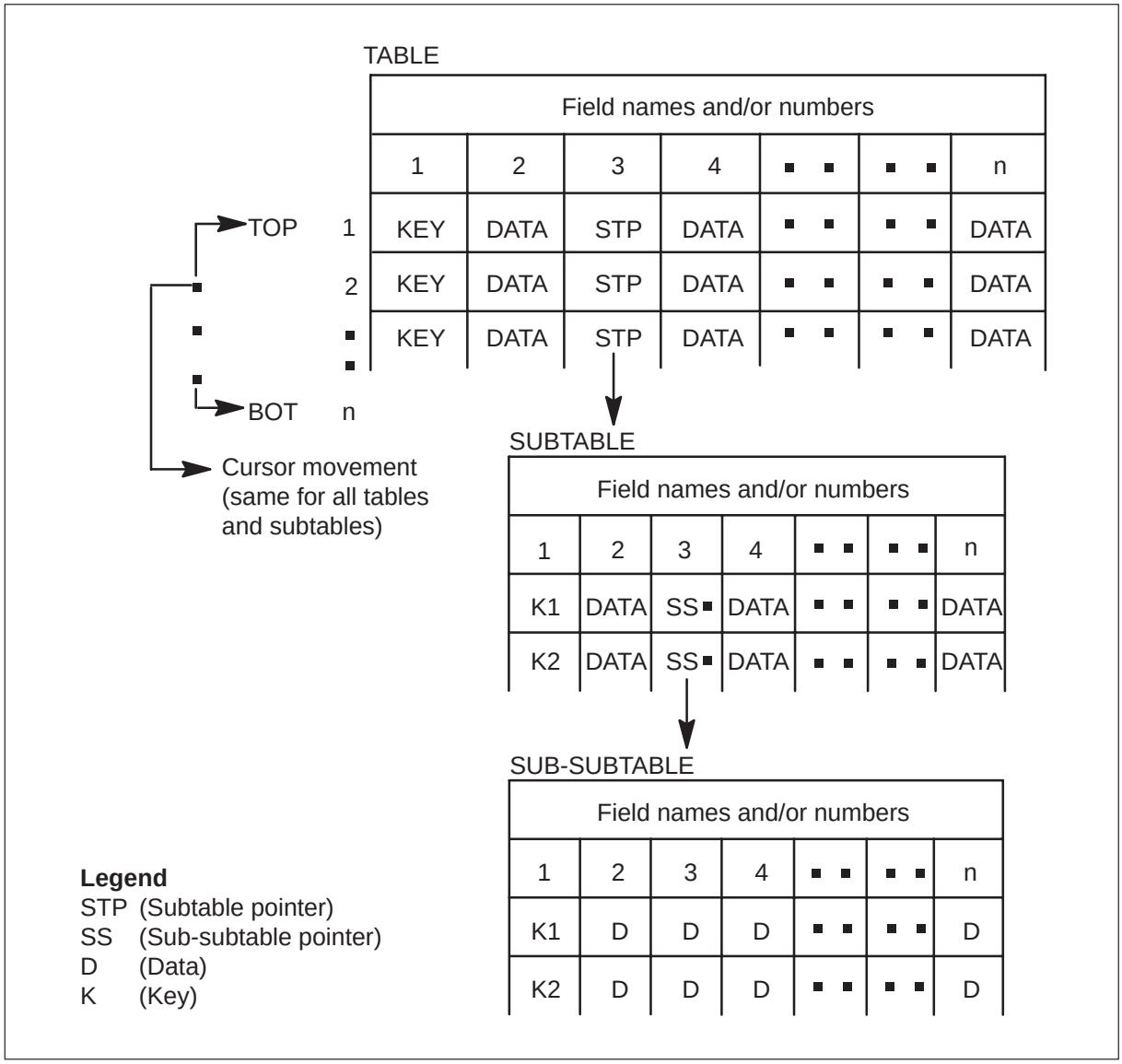
A different key identifies each tuple.

A key contains the first field. For most tables, the key forms one field. In other tables, the key requires a minimum of one field of data to make the key different. In this occurrence, the first field and one or more following fields in the tuple form the key.

The key or the table editor (TE) cursor reference tuples. The cursor is an internal pointer to a tuple of a table. Use TE commands like POSITION, LIST, BOTTOM, and TOP to move the cursor. Refer to the Table editor commands table in this section for a description of TE commands.

The tuple the cursor points to is the current tuple.

Examples of table, subtable and sub-subtable



Using the table editor

The TE is a set of commands that modify the data in the DMS-100 control tables. Enter the commands at the MAP terminal.

Note: 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 a tuple in a table or subtable
- display specified valid field values
- search for tuples that contain specified field values

Procedures for datafilling any system

The datafill procedures in this section list the field and subfield names of the key tables. You enter data into the key tables for any system. Explanations of each field and subfield also available. Examples of field entries are available for most fields and subfields. The examples correspond to the example configuration in the earlier table. The examples correspond to examples of tuples at the end of each procedure.

Input prompts and prompting mode

The system uses prompts to notify the user. The system prompts you when the data you enter is not complete or is not in defined parameters. When a prompt occurs, the system gives you the name of the required field or parameter. You have the following options:

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

If the tuple you enter has many list items, a prompt appears. The prompt continues until the tuple reaches the maximum list length or until you enter a dollar sign ($).

Nonprompt mode

WARNING

Possible loss of service if you use the NONPROMPT mode

In tables with fields with multiple entries, like OPTCARD, EXECTAB, CSLINKTAB and PSLINKTAB, do not use the NONPROMPT mode of datafill. When you use the NONPROMPT mode, enter all datafill of a field in one entry. The system deletes entries that you do not enter in the NONPROMPT mode from the table. The system does not prompt operating company personnel for additional entries in a field unless the personnel are in the PROMPT mode. The PROMPT mode steps through each separate value. Use the PROMPT mode when you make entry changes to multiple datafill fields.

The system first processes commands in the nonprompt mode. After the system recognizes a valid command, the system processes one field value at a time. The process continues until the system reaches the end of the input line ($) or error detection occurs.

To add a tuple at one time, string following field values together. This action leaves an empty space between each field value. Indicate the end of the string with a dollar sign ($). If the information for one tuple exceeds one input line, use a plus sign (+) as the last character on the line. This action allows the system to process current line contents and the next line as a single input.

Activating changes to tables

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

Table editor commands

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

Table editor commands

Command	Description
TABLE *table name*	Opens the table *table name*.
ADD	Adds the tuple given as a parameter to the table. If you do not give parameters, the system prompts in each field for your input.
BOTtom	Positions the cursor at bottom of the table.
CHAnge	Changes the specified fields to the specified values. If you do not specify fields, the system prompts each field for your input.
COUNT condition	Counts the number of tuples in the table that meet specified conditions. Positions the cursor at the first tuple.
DELete KEY	Deletes the tuple that contains the specified key. If you do not give parameters, the system deletes the current tuple.
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. Display of the tuple does not occur.
HEADING	Displays the current tuple heading line or lines. Shows tuple format.
HELp command name	Displays a short description of the function of the TE command you want.
LAST	Positions the cursor at the last tuple in the table or subtable without the display of the tuple.

—continued—

Table editor commands (continued)

Command	Description
LIST n *or* all condition	Displays one or more tuples of the current table, as follows: • *n* is the number of tuples to display. This display starts with the current tuple. • *all* includes all tuples of the current table displayed. This display starts at the first tuple. This display does not depend on cursor position. • The condition command parameter is on condition. The system lists all tuples meeting the condition. The parameter is in use with the *n* and *all* parameters.
NEXT	Positions the cursor at the tuple following the current tuple. Does not display the tuple.
OVErride	Cancels the prompt that appears when the CPUs are out-of-synchronization or when the journal file is not available.
POSition KEY	Positions the cursor at a specified tuple and causes the tuple to appear.
QUIt all	Exits from the current table if you enter QUIT. The parameter *all* causes the system to quit all tables accessed during the table editor session. The parameter returns 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 returns from a subtable to a main table.
SUBtable field name or field#	Opens and enters the subtable from a main table. You must enter the main table before you can access the subtables. If more than one subtable is present, you must specify the field name or the field number associated with the field name. When you do not enter parameters, one field points to a subtable. Enter that subtable.
TOP	Positions the cursor at the first tuple in the table and displays the tuple field data.
UP	Moves the cursor up to the specified number of tuples. Displays the field data without headings.

—continued—

Table editor commands (continued)

Command	Description
VERify ON or OFF	Sets a verify mode. This mode delays performance of following commands. This mode lets you check the display, as follows: • ON causes the system to prompt you to confirm that the tuple addition, change, replacement or deletion data is correct. • OFF causes the system to perform the command as you entered the command, without your confirmation.
—end—	

Remote Switching Center-SONET International

Understanding RSC-S International translations

You must understand the RSC-S concepts and terminology before you enter data in the Remote Switching Center-SONET (RSC-S) product. This chapter describes the product in general terms as a background to enter data in the RSC-S.

Differences between RSC and RSC-S

The RSC-S is like the RSC. For example, RSC-S is available with or without ISDN. The RSC-S requires the same call processing software as a requirement to install RSC-S. The RSC-S is an improved version of the RSC. New software functionality, revised system architecture and revised component packages implement these improvements. Software packages support international technology for international offices.

Software functionality

Combine standard RSC packages and the RSC-S basic package to obtain RSC-S software features. The RSC packages provide separate features. The RSC-S basic package activates these features and provides specified RSC-S capabilities. The RSC-S improves the basic call processing of the RSC. The RSC-S provides the following improvements for intraswitching and emergency stand-alone (ESA) failure contingency services:

- Intraswitching allows calls that originate and terminate on the RSC-S to switch without the use of host links.
- The ESA continues RSC-S service when a loss of communication with the host occurs.
- Warm SWACT allows stable calls to continue without interruption when a controlled or uncontrolled transfer of RSC-S call processing occurs. An improvement in the pre-SWACT/post-SWACT audit process reduces the possibility of loss of service. The loss of service occurs when the mate remote center offshore #2 (RCO2) cannot gain and maintain call processing activities.

Revised system architecture

The RSC-S design is like the common peripheral module (CPM) architecture. The CPM replaces the current expanded peripheral modules (XPM) for host and remote applications. The CPM is a family of peripheral modules (PM) that the DMS-100 family uses. The CPM supports current XPM interfaces where the CPM is able to support these interfaces.

The CPM can be a host peripheral or a remote peripheral, like the RCO2. In remote applications, RCO2 supports different types of trunks and lines. The amount of visibility and control that is available for current XPMs is available to the RCO2. The MAP terminal provides access to these new PM types.

The RSC-S design has a dual-shelf configuration that includes the RCO2 shelf and the extension shelf. The RCO2 shelf contains central processing equipment and circuits that each application requires. The extension shelf increases the capacity of the RCO2 shelf. The extension shelf contains octal PCM-30 circuit packs and D-channel handlers (DCH). A central office or a customer location can use the RSC-S package.

Packaging

The RSC-S packaging differs from traditional RSC packaging as follows:

- The RSC-S can be provisioned in cabinets instead of equipment frames. The RSC-S model A uses the equipment frame and model B is configured in cabinets.
- The RSC-S design is like the RCO2. The RCO2 is the master controller for all RSC-S peripherals. The RCO2 is a single-shelf, 68020- or 68040-based module with increased processing abilities.
- The core RSC-S cabinet has a dual-shelf enhanced line concentrating module (LCME).
- An RSC-S extension cabinet contains additional ISDN DCH or PCM-30 interfaces. The extension shelf also has one LCME.

The RSC-S can contain the following:

- a maximum of two CRSC cabinets
- a minimum of one cabinetized power distribution centers (CPDC)
- one cabinetized extension module (CEXT)
- a maximum of five cabinetized line concentrating equipment (CLCE) cabinets
- a minimum of one cabinetized miscellaneous equipment (CMIS) cabinets
- a miscellaneous spares storage (CMSS) cabinet that stores spare cards

Cabinetized remote switching center (CRSC) cabinet

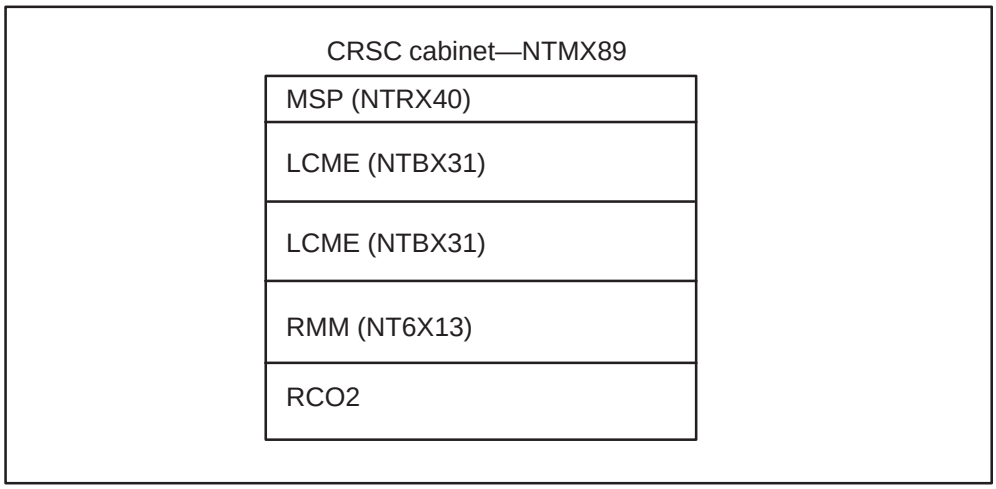
A single-configuration RSC-S can have one CRSC cabinet that contains:

- one provisioned RCO2 shelf
- one remote maintenance module (RMM) that dedicated DS30A links serve
- one LCME
- the model type determines the following:
  - — one frame supervisory panel (FSP), when model A
  - — one modular supervisory panel (MSP), when model B

  Note: A software upgrade does not occur on the MAP display. The upgrade indicates the difference between model A frame alarms and model B cabinet alarms. These alarm types indicate FSP at the MAP terminal.

The CRSC cabinet appears in the following figure.

Cabinetized remote switching center cabinet



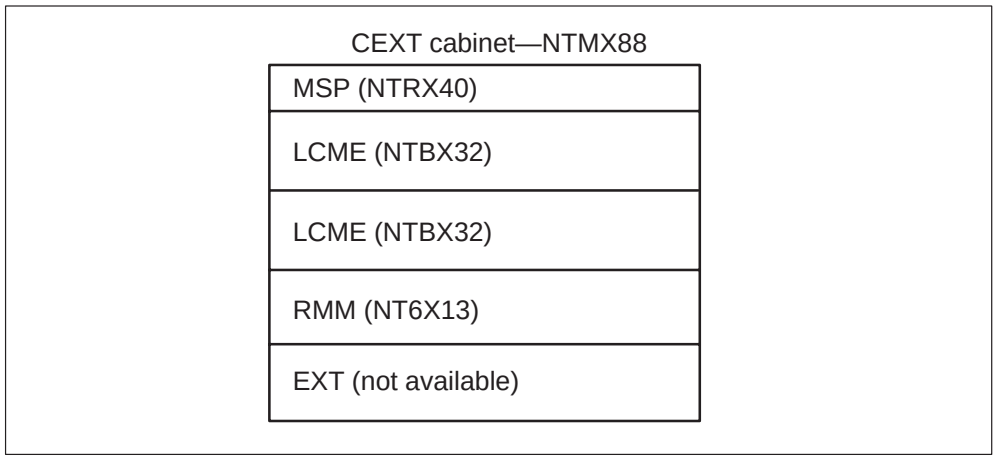
CRSC extension (CEXT) cabinet

A single-configuration RSC-S can have one CEXT cabinet that contains one:

- extension shelf (EXT)
- RMM
- LCME
- MSP

The CEXT cabinet appears in the following figure.

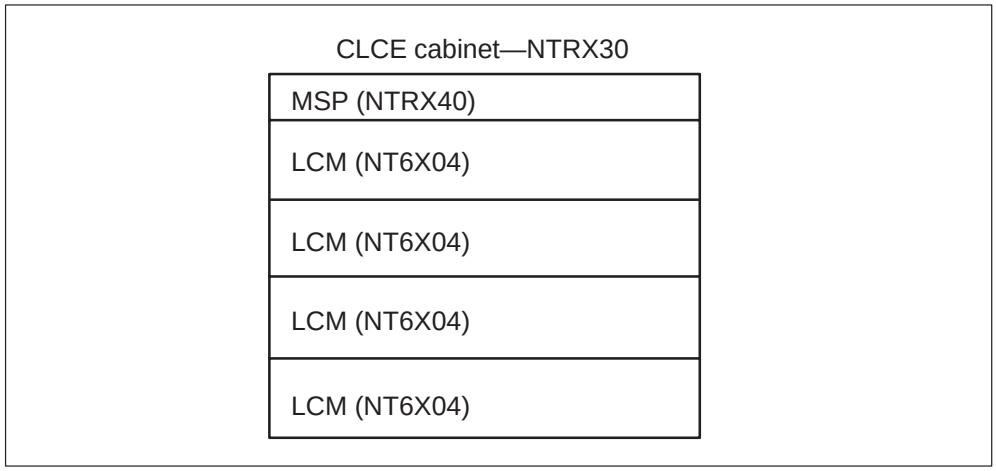
CRSC extension cabinet



Cabinetized line modules (CLCE)

A single-configuration RSC-S can have a maximum of five CLCE cabinets. Each CLCE cabinet supports a maximum of two completely duplicated LCMs. Each duplicated LCM provides a 640-line card capacity. The CLCE cabinet appears in the following figure.

Cabinetized line modules



Cabinetized power distribution center (CPDC) cabinet

The CDPC is a cabinetized module that provides distribution of power for RSC-S equipment.

Cabinetized miscellaneous equipment (CMIS) cabinet

A single-configuration RSC-S can have one CMIS cabinet to contain customer-specified equipment.

Cabinetized miscellaneous spares storage (CMISS) cabinet

A single-configuration RSC-S can have one CMSS cabinet that stores spare cards.

RSC-S services

The flexible design provides the application diversity of RSC-S. The RSC-S offers a wide range of interfaces and services to operating companies. Examples of these services are as follows:

- plain ordinary telephone service (POTS) 500/2500 sets
- multiparty lines
- coin lines
- MDC 500/2500 sets

- Electronic business sets (EBS) and P-phones
- ISDN basic rate interface
- attendant console
- Custom Local Area Signaling Services (CLASS)

The CPM in the same module can support the following. This CPM can support ISDN primary rate interface (PRI). The PRI includes functional stimulus and Meridian feature transparency.

This range of options equip RSC-S with the ability to address the following:

- community dial offices (CDO) modernization
- analog switch capping
- digital overlay networks

Northern Telecom offers the RSC-S product with or without the services that the ISDN provides. The RSC-S with ISDN is like the RSC-S that serves business customers and residential subscribers. With the addition of ISDN abilities, the RSC-S with ISDN can provide a mix of POTS and MDC voice, data. The RSC-S with ISDN can provide ISDN services.

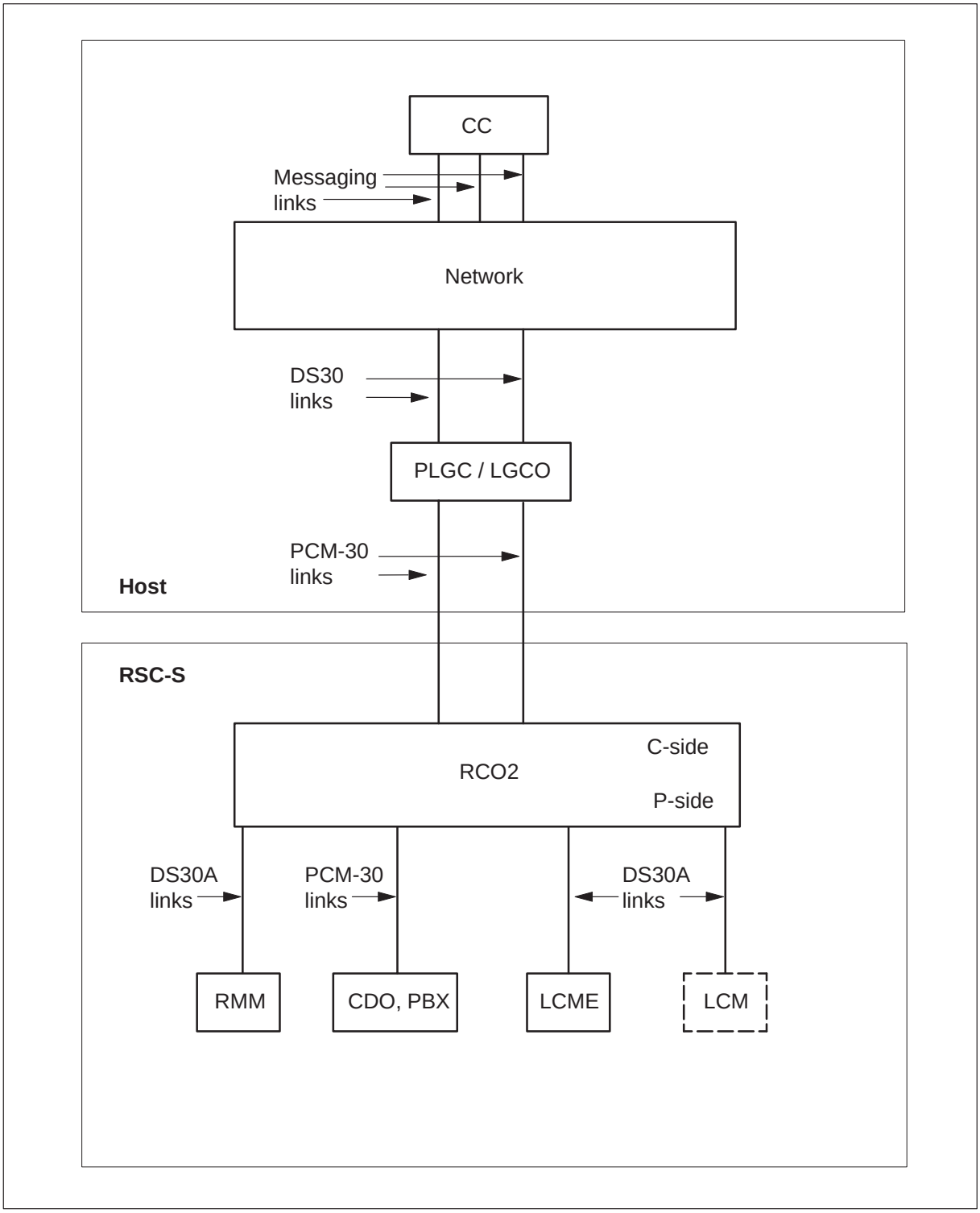
The configuration determines the services for the RSC-S.

RSC-S configurations

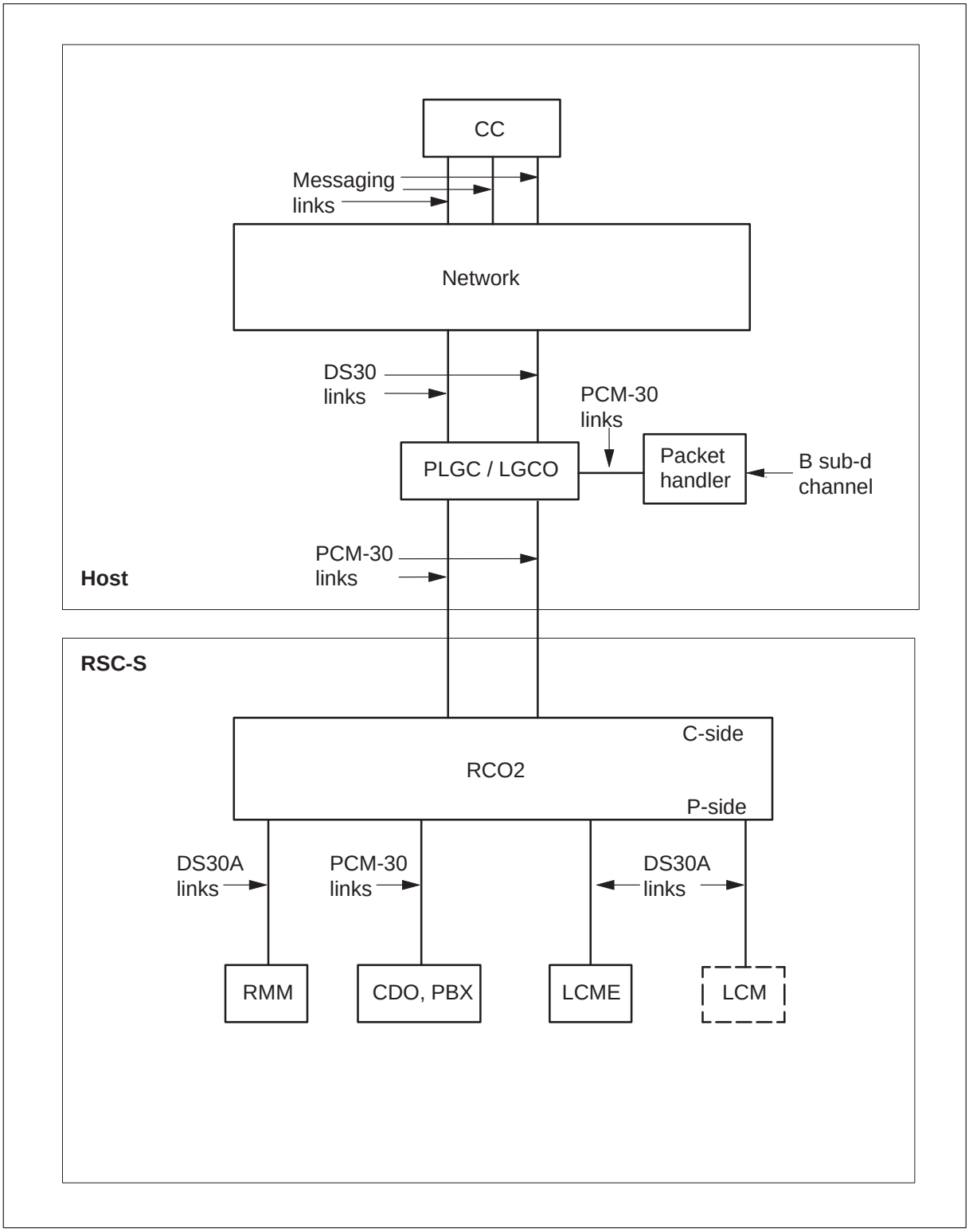
Northern Telecom offers the basic RSC-S configuration with or without ISDN. These configurations appear in the following figures. The peripheral side (P-side) of the RCO2 provides support of community dial offices (CDO) and private branch exchanges (PBX).

> ***Note:*** Interchangeable use of the PCM-30 line group controller (PLGC) or the line group controller overseas (LGCO) can occur. Interchangeable use of PLGC and LGCO provides a pulse code modulation (PCM-30) interface between the RSC-S and the DMS-100 switch.

Basic single-configuration RSC-S without ISDN



Basic single-configuration RSC-S with ISDN



Preparing to datafill for RSC_S_International

After BCS36, Northern Telecom delivers Product Computing-Module Loads (PCL) instead of BCS releases or Universal Software Loads (USL). A description of PCLs appears in the following section.

PCL—New Software Delivery Vehicle

A PCL contains features selected from the development stream software product for a specified application in a specified market. The PCL contains the abilities divided earlier into different related NTX packages. An eight-digit order code replaces the NTX package codes.

The order codes and functional group names that the RSC-S requires appear in the following table. A list of earlier NTX packages in the functional group appears in the following table. These abilities associate with the RSC-S.

RSC-S order codes

Order code	Functionality	Functional group name	Former NTX package codes
BAS00012		BAS Remotes Generic	NTX145AA—Remote Switching Center NTX149AB—RSC ESA-Lines and Trunks NTX150AA—RSC-Intra RSC Calling NTXP92AA—RSC-S Basic NTXQ12AA—RSC Enhanced ESA (Lines)
BAS00026	BAS00036	BAS International Remote Generic	NTXK77AA—PCM-30 RSCO-S Support
NI000007		NI0 ISDN Base	NTX750AD—ISDN Basic Access

Collecting end-user data

When the RSC-S includes ISDN, collect the profiles of the subscriber sets. Collect the sets to enter the profiles for the host office and the packet handler (PH).

Configurations

The RSC-S configuration can occur with or without ISDN. An RSC-S configuration has a family of peripherals that are not ISDN. This configuration provides a wide range of services. These services do not include ISDN services. An RSC-S with ISDN provides all the services of the RSC-S. An RSC-S with ISDN can include all the peripherals of the RSC-S. This configuration includes ISDN peripherals and provides ISDN services.

The configuration type affects datafill requirements because the configuration determines the services available with the RSC-S.

Activating the RSC-S

Enter the field operator verification common language location identifier (OPVRCLLI) in table CLLI first for RSC-S. This tuple in table CLLI forms a field in table SITE. Enter other tables in the order that the data schema section of the *Translations Guide*. specifies.

When to update the RCO2 static data

Update static data in the RCO2 when the following conditions occur:

- the addition, change or deletion of links on the RCO2 P-side or C-side in tables RCCINV, RCCPSINV, or LTCPSINV
- the addition, change or deletion of nodes off the RCO2 or links associated with these nodes in tables LCMINV, RMMINV, or RCCPSINV
- the addition, change or deletion of cards in the card list of the RCO2 or nodes off the RCO2 in tables LCMINV, RMMINV, or RCCPSINV
- the addition, change or deletion of exec data for the RCO2 in table RCCINV
- a global office parameter that affects the RSC-S configuration changes
- when ESA is turned on or off in table RCCINV

Note: The NODATASYNC option is the method of preference.

Alarms produced when a static data mismatch occurs

An update of the static data for the central control (CC) at the CC can occur. This update occurs when an update of the static data at the RCO2 does not occur. When this condition occurs, the system generates a PM128 log with the following message:

```
STATIC DATA MISMATCH WITH CC
```

At the RCO2 level of the MAP display, the response to the QUERYPM FLT command is the same message as the PM128 log message. The required steps are like the steps to update static data.

Tuple changed (TUPC) logs for static data updates

With the DMS, the journal file (JF) can track changes to DMS data tables. Changes to DMS data tables include data modification orders (DMO) and service orders. When a reload of the office occurs, these JFs must be applied before a new JF starts. When this application does not occur, the system does not record the data changes. The system generates a log that records changes to the inventory tables.

This log includes the following data tables:

- LCMINV
- LTCINV
- LTCPSINV
- RMMINV
- RCCINV
- RCCPSINV

The system generates this log for each tuple. This log includes information like the table name, the original tuple, and the tuple that results from the change.

Types of TUPC logs

The numbers for the TUPC logs are as follows:

- TUPC100. The addition of a tuple occurs.
- TUPC101. The deletion of a tuple occurs.
- TUPC102. A change to a tuple occurs. This log contains the old tuple.
- TUPC103. A change to a tuple occurs. This log contains the new tuple.

TUPC log format

The TUPC log contains a header that indicates the following information:

- TUPC log number
- date
- time
- table name
- action taken on the table (addition, change or deletion)

The important tuple or tuples appear.

Note: The TUPC logs can help to track inventory changes. Northern Telecom personnel use TUPC logs to solve field problems. Do not use TUPC logs instead of the JF utility.

Basic call processing

Functional group

BAS00012

BAS00026

Feature packages

NTX145AA Remote Switching Center

NTX150AA RSC-Intra RSC Calling

NTXP92AA RSC-S Basic

NTXK77AA PCM-30 RSCO-S Support

Release applicability

XPM05 and higher

Requirements

Basic call processing requires the following feature packages:

- NTXR42AA Firmware Downloading
- NTX000AA Bilge
- NTX001AA Common Basic
- NTX145AA Remote Switching Center
- NTX269AA Universal Tone Receivers (Domestic)
- NTX270AA New Peripheral Maintenance Package
- NTX901AA Local Features I

International support requires the following feature packages:

- NTXH52AA PCM-30 RSCO Support
- NTXP92AA RSC-S Basic
- NTX001AA Common Basic
- NTX145AA Remote Switching Center
- NTX270AA New Peripheral Maintenance Package

Basic call processing (continued)

Description

This description contains tables that apply directly to basic call processing. For details on call translations, refer to the *Translations Guide*.

Basic call processing tables provide entries for:

- DMS recognition of the switching unit and all remote locations
- physical device location identification data
- link assignments for the RCO2 and peripherals
- recovery
- trunks and trunk groups
- alarm functions
- circuit test equipment
- maintenance control for peripherals
- REX scheduler
- negate ground diagnostics that are not complete

DMS recognition of the switching unit and remote locations

The data in table SITE allows a DMS switch to recognize the equipment for the switching unit. This data also allows the switch to recognize the equipment for the remote locations that use the switching unit. Table SITE defines site names for the remote location. Table SITE uses codes in table CLLI for switching unit trunk groups and the remote location. Table CLLI 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-S components are in inventory tables. These inventory tables include tables LCMINV, RCCINV and RMMINV.

Link assignments for the RCO2 and peripherals

Link assignments are entered in tables LTCINV, LTCPSINV and RCCPSINV.

Basic call processing (continued)

Recovery

Table PMLOADS stores the device location of every peripheral module (PM) load file. The table stores the location to map between load names and devices on which the loads reside. Autoload can locate load files without intervention of personnel. Autoload can load separate PMs suspected to have a corrupt load.

Trunks and trunk groups

Tables TRKGRP, TRKSGRP and TRKMEM define:

- each trunk group for a switching unit
- supplementary information for subgroups assigned to trunk groups
- data for each trunk, trunk group and subgroup

Other entries identifies circuits for static trunks, dynamic trunks and equipment used to test lines and trunks.

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 information also includes functions of assigned scan points and signal distribution points in the alarm scan groups.

Circuit test equipment

Table TRKMEM identifies circuits for static trunks, dynamic trunks and test equipment used to test lines and trunks. Tables MTAMDRVE, MTAVERT and MTAHORIZ include entries to connect test equipment to a circuit that requires tests.

Maintenance control for peripherals

Table CARRMTC entries include maintenance control information in peripherals, out-of-service (OOS) limits for alarms and system return-to-service (RTS) occurrences.

REX scheduler

Table REXSCHED schedules the frequency and number of REX tests. The system adds tuples to table REXSCHED after you enter data in the inventory tables.

Basic call processing (continued)

Negate partial ground diagnostics

If the suffix of the NT6X18 card is -AA or -AB, the system identifies the line as ground start (GND equals Y in table LNINV). First diagnostics fail. Run the diagnostics. To complete this process, add the service order (SERVORD) option negate partial ground start diagnostics (NPGD). This option tests the line against a smaller subset of ground start diagnostics. Option NPGD is set in table LENLINES. Loop detector, reversal relay and ground start relay tests are skipped.

Note: The NPGD feature is functional for LCMs. Ground start diagnostics does not apply to RCO2s with LCMEs.

Operation

The RCS software supplies the separate features. The RSC-S basic package activates the separate features. The RSC-S basic package provides abilities for the synchronous optical network (SONET) remote.

Tables and methods to enter data do not change for RSC-S in comparison to the RSC. This occurrence adds new value ranges to relevant fields. The system notes new data entry restrictions. The system adds new fields to enter data in an extension shelf.

Conditional routing

The RSC-S allows conditional routing. With the RSC-S configuration, the SITE subselector is added to the following:

- plain ordinary telephone service (POTS)
- Meridian Digital Centrex (MDC)
- integrated business network (IBN) call routing

Enter data in the SITE subselector as a subselector of the CND selector of table IBNRTE, table OFRT, and the RTEREF subtables. Use the SITE subselector of field CONDITION with route types ST, SK and T.

Conditional routes require the CND selector. Specify conditions before you route a call. If the specified conditions are met, execute instructions in the route list. If the conditions are not met, translations looks to the next element in the route list. Refer to the data schema section of the *Translations Guide*, for a complete list and explanation of each routing condition.

Add the SITE option to field CONDITION. Enter field SITE 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

The SITE condition allows a call to transfer to a route list or an element in a route list according to the origin of the call. Compare the site of the call with the site defined in field SITE. If the two sites match, the call proceeds as field RTETYPE indicates and refinements of field RTETYPE. In another occurrence, the call proceeds to the next route element in the route list.

Note: To optimize this feature, trunk groups must be different by site. Each member of each trunk group must belong to that site.

The following pages describe the fields in tables OFRT and IBNRTE for conditional routing. The fields in table OFRT are the same for subtable HNPACONT.RTEREF and for subtable FNPACONT.RTEREF.

Table OFRT

The entries for basic call processing for table OFRT appear in the following table. Fields that apply directly to basic call processing appear in the table. For details on table OFRT, refer to the data schema section of the *Translations Guide*.

Datafilling data in table OFRT

Field	Subfield or refinement	Entry	Description
RTE		0 to 1023 or blank	Extended route reference index. Enter a value from 0 to 1023. If the record is the first in the route list, enter the route reference number assigned to the route list. At other times, leave the entry blank.
RTELIST		refer to subfields	Route list. This field contains subfields RTESEL and the RTESEL set-equal-to-CND refinements CONDITION and CONDRTE.

—continued—

Basic call processing (continued)

Datafilling data in table OFRT (continued)

Field	Subfield or refinement	Entry	Description
	RTESEL	CND	Route selector. The CND sets conditional routing.
	CNDSEL	refer to refinements	Condition select. This field contains the condition selector CNDSEL. This field also contains refinements ALWAYS, CALLCHR, COSMAP, EA, INTERLATA, RND, SITE, TOD and TOPEACLS. A match of the selected conditions affect transfer to the routing specified in field CONDRTE. If a match does not occur, the call routing proceeds as the next tuple specifies.
		ALWAYS	Always. Transfer to specified routing.
RTELIST (continued)	CNDSEL (continued)	CALLCHR	The selected condition is a match of field CALLCHR. Use a call characteristic from table CALLCHR. Perform 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. Perform next entry.
	COSMAP	alphanumeric	Enter the name of the selected NCOS mapping entry from table COSMAP.
		EA	The selected condition is use equal access conditional routing, as field EA_CND_RTE defines. Perform next entry.
	EA_CND_ RTE	CAC, INTNL, or PIC	Enter one of the following selectors: carrier access code (CAC), international access (INTNL) or presubscribed interexchange carrier (PIC).

Note 1: Enter a plus sign (+) for field CONTMARK when the next record specifies more data for a route list. Enter a dollar sign ($) for field CONTMARK when a record is the last record for the list.
Note 2: Enter data in field SITE after you enter data in table SITE. Table SITE must already define an entry in field SITE.

—continued—

Datafilling data in table OFRT (continued)

Field	Subfield or refinement	Entry	Description
		INTERLATA	Index into table TRKLATA to obtain originating LATA of calling number. Index into table LATAXLA of called number to determine inter-LATA or intra-LATA status.
		RND	The selected condition to match is a percent of randomly selected calls. Perform next entry.
	PERCENT	0 to 100	Enter percentage of calls the system will conditionally route.
		SITE	The selected condition is a match of the site where the call originated. Perform next entry.
	SITE	HOST or alphanumeric	Enter in field SITE, HOST or a site name entered in table SITE.
RTELIST (continued)	HOST or alphanumeric (continued)	TOD	The selected condition to match is time of day. Perform next entry.
	TODNAME	alphanumeric	Enter in field TODNAME the name assigned to the entry in the table TIMEODAY.
	TIMES	0 to 9 or A to F	Enter in field TIMES the times, up to 14, 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. Perform next entry.
	TOP_CND_ RTE	alphanumeric	Enter the selected TOPS class of service that the call must match.

Note 1: Enter a plus sign (+) for field CONTMARK when the next record specifies more data for a route list. Enter a dollar sign ($) for field CONTMARK when a record is the last record for the list.
Note 2: Enter data in field SITE after you enter data in table SITE. Table SITE must already define an entry in field SITE.

—continued—

Basic call processing (continued)

Datafilling data in table OFRT (continued)

Field	Subfield or refinement	Entry	Description
CONDRTE		refer to subfields	If a match selects the following subfields in CNDSEL, these subfields: RTETYPE, RTEREF, SKIPNUM, EXTREID, TABNAME and INDEX define the conditional route.
	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. Refer to the following entries.
	RTEREF	1 to 1023	ST, same table specified. Enter in field RTEREF the number of the route reference element to transfer call routing.
	SKIPNUM	0 to 7	SK, skip in same table specified. Enter into field SKIPNUM the number of elements to skip in the route reference list.
CONDRTE (continued)	EXTREID	refer to subfields	T, transfer to index in table specified. Contains subfields TABNAME and INDEX. Perform next entries.
	TABNAME	OFRT, OFR2 OFR3, OFR4	TABNAME. Enter the office route table name.
	INDEX	1 to 1023	INDEX. Enter the route reference index number in the office route table.

Note 1: Enter a plus sign (+) for field CONTMARK when the next record specifies more data for a route list. Enter a dollar sign ($) for field CONTMARK when a record is the last record for the list.
Note 2: Enter data in field SITE after you enter data in table SITE. Table SITE must already define an entry in field SITE.

—end—

Entry example for table OFRT

Sample entries for table OFRT appears in the following example.

MAP display example for table OFRT

```
RTE                                                            RTELIST
______________________________________________________________________
1                                  (            S       D        T120)$
2 (S D T60  (S D LKOUT) $
3 (S D BLDNANNC)  (S D T120)  (S D LKOUT)  $
4 (S D CACEANNC)  (S D T120)  (S D LKOUT)  $
5                                  (            S       D   TERM102T) $
6 (S D DACDANNC)  (S D T120)  (S D LKOUT)  $
7 (S D D950ANNC)  (S D T120)  (S D LKOUT)  $
```

Routing options

Each of the previous formats with route selector CND point to the conditional route selector field CONDRTE. Field CONDRTE contains the following subfields:

- RTETYPE
- RTEREF
- SKIPNUM
- EXTREID
- TABNAME
- INDEX

Route to a specified route list in the same table

If a call transfers to another route list in the same table, complete field RTETYPE. To complete field RTETYPE, enter ST as the route type. To complete field RTEREF, enter the route reference number.

> ***Note:*** The route reference number must have a higher number in the same table where translations must transfer when the condition is met.

Route after call skips specified number of route elements

If call skips to another route element in the same route list, complete field RTETYPE. To complete field RTETYPE, enter SK as the route type. To complete field SKIPNUM, enter the number of elements, 0 through 7, to skip in the same route list where translations must route when the condition is met.

Basic call processing (continued)

Route to specified table at specified index

If a call transfers to another route list in table OFRT, complete fields RTETYPE and EXTREID. To complete field RTETYPE, enter T as the route type.

Field EXTREID has two subfields, TABNAME and INDEX. To complete TABNAME, enter the table name OFRT where the translation must transfer when the condition is met. To complete INDEX, enter the route reference index number, 1 through 1023, in table OFRT where translation must transfer when the condition is met.

> ***Note:*** Enter a plus sign (+) for field CONTMARK when the next record specifies more data for the route list. Enter a dollar mark ($) for field CONTMARK when the record is the last record for the route list.

Table IBNRTE

Table IBNRTE controls basic call processing when:

- the call routes to a specified route list in the same table
- the system skips a specified number of route elements
- the call routes to a specified table at a specified index

When the IBN route selector is set equal to CND

Conditional routes require the IBN route selector. The route selector controls if a call:

- skips to another route list in the same table
- skips a number of elements in the same route list
- transfers to a route list in a different route table

This action can occur if the call meets one of six parameters. The six parameters include always, time of day, class of service, call characteristic, random and site.

The following procedure provides field definitions for table IBNRTE. The fields that apply directly to basic call processing appear in the procedure. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling data in table IBNRTE

Field	Subfield or refinement	Entry	Description
RTE		0 to 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. At other times, leave the entry blank.
RTELIST		refer to subfields	Route list. The field contains subfields IBNRTSEL, CONDITION and CONDRTE.
	IBNRTSEL	CND	IBN or MDC route selector.
CONDITION		refer to 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 occurs according to origin.
	SITE	alphanumeric	Site. Enter the name of the site which you must enter in table SITE for the selection.

Entry example for table IBNRTE

A sample entry for table IBNRTE appears in the following example.

MAP display example for table IBNRTE

```
RTE                                                          RTELIST
_____________________________________________________________________
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)
```

Basic call processing (continued)

In this example, route list 1, element 1, sends the call to route list 2 if the call origination is HOST. If the call originates at REM1, the DMS sends the call to route list 3. If the call originates at REM2, the DMS sends the call to route list 4.

After the DMS sends a call to a correct route list, the DMS tries the first element in that route. If the first element in the route fails, the DMS tries the next element and elements that follow. For example, if a call originates at site REM1, the DMS sends the call to route list 3. The system sends the call over trunk group G1 because trunk group G1 is the first element in the route list. Trunk group G1 has priority over other elements in the route list. If trunk group G1 is not available, the DMS sends a call out on trunk group G0 and trunk groups that follow.

Conditional routes require the IBN route selector. The route selector controls if a call skips to another route list in the same table, or skips a number of elements in the same route list. The route selector also controls if a call transfers to a route list in a different route table. This action can occur if the call meets one of six parameters. These six parameters are: always, time of day, class of service, call characteristic, random and site.

Conditional routes require the IBN route selector, IBN. The route selector controls if a call skips to another route list in the same table, or skips a number of elements in the same route list. The route selector also controls if a call transfers to a route list in a different route table. This action can occur if the call meets one of six parameters. These six parameters are: always, time of day, class of service, call characteristic, random and site.

TRK111 log-routing problems

The system generates a TRK111 log report for routing related problems. Refer to the *Log Report Reference Manual* for information on the TRK111 log report.

OM GNCT route list not entered

The GNCT register in OM group TRMT2 increases for calls that attempt a route list that is not entered. Refer to *Operational Measurements Reference Manual* for details.

Translations table flow

The basic call processing translation process appears in the flowchart that follows the table descriptions.

Table CLLI 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
- the code that identifies trunk groups that terminate at the same CLLI location

Table CLLI stores the maximum number of trunk groups expected to be assigned to the trunk group. Table CLLI also stores a miscellaneous entry for administrative information the switching unit does not use.

The system adds some CLLI codes to table CLLI when the feature is present in the switch. Add other codes to table CLLI. After you enter table CLLI, CLLI codes are reflected in trunk group tables, the scan and distribution point table, and MTA tables. Duplicate the CLLI tuple for operator verification in field OPVRCLLI in table SITE.

> ***Note:*** Enter some data tables according to the kind of trunk group type required. Each trunk group type requires a specified form. Valid trunk group types are TI, TO, T2, IBNTI, IBNTO, IBNT2, PX and ES.

Table PMLOADS stores the device location of every peripheral module (PM) load file. The PMLOADS stores the location to map between the load names and devices where loads reside. You must enter PM load files in table PMLOADS before you can use PM load files in the inventory tables.

Enter load information in field LOADNAME. Enter corresponding entries in field LOAD for tables LTCINV, LCMINV and RMMINV.

Table SITE identifies equipment for the switching unit and for the remote locations that use the switching unit. You must enter data in table SITE before you can assign a LEN or enter data in a PM. The host switching unit is the first entry in field NAME. Field LTDSN associates with the number required to dial the site and alarm data for remote sites. Table SITE uses the same CLLI tuple for operator verification as the CLLI tuple you entered in table CLLI.

Basic call processing (continued)

Field SITE in table LCMINV, field SITENM in tables RCCINV and RMMINV, and subfield SITE_ID in table ISTRKGRP must be available to table SITE, field NAME.

Table CARRMTC allows DMS switch administration to enter 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 the field CARRIDX in tables LTCPSINV and RCCPSINV.

Table LTCINV contains the inventory data, except the P-side link assignment, for PM types. Table LTCINV defines the PCM-30 line group controller (PLGC) or line group controller offshore (LGCO) on the C-side of the RCO2. Enter load information for table LTCINV in field LOAD. The load information corresponds to the LOADNAME tuple from table PMLOADS.

> ***Note:*** The RSC-S can be configured with the PLGC or the LGCO. In each case, use PLGC as the entry.

Field LTCNAME in table LTCINV corresponds to the LTCNAME field in table LTCPSINV.

Table LTCPSINV contains the assignment of P-side links for PMs. If you enter data in DS-1, the CARRIDX field indexes table CARRMTC for maintenance control information about the peripheral.

Table RCCINV maintains a list of RCO2s in the DMS switch and that contain inventory data, except P-side link assignments, for the RCO2s. Table information identifies the location of the RCO2, the load and exec lineups required, and the network link connections. Enter C-side DS-1 assignments for the RCO2 in table RCCINV. Enter intraswitching in table RCCINV.

Enter load information in field LOAD. The load information corresponds to the LOADNAME tuple from table PMLOADS. The RCCNAME tuple in table RCCINV corresponds to the RCCNAME tuple from table RCCPSINV. The RCCNAME field stores site information, originally entered in the NAME field from table SITE, PM type and PM number.

Basic call processing (continued)

Table RCCPSINV contains the P-side link assignments for an RCO2. When you add a tuple in table RCCINV, the system adds a corresponding tuple in table RCCPSINV. Table RCCPSINV uses field LOAD to identify load information. The LOAD corresponds to the LOADNAME tuple from table PMLOADS. The field CARRIDX indexes to table CARRMTC for maintenance control information about the peripheral. The RCCNAME tuple in table RCCPSINV corresponds to the RCCNAME tuple from table RCCINV. The RCCNAME tuple in table RCCPSINV stores site information originally entered in field NAME from table SITE, the PM type, and PM number.

Table RMMINV identifies a remote RLCM, RSC-S, or outside plant module (OPM) site with one of the following:

- frame type
- frame number
- floor
- row
- frame position
- product engineering code (PEC)
- PM
- executive program loads
- C-side PMs

These data attach 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 the remote locations that use the switching unit. The LOAD field in table RMMINV corresponds to the LOADNAME tuple from table PMLOADS. The LOAD field stores the device location of each PM load file.

Table LCMINV lists data assignments for each bay for 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. Field SITE identifies the equipment for the switching unit and for the remote locations that use the switching unit. Field LOAD in table LCMINV corresponds to the LOADNAME tuple from table PMLOADS. Field LOAD stores the device location of each PM load file.

Table TRKGRP defines data for each trunk group for a switching unit. Field CLLI in table TRKGRP corresponds to the CLLI code for the trunk group.

Basic call processing (continued)

Table TRKSGRP lists additional information for each subgroup assigned to one of the trunk groups that appear in table TRKGRP. Field CLLI in table TRKSGRP corresponds to the CLLI code for the trunk group.

Table TRKMEM lists the data for each trunk assigned to one of the trunk groups and subgroups specified in tables TRKGRP and TRKSGRP. Table TRKMEM identifies circuits for static trunks, dynamic trunks and test equipment you use to test lines and trunks. Field CLLI in table TRKMEM corresponds to the CLLI code for the trunk group.

Table LTGRP provides the capacity to define a maximum of 32 LT groups. One of the LT groups is defined as ISDN. Field GROUP in table LTGRP corresponds to field LTGRP field in table LTDEF.

Table ALMSC identifies the function that each of the assigned scan points in the alarm scan groups performs. Field SCGROUP identifies a scan group number. Field SCGROUP corresponds to the SCGROUP entry in table ALMSCGRP.

Table ALMSD identifies the function that each of the assigned signal distribution points in the alarm signal distributor groups performs. 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.

Table ALMSDGRP records the circuit equipment, location and type of circuit pack that contains signal distribution (SD) points. Entries in the field SDGROUP in table ALMSD must correspond to SDGROUP entries in table ALMSDGRP.

Table ALMSCGRP records the circuit equipment, location and type of circuit pack that contains scan points. Entries in field SCGROUP in table ALMSC must correspond to SCGROUP entries in table ALMSCGRP.

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, like line or test units or local test desks. Each minibar has 16 horizontal connections.

Table MTAHORIZ uses CLLI codes from table CLLI for:

- host line test units
- remote line test units
- metallic test units (multiline)

- operator verification trunks
- metallic jacks (MJACK)
- incoming test access trunks

Field EXTRKNM in table MTAHORIZ 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.

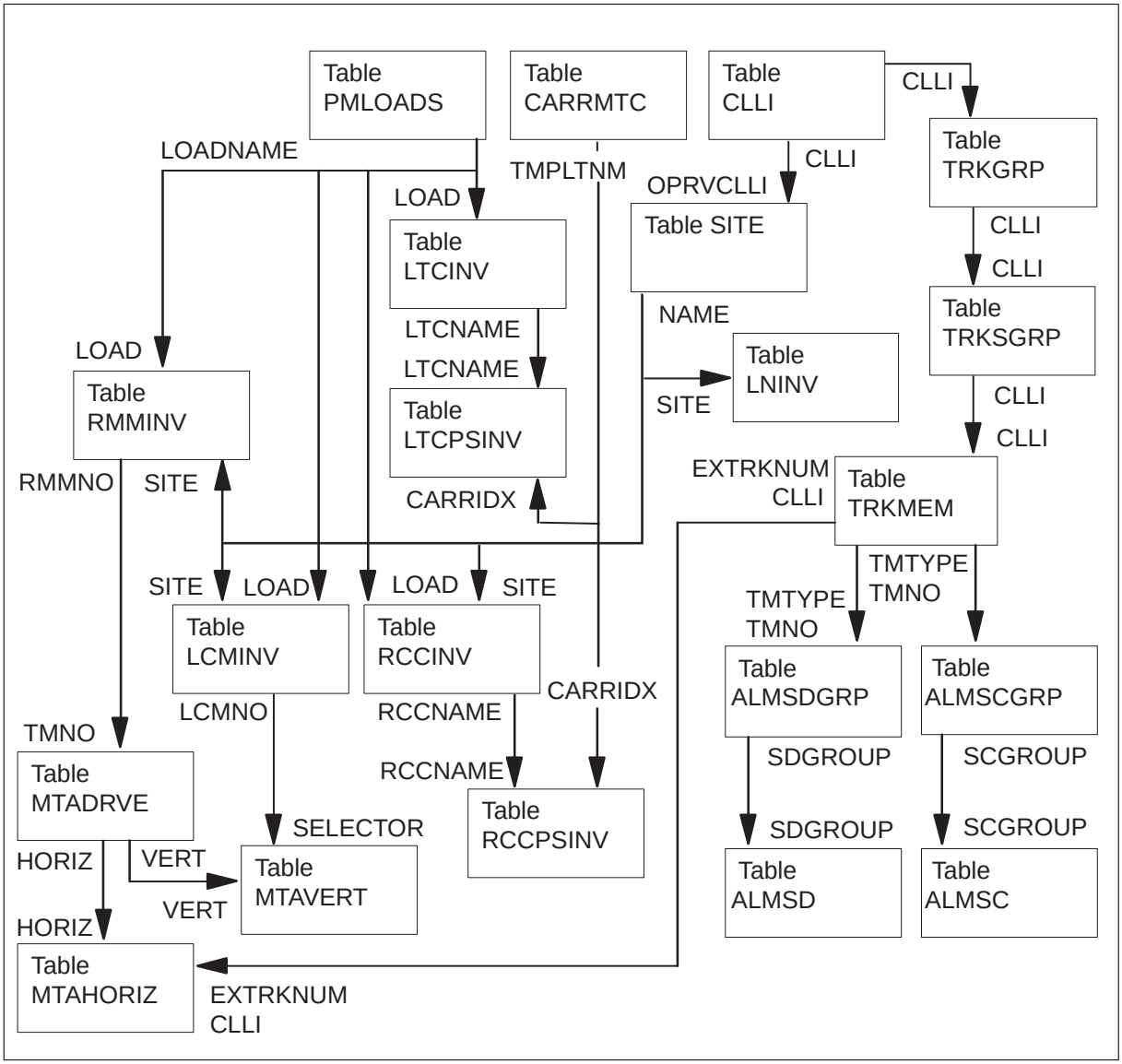
Table MTAVERT identifies the vertical connection points of the MTA matrix. For RSC-S, the connection is single and not multiple. Field SITE in table MTAVERT must correspond to field NAME in table SITE. The fields must correspond to identify the equipment for the switching unit and for the remote locations that use the switching unit.

Table MTAMDRVE locates an MTAM driver in the MTA structure. The 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. The vertical and horizontal crosspoints connect specified horizontal to vertical connections in the network.

Each minibar has 20 vertical connections. Each vertical connection can connect to one of 320 lines in a line module. A line module, which can hold a maximum of 640 lines, always joins to the test access network with two vertical connections.

Basic call processing (continued)

Table flow for basic call processing



Limits

Basic call processing do not have limits.

Interactions

Basic call processing does not have functionality interactions.

Basic call processing (continued)

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

There are no parameters specific to the basic RSC-S configuration. Parameters that associate with abilities the RSC-S can have, like emergency stand-alone (ESA), are present. The respective chapters address these abilities.

The system transfers control of routine exercise (REX) testing for line concentrating modules (LCM) from parameter LCDREX_CONTROL in table OFCVAR. Testing LCM ring and voltage values, previously a section of LCM_REX, separates and becomes an LCM converter test (LCM_COV_REX). The system transfers control of LCM_REX_TEST and LCMCOV_REX_TEST, part of system REX (SREX), to parameter NODEREXCONTROL in table OFCVAR. The system retains parameter LCDREX_CONTROL to control REX testing of line modules (LM).

Note: Perform the LCMCOV_REX_TEST on LCMs, XLCMs, OPMs and RLCMs.

Data entry sequence

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

Basic call processing (continued)

Data entry tables for basic call processing

Table	Purpose of table
CLLI	Common language location identifier. Codes identify the far end of each announcement, tone, trunk group, test trunk, national milliwatt test lines and service circuit.
SITE	Site. Site contains data that allows the DMS system to recognize the equipment for the switching unit and remote locations that use the switching unit.
PMLOADS	Peripheral module loads table. The PMLOADS table stores the device location of every peripheral module (PM) load file. The PM load files must map between the load names and devices where the loads reside. This table permits autoload to locate load files without the intervention of personnel. Enter the expanded peripheral module (XPM) load files in table PMLOADS before you use the XPM load files in the XPM inventory tables.
LTCINV	Line trunk controller inventory. Contains the inventory data, except the P-side link assignment, for PM types. Table LTCINV defines the PCM-30 line group controller (PLGC) or line group controller offshore (LGCO) on the C-side of the RCO2.
CARRMTC	Carrier maintenance control. Allows the DMS switch administration to enter maintenance control information in peripherals, and OOS limits for alarms. The DMS switch administration also enters system return-to-service (RTS) occurrences.
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 RCO2. Enter C-side DS-1 assignments for the RCO2 in table RCCINV.
RCCPSINV	Remote cluster controller P-side link inventory. Contains the P-side link assignments for the RCO2.
LCMINV	Line concentrating module inventory. Lists data assignments for each bay for a local line concentrating module (LCM) or remote line concentrating module (RLCM) unit.

—continued—

Data entry tables for basic call processing (continued)

Table	Purpose of table
RMMINV	Remote maintenance module inventory. Identifies: • RLCM • RSC-S or outside plant module (OPM) site with: frame type, frame number, floor, row, frame position, product engineering code (PEC), PM load, and executive program loaded • C-side PM These data attach to each remote maintenance module (RMM).
LNINV	Line circuit inventory. Lists the data for each line card slot.
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 SREX tests. The system adds tuples to this table after you enter data in inventory tables.
TRKGRP	Trunk group. Defines data for each trunk group that associates with the switching unit.
TRKSGRP	Trunk subgroup. Lists additional information for each subgroup assigned to one of the trunk group in table TRKGRP.
TRKMEM	Trunk member. Lists data for each trunk assigned to one of the trunk groups and subgroups specified in tables TRKGRP and TRKSGRP. This table identifies the circuits for static trunks, dynamic trunks and the test equipment you use to test lines and trunks.
ALMSCGRP	Alarm scan group. Records the circuit equipment, location and type of circuit pack that contains scan points.
ALMSDGRP	Alarm signal distributor group. Records the circuit equipment, location, and type of circuit pack that contains signal distribution (SD) points.
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.

—continued—

Basic call processing (continued)

Data entry tables for basic call processing (continued)

Table	Purpose of table
MTAMDRVE	Metallic test access (MTA) minibar driver. The MTA network is a matrix of vertical and horizontal crosspoints, comparable to a minibar. The crosspoints connect specified vertical connections to horizontal connections in the network. The MTA connects 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.
—end—	

The following table describes the office parameter you use to control SREX test execution. For additional information about office parameters, refer to *Office Parameters Reference Manual*. For information about SREX scheduling, refer to table REXSCHED in this document.

Office parameters used to control SREX execution

Table name	Parameter name	Description
OFCVAR	NODEREXCONTROL	Control of SREX nodes. Governs execution of SREX tests (nodes). Fields are REXON (default: Y), REXSTART (default: 1:30) and REXSTOP (default: 3:30). ***Note:*** Entries in table REXSCHED control separate REX test nodes.

Datafilling table OFCENG

The following table describes the entries specific to RSC-S International for table OFCENG. Fields that apply directly to basic call processing appear in the table. For additional information about office parameters, refer to *Office Parameters Reference Manual*.

Datafilling table OFCENG

Field	Entry	Description
TALK_BATTERY_ALARM	Y or N Default is Y	TALK_BATTERY_ALARM. This parameter turns on automatic audits of the talk battery in LCM/XLCM/LCME/RLCM/OPM peripheral modules.

Entry example for table OFCENG

The following example describes sample entries for table OFCENG. The sample entry table lists the new parameter required to allow the talk battery alarm audit. For additional information about office parameters, refer to *Office Parameters Reference Manual.*

Basic call processing (continued)

Example of OFCENG 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 LCM/XLCM/LCME/RLCM/OPM/OPAC peripheral modules. When this parameter changes, activation is immediate.

Datafilling table CLLI

The CLLI codes identify the far end of each announcement, tone, trunk group, test trunk, national milliwatt test lines and service circuit.

The following table describes the entries specific to basic call processing for table CLLI. Fields that apply directly to basic call processing appear in the table. The example that appears is for other than a Gateway Switching Center. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table CLLI

Field	Subfield or refinement	Entry	Description
CLLI		refer to subfields	Common language location identifier. This 16-character field 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 4-character code identifies the name of the city or town at the far end of each group.
Note 1: The maximum number of CLLI codes is 8192. ***Note 2:*** The SIZE field in table DATASIZE allocates memory for entry with field DATSKEY equal to CLLI.			

—continued—

Datafilling table CLLI (continued)

Field	Subfield or refinement	Entry	Description
	PROV	alphanumeric	Province or state. This 2-character code identifies the province or state at the far end of the trunk group.
	BLDG	alphanumeric	Building. This 2-character code identifies the building number at the far end of the trunk group.
CLLI (continued)	TRAFUNIT	alphanumeric	Traffic unit. This 3-character code identifies the destination of the traffic unit at the far end of the trunk group.
	SUFX	alphanumeric	Suffix. This 1-character code identifies trunk groups that terminate at the same CLLI location.
ADNUM		0 to (size of CLLI table minus 1)	Administrative trunk group number. Enter a number from 0 through a number 1 less than the size of table CLLI that appears in table DATASIZE. The maximum size is 4095.
TRKGRPSIZ		0 to 2047	Trunk group size. This 4-character field is equal to the maximum quantity of trunk members expected to be assigned to the trunk group.
ADMININF		see subfields	Administrative information. The operating company uses this 32-character field to record administrative information. The switching unit does not use this information. The recommended subfields are TRAFCLS, OFFCLS and TRKGRTYP.
	TRAFCLS	alphanumeric or – for no entry	Trunk group traffic class. This field is optional and is for administrative purposes.

Note 1: The maximum number of CLLI codes is 8192.
Note 2: The SIZE field in table DATASIZE allocates memory for entry with field DATSKEY equal to CLLI.

—continued—

Basic call processing (continued)

Datafilling table CLLI (continued)

Field	Subfield or refinement	Entry	Description
	OFFCLS	alphanumeric or – for no entry	Office class. This field is optional and is for administrative purposes. When field TRKGRTYP is blank, OFFCLS can be left blank.
	TRKGRTYP	alphanumeric or blank	Trunk group type. This field is optional and is for administrative purposes.
Note 1: The maximum number of CLLI codes is 8192. ***Note 2:*** The SIZE field in table DATASIZE allocates memory for entry with field DATSKEY equal to CLLI.			
—end—			

Entry example for table CLLI

The following example describes sample entries for table CLLI.

MAP display example for table CLLI

```
Table: CLLI

CLLI        ADNUM   TRKGRPSIZ   ADMININF
_____________________________________________________
SYNCH       23      10          SYNCH/NONSYNCH
OFFHKSUP    45      10          SUPERVISION_SIGNAL_OFFHOOK
ALMSC       58      240         ALARM_SC
RMMVER90    79      10          ALARM_SD
LTU         177     10          LINE_TEST_UNIT
```

Datafilling table SITE

Table SITE contains data for the switching unit and for the remote locations that use the switching unit. Enter data in table SITE to enable the DMS system to recognize the equipment. Enter this data before you assign a line equipment number, and enter data in a PM. The HOST for the switching unit must be the first entry in table SITE. The operating company defines the site names for the remote locations.

The following table describes entries specific to basic call processing for table SITE. Fields that apply directly to basic call processing appear in the table. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Note: To use site names for a remote location, make sure that you enter the two parameters set to Y correctly. Enter the parameters in table OFCOPT (USINGSITE) and table OFCENG (UNIQUE_BY_SITE_NUMBERING).

Basic call processing (continued)

Datafilling table SITE

Field	Subfield or refinement	Entry	Description
SITE		alphanumeric	Site name. Enter the site name assigned to the remote switching unit. The first character must be alphabetical. Site names can contain a maximum of four characters. You cannot use PM names for site names. The host switching unit is the first entry in this field.
LTDSN		00 to 99	The LEN test desk site number. Enter a separate 2-digit number to dial the site that appears under field NAME.
MODCOUNT		0	Module count. Enter 0.
OPVRCLLI		alphanumeric	Operator verification CLLI. Enter the CLLI assigned to the operator verification trunk group at the remote location.
ALMDATA		TYPE, TYPENO, CKTNO, POINT	Alarm data. This field is for remote locations only and consists of subfields TYPE, TYPENO, CKTNO and POINT.

Note 1: You must make changes to fields with multiple entries in the PROMPT mode only. In nonprompt mode you can is possible to leave out current entries.
Note 2: Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies more data or you enter more records. Enter the end mark ($) in fields with multiple possible entries after the last entry.
Note 3: The system allocates memory for a maximum of 32 sites.

Sample entries for table SITE

The following example describes sample entries for table SITE.

MAP display example for table SITE

```
Table: SITE

NAME LTDSN  MODCOUNT OPVRCLLI                    ALMDATA
_____________________________________________________________
HOST    00         0    VER90                              $
MELB    02        0 RMMVER90     CR  RSM    0  4     0
                                  MJ  RSM    0  4     1
                                  MN  RSM    0  4     2     $
```

Datafilling table PMLOADS

The following procedure shows the entries for table PMLOADS. Table PMLOADS stores the device location of every PM load file. This permits the DMS-100 switch to locate load files.

The XPM loadfile patching introduces the concept of an active loadfile and a backup loadfile. The active loadfile is always the default load used with the LOADPM command and most system activities. The backup loadfile is used if a problem is present when the active loadfile is loaded or RTSed. The backup loadfile is always the unpatched loadfile that Northern Telecom ships.

Table PMLOADS is modified to add fields to store data for the

- name of the active loadfile, which is the default load uses with the LOADPM command and most system initiated activities
- name of the backup loadfile, which is the load used if a problem is present when the active loadfile is loaded or RTSed. The backup loadfile is always the unpatched loadfile that Northern Telecom ships with the XPM.
- file locations of the loadfiles
- update active loadfile field, which indicates if the site wants the system to update the active file_id. The feature allows the patched loadfile to load to the XPM if a reload is necessary. This reload simplifies the reload and recovery of the XPM. The active file information updates through loadfile patching, if loadfile patching is enabled.

The system uses the active and backup files as part of loading and recovery.

Enter the XPM load files in table PMLOADS before you enter the files in inventory table LTCINV or table RCCINV. The inventory table enforces this restriction.

> ***Note:*** An exception to this rule occurs during initial entries and during dump and restore. During this time, the system adds tuples in table PMLOADS when LTCINV tuples are added.

Basic call processing (continued)

Pre-patched XPM loads

The following sections describe pre-patched XPM loads.

Pre-patched XPM loads background

Pre-patched XPM loads (PPXLs) are XPM loadfiles that have corrective patches built in the loadfile. The PPXLs are incremental loads built with patch updates. The patch updates originally created patch files which were released to the field. A functional or technical difference is not present between a regular XPM load. The difference is not present between an XPM load with patches compared to a PPXL where the patches were incorporated in the load. A PPXL is the same as CM loads that have patches built in according to date of shipment.

Implementation of PPXLs

At the beginning of each PPXL loadfile, a 1K data block that contains patch IDs, is not present. These patch IDs are for the patches in the PPXL. The patches are part of the PPXL. The corresponding patch files for each patch ID in the 1K data block must be present when you enter the PPXL in table PMLOADS.

When the PPXL is entered in table PMLOADS, the loadset is modified if a PPXL is already available for the base load. The loadset is also modified if the loadset is first created if the base load is new to the DMS-100 switch.

> ***Note:*** Loadsets group the peripheral units loaded with the same load together. To view loadsets on the DMS-100 switch, access the PATCHER CI level and enter the command string INFORM PMALL.

After the PPXL is added to table PMLOADS, the system recovery controller (SRC) can load the PPXL manually or automatically. When the PPXL is loaded, the patching that occurs after loading the PPXL is reduced, or eliminated. The PPXL is eliminated because a number of the patches are already in the load.

When the PPXL is loaded, the PPXL can have additional patches applied or removed in the same fashion as a regular XPM load. Patches that are part of the PPXL can be removed, as long as the corresponding patch files are present.

The system applies or removes patches added are removed after a PPXL is loaded. The system applies or removes these patches after subsequent reloads of the PPXL.

PPXL naming convention

The PPXL file names have "_<date>" appended to the end of the corresponding base load name. For example, a PPXL load file created for base load ECL03BX is called ECL03BX_941129. The base load name always remains the same. Base loads can be identified as a load that does not have the _<date> suffix.

The inherent value becomes the preservation of the patch stream with the ability to up-issue a PPXL. The vintage of a PPXL can always be identified with the date identifier.

PPXL storage requirements

When operating companies prepare to load PPXLs, operating companies must double XPM load storage requirements to accommodate the PPXLs. The 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

Two methods to add PPXLs to an office are available. The first method is used to upgrade an office to a new base load lineup, when the base loadname is not currently in table PMLOADS. The second method is for the addition of PPXLs to offices that already have the base loadname in table PMLOADS. For example, ESC03CJ (the current loadname) appends to ESC03CJ_950105 (the PPXL added to the baseload). Descriptions of the two methods follow.

Note 1: The system supports PPXLs on BCS36 or higher CM loads.

Note 2: Apply the PATCH JCK19 to the CM before you continue.

Basic call processing (continued)

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: Copy the base load and the PPXL load to two disk volumes for redundancy.

2 Copy the patches that associate with the PPXL loads to the same disk volume from the step 1. The load tape shipment includes a list of patches for each PPXL load. To obtain a list of patches in the PPXL, after the PPXL file is present on disk, type

>XPMLFP

and press the Enter key.

>PATCHLIST FILE ppxl_filename

and press the Enter key.

where

ppxl_filename is the filename of the PPXL load added to the base load

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 BKPFILE.

4 Add the base loadname to the appropriate inventory table, for example table LTCINV.

5 Edit the tuple added in step 3 to change the ACTFILE field from the base loadfile name to the PPXL filename. Refer to the entry example for table PMLOADS for the physical characteristics of this tuple.

6 To set the loadset against the two units of the XPM, type

>PATCHER

and press the Enter key.

>SET loadname PM pm_type device_no unit_no

and press the Enter key.

where

loadname	is the name of the loadfile
pm_type	is the type of PM that requires the loadset
device_no	is the device number with a range of 0–255
unit_no	is the unit number, 0 or 1

7 To load the PPXL in each unit of the XPM, type

>BSY UNIT unit_no

and press the Enter key.

>LOADPM UNIT unit_no

and press the Enter key.

>RTS UNIT unit_no

and press 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: When you load the XPM, the system can apply or remove additional patches for the XPM. The system applies and removes the patches in the same manner used with XPM loads in the past. Remove patches that are part of the PPXL from the load if the patch file is present on disk.

Note 2: The system applies or removes patches that the system adds or removes after a PPXL is loaded. The system adds and removes these patches after subsequent reloads of the PPXL.

Note 3: The system does not remove non-PPXL patches when you load the PPXL again because the removed patches are already out of the loadset.

Basic call processing (continued)

Adding PPXLs to an current PM load lineup

To add PPXLs to an XPM load lineup that is present, use the following procedure:

1 Verify that patch_ids for the PPXL are present on the disk volume identified in table PMLOADS, field ACTVOL. If the patch_ids are not present, copy the patches from tape to the correct volume. The PM tape shipment includes a list of the patches in each PPXL. Copy the PPXLs to disk. To list the patches in the PPXL, type

>XPMLFP

and press the Enter key.

>PATCHLIST FILE ppxl_filename

and press 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 is not present in table PMLOADS, add a new tuple. Use the previous "Upgrading baseload lineup" procedure to add a new tuple. In other occurrences, change the ACTFILE field to the PPXL filename (filename_date). The loadset is upgraded if a loadset is present. Create a loadset if a loadset is not present.

5 To set the loadset against the two units of the XPM, type

>PATCHER

and press the Enter key.

>SET loadname PM pm_type device_no unit_no

and press the Enter key.

where

loadname	is the name of the loadfile
pm_type	is the type of PM that requires the loadset
device_no	is the device number with a range of 0–255
unit_no	is the unit number, 0 or 1

6 To load each unit of the XPM with the PPXL, type

>BSY UNIT unit_no
and press the Enter key.

>LOADPM UNIT unit_no
and press the Enter key.

>RTS UNIT unit_no
and press 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: When you load the XPM, the system can apply or remove additional patches in the XPM in the same manner used with XPM loads in the past. Remove patches that are part of the PPXL from the load if the patch file is present on disk.

Note 2: The system applies or removes patches that the system adds or removes after a PPXL is loaded. The system adds and removes these patches after subsequent reloads of the PPXL.

The data entry example for table PMLOADS is not changed for RSC-S. The following table describes the data entries specific to basic call processing for table PMLOADS. Fields that apply directly to basic call processing are appear in the table. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Basic call processing (continued)

Datafilling table PMLOADS

Field	Subfield or refinement	Entry	Explanation and action
LOADNAME		alphanumeric	Peripheral module load name. Enter the XPM load name. The range for the load name is a maximum of 32 characters. This loadname must be the same as the load name in tables LTCINV and RCCINV.
ACTFILE		alphanumeric	Active load file name. The name of the active XPM loadfile. This loadfile name can be the original loadfile or a patched loadfile. The range for the loadfile name is a maximum of 32 characters. Before patching, this loadfile name is the original load name. The XPM load file patching updates the field after the load is patched for a period of time. This period of time is called soak time.
ACTVOL		alphanumeric	Active volume. Identifies the device that stores the active loadfile. Range is the set of disk drive unit (DDU) volumes and system load module (SLM) disks available to the CM, S00DXPM. Range is a maximum of 16 characters.
BKPFILE		alphanumeric	Backup load file name. Identifies the name of the backup XPM loadfile. The backup load file name must be the same name as the LOADNAME field. The range for the backup load file name is a maximum of 32 characters.
BKPVOL		alphanumeric	Backup volume. The device that stores the backup loadfile. The range for the backup volume is the set of DDU volumes and SLM disks available to the CM, S00DXPM (Max=16 characters).
UPDACT		Y or N	Update active FILENAME. Controls if the loadfile is eligible for loadfile patching. Controls if the system must update table PMLOADS fields ACTFILE and ACTVOL with the patched loadfile name.

Data entry example for table PMLOADS

The following example displays sample entries for table PMLOADS.

MAP display example for table PMLOADS

```
LOADNAME
 ACTFILE        ACTVOL
 BKPFILE        BKPVOL   UPDACT
_____________________________________________________________________
ESA02CM
 ESA02CM        S00DXPM
 ESA02CM        S00DXPM     Y
```

Datafilling table LTCINV

Table line trunk controller inventory (LTCINV) contains the inventory data, except the P-side link assignment, for

- PM types PLGC
- digital trunk controller offshore (DTCO)
- LGCO
- subscriber module rural (SMR)
- subscriber carrier module-100S (SMS)
- subscriber module urban (SMU)
- international digital trunk controller (IDTC)

With the RSC-S configuration, this table defines the LTCO or LGCO on the C-side of the RCO2.

The following table describes the entries specific to basic call processing for table LTCINV. Fields that apply directly to basic call processing appear in the table. Refer to the data schema section of the *Translations Guide* for a description of the other fields. A field is added that contains the name of the loadfile that associates with the electrically erasable programmable read-only memory (EEPROM).

Basic call processing (continued)

Datafilling table LTCINV

Field	Subfield or refinement	Entry	Description
LTCNAME		refer to subfields	Link trunk controller name. Subfields: XPMTYPE and XPMNO.
	XPMTYPE	PLGC	XPM type. Enter PLGC. Entry values: PLGC, DTC, LGCO, SMR, SMS, SMU, IDTC, ILGC, ILTC, PDTC, TRCC, DTCI, TMS, and SMA. ***Note:*** This entry is PLGC for an LGCO+ or an for an LGCOi+.
	XPMNO	0 to 255	XPM number. Enter the number of the XPM.
FRTYPE		refer to list	Frame type. Enter LTE for the LTCO, and LGE for the LGCO. Enter the location of the C-side PM in fields FRNO, SHPOS, FLOOR, ROW, and FRPOS.
EQPEC		alphanumeric	Product equipment code. Enter the frame PEC.
LOAD		alphanumeric	Load. Enter load for PM use. This field must display a load that appears in table PMLOADS.
EXECTAB		TRMTYPE, EXEC	Executive table. Subfields: TRMTYPE, EXEC, and CONTMARK. The terminal type and the associated execs of the terminal type are entered together.
	TRMTYPE	refer to list	Terminal type. Enter the terminal models to be used. The POTS is for regular lines, KSET for MBS terminals, ABTRK for regular trunks, and RMM_TERM is for MTC trunks.
	EXEC	alphanumeric	Executive programs. Enter the execs that associate with the terminal type.
CSLNKTAB		refer to subfields	C-side link table. Subfields: NMPAIR and NMPORT.

Note 1: Make changes to fields with multiple entries in the PROMPT mode. In nonprompt mode, leave out current entries.
Note 2: Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies more data or when you enter more records. Enter the end mark ($) in fields with multiple possible entries after the last entry.

—continued—

Datafilling table LTCINV (continued)

Field	Subfield or refinement	Entry	Description
	NMPAIR	0 to 31	Network module pair number. Enter the network link where the PM is assigned, corresponding to PM C-side links 0 through 15.
	NMPORT	0 to 63	Network module port. Enter the network port corresponding to the above link.
OPTCARD		see list	Optional card. This field is a vector with up to ten entries. Enter this when the PLGC/LGCO includes the UTR or GTR TONE, message card and the NT7X05 Peripheral/Remote Loader-16 (PRL). If the CMR card is included, enter the CMRLOAD. ***Note 1:*** Changes to fields with multiple entries must occur in the PROMPT mode.
TONESET		AUS100	TONESET. Enter AUS100. Range of values include DEFAULT, NORTHAM, CHINA100, and AUS100.
PROCPEC		MX77AA MX77AA or AX74AA AX74AA	Processor equipment product engineering codes. One PEC is required for each LTCO unit. Enter the PEC for unit 0 first. The PEC must reflect the minimum firmware capabilities in the processor complex of each unit.
E2LOAD		alphanumeric	EEPROM file. Contains the name of the loadfile loaded in either the NTMX77AA EEPROM or the optional NTAX74AA EEPROM. ***Note:*** When the NT7X05 PRL is entered as an optional card, enter the loadfile name for the NTMX77 UP. The optional NTAX74AA CAP does not support NT7X05 PRL functionality.
OPTATTR			Optional attribute. Since this is not a DTC for CCS7, leave blank. Subfield: CONTMARK.

Note 1: Make changes to fields with multiple entries in the PROMPT mode. In nonprompt mode, leave out current entries.
Note 2: Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies more data or when you enter more records. Enter the end mark ($) in fields with multiple possible entries after the last entry.

—continued—

Basic call processing (continued)

Datafilling table LTCINV (continued)

Field	Subfield or refinement	Entry	Description
PEC6X40		alphanumeric	The 6X40 equipment PEC. Enter the version of the NT6X40 to be used.
EXTINFO			EXTENSION_INFO.

Note 1: Make changes to fields with multiple entries in the PROMPT mode. In nonprompt mode, leave out current entries.
Note 2: Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies more data or when you enter more records. Enter the end mark ($) in fields with multiple possible entries after the last entry.

—end—

Example of entries for table LTCINV

The following example displays how sample entries for table LTCINV for an RCO2 provisioned with the NTMX77AA UP.

MAP display example for table LTCINV entered for NTMX77AA UP

```
Table: LTCINV

LTCNAME   FRTYPE FRNO SHPOS FLOOR ROW FRPOS EQPEC  LOAD
_____________________________________________________________
PLGC 1     LGE    1   18    0     C   6    6X02AG  OLG07xx

EXECTAB
CONTMARK
_____________________________________________________________
(POTS POTSEX)(KEYSET KSETEX)(RMM_TERM RSMEX)(ABTRK DTCEX)$

CSLNKTAB
_____________________________________________________________
(9 17)(13 61)(5 14)(0 29)(1 30)(2 31)(3 28)(4 29)     $

OPTCARD                          CMRLOAD
_____________________________________________________________
(UTR6)(ISP)(RAM6X69) (7X05)  (CMR18 CMRAG03)       $

TONESET   PROCPEC          E2LOAD    OPATTR  PEC6X40
_____________________________________________________________
AUS100    MX77AA  MX77AA   MX77NH08   $      6X40AC
```

Basic call processing (continued)

Note 1: xx in field LOAD and xxxx in field E2LOAD represent alphanumeric entries, for example B1 and XE01, in that order.

Note 2: If the shelf has a processor other than NTMX77 or the optional NTAX74, the system enters value NILLOAD in field E2LOAD.

Basic call processing (continued)

Datafilling table CARRMTC

Table CARRMTC allows DMS switch administration to enter maintenance control information on peripherals, OOS limits for alarms, and system RTS occurrences. Fields CSPMTYPE and SELECTOR and subfield of ATTR are expanded to include new PM type RCO2 for table CARRMTC.

A carrier maintains communication on links that connect DMS peripherals to channel banks and DMS peripherals to remote DMS peripherals. The carrier maintains communication on links that connect DMS peripherals to remote-to-remote DMS peripherals. A maximum of 16 entries are present for each peripheral that can provide carrier links in the switch.

The CPM carrier tuples contain different carrier maintenance limits and information for PCM-30 carriers. Add one tuple to provide the maintenance thresholds for CPM carriers. This procedure is like the procedure for XPM carriers. During initial program load (IPL), one default tuple is entered in table CARRMTC. One default tuple is entered for each XPM type that is in the office and in field CSPMTYPE. Other tuples are added manually for different maintenance thresholds.

A tuple in table CARRMTC must be entered before the XPM P-side inventory table tuple in table RCCPSINV is changed. Links in table RCCPSINV cannot reference field TMPLNM in table CARRMTC before a tuple in table CARRMTC is deleted or changed.

The selection of entries for each carrier is entered in the inventory table of the C-side peripheral, table LTCPSINV. 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 must be in table CARRMTC. In this occurrence, the entry is RCO2.
- When an entry is deleted from table CARRMTC, carriers in table LTCPSINV cannot reference the entry. In other occurrences, the delete command is rejected.
- When an entry in table CARRMTC is changed, table LTCPSINV is checked to determine if in-service (INSV) carriers reference the entry. In this event, the change command is rejected and displays a list of in-service carriers.

The datafill for basic call processing for table CARRMTC appears in the following table. Only fields that apply to basic call processing are shown. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table CARRMTC

Field	Subfield or refinement	Entry	Explanation and action
CSPMTYPE		RCO2	C-side node PM type. Enter the PM type of the node on the C-side of the carrier link.
TMPLTNM		DEFAULT	Template name. Enter the template name, a maximum of 16 characters, for the PM. This entry also appears in the CARRIDX field of table LTCPSINV.
RTSML		0 to 255	Return to service maintenance limit. Enter the number of times the system can return a carrier to service in an audit interval. When the audit interval completes, a warning is issued. Value 255 disables this feature.
RTSOL		0 to 255	Return to service OOS limit. Enter the number of times the system can return a carrier to service in an audit interval. When the audit interval completes, the carrier becomes permanently out of service. Value 255 disables this feature.
ATTR		refer to subfield	Attribute. This field contains subfield SELECTOR.
	SELECTOR	D30	Selector. Enter carrier type.
	CARD	NTMX82AA	Card. Enter the PEC of the PCM-30 interface card used.
VOICELAW		A_LAW	Voice law. Enter the voice law used in the carrier. A_LAW is used in international switches. The MU_LAW is used mainly in North American switches.
NATLBIT		INTERNATL	National bit. Enter INTERNATL for RCO2.

Note 1: The DMS system adds the first tuple for RCO2 to table CARRMTC during IPL or first restart after IPL. The entry is index 0 and has the value DEFAULT in field TMPLTNM field. The entry has default values for the other fields.
Note 2: Tuples other than the default tuple must be added manually before they can be referenced in table LTCPSINV. These tuples can only be deleted if they have PCM-30 carriers that associate with them.
Note 3: Tuples can only be changed in table CARRMTC if the associated PCM-30 carriers are manually busied (ManB) or offline (OFFL). The links must be offline to reset the counters.

—continued—

Basic call processing (continued)

Datafilling table CARRMTC (continued)

Field	Subfield or refinement	Entry	Explanation and action
LLFAOST		0 to 255	Local loss of frame alignment OOS time. Enter the local loss of frame alignment OOS time.
LLFARST		0 to 255	
LLFAML		0 to 255	Local loss of frame alignment maintenance limit. Enter the local loss of frame alignment maintenance limit.
LLFAOL		0 to 255	Local loss of frame alignment OOS limit. Enter the local loss of frame alignment OOS limit.
LLMAOST		0 to 255	Local loss of multiframe alignments out-of-service time. Enter the local loss of multiframe alignments OOS time.
LLMARST		0 to 255	Local loss of multiframe alignment return-to-service time. Enter the local loss of multiframe alignment RTS time.
LLMAML		0 to 255	Local loss of multiframe alignment maintenance limit. Enter the local loss of multiframe alignment maintenance limit.
LLMAOL		0 to 255	Local loss of multiframe alignment OOS limit. Enter the local loss of multiframe alignment OOS limit.
RFAIOST		0 to 255	Remote frame alignment indication OOS time. Enter the remote frame alignment indication OOS time.
RFAIRST		0 to 255	Remote frame alignment indication RTS time. Enter the remote frame alignment indication RTS time.

Note 1: The DMS system adds the first tuple for RCO2 to table CARRMTC during IPL or first restart after IPL. The entry is index 0 and has the value DEFAULT in field TMPLTNM field. The entry has default values for the other fields.
Note 2: Tuples other than the default tuple must be added manually before they can be referenced in table LTCPSINV. These tuples can only be deleted if they have PCM-30 carriers that associate with them.
Note 3: Tuples can only be changed in table CARRMTC if the associated PCM-30 carriers are manually busied (ManB) or offline (OFFL). The links must be offline to reset the counters.

—continued—

Datafilling table CARRMTC (continued)

Field	Subfield or refinement	Entry	Explanation and action
RFAIML		0 to 255	Remote frame alignment indication maintenance limit. Enter the remote frame alignment indication maintenance limit.
RFAIOL		0 to 255	Remote frame alignment indication OOS limit. Enter the remote frame alignment indication OOS limit.
RMAIOST		0 to 255	Remote multiframe alignment indication OOS time. Enter the remote multiframe alignment indication OOS time.
RMAIRST		0 to 255	Remote multiframe alignment indication RTS time. Enter the remote multiframe alignment indication RTS time.
RMAIML		0 to 255	Remote multiframe alignment indication maintenance limit. Enter the remote multiframe alignment indication maintenance limit.
RMAIOL		0 to 255	Remote multiframe alignment indication OOS limit. Enter the remote multiframe alignment indication OOS limit.
RFAIOST		0 to 255	Remote frame alarm indication OOS time. Enter the remote frame alarm indication OOS time.
RFAIRST		0 to 255	Remote frame alarm indication RTS time. Enter the remote frame alarm indication RTS time.
RFAIML		0 to 255	Remote frame alarm indication maintenance limit. Enter the remote frame alarm indication maintenance limit.

Note 1: The DMS system adds the first tuple for RCO2 to table CARRMTC during IPL or first restart after IPL. The entry is index 0 and has the value DEFAULT in field TMPLTNM field. The entry has default values for the other fields.
Note 2: Tuples other than the default tuple must be added manually before they can be referenced in table LTCPSINV. These tuples can only be deleted if they have PCM-30 carriers that associate with them.
Note 3: Tuples can only be changed in table CARRMTC if the associated PCM-30 carriers are manually busied (ManB) or offline (OFFL). The links must be offline to reset the counters.

—continued—

Basic call processing (continued)

Datafilling table CARRMTC (continued)

Field	Subfield or refinement	Entry	Explanation and action
RFAIOL		0 to 255	Remote frame alarm indication OOS limit. Enter the remote frame alarm indication OOS limit.
RMAIOST		0 to 255	Remote multiframe alarm indication OOS time. Enter the remote multiframe alarm indication OOS time.
RMAIRST		0 to 255	Remote multiframe alarm indication signal RTS time. Enter the remote multiframe alarm indication signal RTS time.
RMAIOL		0 to 255	Remote multiframe alarm indication signal OOS limit. Enter the remote multiframe alarm indication signal OOS limit.
AISOST		0 to 255	Alarm indication signal OOS time. Enter the alarm indication signal OOS time.
AISRST		0 to 255	Alarm indication signal RTS time. Enter the alarm indication signal RTS time.
AISML		0 to 255	Alarm indication signal maintenance limit. Enter the alarm indication signal maintenance limit.
AISOL		0 to 255	Alarm indication signal OOS limit. Enter the alarm indication signal OOS limit.
BERML		0 to 255	Bit error rate maintenance limit. Enter the bit error rate maintenance limit.
		0 to 255	Bit error rate OOS time. Enter the bit error rate OOS time.
BEROL		0 to 255	Bit error rate OOS limit. Enter the bit error rate OOS limit.

Note 1: The DMS system adds the first tuple for RCO2 to table CARRMTC during IPL or first restart after IPL. The entry is index 0 and has the value DEFAULT in field TMPLTNM field. The entry has default values for the other fields.
Note 2: Tuples other than the default tuple must be added manually before they can be referenced in table LTCPSINV. These tuples can only be deleted if they have PCM-30 carriers that associate with them.
Note 3: Tuples can only be changed in table CARRMTC if the associated PCM-30 carriers are manually busied (ManB) or offline (OFFL). The links must be offline to reset the counters.

—continued—

Datafilling table CARRMTC (continued)

Field	Subfield or refinement	Entry	Explanation and action
SLIPML		0 to 255	Slip maintenance limit. Enter the slip maintenance limit.
SLIPOL		0 to 255	Slip OOS limit. Enter the slip OOS limit.
SLIPSYNC		Y	SLIP SYNC. Enter Y to indicate the switch operates in a synchronized region and slips accumulate during 24 h intervals. Enter N to indicate the switch does not operate in a synchronized region. Enter N to indicate slips accumulate during 1 min and 5 min intervals.
AIS16OST		0 to 255	RTS time for AIS16 alarm. The default is 4.
AIS16RST		0 to 255	RTS time for AIS16 alarm. The default is 4.
AIS16ML		0 to 255	Maintenance limit for AIS16 alarm. The default is 17.
AIS16OL		0 to 255	OOS limit for AIS16 alarm. The default is 255.
CRC4		Y or N	Initiate the cyclic redundancy check 4 (CRC4) routine.
CRE		Y or N	Initiates the CRE procedure.
CRCOST		0 to 255	OOS time for CRC alarm. The default is 5.
CRCRST		0 to 255	RTS time for CRC alarm. The default is 5.
CRCML		0 to 1023	Maintenance limit for CRC4 alarm. The default is 205.
CRCOL		0 to 1023	OOS limit for CRC4 alarm. The default is 914.
IDLECODE		Q503 or G714	CCITT recommended idle channel bit pattern.

Note 1: The DMS system adds the first tuple for RCO2 to table CARRMTC during IPL or first restart after IPL. The entry is index 0 and has the value DEFAULT in field TMPLTNM field. The entry has default values for the other fields.
Note 2: Tuples other than the default tuple must be added manually before they can be referenced in table LTCPSINV. These tuples can only be deleted if they have PCM-30 carriers that associate with them.
Note 3: Tuples can only be changed in table CARRMTC if the associated PCM-30 carriers are manually busied (ManB) or offline (OFFL). The links must be offline to reset the counters.

—continued—

Basic call processing (continued)

Datafilling table CARRMTC (continued)

Field	Subfield or refinement	Entry	Explanation and action
SIGNTYPE		refer to list	Signal type. Enter the signal type. Value ranges: CAS, CASX, CCS, CCSIPML, and D30RCC.
Note 1: The DMS system adds the first tuple for RCO2 to table CARRMTC during IPL or first restart after IPL. The entry is index 0 and has the value DEFAULT in field TMPLTNM field. The entry has default values for the other fields. ***Note 2:*** Tuples other than the default tuple must be added manually before they can be referenced in table LTCPSINV. These tuples can only be deleted if they have PCM-30 carriers that associate with them. ***Note 3:*** Tuples can only be changed in table CARRMTC if the associated PCM-30 carriers are manually busied (ManB) or offline (OFFL). The links must be offline to reset the counters.			
—end—			

Datafill example for table CARRMTC

Sample datafill for table CARRMTC appears in the following example.

```
Table: CARRMTC

CSPMTYPE TMPLTNM RTSML RTSOL                  ATTR
_____________________________________________________
PLGC     D30RCo2 255  255 D30 NT6X27AB A_LAW NATL 30 30 4 20 3
                                  30 4 20 30 30 4 20 30 30 4 20 30 30
                                  20 130 16 4 20 Y 4 4 17 255 N N 5 5
                                  205 914 G714 D30RCC
```

Datafilling table LTCPSINV

Table line trunk controller P-side link inventory (LTCPSINV) contains P-side link assignments for host PMs. The key for table LTCPSINV is the same as table LTCINV. Memory is allocated for a maximum of 128 tuples.

The datafill for table LTCPSINV appears in the following example. This table only contains fields that apply to basic call processing. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Basic call processing (continued)

Datafilling table LTCPSINV

Field	Subfield or refinement	Entry	Explanation and action
LTCNAME		refer to subfields	Link trunk controller name. Subfields: XPMTYPE and XPMNO.
	XPMTYPE	PLGC	PM type. Must match the entry in subfield XPMTYPE in table LTCINV.
	XPMNO	0 to 255	PM number. Corresponds to the subfield XPMNO datafilled in LTCINV.
PSLNKTAB		0 to 19	P-side link table. Subfields: PSLINK, PSDATA, and CONTMARK. Enter the vector number. ***Note:*** Changes to fields with multiple entries must be made in the PROMPT mode only.
	PSLINK	0 to 19	P-side link. Enter the P-side port number.
	PSDATA	refer to subfield	P-side data. Subfield: AREASELCT.
	AREASELCT	D30	Area select. Enter D30 for trunks and remote nodes, including the RCC, RCO2, and RLCM. Enter DS30A if the P-side interface is to a local LCM.
	CARRIDX	DEFAULT	Carrier index. Enter DEFAULT for the default template name in in table CARRMTC. In other occurrences, enter a correct template name from table CARRMTC.
	ACTION	N	Action to remove carrier from service if (OOS) limits are exceeded. Enter Y to remove carrier from service. In other occurrences, enter N.

Note: Fields in PSDATA are entered depending on which value of AREASELCT is chosen. If AREASELCT is DS30A, DCH, or NILTYPE, other fields do not require datafill. If PSDATA is D30, complete fields CARRIDX and ACTION.

Basic call processing (continued)

Datafill example for table LTCPSINV

Sample datafill for table LTCPSINV appears in the following example.

MAP display example for table LTCPSINV

```
Table: LTCPSINV

LTCNAME  PSLNKTAB                                          CONTMARK
-------------------------------------------------------------------
PLGC 1
(0 D30 D30RCO2 N) (1 D30 D30RCO2 N) (2 D30 D30RCO2 N)
(3 D30 D30RCO2 N) (4 D30 DEFAULT N) (5 D30 DEFAULT N)
(6 D30 DEFAULT N) (7 D30 DEFAULT N) (8 NILTYPE) (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 RCO2. The C-side PCM-30 assignments for the RCO2 are entered in table RCCINV.

The datafill for table RCCINV appears in the following procedure. This procedure only contains fields that apply to basic call processing. Refer to the data schema section of the *Translations Guide* for a description of the other fields. Field FRTYPE contains new values. A field is added that contains the name of the loadfile that associates with the EEPROM.

The addition of the NILPORT option to the CSLNKTAB field of table RCCINV provides the ability to skip links. The NILPORT option allows ports to be skipped when an RCO2 C-side PCM-30 link is entered. Datafill NILPORT if a port must remain unequipped.

> ***Note:*** When you change delete, replace, or add a C-side link, the link affected and all links that follow must be busied. The links must be busied before modifications can be made in table RCCINV.

Datafilling table RCCINV

Field	Subfield or refinement	Entry	Explanation and action
RCCNAME		refer to subfields	RCO2 name. Contains subfields SITE, PMTYPE, and RCCNO.
	SITE	alphanumeric	Site. Enter the site name assigned to the remote location. This entry must appear in table SITE.
	PMTYPE	RCO2	PM type. Enter RCO2.
	RCCNO	0 to 511	RCO2 number. This number is different by office and not by site.
FRTYPE		see list	Frame type. Enter CRSC for the RCO2 shelf. Enter CEXT for the RCO2 extension shelf. Enter the location of the RCO2 in fields FRNO, SHPOS, FLOOR, ROW, and FRPOS.
EQPEC		MX85AA	Equipment PEC. Enter the PEC MX85AA for the RCO2.
LOAD		alphanumeric	Load. Enter the load for the RCO2. Make sure that table PMLOADS contains this datafill.
EXECTAB		refer to subfields	Exec table. Contains subfields TRMTYPE, EXEC, and CONTMARK. As with LTCINV, each terminal type associates with the particular execs. ***Note:*** Changes to fields with multiple entries must be made in the PROMPT mode only.
	TRMTYPE	refer to list	Terminal type. Enter the terminal models that will be used. The POTS is for normal lines. The KEYSET is for MBS/data lines. The RMM_TERM is for remote MTC trunks. The ABTRK is for normal trunks, and the ESA is for ESA lines.

Note: 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 two or more 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. If an attempt to assign message links is made on the same interface card, table control issues a warning. The assignment of message links to the same interface card can cause an E1 outage (failure of all message links). The E1 outage can occur if the card fails.

—continued—

Basic call processing (continued)

Datafilling table RCCINV (continued)

Field	Subfield or refinement	Entry	Explanation and action
	EXEC	refer to list	Executive programs. Enter the execs that associate with the terminal type. Examples are POTSEX, KSETEX, DTCEX, ESAEX, and RSMEX.
CSPM		refer to subfields	C-side PM. Contains subfields PMTYPE and XPMNO.
	PMTYPE	PLGC	PM type. Enter the type of peripheral attached to the RCO2. Note this PLGC or LGCO can be part of a host ISDN configuration. Enter PLGC for an LGCO+ or for an LGCOi+.
	XPMNO	0 to 255	PM number. Enter the PM number attached to the RCO2 C-side.
CSLNKTAB		0 to 19	C-side link table. This is a vector with a maximum of 16 entries. Enter the PLGC or LGCO P-side PCM-30 links (0-19) where the RCO2 C-side is assigned. Note that all links for an RCO2 must end at the same PLGC or LGCO. Message links (first and third entries) must be assigned to different shelves (units) of the frame. Message links require this action so corruption or power failure does not affect service. Contains subfield CONTMARK. ***Note:*** Changes to fields with multiple entries must be made in the PROMPT mode only.
ESA		Y or N	Emergency stand-alone. Controls whether the RCO2 has ESA capability.
INTRASW		Y or N	Intraswitching. Controls whether intraswitching is allowed.

Note: 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 two or more 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. If an attempt to assign message links is made on the same interface card, table control issues a warning. The assignment of message links to the same interface card can cause an E1 outage (failure of all message links). The E1 outage can occur if the card fails.

—continued—

Datafilling table RCCINV (continued)

Field	Subfield or refinement	Entry	Explanation and action
OPTCARD		see list	Optional card. This is a vector of a maximum of 10 entries. For the RCO2, slot 4 must be used for the ISDN signaling pre-processor (ISP) card. Slots 6 and 7 can be used for the universal tone receiver (UTR) cards. The class modem resources (CMR) card can only be plugged to slot 5. The NTMX76 card, can be used for extended distance capability, in slots 8 and 20. Examples are CMR5, ISP, UTR6, UTR7, PRL, and MSGMX76. ***Note:*** If the NTMX76 card is used at the remote, it must also be present at the host. ***Note:*** Changes to fields with multiple entries must be made in the PROMPT mode only.
	MX76LOC	REM	NTMX76 card location. Defines the location of the NTMX76 card, remote or host. Only REM is acceptable for the remote peripheral.
	PROTOCOL	HDLC or DMSX	Protocol. Defines whether HDLC mode is present and is active. If active, the remote shelf operates in HDLC after initialization. The remote PM must be busied before this value is changed. Entry is mandatory if the NTMX76 card is entered.
		NT7X05AA	If NT7X05AA is entered, the system prompts for the slot_number. Slot number for the NT7X05AA in the RCO2 is 5 and 21 or 7 and 23.

Note: 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 two or more 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. If an attempt to assign message links is made on the same interface card, table control issues a warning. The assignment of message links to the same interface card can cause an E1 outage (failure of all message links). The E1 outage can occur if the card fails.

—continued—

Basic call processing (continued)

Datafilling table RCCINV (continued)

Field	Subfield or refinement	Entry	Explanation and action
CMRLOAD		alphanumeric	CLASS modem resource load. If the CMR card is used the card must be followed by the CMR loadname. Enter the CMR loadname.
TONESET		AUS100, CHINA100, or DEFAULT	Tone set. Enter AUS100 for international applications or CHINA100 for China. Otherwise, enter a blank for DEFAULT.
PROCPEC		MX77AA MX77AA or AX74AA AX74AA	Processor equipment product engineering codes. Enter the PEC of the 6X45 type card in units 0 and 1 of the RCO2. The PEC must reflect the minimum firmware capabilities in the processor complex of each unit. For RCO2, entry value AX74AA has been added. ***Note:*** When the NT7X05 PRL is entered as an optional card, enter MX77AA MX77AA. AX74AA AX74AA is not allowed as a valid value when the NT7X05 PRL is entered as an optional card because the NTAX74 CAP does not support NT7X05 PRL functionality.
E2LOAD		alphanumeric	EEPROM file. Contains the name of the loadfile loaded in the NTMX77AA EEPROM or the optional NTAX74AA EEPROM. ***Note:*** When the NT7X05 PRL is datafilled as an optional card, enter the loadfile name for the NTMX77 UP. The optional NTAX74AA CAP does not support NT7X05 PRL functionality.

Note: 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 two or more 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. If an attempt to assign message links is made on the same interface card, table control issues a warning. The assignment of message links to the same interface card can cause an E1 outage (failure of all message links). The E1 outage can occur if the card fails.

—continued—

Basic call processing (continued)

Datafilling table RCCINV (continued)

Field	Subfield or refinement	Entry	Explanation and action
EXTSHELF		Y or N	Extension shelf. Enter Y if the CPM has an extension shelf. If Y, the refinements to this field are listed below.
		see subfields	***Note:*** Enter the location of the extension shelf in fields EXTFRTYP, EXTFRNO, EXTSHPOS, EXTFLOOR, EXTROW, EXTFRPOS, EXTEQPEC, and EXTSIDE (L or R).
Note: 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 two or more 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. If an attempt to assign message links is made on the same interface card, table control issues a warning. The assignment of message links to the same interface card can cause an E1 outage (failure of all message links). The E1 outage can occur if the card fails.			
—end—			

Basic call processing (continued)

Datafill example for table RCCINV

The NTMX77AA UP appears in the following example. Sample datafill for table RCCINV for an RCO2 that has the optional NTAX74AA CAP appears in following examples.

MAP display example for table RCCINV datafilled for NTMX77AA UP

```
Table: RCCINV

RCCNAME      FRTYPE FRNO SHPOS FLOOR ROW FRPOS  EQPEC   LOAD
-------------------------------------------------------------------
MELB RCO2 0
     1101 CRSC   0     5    0     C   0         MX85AA  KRI07xx

EXECTAB                                                  CONTMARK
-------------------------------------------------------------------
(POTS POTSEX) (KEYSET KSETEX) (RMM_TERM RSMEX) (ESALINES ESAEX) $


CSPM        CSLNKTAB                                     CONTMARK
-------------------------------------------------------------------
PLGC 1     (0) (1) (2) (3) (4) (5) (6) (7)                      $


ESA  INTRASW   OPTCARD  CMRLOAD                      CONTMARK
-------------------------------------------------------------------
Y    Y         (7X05)  (UTR6)(CMR5 CMRAG03)(ISP)(MSGMX76 REM
HDLC)$
TONESET   PROCPEC          E2LOAD     EXTINFO
-------------------------------------------------------------------
AUS100    MX77AA  MX77AA   MX77xxxx   CEXT 0 4 0 E 15 MX86AA L
```

Note 1: xx in field LOAD and xxxx in field E2LOAD represent alphanumeric entries, for example B1 and XE01.

Note 2: If the shelf has a processor other than NTMX77, or the optional NTAX74, field E2LOAD is automatically entered with value NILLOAD.

Note 3: The field PROCPEC can be entered with AX74AA AX74AA instead of MX77AA MX77AA. In this occurrence, the load name prefix in field LOAD changes from KRI to WRI. For example, KRI07xx (for MX77) changes to WRI07XX (for AX74AA). Sample datafill for table RCCINV when the RCO2 is entered for the NTAX74AA CAP appears in the following example.

Basic call processing (continued)

MAP display example for table RCCINV datafilled for NTAX74AA CAP

```
Table: RCCINV

RCCNAME      FRTYPE FRNO SHPOS FLOOR ROW FRPOS  EQPEC   LOAD
-------------------------------------------------------------------------
MELB RCO2 0
     1101 CRSC   0     5    0     C   0        MX85AA  WRI07xx

EXECTAB                                                        CONTMARK
-------------------------------------------------------------------------
(POTS POTSEX) (KEYSET KSETEX) (RMM_TERM RSMEX) (ESALINES ESAEX) $


CSPM        CSLNKTAB                                           CONTMARK
-------------------------------------------------------------------------
PLGC 1     (0) (1) (2) (3) (4) (5) (6) (7)                          $


ESA  INTRASW   OPTCARD      CMRLOAD                           CONTMARK
-------------------------------------------------------------------------
Y    Y                    (UTR6)(CMR5 CMRAG03) (ISP)          $

TONESET   PROCPEC          E2LOAD     EXTINFO
-------------------------------------------------------------------------
AUS100    AX74AA  AX74AA   AX74xxxx   CEXT 0 4 0 E 15 MX86AA L
```

Error messages for table RCCINV

The following error messages can occur when you datafill table RCCINV.

Error messages for table RCCINV

Error message	Explanation and action
`Failed to allocate pslinks table`	No store is allocated for P-side tables.
`Only one CMR card allowed`	A user tried to datafill more than one CMR card.
`PEC6X45 must be MX77AA for CPMs–only MX77 processor can be used for CPM`	A user tried to datafill MX77 PEC for a shelf that is not CPM like RCC.
`RCO2 can be connected to PLGC only`	An RCO2 can not connect to another peripheral on the C-side.

—continued—

Basic call processing (continued)

Error messages for table RCCINV (continued)

Error message	Explanation and action
`Delete P-side links prior to deleting the extension`	A user tried to delete an extension shelf that has P-side links entered in table RCCPSINV.
`Extension PEC must be MX86AA`	A user tried to enter a PEC that is different than MX86AA to the extension shelf.
`XX does not support extension`	A user tried to add an extension shelf to a peripheral that is not CPM.
`Info: NT7X05AA requires MX77 processor`	A user tried to enter field PROCPEC with AX74AA AX74AA instead of MX77AA MX77AA. The user enters the fields when NT7X05 is already entered as an optional card.
`Info: The remote PM must be busied before this value can be changed`	A user tried to change protocols before the user busied the PM.

—end—

Datafilling table RCCPSINV

Table remote cluster controller P-side link inventory (RCCPSINV) contains only P-side link assignments for the RCO2. A maximum of 54 multiples of P-side link information can be entered for the RCO2.

> ***Note:*** Only two PCM-30 C-side links, 0 and 2, are necessary. The data control table for P-side links, table RCCPSINV, requires link 1 to be entered before link 2 can be entered. If only two links are required, link 1 remains ManB. You must enter for three links in this table.

When an extension shelf is added, there are datafill limits. The datafill limits applies to RCO2 P-side links that connect to the extension shelf. The PCM-30 and D-channel handler (DCH) links connected to the extension shelf can only be entered if an extension shelf is entered in RCCINV. All the links that connect to the extension shelf must be changed from D30/DCH to NILTYPE or DS30A in RCCPSINV. These links must be changed prior to the deletion of the extension shelf from table RCCINV. A maximum of DCH cards can be entered in table RCCPSINV.

The following procedure shows the datafill for table RCCPSINV. This procedure only contains fields that apply to basic call processing. Refer to

the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table RCCPSINV

Field	Subfield or refinement	Entry	Explanation and action
RCCNAME		refer to subfields	Remote cluster controller name. Enter the RCC name. 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	RCO2	PM type. Enter RCO2.
	RCO2NO	0 to 127	RCO2 number.
PSLNKTAB		see subfields	P-side link table. Contains subfields PSLINK, PSDATA, and CONTMARK. Enter the vector number. ***Note:*** Changes to fields with multiple entries must be made in the PROMPT mode only.
	PSLINK	0 to 53	P-side link. Enter the RCO2 P-side port number.
	PSDATA	see list	P-side data type. Enter DS30A for links to RMMs or LCMs, D30 for PCM-30 links. In other events, enter NILTYPE.

Note: The PCM-30s are allowed on links 0 to 21 and 24 to 47. The DS30A links are allowed on links 22 to 53, where links 22 and 23 are reserved for the RMM.

Datafill example for table RCCPSINV

Sample datafill for table RCCPSINV appears in the following example.

MAP display example for table RCCPSINV

Basic call processing (continued)

```
Table: RCCPSINV

          RCCNAME                                          PSLNKTAB
-------------------------------------------------------------------
MELB RCO2 0  (0 NILTYPE) (1 NILTYPE) (2 NILTYPE) (3 NILTYPE)
(4 NILTYPE)(5 NILTYPE) (6 NILTYPE) (7 NILTYPE) (8 NILTYPE)
(9 DCH) (10 NILTYPE) (11 NILTYPE) (12 NILTYPE) (13 NILTYPE)
(14 NILTYPE) (15 DS30A) (16 NILTYPE) (17 DCH) (18 NILTYPE)
.
..
(21 DS30A) (22 DS30A) (23 DS30A) (24 DS30A)
(25 DS30A) (26 DS30A) (27 DS30A) (28 DS30A)
(29 NILTYPE)
...
...
(44 NILTYPE) (45 NILTYPE) (46 NILTYPE) (47 NILTYPE)
(48 NILTYPE) (49 NILTYPE) (50 NILTYPE) (51 NILTYPE)
(52 NILTYPE) (53 NILTYPE)  $
```

Error messages for table RCCPSINV

The following error messages can occur when you enter data in table RCCPSINV.

Error messages for table RCCPSINV

Error message	Explanation and action
`Failed to allocate pslinks table`	This message indicates that store is not allocated for P-side tables.
`Cannot datafill &$ in link &$`	The P-side link limits for the RCO2 prevent datafill.

Datafilling table LCMINV

Table line concentrating module inventory (LCMINV) lists data assignments for each bay that associate with a local or remote LCM unit. The SITE is the only field different for the RSC-S configuration.

The datafill for table LCMINV appears in the following example. This table only contains fields that apply to basic call processing. Field FRTYPE contains new information. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table LCMINV

Field	Subfield or refinement	Entry	Explanation and action
LCMNM		refer to subfields	Line concentrating module name. Enter the LCM name. Subfields: SITE, FRNO, and UNITNO.
	SITE	alphanumeric	Site. Enter the remote location site name. SITE is a subfield of field LCMNM.
	FRNO	0 to 511	Frame number Enter the LCM frame number.
	UNITNO	0 to1	Unit number. Enter the LCM unit number.
FRTYPE		refer to list	Frame type. Enter the frame type where the peripheral module equipment mounts. Enter CRSC for the RCO2 shelf. Enter CEXT for the RCO2 extension shelf. Enter the location of the RCO2 in fields FRNO, SHPOS, FLOOR, ROW, and FRPOS.
EQPEC		BX30AB	Equipment PEC. Enter PEC BX30AB for the LCME.

Note 1: The LCM link info is listed starting with link 0. The C-side peripheral links are in parentheses.
Note 2: When you enter field link information (LNKINFO), make sure message links are not assigned to the same interface card. Make sure message links are not assigned to the same interface card when you enter field link map (LNKMAP). When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This occurrence applies to all interface link types; DS-1, DS30, DS30A, or PCM-30. Table control issues a warning if an attempt is made to assign message links on the same interface card. The assignment of message links to the same interface card can cause an E1 outage (failure of all message links). The E1 outage can occur if the card fails.

—continued—

Basic call processing (continued)

Datafilling table LCMINV (continued)

Field	Subfield or refinement	Entry	Explanation and action
LOAD		alphanumeric	Load. Enter the load for the LCM.
CSPMNO		see subfields	C-side PM. Subfields: PMTYPE and XPMNO.
	PMT	RCO2	PM type. Enter the type of peripheral attached to the C-side of the LCM.
	EXT_PMNO	0 to 199	PM number. Enter the PM number attached to the LCM C-side.
BICTST		Y or N	BIC relay test. Include the LCM in the next LCM BIC Relay Test (BRT) schedule.
MEMSIZE		see list	Memory size. Enter the memory size of the LCM processor card. Entry values: 256K and 64K. Field MEMSIZE must be set to 256K if BICTST is set to yes or if XLCM overload is implemented. If MEMSIZE is set to 64K, BICTST must be set to NO.
LCMTYPE		LCME	LCM type and link information. Enter LCM or LCME for the enhanced type of LCM. Subfields: RNGDATA and LCDI_INFO.
RNGDATA		see subfield	Ring data. Subfield: RGEQUIP.
	RGEQUIP	Y or N	Ringing equipment. Enter Y to select ringing type and features.

Note 1: The LCM link info is listed starting with link 0. The C-side peripheral links are in parentheses.
Note 2: When you enter field link information (LNKINFO), make sure message links are not assigned to the same interface card. Make sure message links are not assigned to the same interface card when you enter field link map (LNKMAP). When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This occurrence applies to all interface link types; DS-1, DS30, DS30A, or PCM-30. Table control issues a warning if an attempt is made to assign message links on the same interface card. The assignment of message links to the same interface card can cause an E1 outage (failure of all message links). The E1 outage can occur if the card fails.

—continued—

Basic call processing (continued)

Datafilling table LCMINV (continued)

Field	Subfield or refinement	Entry	Explanation and action
	RNGTYPE	see list	Ringing type. Refinements: RNGCADENCE, FREQUENCIES, and PROMVOLT.
	LCDI_INFO	0 to 53	Line concentrating device ISDN information. A maximum of 18 vectors of link numbers (0 to 53) of the C-side peripheral (RCO2). Links 0 through 21 are DS1 links and 22 through 53 are DS30A links on the RCO2. ***Note:*** LCMs attached to RCO2s must have message link (0 and 1) assignments separated by a minimum of four. The RCO2 NTMX74 I/F cards support four links each. The NTMX74 card failure can cause an E1 outage if all message links of an LCM reside on that card.
Note 1: The LCM link info is listed starting with link 0. The C-side peripheral links are in parentheses. ***Note 2:*** When you enter field link information (LNKINFO), make sure message links are not assigned to the same interface card. Make sure message links are not assigned to the same interface card when you enter field link map (LNKMAP). When the interface card supports two or more links, separate the message links by the number of links on the interface cards. This occurrence applies to all interface link types; DS-1, DS30, DS30A, or PCM-30. Table control issues a warning if an attempt is made to assign message links on the same interface card. The assignment of message links to the same interface card can cause an E1 outage (failure of all message links). The E1 outage can occur if the card fails.			
—end—			

Each interface (I/F) chip on the NTMX74 card RCO2 serves four DS30A links. The following chart illustrates the link to chip relationship. Message (MS) links (links 0 and 1) must be separated by a minimum of 4. The links must be separated when you enter data in table LCMINV. The separated links prevent a single chip failure that causes a T1 outage.

DS30A link relationship

Chip number	DS30A link numbers
1	22, 23, 24, 25
2	26, 27, 28, 29

Basic call processing (continued)

DS30A link relationship (continued)

Chip number	DS30A link numbers
3	30, 31, 32, 33
4	34, 35, 36, 37
5	38, 39, 40, 41
6	42, 43, 44, 45
7	46, 47, 48, 49
8	50, 51, 52, 53

—end—

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
-------------------------------------------------------
MELB 02 0   CRSC    4     3     D   1   BX30AB  KRI05AU

CSPMNO  BICTST  MEMSIZE     LCMTYPE
-------------------------------------------------------
RCO2 0    N   56  256K  256K  LCME     Y

-----------------------------------------------
C3C      (24) (28) (26) (27)  $
```

Note: The `xx` in field LOAD represents alphanumeric, for example, `B1`.

Error messages for table LCMINV

The following error message can occur when you enter data in table LCMINV.

Error message for table LCMINV

Error message	Explanation and action
`RCO2 is connected to an LCM/LCME only.`	This message indicates that the RCO2 can connect to an LCM or LCME (phase one) on P-side links.

Datafilling table RMMINV

Table remote maintenance module inventory (RMMINV) identifies an RLCM, RSC-S, or OPM site with the frame type, frame number, floor or row attached to each RMM. The RMMINV also identifies an RLCM, RSC-S, or OPM site with the frame position, PEC, PM load and executive program loaded, and C-side PM attached to each RMM. Memory is dynamically allocated and the maximum size of this table is 255 entries.

The CSPMINFO field of an RMM can be an RCO2, PLGC/LGCO or RCC. The C-side links of RMM must be defined to links 22 and 23 of the RCO2.

The datafill for table RMMINV appears in the following example. This table only contains fields that apply to basic call processing. Field FRTYPE contains new values. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table RMMINV

Field	Subfield or refinement	Entry	Explanation and action
RMMNAME		see list	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. This entry must also appear in tables RCCINV, LCMINV, and SITE.
	PMTYPE	RMM	PM type.
	RMMNO	0 to 63	RMM number. This number is different by office and not by site.

—continued—

Basic call processing (continued)

Datafilling table RMMINV (continued)

Field	Subfield or refinement	Entry	Explanation and action
FRTYPE		refer to list	Frame type. Enter CRSC for the RCO2 shelf. Enter CEXT for the RCO2 extension shelf. For an RLCM, enter RLCM. Enter the location of the RCO2 in fields FRNO, SHPOS, FLOOR, ROW, and FRPOS.
EQPEC		6X13AA	Equipment PEC. Enter PEC for an RMM.
LOAD		alphanumeric	Load. Enter the load for the RMM. Make sure that table PMLOADS contains this datafill.
EXECS		RSMEX	Exec table. Enter the correct execs for the RMM.
CSPMINFO		refer to subfields	C-side PM information. Contains subfields RMMSELECTOR, CSIDEPM, and CSIDPORT.
	RMM SELECTOR	RMMRCO2	RMM selector. Enter the type of module where the RMM is.
	CSIDEPM	see subfields	C-side peripheral module. Contains subfields PMT and EXT_PMNO.
	PMT	RCO2	PM type. Based on value in field RMMSELECTOR.
	EXTPMNO	0-127	External PM number. Enter the external PM number where the RMM attaches. This number must also appear in table LCMINV or RCCINV. ***Note:*** If the field RMMSELECTOR is RMMRCO2, datafill subfield CSIDPORT as follows.
	CSIDPORT	22, 23	C-side PORT. Enter the C-side port connected to the RMM. Enter one tuple with 22 and one with 23. Refer to datafill example.

—end—

Datafill example for table RMMINV

Sample datafill for table RMMINV appears in the following example.

MAP display example for table RMMINV

```
Table: RMMINV

RMMNAME        FRTYPE FRNO SHPOS FLOOR ROW FRPOS
-------------------------------------------------
MELB RMM 0      CRSC    0     19   3    C   51
MELB RMM 2      CEXT    2     19   3    G   52

EQPEC    LOAD         EXECS      CSPMINFO
-------------------------------------------------
6X13AA   RMM34C       RSMEX     RMMRCO2 RCO2 0 22
6X13AA   RMM34C       RSMEX     RMMRCO2 RCO2 0 23
```

Error messages for table RMMINV

The following error message can occur when you datafill table RMMINV.

Error message for table RMMINV

Error message	Explanation and action
`RMM can be defined on P-side links 22 and 23`	This message indicates the RMM can only be defined on P-side links 22 and 23 of the RCO2.

Basic call processing (continued)

Datafilling table LNINV

Table line circuit inventory (LNINV) defines the site, line equipment number, and associated data for each line card circuit. Then SERVORD can add or delete table LNINV line datafill for remote fiber terminal (RFT) lines in an S/DMS AccessNode system. This *auto-create* feature removes a manual provisioning step. The *auto-create* feature allows RFT line cards to be software-provisioned and service-provisioned in a single step. For more information, refer to *SERVORD Reference Manual*.

Datafilling table LNINV

Field	Subfield or refinement	Entry	Explanation and action
LEN		see subfields	Line equipment number. Contains subfields SITE, FRAME, UNIT, LSG, and CIRCUIT.
	SITE	alphanumeric	Site. Enter the site assigned to the remote location.
	FRAME	0 to 99	Frame. Range is 0-99.
	UNIT	0 to1	Unit. Range is 0-1.
	LSG	0 to 19	Line subgroup. For LCMs the range is 0-19.
	CIRCUIT	0 to 31	Circuit. Enter the circuit number of the line card. The range is from 0-31.
CARDCODE		alphanumeric	Cardcode. Enter the correct line card for the office. EBS line card (6X21AC) or advanced UDLC line card (6X21AD).
PADGP		character	Pad group. Enter the name of the pad group assigned to the line circuit in table PADDATA.
STATUS		character	State. Enter the line inventory availability state. Correct entries are HASU, WORKING, UNEQUIP, CUTOFF, or RESERVED.
GND		Y or N	Ground. Where the line is ground start enter Y, or enter N.
BNV		L or NL	Balanced network value. Enter L or NL. Enter L when the line circuit is configured for a loaded network. In other occurrences, enter NL for a network that is not loaded.

—continued—

Datafilling table LNINV (continued)

Field	Subfield or refinement	Entry	Explanation and action
MNO		Y or N	Manual override. Enter Y when the on-hook balance network test cannot update field BNV in this table. In other occurrences, enter N to allow the off-hook balance network test to update field BNV.
	CARDINFO	refer to subfield	Card information. This information includes subfield CARDTYPE and CARDTYPE refinements.
—end—			

Datafill example for table LNINV

Sample datafill for table LNINV appears in the following example.

MAP display example for table LNINV

```
Table: LNINV

         LEN CARDCODE PADGRP STATUS GND BNV MNO CARDINFO
_____________________________________________________________
MELB 00 1 00 05 6X21AD STDLN HASU   N  NL   N    NIL
```

Datafilling table TRKGRP

Table trunk group (TRKGRP) defines data for each trunk group that associates with the switching unit. Each trunk group entry in table TRKGRP consists of a different CLLI. The different trunk group entry is for the trunk group and a number of other fields that the trunk group type field GRPTYP determines.

The datafill for table TRKGRP appears in the following example. This table contains fields that apply to basic call processing. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Basic call processing (continued)

Datafilling table TRKGRP

Field	Subfield or refinement	Entry	Explanation and action
GRPKEY		refer to subfield	Group key. Subfield: CLLI.
	CLLI	alphanumeric	CLLI. Enter the CLLI code for the trunk group assigned in table CLLI.
GRPINFO		refer to subfields	Variable group data. When trunk group type is MAINT, this field contains subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, and CARD. ***Note:*** Changes to fields with multiple entries must be made in the PROMPT mode only.
	GRPTYP	refer to list	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. This number is not required for maintenance and test trunks. Enter 0.
	PADGRP	refer to list	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). In other occurences, enter NPDGP.
	NCCLS	NCRT	A circuit class does not apply. Enter NCRT (no circuit).
	CARD	refer to list	Card code. Enter the PEC of the maintenance and test trunk card. Examples of values: 2X90AB, 2X96AA, 2X47AA, and 2X11AA.

Note 1: The set of trunk group types available for use in an office is a function of hardware and software features. The set of trunk group types available is also a function of feature packages. The operating company provides the features and packages for the office.
Note 2: Table TRKGRP can have a maximum of 2047 trunk groups. The number of CLLIs available to name the trunk groups limits this number.

Datafill example for table TRKGRP

Sample datafill for table TRKGRP appears in the following example.

MAP display example for table TRKGRP

```
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

  RCO20IBNTO
     IBNTO 0 ELO NCBN RCO20 0 MIDL 0  N ANSDISC
      0 N O 1 8 9 N N N N N N N $
  RCO20IBNTI
     IBNTI 0  ELO NCRT RCO20 0 0 3204001  ANSDISC
      0 Y N N Y N Y Y 0 0 N N N N N $
```

Datafilling table TRKSGRP

Table trunk subgroup (TRKSGRP) lists additional information for each subgroup. The subgroups are assigned to one of the trunk groups in table TRKGRP.

Input data must be specified for one or two subgroups for each trunk group listed in table TRKGR. Input data does not have to be specified for maintenance (MAINT) trunk groups.

> ***Note:*** The trunk group datafill automatically produces the trunk subgroup data for maintenance and test trunks. This action does not apply to subgroup 1 of trunk groups with code TTU.

The datafill for table TRKSGRP appears in the following example. This table contains fields that apply to basic call processing. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Basic call processing (continued)

Datafilling table TRKSGRP

Field	Subfield or refinement	Entry	Explanation and action
SGRPKEY		see subfields	Subgroup key. Subfields: CLLI and SGRP.
	CLLI	alphanumeric	CLLI. This subfield contains the code assigned in table CLLI to the trunk group where the subgroup belongs.
	SGRP	0 or 1	Subgroup number. This subfield contains the number assigned to the trunk subgroup. For maintenance and test trunks, the number is 0.
CARDCODE		refer to list	Card code. Enter the PEC of the maintenance and test trunk card. Examples of values: 2X90AB, 2X96AA, and 2X11AA.
SGRPVAR		refer to 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. ***Note:*** Changes to fields with multiple entries must be made in the PROMPT mode only.
	SIGDATA	STD	Signaling data. This subfield lists the signaling code (STD for standard signaling).
	DIR	OG	Direction. For maintenance and test trunks, the entry is OG (outgoing).
	OPULSTYP	NP	Outgoing type of pulsing. For maintenance and test trunks, the entry is NP (no pulsing).
	OSTARTSG	WK	Outgoing start dial signal. For maintenance and test trunks, the entry is WK (wink).
	IDGTIME	2	Interdigital timing. For maintenance and test trunks, the value is 2.
	NUMSTOPS	0	Number of stop/goes. For maintenance and test trunks, the value is 0.

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

—continued—

Datafilling table TRKSGRP (continued)

Field	Subfield or refinement	Entry	Explanation and action
SGRPVAR (continued)	CCONT	MW	Coin control. For maintenance and test trunks, the entry is MW (multiwink).
	RNGBCK	IB	Ringback. For maintenance and test trunks, the entry is IB (inband).
	ESUPR	N	Echo suppressor. For maintenance and test trunks, the entry is N (no echo suppressor).
	SAT	N	Satellite. For maintenance and test trunks, the entry is N (no satellite).
	REMBSY	N	Remote make busy. For maintenance and test trunks, the entry is N (feature not assigned).
	DIALMODE		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. This elapse time interval is 160 ms before the trunk is returned to the idle link list after trunk disconnect.
Note 1: The number of trunk subgroups by the SIZE field in table DATASIZE for the entry with field DATSKEY equal to TRKSGRP allocates memory. ***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.			
—end—			

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

```
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
RCO20TO  0   DS1SIG
   STD 2W MF WK N 7 7 MF WK 7 0 N NO NO N N N M 70
```

Datafilling table TRKMEM

Table trunk member (TRKMEM) lists data that associate with each trunk assigned to a trunk group and subgroup. Tables TRKGRP and TRKSGRP list the trunk groups and subgroups. For an RSC-S, this table identifies circuits that associate with static trunks and test equipment used to test lines and trunks. Trunk assignment off the P-side of an RCO2 is allowed in table TRKMEM.

Datafill for table TRKMEM appears in the following example. This table only contains fields that apply to basic call processing. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table TRKMEM

Field	Subfield or refinement	Entry	Explanation and action
CLLI		alphanumeric	CLLI. Enter the code assigned in table CLLI to the trunk group where the trunk is a member.
EXTRKNM		0 to 9999	External trunk name. Enter the external trunk number assigned to the trunk.
SGRP		0 or 1	Trunk subgroup number. Enter subgroup number.
MEMVAR		refer to refinement	Memory variable area. Refinements are of PMTYPE.
	PMTYPE	RCO2	Variable data for members. For RSC-S applications, this field varies. If the trunk is part of an interoffice trunk or a maintenance trunk, the field varies. For an interoffice trunk, the subfield is PMTYPE and the PMTYPE refinements.
	RCO2NO	0 to 511	Remote cluster controller equipment number. Enter the RCO2 equipment number.
	RCO2CKTNO	0 to 47	Remote cluster controller equipment circuit card number. Enter the RCO2 card number where the TRKGRP member is assigned.
	RCO2CKTTS	1 to 24	Remote cluster controller circuit time slot. Enter the RCO2 time slot number where the TRKGRP member is assigned.

Note 1: The total number of trunks specified in field TRKGRSIZ in table CLLI for correct trunk groups allocates memory.
Note 2: Table size can increase with data if field TRKGRSIZ is changed in table CLLI for correct trunk groups.

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

    CLLI         EXTRKNM   SGRP        MEMVAR
-------------------------------------------------
     RCO20TI      0        0           RCO2 0  2  4
     RCO20T2      0        0           RCO2 0  2  4
```

Datafilling table ALMSCGRP

Table alarm scan group (ALMSCGRP) records the circuit equipment, location, and type of circuit pack that contains scan points. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table ALMSCGRP

Field	Subfield or refinement	Entry	Explanation and action
SCGROUP		0 to 255	Scan group. Enter the scan group number.
TMTYPE		refer to list	Trunk module type. Enter type of trunk module where the circuit mounts. Entry values are MTM, OAU, and RMM.
TMNO		0 to 255	Trunk module number. Enter the number of the trunk module where the circuit mounts. If the TMTYPE is OMU, enter 0.
TMCKTNO		0 to 23	Trunk module circuit number Enter the trunk module circuit number where the circuit is assigned.
CARDCODE		refer to list	Card code. Enter the PEC of the alarm card. Entry values are 3X82AA, 3X84AA, and 0X10AA.

Datafill example for table ALMSCGRP

Sample datafill for table ALMSCGRP appears in the following example.

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
      .       .     .        .       .
      .       .     .        .       .
      .       .     .        .       .
     21     RMM     2       11    0X10AA
```

Datafilling table ALMSDGRP

Table alarm signal distributor group (ALMSDGRP) records circuit equipment, location, and circuit pack type that contains SD points. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table ALMSDGRP

Field	Subfield or refinement	Entry	Explanation and action
SDGRP		0 to 255	Signal distributor group. Enter the signal distributor group number.
TMTYPE		MTM, OAU, RMM	Trunk module type. Enter type of trunk module where the circuit mounts.
TMNO		0 to 255	Trunk module number Enter the number of the trunk module where the circuit mounts.
TMCKTNO		0 to 23	Trunk module circuit number Enter the trunk module circuit number where the circuit is assigned.
CARDCODE		refer to list	Card code. Enter the PEC of the alarm card. Values: 3X82AA, 3X84AA, and 2X57AA.

Basic call processing (continued)

Datafill example for table ALMSDGRP

Sample datafill for table ALMSDGRP appears in the following example.

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
      8    MTM    6      18   2X57AA
      9    MTM    6      19   2X57AA
     10    MTM    9      18   2X57AA
     11    MTM    9      19   2X57AA
      .     .     .       .      .
     22    MTM   12      18   2X57AA
     23    MTM   12      19   2X57AA
```

Datafilling table ALMSD

Table alarm signal distributor point (ALMSD) identifies functions performed by each assigned signal distributor (SD) point in alarm signal distributor groups. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table ALMSD

Field	Subfield or refinement	Entry	Explanation and action
FUNCTION		alphanumeric	Function. Enter the alarm function.
SDGROUP		0 to 255	Signal distributor group. Enter the signal distributor group to which the SD point belongs.
POINT		0 to 7	Signal distributor point. Enter the SD point number in the signal distributor group.
NORMALST		0 or 1	Normal state. Enter the normal state of the SD point. The entry value is 0 if the SD point is normally open or off. The entry value is 1 if the SD point is normally on or closed.
AUDIBLE		Y or N	Audible alarm. Enter Y if the signal distributor point is reset when the audible alarm reset key is operated. In other occurrences, enter N.
LAMPTEST		Y or N	Lamp test. Enter Y if the SD point is included in the lamp test. In other occurrences, enter N.

Datafill example for table ALMSD

Sample datafill for table ALMSD appears in the following example.

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
 PREFLRF       0     6        0    N     N
```

Basic call processing (continued)

Datafilling table ALMSC

The function each of the assigned scan points in the alarm scan groups appears in table alarm scan (ALMSC). Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table ALMSC

Field	Subfield or refinement	Entry	Explanation and action
FUNCTION		alphanumeric	Function. Enter the alarm function.
SCGROUP		0 to 255	Scan group. Enter the scan group where the scan point belongs.
POINT		0 to 7	Scan point. Enter the scan point number in the scan group.
NORMALST		0 or 1	Normal state. Enter the normal state of the scan point. Entry values: 0, if the scan point is normally off or open. The entry value is 1 if the scan point is normally on or closed.
REPORT		Y or N	Alarm report. Enter Y if an alarm report must be logged. Otherwise, enter N.
ALM		refer to list	Alarm type. Enter the type of alarm to activate. Entry values: CR (critical alarm), MJ (major alarm), MN (minor alarm), and NA (no alarm).
LOGIC		refer to subfields	Logic. Subfields: LOGIC, SDFUNCT, ALMGRP, ALMXFR, and CONTMARK.
	LOGIC	Y or N	Logic. Enter Y if the logic that associates with the function is fixed; otherwise enter N.
	SDFUNCT	alphanumeric	Signal distributor function. Enter the signal distributor function or functions that associates with an exact scan point.
	ALMGRP	Y or N	Alarm grouping. Enter Y if the alarms are activated when the alarm grouping key is activated. Enter N if the alarm function is activated at all times if the alarm grouping key does not affect function.

—continued—

Datafilling table ALMSC (continued)

Field	Subfield or refinement	Entry	Explanation and action
LOGIC (continued)	ALMXFR	Y or N	Alarm transfer. Enter Y if the alarm is activated when the alarm transfer key is activated. Otherwise, enter N.
	CONTMARK	+ or $	Continuation mark. Where the record is other than the last for an exact scan point, enter a plus sign (+). The plus sign specifies additional data for the scan point in the next record. Where the record is the last for a specified scan point, enter a dollar sign ($).
—end—			

Datafill example for table ALMSC

Sample datafill for table ALMSC appears in the following example.

MAP display example for table ALMSC

```
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) $
   .           .     .        .   .           .
   .           .     .        .   .           .
 RSC-S0_ABS_ALM  20 2 0  Y  MN N (ABAUD N N)
                                   (ABSVIS N N)
                                   (EXPILDMS N N)
                                   (MNXFR N Y) $
```

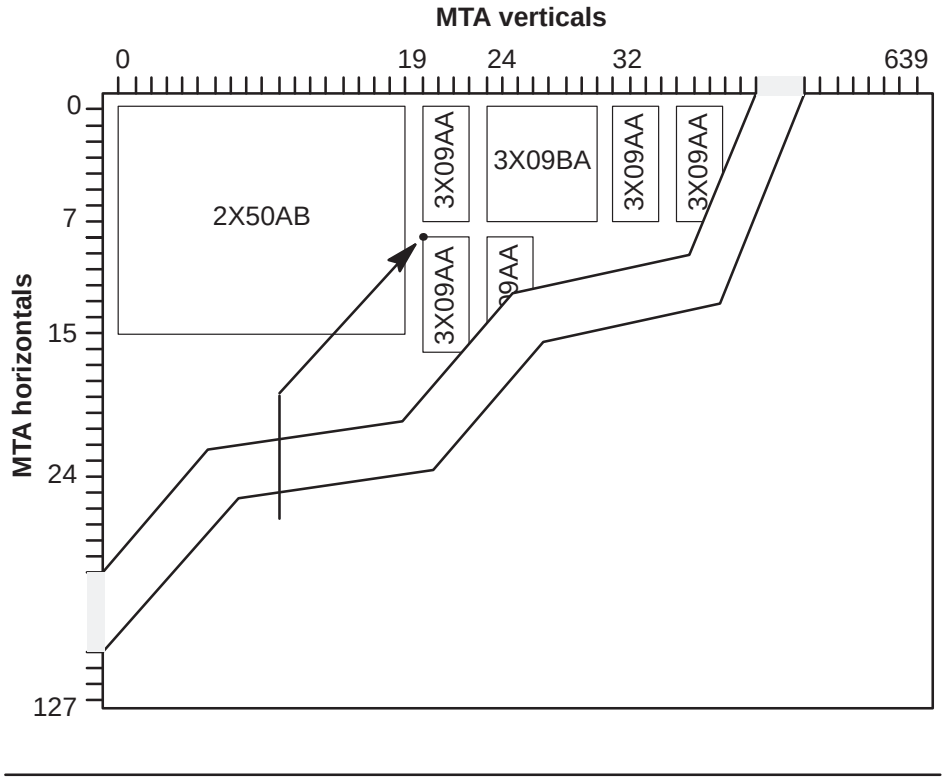
Basic call processing (continued)

Datafilling table MTAMDRVE

The metallic test access (MTA) network is a matrix of vertical and horizontal crosspoints. This matrix is like a minibar that connects verticals to horizontals in the MTA. The MTA tests equipment. The horizontal connections in the MTA connect the test equipment to the vertical connections where the circuit lines attach.

The interconnection of a number of smaller minibar circuits can produce an MTA network of the required size. The minibar circuits are used as building block components. The NT3X09AA driver allows metallic test access to remote line concentrating devices. The metallic test access includes the LCMs off the RCO2. The NT3X09AA circuit measures four vertical by eight horizontal. The NT3X09BA circuit measures eight vertical by eight horizontal. The MTA matrix appears in the following figure.

MTA matrix

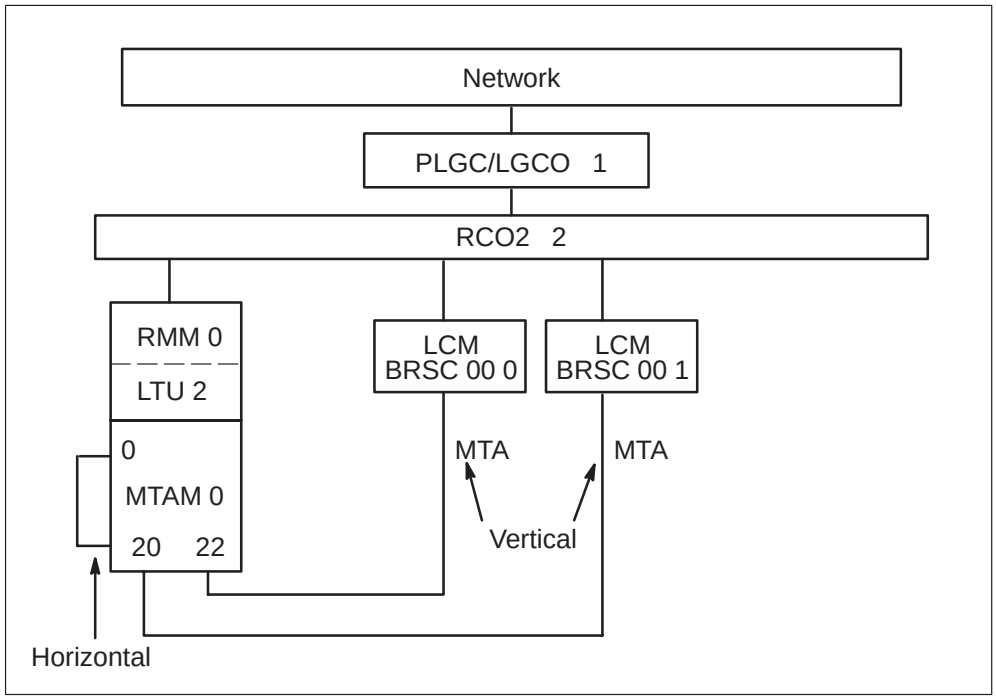


The 0, 0 crosspoint of an MTA driver locates the driver in the MTA matrix. This driver has a vertical start location of 20 and a horizontal start location of 8.

Basic call processing (continued)

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 and does not require an associated minibar switch. The 0, 0 crosspoint in the matrix identifies each minibar driver. An example of the MTA configuration appears in the following figure.

Example MTA configuration



Basic call processing (continued)

The datafill for table MTAMDRIVE appears in the following example. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table MTAMDRIVE

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 horizontal start location for the MTAM driver.
TMTYPE		RMM	Trunk module type. Enter type of trunk module where the minibar driver mounts.
TMNO		0 to 255	Trunk module number. Enter the number assigned to the maintenance trunk module (MTM).
TMCKTNO		see list	Trunk module circuit number. Enter the circuit number of the MTM or RMM where the minibar driver is assigned.
MTACARD		see list	MTAM driver card. Enter card code for metallic test access minibar driver card. Range: 2X50AB, 3X09AA, 3X09BA.

Datafill example for table MTAMDRIVE

Sample datafill for RSC-S basic call processing in table MTAMDRVE appears in the following example. The example tuple corresponds to the example configuration. Note the NT3X09AA has four verticals with a range of 20 to 23. In the example, only verticals 20 and 22 are datafilled.

MAP display example for table MTAMDRIVE

```
Table:  MTAMDRVE

MTAMEM  VERT HORIZ  TMTYPE TMNO TMCKNO  MTACARD
-------------------------------------------------
1        20   0      RMM    0    10     3X09AA
1        22   0      RMM    0    10     3X09AA
2        24   0      RMM    1    10     3X09AA
```

Datafilling table MTAVERT

The metallic test access vertical connection table identifies the vertical connectivity to the MTA matrix. Two connection types are allowed: single and multiple. A maximum of 32 LCMs can share a metal test pair.

Datafill for table MTAVERT appears in the following table. This table only contains fields that apply to . Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table MTAVERT

Field	Subfield or refinement	Entry	Explanation and action
VERT		20 to 27	Vertical. Enter the MTA vertical connection number.
VERTCONN		S or M	Vertical connection. Enter M for multiple connections and S for single connections. A maximum of 32 LCM modules can share a metal test pair.
SELECTOR		O	Selector type. Only selector O can be used when the entry in VERTCONN is M. Subfields SITE, FRAME, UNIT, and CONTMARK must be datafilled after the selector. This vector has a maximum of 32 entries. ***Note:*** Changes to fields with multiple entries must be made in the PROMPT mode only.
	SITE	alphanumeric	Site name. Enter the name selected for the remote location.

—continued—

Basic call processing (continued)

Datafilling table MTAVERT (continued)

Field	Subfield or refinement	Entry	Explanation and action
	FRAME		Frame number. Enter the frame number.
	UNIT	0 or 1	Unit number. Enter the unit number.
	CONTMARK	+ or $	Continuation mark. Enter a plus sign (+) when additional data are specified on the next record. In other occurrences, enter a dollar sign ($) after last record.
		—end—	

Datafill example for table MTAVERT

Sample datafill for RSC-S basic call processing in table MTAVERT appears in the following example.

MAP display example for table MTAVERT

```
Table:  MTAVERT

VERT        VERTCONN
-----------------------------------------------
20          S  L  MELB  00   0
22          S  L  MELB  00   1
```

Datafilling table MTAHORIZ

Table metallic test access horizontal connection (MTAHORIZ) lists the assignment of horizontal agents to a horizontal and horizontal group of Integrated Services Digital Network MTAMs. Horizontal agents include line test units (LTU), metallic test units (MTU), operator verification and metal jacks (MJACK). Horizontal agents also includes incoming test access trunks, extended metallic test access, and short circuits.

Different horizontal agents can use the same horizontal but must be associated with different MTAMs or horizontal groups. A maximum of 160 different horizontal agents are allowed for a given horizontal.

Basic call processing (continued)

A maximum of 32 MTAMs can be multiplied (grouped) to connect to a horizontal agent. A horizontal agent can only be used once.

The datafill for table MTAHORIZ appears in the following example. This procedure only contains fields that apply to . Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Note 1: There are no horizontals reserved for dedicated LTUs. Nondedicated LTUs do not have restriction on assignment.

Note 2: When an LTU is assigned to the host switching, the horizontal where it is assigned is multiplied. The horizontal 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 multiplied. In this occurrence the horizontal is multiplied to all minibar switches assigned to the remote location.

Note 3: When the minibar switch is at the host switching unit, assignment limits do not apply. The assignment limit applies to the assignment of incoming test and operator verification trunks. Each incoming test access trunk and operator verification trunk requires one horizontal.

Note 4: The horizontals where the incoming test access and operator verification trunks are assigned are multiplied to all minibar switches. The minibar switches are at the host switching unit. The horizontals must be multiplied when the MTA configuration is small or medium.

Note 5: All horizontals are available for the assignment of incoming test access trunks and operator verification trunks. The horizontals can be assigned for the extension of the metallic test access feature. The horizontals are available . Each incoming test access trunk, operator verification trunk, and vertical requires a horizontal. The test access and operator verification trunks and vertical can be on the host minibar switch. These items can be on the switch if the minibar switch is remote from the host switching unit. The host minibar switch is assigned to a horizontal on the switch. The minibar switch is at the remote or host location.

Note 6: The maximum number of metal jacks at each DMS office is 256.

Note 7: See tables CLLI, TRKGRP, TRKSGRP, and TRKMEM. These tables perform an assignment of the LTUs, incoming test access and operator verification trunks. These items are assigned to trunk group, trunk subgroup, and trunk member tables.

Basic call processing (continued)

Note 8: An LTU or MTU must be datafilled in table TRKMEM before added to table MTAHORIZ. If the LTU or MTU is deleted from table TRKMEM, the corresponding tuple in table MTAHORIZ is marked as deleted. The tuple is automatically restored if the LTU or MTU is added to table TRKMEM again.

Note 9: The memory for this table is dynamically allocated to a maximum of 2000 tuples.

Datafilling table MTAHORIZ

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 identify the horizontal and its horizontal agent as a different tuple. The horizontal group allows assignment of different test equipment on the same MTA horizontal.
HORIZAGT		refer to subfields	This field contains several subfields that depend on the value of the used SELECTOR.
SELECTOR		1 to 2 characters	Selector. Range: 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 test access or operator verification trunk assignment. Enter T for complete subfields CLLI and EXTRKNM. Enter B for a board-to-board dedicated horizontal and complete subfield BBTNR. Enter E to multiply a horizontal of a minibar switch from a host or remote. The horizontal multiplies to the vertical of a host minibar switch and complete subfield EMTAVERT. Enter MJ for a metal connection to the tip and ring of the subscriber line. Enter MJ for complete subfields CLLI and MJACKNUM. Selectors J and LA are for licensee use only.

—continued—

Basic call processing (continued)

Datafilling table MTAHORIZ (continued)

Field	Subfield or refinement	Entry	Explanation and action
SELECTOR (continued)	CLLI	alphanumeric	Common language location identifier. Enter LTU for line test unit. Enter MTU for metallic test unit. Enter MJACK for metal jack. For operator verification or an incoming test access trunk, enter the alphanumeric code. Enter the code that represents this trunk group in table CLLI.
	EXTRKNM	0 to 9999	External trunk number. Enter the external trunk number assigned in table TRKMEM. The number is assigned to the line test unit, metallic test unit, operator verification trunk, or the incoming test access trunk.
	BBTNR	0 to 7	Board-to-board testing number. Enter the number of the board-to-board set where 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.
	MJACKNUM	1 to 256	Metal jack number. When the entry in subfield CLLI is MJACK, enter the metal jack number.
MTAGRP		refer to subfields	MTA group. This field contains 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 ALTUSE.
	MTAMEM	0 to 255	MTA minibar driver member. Enter MTAM driver member number where the horizontal connects.

—continued—

Datafilling table MTAHORIZ (continued)

Field	Subfield or refinement	Entry	Explanation and action
MTAGRP (continued)	HORIZ	0	Read-only field provides information about the horizontal to which the MTA drivers connect. Enter 0 to satisfy table control.
	ALTUSE	Y or N	Automatic line test use. Enter Y to use line test equipment for automatic line testing (ALT). Otherwise, enter N.
—end—			

Datafill example for table MTAHORIZ

Sample datafill for RSC-S basic call processing in table MTAHORIZ appears in the following example.

MAP display example for table MTAHORIZ

```
Table: MTAHORIZ

HORIZ HORIZGRP   HORIZAGT    MTAGRP
-------------------------------------------------
8     0          L LTU 0 Y   (0 0)(2 0)      $
```

Datafilling table REXSCHED

Table routine exercise schedule (REXSCHED) contains the information the Routine Exercise Text (REX) coordinator or scheduler requires. The REX schedules the REX tests according to specifications. The different REX tests can be scheduled according to the specific characteristics of the switch. Certain tests can be excluded on certain days of the week. Critical nodes that form the core complex cannot be excluded from testing.

Application of this table is limited to REX test controllers. Only the REX tests that are available in the office are entered. Where REX tests are not available, the table REXSCHED is empty.

Basic call processing (continued)

The datafill for basic call processing for table REXSCHED appears in the following table. The only fields that are shown apply directly to basic call processing. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table REXSCHED

Field	Subfield or refinement	Entry	Explanation and action
REXTSTID			REX test identifier. The system automatically defines REXSTIDS. Only REX tests available in the office are shown.
	REX_TEST_ID	see list	REX test ID. The system automatically defines REX test identifiers when inventory tables are datafilled. Examples: MS_REX_TEST, CM_REX_TEST, SLM_REX_TEST, LGC_REX_TEXT, RCO2_REX_TEST, LCM_REX_TEST, and LCMCOV_REX_TEST.
ENABLE		N or Y	Enable. Enter either N or Y to disable or enable the REX test. The default value is Y.
PERIOD		1 through 7	Period. Enter a number between 1 and 7 to represent the minimum number of days between two consecutive REX tests. The REX tests are on the same object. Each test must be run once a week. The range is 1 to 7. The default value is 1.
PARALLEL		1 through 99	Parallel. Limits the number of REX tests that can occur in parallel for one group. The user can choose to limit the number of parallel REX tests within a group. The default value is set to the maximum number allowed. The maintenance software for each REX test defines the maximum number allowed. This value is determined by the resources required for each test. The range is 1 to 99.
Note: Application of this table is limited to REX test controllers for series 3 peripherals, applications and file processors. Only the REX tests available are entered. Where there are no REX tests available, the REXSCHED table is empty.			

—continued—

Datafilling table REXSCHED (continued)

Field	Subfield or refinement	Entry	Explanation and action
DAYSDSBL		character	DAYSDSBL. List the days when the REX test must not be invoked. The day refers to the start time of the REX test. An ALL entry means that the test is disabled every day. The range is the set of MON, TUES, WED, THU, FRI, SAT, SUN, ALL, NONE. The default is NONE (every day).
CONTMARK		+ or $	Continuation mark. Enter a plus sign (+) to indicate the line continues on the next record. Otherwise enter a dollar sign ($).
Note: Application of this table is limited to REX test controllers for series 3 peripherals, applications and file processors. Only the REX tests available are entered. Where there are no REX tests available, the REXSCHED table is empty.			
—end—			

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     DAYSDSBL

  MS_REX_TEST         Y       1         1         NONE
  CM_REX_TEST         Y       1         1         NONE
  PLGC_REX_TEST       Y       1         1         NONE
  RCO2_REX_TEST       Y       1         1         NONE
  LCM_REX_TEST        Y       1         4         NONE
  LCMCOV_REX_TEST     Y       1         1         NONE
```

Translation verification tools

Basic call processing does not use translation verification tools.

SERVORD

Note: Only LCMs can use NPGD. Ground start diagnostics does not apply to RCO2s with LCMEs.

Basic call processing (end)

Example of the addition of the NPGD option in the prompt mode

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

Example of the addition of the NPGD option in the no-prompt mode

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

ESA lines and trunks

Functional group

BAS00012

Feature package

NTX149AA ESA lines and trunks

Release applicability

XPM05 and later versions

Requirements

The ESA lines and trunks require the following feature packages to operate:

- NTX000AA Bilge
- NTX001AA Common Basic
- NTX145AA Remote Switching Center
- NTX270AA New Peripheral Maintenance Package
- NTX901AA Local Features I

Note: Feature packages NTX150AA and NTXP92AA are removed from this list as requirement packages for feature package NTX149AA.

Description

The emergency stand-alone (ESA) feature allows call processing to continue a Remote Switching Center-SONET (RSC-S) when a loss of communication with the host occurs.

During ESA, the RSC-S requires routing and translation data that the host normally stores to continue to process calls. The user or the system can update and download data to the RSC-S at less busy hours every day.

The ESA task software controls the translation facilities for the RSC-S ESA mode call operations. The ESA task software has the ESA central controller (CC). The CC is a software module. The ESA CC operates like the DMS CC while the RSC-S is in ESA.

When the host controls the RSC-S, the DMS CC performs translations. When the RSC-S is in ESA, the ESA CC uses a subset of translation data from the DMS CC to perform translations. This subset is a snapshot of DMS CC data required for ESA call processing.

During ESA, automatic number identification (ANI) can route over emergency service trunks from an RSC-S to an E911 tandem. While in

ESA lines and trunks (continued)

ESA, the RSC-S always routes the first party on a multiparty line. The hunts start with the first party. The system can encounter a corrupt emergency service trunk. When this condition occurs, hunts continue until the system exhausts the list or locates a good trunk. The E911 tandem can be a DMS, 1AESS, or 5ESS.

The RSC-S ESA lines feature package is available for RSC-S applications that support lines. To allow ESA for the RSC-S, the RCO2 must contain software that provides ESA. Tables required to implement the ESA lines feature package include tables RCCINV, ESAPXLA and CUSTHEAD. The ESA office parameters for lines control entry to and exit from ESA. The ESA office parameters for lines control downloads of ESA static data.

Table RCCINV

Table remote cluster controller inventory (RCCINV) contains inventory data, except RCO2 P-side link assignments. Table RCCINV requires the following datafill for ESA application.

- You must enter field TRMTYPE in table RCCINV with entry ESALINES.
- You must enter field EXEC in table RCCINV with entry ESAEX.
- Field ESA in table RCCINV is Boolean and must be set to Y when the RSC-S has the ESA option.

The ESA flag in field ESA allows operating company personnel to turn the ESA option ON or OFF. A change in the ESA flag appears at the DMS CC. The change indication transfers to the RCO2 during the next update of the static data. The RCO2 must be Busy (BSY) return the RC02 to service (RTS) after you change the status of the ESA flag.

When the flag changes, a warning appears at the MAP screen. This warning indicates the need for an update of the RCO2 static data or ESA static data. A change to the flag marks the RCO2 in-service trouble (ISTb) with STATIC DATA or ESA STATIC DATA as the reason.

To change the ESA flag, perform the following steps:

1 Change field ESA in table RCCINV to the required setting.

2 Manually busy and return the inactive RCO2 unit to service.

3 SWACT the RCO2.

Table ESAPXLA

Table emergency stand-alone prefix translation (ESAPXLA) contains special prefix translation data. Plain ordinary telephone service (POTS) and

Meridian Digital Centrex (MDC) customer groups use this data. This table is not in use during normal operation of the RCO2 , and translations occur in the central control (CC). When a loss of communication with the host occurs and the RCO2 enters ESA mode, use of this table occurs in the prefix translations.

Table CUSTHEAD

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

For MDC lines, you must link the information in the ESAPXLA prefix tables to a particular customer group. The ESAPXLA option specifies the prefix translator name for the customer group.

When the ESA feature package is present, enter data in fields OPTION and XLANAME of table CUSTHEAD. When the OPTION field does not have the ESAPXLA option set, a prefix translation for that customer group is not available.

Office parameters for ESA lines

The office parameters for ESA entry and exit include the following:

- RSC_ESA_NOTIFY_TONE
- RSC_XPMESAEXIT

The RSC-ESA lines feature package uses the office parameters that control ESA static data. The required office parameters that appear in a switching unit with the ESA software feature package follow:

- RSC_ESASDUPD_BOOL
- RSC_ESASDUPD_HOUR

Note: The *Office Parameters Reference Manual* contains descriptions of every office parameter.

RSC_ESA_NOTIFY_TONE

This parameter controls if the subscriber hears a distinctive dial-tone burst, which is 0.25 s on and 0.25 s off. This dial-tone burst alerts the end user that the RCO2 is in ESA. This parameter is in table OFCENG.

ESA lines and trunks (continued)

RSC_XPMESAEXIT

The timeout, RSC_XPMESAEXIT, in *Office Parameters Reference Manual*, is implemented in ESA-EXIT to protect against links that bounce. This parameter is the informal exit delay parameter. This parameter allows time for a bad link to gain stability after the link recovers.

During the RSC_XPMESAEXIT timeout period, the RCO2 continues to operate in ESA mode. The CC communicates with the ESA unit every 10 s to determine if the links to the RCO2 are operational. When communications fail again during the RSC_XPMESAEXIT timeout, CC does not proceed with ESA-EXIT. When the RSC_XPMESAEXIT parameter is set to zero, ESA-EXIT requires user action. Zero is the default value,

The RSC_XPMESAEXIT office parameter specifies the ESA-EXIT delay time. Operating company personnel must proceed with a manual exit when the RSC_XPMESAEXIT office parameter is set to zero. Operating company personnel must proceed when the RCO2 unit is in the ManB state. Descriptions and examples of the fields for office parameter RSC_XPMESAEXIT appear in the following section.

Fields for RSC-S_XPMESAEXIT

Field	Example
Name	RSC_XPMESAEXIT
Type	EXIT_DELAY_TYPE
SYSTEM_ESA_EXIT	{N,Y}
Default	60 (60 s)
Minimum value	0 (0 s)
Maximum value	100 (1000 s)

During the exit timeout period, the timeout status appears at the MAP screen with the timeout count down. For example, when 10 s remain in the timeout period, the following message appears: `ESA T.O. 10.` The timeout status updates every 10 s.

During the ESA-EXIT process, a message appears at the MAP display to indicate the RCO2 exits ESA.

RSC_ESASDUPD_BOOL

The RSC_ESASDUPD_BOOL office parameter, in *Office Parameters Reference Manual*, specifies when static data updates must occur every night. The value can be at the default value of Y. When this condition occurs, the system downloads the static data during the updates that occur every night. Descriptions and examples of the fields for office parameter RSC_ESASDUPD_BOOL appear in the following section.

Fields for RSC_ESASDUPD_BOOL

Field	Example
Name	RSC_ESASDUPD_BOOL
Type	BOOLEAN
Default	YES
Range	YES or NO

RSC_ESASDUPD_HOUR

The RSC_ESASDUPD_HOUR parameter, in *Office Parameters Reference Manual*, specifies the start time for the update of static data that occurs every night. Descriptions and examples of the fields for office parameter RSC_ESASDUPD_HOUR appear in the following section.

Fields for RSC_ESASDUPD_HOUR

Field	Example
Name	RSC_ESASDUPD_HOUR
Type	ESASDUPD_TYPE
Default	2 (02:00 HR), with a 24 h clock
Range	0 (00:00 HR) to 23 (23:00 HR)

Note that an update of static data can take between 3 min and 5 min. Set this parameter so the data transfer:

- occurs during a low-traffic period
- does not occur when an office image is taken
- does not occur while system software performs automatic routine exercise (REx) tests

ESA lines and trunks (continued)

To determine when the REx occurs, view parameters CC-REX_SCHEDULED_HR and CMC_REX_SCHEDULED_HR in table OFCENG. The CC tests take approximately 12 min to complete and start 15 min after the time set in the parameter. The central message controller (CMC) tests take approximately 15 min to complete and start 5 min after the time set in the parameter.

Modifying ESA parameters

Use the table editor to modify the following parameters:

- RSC_XPMESAEXIT
- RSC_ESAUPD_HOUR
- RSC_ESAUPD_BOOL

Using the table editor to modify parameters

Use the following procedure to change an office parameter with the table editor. The example procedure changes the ESA exit parameter, RSC_XPMESAEXIT, in table OFCENG.

1 To access table OFCENG and position on the parameter, type:

>TABLE OFCENG;POS RSC_XPMESAEXIT

2 To request a change of the parameter to the desired value, type:

>CHA

3 To enter the new value, type:

>n

where

n is the new exit delay in 10 s increments

4 To confirm the change, type:

>Y

5 To quit the table editor, type:

>QUIT

Note: After changes to ESA office parameters occur, you must load the ESA static data again. Propagate the RSC_XPMESAEXIT parameter change to the RCO2. To propagate this parameter change, enter the following command to reload ESA static data again:

>LOADPM unit_no CC ESADATA

ESA lines and trunks (continued)

Operation

Download data to the RCO2 before the RCO2 enters ESA. The ESA static data is a subset of translation data from the DMS CC. The system generates ESA logs when the downloaded data exceeds the RSC-S ESA maximum. The RSCO2 cannot enter RSC-S ESA mode until the ESA task software contains the ESA static data.

When a change occurs in one of the following tables, the change can require a download of the ESA static data. The download occurs from the DMS CC to the ESA task software.

- translation data tables
- table ESAPXLA
- table CUSTHEAD

The ESA CC tables appear in the following section.

ESA CC data tables

Table	Type	Maximum	Download warning
Terminal data	One for each terminal	5760	
Automatic line	One for each AUL line	256	ESA101
Customer group	One for each group	288	ESA102
Prefix header	One for each customer group	288	
Prefix table	One for each ESA prefix translator POTS customer group	16 8	ESA103
Extension header	One for each customer group	288	ESA103
EFG		2304	
ABCD	One for each directory number (DN)	5760	ESA105
Hunt header	One huntgroup	2000	ESA106
Hunt member	One huntgroup	5000	ESA107

ESA lines and trunks (continued)

Translations table flow

The ESA lines and trunks translation process appears in the following flowchart.

Table flow for ESA lines and trunks

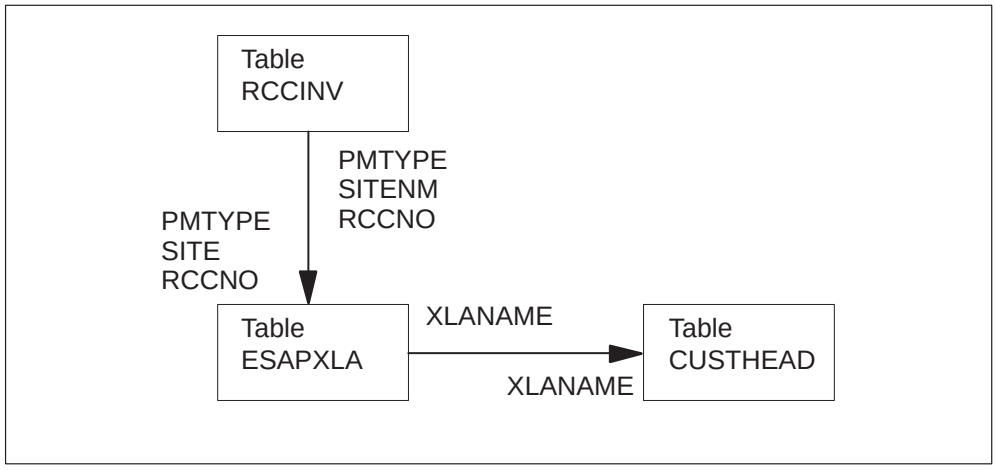


Table CUSTHEAD links a customer group to the prefix translation table name that table ESAPXLA identifies. Field XLANAME table CUSTHEAD corresponds to the prefix translator name assigned in field XLANAME from table ESAPXLA. The field name corresponds to the translator name to access prefix translation data.

Table ESAPXLA supports line-to-trunk, trunk-to-trunk and trunk-to-line call processing in the RSC-S during ESA. Table ESAPXLA contains special prefix translation data used for POTS and MDC customers. Fields PMTYPE, SITE, and RCCNO in table ESAPXLA correspond to fields PMTYPE, SITENM and RCCNO from table RCCINV. The data corresponds to provide access to inventory data for the identified RCO2. The corresponding data does not provide to P-side link assignments.

Table RCCINV maintains a list of RCO2s entered in the DMS system and contains inventory data. Table RCCINV does not contain RCO2 P-side link assignments. The table identifies the location of the RCO2, the required load and exec lineups and the network link connections. Enter the C-side PCM-30 assignments for the RCO2 in table RCCINV. Enter intraswitching in table RCCINV.

Enter load information for this table 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 the original site information entered in the field NAME from table SITE, the PM type and the PM number.

Limits

The following limits apply to ESA lines and trunks:

- When you enter data in table ESAPXLA for POTS, each RSC-S can have a maximum of 16 entries.
- You can enter data in table ESAPXLA for MDC customer groups. When this event occurs, each prefix translator name for each RSC-S can have a maximum of eight entries.
- The system does not support ESA warm exit on plain ordinary telephone service (POTS) lines on a DMS-100G switch.

Interactions

The ESA lines and trunks do not have functionality interactions.

Activation/deactivation by the end user

The ESA lines and trunks do not require activation or deactivation by the end user.

Billing

The ESA lines and trunks do not affect billing.

Station Message Detailed Recording (SMDR)

The ESA lines and trunks feature package does not affect SMDR.

Datafilling office parameters

The office parameters that ESA lines and trunks use appear in the following table. For additional information about office parameters, refer to *Office Parameters Reference Manual*.

Office parameters that ESA lines and trunks use

Table name	Parameter name	Description
OFCENG	RSC_ESA_NOTIFY_TONE	Defines when the subscriber hears a tone burst when the RCO2 enters ESA. Default: N
	RSC_XPMESAEXIT	Delays ESA exit to make sure links do not bounce. Default: 6

ESA lines and trunks (continued)

Office parameters that ESA lines and trunks use

Table name	Parameter name	Description
OFCENG (continued)	RSC_ESASDUPD_BOOL	Specifies when updates of static data must occur every night. Default: YES
	RSC_ESASDUPD_HOUR	Specifies start time for update of ESA static data that occurs every night. Default: 2
—end—		

Datafill sequence

The tables that require datafill to implement ESA lines and trunks appear in the following table. The tables appear in the order in which the user enters data.

Datafill tables required for ESA lines and trunks

Table	Purpose of table
RCCINV	Remote cluster controller inventory. Contains inventory data, except P-side link assignments, for the RCO2.
ESAPXLA	Emergency stand-alone. Support line-to-trunk, trunk-to-trunk, and trunk-to-line call processing in the RSC-S during ESA. Table ESAPXLA contains special prefix translation data for POTS and MDC customers.
CUSTHEAD	Customer head group. Links a customer group to the prefix translation table name as table ESAPXLA identifies.
Note: MDC lines require table CUSTHEAD. The MDC lines must link to a particular customer group in table ESAPXLA.	

Datafilling table RCCINV

The remote cluster controller inventory (RCCINV) table contains the inventory data, except P-side link assignments, for the RCO2.

The datafill for ESA lines and trunks for table RCCINV appears in the following table. Fields that apply directly to ESA lines and trunks appear. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table RCCINV

Field	Subfield or refinement	Entry	Description
EXECTAB		refer to subfields	Executive table. This field contains subfields TRMTYPE, EXEC, and CONTMARK. Note that use of more than one combination (8 maximum) can occur for a specified PM. A maximum of 8 combinations can be used. ***Note:*** Changes to fields with multiple entries must occur in the PROMPT mode.
	TRMTYPE	ESALINES	Terminal type. Enter the type of PM terminals used. Entry values include POTS for regular lines, KEYSET for MDC or data lines, RMM_TERM for remote maintenance module (RMM) terminals, ABTRK for regular trunks and ESALINES for ESA lines.
Note: 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 two or more links, use the number of links on the interface cards to separate the message links. This process applies to every interface link type. The types are DS-1, DS30, DS30A, or PCM-30. Table control issues a warning when an attempt to assign message links on the same interface card occurs. Assignment of message links to the same interface card can cause an E1 outage when the card fails. An E1 outage is a failure of all message links.			

—continued—

ESA lines and trunks (continued)

Datafilling table RCCINV (continued)

Field	Subfield or refinement	Entry	Description
	EXEC	ESAEX	Executive programs. Enter the set of executive programs required for the PM specified in the TRMTYPE entry. Entry values include the following: • POTSEX when TRMTYPE is POTS • KSETEX when TRMTYPE is KEYSET • RSMEX when TRMTYPE is RMM_TERM • DTCEX or FXODCM (depending on the type of trunking) when TRMTYPE is ABTRK • ESAEX when TRMTYPE is ESALINES ***Note:*** Make changes to fields with multiple entries in the PROMPT mode.
ESA		Y or N	Emergency stand-alone. Entry values are Y and N. A Y value indicates that the RSC-S has the ESA option. An N value indicates that the RSC-S does not have the ESA option.
Note: 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 two or more links, use the number of links on the interface cards to separate the message links. This process applies to every interface link type. The types are DS-1, DS30, DS30A, or PCM-30. Table control issues a warning when an attempt to assign message links on the same interface card occurs. Assignment of message links to the same interface card can cause an E1 outage when the card fails. An E1 outage is a failure of all message links.			
—end—			

Datafill example for table RCCINV

Sample datafill for table RCCINV for two types of RCO2s appears in the following example. The first RC02 is provisioned with the NTMX77AA UP. The second RCO2 is provisioned with the optional NTAX74AA CAP.

ESA lines and trunks (continued)

MAP display example for table RCCINV entered for NTMX77AA CAP

```
Table: RCCINV

RCCNAME        FRTYPE FRNO SHPOS FLOOR ROW FRPOS   EQPEC   LOAD
-------------------------------------------------------------------------
MELB RCO2 0     CRSC    0   18    0     C   0      MX85AA  KRI07xx

EXECTAB                                                          CONTMARK
-------------------------------------------------------------------------
(POTS POTSEX)(KEYSET KSETEX)(ABTRK DTCEX)                        +
(RMM_TERM RSMEX)(ESALINES ESAEX)                                 $

CSPM          CSLNKTAB                                            CONTMARK
-------------------------------------------------------------------------
PLGC 1        (0) (1) (2) (3) (4) (5) (6) (7)                     $

ESA  INTRASW   OPTCARD                          CMRLOAD          CONTMARK
-------------------------------------------------------------------------
Y    Y        (UTR6)(MSGMX76 REM HDLC) (7X05)  (CMR18 CMRAG03)   $

TONESET  PROCPEC         E2LOAD
--------------------------------------------------------------------------
AUS100   MX77AA  MX77AA  MX77xxxx
```

Note 1: The xx in field LOAD and xxxx in field E2LOAD represent alphanumeric entries. The entries are B1 and XE01, in that order.

Note 2: When the shelf has a processor other than NTMX77 or the optional NTAX74, the system enters value NILLOAD in field E2LOAD.

Note 3: You can enter field PROCPEC with AX74AA AX74AA instead of MX77AA MX77AA. When this event occurs, the load name prefix in field LOAD changes from KRI to WRI. For example, KRI07xx (for MX77) changes to WRI07XX (for AX74AA). Sample datafill for table RCCINV when data entry occurs in the RCO2 for the NTAX74AA CAP appears in the following example.

ESA lines and trunks (continued)

MAP display example for data entered in table RCCINV for NTAX74AA CAP

```
Table: RCCINV

RCCNAME          FRTYPE FRNO SHPOS FLOOR ROW FRPOS   EQPEC   LOAD
----------------------------------------------------------------------
MELB RCO2 0       CRSC    0   18    0     C   0      MX85AA  WRI07xx

EXECTAB                                                        CONTMARK
-----------------------------------------------------------------------
(POTS POTSEX)(KEYSET KSETEX)(ABTRK DTCEX)                      +
(RMM_TERM RSMEX)(ESALINES ESAEX)                               $

CSPM          CSLNKTAB                                          CONTMARK
-----------------------------------------------------------------------
PLGC 1        (0) (1) (2) (3) (4) (5) (6) (7)                   $

ESA  INTRASW   OPTCARD                          CMRLOAD         CONTMARK
-----------------------------------------------------------------------
Y    Y        (UTR6)(MSGMX76 REM HDLC)        (CMR18 CMRAG03)  $

TONESET  PROCPEC          E2LOAD
-----------------------------------------------------------------------
AUS100   AX74AA  AX74AA    AX74xxxx
```

Datafilling table ESAPXLA

The ESA trunk translations tables support line-to-trunk, trunk-to-trunk and trunk-to-line call processing in the RSC-S during ESA. Table ESAPXLA contains special prefix translation data for POTS and MDC customers.

During normal RCO2 operation, this table is not in use and translations occur normally. When a loss of communication with the host occurs and the RCO2 enters ESA, use of this table occurs in the prefix translations.

The datafill for the ESAPLXA table appears in the following table. Fields that apply directly to RSC-ESA lines appear. Refer to the data schema section of the *Translations Guide* for a description of the other fields. Note that you must enter data in table ESAPXLA must be before data entry occurs in table CUSTHEAD.

ESA lines and trunks (continued)

Datafilling table ESAPXLA

Field	Subfield or refinement	Entry	Description
PXLAKEY		refer to subfields	Prefix translator key. This key identifies a set of prefix digits on a certain site for a particular set of customers. Subfields are XLANAME, NODE and PREFIX.
	XLANAME	alphanumeric	Prefix translator name. When this translation is performed for a POTS line on the remote, enter ESAPOTS. When the translation is performed for a particular MDC customer group, enter a name to a maximum of eight characters. Relate this name to a customer group in table CUSTHEAD.
	NODE	refer to subfields	Node. The RLCM, RCC, RCO2, or remote digital line module (RDLM) that associates with the translator that XLANAME identifies. Subfields are PMTYPE, LCMNO, SITE and RCCNO.
	PMTYPE	RCO2	Peripheral module type. This field identifies the peripheral node as an RLCM, an RCC, an RCO2, or an RDLM.
	SITE	alphanumeric	Site. Enter the name assigned to the location of the RCO2.
	RCCNO	0 to 127	RCC number. For this field, enter the RCO2 PM number.
	PREFIX	0 to 63	Prefix digits. Enter the 1 to 15-digit prefix with which the translation must associate.
Note: Routes for the R and D selectors must be in table ESARTE before use of the selectors can occur.			

—continued—

ESA lines and trunks (continued)

Datafilling table ESAPXLA (continued)

Field	Subfield or refinement	Entry	Description
RESULT		refer to subfield	Translation result. This field defines the action to take when the subscriber dials previously defined prefix digits on the remote. This entry is alphanumeric. Subfields: SEL and other entries contingent on the value entered for SEL.
	SEL	L, H, A, R, D, or T	Selector. Enter the selector multiple with the subfields: L for line equipment number (LEN), H for hunt group (HTGRP), A for alternate translator (XLANAME), R for route (RR) with standard translations, D for routing with direct translations, T for treatment (TRMT) and enter the subfields.
	L	refer to subfields	If selector is L , enter subfields. Terminate LEN, ambiguous code (AMBIG) (Y or N), and the ring code (RNCD) (0 to 7).
	H	refer to subfields	The selector H can enter subfields. If this action occurs, hunt group (HTGRP) number from table HUNTGRP, and sequence number (SEQNO) from table HUNTMEM. The HTGRP can also specify if the prefix digit is ambiguous (AMBIG) code (Y or N).
	A	refer to subfields	If selector is A then enter subfields: multiple with an alternate translator name. Specify if a second dial tone (Y or N) is desired. Default alternate translators are: • NPXLA—no prefix translations • ESAPOTS—standard translations • ESATRMT—retranslate
Note: Routes for the R and D selectors must be in table ESARTE before use of the selectors can occur.			

—continued—

Datafilling table ESAPXLA (continued)

Field	Subfield or refinement	Entry	Description
	R	refer to subfields	If selector is R , enter subfields: multiple with the route number (RR) from table ESARTE, for standard trunking translations, number of digits (NUMDIG) to outpulse to outpulse. Specify if prefix is AMBIG (Y or N).
	D	refer to subfields	If selector is D, enter subfields: multiple with the route number (RR) from table ESARTE, for direct trunking translations, number of digits (NUMDIG) to outpulse. Specify when a second dial tone (Y or N) is desired.
	T	refer to subfields	If selector is T enter special treatments to be applied to the call. Treatments are: • REORDER—a fast busy tone • SRPXLA—strip the prefix digit and translate dialed digits • SRPDXLA—strip the prefix digit, provide a second dial tone and translate dialed digits
Note: Routes for the R and D selectors must be in table ESARTE before use of the selectors can occur.			
—end—			

Datafill example for table ESAPXLA

Sample datafill for table ESAPXLA appears in the following example.

ESA lines and trunks (continued)

MAP display example for table ESAPXLA

```
Table: ESAPXLA
                      PXLAKEY                      RESULT
-------------------------------------------------------
ESAPOTS RC02 MELB   0   411 L   MELB00 0 00 02  Y   1
  IBN1 RCO2 MELB    0   4           T       REORDER
  IBN1 RCO2 MELB    0   6           T       SRPXLA
  IBN1 RCO2 MELB    0   9           T       SRPDXLA
  IBN1 RCO2 MELB    0   7   H               5   7   Y
  IBN2 RCO2 MELB    0   0   A               ESATRMT Y
ESAPOTS RCO2 MELB   0   5   R               21  7   Y
ESAPOTS RCO2 MELB   0   8   D               10  4   N
```

Datafilling table CUSTHEAD

To implement ESA lines, the operating company uses table CUSTHEAD. The operating company uses this table to specify the prefix translator name entered in table ESAXPLA for field XLANAME. An ESA prefix translator defines prefix translation data for an RCO2 that operates in ESA.

> ***Note:*** The operating company can specify prefix translator names, except POTS. The POTS prefix translator name is hard-coded as ESAPOTS. Each node that requires prefix translation for POTS uses this prefix name and specifies the node.

Datafill specific to table CUSTHEAD appears in this example. Fields that apply directly to RSC-ESA lines appear. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafillling table CUSTHEAD

Field	Subfield or refinement	Entry	Description
OPTIONS		ESAPXLA	Option. This field lists options and associated subfields selectively assigned to the customer group. Enter the option.
XLANAME		alphanumeric	Prefix translator name. Enter the one to eight characters assigned to the prefix translator table in field XLANAME of table ESAPXLA.

Datafill example for table CUSTHEAD

Sample datafill for table CUSTHEAD appears in the following example.

MAP display example for table CUSTHEAD

```
Table: CUSTHEAD

CUSTNAME CUSTXLA DGCOLNM OPTIONS
-------------------------------------------------
POTSDATA POTSXLA POTS  (VACTRMT 0)(EXTNCOS 0)
COMIBN2  CXN2   IBN2   (VACTRMT 0)(EXTNCOS 0)

     OPTIONS
-------------------------------------------------
(SUPERCNF)(MHOLD 10 AUDIO)(CPR Y AUDIO1 3 )
(ESAPXLA IBN1)
```

Tools for verifying translations

The operating company can verify the translations that occur during ESA. The tool ESATRAVER allows operating company personnel to perform a translation verification (TRAVER) on RSC-ESA lines.

SERVORD

The ESA lines and trunks do not use SERVORD.

PCM-30 R1 Trunking

Functional group

BAS00012

Feature package

NTXT00AA PCM-30 RSC-S R1 Trunking

Release applicability

XPM05 and later versions

Requirements

The PCM-30 R1 Trunking requires the following feature packages:

- NTXH52AA PCM-30 RSCO Support
- NTXK77AA PCM-30 RSCO-S Support
- NTXP92AA RSC-S Basic

Description

The PCM-30 RSC-S R1 Trunking software package provides P-side trunking off the RSC-S. This package uses the P-side of the RCO2 to terminate trunks from community dial offices (CDO) and private branch exchanges (PBX). This package supports line-to-trunk, trunk-to-line, and trunk-to-trunk calls.

Operation

Does not apply

Translations table flow

The PCM-30 R1 Trunking translations tables appear in the following list:

- Table common language location identifier (CLLI) identifies the far end of the trunk group. The CLLI identifies the far end of the trunk group by the following:
  - — name of city or town
  - — state or province
  - — building group
  - — destination of the traffic unit
  - — code that identifies groups that terminate at the same CLLI location

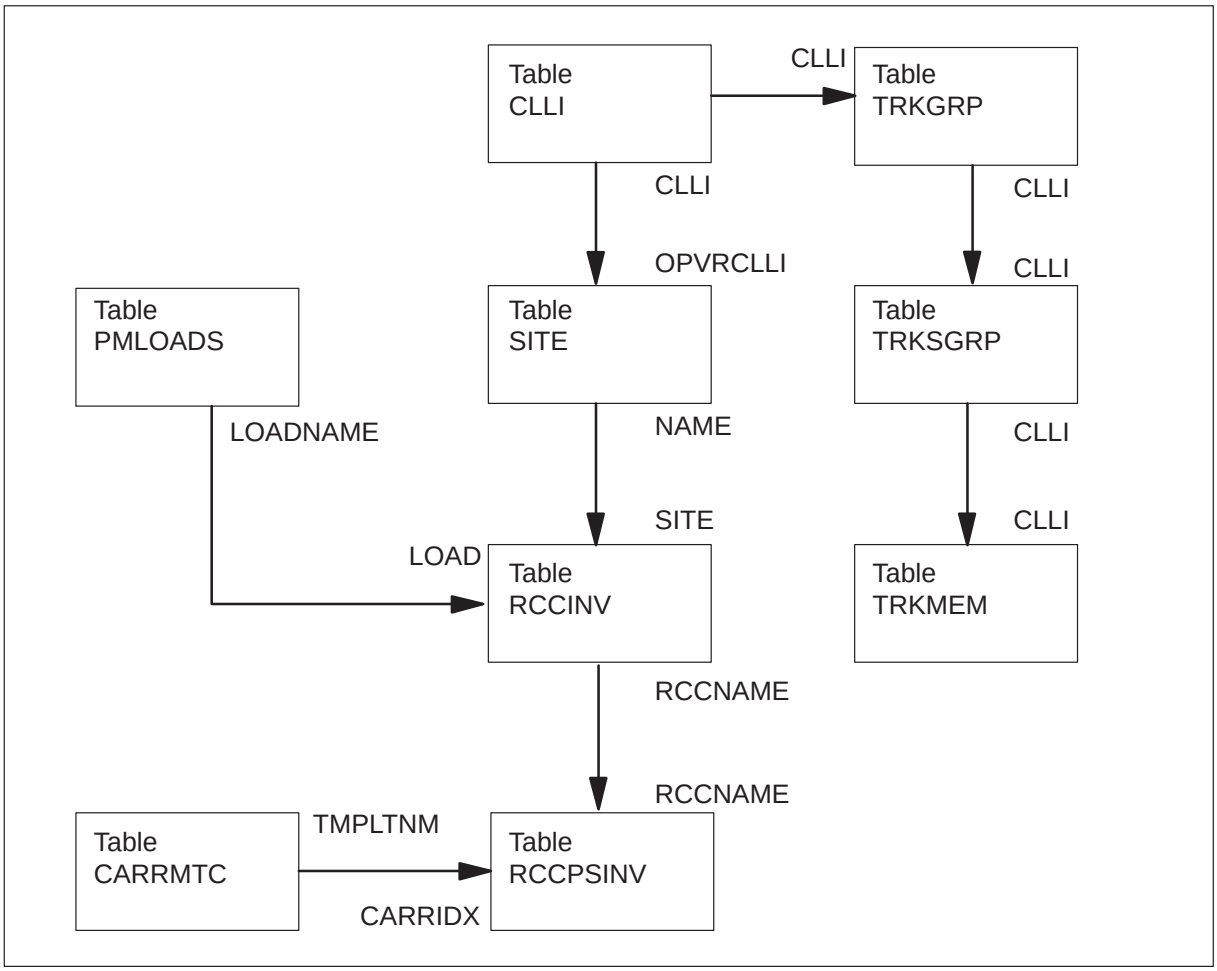
- Table SITE identifies equipment for the switching unit and remote locations that connect to the unit. You must enter data in this table before you assign LEN or enter data for a PM. The host switching unit is the first entry in field NAME. Field LTDSN associates with the number required to dial the site and alarm data for remote sites.
- Table PMLOADS stores the device location of every peripheral module (PM) loadfile. This information allows mapping between the load names and devices that contain the loads. The PM loadfiles must be present in table PMLOADS before the inventory tables can use the loadfiles.
- Table CARRMTC allows the DMS switch administration to enter maintenance control information in peripherals. Table CARRMTC allows the DMS switch administration to enter 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 RCCINV has a list of RCO2s entered in the DMS switch. Table RCCINV contains inventory data (except P-side link assignments) for the RCO2s. The table information identifies the location of the RCO2, the required load and exec the lineups, and the network link connections. Table RCCINV receives the C-side DS-1 assignments for the RCO2. Table RCCINV receives intraswitching datafill.
- Table RCCPSINV contains the P-side link assignments for the RCO2. When table RCCINV receives a tuple the system adds a corresponding tuple in table RCCPSINV. This table uses field LOAD to identify load information. The LOAD corresponds to the LOADNAME tuple from table PMLOADS. Field CARRIDX indexes to table CARRMTC for maintenance control information about the peripheral. The RCCNAME tuple in table RCCPSINV corresponds to the RCCNAME tuple from table RCCINV and stores site information. The RCCNAME tuple stores site information the PM type and PM number.
- 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 has additional information for each subgroup assigned to a trunk group in table TRKGRP. Field CLLI in table TRKSGRP corresponds to the CLLI code for the trunk group.

PCM-30 R1 Trunking (continued)

- Table TRKMEM lists the data associated with each trunk assigned to a trunk group and subgroup in tables TRKGRP and TRKSGRP. Table TRKSGRP identifies the circuits associated with static trunks, dynamic trunks, and equipment to test lines and trunks. Field CLLI in table TRKMEM corresponds to the CLLI code for the trunk group.

The PCM-30 R1 Trunking translation process appears in the following flowchart.

Table flow for PCM-30 R1 Trunking



PCM-30 R1 Trunking (continued)

Limits

The following limits apply to PCM-30 RSC-S R1 Trunking:

- The P-side of the RCO2 supports a maximum of 46 PCM-30 links. The main shelf has 22 PCM-30 links, and the extension shelf has 24 PCM-30 links.
- Ports 22 and 23 on the P-side of the RCO2 are reserved for the remote maintenance module (RMM).
- The RCO2 supports a maximum of 16 PCM-30 links on C-side.
- The first 16 PCM-30 links on the P-side of the RCO2 support CDOs and PBXs.
- The RCO2 does not support emergency stand-alone (ESA) trunking.

Interactions

The PCM-30 R1 Trunking does not have functionality interactions.

Activation/deactivation by the end user

The end user does not have to activate or deactivate PCM-30 R1 Trunking.

Billing

The PCM-30 R1 Trunking does not affect billing.

Station Message Detail Recording

The PCM-30 R1 Trunking does not affect Station Message Detail Recording.

Datafilling office parameters

The PCM-30 R1 Trunking does not affect office parameters.

Datafill sequence

Tables that require data entry to start PCM-30 R1 Trunking appear in the following table. The tables appear in the order of data entry.

PCM-30 R1 Trunking (continued)

Datafill tables required for PCM-30 R1 Trunking

Table	Purpose of table
CLLI	Common language location identifier. Contains codes that identify the far end of announcements, tones, trunk groups, test trunks, national milliwatt test lines, and service circuits.
SITE	Site. Contains data that allows the DMS system to recognize equipment for the switching unit. Contains data that allows the DMS system to recognize equipment for all remote locations that connect to the switching unit.
PMLOADS	Peripheral module loads. Stores the device location of every peripheral module (PM) load file. Stores the device location of every PM load file to map between the load names and devices where the loads reside. The system enters data in first loads.
CARRMTC	Carrier maintenance. Allows the DMS switch administration to enter maintenance control information in peripherals, OOS limits for alarms, and system return-to-service (RTS) occurrences.
RCCINV	Remote cluster controller inventory. Contains inventory data for the RCO2. The RCCINV does not contain P-side link assignments. Enter RCO2 C-side DS-1 assignments in table RCCINV.
RCCPSINV	Remote cluster controller P-side link inventory (RCCPSINV). Contains the RCO2 P-side link assignments.
TRKGRP	Trunk group. Defines data for each trunk group associated with the switching unit.
TRKSGRP	Trunk subgroup. Lists additional information for each subgroup assigned to a trunk group in table TRKGRP.
TRKMEM	Trunk member. Lists data associated with each trunk assigned to a trunk group and subgroup specified in tables TRKGRP and TRKSGRP. Table TRKSGRP identifies circuits associated with static trunks, dynamic trunks, and equipment to test lines and trunks.

Datafilling table CLLI

The following table shows the data entry for PCM-30 R1 Trunking for table CLLI. The fields that appear apply to PCM-30 R1 Trunking. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table CLLI

Field	Subfield or refinement	Entry	Explanation and action
CLLI		see subfields	Common language location identifier. This 16-character field identifies the far end of each announcement, tone, trunk group, test trunk, national milliwatt test lines, and service circuit. Recommended subfields: PLACE, PROV, BLDG, TRAFUNIT, and SUFX.

Datafill example for table CLLI

The following is an example of datafill for table CLLI.

MAP example for table CLLI

```
Table: CLLI

CLLI       ADNUM       TRKGRPSIZ      ADMININF
_____________________________________________________
MELB        12          20             MELBNT
QUEENSLAND  14          20             QTVER90
```

Datafilling table SITE

The data entry for PCM-30 R1 Trunking for table SITE appears in the following table. The fields that appear apply to PCM-30 R1 Trunking. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

PCM-30 R1 Trunking (continued)

Datafilling table SITE

Field	Subfield or refinement	Entry	Explanation and action
SITE		alphanumeric	Site name. Enter the remote switching unit site name. The first character must be alphabetical. Site names can have a maximum of four characters. Do not use PM names for site names. The first entry in this field is for the host switching unit.
LTDSN		00 to 99	Line equipment number test desk site number. Enter a 2-digit number to dial the site that appears under field NAME.
MODCOUNT		0	Module count.
OPVRCLLI		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. Subfields: TYPE, TYPENO, CKTNO and POINT.

Note 1: Make changes to fields with multiple entries in the PROMPT mode. In nonprompt mode you can miss current entries.
Note 2: Enter the continuation mark (+) in fields with multiple possible entries. Enter the continuation mark when the next line specifies more data or there are more records to enter. Enter the end mark ($) in fields with multiple possible entries after the last entry.

Datafill example for table SITE

The following is an example of data for table SITE entry.

MAP example for table SITE

```
Table: SITE

NAME LTDSN MODCOUNT OPVRCLLI ALM  TM  TM TM  POINT CONTMARK
-------------------------------------------------------------
HOST 00    0        VER90                              $
MELB 02    2        MELB     CR   RSM  0  6   0
                             MJ   RSM  0  6   1
                             MN   RSM  0  6   2       $
```

Datafilling table PMLOADS

Table PMLOADS stores the device location of every PM loadfile to map between load names and devices that contain the loads. The system automatically reloads the PMs that can have a damaged load are automatically reloaded. Autoload can locate load files without personnel to reduce recovery time.

Table PMLOAD must contain PM loadfiles before use of PM loadfiles in inventory tables can occur. In the first data entry and dump and restore processes, the system automatically adds tuples in PMLOADS. The system adds tuples in PMLOADS when addition of tuples for LTCINV and RCCINV occurs. The system enters a dummy entry if the loadname is not in the table. For switch operation, this dummy data must change to include the correct storage device for the PM load file.

Datafilling table PMLOADS

Field	Subfield or refinement	Entry	Explanation and action
LOADNAME		alphanumeric	Peripheral module load name. Enter the XPM load name. The range is a maximum of 32 characters. This loadname must be the same as the load name in tables LTCINV and RCCINV.

Datafill example for table PMLOADS

The following is an example of data entry for table PMLOADS.

MAP example for table PMLOADS

```
LOADNAME
 ACTFILE        ACTVOL
 BKPFILE        BKPVOL   UPDACT
_____________________________________________________________________
ESA02CM
 ESA02CM        S00DXPM
 ESA02CM        S00DXPM      Y
```

PCM-30 R1 Trunking (continued)

Datafilling table CARRMTC

The data entry for PCM-30 R1 Trunking for table CARRMTC appears in the following table. The fields that appear apply to PCM-30 R1 Trunking. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table CARRMTC

Field	Subfield or refinement	Entry	Explanation and action
CSPMTYPE		RCO2	C-side node PM type. Enter the PM type of the node on the C-side of the carrier link.
TMPLTNM		DEFAULT	Template name. Enter the template name for the PM. The template name is a maximum of 16 characters. This entry appears in field CARRIDX in table LTCPSINV.

Datafill example for table CARRMTC

The following is an example of data entry for PCM-30 RC-S R1 trunking in table CARRMTC.

MAP example for table CARRMTC

```
Table: CARRMTC

CSPMTYPE TMPLTNM RTSML RTSOL                                    ATTR

-----------------------------------------------------------------------
RCO2 DEFAULT 255 255 D30 NTMX82AA A_LAW INTERNATL 100 100 150 150 200
200 220 220 50 50 50 50 100 100 100 120 120 130 130 140 140 100 200 200
Y 4 4 17 255 Y Y 5 5 205 914 G714 D30RCC
```

Datafilling table RCCINV

Table remote cluster controller inventory (RCCINV) contains inventory data, except P-side link assignments, for the RCO2. The following procedure describes data entry for table RCCINV. The fields that appear apply to PCM-30 R1 Trunking. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table RCCINV

Field	Subfield or refinement	Entry	Explanation and action
RCCNAME		see subfields	RCO2 name. The field RCCNAME contains subfields SITE, PMTYPE, and RCCNO.
	SITE	alphanumeric	Site. Enter the remote location site name. This entry must appear in table SITE.
	PMTYPE	RCO2	Peripheral module type.
	RCCNO	0 to 127	RCO2 number. The office defines this number. The site does not define this number.
LOAD		alphanumeric	Load. Enter the load for the RCO2. Make sure table PMLOADS contains this data entry.

Note: When you enter data in field C-side link table (CSLNKTAB), 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 operation 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. The assignment of message links to the same interface card can cause an E1 outage if the card fails. An E1 outage occurs when all message links fail.

Datafill example for table RCCINV

The following are examples of datafill for the PCM-30 R1 Trunking in table RCCINV. Examples of an RC02 with the NTMX77AA UP and an RC02 with the NTAX74AA CAP appear in these examples.

PCM-30 R1 Trunking (continued)

MAP example for table RCCINV datafilled for NTMX77AA UP

```
Table: RCCINV

RCCNAME      FRTYPE FRNO SHPOS FLOOR ROW FRPOS   EQPEC    LOAD
-------------------------------------------------------------------
MELB RCO2 0  CRSC   0   18    0     C   0        MX85AA   KRI07xx

EXECTAB
(POTS POTSEX)(KEYSET KSETEX)(ABTRK DTCEX)
(RMM_TERM RSMEX) (ESALINES ESAEX)                              $

CSPM        CSLNKTAB
-------------------------------------------------------------------
PLGC 1     (0) (1) (2) (3) (4) (5) (6) (7)                     $


ESA  INTRASW    OPTCARD                 CMRLOAD
-------------------------------------------------------------------
N    Y         (UTR6)(MSG6X69)(7X05)    (CMR18 CMRAG03)      $

TONESET   PROCPEC          E2LOAD     EXTINFO
-------------------------------------------------------------------
AUS100    MX77AA  MX77AA   MX77xxxx   CEXT 0 4 0 E 15 MX86AA L
```

Note 1: xx in field LOAD and xxxx in field E2LOAD represent alphanumeric entries, for example B1 and XE01.

Note 2: If the shelf has a processor other than NTMX77, the system enters field E2LOAD with value NILLOAD. If the shelf has a processor other than the optional NTAX74, the system enters field E2LOAD with value NILLOAD.

Note 3: Field PROCPEC can have data entries AX74AA AX74AA instead of MX77AA MX77AA. In this event, the load name prefix in field LOAD changes from KRI to WRI. For example, KRI07xx, for MX77, changes to WRI07XX, for AX74AA. Sample data entry for table RCCINV when the RCO2 has data entered for the NTAX74AA CAP appears in the following example.

MAP example for table RCCINV datafilled for NTAX74AA CAP

```
Table: RCCINV

RCCNAME      FRTYPE FRNO SHPOS FLOOR ROW FRPOS   EQPEC    LOAD
-------------------------------------------------------------------------
MELB RCO2 0  CRSC   0   18    0     C   0        MX85AA   WRI07xx

EXECTAB
(POTS POTSEX)(KEYSET KSETEX)(ABTRK DTCEX)
(RMM_TERM RSMEX) (ESALINES ESAEX)                              $

CSPM        CSLNKTAB
-------------------------------------------------------------------------
PLGC 1     (0) (1) (2) (3) (4) (5) (6) (7)                     $


ESA  INTRASW    OPTCARD                  CMRLOAD
-------------------------------------------------------------------------
N    Y         (UTR6)(MSG6X69)          (CMR18 CMRAG03)      $

TONESET  PROCPEC          E2LOAD     EXTINFO
---------------------------------------------------------------------
AUS100   AX74AA  AX74AA   AX74xxxx   CEXT 0 4 0 E 15 MX86AA L
```

Datafilling table RCCPSINV

Table remote cluster controller P-side link inventory (RCCPSINV) contains RCO2 P-side link assignments. Table RCCPSINV can contain a maximum of 54 multiples of P-side link information for the RCO2.

> ***Note:*** 2 PCM-30 C-side links (1 and 2) are required. The data control table for P-side links is table RCCPSINV. Table RCCPSINV requires data in link 1 to be datafilled before link 2. If only two links are required, link 1 is ManB. Enter data for three links in this table.

For an extension shelf, data entry limits apply for RCO2 P-side links. The data entry limits apply to P-side links connected to the extension shelf. The PCM-30 and D-channel handler (DCH) links that connect to the extension shelf can contain data. These links can contain data if an extension shelf has data entered in RCCINV. All links that connect to the extension shelf must change from D30/DCH to NILTYPE or DS30A in RCCPSINV. All links must change before the deletion of the extension shelf from table RCCINV. Table RCCPSINV can contain a maximum of ten DCH cards.

The data entry for table RCCPSINV appears in the following procedure. This procedure contains fields that apply to PCM-30 R1 Trunking. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

PCM-30 R1 Trunking (continued)

Datafilling table RCCPSINV

Field	Subfield or refinement	Entry	Explanation and action
RCCNAME		see subfields	Remote cluster controller name. Enter the RCC name. Subfields: SITE, PMTYPE, and RCCNO.
	SITE	alphanumeric	Site. Enter the remote location site name. The remote location site name must appear in table SITE.
	PMTYPE	RCO2	Peripheral module type. Enter RCO2.
	RCCNO	0 to 127	RCO2 number.
PSLNKTAB		0 to 53	P-side link table. Subfields: PSLINK, PSDATA, and CONTMARK. Enter the vector number. ***Note:*** You must make changes to fields with many entries in the PROMPT mode.
	PSLINK	0 to 46	P-side link. Enter RCO2 P-side port number.
	PSDATA	D30	P-side data type. Enter DS30A for links to RMMs or LCMs, and D30 for PCM-30 links. Enter NILTYPE for other links.

Note 1: The RCO2 supports a maximum of 46 PCM-30 links on its P-side. There are 24 PCM-30 links on the external cabinet.
Note 2: The PCM-30s can be present on links 0–21 and 24–47. The DS30A links can be present on links 22–53. Links 22 and 23 are for the RMM.
Note 3: Community dial office (CDO) or private branch exchange (PBX) trunks can be assigned on the RCO2 P-side links. The first 16 PCM-30 links on the P-side support CDOs and PBXs.

Datafill example for table RCCPSINV

The following is an example of data entry for PCM-30 R1 Trunking in table RCCPSINV.

MAP example for table RCCPSINV

```
Table: RCCPSINV

RCCNAME      PSLNKTAB
-------------------------------------------------------
MELB RCO2 0  (0 D30 DEFAULT N) (1 D30 DEFAULT N)
(2 D30 DEFAULT N) (3 D30 DEFAULT N) (4 D30 DEFAULT N)
(5 D30 DEFAULT N) (6 D30 DEFAULT N) (7 D30 DEFAULT N)
(8 NILTYPE) (9 NILTYPE) (10 NILTYPE) (11 NILTYPE) (12 NILTYPE)
..
(48 NILTYPE) (49 NILTYPE) (50 NILTYPE) (51 NILTYPE)
(52 NILTYPE) (53 NILTYPE)  $
```

Datafilling table TRKGRP

The data entry for table TRKGRP appears in the following procedure. This procedure contains fields that apply to PCM-30 R1 Trunking. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table TRKGRP

Field	Subfield or refinement	Entry	Explanation and action
GRPKEY			Group key. Subfield: CLLI.
	CLLI	alphanumeric	Common language location identifier. Enter the CLLI code for the trunk group assigned in table CLLI.
GRPINFO		see subfields	Variable group data. When trunk group type is MAINT, the group contains subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, and CARD.
	GRPTYP	see list	Group type. Enter the group type for the trunk group. Group type examples are: international with metering (MTR) and international with operator (OPR).
	NCCLS	NCRT	No circuit class. Enter NCRT (no circuit).

Datafill example for table TRKGRP

The following is an example of data entry for PCM-30 R1 Trunking in table TRKGRP.

PCM-30 R1 Trunking (continued)

MAP example for table TRKGRP

```
Table:  TRKGRP

GRPKEY                                GRPINFO
_____________________________________________________________
MELB      MTR  0  TLD NCRT     IE MIDL  7 N $
QUEENSLAND +
    IBNTO 0 ELO NCBN RCO20 0 MIDL ANSDISC +
    0 N O 1 8 9 N N N N N N N $
```

Datafilling table TRKSGRP

Table trunk subgroup (TRKSGRP) lists additional information for subgroups assigned to a trunk group in table TRKGRP. Specify input data for one or two subgroups for each trunk group in table TRKGRP. Do not specify input data trunk groups defined as maintenance (MAINT) group types.

The following procedure describes data entry for table TRKSGRP. This procedure contains fields that apply to PCM-30 R1 Trunking. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table TRKSGRP

Field	Subfield or refinement	Entry	Explanation and action
SGRPKEY		see subfields	Subgroup key. 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.
SGRPVAR		see list	Variable subgroup data. For standard signaling, contains subfields SIGDATA, DIR, OPULSTYP, OSTARTSG, IDGTIME, NUMSTOPS, CCONT, RNGBCK, ESUPR, SAT, REMBSY, DIALMODE, and TRKGDTIM.

Note 1: Field SIZE in table DATASIZE allocates memory for the number of trunk subgroups. The field DATSKEY is equal to TRKSGRP.
Note 2: The maximum number of trunk subgroups is equal to twice the number of trunk groups.
Note 3: You can assign a maximum of 4096 trunk subgroups.

Datafill example for table TRKSGRP

The following is an example of data entry for PCM-30 R1 Trunking in table TRKSGRP.

MAP example for table TRKSGRP

```
Table:  TRKSGRP

SGRPKEY CARDCODE
                                                SGRPVAR
_____________________________________________________________________
QUEENSLAND 0   2X11AA +
          STD OG  NP      WK  0 0 NO NO F N 17 $
   MELB 0 DS1SIG +
          STD OG  DP      IM 70 0 NO NO N N 70 $
```

Datafilling table TRKMEM

The following procedure shows the data entry for table TRKMEM. This procedure contains fields that apply to PCM-30 R1 Trunking. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

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 of which the trunk is a member.
EXTRKNM		0 to 9999	External trunk number. Enter the external trunk number assigned to the trunk.
SGRP		1	Subgroup number. Enter the subgroup number assigned to the trunk. Enter 0 for maintenance and test trunks, and 1 for other subgroups.
MEMVAR		see subfield	Variable data for members. For RSC-S applications, this field varies. This field varies according to if the trunk is part of an interoffice trunk or a maintenance trunk. For an interoffice trunk, the subfield is PMTYPE and its improvements.

—continued—

PCM-30 R1 Trunking (end)

Datafilling table TRKMEM (continued)

Field	Subfield or refinement	Entry	Explanation and action
MEMVAR (continued)	PMTYPE	RCO2	Peripheral module type. This field is the PM type that contains the trunk. Enter RCO2.
	RCO2NO	0 to 511	RCO2 number.
	RCO2CKTNO	0 to 47	RCO2 circuit number. Enter the RCO2 card number that has the TRKGRP member assigned.
	RCO2CKTTS	1 to 24	RCO2 time slot number. Enter the time slot number that has the TRKGRP member assigned.
		—end—	

Datafill example for table TRKMEM

The following is an example of data entry for the PCM-30 R1 Trunking in table TRKMEM.

Datafill example for table TRKMEM

```
Table: TRKMEM

    CLLI         EXTRKNM  SGRP       MEMVAR
_____________________________________________________
MELB       0        0          RCO2 0  2  4
QUEENSLAND 0        0          RCO2 0  2  4
```

Tools for verifying translations

The PCM-30 R1 Trunking feature does not use translation verification tools.

SERVORD

The PCM-30 R1 Trunking feature does not use SERVORD.

Functional group

BAS00012

BAS00026

Feature package

Refer to Basic call processing in the Remote Switching Center-SONET International section of this document.

- NTX145AA Remote Switching Center
- NTX150AA RSC Intra-RSC Calling
- NTXP92AA RSC-S Basic
- NTXK77AA PCM-30 RSCO-S Support

Release applicability

This module supports the following BCS releases:

- BCS20 and up for the Remote Switching Center feature package
- BCS20 and up for the RSC Intra-RSC Calling feature package
- BCS33 and up for the RSC-S Basic feature package
- BCS34 and up for the RSC-S PCM-30 RSCO-S Support feature package

Requirements

To operate, ISDN on RSC-S requires the following feature packages:

- NTXR42AA Firmware Downloading
- NTX000AA Bilge
- NTX001AA Common Basic
- NTX100AA Integrated Business Networks-Basic (IBN)
- NTX269AA Universal Tone Receivers (Domestic)
- NTX270AA New Peripheral Maintenance
- NTX750AD ISDN Basic
- NTX901AA Local Features I

ISDN operations (continued)

Note: This list of required packages does not include feature packages NTX143AA, NTX150AA, NTX381AA, and NTXP92AA.

International support requires the following feature packages:

- NTXH52AA PCM-30 RSCO Support
- NTXP92AA RSC-S Basic
- NTX001AA Common Basic

Description

The integrated services digital network (ISDN) is provided through the Remote Cluster Controller Offshore #2 (RCO2) module of the Remote Switching Center Synchronous Optical Network (SONET), or RSC-S. An RCO2 provides increased ISDN performance capacity.

All the packages required for the RSC-S without ISDN are also required for the RSC-S with ISDN. The non-ISDN packages provide many of the base functionalities. Examples of base functionalities are intraswitching and emergency stand-alone (ESA). The RSC-S with ISDN expands on these base functionalities.

This section addresses datafill parameters that define:

- hardware components used in the RCO2 configuration
- the extension shelf
- the names and attributes of the PCM-30 and trunk data links between the components of the RCO2
- D-channel data connections
- optional card (ISP16) for the RCO2
- attributes of ISDN service capabilities
- card type requirements and table datafill necessary in order to implement National ISDN (NI-2) enhanced D-channel data
- NI-2 support for malicious call trace (MCT) in the Australian market
- bearer capability services (BS) that provide a way to screen calls so that communication attempts between incompatible stimulus terminals cannot occur
- ISDN protocol version control (PVC) to implement support of A-Law for NI-2 speech and 3.1 kHz bearer services, and variable length directory number (DN) screening

- NI-2 support for Telecom Service Interface Specification (TSIS) of BS interworking and datafill to allow data rate adaptation

Profile of basic rate access (BRA) and primary rate interface (PRI) lines

The BRA and PRI lines are important categories of ISDN service. The BRA line services use a two-wire loop. The PRI line services use a four-wire loop. The key attributes of an ISDN line are multiple devices that run off each line equipment number (LEN). Another one of the key attributes of an ISDN line are devices considered to be logical terminals (LT). To identify these terminals, use the following parameters.

Logical terminal identifier (LTID)

The LTID provides a different logical terminal (LT), or profile, to the exchange termination (ET). The LTID contains the following:

- the LT group (LTGRP) that is the name of the group of LTs, to a maximum of 32
- the LT number (LTNUM) that is the number that identifies the LT in the group, 1 through 1022

Terminal endpoint identifier (TEI)

The TEI identifies terminals on the same group. The Consultative Committee on International Telegraphy and Telephony (CCITT) defines a maximum of 128 TEIs for each ISDN loop. Northern Telecom uses a maximum of eight TEIs defined for each loop. Northern Telecom assigns TEI 1 and TEI 2 to devices associated with BRI B-channels. The terminal endpoint identifiers TEI 21 through 26 are assigned to devices with BRI D-channels.

Note: A terminal can have more than one LT.

Call appearances and feature appearances

Terminals off an ISDN line can support multiple directory numbers (DN) and different features on programmable keys and softkeys. The Meridian M5317 digital telephone supports the following:

- call appearances (CAP), directory numbers assigned to the M5317
- feature appearances (FAP), features assigned to the M5317

ISDN operations (continued)

Access privileges (AP)

The line equipment number (LEN) and terminal identifier (TEI) are associated. At this point, the terminal that connects to the ISDN interface can originate and receive calls. Datafill determines if terminals can have the following access privileges:

- voice and circuit-switched data on a B-channel (B)
- low-speed packet-switched data on a D-channel (D)
- high-speed packet data on a B-channel (PB)
- combined circuit-switched and D-channel packet data (BD)

The LT Access privilege (MP) defines services that an LT can use. Service order software subsystem (SERVORD) commands define these services. The following example shows how the attributes of datafill determine AP.

Attributes for determining access privileges

Access privilege		Circuit switching (Y or N)	Packet switching (N, D, or B)
B	circuit-switched voice and data	Y	N
D	packet-switched voice and data	N	D
PB	packet-switched high-speed data	N	B
BD	voice and low-speed packet data	Y	D

Note: If a device can carry both low and high-speed data, there are two profiles and the device requires two LTIDs.

The available AP and attribute values entered through the SERVORD appear in the following example.

Attributes of datafill according to AP

AP	CPE	DMS	DPN
B	TEI	LTD, AP of B LEN/TEI CAP (DN) FAP (options and features)	No attributes required
D	TEI LAPDX25 packet parameters: • DNA • L2 and L3	LTID, AP of D LEN/TEI/DCHCHNL	DIU/TIM/SIM/AM/PI/PO LTID LAPDX25 packet parameters: • DNA • L2 and L3 Options and features
BD	TEI (phone and PC) LAPDX25 packet parameters: • DNA • L2 and L3	LTID, AP of BD LEN/TEI/DCHCHNL CAPs (DN) FAPs (options and features)	DIU/TIM/SIM/AM/PI/PO LTID LAPDX25 packet parameters: • DNA • L2 AND L3 Options and features
PB	Channel (B1 and B2) LAPB25 packet parameters: • DNA • L2 and L3	LTID, AP of PB LEN/Bch DS-1/DS-0 (nailed up)	DIU/TIM/SIM/AM/PI/PO LAPBX25 packet parameters: • DNA • L2 and L3

ISDN operations (continued)

ISDN variants using protocol version control (PVC)

Static table download from the CC allows PVC options to a generic ISDN software module. The static download indicates if ISDN supports A-Law and variable length directory numbers (DN) for NI–2 compatibility for offshore.

NI-2 functionality in ESA mode

The RCO2 provides the same NI-2 functionality in ESA mode as the North American RSC-S platform. The RCO2 is not available in a dual configuration. The ISDN does not support interswitching.

Office parameters associated with ISDN lines

Office parameters associated with lines that have ISDN capabilities on the RSC-S include:

- MAX_BRA_LINES
- MAX_PRI_LINKS
- DCH_BD_STATMUX_RATIO
- ISDN_PERFORMANCE_MON_ALARM
- DAILY_ISDN_LAYER2_PEG_AUDIT_TIME
- DEFAULT_BEARER_CAPABILITY

MAX_BRA_LINES

This parameter specifies the maximum number of ISDN basic rate access (BRA) lines that the system can assign. Specify in line increments of 100 the maximum number of lines that the system can assign. The default value of 10 sets the maximum number of links to 1000.

MAX_PRI_LINKS

This parameter specifies the maximum number of primary rate interface (PRI) links that the operating company can enter in table TRKSGRP. This maximum applies when pricing for each link is in effect. This feature depends on on the Primary Rate Access Base feature. Operating companies that do not have this feature must leave the parameter set to the default value of 0. The maximum number of links is 8191.

DCH_BD_STATMUX_RATIO

Switching units with ISDN require this parameter. This parameter controls the maximum number of logical terminals (LT) that you can multiplex on one Bd channel. Multiplex these LTs in order to route the packet data to the data packet network (DPN). This parameter directly controls the number of LT identifiers (LTID), either BD or D. This parameter controls the maximum number of LTIDs that you can map into the same data channel in table LTMAP. This parameter controls the number of packet data LTIDs that each DCH can accept. If the system exceeds the number of LTIDs for each Bd channel, the system displays the following message:

```
CAPACITY OF Bd CHANNEL Y ON DCH X EXCEEDED
```

ISDN_PERFORMANCE_MON_ALARM

This parameter controls the performance monitor LINE131 logs. This parameter affects the following ISDN line types for the LCME:

- two binary one quaternary (2B1Q)
- alternate mark inversion (AMI-U)
- S/T
- optical

Set the value to OFF to deactivate generation of these logs. The default value is ON.

DAILY_ISDN_LAYER2_PEG_AUDIT_TIME

This parameter specifies the time of day to collect ISDN layer 2 peg counts. This parameter also specifies the time of day to generate ISDN200 and ISDN201 log reports.

This parameter collects the following peg counts:

- number of frames with CRC errors
- total number of frames received, good frames plus frames with CRC errors
- number of frames retransmitted, except SAPI16 frames
- total number of frames transmitted

The default setting is 2 0, which corresponds to 2:00 a.m. on the 24-hour clock.

ISDN operations (continued)

DEFAULT_BEARER_CAPABILITY

This parameter defines the default bearer capability (BC) of an office. The default is SPEECH. A change in the default can have an important impact on call completion. If the value changes to 3_1KHZ, investigate table RTECHAR for any entries that use a BC of speech. Use value 3_1KHZ be only in a controlled environment. Make use of A-Law for national ISDN (NI-2) compatible speech and 3.1 kHz bearer services. Use these services on the PLGC and the RCO2.

Changing office parameters

Northern Telecom sets the default value of parameters during load build. Use the following procedure to change an office parameter through the table editor. The following procedure change the MAX_BRA_LINES parameter in table OFCOPT.

1 To access table OFCOPT and position on the parameter, type

>TABLE OFCOPT;POS MAX_BRA_LINES

2 To request a change of the parameter to the desired value, type

>CHA

3 To enter the new value, type

>n

where

n is the new parameter value

4 To confirm the change, type

>Y

5 To quit the table editor, type

>QUIT

Note: When office parameters change, reload static data. To propagate the parameter changes to the RCO2, reload static data with the following command:

>LOADPM unit_no CC

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

Operation

Describe the datafill for the RCO2 in terms of physical configuration, service capabilities, and bearer capabilities.

Defining the physical configuration

Use the following translations tables to identify the hardware components and the connections between the components. This section includes only the tables for ISDN on RSC-S. This section includes tables used in basic call processing for the RSC-S.

Hardware parts

The following tables are used to define the components which are used in the RCO2 configuration:

- LTCINV (Line Trunk Inventory)
- LTPSINV (Line Trunk Peripheral Side Inventory)
- RCCINV (Remote Cluster Controller Inventory)
- RCCPSINV (Remote Cluster Controller Peripheral Side Inventory)
- LCMINV (Line Concentrating Module Inventory)
- RMMINV (Remote Maintenance Module Inventory)

PCM-30 and trunk data

The following tables define the names and attributes of the links between the components of the RCO2 configuration:

- CLLI (Common Language Location Identifier)
- TRKGRP (Trunk Group)
- TRKSGRP (Trunk Subgroup)
- TRKMEM (Trunk Member)
- CARRMTC (Carrier Maintenance)
- PADDATA (Pad Data)

D-channel data

The following tables define D-channel data:

- SPECCONN (Special Connections)
- DCHINV (D-channel Handler Inventory)

ISDN operations (continued)

Defining service capabilities

These tables contain the attributes of the BRA:

- LTGRP (Logical Terminal Group)
- LTDEF (Logical Terminal Definition)
- LTMAP (Logical Terminal Map)
- KSETINV (Key Set Inventory)
- KSETLINE (Keyset Line)
- KSETFEAT (Keyset Features)

Note: The SERVORD automatically fills some of these tables.

Translations table flow

Enter data in some of the tables through SERVORD and not the table editor.

ISDN operations translations tables interactions

The following list describes ISDN operations translations tables:

- Table DATASIZE specifies the size of fixed tables. For BRI services, enter data in table DATASIZE to specify the size needed for table SPECCONN. If you set the size too low, table SPECCONN will be corrupted.

  Table DATASIZE is entered at the start with default table size values for RSC-S tables CLLI, SPECCONN, TRKGRP, and TRKSGRP.

- Table SITE. Identifies the equipment for the switching unit and for all remote locations that connect to the limit. This table contains data before you can assign a LEN or a PM. The host switching unit is the first entry in this field. Field NAME associates with the number required to dial the site, and alarm data for remote sites. Table SITE uses the same CLLI tuple for operator verification as the CLLI tuple datafilled in table CLLI.

  The table SITE (field NAME) must know the field SITE in table LCMINV and the field SITENM in tables RCCINV and RMMINV. The table SITE (field NAME) must know the subfield SITE_ID in table ISTRKGRP.

ISDN operations (continued)

- Table CLLI identifies the far end of the trunk group by the name of city or town, and the state or province. Table CLLI identifies the trunk group by the building group, and the destination of the traffic unit. Table CLLI identifies the trunk group through the code that identifies trunk groups that end at the same CLLI location. Table CLLI also stores the maximum number of expected trunk groups. Table CLLI stores an entry for administrative information that the switching unit does not use.

  The system automatically adds some CLLI to table CLLI when the feature is present in the switch. You must add other codes to the CLLI table. After you enter table CLLI, trunk group tables display CLLI codes, scan and distribution point table, and MTA tables. Duplicate the CLLI tuple in field OPVRCLLI in table SITE for operator verification.

  Note: Enter data in some data tables according to the type of trunk group type required. Each trunk group type requires an exact form. Correct trunk group types are TI, TO, T2, IBNTI, IBNTO, IBNT2, PX, and ES.

- 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 additional information for each subgroup assigned to trunk groups listed in table TRKGRP. Field CLLI in table TRKSGRP corresponds to the CLLI code for the trunk group.
- Table TRKMEM lists data associated with each trunk assigned to the trunk groups and subgroups specified in tables TRKGRP and TRKSGRP. Table TRKMEM identifies the circuits associated with static trunks and dynamic trunks. This table identifies the test equipment used to test lines and trunks. Field CLLI in table TRKMEM corresponds to the CLLI code for the trunk group. Table TRKMEM allows the assignment of trunks off of the P-side of the RCO2.
- Table PMLOADS stores the device location of every PM loadfile. This store allows table PMLOADS to map between load names and devices where loads reside. Enter the PM load files in Table PMLOADS contains the PM loadfiles before the inventory tables can use the PM loadfiles.
- Table CARRMTC allows the DMS switch administration to enter maintenance control information in peripherals and out-of-service limits for alarms. Table CARRMTC also allows the DMS switch to enter system return-to-service (RTS) occurrences. The TMPLTNM field in table CARRMTC corresponds to the field CARRIDX in tables LTCPSINV and RCCPSINV.

ISDN operations (continued)

- Table LTCINV contains inventory data for PM types. The P-side link assignment of table LTCINV does not contain inventory data for PM types. This table defines the PCM-30 line group controller (PLGC) or line group controller overseas (LGCO) on the C-side of the RCO2. Load information for this table is entered in field LOAD. Load information for this table corresponds to the LOADNAME tuple from table PMLOADS.
- Table LTCPSINV contains the assignment of the P-side links for PMs. If AREASELCT contains the D30, the CARRIDX field indexes table CARRMTC for maintenance control information about the peripheral.

  Field XPMNO in table LTCPSINV corresponds to field PMNO in table SPECCONN. Field XPMTYPE corresponds to field PMTYPE in table SPECCONN.

  Note: The RSC-S can be configured with either the PLGC or the LGCO. In either occurrence, use `PLGC` as the datafill entry.

  Field LTCNAME in table LTCINV corresponds to the LTCNAME field in table LTCPSINV.

  Enter load information in field LOADNAME. Enter corresponding entries in field LOAD for tables LTCINV, LCMINV, and RMMINV.

- Table RCCINV maintains a list of RCO2s entered in the DMS switch. Table RCCINV contains inventory data, for the RCO2s. Table RCCINV does not contain P-side link assignments. The table information identifies the location of the RCO2, the load and execute lineups required, and the network link connections. Enter the C-side PCM-30 assignments for the RCO2 in table RCCINV. In addition, enter intraswitching in table RCCINV.

Enter load information for table RCCINV in field LOAD. Load information for table RCCINV corresponds to the LOADNAME tuple from table PMLOADS. The RCCNAME tuple in table RCCINV corresponds to the RCCNAME tuple from table RCCPSINV. The field RCCNAME stores site information entered in field NAME from table SITE. The field RCCNAME also stores the PM type and the PM number.

- Table RCCPSINV contains only the P-side link assignments for the RCO2. When the system adds a tuple to table RCCINV, the system adds an equivalent tuple in table RCCPSINV. For maintenance control information about the peripheral the CARRIDX field indexes to table CARRMTC. The RCCNAME tuple in table RCCPSINV matches the RCCNAME tuple from table RCCINV. The RCCNAME tuple in table RCCPSINV stores site information entered in field NAME from table SITE. The RCCNAME tuple in table RCCPSINV stores the PM type and the PM number.
- Table LCMINV lists the data assignment for each bay associated with a local line concentrating module (LCM). Table LCMINV lists the data assignment for each bay associated with a remote line concentrating module (RLCM) unit. 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 that connect to the switching unit. The LOAD field in table LCMINV matches the LOADNAME tuple from table PMLOADS. This field stores the device location of each PM load file.
- Table LNINV lists data for each line card slot. The LEN tuple in table LNINV corresponds to the LEN tuple in table LTMAP.

ISDN operations (continued)

- Table ISGDEF contains service and channel information for the PM which supports the DCH. The field in table ISGDEF isolates the DCH card and the PM that houses the DCH card. The PMTYPE, PMNO fields match the PMTYPE, PMNO, and DCHNO tuples in table DCHINV. The D_CHNL subfield matches the PMTYPE, PMNO, and DCHNO tuples in table DCHINV. The ISGNO tuple in table ISGDEF matches the ISGNO tuple in table SPECCONN.
- Table DCHINV contains information about peripherals that contain this card in relation to the D-channel handler (DCH). The PMTYPE, PMNO and DCHNO tuples match the PMTYPE and PMNO fields and the D_CHNL subfield in table ISGDEF.
- Table LTGRP can define a maximum of 32 logical terminal (LT) groups. The system defines one of the groups as ISDN. The GROUP field in table LTGRP matches field LTGRP in table LTDEF.
- Table SPECCONN contains connections that you cannot modify through the SERVORD. The SITE field in table SPECCONN matches the NAME tuple from table SITE. This allows the system to identify equipment for the switching unit and for all remote locations that connect to the switching unit. Table SPECCONN duplicates datafill of the XPMNO and XPMTYPE tuples in table LTCPSINV. This duplication allows table SPECONN to access assignment of P-side links. The OPTION tuple in this table matches the SCSEL field in table LTMAP. The system supports a special connection on the P-side of the RCO2.
- Table LTMAP maps the ISDN LTs to a LEN or the TEI. Where table LTMAP maps the ISDN LTs depends on the access privilege (AP). The AP data matches the LTKEY tuple in table LTDEF. Table LTMAP uses the LEN tuple, to access data for each line card slot. Table LTMAP uses the LEN tuple entered in table LNINV. The SCSEL field in this table matches the OPTION tuple in table SPECCONN.
- Table LTDEF defines ISDN terminals and access privileges (AP) for the type of service the terminal can access. The LTDEF field in this table identifies an ISDN LT group. This field matches the GROUP field in table LTGRP.

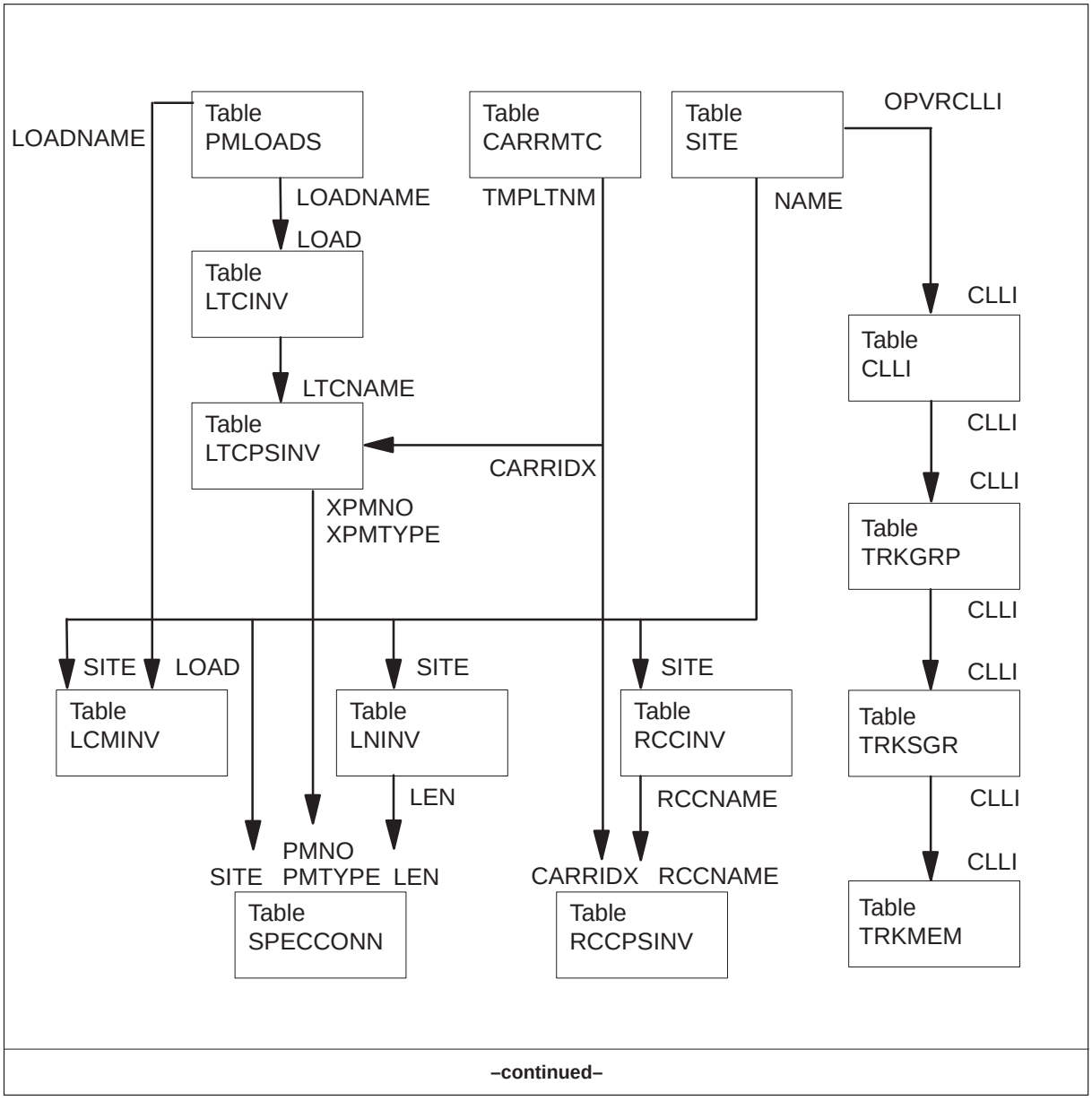
ISDN operations (continued)

- Table KSETINV identifies an LTID as an ISDN keyset. Table KSETINV defines the attributes of an LTID. The KSETLEN tuple in table KSETINV includes the LTID tuple.
- Table KSETLINE associates call appearances, ISDN LT call activators and indicators, to directory numbers and different feature options. The LTID tuple in table KSETLINE matches the KSETLEN tuple in table KSETINV.
- Table KSETFEAT associates feature appearances, ISDN logical terminal (LT) feature activators and indicators with feature instances and different feature options. The LTID tuple in table KSETFEAT matches the KSETLEN tuple in table KSETINV.
- Table KSETKEYS defines the business set feature key templates. The system uses the table KSETKEYS to assign dedicated keys for a varity of business sets.

The translation process for the RSC-S with ISDN appears in the flowchart that follows. Tables that ISDN on the RSC-S does not use appear in the basic call processing section.

ISDN operations (continued)

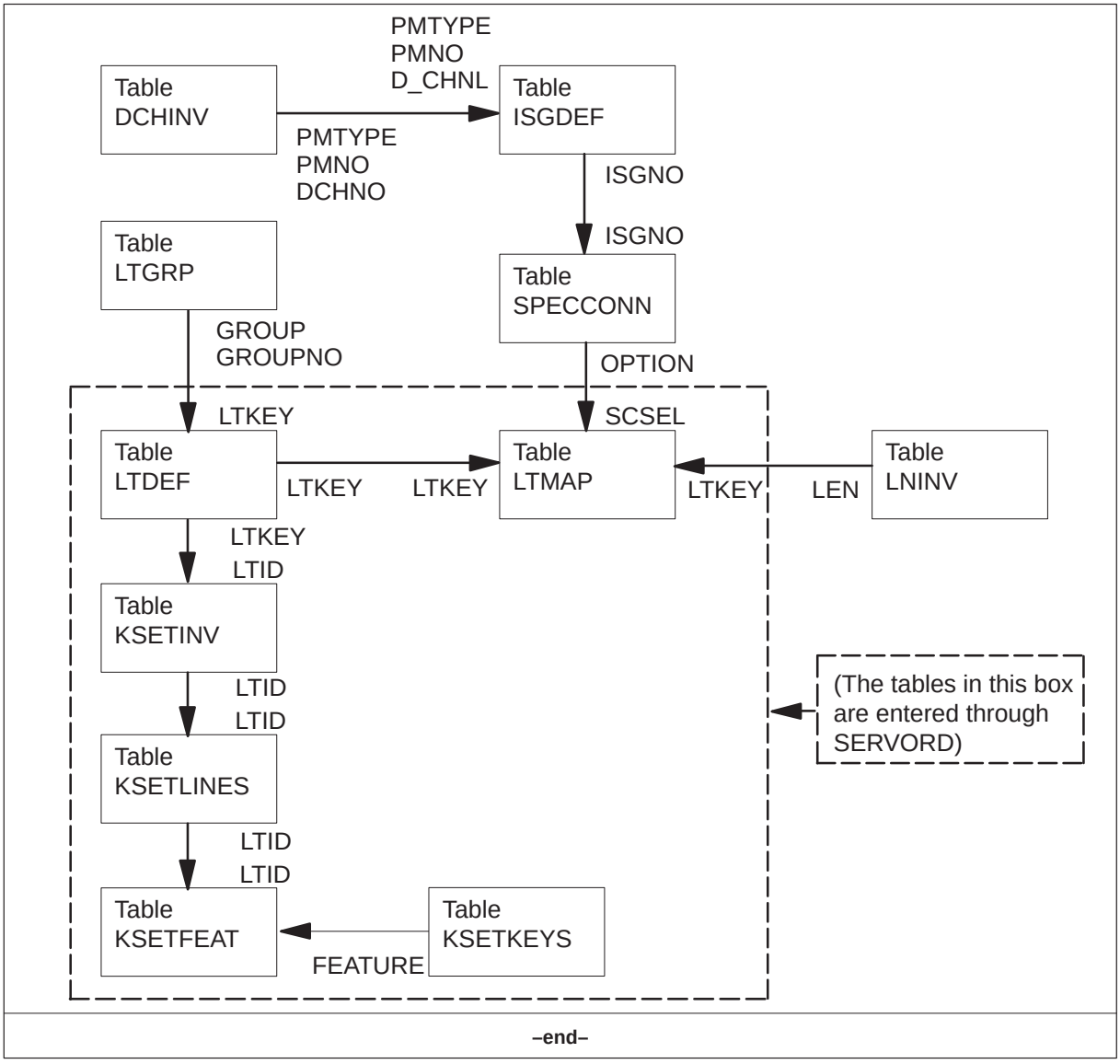
Table flow for ISDN operations



–continued–

ISDN operations (continued)

Table flow for ISDN operations (continued)



–end–

ISDN operations (continued)

Limits

The ISDN operations require that the PM type be entered as PLGC for an LGCOi+.

Plain ordinary telephone service (POTS) lines on a DMS-100G switch do not support the ESA warm exit.

Interactions

The requirements for the use of ISDN enhanced D-channel features are as follows:

- The RCO2 must have the NTMX77 Unified Processor (UP) card or the optional NTAX74 Cellular Access Processor (CAP) card.

  Note: The NT7X05 Peripheral/Remote Loader-16 (PRL) functionality requires the NTMX77 up for support. An RCO2 equipped with the optional NTAX74 CAP does not support NT7X05 PRL functionality.

- The RCO2 must have an enhanced ISDN signal processor card (NTBX01BA).

  Note: An RCO2 equipped with the NTAX74 CAP requires the NTBX01BA.

- The RCO2 must have an enhanced D-channel card (NTBX02BA).

  Note: An RCO2 equipped with the NTAX74 CAP requires the NTBX02BA.

- The table DCHINV tuple DECPEC must contain NTBX02BA card information.

  Note: The system does not permit changes to the DCHPEC code with a ISDN service group attached. Make the DCH a spare DCH before the tuple change.

Activation/deactivation by the end user

The ISDN operations do not require activation or deactivation by the end user.

Billing

The ISDN operations do not affect billing.

Station Message Detail Recording

The ISDN operations do not affect Station Message Detail Recording.

Datafilling office parameters

The office parameters that ISDN operations uses appear in the following table. Refer to *Office Parameters Reference Manual* for more information about office parameters.

Office parameters by ISDN on RSC-S International

Table name	Parameter name	Explanation and action
OFCENG	DCH_BD_STATMUX_RATIO	Controls the maximum number of LTs that can multiplex on one Bd channel. The default maximum is 64. Do not set the maximum value to greater than 32 unless the packet handler can handle more than 32.
OFCOPT	MAX_BRA_LINES	Specifies the maximum number of basic rate access (BRA) lines that can be assigned. Range: 0 to 10000. Default: 10.
OFCOPT	MAX_PRI_LINKS	Set equal to the number of primary rate interface (PRI) links if the links have the PRI package installed on a link basis.
OFCVAR	ISDN_PERFORMANCE_MON_ALARM	Generates an ISDN performance monitoring LINE131 logs.
OFCVAR	DAILY_ISDN_LAYER2_PEG_AUDIT_TIME	Sets the time of day to collect and reset layer 2 peg counts for ISDN200 and ISDN201 logs. Use the 24-hour clock.
OFCENG	DEFAULT_BEARER_CAPABILITY	Defines the bearer capability (BC) of the office with ISDN capabilities. Default: SPEECH.

Datafill sequence

The tables that require datafill to operate ISDN on RSC-S appear in the following table. The tables appear in the order in which to enter the tables.

ISDN operations (continued)

Datafill requirements for ISDN operations

Table	Purpose of table
DATASIZE	Data size. Specifies the size of certain tables. For BRA services, enter table DATASIZE to specify the size needed for table SPECCONN.
CLLI	Common language location indicator. Contains codes that identify the far end of each announcement, tone, trunk group and test trunk. Contains codes which identify the far end of each national milliwatt test line and service circuit.
SITE	Site. Contains data that allows the DMS switch to recognize equipment for the switching unit. Contains data that allows the DMS switch to recognize equipment for all remote locations that connect to the DMS.
PMLOADS	Peripheral module loads. Stores the device location of every PM loadfile to map between load names and load devices. Autoload locates loadfiles without personnel. Table PMLOADS must contain expanded peripheral module (XPM) load files before XPM inventory tables can use the loadfiles.
LTCINV	Line trunk controller inventory. Contains inventory data for PM types. This table does not contain P-side link assignments. This table defines the PCM-30 line group controller (PLGC) on the C-side of the RCO2. This table defines the line group controller offshore (LGCO) on the C-side of the RCO2.
CARRMTC	Carrier maintenance. Allows DMS administration to enter maintenance control information in peripherals. Allows DMS administration to enter out-of-service limits for alarms and system return-to-service (RTS) occurrences.
LTCPSINV	Line trunk controller P-side link inventory (LTCPSINV). Contains XPM peripheral P-side link assignments.
RCCINV	Remote cluster controller inventory. Contains RCO2 inventory data. This table does not contain P-side link assignments. Contains datafill for C-side PCM-30 assignments for the RCO2.

Note 1: Data entered in some data tables must be in relation to the type of trunk group required. Each trunk group type requires a specific form. Valid trunk group types are TI, TO, T2, IBNTI, IBNTO, IBNT2, PX, and ES.
Note 2: Examples of the datafill of tables required to operate ISDN features appear in the next section. Specific tables are also required for basic call processing. Datafill examples for these tables are shown in the basic call processing section.
Note 3: In tables with fields with multiple possible entries the continuation mark (CONTMARK) indicates more entries for the tuple on the next line. The continuation mark (CONTMARK) is a plus sign (+). A dollar sign ($) indicates the end of entries.

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ISDN operations (continued)

Datafill requirements for ISDN operations (continued)

Table	Purpose of table
RCCPSINV	Remote cluster controller P-side link inventory. Contains only RCO2 P-side link assignments.
LCMINV	Line concentrating module inventory. Lists data assignments for each bay associated with a local line concentrating module (LCM). Lists data assignments for each bay connected with a remote line concentrating module (RLCM) unit.
ISGDEF	ISDN service group definition. Contains service and channel information for the PM that supports the DCH.
DCHINV	D-channel inventory. Contains information about the D-channel handler (DCH). Information includes the The DCH information includes the name an number of the host PM, the associated NTMx82 port, NTBX02BA and the PEC. The DCH information also includes the loadfile and the port number.
RMMINV	Remote maintenance module inventory. Identifies an RLCM, RSC-S, or OPM site with the frame type, frame number, floor, row, frame position and PEC loaded. Identifies an RLCM, RSC-S, or OPM site with the PM load and executive program loaded. Identifies the C-side PM attached to each RMM.
LTGRP	Logical terminal group. Provides capacity to define a maximum of 32 LT groups. One of the groups is ISDN.
TRKGRP	Trunk group. Defines data for each trunk group that connects to the switching unit.
TRKSGRP	Trunk subgroup. Lists the additional information for each subgroup assigned to one of the trunk groups listed in table TRKGRP.

Note 1: Data entered in some data tables must be in relation to the type of trunk group required. Each trunk group type requires a specific form. Valid trunk group types are TI, TO, T2, IBNTI, IBNTO, IBNT2, PX, and ES.
Note 2: Examples of the datafill of tables required to operate ISDN features appear in the next section. Specific tables are also required for basic call processing. Datafill examples for these tables are shown in the basic call processing section.
Note 3: In tables with fields with multiple possible entries the continuation mark (CONTMARK) indicates more entries for the tuple on the next line. The continuation mark (CONTMARK) is a plus sign (+). A dollar sign ($) indicates the end of entries.

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ISDN operations (continued)

Datafill requirements for ISDN operations (continued)

Table	Purpose of table
TRKMEM	Trunk member. Lists the data associated with each trunk assigned to trunk groups and subgroups specified in tables TRKGRP and TRKSGRP. This table identifies the circuits associated with static trunks and dynamic trunks. This table identifies the test equipment used to test lines and trunks.
ALMSCGRP	Alarm scan group. Records the circuit equipment, location, and type of circuit pack that contains scan points.
ALMSDGRP	Alarm signal distributor group. Records the circuit equipment, location and the type of circuit pack that contains signal distribution (SD) points.
ALMSD	Alarm signal distributor point. Identifies the function by each assigned SD point in the alarm signal distributor groups.
ALMSC	Alarm scan. Identifies the function of each assigned scan point in the alarm scan groups.
LNINV	Line circuit inventory. Table lists data for each line card slot.
LTDEF	Logical terminal definition. Defines ISDN terminals and AP for the service the terminal can access.
SPECCONN	Special connections. Contains connections that SERVORD cannot change.
KSETINV	Business set inventory. Identifies an LTID as an ISDN keyset. Defines the attributes of an LTID. The keyset can be a T2317 business set, an M5317t business set and terminals, or equipment provided by other manufacturers.
KSETLINE	Keyset line. Associates call appearances to directory numbers and various feature options. Call appearances are ISDN LT call activators and indicators. This is a current MDC table.

Note 1: Data entered in some data tables must be in relation to the type of trunk group required. Each trunk group type requires a specific form. Valid trunk group types are TI, TO, T2, IBNTI, IBNTO, IBNT2, PX, and ES.
Note 2: Examples of the datafill of tables required to operate ISDN features appear in the next section. Specific tables are also required for basic call processing. Datafill examples for these tables are shown in the basic call processing section.
Note 3: In tables with fields with multiple possible entries the continuation mark (CONTMARK) indicates more entries for the tuple on the next line. The continuation mark (CONTMARK) is a plus sign (+). A dollar sign ($) indicates the end of entries.

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Datafill requirements for ISDN operations (continued)

Table	Purpose of table
LTMAP	Logical terminal map. Maps the ISDN LTs to a LEN or the TEI, from table LTDEF. The AP determines if LTMAP maps the LTs to a LEN or the TEI.
KSETFEAT	Keyset feature. Associates feature appearances and ISDN LT feature activators and indicators with feature instances and various feature options.
KSETKEYS	Keyset keys. Defines business set feature key templates. This table also assigns dedicated keys used on a varity of business sets.
Note 1: Data entered in some data tables must be in relation to the type of trunk group required. Each trunk group type requires a specific form. Valid trunk group types are TI, TO, T2, IBNTI, IBNTO, IBNT2, PX, and ES. ***Note 2:*** Examples of the datafill of tables required to operate ISDN features appear in the next section. Specific tables are also required for basic call processing. Datafill examples for these tables are shown in the basic call processing section. ***Note 3:*** In tables with fields with multiple possible entries the continuation mark (CONTMARK) indicates more entries for the tuple on the next line. The continuation mark (CONTMARK) is a plus sign (+). A dollar sign ($) indicates the end of entries.	
—end—	

Datafilling table DATASIZE

Table data size (DATASIZE) specifies the size of certain tables. For basic rate interface (BRI), table DATASIZE must specify the size needed for table SPECCONN. If the size is set too small, table SPECCONN will be corrupted. The datafill example for table DATASIZE shows the fields that apply to the ISDN on RSC. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table DATASIZE for ISDN on RSC-S

Field	Subfield or refinement	Entry	Explanation and action
DATSKEY		alphanumeric	Data size key. Enter the name of the table where the SIZE field will apply. If you use BRA, the table SPECCONN will be sized.
SIZE		0 to 32767	Table size. Enter the required size of the table.

ISDN operations (continued)

Datafilling table LTCINV

Table line trunk controller inventory (LTCINV) identifies a host XPM peripheral to the DMS software. Information about the peripheral includes location, required load, and network link connections. This table also supports the universal tone receiver (UTR) as an optional card.

The following procedure shows the datafill for table LTCINV. This procedure contains only the fields that apply to RSC-S with ISDN. Refer to the data schema section of the *Translations Guide* for a description of the other fields. The table has a field that contains the name of the loadfile. This loadfile associate with the electrically erasable programmable read-only memory (EEPROM). The ISP16 option card allows integration of the enhanced D-channel handler (NTBX02BA) card in table DCHINV.

Note: Enter data in tables CLLI, SITE, and PMLOADS before table LTCINV. The datafill examples for tables CLLI, SITE and PMLOADS appear in the basic call processing section for the RSC.

Datafilling table LTCINV for ISDN on RSC-S International

Field	Subfield or refinement	Entry	Explanation and action
LTCNAME		see subfields	Line trunk controller name. Contains subfields XPMTYPE and XPMNO.
	XPMTYPE	PLGC	Extended peripheral type of LTC that connects to the RCO2. Enter PLGC. The PLGC is in use for both ISDN and non-ISDN.
	XPMNO	0 to 255	Extended peripheral module (PM) number of the PLGC.
FRTYPE		LGE	Frame type. Enter LTE for the LTCI or LGE for the LGCI.
		all from list	Enter the location of the PM in fields FRNO, SHPOS, FLOOR, ROW, and FRPOS.

Note 1: When NI-2 is supported, the OPTCARD must contain ISP16. The ISP16 is the designator of the enhanced EISP (NTBX01BA) card.
Note 2: Make changes to fields with multiple entries in the PROMPT mode. Nonprompt mode can leave out current entries.
Note 3: Enter the continuation mark (+) in fields with multiple possible entries. Enter the continuation mark (+) when the next line specifies more data or to enter more records. Enter the end mark ($) in fields with multiple possible entries after the last entry.

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Datafilling table LTCINV for ISDN on RSC-S International (continued)

Field	Subfield or refinement	Entry	Explanation and action
EQPEC		6X02UA	Product equipment code. Enter the code for the PLGC with ISDN.
LOAD		alphanumeric	Load. Enter the load the PM is to use. The load must appear in the list in table PMLOADS.
EXECTAB		see subfields	Executive table. Subfields: TRMTYPE, EXEC, and CONTMARK. The terminal type and the associated execs are entered together. ***Note:*** Make changes to fields with multiple entries in the PROMPT mode.
	TRMTYPE	KEYSET	Terminal type. Enter the type of terminal models. The POTS table is for regular lines. The KEYSET table is for ISDN, MBS set, and data lines. The RMM_TERM table is for remotes. The ABTRK table is for IBN out trunks that support BT3J type II / IV and DC5 / AC15 loop disconnect signaling.
	EXEC	KSETEX	Executive programs. Required for PM selected in TRMTYPE. Possible values: KSETEX for KEYSET, POTSEX for POTS, and DTCEX for ABTRK.

Note 1: When NI-2 is supported, the OPTCARD must contain ISP16. The ISP16 is the designator of the enhanced EISP (NTBX01BA) card.
Note 2: Make changes to fields with multiple entries in the PROMPT mode. Nonprompt mode can leave out current entries.
Note 3: Enter the continuation mark (+) in fields with multiple possible entries. Enter the continuation mark (+) when the next line specifies more data or to enter more records. Enter the end mark ($) in fields with multiple possible entries after the last entry.

—continued—

ISDN operations (continued)

Datafilling table LTCINV for ISDN on RSC-S International (continued)

Field	Subfield or refinement	Entry	Explanation and action
OPTCARD		ISP16	Optional card. This field is a vector. This field can have a maximum of ten entries. If the CMR card is present, enter the CMRLOAD. Values: CMR5, UTR6, and UTR7, ISP16, and the NT7X05 Peripheral/Remote Loader-16 (PRL). If the CMR card is present, enter the CMRLOAD. ***Note 1:*** Make changes to fields with multiple entries in the PROMPT mode.
TONESET		AUS100	TONESET. Enter AUS100. Range of values: DEFAULT, NORTHAM, and AUS100.
PROCPEC		MX77AA MX77AA, or AX74AA AX74AA	Processor equipment product engineering codes. Each PLGC or LGCO unit requires one PEC. Enter the PEC for unit 0 first. The PEC must reflect minimum firmware capabilities in the processor complex of each unit.
E2LOAD		alphanumeric	EEPROM file. Contains the name of the loadfile loaded in either the NTMX77AA EEPROM or the optional NTAX74AA EEPROM. ***Note:*** When you enter the NT7X05 PRL as an optional card, enter the loadfile name for the NTMX77 UP. The optional NTAX74AA CAP does not support NT7X05 PRL functionality.

Note 1: When NI-2 is supported, the OPTCARD must contain ISP16. The ISP16 is the designator of the enhanced EISP (NTBX01BA) card.
Note 2: Make changes to fields with multiple entries in the PROMPT mode. Nonprompt mode can leave out current entries.
Note 3: Enter the continuation mark (+) in fields with multiple possible entries. Enter the continuation mark (+) when the next line specifies more data or to enter more records. Enter the end mark ($) in fields with multiple possible entries after the last entry.

—continued—

ISDN operations (continued)

Datafilling table LTCINV for ISDN on RSC-S International (continued)

Field	Subfield or refinement	Entry	Explanation and action
OPTATTR	IBN	$	Optional attribute. This is not a DTC for CCS7. Leave this field blank.
PEC6X40		6X40AC	For 6X40 equipment PEC. Enter the version of the NT6X40 used. The 6X40AC is the required version for ISDN.

Note 1: When NI-2 is supported, the OPTCARD must contain ISP16. The ISP16 is the designator of the enhanced EISP (NTBX01BA) card.
Note 2: Make changes to fields with multiple entries in the PROMPT mode. Nonprompt mode can leave out current entries.
Note 3: Enter the continuation mark (+) in fields with multiple possible entries. Enter the continuation mark (+) when the next line specifies more data or to enter more records. Enter the end mark ($) in fields with multiple possible entries after the last entry.

—end—

Datafill example for table LTCINV

Sample entries for table LTCINV appear in the following examples. The first example is for an RC02 with NTMX77AA UP. The second example is for an RC02 with NTAX74AA CAP.

MAP example for table LTCINV with data entered for NTMX77AA UP

```
LTCNAME   FRTYPE FRNO SHPOS FLOOR ROW FRPOS EQPEC      LOAD
-----------------------------------------------------------------
PLGC 1     LGE   1   18    0     C   6     6X02UA     KRI07xx

EXECTAB
-----------------------------------------------------------------
(POTS POTSEX)(KEYSET KSETEX)(ABTRK DTCEX)           $

CSLNKTAB
----------------------------------------------------------------
(0 5)(0 23)(1 5)(1 23)(0 30)(1 30)(0 38)(1 38)
(0 43)(1 43)(0 47)(1 47)(0 54)(1 54)(0 62)(1 62)            $

OPTCARD
----------------------------------------------------------------
(UTR9)(ISP16) (NT6X28)  (7X05)                               $

TONESET   PROCPEC          E2LOAD     OPATTR    PEC6X40
----------------------------------------------------------------
AUS100    MX77AA  MX77AA    MX77xxxx      $        6X40AC
```

ISDN operations (continued)

Note 1: An LGCO and an LGCOI+ is entered as PLGC.

Note 2: The xx in field LOAD and the xxxx in field E2LOAD represent alphanumeric entries like B1 and XE01.

Note 3: The shelf can have a processor other than NTMX77 or the optional NTAX74. In this occurrence, the system automatically loads field E2LOAD with value NILLOAD.

Note 4: Field PROCPEC can contain data for AX74AA AX74AA instead of MX77AA MX77AA. If field PROPEC contains data for AX74AA AX74AA, the load name prefix in field LOAD changes from KRI to WRI. For example, KRI07xx (for MX77) changes to WRI07XX (for AX74AA). The sample datafill for table LTCINV when the RCO2 contains data for the NTAX74AA CAP appears in the following table.

MAP example for table LTCINV with data entered for NTAX74AA CAP

```
LTCNAME   FRTYPE FRNO SHPOS FLOOR ROW FRPOS EQPEC      LOAD
-------------------------------------------------------------------
PLGC 1     LGE   1   18    0     C   6     6X02UA     WRI07xx

EXECTAB
-------------------------------------------------------------------
(POTS POTSEX)(KEYSET KSETEX)(ABTRK DTCEX)                    $

CSLNKTAB
-------------------------------------------------------------------
(0 5)(0 23)(1 5)(1 23)(0 30)(1 30)(0 38)(1 38)
(0 43)(1 43)(0 47)(1 47)(0 54)(1 54)(0 62)(1 62)             $

OPTCARD
-------------------------------------------------------------------
(UTR9)(ISP16) (NT6X28)                                       $

TONESET    PROCPEC          E2LOAD       OPATTR    PEC6X40
-------------------------------------------------------------------
AUS100     AX74AA  AX74AA    AX74xxxx      $        6X40AC
```

Datafilling table LTCPSINV

Table line trunk controller P-side link inventory (LTCPSINV) contains P-side assignments for host peripheral links. You can enter these links as DS30A, D30, or DCH. The key for this table is the same as for table LTCINV. The system automatically allocates memory for a maximum of 128 tuples. The system automatically adds an entry when you enter a PM in table LTCINV.

The carrier type is set in this table. The value entered after D30 is the same value you enter in table CARRMTC. The operating company can choose the value to use.

The datafill example for table LTCPSINV shows only fields that apply to the ISDN on RSC. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Note: You must enter data in table LTCPSINV after you enter data in tables CLLI, SITE, PMLOADS, LTCINV, and CARRMTC. Examples of datafill for tables CLLI, SITE, PMLOADS, and CARRMTC appear in the basic call processing section for the RSC-S.

ISDN operations (continued)

Datafilling table LTCPSINV

Field	Subfield or refinement	Entry	Explanation and action
LTCNAME		see subfields	Line trunk controller name. Subfields: XPMTYPE and XPMNO.
	XPMTYPE	PLGC	PM type. Contains the same entry in field XPMTYPE of table LTCINV. Use PLGC for both ISDN and non-ISDN RSC-S. ***Note:*** An LGCO+ is always entered as a PLGC.
LTCNAME (continued)	XPMNO	0 to 255	PM number. Contains the unit number of the PLGC in field XPMNO of table LTCINV.
PSLNKTAB		see subfields	P-side link table. Subfields: PSLINK, PSDATA, and CONTMARK. ***Note:*** Make changes to fields with multiple entries in the PROMPT mode only.
	PSLINK	1, 9, 17	Vector of P-side ports. Enter the P-side port number to enter. The DCH must be entered in odd ports.

Note 1: Enter the subfields in PSDATA depending on the AREASELCT chosen value. If AREASELCT is DS30A, DCH, or NILTYPE, no other fields require datafill. If PSDATA is D30, fill in subfields CARRIDX and ACTION.
Note 2: You can define only three DCHs in ports 1, 9, and 17 in an RCO2 main shelf without an extension cabinet. You can define an additional seven DCHs in an RCO2 with an extension cabinet. A DCH is allowed on links 1, 9, 10–15, and 17–21.
Note 3: A PCM-30 is not allowed on ports 1–8, 9–15, and 17–21, in the order given, if the following condition exists. The DCH is on link 1, 9, or 17.

—continued—

Datafilling table LTCPSINV (continued)

Field	Subfield or refinement	Entry	Explanation and action
	PSDATA	see subfield	P-side data. Subfield: AREASELCT.
	AREASELCT	DCH	P-side data. Enter D30 for trunks and remote nodes. Enter DS30A for P-side interface to a local LCM. The DCH interface ISDN loops.
Note 1: Enter the subfields in PSDATA depending on the AREASELCT chosen value. If AREASELCT is DS30A, DCH, or NILTYPE, no other fields require datafill. If PSDATA is D30, fill in subfields CARRIDX and ACTION. ***Note 2:*** You can define only three DCHs in ports 1, 9, and 17 in an RCO2 main shelf without an extension cabinet. You can define an additional seven DCHs in an RCO2 with an extension cabinet. A DCH is allowed on links 1, 9, 10–15, and 17–21. ***Note 3:*** A PCM-30 is not allowed on ports 1–8, 9–15, and 17–21, in the order given, if the following condition exists. The DCH is on link 1, 9, or 17.			
—end—			

Datafill example for table LTCPSINV

The sample datafill for table LTCPSINV appears in the following example.

MAP example for table LTCPSINV

```
LTCNAME  PSLNKTAB                                          CONTMARK
---------------------------------------------------------------
PLGC 1 (0 NILTYPE) (1 DCH) (2 NILTYPE) (3 NILTYPE)
(4 NILTYPE) (5 NILTYPE).(6 NILTYPE) (7 NILTYPE) (8 NILTYPE)
(9 D30 ESFB8ZS N) (10 NILTYPE) (11 NILTYPE) (12 NILTYPE)
(13 NILTYPE) (14 NILTYPE) (15 NILTYPE) (16 NILTYPE)
(17 NILTYPE) (18 NILTYPE) (19 NILTYPE)                    $
```

Datafilling table RCCINV

The remote cluster controller inventory (RCCINV) table contains inventory data, except the P-side links, for the RCO2. The datafill example for table RCCINV shows only the fields that apply to the ISDN on RSC-S. Refer to the data schema section of the *Translations Guide* for a description of the other fields. The inclusion of the ISP16 option card allows integration of the enhanced D-channel handler (NTBX02BA) card in table DCHINV.

ISDN operations (continued)

Datafilling table RCCINV

Field	Subfield or refinement	Entry	Explanation and action
OPTCARD		ISP16	Optional card. This is a vector of a maximum of 10 entries. Examples: UTR14, UTR6, UTR7, CMR18, ISP16, PRL. ***Note:*** Make changes to fields with multiple entries in the PROMPT mode only.

Note 1: The designator of the enhanced ISDN signal processor (NTBX01BA) card is ISP16. You require NTBX01BA when an RCO2 is equipped with the NTAX74AA Cellular Access Processor (CAP).
Note 2: When you enter field C-side link table (CSLNKTAB), do not assign 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 procedure applies to all interface link types: DS-1, DS30, DS30A, or PCM-30. Table control issues a warning if you make an attempt to assign message links on the same interface card. If you assign message links to the same interface card, an E1 outage can result. An E1 outage is the failure of all message links.

Datafill example for table RCCINV

The following examples show sample datafill for table RCCINV. The samples are for an RCO2 with the NTMX77AA UP and an RCO2 with the optional NTAX74AA CAP, in that order.

MAP example for table RCCINV entered for NTMX77AA UP

```
RCCNAME     FRTYPE FRNO SHPOS FLOOR ROW FRPOS EQPEC    LOAD
-------------------------------------------------------------
MELB RCO2 0 CRSC    0    0     3     C  18    MX85AA   KRI06xx

EXECTAB                                                CONTMARK
-------------------------------------------------------------
(POTS POTSEX)(RMM_TERM RSMEX)(ESALINES ESAEX)            $

CSPM     CSLNKTAB                                      CONTMARK
-------------------------------------------------------------
PLGC 0   (0) (1) (2) (3) (4) (5) (6) (7)                $

ESA INTRASW  OPTCARD                                   CONTMARK
-------------------------------------------------------------
N   N        (UTR5)(ISP16) (7X05)                       $

TONESET   PROCPEC      E2LOAD
-------------------------------------------------------------
AUS100    MX77AA  MX77AA   MX77xxxx
```

Note 1: xx in field LOAD and xxxx in field E2LOAD represent alphanumeric entries, for example B1 and XE01, in the order given.

Note 2: If the shelf has a processor other than NTMX77 or the optional NTAX74, the following occurs. The system automatically enters field E2LOAD with value NILLOAD.

Note 3: When you enter field PROCPEC with AX74AA AX74AA instead of MX77AA MX77AA, the following occurs. The load name prefix in field LOAD changes from KRI to WRI. For example, KRI07xx (for MX77) changes to WRI07XX (for AX74AA). The following example shows sample datafill for table RCCINV when you enter the RCO2 for the NTAX74AA CAP.

MAP example for table RCCINV entered for NTAX74AA CAP

```
RCCNAME     FRTYPE FRNO SHPOS FLOOR ROW FRPOS EQPEC   LOAD
-------------------------------------------------------------------
MELB RCO2 0 CRSC    0    0     3     C  18    MX85AA  KRI06xx

EXECTAB                                                CONTMARK
-------------------------------------------------------------------
(POTS POTSEX)(RMM_TERM RSMEX)(ESALINES ESAEX)           $

CSPM     CSLNKTAB                                      CONTMARK
  ---------------------------------------------------------------
PLGC 0   (0) (1) (2) (3) (4) (5) (6) (7)               $

ESA INTRASW  OPTCARD                                   CONTMARK
-------------------------------------------------------------------
N   N        (UTR5)(ISP16)                             $

TONESET    PROCPEC        E2LOAD
-------------------------------------------------------------------
AUS100     MX77AA  MX77AA  MX77xxxx
```

Datafilling table RCCPSINV

The remote cluster controller P-side inventory (RCCPSINV) table contains only the P-side link assignments for the RCO2. You can enter a maximum of 54, 0 through 53, multiples of P-side link information for the RCO2.

When you add an extension shelf, datafill limits apply for RCO2 P-side links connected to the extension shelf. You can enter the PCM-30 and DCH links that connect to the extension shelf if you entered an extension shelf in table RCCINV. You must change all links connected to the extension shelf from D30 or DCH to NILTYPE or DS30A in table RCCPSINV. Perform this procedure before you delete the extension shelf from table RCCINV.

You can enter a maximum of ten DCH cards in table RCCPSINV.

ISDN operations (continued)

The datafill example for table RCCPSINV shows only the fields that apply to the ISDN on RSC. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table RCCPSINV

Field	Subfield or refinement	Entry	Explanation and action
PSLNKTAB		see subfields	P-side link table. Subfields: PSLINK, PSDATA, and CONTMARK. Enter the vector number. ***Note:*** Make changes to fields with multiple entries in the PROMPT mode only.
	PSLINK	0 to 53	P-side link. Enter RCO2 P-side port number.
	PSDATA	DCH	P-side data type. Enter DS30A for links to RMMs or LCMs. Enter NILTYPE for links that are not assigned. When you enter DCHs, make sure the DCHs are on odd ports.
	CONTMARK	+ or $	Continuation mark. Enter a plus sign (+) to continue, and a dollar sign ($) to end the vector.

Datafill example for table RCCPSINV

The sample datafill for table RCCPSINV appears in the following example.

MAP example for table RCCPSINV

```
RCCNAME       PSLNKTAB
-------------------------------------------------------
MELB  RCO2 0  (0 NILTYPE) (1 DCH) (2 NILTYPE) (3 NILTYPE)
(4 NILTYPE) (5 NILTYPE) (6 NILTYPE) (7 NILTYPE) (8 DS30A)
(9 NILTYPE) (10 DS30A) (11 NILTYPE) (12 NILTYPE)
(13 NILTYPE) (14 NILTYPE) (15 NILTYPE) (16 NILTYPE)
(17 NILTYPE) (18 NILTYPE) (19 NILTYPE) (20 NILTYPE)
(21 NILTYPE) (22 NILTYPE) (23 NILTYPE) (24 NILTYPE)
(25 NILTYPE) (26 NILTYPE) (27 NILTYPE) (28 NILTYPE)
(29 NILTYPE) (30 NILTYPE) (31 NILTYPE) (32 NILTYPE)
(33 NILTYPE) (34 NILTYPE) (35 NILTYPE) (36 NILTYPE)
(37 NILTYPE) (38 NILTYPE) (39 NILTYPE) (40 NILTYPE)
(41 NILTYPE) (42 NILTYPE) (43 NILTYPE) (44 NILTYPE)
(45 NILTYPE) (46 NILTYPE) (47 NILTYPE) (48 NILTYPE)
(49 NILTYPE) (50 NILTYPE) (51 NILTYPE) (52 NILTYPE)
(53 NILTYPE) $
```

Datafilling table LCMINV

The data assignment for the LCM and expanded line concentrating module (LCNE) appears in table line concentrating module inventory (LCMINV). Enter LCMEs off the RCO2 with the same values as LCMEs configured at the host site.

The datafill example for table LCMINV shows only the fields that apply to the ISDN on RSC. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table LCMINV

Field	Subfield or refinement	Entry	Explanation and action
LCMNM			
		see subfields	Line concentrating module name. Enter the LCM name. Subfields: SITE, FRNO, and UNITNO.
	SITE	alphanumeric	Site. Enter the remote location site name.
	FRNO	0 to 511	Frame number. Enter the LCM frame number.
	UNITNO	0 to1	Unit number. Enter the LCM unit number.
FRTYPE		see list	Frame type. Enter the frame type that contains the peripheral module equipment. Enter CRSC for the RCO2 shelf. Enter CEXT for the RCO2 extension shelf. Enter the location of the LCM in fields SHPOS, FLOOR, ROW, and FRPOS.
EQPEC		see list	Frame equipment product engineering code (PEC). Enter PEC for frame type, CRSC or CEXT, where the LCME appears.

Note: When you enter 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 procedure 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. If you assign message links to the same interface card, this procedure can cause an E1 outage if the card fails. An E1 outage is the failure of all message links.

—continued—

ISDN operations (continued)

Datafilling table LCMINV (continued)

Field	Subfield or refinement	Entry	Explanation and action
LOAD		alphanumeric	Software load number. Contains the name of the software issue.
CSPMNO		see subfields	C-side PM number. Subfields: PMTYPE and PMNO.
	PMTYTPE	RCO2	Peripheral module type. Subfield of CSPMNO. Enter the type of PM where the LCM connects on the C-side. Entry values: LGCO, ILGC, ILTC, PLGC, RCC, PRCC, and RCO2.
	PMNO	0 to 511	Peripheral module number. Enter the number of the PM to which the LCME attaches.
LCMINFO		0 to 53	Line concentrating module information. C-side link information to the RCO2. Corresponds with information in table RCCPSINV.
Note: When you enter 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 procedure 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. If you assign message links to the same interface card, this procedure can cause an E1 outage if the card fails. An E1 outage is the failure of all message links.			
—end—			

Datafill example for table LCMINV

The following is an example of datafill for table LCMINV.

MAP example for table LCMINV

```
LCMNM       FRTYPE SHPOS FLOOR ROW FRPOS EQPEC  LOAD
-----------------------------------------------------
MELB 05 0   CRSC   4     1     F   11    BX30AB KRI06AY

CSPMNO        BICTST   MEMSIZE   LCMTYPE  RGEQUIP
-----------------------------------------------------
RCO2 0            N       256K     LCME    Y

RNGTYPE         LCMINFO             CONTMARK
---------------------------------------------
C                (8) (10)             $
```

Datafilling table ISGDEF

Table ISDN service group definition (ISGDEF) contains service and channels information for the PM that supports the DCH. Information includes:

- ISDN service group (ISG) number
- name and number of the PM
- single or combined service attributes (BRA, packet data [PD])

If you specify packet data (PD) service, the system automatically assigns DCH channels. There are 29 BRA channels and two BD channels. You can assign more BD channels if necessary (channel 0 is for messaging).

When you specify only BRA service, all 31 channels are assigned as BRA. If an ISG is not defined for a DCH, that DCH is a spare on hot standby. More than one spare can be present.

To prevent the number of ISGs from exceeding the number of DCHs on the RCO2, you cannot enter DCHs before ISGs. You cannot remove DCHs from table DCHINV if DCHs have an assigned ISG.

Channels specified as BD in table ISGDEF correspond with BD channels specified in table LTMAP. This condition is present when you use SERVORD to map a packet LTID to a loop and Bd channel.

Table ISGDEF allows the PM type RCO2. The RCO2 PM type has the option of an ISP16 card.

ISDN operations (continued)

Datafilling table ISGDEF

Field	Subfield or refinement	Entry	Explanation and action
ISGNO		0 to 255	Integrated services group number. Enter the number of the D-channel handler card in the PM.
PMTYPE		RCO2	PM type. Enter the PM that supports the DCH services. Enter PLGC, LGCI, LTCI, or RCO2.
PMNO		0 to127	Peripheral module number.
SERVICE		see list	Service. Enter the services provided by the ISG; the entry value range is either basic rate access (BRA) or packet data (PD).
Note: For DCH sparing, do not enter the card to use as the spare in this table. Not enough datafill in table ISGDEF automatically causes the system to spare the card.			

—continued—

Datafilling table ISGDEF (continued)

Field	Subfield or refinement	Entry	Explanation and action
CHNLTAB		see subfields	Channel information. This field is a vector with a maximum of 32 entries specifying the functions of each channel. Subfields: D_CHNL and CH_TYPE. Use a dollar sign ($) sign to terminate this field if fewer than 32 entries are made. All BD channels must be assigned in descending order starting at 31, while BRA channels are assigned in ascending order starting at 0. The order of datafill for BD and BRA channels is restricted as follows: • For one night process (ONP), the warning message "`BD channels must be higher than any BRA channels`" is displayed to inform operating company personnel of the incorrect data ordering in the tuple transferred. The tuple is accepted by the table on the new side. • For non-ONP, the error message "`BD channels must be higher than any BRA channels`" is displayed to inform operating company personnel of the incorrect data ordering in the tuple and the tuple is rejected.
Note: For DCH sparing, do not enter the card to use as the spare in this table. Not enough datafill in table ISGDEF automatically causes the system to spare the card.			

—continued—

ISDN operations (continued)

Datafilling table ISGDEF (continued)

Field	Subfield or refinement	Entry	Explanation and action
CHNLTAB (continued)	D_CHNL	1 to 31	D-channel port. Enter the D-channel port assigned on the D-channel card. Port 0 is always reserved for the ISDN signal processor (ISP) functions.
	CH_TYPE	see list	Channel type. Enter the type of service the D-channel provides. Enter NIL, RESERVED, BRA, or BD.
Note: For DCH sparing, do not enter the card to use as the spare in this table. Not enough datafill in table ISGDEF automatically causes the system to spare the card.			
—end—			

Datafill example for table ISGDEF

The following example shows sample datafill for table ISGDEF.

MAP example for table ISGDEF

```
                              SERVICE
                                                          CHNLTAB
------------------------------------------------------------------
_
0  RCO2  0
                             (BRA)      (PD) $

(O RESERVED)   (1 BRA)   (2 BRA)   (3 BRA)   (4 BRA)   (5 BRA)
(6 BRA)   (7 BRA)   (8 BRA)   (9 BRA)   (10 BRA)  (11 BRA)
(12 BRA)  (13 BRA)  (14 BRA)  (15 BRA)  (16 BRA)  (17 BRA)
(18 BRA)  (19 BRA)  (20 BRA)  (21 BRA)  (22 BRA)  (23 BRA)
(24 BRA)  (25 BRA)  (26 BRA)  (27 BRA)  (28 BD)   (29 BD)
(30 BD)   (31 BD)  $

1  RCO2    0
                             (BRA)     (PD) $

(O RESERVED)   (1 BRA)   (2 BRA)   (3 BRA)   (4 BRA)   (5 BRA
(6 BRA)   (7 BRA)   (8 BRA)   (9 BRA)   (10 BRA)  (11 BRA)
(12 BRA)  (13 BRA)  (14 BRA)  (15 BRA)  (16 BRA)  (17 BRA)
(18 BRA)  (19 BRA)  (20 BRA)  (21 BRA)  (22 BRA)  (23 BRA)
(24 BRA)  (25 BRA)  (26 BRA)  (27 BRA)  (28 BD)   (29 BD)
(30 BD)   (31 BD)  $

2   PLGC  0
                             (BRA)     (PD) $
```

Datafilling table DCHINV

Table D-channel inventory (DCHINV) contains information about the DCH for peripherals that contain this card. The data includes the following:

- DCH ID number for each DCH
- name and number of the host PM and the associated NTMX82 port
- PEC (NTBX02BA)
- load file
- port number

You can define a maximum of ten DCHs for each CPM shelf.

The datafill example for table DCHINV shows the fields that apply to the ISDN on RSC-S. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Note: Spare the DCH before you change the DCHPEC tuple. An attempt to change the table with an ISDN service group connected is not permitted.

Datafilling table DCHINV

Field	Subfield or refinement	Entry	Explanation and action
DCHNO		0 to 255	D-channel handler card number.
PMTYPE		RC02	Peripheral module type. Enter the PM where the DCH card resides. Values: PLGC, LGCI, LTCI, or RCO2.
PMNO		0 to 255	Peripheral module number. Enter the unit number.
DCHPEC		BX02BA	D-channel car product equipment code. Enter the D-channel PEC card number (BX02BA) for enhanced D-channel (EDCH) operations.
LOAD		alphanumeric	Software load name. Enter the name of the software load for the DCH card.
PORT		0 to 19	P-side port. Enter the port number assigned in table LTCPSINV.

ISDN operations (continued)

Datafill example for table DCHINV

The sample datafill for table DCHINV appears in the following example.

MAP example for table DCHINV

```
DCHNO PMTYPE    PMNO    DCHPEC     LOAD      PORT
------------------------------------------------
2     RCO2      0       BX02BA     DCH31AW   1
3     RCO2      0       BX02BA     DCH31AW   9
```

Datafilling table LTGRP

Table LTGRP provides the capacity to define a maximum of 32 LT groups. Define one of the groups as ISDN. Group names can be any combination of digits or letters to a maximum of eight characters.

Each group can support a maximum of 1022 LTIDs. You can define a maximum of 32 704 LTIDs (32 x 1022) with 32 logical groups. The key to this terminal is the LT group. You must enter an LT in table LTGRP before you enter an LT from this group in any other table.

Note: You cannot add or delete a permanent ISDN entry.

The datafill example for table LTGRP shows only the fields that apply to the ISDN on RSC-S. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table LTGRP

Field	Subfield or refinement	Entry	Explanation and action
GROUP		alphanumeric	Logical group name. Enter the name of the logical group of terminals.
GROUPNO		0 to 15	Logical group number. Enter the group number corresponding to a group name. The number can be from 0 to 31. Any group with the SAPI16 option must have a group number from 0 to 15. The DPN recognizes LTs by the LT group and LT number.
OPTIONS		SAPI16	Enter the option. The only option available is SAPI16. If you specify this option, you can enter both packet and circuit switching terminals for this group.
Note: DPN is a prefix for a series of packet data switches in the data networking system.			

Datafill example for table LTGRP

The following example shows sample datafill for table LTGRP.

MAP example for table LTGRP

```
GROUP       GROUPNO OPTIONS
---------------------------------

ISDN        0       (SAPI16)  $
LTCO        1       (SAPI16)  $
PCCC        2       (SAPI16)  $
TESTO       3       (SAPI16)  $
```

ISDN operations (continued)

Datafilling table LNINV

Table LNINV lists data for each line card slot. The LEN tuple in table LNINV corresponds to the LEN tuple in table LTMAP. With ISDN lines, the values for some of the fields have changed.

The datafill example for table LNINV shows only the fields that apply to the ISDN on RSC-S. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table LNINV

Field	Subfield or refinement	Entry	Explanation and action
LEN		see subfields	Subfields: SITE, FRAME, UNIT, LSG, and CIRCUIT.
	SITE	alphanumeric	Site. Enter the remote location site name.
	FRAME	0 to 99	Frame. Enter the frame number.
	UNIT	0 to 1	Unit. Enter the unit number.
	LSG	0 to 23	Line subgroup. Enter the LSG.
	CIRCUIT	0 to 15	Circuit. Enter the line card circuit number. For ISDN lines, the range is 0 to 15 not 0 to 31.
CARDCODE		BX27AA	Card code. Enter BX27AA for ISDN line cards in the LCME.
STATUS		WORKING	Line inventory available status. Enter HASU, WORKING, UNEQUIP, CUTOFF, or RESERVED, a field usually controlled through SERVORD. WORKING is the recommended entry.
GND		N	Ground. For ISDN lines, enter N.
BNV		NIL	Balanced network value. ISDN lines have a non-loaded network value. Enter NL.
Note: When you define an LEN as working in table LNINV, a connection is set up. The connection is for the four D-channels to one DCH card BRA port. In the LCME, the first four ISDN lines defined as working in the same physical drawer are mapped together.			

—continued—

Datafilling table LNINV (continued)

Field	Subfield or refinement	Entry	Explanation and action
MNO		Y	Manual override. Since an on-hook balance network test will not update field BNV, enter Y.
CARDINFO		NIL	Card information. Since this field does not apply to ISDN lines, enter NIL.
Note: When you define an LEN as working in table LNINV, a connection is set up. The connection is for the four D-channels to one DCH card BRA port. In the LCME, the first four ISDN lines defined as working in the same physical drawer are mapped together.			
—end—			

Datafill example for table LNINV

The sample datafill for table LNINV appears in the following example.

MAP example for table LNINV

```
LEN                 CARDCODE PADGRP STATUS GND BNV MNO CARDINFO
------------------------------------------------------------

MELB  04  1  00  04  BX27AA   NPDGP  WORKING N   NL  Y  NIL
MELB  04  1  00  05  BX27AA   NPDGP  WORKING N   NL  Y  NIL
MELB  04  1  00  06  BX27AA   NPDGP  WORKING N   NL  Y  NIL
MELB  04  1  00  07  BX27AA   NPDGP  WORKING N   NL  Y  NIL
MELB  04  1  01  00  BX27AA   NPDGP  WORKING N   NL  Y  NIL
MELB  04  1  01  01  BX27AA   NPDGP  WORKING N   NL  Y  NIL
MELB  04  1  01  02  BX27AA   NPDGP  WORKING N   NL  Y  NIL
MELB  04  1  01  03  BX27AA   NPDGP  WORKING N   NL  Y  NIL
MELB  04  1  01  04  BX27AA   NPDGP  WORKING N   NL  Y  NIL
```

Datafilling table SPECCONN

Table special connections (SPECCONN) contains connections that you cannot modify using SERVORD. The types of connections follow:

- Bd-channel
- Bb-channel
- B-channel to B-channel

The Bd-channel connection carries service access point identifier 16 (SAPI16) packet data from a DCH to the PH. This connection supports a maximum of 64 LTs.

ISDN operations (continued)

The Bb-channel connection provides packet data service on a B-channel. The connection is between a B1 or B2 channel on a line card and a PCM-30 channel to the PH.

The B-channel to B-channel connection is between a B1 or B2 channel on a line card to another B1 or B2 channel. The end points are on separate LCMEs with an access privilege (AP) of PB.

Table SPECCONN is the table used to route different PCM-30 links to the packet handler. You can nail up the links through the PLGC.

This table changes to accommodate an RCO2 entry in PMTYPE, a subfield of SCSEL. You can define the PCM-30 end point of the RCO2 shelf in ports higher than 19, a maximum of 47.

The datafill example for table SPECCONN shows only the fields that apply to the ISDN on RSC-S. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table SPECCONN

Field	Subfield or refinement	Entry	Explanation and action
ENDPT1		see subfields	End point 1. Identifies the first end point. Contains subfield SCSEL and refinements.
	SCSEL	see list	End point selector. Enter the type of selector for the end point. Enter D30, ISLC, or DCHCHNL.
ENDPT1 (continued)		D30	If you enter SCSEL D30, subfield PMTYPE determines the fields to complete.
	PMTYPE	PLGC	PM type. Entries are PLGC or RCO2. If entry is PLGC, enter subfields DEQNO, DQCKTNO, and DEQCKTTS. See entry for RCO2.
	DEQNO	0 to 511	DEQNO. Enter external number of the PM.
	DEQCKTNO	0 to 19	DEQCKTNO. This is the PM circuit number. Enter P-side port of the PM.
	DEQCKTTS	1 to 31	DEQCKTTS. Enter the time slot (channel) on the PCM-30.

—continued—

Datafilling table SPECCONN (continued)

Field	Subfield or refinement	Entry	Explanation and action
	PMTYPE	RCO2	If entry is RCO2, enter subfields RCO2NO, RCO2CKTNO, and RCO2CKTTS.
	RCO2NO	0 to 511	RCO2NO. Enter external number of the PM.
	RCO2CKTNO	0 to 47	RCO2CKTNO. The PM circuit number. Enter P-side port of the PM.
	RCO2CKTTS	1 to 24	RCO2CKTTS. Enter time slot (channel) on the PCM-30.
		ISLC	If you enter SCSEL ISLC, complete the following fields:
	LEN	see subfields	Line equipment number for the ISDN card. Subfields: SITE, FRAME, UNIT, DRAWER and CIRCUIT.
		see list	Basic rate access channel to nail up. Enter channel on the ISDN loop, D, B1, or B2.
		DCHCHNL	If you enter SCSEL DCHCHNL, complete the following fields:
ENDPT1 (continued)	ISGNO	0 to 255	ISDN signal group number. Enter D-channel card number, identified in table ISGDEF.
	CHNL	0 to 31	D-channel. Enter D-channel defined for packet switching (BD) in table ISGDEF. Defaults are 30 and 31.
ENDPT2		see subfields	End point 2. Identifies the second end point. Subfield: SCSEL and refinements. ***Note:*** Subfields and refinements for endpoint 2 are the same as endpoint 1.

—continued—

ISDN operations (continued)

Datafilling table SPECCONN (continued)

Field	Subfield or refinement	Entry	Explanation and action
CONTYPE		CON	Connection type. In the connection type field, PEND indicates pending, CON indicates connected, and CAB indicates connected with A-bit and B-bit signaling. The RES indicates reserved.
STATUS		ACTIVE	Connection status. In the connection status field, PMBUSY indicates that the peripheral is busy. The ACTIVE indicates a physically established connection. Integrity is present and is constantly checked. The INACTIVE indicates the connection is not set up. The MTC indicates a broken connection that maintenance uses. The NOINTEG indicates a physical connection but integrity is not found or is lost. The MTC indicates both XPMs are in service.
—end—			

Datafill example for table SPECCONN

The following example shows sample datafill for table SPECCONN.

MAP example for table SPECCONN

```
ENDPT1                          ENDPT2              CONTYPE  STATUS
------------------------------------------------------------------
D30   RCO2   0   5   1  DCHCHNL 0   28   CON      ACTIVE
D30   RCO2   0   5   2  DCHCHNL 0   29   CON      ACTIVE
D30   RCO2   0   5   3  DCHCHNL 0   30   CON      ACTIVE
D30   RCO2   0   5   4  DCHCHNL 0   31   CON      ACTIVE
D30   RCO2   0   5   5  DCHCHNL 1   28   CON      ACTIVE
D30   RCO2   0   5   6  DCHCHNL 1   29   CON      ACTIVE
D30   RCO2   0   5   7  DCHCHNL 1   30   CON      ACTIVE
D30   RCO2   0   5   8  DCHCHNL 1   31   CON      ACTIVE
```

Datafilling table LTDEF

Table logical terminal definition (LTDEF) defines ISDN terminals and AP for the type of service the terminal can access.

The datafill example for table LTDEF shows only the fields that apply to the ISDN on RSC. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

CAUTION
Use the Service Order system to add and delete tuples to and from table LTDEF.
Do not use the table editor to add or delete tuples. The table editor can result in the assignment of incompatible features to the line. This table datafill appears here for information only.

Datafilling table LTDEF

Field	Subfield or refinement	Entry	Explanation and action
LTKEY		see subfields	Logical terminal key. Subfields: LTGRP and LTNUM.
	LTGRP	alphanumeric	Logical terminal group. Enter the LT group. Group ISDN is defined.
	LTNUM	0 to 1022	Logical terminal number.

—continued—

ISDN operations (continued)

Datafilling table LTDEF (continued)

Field	Subfield or refinement	Entry	Explanation and action
LTAP		B, D, BD, PB	LT access privilege. Enter B for circuit switching or D for D-channel packet switching. Enter BD for combined circuit switching and D-channel packet switching, or PB for B-channel packet switching. Note that BD is for functional sets.
LTCLASS		see list	LT class of service. Defines set of services allowed for the LT. The services are: • basic rate access stimulus (BRAKS) • basic rate access functional (BRAFS) • basic rate access Meridian feature transparency (BRAMFT) • Meridian attendant services console (MASCON) • primary rate access (PRA) ***Note:*** Make changes to fields with multiple entries in the PROMPT mode only.
—end—			

Datafill example for table LTDEF

The sample datafill for table LTDEF appear in the following example.

MAP example for table LTDEF

```
LTKEY   LTAP
                                          LTCLASS
------------------------------------------------

LTCO         1   B
                                          BRAKS
LTCO         2   B
                                          BRAKS
   .
   .                  .
   .                  .
RCO2 0  23  D         .                   BRAFS

RCO2 0  24  BD
                                          BRAFS
```

Datafilling table KSETINV

Table business set inventory (KSETINV) identifies an LTID as an ISDN keyset. Table KSETINV defines the keyset attributes. The keyset can be a T2317 business set, an M5317t business set and terminals, or equipment by other manufacturers.

Note: Table KSETINV is present in the MDC translations. Enter each line card slot in table LNINV.

The datafill example for table KSETINV shows only the fields that apply to the ISDN on RSC. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

CAUTION

Use the Service Order system to add and delete tuples to and from table KSETINV. Do not use the table editor to add or delete tuples. The table editor can result in the assignment of incompatible features to the line. This table datafill appears here for information only.

ISDN operations (continued)

Datafilling table KSETINV

Field	Subfield or refinement	Entry	Explanation and action
KSETLEN		see subfield	Keyset line equipment number. The key to table KSETINV. Subfield: LEN, or for ISDN terminals subfields LTGRP and LTNUM.
	LEN	see subfields	Line equipment number for the card that has the keyset. Subfields: SITE, FRAME, UNIT, DRAWER, and CIRCUIT.
	LTGRP	alphanumeric	Logical terminal group. Enter the LT group name from table LTGRP. This group contains a maximum of eight characters or digits.
	LTNUM	1 to 1022	Logical terminal number. Enter the LT number.
SETDATA		see subfields	Set data. Subfields: KSET and FANUM.
	KSET	ISDNKSET	Keyset. Contains keyset type for ISDN terminals. ISDNKSET is the only response.
	FANUM	2 to 64	Number of feature activators or feature appearance keys (FAP). Enter the number of FAPs programmable on the LT.

Datafill example for table KSETINV

The sample datafill for table KSETINV appears in the following example.

MAP example for table KSETINV

```
KSETLEN     SETDATA
                                   OPTIONS          CONTMARK
-------------------------------------------------------------
RCO2 0      ISDNKSET    64                            $
RCO2 1      ISDNKSET    64                            $
RCO2 2      ISDNKSET    64                            $
RCO2 3      ISDNKSET    64                            $
RCO2 4      ISDNKSET    64                            $
```

Datafilling table KSETLINE

Table keyset line (KSETLINE) associates CAPs, ISDN LT call activators and indicators, with directory numbers (DN) and different feature options.

The datafill example for table KSETLINE shows only the fields that apply to the ISDN on RSC. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

CAUTION

Use the Service Order system to add and delete tuples to and from table KSETLINE. Do not use the table editor to add or delete tuples. The table editor can result in the assignment of incompatible features to the line. This table datafill appears here for information only.

Datafilling table KSETLINE

Field	Subfield or refinement	Entry	Explanation and action
KSETKEY		see subfields	Keyset key. This field is the key to the KSETLINE table. Subfield: LEN, or for ISDN terminals subfields LTGRP and LTNUM, and subfield KEY.
	LEN	see subfields	Line equipment number for the card with the keyset attached. Subfields: SITE, FRAME, UNIT, DRAWER, and CIRCUIT.
	LTGRP	alphanumeric	Logical terminal group. Enter the LT group name from table LTGRP. This group contains a maximum of eight characters or digits.
	LTNUM	1 to 1022	Logical terminal number. Enter the LT number in the group.
	KEY	1 to 69	Key. Enter the number associated with the physical set key where the DN is assigned. You must program key number 1 for the set primary DN and enter before any other DNs. For M5317 sets, use only keys 1 through 11 for DNs (CAPs) and keys 1 through 33 for FAPs.

—continued—

ISDN operations (continued)

Datafilling table KSETLINE (continued)

Field	Subfield or refinement	Entry	Explanation and action
FORMAT		see list	Format of datafill. Possible entries: directory number(DN), multiple appearance DN (MADN), group intercom (GIC), and automatic call distribution (ACD).
		DN	Contains refinements specified for the format of the datafill. For DN the following apply.
	RING	Y or N	Ringing activated. Boolean yes or no to activate ringing capability.
	DN	numeric	Directory number. Consists of a directory number, that is a maximum of 15 digits, attached to this terminal.
	CUSTGRP	alphanumeric	Customer group. Defined in SERVORD while you attach a DN to an LTID.
	SUBGRP	0 to 7	Sub group number.
	NCOS	0 to 255	Network class of service.
	SNPA	000 to 999	Serving number plan area. Consists of three-digit area number.

—end—

Datafill example for table KSETLINE

The sample datafill for table KSETLINE appears in the following example.

MAP example for table KSETLINE

```
KSETKEY
           FORMAT                DNRESULT   CONTMARK
------------------------------------------------
MELB 0  1   DN    Y 2265235 SYDMC 0 0 613   +
                    DCPX      SMDR           $
```

Datafilling table LTMAP

Table logical terminal map (LTMAP) maps ISDN LTs to a LEN or the TEI, depending on the AP, from table LTDEF.

The datafill example for table LTMAP shows only the fields that apply to the ISDN on RSC-S. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

CAUTION
Use the Service Order system to add and delete tuples to and from table LTMAP.
Do not use the table editor to add or delete tuples. The table editor can result in the assignment of incompatible features to the line. This table datafill appears here for information only.

Datafilling table LTMAP

Field	Subfield or refinement	Entry	Explanation and action
LTKEY			Logical terminal key. Subfields: LTGRP and LTNUM.
	LTGRP	alphanumeric	Logical terminal group. Enter the LT group name from table LTGRP. This group contains a maximum of eight characters or digits.
	LTNUM	1 to 1022	Logical terminal number. Enter the LT number in the group.
MAPTYPE		LEN	Terminal mapping type. Subfields: CLLI or LEN that identify the terminal.
	LEN	see subfields	LEN for LCME. Subfields: SITE, FRAME, UNIT, LSG, and CIRCUIT.
OPTION		see list	Option. The option based on the terminal AP selected. Use the TEI for B- and BD-type terminals. Use the PHI for packet handler interface. Use the BCH for high-speed packet data terminals, type B1 or B2. Use the DCHCHNL for D-channel.

—continued—

ISDN operations (continued)

Datafilling table LTMAP (continued)

Field	Subfield or refinement	Entry	Explanation and action
OPTION (continued)	TEI	see list	Terminal end point identifier for B, D, BD type terminals. Enter 1 or 2 for M5317 devices, and 21 through 26 for D-channel devices.
	PHI	0 to 1023	Packet handler interface. Contains the number of the PHI.
	BCH	see list	B-channel. Enter the dedicated B-channel for high-speed packet data, B1 or B2.
	DCHCHNL	0 to 31	DCH channel. Enter the specified channel located on a DCH card. The option is valid for BD- and D-type terminals.
		—end—	

Datafill example for table LTMAP

The sample datafill for table LTMAP appears in the following example.

MAP example for table LTMAP

```
LTKEY                    MAPPING                          OPTION
------------------------------------------------------------------------
ISDN 0    1      LEN   MELB  04  1  00  01                (BCH B1)$
ISDN 0    2      LEN   MELB  04  1  00  02                (BCH B2)$
ISDN 0    3      LEN   MELB  04  1  00  03          (   TEI    1)$
ISDN 0    4      LEN   MELB  04  1  00  04          (   TEI    2)$
ISDN 0    5      LEN   MELB  04  1  02  00          (   TEI    1)$
ISDN 0    6      LEN   MELB  04  1  02  00          (   TEI    2)$
ISDN 0  200      LEN   MELB  04  1  03  01   (TEI 21) (DCHCHNL 26)$
ISDN 0  201      LEN   MELB  04  1  03  02   (TEI 22) (DCHCHNL 27)$
ISDN 0  202      LEN   MELB  04  1  03  03   (TEI 23) (DCHCHNL 28)$
ISDN 0  203      LEN   MELB  04  1  03  04   (TEI 24) (DCHCHNL 29)$
ISDN 0  204      LEN   MELB  04  1  03  05   (TEI 25) (DCHCHNL 30)$
ISDN 0  205      LEN   MELB  04  1  03  06   (TEI 26) (DCHCHNL 31)$
```

Datafilling table KSETFEAT

Table keyset feature (KSETFEAT) associates ISDN LT feature activators and indicators (FAP) with feature instances and options.

The datafill example for table KSETFEAT shows only the fields that apply to the ISDN on RSC-S. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

CAUTION

Use the Service Order system to add and delete tuples to and from table KSETFEAT. Do not use the table editor to add or delete tuples. The table editor can result in the assignment of incompatible features to the line. This table datafill appears here for information only.

ISDN operations (continued)

Datafilling table KSETFEAT

Field	Subfield or refinement	Entry	Explanation and action
FEATKEY		see list	Feature key. The key to table KSETFEAT. Subfields: LEN, KEY, and FEAT.
	LEN	see subfields	Line equipment number. Subfields: SITE, FRAME, UNIT, DRAWER, and CIRCUIT.
FEATURE		alphanumeric	KSET feature. Contains feature type, Malicious Call Hold (MCH), for example.
KVAR		alphanumeric	Key variable index.

Note: You can assign the Malicious Call Hold (MCH) feature to a basic rate functional set (BRAFS) with Australian NI-2 software loads.

Datafill example for table KSETFEAT

The sample datafill for table KSETFEAT appears in the following example.

MAP example for table KSETFEAT

```
FEATKEY          FEATURE    KVAR
------------------------------------------------
MELB  0  1  SDY  SDY        Y  Y
```

Datafilling table KSETKEYS

Table keyset keys (KSETKEYS) defines business set feature key templates and assigns dedicated keys for business sets. Enter the Malicious Call Hold (MCH) option to activate Feature Malicious Call Trace (MCT) in Australia

on NI-2 lines. The MCH option has a basic rate access functional (BRAFS) business set.

The datafill example for table KSETKEYS shows only the fields that apply to the ISDN on RSC-S. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

CAUTION

Use the Service Order system to add and delete tuples to and from table KSETKEYS. Do not use the table editor to add or delete tuples. The table editor can result in the assignment of incompatible features to the line. This table datafill appears here for information only.

Datafilling table KSETKEYS

Field	Subfield or refinement	Entry	Explanation and action
TEMPLATE		alphanumeric	Template name. This field is the key to the KSETKEYS table.
	SETINFO	alphanumeric	Set information. Contains keyset type. Valid entries: basic rate access (BRAKS), basic rate access Meridian feature transparency (BRAMFT), and basic rate access functional (BRAFS). Enter BRAFS to allow datafill in subfield FEATLIST to activate MCT in Australia.
	FEATLIST	alphanumeric	KSETKEYS features. Contains vector of 36 feature types. Enter feature type MCH. ***Note:*** Make changes to fields with multiple entries in the PROMPT mode only.

ISDN operations (continued)

Datafill example for table KSETKEYS

The sample datafill for table KSETFEAT appears in the following example.

MAP example for table KSETFEAT

```
TEMPLATE          SETINFO
                                              FEATLIST
-------------------------------------------------------
MCT               BRAFS                        MCH
```

Tools for verifying translations

Translations verification (TRAVER) uses datafill to check the routing of a call. The syntax for TRAVER follows. The use of TRAVER for packet-switched calls is not supported.

>TRAVER orig digits trace authcode mfst billno bill_mfst

SERVORD

The SERVORD allows you to add or delete line-associated data but not have to access tables. Use SERVORD to enter these tables automatically. The abbreviated process saves time and minimizes errors.

Use LTID when you enter lines for an LCME off an RCO2. The datafill sequence does not change. The examples that follow show both the prompt and non-prompt modes and what fields are entered.

SERVORD limits

The ISDN operations do not have SERVORD limits. The SERVORD examples are for ISDN on RSC-S. For complete information on the application of SERVORD, refer to the *SERVORD Reference Manual*.

Setting up a logical terminal (using the SLT command)

Command SLT is the SERVORD command that manipulates data associated with an ISDN LT. Use command SLT for circuit switching and packet switching. The SLT command defines a new LT, deletes an LT, and detaches an LT from a LEN. The SLT command attaches an LT to a LEN with the associated option.

Providing B-channel switched service

To define a new circuit-switch LT, create an LTID. Associate the LTID with an LEN and a TEI. Examples that illustrate the SERVORD entry process appear in the following displays.

ISDN operations (continued)

SERVORD example for creating an LTID in prompt mode

```
SO:
> SLT
SONUMBER :  NOW 90 03 14 AM
>
LTID:
> ISDN  1
FUNCTION:
> ADD
CS:
> Y
PS:
> N
```

SERVORD example for creating an LTID in no-prompt mode

```
>SLT $ ISDN 1 ADD Y N
```

SERVORD example for attaching an LEN and TEI to LTID ISDN operations in prompt mode

```
SO:
>SLT
SONUMBER :  NOW 90 03 14 AM
>
LTID:
>ISDN 1
FUNCTION:
>ATT
LEN
>2 0 6 0
OPTION:
>TEI
TEI:
>1
>
>$
```

ISDN operations (continued)

SERVORD example for ISDN operations in no-prompt mode

```
>SLT $ ISDN 1 ATT 2 0 6 0 TEI 1 $
```

SERVORD example for defining the CAP/DN on the M5317T key in prompt mode

```
SO:
>NEW
SONUMBER  :  NOW 90 03  14 AM
>$
DN:
> 8344040
LCC:
> ISDNKSET
GROUP
> ISDNGRP
SUBGRP:
> 0
NCOS:
> 0
SNPA:
> 919
KEY:
> 1
MAXKEYS:
>3  3
RELKEY:
> 24
LATTANAME;
>NILLATA
LTG:
>0
LEN:
>ISDN 1
OPTKEY:
>2 5
OPTION:
>HLD
OPTKEY:
> $
```

ISDN operations (end)

SERVORD example for defining CAP/DN on the M5317T key in no-prompt mode

```
>NEW $ 8344040 ISDNKSET ISDNGRP 0 0 919 1 33 24 NILLATA 0 ISDN 1 25
```

Firmware downloading

Functional group

BAS00003

Feature package

NTXR42AA Firmware downloading

Release applicability

XPM05 and higher

Requirements

Firmware downloading requires the following feature packages:

- NTX000AA Bilge
- NTX001AA Common Basic
- NTX270AA New Peripheral Maintenance
- NTXR34AA XPM-PLUS Basic

Description

The MX77 firmware downloading implements a process for loading firmware into the EEPROM of the unified processor (UP) (NTMX77AA) card. The main shelf of the Remote Switching Center-SONET (RSC-S) configuration contains this card.

This method is used for upgrading firmware because of the high cost of changes. Equipment upgrades that cause enhancements and maintenance of multiple versions of EPROMs are examples of changes. This method spares the cost of preparing, sending, and changing EPROMs on all cards. This method saves the need for returning all EPROMs on current UP cards equipped with a previous firmware version.

Firmware downloading (continued)

Operation

The UP is equipped with flash memory chips. The system upgrades the UP after an image is loaded like the software loading method from a host switch. There are two flash EEPROMs or banks on the NTMX77AA card. These banks are 256-kbyte programmable chips. One bank is in the executable mode while the other is in the loadable mode. The EEPROM that executes random access memory (RAM) is the executable EEPROM. 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.

You implement the downloading process manually by the current LOADPM command from the MAP terminal. This procedure occurs when a new firmware load is issued.

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]
```

Firmware downloading (continued)

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 datafilled in the appropriate inventory table.

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
>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.

Translations table flow

Firmware downloading translations tables are described in the following list:

- Table PMLOADS stores the device location of every peripheral module (PM) load file to map between load names and devices where the loads reside. You must enter PM load files in table PMLOADS before you can use them in inventory tables. You enter load information in field LOADNAME. You enter corresponding entries in field LOAD for tables LTCINV, LCMINV, and RMMINV.
- Table LTCINV contains inventory data for PM types. The exception is the P-side link assignments. This table defines the PCM-30 line group controller (PLGC) or line group controller overseas (LGCO) on the C-side of the RCO2. You enter load information for this table in field LOAD. Load information corresponds to the LOADNAME tuple from table PMLOADS.

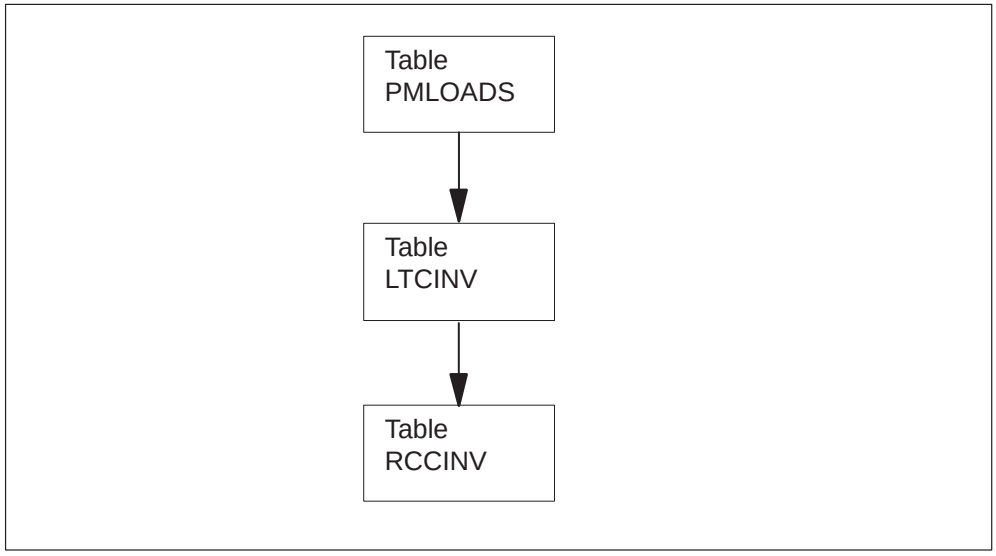
  Note: The RSC-S can be configured with either the PLGC or the LGCO. In either event, you must use PLGC as the datafill entry.

Firmware downloading (continued)

- Table RCCINV maintains a list of RCO2s entered in the DMS that contains RCO2 inventory data. The exception is P-side link assignments. Table information identifies RCO2 location, required load and exec lineups, and network link connections. You enter RCO2 C-side PCM-30 assignments in table RCCINV. In addition, you enter intraswitching in table RCCINV.

The following flowchart shows the firmware downloading translation process.

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 in the ManB state.
- The unit must have the NTMX77AA 0D2 card and support new messaging. The EEPROM version must be equal 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 (SMDR).

Entering office parameters

Firmware downloading does not affect office parameters.

Datafill sequence

The following table lists tables that require datafill to implement firmware downloading. The list appears in the order you must enter.

Datafill tables required for firmware downloading

Table	Purpose of table
PMLOADS	PM loads. Stores the device location of every PM load file to map between load names and devices where the loads reside. This condition permits autoload to locate load files without personnel interruption. You must enter the expanded peripheral module (XPM) load files in table PMLOADS before use in XPM inventory tables.
LTCINV	Line trunk controller inventory. Contains the inventory data for PM types. The exception is the P-side link assignment. Use this table to define the PCM-30 line group controller (PLGC). You also use this table to define line group controller overseas (LGCO) on the C-side of the RCO2.
RCCINV	Remote cluster controller inventory. Contains inventory data for the RCO2. The exception is P-side link assignments. You enter RCO2 C-side PCM-30 assignments in table RCCINV.

Entering table PMLOADS

Table PMLOADS stores the device location of every PM load file to map between load names. Table PMLOADS also stores devices where the loads reside. The PMs suspected of having a corrupt load are automatically reloaded. Recovery time is reduced. This reduction permits autoload to locate load files without interruption by personnel.

Table PMLOADS stores data for the following:

- name of the active loadfile—the default load used with the LOADPM command and most system initiated activities

Firmware downloading (continued)

- name of the backup loadfile—the load used if a problem is present in loading or returning to service the active loadfile. The backup loadfile is always the loadfile shipped with the RC02 that is not patched.
- file locations
- update active loadfile field—indicates if the site wants the active field updated automatically. The feature allows the patched loadfile to be loaded into the XPM should a reload be necessary. This procedure simplifies reload and recovery of the XPM. The active file information updates through loadfile patching, if loadfile patching is enabled.

The system uses active and backup files as part of loading and recovery.

You must enter the PM load files in table PMLOADS before you can use them in inventory tables. During both first datafill and the dump and restore process, the system automatically adds tuples in PMLOADS when LTCINV and RCCINV tuples are added.

Note: An exception to this rule occurs during first datafill and dump and restore. During these times, the system enters tuples in table PMLOADS automatically when you enter LTCINV tuples.

You add a dummy entry if the load name does not appear in the table. For switch operation, you must change this dummy entry to include the correct storage device for the PM load file.

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. The PPXLs are incremental loads built using patch updates. The patch updates were used to create patch files released to the field. There is no functional or technical difference between a regular XPM load with patches compared to a PPXL where the patches are incorporated into the load. PPXLs are the same as CM loads that have patches built in based on date of shipment.

Implementation of PPXLs

At the beginning of each PPXL loadfile is a 1 kbyte data block containing the patch IDs for the patches included in the PPXL. The patches have been built into the PPXL. The corresponding patch files must exist when the PPXL is entered in table PMLOADS. The patch files are for each patchid listed in the 1 kbyte data block.

Firmware downloading (continued)

When you enter the PPXL in table PMLOADS, the following two procedures apply to the loadset. The system modifies the loadset if a loadset exists for the base load. The system creates a loadset if the base load is new to the DMS-100 switch.

> ***Note:*** You use loadsets 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 you add the PPXL to table PMLOADS, the system recovery method controller (SRC) can load the PPXL manually or automatically. When the SRC loads the PPXL by either method, the patching performed after loading the PPXL will be reduced or eliminated completely. This procedure occurs because most or all of the patches have already been included in the load.

Once the PPXL is loaded, the PPXL can have additional patches applied or removed in the same fashion as a normal XPM load. Any patch built into the PPXL can be removed, as long as the 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.

PPXL naming convention

The 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 ECL03BX would be named ECL03BX_941129. The base load name always remains the same. Base loads are identified as any load not having the _<date> suffix.

The value is to maintain the patch stream that is able to up-issue a PPXL as required. You use the date identifier to identify the PPXL vintage.

PPXL storage requirements

When preparing to load PPXLs, operating companies are advised to double their XPM load storage requirements to accommodate the PPXLs. The PPXLs require that the PPXL loadfile be stored on the ACTVOL device and the base load file be stored on the BKPVOL device.

Firmware downloading (continued)

Loading a PPXL

There are two methods to add PPXLs to an office. The first is for upgrading an office to a new base load lineup. You use this method when the base loadname is not now in table PMLOADS. The second method is for adding PPXLs to offices that already have the base loadname in table PMLOADS. For example, ESC03CJ (the current loadname) is appended to ESC03CJ_950105 (the PPXL added to the baseload). The two methods follow:

Note 1: The PPXLs are only supported on BCS36 or higher CM loads.

Note 2: Apply PATCH JCK19 to the CM before you continue.

Upgrading the baseload

To load a new PPXL in an office, use the following procedure:

1 Copy the base loadfile and the PPXL loadfiles to the disk volumes for PM loads.

Note: Copy both the base load and the PPXL load 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 in the load tape shipment. After the PPXL file is on disk, to obtain a list of patches included in the PPXL, type

>XPMLFP

and press the Enter key.

>PATCHLIST FILE ppxl_filename

and press the Enter key.

where

ppxl_filename — is the filename of the PPXL loaded added to the base load

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 BKPFILE.

4 Add the base loadname to the correct 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. Refer to the datafill example for table PMLOADS to see this tuple.

6 To set the loadset against both units of the XPM, type

>PATCHER

and press the Enter key.

>SET loadname PM pm_type device_no unit_no

and press 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 To load the PPXL into each unit of the XPM, type

>BSY UNIT unit_no

and press the Enter key.

>LOADPM UNIT unit_no

and press the Enter key.

>RTS UNIT unit_no

and press the Enter key.

where

unit_no	is the unit number of the XPM to load

8 Perform a SWACT of the XPM and repeat step 7.

Note 1: After you load the XPM, the XPM can have additional patches applied or removed like past XPM loads. You can remove any patches built into the PPXL from the load as long as the actual patch file is on disk.

Note 2: Any patches that the system automatically applies or removes following loading of a PPXL the system will automatically apply or remove on reloads of the PPXL.

Note 3: Patches that are not PPXL patches are not removed when you reload the PPXL. There is no need to remove these patches because the removed patches are already out of the loadset.

Firmware downloading (continued)

Adding PPXLs to an existing PM load lineup

To add PPXLs to an existing XPM load lineup, use the following procedure:

1 Verify that all patch_ids associated with the PPXL are on the disk volume identified in table PMLOADS, field ACTVOL. If the patch_ids are not present, copy the patches from tape to the correct volume. A list of the patches contained in each PPXL is in the PM tape shipment. When the PPXLs are copied to disk, to list the patches in the PPXL, type

>XPMLFP

and press the Enter key.

>PATCHLIST FILE ppxl_filename

and press 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. Use the previous Upgrading baseload lineup procedure to add a new tuple. Follow this procedure if the XPM base loadname is not in table PMLOADS. You can change the ACTFILE field to the PPXL filename (filename_date). The system will upgrade the loadset if present, or the system will create a loadset, if required.

5 To set the loadset against both units of the XPM, type

>PATCHER

and press the Enter key.

>SET loadname PM pm_type device_no unit_no

and press 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

6 To load each unit of the XPM, type

>BSY UNIT unit_no
and press the Enter key.

>LOADPM UNIT unit_no
and press the Enter key.

>RTS UNIT unit_no
and press 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: When loaded, the system can apply or remove additional patches to the XPM the same as XPM loads in the past. The system can remove any patches built into the PPXL from the load if the patch file is present on disk.

Note 2: Any patches that the system adds or removes following loading of a PPXL the system automatically applies or removes on reloads of the PPXL.

The following table shows the datafill exact to firmware downloading for table PMLOADS. Only fields that apply directly to firmware downloading appear in the table. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Firmware downloading (continued)

Datafilling table PMLOADS

Field	Subfield or refinement	Entry	Explanation and action
LOADNAME		alphanumeric	Peripheral module load name. Enter the XPM load name. Range is a maximum of 32 characters. This loadname must be the same as the load name entered in tables LTCINV and RCCINV.
ACTFILE		alphanumeric	Active load file name. The name of the active XPM loadfile. This name can be the original loadfile or a patched loadfile. The name has a maximum of 32 characters. Before patching, this name is the original load name. The XPM load file patching updates the field after the load is patched for a period of time. This period of time is soak time.
ACTVOL		alphanumeric	Active volume. Identifies the device that stores the active loadfile. Range is the set of disk drive unit (DDU) volumes and system load module (SLM) disks available to the CM, that is, S00DXPM. The name has a maximum of 16 characters.
BKPFILE		alphanumeric	Backup load file name. Identifies the name of the backup XPM loadfile. The name should be the same name as the LOADNAME field. The name has 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 available to the C, that is, S00DXPM. The name has a maximum of 16 characters.
UPDACT		Y or N	Update active filename. This filename determines if the loadfile is qualified for loadfile patching. This filename determines if the system automatically updates table PMLOADS fields ACTFILE and ACTVOL with the patched loadfile name.

Datafill example for table PMLOADS

Sample datafill for table PMLOADS appears in the following example.

MAP display example for table PMLOADS

```
LOADNAME
 ACTFILE        ACTVOL
 BKPFILE        BKPVOL   UPDACT
_____________________________________________________________________
ELI36xx
 ELI36xx        S00DXPM
 ELI36xx        S00DXPM      Y
```

Note: The xx in field LOAD stands for two letters, for example BZ.

Table LTCINV

Table line trunk controller inventory (LTCINV) identifies to the DMS software a host XPM peripheral. Information about the peripheral includes location, load required, and network link connections. This table supports the universal tone receiver.

The following table shows the datafill exact to firmware downloading for table LTCINV. Only fields that apply directly to firmware downloading are in the table. Refer to the data schema section of the *Translations Guide* for a description of the other fields. The table has an additional field that contains the name of the loadfile associated with the electrically erasable programmable read-only memory (EEPROM).

Firmware downloading (continued)

Datafilling table LTCINV

Field	Subfield or refinement	Entry	Explanation and action
LOAD			Load. Enter the load the RCO2 uses. The display should show a load listed in table PMLOADS.
PROCPEC		MX77AA MX77AA, or AX74AA AX74AA	Processor equipment product engineering codes. You require one PEC for each PLGC or LGCO unit. Enter the PEC for unit 0 first. The PEC must reflect the minimum firmware capabilities in the processor complex of each unit.
E2LOAD			EEPROM file. Contains the name of the loadfile loaded in either the NTMX77AA EEPROM or the optional NTAX74AA EEPROM. ***Note:*** When the NT7X05 PRL is entered as an optional card, enter the loadfile name for the NTMX77 UP. The optional NTAX74AA CAP does not support NT7X05 PRL functionality.

Datafill example for table LTCINV

The following examples show sample RCO2 entries for table LTCINV. An RCO2 provisioned with the NTMX77AA UP appears in Table LTCINV. An RCO2 provisioned with the optional NTAX74AA CAP appears in Table LTCINV.

Firmware downloading (continued)

MAP display example for table LTCINV datafilled for NTMX77AA UP

```
Table: LTCINV

LTCNAME   FRTYPE FRNO SHPOS FLOOR ROW FRPOS EQPEC   LOAD
-------------------------------------------------------------------
PLGC 1     LGE    1   18    0     C   6    6X02AG   OLG07xx

EXECTAB                                                  CONTMARK
-------------------------------------------------------------------
(POTS POTSEX)(KEYSET KSETEX)(RMM_TERM RSMEX)(ABTRK DTCEX)  $

CSLNKTAB                                                 CONTMARK
-------------------------------------------------------------------
(9 17)(13 61)(5 14)(0 29)(1 30)(2 31)(3 28)(4 29)      $

OPTCARD                          CMRLOAD                 CONTMARK
-------------------------------------------------------------------
(UTR6)(TONE6X79)(MSG6X69) (7X05)  (CMR18 CMRAG03)      $

TONESET   PROCPEC         E2LOAD    OPATTR  PEC6X40
-------------------------------------------------------------------
AUS100    MX77AA  MX77AA  MX77xxxx  $     6X40AC
```

Note 1: The `xx` in field LOAD and `xxxx` in field E2LOAD represent alphanumeric entries, for example `B1` and `XE01`, in the sequence given.

Note 2: The system enters field E2LOAD with value NILLOAD if the shelf is equipped with a processor other than NTMX77 or the optional NTAX74.

Note 3: When the system enters field PROCPEC with AX74AA AX74AA instead of MX77AA MX77AA, the following occurs. The load name prefix in field LOAD changes from `KRI` to `WRI`. For example, `KRI07xx` (for MX77) changes to `WRI07XX` (for AX74AA). The following example shows sample datafill for table LTCINV when the system enters RCO2 for the NTAX74AA CAP.

Firmware downloading (continued)

MAP display example for table LTCINV datafilled for NTAX74AA CAP

```
Table: LTCINV

LTCNAME   FRTYPE FRNO SHPOS FLOOR ROW FRPOS EQPEC    LOAD
-------------------------------------------------------------------
PLGC 1     LGE    1   18    0     C   6    6X02AG   OLG07xx

EXECTAB                                                CONTMARK
-------------------------------------------------------------------
(POTS POTSEX)(KEYSET KSETEX)(RMM_TERM RSMEX)(ABTRK DTCEX)  $

CSLNKTAB                                               CONTMARK
-------------------------------------------------------------------
(9 17)(13 61)(5 14)(0 29)(1 30)(2 31)(3 28)(4 29)      $

OPTCARD                              CMRLOAD           CONTMARK
-------------------------------------------------------------------
(UTR6)(TONE6X79)(MSG6X69)            (CMR18 CMRAG03)     $

TONESET   PROCPEC          E2LOAD    OPATTR  PEC6X40
-----------------------------------------------------------------
AUS100    AX74AA  AX74AA   AX74xxxx  $     6X40AC
```

Datafilling table RCCINV

Table remote cluster controller inventory (RCCINV) contains inventory data for the RCO2. The exception is P-side link assignments. The C-side PCM-30 assignments for the RCO2 are entered in table RCCINV.

The following table shows the datafill exact to firmware downloading for table RCCINV. Only fields that apply directly to firmware downloading are in the table. Refer to the data schema section of the *Translations Guide* for a description of the other fields. A field is added that contains the name of the loadfile associated with the electrically erasable programmable read-only memory (EEPROM).

Firmware downloading (continued)

Datafilling table RCCINV

Field	Subfield or refinement	Entry	Explanation and action
LOAD			Load. Enter the load the RCO2 must use. The display should show a load listed in table PMLOADS.
PROCPEC		MX77AA MX77AA, or AX74AA AX74AA	Processor equipment product engineering codes. One PEC is required for each PLGC or LGCO 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 RCO2, entry value AX74AA has been added. ***Note:*** When the NT7X05 PRL is entered as an optional card, enter MX77AA MX77AA. The value AX74AA AX74AA is not allowed as valid when the NT7X05 PRL is entered as an optional card. The conditions appears because the NTAX74 CAP does not support NT7X05 PRL functionality.
E2LOAD		alphanumeric	EEPROM file. Contains the name of the loadfile loaded in either the NTMX77AA EEPROM or in the optional NTAX74AA EEPROM. ***Note:*** When the NT7X05 PRL is entered as an optional card, enter the loadfile name for the NTMX77 UP. The optional NTAX74AA CAP does not support NT7X05 PRL functionality.

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 all interface link types: DS-1, DS30, DS30A, or PCM-30. Table control will issue a warning if you make an attempt to assign message links on the same interface card. Assigning message links to the same interface card can cause an E1 outage if the card fails. The E1 outage means a failure of all message links.

Datafill example for table RCCINV

The following examples show RCO2 sample entries. An RCO2 provisioned with the NTMX77AA UP appears in Table RCCINV. An RCO2 provisioned with the optional NTAX74AA CAP appears in Table RCCINV.

Firmware downloading (continued)

MAP display example for table RCCINV entered for NTMX77AA UP

```
Table: RCCINV

RCCNAME      FRTYPE FRNO SHPOS FLOOR ROW FRPOS EQPEC    LOAD
-------------------------------------------------------------------
MELB RCO2 0  CRSC   0   18    0     C   0     MX85AA    KRI07xx

EXECTAB                                                  CONTMARK
-------------------------------------------------------------------
(POTS POTSEX)(KEYSET KSETEX)(ABTRK DTCEX)(RMM_TERM RSMEX)    +
(ESALINES ESAEX)                                         $

CSPM        CSLNKTAB                                     CONTMARK
-------------------------------------------------------------------
PLGC 1     (0) (1) (2) (3) (4) (5) (6) (7)               $


ESA  INTRASW    OPTCARD                 CMRLOAD          CONTMARK
-------------------------------------------------------------------
Y      Y       (UTR6)(MSG6X69) (7X05)  (CMR18 CMRAG03)    $

TONESET   PROCPEC          E2LOAD     EXTINFO
-------------------------------------------------------------------
AUS100    MX77AA  MX77AA   MX77NH08   CEXT 0 4 0 E 15 MX86AA L
```

Note 1: The xx in field LOAD and xxxx in field E2LOAD represent alphanumeric entries, for example B1 and XE01, in the sequence given.

Note 2: If the shelf is equipped with a processor other than NTMX77 or the optional NTAX74, the following occurs. The system enters field E2LOAD with value NILLOAD.

Note 3: When field PROCPEC is entered with AX74AA AX74AA instead of MX77AA MX77AA, the load name prefix in field LOAD changes from KRI to WRI. For example, KRI07xx (for MX77) changes to WRI07XX (for AX74AA). The following example shows sample datafill for table RCCINV when the RCO2 is entered for the NTAX74AA CAP.

Firmware downloading (end)

MAP display example for table RCCINV datafilled for NTAX74AA CAP

```
Table: RCCINV

RCCNAME      FRTYPE FRNO SHPOS FLOOR ROW FRPOS EQPEC    LOAD
-------------------------------------------------------------------
MELB RCO2 0  CRSC   0   18    0     C   0     MX85AA    WRI06xx

EXECTAB                                                  CONTMARK
-------------------------------------------------------------------
(POTS POTSEX)(KEYSET KSETEX)(ABTRK DTCEX) (RMM_TERM RSMEX)   +
(ESALINES ESAEX)                                         $

CSPM        CSLNKTAB                                     CONTMARK
-------------------------------------------------------------------
PLGC 1     (0) (1) (2) (3) (4) (5) (6) (7)               $


ESA  INTRASW    OPTCARD                CMRLOAD           CONTMARK
-------------------------------------------------------------------
Y       Y      (UTR6)(MSG6X69)         (CMR18 CMRAG03)   $

TONESET   PROCPEC          E2LOAD     EXTINFO
-------------------------------------------------------------------
AUS100    AX74AA  AX74AA    AX74xxxx   CEXT 0 4 0 E 15 MX86AA L
```

Translation verification tools

Firmware downloading does not use translation verification tools.

SERVORD

Firmware downloading does not use SERVORD.

Remote Switching Center-SONET (UK / Europe)

Understanding RSC-S translations

You must understand the Remote Switching Center-SONET (RSC-S) methods and terminology before you enter data in the product. This chapter describes the product in general terms as a background to enter data in the RSC-S. The information in this section is for RSC-S functions in UK/Europe.

Differences between RSC and RSC-S

The RSC-S is like the RSC. The RSC-S is available with or without integrated services digital network (ISDN), like RSC. The RSC-S requires the same basic call processing software that the RSC uses as a requirement to install RSC-S.

The RSC-S is an improved version of the RSC product. New software functionality, revised system architecture and part packaging implement these improvements. Software packages are provided to support international technology for international offices.

Software functionality

Software features for the RSC-S are obtained through a collection of standard RSC packages and the RSC-S basic package. Each feature is provisioned through RSC packages. The RSC-S basic package activates these features and provides specified RSC-S abilities.

The RSC-S improves the basic call processing of the RSC. The RSC-S provides an improvement in abilities for intraswitching and emergency stand-alone (ESA) failure contingency services.

This release includes the following capabilities:

- Intraswitching allows calls that originate and terminate on the RSC-S to be switched without the use of host links.
- ESA allows the continuation of service in the RSC-S when a loss of communication with the host occurs.
- A Warm Switch of Activity (SWACT) allows steady calls to continue without interruption when a controlled or uncontrolled transfer of RSC-S call processing occurs. An improvement in pre-SWACT/post-SWACT audit process reduces the possibility of loss of service. The loss of service occurs when the mate remote center offshore #2 (RCO2) cannot gain and maintain call processing activities.

Revised system architecture

The base of the RSC-S design is the common peripheral module (CPM) architecture. The CPM replaces the current expanded peripheral modules (XPM) for the host and remote applications. The CPM is a group of peripheral modules (PM) that the Digital Multiplex System (DMS)-100 family uses. The CPM supports current XPM interfaces (I/Fs) where possible.

The CPM can be a host peripheral or a remote peripheral, like the RCO2. In remote applications, RCO2 supports different types of trunks and lines.

The same amount of visibility and control that current XPMs have, applies for the RCO2. The MAP terminal provides access to the new PM types.

The base of RSC-S design is a two-shelf configuration that includes the RCO2 shelf and the extension shelf. The RCO2 shelf contains the central processing equipment and circuits that each application requires. The extension shelf that increases the capacity of the RCO2 shelf contains octal pulse code modulation 30 (PCM-30) circuit packs and D-channel handlers (DCH). Central office or a customer location can use the RSC-S package.

Packaging

The RSC-S packaging differs from normal RSC packaging, for example:

- The RSC-S can be provisioned in cabinets instead of equipment frames. The RSC-S model A uses the equipment frame and model B is configured in cabinets.
- The base of the RSC-S design is the RCO2. The RCO2 is the master controller for all peripherals of the RSC-S. The RCO2 is a single-shelf, 68020-based module with increased processing abilities.
- The core RSC-S cabinet is provisioned with a dual-shelf enhanced line concentrating module (LCME).
- An RSC-S extension cabinet is available to contain additional ISDN DCH or PCM-30 I/Fs. The extension shelf is provisioned with one LCME.

The RSC-S has a minimum of the following parts:

- one or two cabinetized remote switching centers (CRSC)
- one or more cabinetized power distribution centers (CPDC)
- one cabinetized extension module (CEXT)
- one or more cabinetized miscellaneous equipment (CMIS) cabinets
- a cabinetized miscellaneous spares storage (CMSS) cabinet for spare card storage.

The RSC-S has a maximum of five cabinetized line concentrating equipment (CLCE) cabinets.

Cabinetized remote switching center (CRSC) cabinet

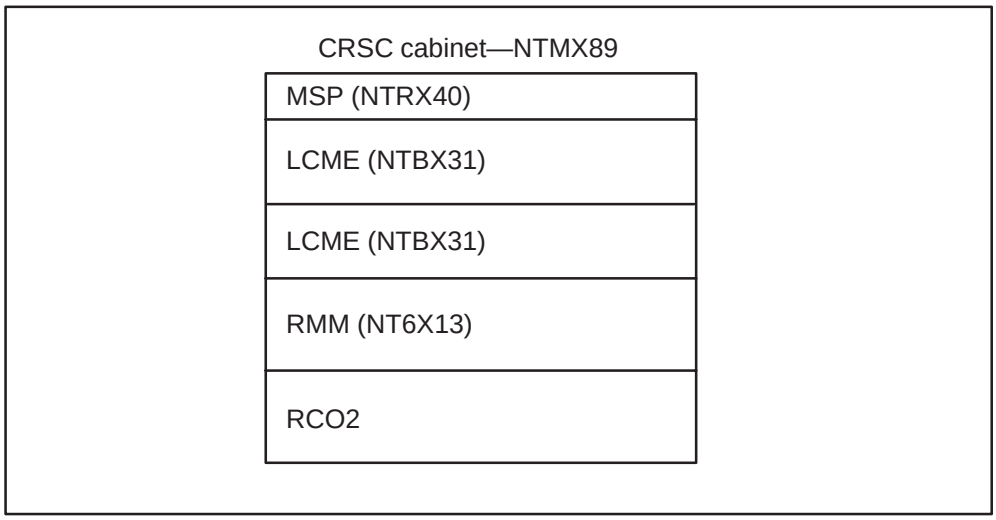
A single-configuration RSC-S can have one CRSC cabinet that contains:

- one provisioned RCO2 shelf
- one remote maintenance module (RMM) that dedicated DS30A links serve
- one LCME
- one frame supervisory panel (FSP), for model A
- one modular supervisory panel (MSP), for model B.

Note: A software upgrade is not present on the MAP display. The software upgrade indicates the difference between model A frame alarms and model B cabinet alarms. Both alarm types will indicate FSP at the MAP terminal.

The CRSC cabinet appears in the following figure:

Cabinetized remote switching center cabinet



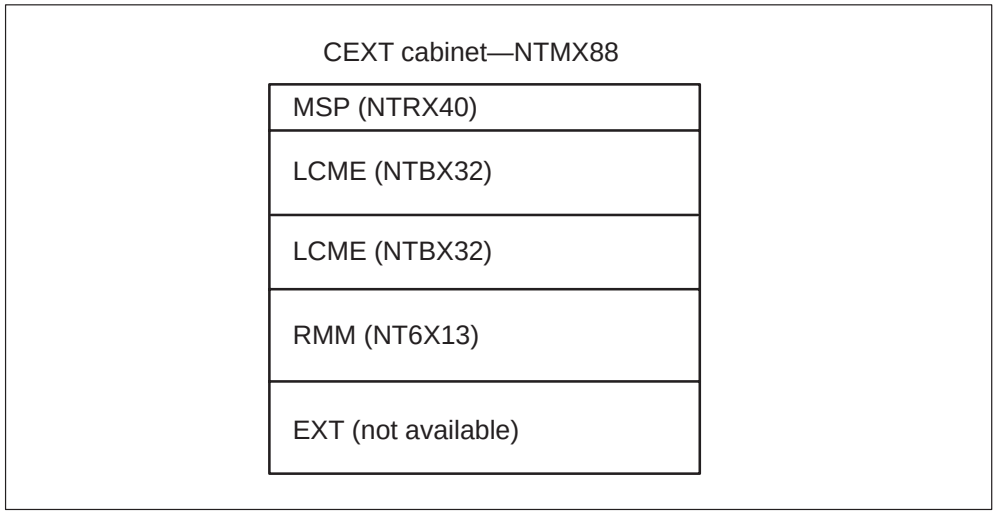
CRSC extension (CEXT) cabinet

A single-configuration RSC-S can have one CRSC extension (CEXT) cabinet that contains one:

- extension shelf (EXT)
- RMM
- LCME
- MSP

The CEXT cabinet appears in the following figure:

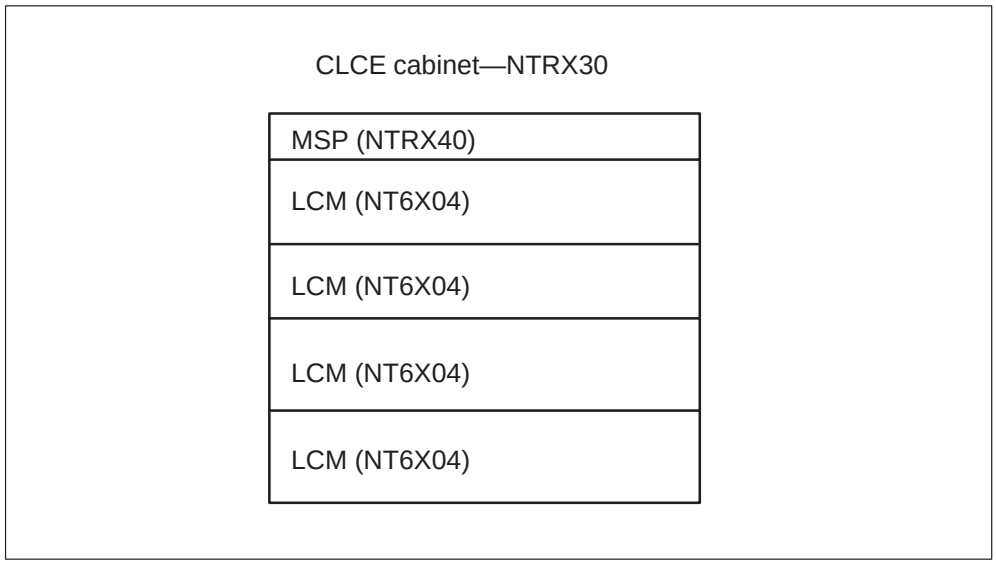
CRSC extension cabinet



Cabinetized line modules (CLCE) cabinet

A single-configuration RSC-S can have a maximum of five CLCE cabinets. Each cabinet supports a maximum of two completely duplicated LCMs. Each duplicated LCM provides a 640-line card capacity. The CLCE cabinet appears in the following figure:

Cabinetized line modules



Cabinetized power distribution center (CDPC) cabinet

The CDPC is a cabinetized module that provides distribution of power for RSC-S equipment.

Cabinetized miscellaneous equipment (CMIS) cabinet

A single-configuration RSC-S can have one CMIS cabinet to contain customer-specified equipment.

Cabinetized miscellaneous spare storage (CMSS) cabinet

A single-configuration RSC-S can have one CMSS cabinet to store spare cards.

RSC-S services

The application diversity of RSC-S comes from the flexible design of the RSC-S. The RSC-S offers a wide range of I/Fs and services to operating companies. The following is a list of examples of these services:

- plain ordinary telephone service (POTS) 500/2500 sets
- multiparty lines
- coin lines
- MDC 500/2500 sets
- Electronic business sets (EBS) and P-phones
- ISDN basic rate interface (BRI)
- attendant console.

The CPM in the same module can support the ISDN primary rate interface (PRI), that includes functional stimulus and Meridian feature transparency.

This range of selections equips RSC-S with a complement of abilities to address:

- community dial offices (CDO) modernization
- analog switch capping
- digital overlay networks.

Northern Telecom offers the RSC-S product with or without the services that ISDN provides. The base of the RSC-S with ISDN design is the RSC-S that serves business customers and residential subscribers. With the addition of ISDN abilities, the RSC-S can provide a mix of POTS and MDC voice, data and ISDN services.

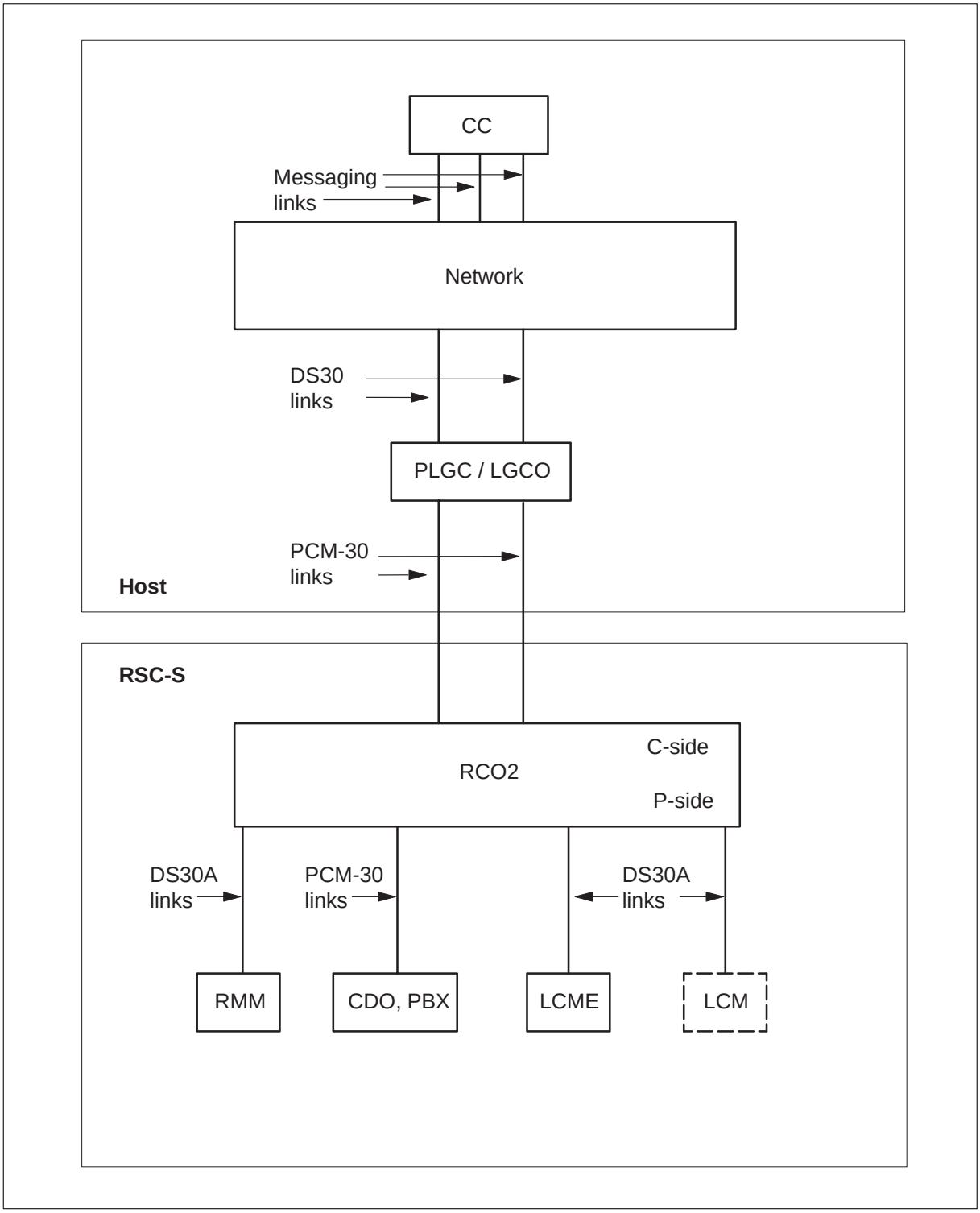
The services available for the RSC-S depend on the configuration.

RSC-S configurations

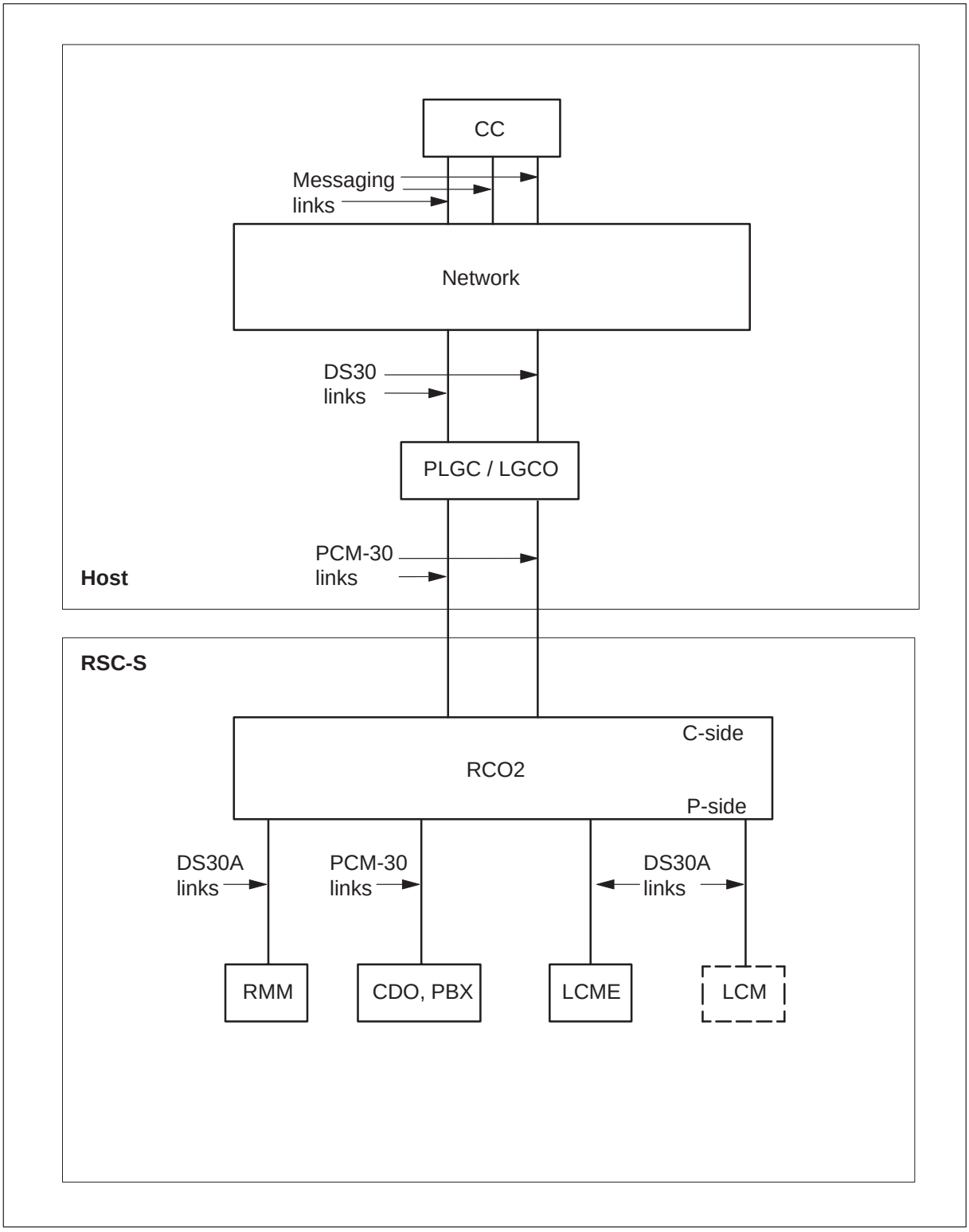
Northern Telecom offers the basic RSC-S configuration without ISDN, or with ISDN. These configurations appear in the following two figures. Support of CDO and private branch exchanges (PBX) is provided on the peripheral side (P-side) of the RCO2.

Note: Interchangeable use of the PCM-30 line group controller (PLGC) or the line group controller overseas (LGCO) can occur. This action provides a PCM-30 I/F between the RSC-S and the DMS-100 switch.

Basic single–configuration RSC-S without ISDN



Basic single-configuration RSC-S with ISDN



Preparing to datafill RSC-S UK/Europe

PCL—New Software Delivery Vehicle

After BCS36, Northern Telecom delivers Product Computing-Module Loads (PCL) instead of BCS releases or Universal Software Loads (USL).

A PCL has features selected from the development stream software product intended for an application in a market. The PCL contains the abilities divided before, in different related NTX packages. An 8-digit order code replaces the NTX package codes.

The order codes and Functional group names required for the RSC-S appear in the following table. A list of the old NTX packages that the Functional group includes, appears in the following table. These capabilities associate with the RSC-S.

RSC-S order codes

Ordering code	Functionality	Functional group name	Old NTX package codes
BAS00012		BAS Remotes Generic	NTX145AA—Remote Switching Center
			NTX149AB—RSC ESA-Lines and Trunks
			NTX150AA—RSC-Intra RSC Calling
			NTXP92AA—RSC-S Basic
			NTXQ12AA—RSC Enhanced ESA (Lines)
BAS00026	BAS00036	BAS Int'l Remote Generic	NTXK77AA—PCM-30 RSCO-S Support
NI000007		NI0 ISDN Base	NTX750AD—ISDN Basic Access

Collecting end-user data

When the RSC-S includes ISDN, collect the profiles of the subscriber sets to enter the profiles.

Configurations

The RSC-S can be configured with or without ISDN. An RSC-S configuration with a group of peripherals without ISDN provides a wide range of services. These services do not include ISDN services. An RSC-S with ISDN offers all the services of the RSC-S. An RSC-S with ISDN can include the peripherals of the RSC-S. This configuration includes ISDN peripherals and offers ISDN services.

The configuration type directly affects datafill requirements. This condition occurs because the configuration determines the services available with the RSC-S.

Activating the RSC-S

Enter the field operator verification (OPVR) common language location identifier (CLLI) in table CLLI first for RSC-S. This tuple in table CLLI forms a field in table SITE. Enter other tables in the order specified in the data schema section of the *Translations Guide*.

When to update the RCO2 static data (SD)

When the following conditions occur, SD needs an update in the RCO2:

- the addition, change or deletion of links on the RCO2 P-side or central side (C-side) in tables RCCINV, RCCPSINV, or LTCPSINV
- the addition, change or deletion of nodes off the RCO2 or links that associated with these nodes in tables LCMINV, RMMINV, or RCCPSINV
- the addition, change or deletion of cards in the card list of the RCO2 or nodes off the RCO2 in tables LCMINV, RMMINV, or RCCPSINV
- the addition, change or deletion of executive data for the RCO2 in table RCCINV
- the change of global office parameters that affect the RSC-S configuration
- in table RCCINV, when ESA is turned ON or OFF.

Note: The NODATASYNC option is the method of selection.

Alarms produced when an SD mismatch occurs

An update of the SD for the central control (CC) can occur at the CC. An update of the SD occurs at the CC when an update of the SD at the RCO2 does not occur. When this event occurs, the system produces a PM128 log with the following message:

```
STATIC DATA MISMATCH WITH CC
```

At the RCO2 level of the MAP display, the response to the QUERYPM FLT command is the same message as that of the PM128 log. The required steps are like the steps to update SD.

Tuple changed (TUPC) logs for static data (SD) updates

The DMS and the journal file (JF) together can track changes to DMS data tables. Changes to DMS data tables include data modification orders (DMO) and service orders. When a reload of the office occurs, the JFs must be applied before the start of a new JF. When this application does not occur, the data changes are not recorded. The system produces a log that records changes to inventory tables.

This log includes the following data tables:

- LCMINV
- LTCINV
- LTCPSINV
- RMMINV
- RCCINV
- RCCPSINV.

The system generates this log for each tuple. The log includes information like the table name, the original tuple and the tuple that results from the change.

Types of TUPC logs

The numbers for the TUPC logs follow:

- TUPC100. The addition of a tuple occurs.
- TUPC101. The deletion of a tuple occurs.
- TUPC102. A change to a tuple occurs. This log contains the old tuple.
- TUPC103. A change to a tuple occurs. This log contains the new tuple.

TUPC log format

The TUPC log contains a header where the following information appears:

- TUPC log number
- the date
- the time
- the table name
- the action taken on the table: addition, change or deletion.

The important tuple or tuples appear.

Note: The TUPC logs can help track inventory changes. Northern Telecom personnel use TUPC logs to solve field problems. Do not use TUPC logs instead of the JF utility.

Basic call processing

Functional group

BAS00012

BAS00026

Feature packages

NTX145AA Remote Switching Center

NTX150AA RSC–Intra RSC Calling

NTXP92AA RSC-S Basic

NTXK77AA PCM-30 RSCO-S Support

Release applicability

XPM05 and higher

Requirements

Basic call processing requires the following feature packages:

- NTXR42AA Firmware Downloading
- NTX000AA Bilge
- NTX001AA Common Basic
- NTX145AA Remote Switching Center
- NTX269AA Universal Tone Receivers (Domestic)
- NTX270AA New Peripheral Maintenance Package
- NTX901AA Local Features I

International support requires the following feature packages:

- NTXH52AA PCM-30 RSCO Support
- NTXP92AA RSC-S Basic
- NTX001AA Common Basic
- NTX145AA Remote Switching Center
- NTX270AA New Peripheral Maintenance Package

Description

This section contains tables that apply directly to Basic call processing. For details on call translations, refer to the *Translations Guide*.

Basic call processing (continued)

Basic call processing tables provide entries for the following:

- DMS recognition of the switching unit and remote locations
- physical device location identification data
- link assignments for the RCO2 and peripherals
- recovery
- trunks and trunk groups
- alarm functions
- circuit test equipment
- maintenance control for peripherals

DMS recognition of the switching unit and remote locations

The data in table SITE allows a DMS switch to recognize the equipment for the switching unit. Table SITE also allows a DMS switch to recognize the remote locations that use the switching unit. This table defines site names for the remote location. Table SITE uses codes in table CLLI for switching unit trunk groups and the remote location. Table CLLI 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-S components are in the inventory tables. These inventory tables include tables LCMINV, RCCINV and RMMINV.

Link assignments the RCO2 and peripherals

Link assignments are entered in tables LTCINV, LTCPSINV, RCCPSINV.

Recovery

Table PMLOADS stores the device location of every peripheral module (PM) load file to map between load names and devices. This procedure allows autoload to locate load files without action by personnel. Autoload can reload PMs suspected to have a corrupt load.

Basic call processing (continued)

Trunks and trunk groups

Tables TRKGRP, TRKSGRP and TRKMEM define the trunk groups that associate with a switching unit. These tables define additional information for subgroups assigned to trunk groups. These tables also define data for each trunk, trunk group, and subgroup. Other data identify circuits for static trunks, dynamic trunks, and equipment used to test lines and trunks.

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 data also includes functions of assigned scan points and signal distribution points in the alarm scan groups.

Circuit test equipment

Table TRKMEM identifies circuits for static trunks, dynamic trunks and test equipment to test lines and trunks. Tables MTAMDRVE, MTAVERT, and MTAHORIZ include data to connect test equipment to a circuit that requires testing.

Maintenance control for peripherals

The data in table CARRMTC includes maintenance control information in peripherals, out-of-service (OOS) limits for alarms, and system return-to-service (RTS) occurrences.

REX Scheduler

Table REXSCHED schedules the frequency and number of REX tests. Tuples are added to table REXSCHED after data are entered in the inventory tables.

Negate Partial Ground Diagnostics

Run the diagnostics if the suffix of the NT6X18 card is -AA or -AB, the line is a ground start (GND=Y in table LNINV), and initial diagnostics fail. Add the Service order (SERVORD) option NPGD, Negate Partial Ground Start Diagnostics. This option allows you to test the line against a smaller subset of ground start diagnostics. When you set option NPGD in table LENLINES, the system skips loop detector, reversal relay, and ground start relay tests.

Note: The NPGD works for LCMs. Ground start diagnostics do not apply to RCO2s with LCMEs.

Operation

The RSC software provides each feature. The RSC-S basic package activates the features and provides the Synchronous Optical Network (SONET) remote.

Tables and data entry methods do not change for RSC-S in comparison to the RSC. This release adds new value ranges to relevant fields. The release notes new data entry limits and adds new fields to enter data on an extension shelf.

Conditional routing

The RSC-S allows conditional routing. The RSC-S configuration adds the SITE subselector to plain ordinary telephone service (POTS), Meridian Digital Centrex (MDC) or integrated business network (IBN) call routing. The RSC-S configuration data is entered as a subselector of the CND selector of table IBNRTE, table OFRT, and the RTEREF subtables. Use the SITE subselector of field CONDITION with route types ST, SK and T.

The system requires the CND selector for conditional routes. Some conditions must be specified before the system routes a call. If the specified conditions are met, the system performs the instructions in the route list. If the conditions are not met, translations looks to the next element in the route list. Refer to the data schema section of the *Translations Guide*, for a list and explanation of each routing condition.

The SITE option is added to field CONDITION. Enter data in field SITE when CONDITION equals SITE. This change affects the following tables when the selector is CND:

- table IBNRTE
- table OFRT
- subtable HNPACONT.RTEREF
- subtable FNPACONT.RTEREF

The SITE condition allows a call to transfer to a route list or an element in a route list. The call origin determines the transfer. The system compares the site where the call originates with the site that field SITE defines. If the two sites match, the call proceeds as the field RTETYPE indicates. If the two sites do not match, the call proceeds to the next route element in the route list.

> ***Note:*** To optimize this feature, trunk groups must vary by site. Members of each trunk group must belong to the specified site.

Basic call processing (continued)

The following pages detail the fields entered in tables OFRT and IBNRTE for conditional routing. The fields in table OFRT are the same for subtable HNPACONT.RTEREF and for subtable FNPACONT.RTEREF.

Table OFRT

The following table describes the data entries for Basic call processing in table OFRT. The table describes the fields that apply directly to Basic call processing. For details on table OFRT, refer to the data schema section of the *Translations Guide*.

Datafilling table OFRT for basic call processing

Field	Subfield or refinement	Entry	Description
RTE		0 through 1023 or blank	Extended route reference index. Enter a value from 0 to 1023. If the record is the first in the route list, enter the route reference number assigned to the route list. If the record is not the first in the route list, leave the entry blank.
RTELIST		refer to subfields	Route list. This field contains subfields RTESEL and the RTESEL set equal to CND refinements CONDITION and CONDRTE.
	RTESEL	CND	Route selector. The CND sets conditional routing.
CONDITION	CNDSEL	refer to refinements	Condition. This field contains the condition selector CNDSEL and refinements ALWAYS, CALLCHR, COSMAP, EA, INTERLATA, RAND, SITE, TOD, and TOPEACLS. A match of the selected conditions causes transfer to the routing specified in field CONDRTE. If a match is not made, the call routing proceeds as specified in the next tuple.
		ALWAYS	Always. Transfer to specified routing.

Note 1: Make changes to fields with multiple entries in the PROMPT mode. The nonprompt mode allows current entries to be left out.
Note 2: Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies more data or you have more records to enter. Enter the end mark ($) in fields with multiple possible entries after the last entry.
Note 3: You can enter data in Field SITE only after the user enters data in table SITE. Table site must define entries in field SITE.

—continued—

Basic call processing (continued)

Datafilling table OFRT for basic call processing (continued)

Field	Subfield or refinement	Entry	Description
CONDITION (continued)		CALLCHR	The selected condition is a match of field CALLCHR. Use a call characteristic from table CALLCHR. Perform 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. Perform next entry.
	COSMAP	alphanumeric	Enter the name of the selected NCOS mapping entry from table COSMAP.
		EA	The selected condition is use equal access conditional routing. Field EA_CND_RTE. defines condition. Perform next entry.
	EA_CND_ RTE	CAC, INTNL, or PIC	Enter one of the following selectors: carrier access code (CAC), international access (INTNL), or presubscribed interexchange carrier (PIC).
		INTERLATA	Index into table TRKLATA to obtain originating LATA of calling number. Index into table LATAXLA of called number to determine inter-LATA or intra-LATA status.
		RND	The selected condition to match is a percent of randomly selected calls. Perform next entry.
	PERCENT	0 to 100	Enter percentage of calls that the system must route conditionally.
		SITE	The selected condition is a match of the site where the call originates. Perform next entry.

Note 1: Make changes to fields with multiple entries in the PROMPT mode. The nonprompt mode allows current entries to be left out.
Note 2: Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies more data or you have more records to enter. Enter the end mark ($) in fields with multiple possible entries after the last entry.
Note 3: You can enter data in Field SITE only after the user enters data in table SITE. Table site must define entries in field SITE.

—continued—

Basic call processing (continued)

Datafilling table OFRT for basic call processing (continued)

Field	Subfield or refinement	Entry	Description
	SITE	HOST or alphanumeric	Enter in field SITE, HOST or a site name entered in table SITE.
		TOD	The selected condition to match is time of day. perform next entry.
	TODNAME	alphanumeric	Enter in field TODNAME the name assigned to the entry in the table TIMEODAY.
	TIMES	0 to 9 or A to F	Enter in field TIMES the times, to a maximum of 14, 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. Perform next entry.
	TOP_CND_ RTE	alphanumeric	Enter the selected TOPS class of service that the call must match.
CONDRTE		refer to subfields	If a match in CNDSEL selects this route, subfields RTETYPE, RTEREF, SKIPNUM, EXTREID, TABNAME, INDEX define the conditional route
	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. Refer to the following entries.
	RTEREF	1 to 1023	ST, same table specified. Enter in field RTEREF the number of the route reference element to transfer call routing.

Note 1: Make changes to fields with multiple entries in the PROMPT mode. The nonprompt mode allows current entries to be left out.
Note 2: Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies more data or you have more records to enter. Enter the end mark ($) in fields with multiple possible entries after the last entry.
Note 3: You can enter data in Field SITE only after the user enters data in table SITE. Table site must define entries in field SITE.

—continued—

Datafilling table OFRT for basic call processing (continued)

Field	Subfield or refinement	Entry	Description
	SKIPNUM	0 to 7	SK, skip in same table specified. Enter in field SKIPNUM the number of elements to skip in the route reference list.
CONDRTE (continued)	EXTREID	refer to subfields	T, transfer to index in table specified. Contains subfields TABNAME and INDEX. Perform the next entries.
	TABNAME	OFRT, OFR2 OFR3, OFR4	TABNAME. Enter the office route table name.
	INDEX	1 to 1023	INDEX. Enter the route reference index number in the office route table.
Note 1: Make changes to fields with multiple entries in the PROMPT mode. The nonprompt mode allows current entries to be left out. ***Note 2:*** Enter the continuation mark (+) in fields with multiple possible entries when the next line specifies more data or you have more records to enter. Enter the end mark ($) in fields with multiple possible entries after the last entry. ***Note 3:*** You can enter data in Field SITE only after the user enters data in table SITE. Table site must define entries in field SITE.			
—end—			

Routing options

Each of the above formats with route selector CND indicates the conditional route selector field CONDRTE. This field contains the following subfields:

- RTETYPE
- RTEREF
- SKIPNUM
- EXTREID
- TABNAME
- INDEX

Route to a specified route list in the same table

Enter ST as the route type in field RTETYPE when a call transfers to another route list in the same table. Enter the route reference number in field RTEREF.

Basic call processing (continued)

Note: The route reference number must be higher in the table to which translations transfer when the condition is met.

Route after specified number of route elements skipped

If the call must skip to another route element in the same route list, complete field RTETYPE. Enter SK as the route type. Complete field SKIPNUM. Enter the number of elements, 0 through 7 to skip. Enter the elements to skip in the same route list to which translations must route when the condition is met.

Route to specified table at specified index

Complete fields RTETYPE and EXTREID to transfer a call to another route list in table OFRT. To complete field RTETYPE enter T as the route type.

Field EXTREID contains the subfields TABNAME and INDEX. To complete TABNAME, enter the table name OFRT to which translations must transfer when the condition is met. To complete INDEX, enter the route reference index number, 1 through 1023. Enter the number in table OFRT to which translations must transfer when the condition is met.

Note: Enter the continuation mark (+) in fields with multiple possible entries which require more data. Enter the continuation mark when the next line specifies more data on the next line or you have more records to enter. Enter the end mark ($) in fields with multiple possible entries after the last entry.

Table IBNRTE

Table IBNRTE controls basic call processing when the system routes calls:

- to a specified route list in the same table
- after the system skips a specified number of route elements
- to a specified table at a specified index

When the IBN route selector is set equal to CND

The system requires this route selector for conditional routes. The route selector controls if a call skips to another route list in the same table. The route selector controls if a call skips a number of elements in the same route list. The route selector also controls if a call transfers to a route list in a different route table. The call must meet one of six parameters. These parameters include time of day, class of service, call characteristic, random and site.

The following table provides field definitions for table IBNRTE. The table only displays the fields that apply directly to Basic call processing. Refer to

the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table IBNRTE for basic call processing

Field	Subfield or refinement	Entry	Explanation and action
RTE		0 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. If the record is not the first on the route list, leave the entry blank.
RTELIST		refer to subfields	Route list. The field contains subfields IBNRTSEL, CONDITION and CONDRTE.
	IBNRTSEL	CND	IBN or MDC route selector.
CONDITION		refer to 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 origin determines selection.
	SITE	alphanumeric	Site. Enter the name of the site in table SITE.

Example of entries for table IBNRTE

The following is an example of entries for table IBNRTE.

MAP display example for table IBNRTE

```
RTE      RTELIST     IBNRTSEL      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 originates at REM1, the DMS sends the call to route list 3. If the call originates at REM2, the system routes the call to route list 4.

Basic call processing (continued)

After the DMS sends a call to a route list, the system tries the first element in the route list. If the attempt fails, the DMS tries the next element and the elements that follow. For example, if a call originates at site REM1, the DMS sends the call to route list 3. The DMS sends the call over trunk group G1 because G1 is the first element in the route list. If trunk group G1 is not available, the DMS sends the call out on trunk group G0. The DMS sends the call over the trunk groups that follow.

TRK111 log-routing problems

The system generates a TRK111 log report for routing problems. Refer to the *Log Report Reference Manual* for detailed information on the TRK111 log report.

OM GNCT route list not entered

The GNCT register in OM group TRMT2 increases for calls that attempt a route list that does not contain data. Refer to *Operational Measurements Reference Manual* for details.

Translations table flow

The Basic call processing translation process appears in the flowchart that follows the table descriptions.

- Table CLLI identifies the far end of the trunk group through the following:
  - — the city or town
  - — the state or province
  - — the building group
  - — the destination of the traffic unit
  - — the trunk groups that identify codes. These trunk groups terminate at the same CLLI location

  Table CLLI stores the maximum number of trunk groups to assign to the trunk group. Table CLLI also stores an entry for administrative information the switching unit does not use.

  The system adds some CLLI codes to table CLLI when the feature is present in the switch. Add the other codes to table CLLI manually. After you enter data in table CLLI, CLLI codes appear in the tables. The CLLI codes appear in trunk group tables, the scan and distribution point table, and MTA tables. Field OPVRCLLI in table SITE must contain a duplicate of the CCLI tuple for operator verification.

Note: You must enter some data, according to the trunk group type required. Each trunk group type requires an exact form. Correct trunk group types are TI, TO, T2, IBNTI, IBNTO, IBNT2, PX and ES.

- Table PMLOADS stores the device location of every peripheral module (PM) load file to map between the load names and devices. Enter the PM load files in table PMLOADS before the PM loads can be used in the inventory tables.

  Enter load information in field LOADNAME. Enter corresponding entries in field LOAD for tables LTCINV, LCMINV and RMMINV.

- Table SITE identifies equipment for the switching unit and for remote locations that use the unit. This table must contain data before you assign a LEN, or other data in the PM. The host switching unit is the first entry in field NAME. Field LTDSN associates with the number required to dial the site and alarm data for remote sites. Table SITE uses the same CLLI tuple for operator verification as the one in table CLLI.

  Table SITE, field NAME must recognize field SITE in table LCMINV, field SITENM in tables RCCINV and RMMINV. Table SITE, field NAME also must recognize Subfield SITE_ID in table ISTRKGRP.

- Table CARRMTC allows DMS switch administration to enter maintenance control information in peripherals. The table also allows administration to enter information in out-of-service (OOS) limits for alarms, and system return-to-service (RTS) occurrences. The TMPLTNM tuple in table CARRMTC corresponds to the field CARRIDX in tables LTCPSINV and RCCPSINV.
- Table LTCINV contains the inventory data for PM types. This data does not include the P-side link assignment. This table defines the PCM-30 line group controller (PLGC) or line group controller offshore (LGCO) on the C-side of the RCO2. Field LOAD contains load information for this table. Load information for this table corresponds to the LOADNAME tuple from table PMLOADS.

  Note: The RSC-S can be configured with the PLGC or the LGCO. Use the PLGC as the data entry.

  Field LTCNAME in table LTCINV corresponds to the LTCNAME field in table LTCPSINV.

- Table contains the assignment of P-side links for PMs. If table LTCPSINV contains DS-1, the CARRIDX field indexes table CARRMTC for maintenance control information about the peripheral.

Basic call processing (continued)

- Table RCCINV maintains a list of RCO2s entered in the DMS switch. This list contains inventory data for the RCO2s. The inventory data does not contain P-side assignments. Table information identifies the location of the RCO2, the load and exec lineups, and the network link connections. Table RCCINV contains C-side DS-1 assignments for the RCO2. Table IRCCINV contains intraswitching data.

  Field LOAD contains load information data, and corresponds to the LOADNAME tuple from table PMLOADS. The RCCNAME tuple in table RCCINV corresponds to the RCCNAME tuple from table RCCPSINV. The RCCNAME field stores site information, entered in the NAME field from table SITE, PM type, and PM number.

- Table RCCPSINV contains the P-side link assignments for an RCO2. When you add a tuple in table RCCINV, the system adds a tuple that corresponds in table RCCPSINV. This table uses field LOAD to identify load information. Field LOAD corresponds to the LOADNAME tuple from table PMLOADS. The field CARRIDX indexes to table CARRMTC for maintenance control information about the peripheral. The RCCNAME tuple in table RCCPSINV corresponds to the RCCNAME tuple from table RCCINV. The RCCNAME stores site information, entered in field NAME from table SITE, the PM type, and PM number.
- Table RMMINV identifies a remote RLCM, RSC-S, or outside plant module (OPM) site. The table identifies sites with frame type, frame number, floor, row, frame position, product equipment engineering code (PEC) code, PM and executive program loads. Table RMMINV also identifies the C-side PM that attaches 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 remote locations that use the unit. The LOAD field in table RMMINV corresponds to the LOADNAME tuple from table PMLOADS. This field stores the device location of each PM load file.
- Table LCMINV lists data assignments for each bay 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 remote locations that use the unit. Field LOAD in table LCMINV corresponds to the LOADNAME tuple from table PMLOADS. This field stores the device location of each PM load file.
- Table TRKGRP defines data for each trunk group that associates with a switching unit. Field CLLI in table TRKGRP corresponds to the CLLI code for the trunk group.

Basic call processing (continued)

- Table TRKSGRP lists additional information for each subgroup assigned to one of the trunk groups in table TRKSGRP. Field CLLI in table TRKSGRP corresponds to the CLLI code for the trunk group.
- Table TRKMEM lists the data for each trunk assigned to a trunk group and subgroup specified in tables TRKGRP and TRKSGRP. This table identifies circuits associated with static trunks, dynamic trunks, and test equipment. The system uses this equipment to test lines and trunks. Field CLLI in table TRKMEM corresponds to the CLLI code for the trunk group.
- Table LTGRP provides the capacity to define a maximum of 32 LT groups. Table LTGRP defines one of the groups as ISDN. Field GROUP in table LTGRP corresponds to field LTGRP in table LTDEF.
- Table ALMSC identifies the function that each of the assigned scan points performs in the alarm scan groups. Field SCGROUP identifies a scan group number and corresponds to the SCGROUP entry in table ALMSCGRP.
- Table ALMSD identifies the function that each assigned signal distribution point performs in the alarm signal distributor groups. Field SDGROUP identifies the circuit equipment, location, and type of circuit pack that contains signal distribution (SD) points. Field SDGROUP corresponds to an entry in table ALMSDGRP.
- Table ALMSDGRP records the circuit equipment, location, and type of circuit pack that contains signal distribution (SD) points. Data in field SDGROUP in table ALMSD must correspond to SDGROUP entries in table ALMSDGRP.
- Table ALMSCGRP records the circuit equipment, location, and type of circuit pack that contains scan points. Data in field SCGROUP in table ALMSC must correspond to SCGROUP entries in table ALMSCGRP.
- 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 equipment, like line or test units or local test desks. Sixteen horizontal connections are available for each minibar.
- Table MTAHORIZ uses CLLI codes from table CLLI for host and remote line test units and metallic test units (multiline). Table MTAHORIZ also uses the codes for 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.

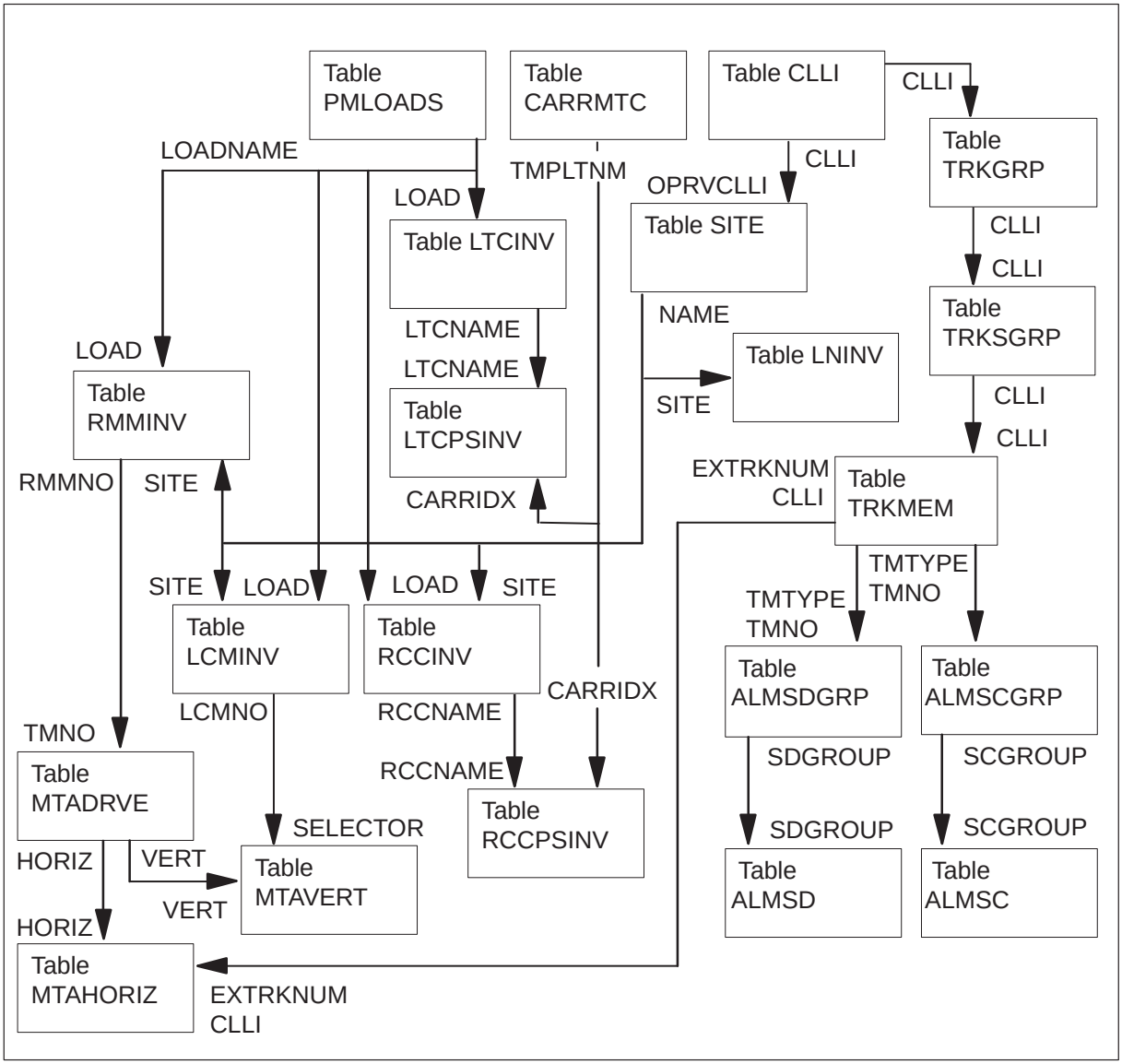
Basic call processing (continued)

- Table MTAVERT identifies the vertical connection points of the MTA matrix. For RSC-S, the connection is single, not multiple. Field SITE in table MTAVERT must correspond to field NAME in table SITE. This match identifies the equipment for the switching unit and for remote locations that use the unit.
- Table MTAMDRVE locates an MTAM driver in the MTA structure. The MTA connects test equipment to a circuit that requires testing. The metallic test access (MTA) network is a matrix of vertical and horizontal crosspoints, like a minibar. The MTA connects specified horizontal connections to vertical connections in the network.

  Twenty vertical connections are available for each minibar. Each vertical connection can connect to one of 320 lines in a line module. A line module joins to the test access network with two vertical connections. A line module can hold a maximum of 640 lines.

Basic call processing (continued)

Table flow for basic call processing



Limits

There are no limits to Basic call processing.

Interactions

There are no functional interactions in Basic call processing.

Basic call processing (continued)

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 basic RSC-S configuration does not have specified parameters. The RSC-S configuration can have RSC-2 capabilities like emergency stand-alone (ESA). The chapters on RSC-2 capabilities discuss each capability.

Parameter LCDREX _CONTROL in table OFCVAR transfers control of routine exercise (REX) tests for line concentrating modules (LCM). The tests of LCM ring and voltage values, previously a section of LCM_REX, becomes part of an LCM converter test (LCM_COV_REX). Control of LCM_REX_TEST and LCMCOV_REX_TEST, part of system REX (SREX), transfer to parameter NODEREXCONTROL in table OFCVAR. Parameter LCDREX_CONTROL remains to control REX testing of line modules (LM).

Note: The system performs the LCMCOV_REX_TEST on LCMs, XLCMs, OPMs, and RLCMs.

Data entry sequence

The following table lists the tables that require data for Basic call processing. Enter data in the tables in the order that the tables appear in the list.

Basic call processing (continued)

Data tables required for Basic call processing

Table	Purpose of table
CLLI	Common language location identifier. Codes 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. This table also contains data to allow the DMS system to recognize equipment for remote locations that use the unit.
PMLOADS	The peripheral module loads table stores the device location of every peripheral module (PM) load file. This storage allows the system to map between the load names and load devices. This storage allows autoload to locate load files without action by personnel. Table PMLOADS must contain the expanded peripheral module (XPM) load files before the XPM inventory tables can use the XPM.
LTCINV	The line trunk controller inventory contains the inventory data, except the P-side link assignment, for PM types. This table defines the PCM-30 line group controller (PLGC) or line group controller offshore (LGCO) on the C-side of the RCO2.
CARRMTC	The carrier maintenance control allows the DMS switch administration to enter maintenance control information in peripherals. The CARRMTC also allows OOS limits for alarms, and system return-to-service (RTS) occurrences.
LTCPSINV	The line trunk controller P-side link inventory contains the assignment of the P-side links for XPM peripherals.
RCCINV	The remote cluster controller inventory contains inventory data, except P-side link assignments, for the RCO2. Table RCCINV confirms the C-side DS-1 assignments for the RCO2.
RCCPSINV	The remote cluster controller P-Side link inventory contains the P-side link assignments for the RCO2.
LCMINV	The line concentrating module (LCM) inventory lists data assignments for each bay that associates with a local LCM or remote line concentrating module (RLCM) unit.
RMMINV	The remote maintenance module inventory identifies an RLCM, RSC-S or outside plant module (OPM) site with the frame type. The RMMINV identifies the frame number, floor, row, frame position and product equipment engineering code (PEC) code. The RMMINV identifies the PM load and executive program loaded. The RMMINV also identifies the C-side PM that attach to each remote maintenance module (RMM).

—continued—

Basic call processing (continued)

Data tables required for Basic call processing (continued)

Table	Purpose of table
LNINV	The line circuit inventory lists the data for each line card slot.
REXSCHED	System REX scheduling of frequency and number of concurrent SREX tests. The REXSCHED uses parameter NODEREXCONTROL in table OFCVAR to control the execution of SREX testing. The system adds tuples to this table after inventory tables are entered.
TRKGRP	The trunk group defines data for each trunk group that associates with the switching unit.
TRKSGRP	The trunk subgroup lists additional information for each subgroup assigned to one of the trunk groups in table TRKGRP.
TRKMEM	The trunk member lists data for each trunk assigned to one of the trunk groups and subgroups. These groups are specified in tables TRKGRP and TRKSGRP. This table identifies the circuits for static trunks, dynamic trunks, and the test equipment used to test lines and trunks.
ALMSCGRP	The alarm scan group records the circuit equipment, location, and type of circuit pack that contains scan points.
ALMSDGRP	The alarm signal distributor group records the circuit equipment, location, and type of circuit pack that contains signal distribution (SD) points.
ALMSD	The alarm signal distributor point identifies the function that each of the assigned signal distribution points perform in the alarm signal distributor groups.
ALMSC	The alarm scan identifies the function that each of the assigned scan points perform in the alarm scan groups.
MTAMDRVE	Metallic test access (MTA) minibar driver. The MTA network is a matrix of vertical and horizontal crosspoints, like a minibar. The MTA connects specified vertical connections to horizontal connections in the network. The MTA connects test equipment to a circuit that requires testing.

—continued—

Basic call processing (continued)

Data tables required for Basic call processing

Table	Purpose of table
MTAVERT	The metallic test access vertical connection table identifies the vertical connectivity to the MTA matrix.
MTAHORIZ	The metallic test access horizontal lists the assignment of horizontal agents to a horizontal connection and horizontal group of MTAMs.
—end—	

The following table describes the office parameter that controls SREX test execution. For additional information about office parameters, refer to *Office Parameters Reference Manual*. For information about SREX scheduling, refer to table REXSCHED in this document.

Office parameters used to control SREX execution

Table name	Parameter name	Explanation and action
OFCVAR	NODEREXCONTROL	Control of SREX nodes governs execution of SREX tests (nodes). Fields are REXON (default: Y), REXSTART (default: 1:30), and REXSTOP (default: 3:30). Note: Data in table REXSCHED controls REX test nodes.

Basic call processing (continued)

Datafilling table OFCENG

The following table describes the data for RSC-S International for table OFCENG. The table describes the fields that apply to Basic call processing. For additional information about office parameters, refer to *Office Parameters Reference Manual*.

Datafilling table OFCENG

Field	Entry	Description
TALK_BATTERY_ALARM	Y or N Default is Y	TALK_BATTERY_ALARM. This parameter turns on the audits of the talk battery in LCM/XLCM/LCME/RLCM/OPM peripheral modules.

Parameter TALK_BATTERY_ALARM

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

Example of entries for table OFCENG

The following is an example of entries for table OFCENG. In this example, the table lists the new parameter to allow the talk battery alarm audit. For additional information about office parameters, refer to *Office Parameters Reference Manual*.

Example of OFCENG table MAP display

```
Table OFCENG
                      PARMNAME                      PARMVAL
-------------------------------------------------------------
  TALK_BATTERY_ALARM                                    Y
```

Datafilling table CLLI

The CLLI codes identify the far end of each announcement, tone, trunk group and test trunk. The CLLI codes also identify the far end of the national milliwatt test lines and service circuits.

Basic call processing (continued)

The following table describes the entries for Basic call processing for table CLLI. The table describes the fields that apply directly to Basic call processing. The following example does not apply to a Gateway Switching Center. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table CLLI

Field	Subfield or refinement	Entry	Description
CLLI		refer to subfields	Common language location identifier is a 16-character field. This field 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 is a 4-character code. This code identifies the name of the city or town at the far end of each group.
CLLI (continued)	PROV	alphanumeric	Province or state is a 2-character code. This code identifies the province or state at the far end of the trunk group.
	BLDG	alphanumeric	Building is a 2-character code. This code identifies the building number at the far end of the trunk group.
	TRAFUNIT	alphanumeric	Traffic unit is a 3-character code. This code identifies the destination of the traffic unit at the far end of the trunk group.
	SUFX	alphanumeric	Suffix is a 1-character code. This code identifies trunk groups that terminate at the same CLLI location.
ADNUM		0 to (size of CLLI table minus 1)	Administrative trunk group number. Enter a number from 0 through a number 1 less than the size of table CLLI that appears in table DATASIZE. The maximum size is 4095.

Note 1: The maximum number of CLLI codes is 8192.
Note 2: The SIZE field in table DATASIZE allocates memory for entry with field DATSKEY equal to CLLI.

—continued—

Basic call processing (continued)

Datafilling table CLLI (continued)

Field	Subfield or refinement	Entry	Description
TRKGRPSIZ		0 to 2047	Trunk group size is 4-character field. This field is equal to the maximum expected number of trunk members in the trunk group.
ADMININF		refer to subfields	Administrative information is a 32-character field. The operating company uses this field to record administrative information. The switching unit does not use the information. The recommended subfields are TRAFCLS, OFFCLS, and TRKGRTYP.
	TRAFCLS	alphanumeric or – for no entry	Trunk group traffic class is an optional field. This field is for administrative purposes.
ADMININF (continued)	OFFCLS	alphanumeric or – for no entry	Office class is an optional field. This field is for administrative purposes. When field TRKGRTYP is blank OFFCLS can be left blank.
	TRKGRTYP	alphanumeric or blank	Trunk group type is an optional field. This field is for administrative purposes.
Note 1: The maximum number of CLLI codes is 8192. ***Note 2:*** The SIZE field in table DATASIZE allocates memory for entry with field DATSKEY equal to CLLI.			
—end—			

Example of entries for table CLLI

The following is an example of entries for table CLLI .

MAP display example for table CLLI

```
Table: CLLI

CLLI         ADNUM   TRKGRPSIZ   ADMININF
_____________________________________________________
SYNCH        23      10          SYNCH/NONSYNCH
OFFHKSUP     45      10          SUPERVISION_SIGNAL_OFFHOOK
ALMSC        58      240         ALARM_SC
RMMVER90     79      10          ALARM_SD
LTU          177     10          LINE_TEST_UNIT
```

Datafilling table SITE

Table SITE contains data for the switching unit and for the remote locations that use the unit. Enter data in table SITE before you assign a line equipment number or enter a PM. The DMS system requires data in table SITE to recognize the equipment. The first entry in table SITE must be HOST for the host switching unit. The operating company defines the site names for the remote locations.

The following table describes data entry for Basic call processing for table SITE. The table describes fields that apply directly to Basic call processing. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

> ***Note:*** To use site names for a remote location, make sure that table OFCOPT (USINGSITE) and table OFCENG (UNIQUE_BY_SITE_NUMBERING) contain the correct data. The value of the two parameters must be Y.

Datafilling table SITE

Field	Subfield or refinement	Entry	Description
SITE		alphanumeric	Site name. Enter the site name of the remote switching unit. The first character must be alphabetical. Site names can contain a maximum of four characters. Do not use PM names for site names. Note that the first entry in this field is for the host switching unit.
LTDSN		00 to 99	LEN test desk site number. Enter a different 2-digit number to dial the site that appears under field NAME.
MODCOUNT		0	Module count. Enter 0.

Note 1: The system allocates memory for a maximum of 32 sites.
Note 2: Make changes to fields with multiple entries in the PROMPT mode. Nonprompt mode allows current entries to be left out.
Note 3: Enter the continuation mark (+) in fields with multiple possible entries which require more data. Enter the continuation mark when the next line specifies more data or you have more records to enter. Enter the end mark ($) in fields with multiple possible entries after the last entry.

—continued—

Basic call processing (continued)

Datafilling table SITE (continued)

Field	Subfield or refinement	Entry	Description
OPVRCLLI		alphanumeric	Operator verification CLLI. Enter the CLLI assigned to the operator verification trunk group at the remote location.
ALMDATA		ALMTYPE, TMTYPE, TMNO, CKTNO, POINT.	Alarm data. This field is for remote locations only and consists of subfields ALMTYPE, TMTYPE, TMNO, CKTNO, and POINT. See Note 3 for information about terminating data entry.

Note 1: The system allocates memory for a maximum of 32 sites.
Note 2: Make changes to fields with multiple entries in the PROMPT mode. Nonprompt mode allows current entries to be left out.
Note 3: Enter the continuation mark (+) in fields with multiple possible entries which require more data. Enter the continuation mark when the next line specifies more data or you have more records to enter. Enter the end mark ($) in fields with multiple possible entries after the last entry.

—end—

Example of entries for table SITE

The following is an example of an entry for table SITE.

MAP display example for table SITE

```
Table: SITE

     NAME
LTDSN  MODCOUNT     OPVRCLLI
                                                          ALMDATA
_____________________________________________________________________
     HOST
    00      14         VER90
                                                              $
     REM1
    01       5      RSMVER90
                           MJ RSM 0 15 0} {CR RSM 0 15 1} $
     RCT0
    04       3         VER90
                                                              $
```

Datafilling table PMLOADS

The following procedure describes the data for table PMLOADS. Table PMLOADS stores the device location of every PM load file. This storage permits the DMS-100 switch to locate load files.

The XPM Loadfile Patching, introduces an active loadfile and a backup loadfile. Use the active loadfile as the default load. Use the active loadfile with the LOADPM command and most system activities. Use the backup loadfile if a problem occurs when the active loadfile is loaded or RTSed. The backup loadfile is the unpatched loadfile that Northern Telecom ships.

Table PMLOADS adds fields to store data for:

- the name of the active loadfile that is the default load. This load uses the LOADPM command and most system initiated activities.
- the name of the backup loadfile used if a problem occurs when the active loadfile is loaded or RTSed. The backup loadfile is the unpatched loadfile the Northern Telecom ships with the XPM.
- the file locations of the loadfiles.
- the update active loadfile field, that indicates if the site requires an automatic update of the active file_id. The feature allows the patched loadfile to be loaded in the XPM. This feature simplifies reload and recovery of the XPM. If loadfile patching is available, loadpile patching updates the active file information.

The system uses active and backup files as part of loading and recovery.

Table PM loads must contain the XPM load files before you can enter the files in inventory table LTCINV or table RCCINV. The inventory table enforces this rule.

> ***Note:*** An exception to this rule occurs during the first entry and during dump and restore. At this time, the system adds tuples in table PMLOADS when LTCINV tuples are added.

Pre-patched XPM loads

Pre-patched XPM loads background

Pre-patched XPM loads (PPXLs) are XPM loadfiles. These loads have corrective patches built in the loadfile. The PPXLs are incremental loads built with patch updates. The patch updates are used to create patch files that are released to the field. A difference is not present between an XPM load with patches and a PPXL with patches. The patches with the PPXL are part of the load. The PPXLs are like CM loads that have built-in internal patches. These patches are built in according to date of shipment.

Basic call processing (continued)

Implementation of PPXLs

At the start of each PPXL loadfile, a 1K data block that contains patch IDs is present. These patch IDs are for the patches in the PPXL. The patch files for each patch ID in the 1K data block must be present. The patch files must be present when the user enters the PPXL in table PMLOADS.

When the user enters the PPXL in table PMLOADS, the loadset changes if a loadset is present for the base load. The system creates a loadset if the base load is new to the DMS-100 switch.

> ***Note:*** Loadsets group peripheral units with the same load together. To view the loadsets on the DMS-100 switch, access the PATCHER CI level and enter the command string INFORM PMALL.

After the PPXL is added to table PMLOADS, load the PPXL. The system recovery controller (SRC) can also load the PPXL. After the PPXL is loaded, a reduction or removal of the patching occurs. The reduction or removal occurs because the load includes the patches.

When PPXL is loaded, additional patches can be applied or removed from the PPXL like an XPM load. Internal patches can also be removed if corresponding patch files are present.

The system applies or removes patches of reloads after a PPXL is loaded.

PPXL Naming Convention

The PPXL file names have "_<date>" attached to the end of the corresponding base load name. For example, a PPXL load file for base load ECL03BX. The name of this file is ECL03BX_941129. The base load name remains the same. The system identifies the Base loads as a load without the _<date> suffix.

The known value becomes the preservation of the patch stream with the ability to up-issue a PPXL. The date identifier identifies the vintage of a PPXL.

PPXL storage requirements

Operating companies must double the XPM load storage requirements to adjust to the PPXLs before PPXL load. The PPXLs require storage of the PPXL loadfile on the ACTVOL device. The PPXLs require storage of the base load file on the BKPVOL device.

Loading a PPXL

There are two ways to add PPXLs to an office. The first way is to upgrade an office to a new base load lineup. This is possible when the base loadname is not in table PMLOADS. The second way is to add PPXLs to offices that have the base loadname in table PMLOADS. For example, ESC03CJ, the current loadname attaches to ESC03CJ_950105, (the PPXL added to the baseload). Descriptions of the two methods follow:

Note 1: Release BCS36 or higher CM loads supports PPXLs.

Note 2: Apply the PATCH JCK19 to the CM before you continue.

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 used for PM loads.

Note: Copy the base load and the PPXL load to two disk volumes for redundancy.

2 Copy the patches that associate with the PPXL loads to the same disk volume used in the step 1. The load tape shipment includes a list of patches that associate with each PPXL. When the disk contains the PPXL file, obtain a list of patches included in the PPXL. To obtain a list of patches included in the PPXL, type

>XPMLFP

and press the Enter key.

>PATCHLIST FILE ppxl_filename

and press the Enter key.

where

ppxl_filename is the filename of the PPXL loaded added to the base load

3 Add a new tuple for the base load to table PMLOADS. Enter the base load for the LOADNAME, and the ACTFILE. Enter the base load name again for the BKPFILE.

4 Add the base loadname to the correct 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. Refer to the entry example for table PMLOADS to identify this tuple.

Basic call processing (continued)

6 To set the loadset against the two units of the XPM, type:

>PATCHER
and press the Enter key.

>SET loadname PM pm_type device_no unit_no
and press the Enter key.

where

loadname	is the name of the loadfile
pm_type	is the type of PM that requires the loadset
device_no	is the device number with a range of 0–255
unit_no	is the unit number, 0 or 1

7 To load the PPXL into each unit of the XPM, type:

>BSY UNIT unit_no
and press the Enter key.

>LOADPM UNIT unit_no
and press the Enter key.

>RTS UNIT unit_no
and press the Enter key.

where

unit_no	is the unit number of the XPM to be loaded

8 Perform a warm SwAct of the XPM and repeat step 7.

Note 1: When loaded, patches can be applied or removed from the XPM as before. Patches built in the PPXL can be removed from the load if the patch file is present on disk.

Note 2: The system adds or removes patches of reloads that follow the loading of a PPXL.

Note 3: The system does not remove non-PPXL patches when the PPXL reloads because the removed patches are already out of the loadset.

Adding PPXLs to present PM load lineup

To add PPXLs to a present XPM load lineup, use the following procedure:

1 Verify that patch_ids that associate with the PPXL are present on the disk volume identified in table PMLOADS, field ACTVOL. If the patch_ids are not present, copy the patches from tape to the correct volume. The PM tape shipment includes a list of the patches in each PPXL. When the disk contains the PPXLs, list the patches in the PPXL. To list the patches, type

>XPMLFP

and press the Enter key.

>PATCHLIST FILE ppxl_filename

and press 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 from step 1.

3 Copy the baseload to the disk volume in table PMLOADS, field BKPVOL.

4 Modify table PMLOADS.

If table PM loads does not contain the XPM base loadname, add a new tuple. Use the previous Upgrading baseload lineup procedure. If this does not apply, change the ACTFILE field to the PPXL filename (filename_date). The system upgrades the loadset if a loadset is present or creates a loadset if a loadset is not present.

5 To set the loadset against the two units of the XPM, type:

>PATCHER

and press the Enter key.

>SET loadname PM pm_type device_no unit_no

and press the Enter key.

where

loadname	is the name of the loadfile
pm_type	is the type of PM that requires the loadset
device_no	is the device number with a range of 0–255
unit_no	is the unit number, 0 or 1

Basic call processing (continued)

6 To load each unit of the XPM with the PPXL, type:

>BSY UNIT unit_no
and press the Enter key.

>LOADPM UNIT unit_no
and press the Enter key.

>RTS UNIT unit_no
and press the Enter key.

where

unit_no is the unit number of the XPM to be loaded

7 Perform a warm SwAct of the XPM and repeat step 6.

Note 1: When loaded, the XPM can have additional patches applied or removed with the same method as the XPM loads in the past. Patches built in the PPXL can be removed from the load if the actual patch file is present on disk.

Note 2: The system adds or removes patches of reloads that follow the loading of a PPXL.

The entry example for table PMLOADS does not change for RSC-S. The following table describes the entries for Basic call processing for table PMLOADS. The table describes fields that apply directly to Basic call processing. 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	Peripheral module load name. Enter the XPM load name. Range is a maximum of 32 characters. This loadname must be the same as the load name entered in tables LTCINV and RCCINV.
ACTFILE		alphanumeric	Active load file name. The name of the active XPM loadfile. This came can be the original loadfile or a patched loadfile. The range is a maximum of 32 characters. Before patching, this name is the original load name. The XPM load file patching updates the field after the load is patched for a period of time. The period of time is called soak time.
ACTVOL		alphanumeric	Active volume. Identifies the device that stores the active loadfile. Range is the set of disk drive unit (DDU) volumes and system load module (SLM) disks available to the CM, S00DXPM. The range is a maximum of 16 characters.
BKPFILE		alphanumeric	Backup load file name. Identifies the name of the backup XPM loadfile. The BKPFILE name should be the same name as the LOADNAME field. The range is a maximum of 32 characters.
BKPVOL		alphanumeric	Backup volume. The device that stores the backup loadfile. The range is the set of DDU volumes and SLM disks available to the CM, S00DXPM. The range is a maximum of 16 characters.
UPDACT		Y or N	Update active filename. Controls if the loadfile is eligible for loadfile patching. Controls if the patchfile loadfile name can update PMLOADS fields ACTFILE and ACTVOL.

Basic call processing (continued)

Example of entries for table PMLOADS

The following is an example of entries for table PMLOADS.

MAP display example for table PMLOADS

```
LOADNAME
 ACTFILE        ACTVOL
 BKPFILE        BKPVOL   UPDACT
_____________________________________________________________________
ESA02CM
 ESA02CM        S00DXPM
 ESA02CM        S00DXPM      Y
```

Datafilling table LTCINV

Table line trunk controller inventory (LTCINV) contains the inventory data for the following:

- PM types PLGC
- digital trunk controller offshore (DTCO)
- LGCO
- subscriber module rural (SMR)
- subscriber carrier module-100S (SMS)
- subscriber module urban (SMU)
- and international digital trunk controller (IDTC)

With the RSC-S configuration, this table is used to define the LTCO or LGCO on the C-side of the RCO2.

The following table describes the entries for Basic call processing for table LTCINV. The table describes the fields that apply directly to Basic call processing. Refer to the data schema section of the *Translations Guide* for a description of the other fields. The system adds a field that contains the name of the loadfile that associates with the electrically erasable programmable read-only memory (EEPROM).

Datafilling table LTCINV

Field	Subfield or refinement	Entry	Description
LTCNAME		refer to subfields	Link trunk controller name. Contains subfield XPMTYPE and XPMNO.
	XPMTYPE	PLGC	XPM type. Enter PLGC. Entry values include PLGC, DTC, LGCO, SMR, SMS, SMU, IDTC, ILGC, ILTC, PDTC, TRCC, DTCI, TMS, and SMA.
	XPMNO	0 to 255	The XPM number. Enter the number of the XPM
FRTYPE		Refer to list	Frame type. Enter LTE for the LTCO; enter LGE for the LGCO.
Enter the location of the C-side PM in fields FRNO, SHPOS, FLOOR, ROW, and FRPOS.			
EQPEC		alphanumeric	Product equipment code. Enter the PEC for the frame.
LOAD		alphanumeric	Load. Enter load for PM use. The load can display a load that appears in table PMLOADS.
EXECTAB		TRMTYPE, EXEC	Executive table. Contains subfields TRMTYPE, and EXEC. The terminal type and associated execs are entered together. Refer to Note 2 for information about terminating data entry.
	TRMTYPE	Refer list	Terminal type. Enter the terminal models to be used. POTS is for regular lines, KSET for MBS terminals, ABTRK for regular trunks, and RMM_TERM is for MTC trunks.
	EXEC	alphanumeric	Executive programs. Enter the execs that associate with the terminal type.
CSLNKTAB		see subfields	C-side link table. Contains subfields NMPAIR, and NMPORT. Refer to Note 2 for information about terminating data entry.

Note 1: Make changes to fields with multiple entries in the PROMPT mode. In nonprompt mode, you can leave out present 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 are entered. Enter the end mark ($) in fields with multiple possible entries after the last entry.

—continued—

Basic call processing (continued)

Datafilling table LTCINV (continued)

Field	Subfield or refinement	Entry	Description
CSLNKTAB (continued)	NMPAIR	0 to 31	Network module pair number. Enter the network link where the PM is assigned, corresponding to C-side links 0 through 15 of the PM.
	NMPORT	0 to 63	Network module port. Enter the network port corresponding to the above link.
OPTCARD		see list	Optional card. This field is a vector with a maximum of ten entries. Enter this when the PLGC/LGCO includes the UTR, TONE, and message card. If the CMR card is included, enter the CMRLOAD. Refer to Note 2 for information about terminating data entry.
TONESET		UKADSI	TONESET. Enter UKADSI. Range of values include DEFAULT and UKADSI.
PROCPEC		MX77AA MX77AA	Processor equipment engineering codes. One PEC is necessary for each LTCO unit. Enter the PEC for unit 0 first. The PEC must reflect the minimum firmware capabilities in the processor complex of each unit.
E2LOAD		alphanumeric	EEPROM file. Contains the name of the loadfile loaded in the NTMX77AA EEPROM.
OPTATTR			Optional attribute. This field is not a DTC for CCS7, leave blank. Refer to note 2 for information about terminating data entry.

Note 1: Make changes to fields with multiple entries in the PROMPT mode. In nonprompt mode, you can leave out present 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 are entered. Enter the end mark ($) in fields with multiple possible entries after the last entry.

—continued—

Datafilling table LTCINV (continued)

Field	Subfield or refinement	Entry	Description
PEC6X40		alphanumeric	The 6X40 equipment PEC. Enter the version of the NT6X40 to be used.
EXTINFO			EXTENSION_INFO.
Note 1: Make changes to fields with multiple entries in the PROMPT mode. In nonprompt mode, you can leave out present 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 are entered. Enter the end mark ($) in fields with multiple possible entries after the last entry.			
—end—			

Example of entries for table LTCINV

The following example describes sample entries for table LTCINV.

MAP display example for table LTCINV

```
Table: LTCINV

LTCNAME   FRTYPE FRNO SHPOS FLOOR ROW FRPOS EQPEC  LOAD
_____________________________________________________________
PLGC 1     LGE    1   18    0     C   6    6X02AG  KRI06AY

EXECTAB
_____________________________________________________________
(POTS POTSEX)(KEYSET KSETEX)(RMM_TERM RSMEX)(ABTRK DTCEX)

CSLNKTAB
_____________________________________________________________
(9 17)(13 61)(5 14)(0 29)(1 30)(2 31)(3 28)(4 29)     $

OPTCARD                  CMRLOAD
_____________________________________________________________
(UTR6)(ISP)(RAM6X69)(7X05)(CMR18 CMRAG03)                    $

TONESET   PROCPEC       E2LOAD    OPATTR  PEC6X40
_____________________________________________________________
AUS100    MX77AA  MX77AA  MX77NH08   $     6X40AC
```

Basic call processing (continued)

Note 1: The xx in field LOAD stands for alphanumeric, for example `B1`.

Note 2: If the shelf is equipped with a processor different from NTMX77, the system enters the value of NILLOAD in field E2LOAD.

Note 3: When field PROCPEC is entered with AX74AA AX74AA, not MX77AA MX77AA, the load name prefix in field LOAD changes from `KRI` to `WRI`. For example, `KRI07xx` (for MX77) changes to `WRI07XX` (for AX74AA). The following example displays sample entries for table LTCINV when the RCO2 is entered for the NTAX74AA CAP.

MAP display example for table LTCINV entered for NTAX74AA CAP

```
Table: LTCINV

LTCNAME   FRTYPE FRNO SHPOS FLOOR ROW FRPOS EQPEC | LOAD   |
_____________________________________________________|______|
PLGC 1     LGE    1   18    0     C   6    6X02AG | WRI07xx|
                                                  |________|
EXECTAB
CONTMARK
_____________________________________________________________
(POTS POTSEX)(KEYSET KSETEX)(RMM_TERM RSMEX)(ABTRK DTCEX)$

CSLNKTAB
_____________________________________________________________
(9 17)(13 61)(5 14)(0 29)(1 30)(2 31)(3 28)(4 29)     $

OPTCARD                          CMRLOAD
_____________________________________________________________
(UTR6)(ISP)(RAM6X69)  |      |(CMR18 CMRAG03)       $
                      |______|

TONESET   |PROCPEC        ||E2LOAD    |OPATTR  PEC6X40
__________|_______________||__________|_____________________
AUS100    |AX74AA  AX74AA || AX74xxx  | $      6X40AC
          |_______________||__________|
```

Datafilling table CARRMTC

Table CARRMTC allows Digital Multiplex System (DMS) switch administration to enter maintenance control information on the following:

- peripherals
- OOS limits for alarms
- system RTS occurrences

For table CARRMTC, fields CSPMTYPE and SELECTOR expand to include the current PM type RCO2. The SELECTOR field is a subfield of ATTR.

A carrier maintains communication on links that connect the following:

- DMS peripherals to channel banks
- DMS peripherals to remote DMS peripherals
- remote-to-remote DMS peripherals.

Each peripheral that can provide carrier links in the switch has a maximum of 16 entries.

The common peripheral module (CPM) carrier tuples contain different carrier maintenance limits and information for pulse code modulated–30 (PCM-30) carriers. Like XMS–based peripheral module (XPM) carriers, you must add one tuple to provide the maintenance thresholds for CPM carriers. During initial program load (IPL), enter one default tuple in table CARRMTC for each XPM type in the office and in field CSPMTYPE. Add other tuples manually for different maintenance thresholds.

You must enter a tuple in table CARRMTC before the XPM P-side inventory table tuple in table RCCPSINV can change. Links in table RCCPSINV cannot refer to field TMPLNM in table CARRMTC until you delete or change a tuple in table CARRMTC.

Enter the selection of entries for each carrier in the inventory table of the C-side peripheral, table LTCPSINV. The following checks are made between tables CARRMTC and LTCPSINV:

- When you enter a carrier index (CARRIDX) in table LTCPSINV, an entry for the peripheral module (PM) type must be present. The PM type is RCO2 when this condition occurs.
- When you delete an entry from table CARRMTC, the carriers in table LTCPSINV cannot refer to the entry. If a carrier refers to the entry, the system rejects the delete command.

Basic call processing (continued)

- When you change an entry in table CARRMTC, the system checks table LTCPSINV to determine if in-service carriers refer to the entry. If the in-service carriers refer to the entry, the system rejects the change command. The system displays a list of in-service carriers.

The following table describes the entries that apply to basic call processing for table CARRMTC. The table contains the fields that apply directly to basic call processing. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table CARRMTC

Field	Subfield or refinement	Entry	Explanation and action
CSPMTYPE		RCO2	The central side (C-side) node PM type. Enter the PM type of the node on the C-side of the carrier link.
TMPLTNM		DEFAULT	Template name. Enter the template name for the PM. The template name can be a maximum of 16 characters. This entry also appears in the CARRIDX field of table LTCPSINV.
RTSML		0 to 255	Return to service (RTS) maintenance limit. Enter the number of times in an audit interval that the system can return a carrier to service. The number reflects the number of times the carrier can RTS before the system issues a warning. Value 255 disables this feature.
RTSOL		0 to 255	Return to service out–of–service (OOS) limit. Enter the number of times in an audit interval that the system can return a carrier to service. The number reflects the number of times the carrier can RTS before the system places the carrier permanently out of service. Value 255 disables this feature.
ATTR		refer to subfield	Attribute. This field contains subfield SELECTOR.
	SELECTOR	D30	Selector. Enter carrier type.
	CARD	NTMX82AA	Card. Enter the PEC of the PCM-30 interface card used.

—continued—

Basic call processing (continued)

Datafilling table CARRMTC (continued)

Field	Subfield or refinement	Entry	Explanation and action
VOICELAW		A_LAW	Voice law. Enter the voice law that the carrier uses. The carrier uses A_LAW in international switches. The carrier uses MU_LAW in North American switches.
NATLBIT		INTERNATL	National bit. Enter INTERNATL for RCO2.
LLFAOST		0 to 255	Local loss of frame alignment out-of-service time. Enter the local loss of frame alignment out-of-service time.
LLFARST		0 to 255	
LLFAML		0 to 255	Local loss of frame alignment maintenance limit. Enter the local loss of frame alignment maintenance limit.
LLFAOL		0 to 255	Local loss of frame alignment out-of-service limit. Enter the local loss of frame alignment out-of-service limit.
LLMAOST		0 to 255	Local loss of multiframe alignments out-of-service time. Enter the local loss of multiframe alignments out-of-service time.
LLMARST		0 to 255	Local loss of multiframe alignment return-to-service time. Enter the local loss of multiframe alignment return-to-service time.
LLMAML		0 to 255	Local loss of multiframe alignment maintenance limit. Enter the local loss of multiframe alignment maintenance limit.
LLMAOL		0 to 255	Local loss of multiframe alignment out-of-service limit. Enter the local loss of multiframe alignment out-of-service limit.
RFAIOST		0 to 255	Remote frame alignment indication out-of-service time. Enter the remote frame alignment indication out-of-service time.
RFAIRST		0 to 255	Remote frame alignment indication return-to-service time. Enter the remote frame alignment indication return-to-service time.

—continued—

Basic call processing (continued)

Datafilling table CARRMTC (continued)

Field	Subfield or refinement	Entry	Explanation and action
RFAIML		0 to 255	Remote frame alignment indication maintenance limit. Enter the remote frame alignment indication maintenance limit.
RFAIOL		0 to 255	Remote frame alignment indication out-of-service limit. Enter the remote frame alignment indication out-of-service limit.
RMAIOST		0 to 255	Remote multiframe alignment indication out-of-service time. Enter the remote multiframe alignment indication out-of-service time.
RMAIRST		0 to 255	Remote multiframe alignment indication return-to-service time. Enter the remote multiframe alignment indication return-to-service time.
RMAIML		0 to 255	Remote multiframe alignment indication maintenance limit. Enter the remote multiframe alignment indication maintenance limit.
RMAIOL		0 to 255	Remote multiframe alignment indication out-of-service limit. Enter the remote multiframe alignment indication out-of-service limit.
RFAIOST		0 to 255	Remote frame alarm indication out-of-service time. Enter the remote frame alarm indication out-of-service time.
RFAIRST		0 to 255	Remote frame alarm indication return-to-service time. Enter the remote frame alarm indication return-to-service time.
RFAIML		0 to 255	Remote frame alarm indication maintenance limit. Enter the remote frame alarm indication maintenance limit.
RFAIOL		0 to 255	Remote frame alarm indication out-of-service limit. Enter the remote frame alarm indication out-of-service limit.
RMAIOST		0 to 255	Remote multiframe alarm indication out-of-service time. Enter the remote multiframe alarm indication out-of-service time.

—continued—

Datafilling table CARRMTC (continued)

Field	Subfield or refinement	Entry	Explanation and action
RMAIRST		0 to 255	Remote multiframe alarm indication signal return-to-service time. Enter the remote multiframe alarm indication signal return-to-service time.
RMAIOL		0 to 255	Remote multiframe alarm indication signal out-of-service limit. Enter the remote multiframe alarm indication signal out-of-service limit.
AISOST		0 to 255	Alarm indication signal out-of-service time. Enter the alarm indication signal out-of-service time.
AISRST		0 to 255	Alarm indication signal return-to-service time. Enter the alarm indication signal return-to-service time.
AISML		0 to 255	Alarm indication signal maintenance limit. Enter the alarm indication signal maintenance limit.
AISOL		0 to 255	Alarm indication signal out-of-service limit. Enter the alarm indication signal out-of-service limit.
BERML		0 to 255	Bit error rate maintenance limit. Enter the bit error rate maintenance limit.
		0 to 255	Bit error rate out-of-service time. Enter the bit error rate out-of-service time.
BEROL		0 to 255	Bit error rate out-of-service limit. Enter the bit error rate out-of-service limit.
SLIPML		0 to 255	Slip maintenance limit. Enter the slip maintenance limit.
SLIPOL		0 to 255	Slip out-of-service limit. Enter the slip out-of-service limit.
SLIPSYNC		Y	Enter Y (yes) to indicate the switch operates in a synchronized region. Slips are accumulated over 24 h intervals. Enter N (no) to indicate the switch does not operate in a synchronized region. Slips are accumulated over 1 min and 5 min intervals.

—continued—

Basic call processing (continued)

Datafilling table CARRMTC (continued)

Field	Subfield or refinement	Entry	Explanation and action
AIS16OST		0 to 255	Return-to-service time for AIS16 alarm. The default is 4.
AIS16RST		0 to 255	Return-to-service time for AIS16 alarm. The default is 4.
AIS16ML		0 to 255	Maintenance limit for AIS16 alarm. The default is 17.
AIS16OL		0 to 255	Out-of-service limit for AIS16 alarm. The default is 255.
CRC4		Y or N	Initiate the cyclic redundancy check 4 (CRC4) routine.
CRE		Y or N	Initiates the CRE procedure.
CRCOST		0 to 255	Out-of-service time for cyclic redundancy check (CRC) alarm. The default is 5.
CRCRST		0 to 255	Return-to-service time for CRC alarm. The default is 5.
CRCML		0 to 1023	Maintenance limit for CRC4 alarm. The default is 205.
CRCOL		0 to 1023	Out-of-service limit for CRC4 alarm. The default is 914.
IDLECODE		Q503 or G714	The CCITT recommended Idle channel bit pattern.

—continued—

Datafilling table CARRMTC (continued)

Field	Subfield or refinement	Entry	Explanation and action
SIGNTYPE		refer to list	Signal type. Enter the signal type. The value ranges are: • CAS • CASX • CCS • CCSIPML • D30RCC
Note 1: The DMS system automatically adds the first tuple for RCO2 to table CARRMTC during IPL or first restart after IPL. The entry is index 0 and has the value DEFAULT in field TMPLTNM field and default values for the other fields. ***Note 2:*** You must manually add tuples other than the default tuple before you can reference the tuples in table LTCPSINV. You can only delete the tuples if no PCM-30 carriers are associated with the tuples. ***Note 3:*** To change tuples in table CARRMTC, you must manually busy (ManB) the associated PCM-30 carriers or set the carriers to offline (OFFL). To reset the counters the links must be off-line.			
—end—			

Entry example for table CARRMTC

A sample entry for table CARRMTC appears in the following example.

```
Table: CARRMTC

CSPMTYPE TMPLTNM RTSML RTSOL                ATTR
_____________________________________________________
PLGC     D30RCo2 255  255 D30 NT6X27AB A_LAW NATL 30 30 4 20 3
                                30 4 20 30 30 4 20 30 30 4 20 30 30
                                20 130 16 4 20 Y 4 4 17 255 N N 5 5
                                205 914 G714 D30RCC
```

Basic call processing (continued)

Datafilling table Line Trunk Controller P–Side Link Inventory (LTCPSINV)

Table LTCPSINV contains P-side link assignments for host PMs. The key for table LTCPSINV is the same as the key for table LTCINV. The system allocates memory automatically for a maximum of 128 tuples.

The datafill for table LTCPSINV appears in the following table. The table contains fields that apply to basic call processing. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table LTCPSINV

Field	Subfield or refinement	Entry	Explanation and action
LTCNAME		refer to subfields	Link trunk controller name. Contains subfields XPMTYPE and XPMNO.
	XPMTYPE	PLGC	The PM type. The PM type must match the entry in subfield XPMTYPE in table LTCINV.
	XPMNO	0 to 255	The PM number. The PM number corresponds to the subfield XPMNO entered in LTCINV.
PSLNKTAB		0 to 19	The P-side link. The P-side contains subfields PSLINK, PSDATA, and CONTMARK. Enter the vector number. ***Note:*** 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.
Note: The value of AREASELCT determines Datafilling fields in PSDATA. If AREASELCT is DS30A, DCH, or NILTYPE, no other fields require entry. If PSDATA is D30, complete fields CARRIDX and ACTION.			

—continued—

Datafilling table LTCPSINV (continued)

Field	Subfield or refinement	Entry	Explanation and action
PSLNKTAB (continued)	PSDATA	Refer to subfield	P-side data. The P-side data contains subfield AREASELCT.
	AREASELCT	D30	Area select. Enter D30 for trunks and remote nodes, including the RCC, RCO2, and RLCM. Enter DS30A if the P-side interface is to a local LCM.
	CARRIDX	DEFAULT	Carrier index. Enter DEFAULT for the default template name in in table CARRMTC. Or, enter a correct template name from table CARRMTC.
	ACTION	N	Action to remove carrier from service if out-of-service (OOS) limits are exceeded. Enter Y to remove carrier from service or enter N.
Note: The value of AREASELCT determines Datafilling fields in PSDATA. If AREASELCT is DS30A, DCH, or NILTYPE, no other fields require entry. If PSDATA is D30, complete fields CARRIDX and ACTION.			
—end—			

Entry example for table LTCPSINV

A sample entry for table LTCPSINV appears in the following example.

MAP display example for table LTCPSINV

```
Table: LTCPSINV

LTCNAME  PSLNKTAB                                          CONTMARK
-----------------------------------------------------------------
PLGC 1
(0 D30 D30RCO2 N) (1 D30 D30RCO2 N) (2 D30 D30RCO2 N)
(3 D30 D30RCO2 N) (4 D30 DEFAULT N) (5 D30 DEFAULT N)
(6 D30 DEFAULT N) (7 D30 DEFAULT N) (8 NILTYPE) (9 NILTYPE)
(10 NILTYPE) (11 NILTYPE) (12 NILTYPE) (13 NILTYPE)
(14 NILTYPE) (15 NILTYPE) (16 NILTYPE) (17 NILTYPE)
(18 NILTYPE) (19 NILTYPE)$
```

Basic call processing (continued)

Datafilling table Remote Cluster Controller Inventory (RCCINV)

Table RCCINV contains inventory data for the RCO2. The RCCINV does not contain inventory data for P-side link assignments. The C-side PCM-30 assignments for the RCO2 are entered in table RCCINV.

The entries for table RCCINV appears in the following procedure. This procedure contains the fields that apply to basic call processing. Refer to the data schema section of the *Translations Guide* for a description of the other fields. Field FRTYPE contains new values. An additional field contains the name of the loadfile associated with the EEPROM.

The addition of the NILPORT option to the CSLNKTAB field of table RCCINV allows you to skip links. The NILPORT option allows you to skip ports when you enter an RCO2 C-side PCM-30 link. If a port must remain unequipped, enter NILPORT.

Note: When you change, delete, replace or add a C-side link, you must busy the affected link. You must busy all links that follow. You must busy the links before you can make any changes in table RCCINV.

Datafilling table RCCINV

Field	Subfield or refinement	Entry	Explanation and action
RCCNAME		Refer to subfields	The RCO2 name. Contains subfields SITE, PMTYPE, and RCCNO.
	SITE	alphanumeric	Site. Enter the site name assigned to the remote location. The entry must also appear in table SITE.
	PMTYPE	RCO2	PM type. Enter RCO2.
	RCCNO	0 to 511	RCO2 number. This number is different by office and not by site.
Note: When you enter 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. The interface link types are DS-1, DS30, DS30A, or PCM-30. Table control issues a warning when you attempt to assign message links on the same interface card. If you assign message links to the same interface card, an E1 outage can occur if the card fails. An E1 outage is a failure of all message links.			

—continued—

Basic call processing (continued)

Datafilling table RCCINV (continued)

Field	Subfield or refinement	Entry	Explanation and action
FRTYPE		Refer to list	Frame type. Enter CRSC for the RCO2 shelf. Enter CEXT for the RCO2 extension shelf.
Enter the location of the RCO2 in fields FRNO, SHPOS, FLOOR, ROW, and FRPOS.			
EQPEC		MX85AA	Equipment PEC. Enter the PEC MX85AA for the RCO2.
LOAD		alphanumeric	Load. Enter the load for the RCO2. Make sure that table PMLOADS contains this entry.
EXECTAB		Refer to subfields	Exec table. Contains subfields TRMTYPE, EXEC, and CONTMARK. Like with LTCINV, each terminal type is associated with a specified execs. ***Note:*** Make changes to fields with multiple entries in the PROMPT mode only.
	TRMTYPE	Refer to list	Terminal type. Enter the terminal models to use. The POTS is for normal lines. The KEYSET for MBS/data lines. The RMM_TERM is for remote MTC trunks. The ABTRK is for normal trunks. The ESA is for ESA lines.
	EXEC	Refer to list	Executive programs. Enter the execs associated with the terminal type. Examples are POTSEX, KSETEX, DTCEX, ESAEX, and RSMEX.

Note: When you enter 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. The interface link types are DS-1, DS30, DS30A, or PCM-30. Table control issues a warning when you attempt to assign message links on the same interface card. If you assign message links to the same interface card, an E1 outage can occur if the card fails. An E1 outage is a failure of all message links.

—continued—

Basic call processing (continued)

Datafilling table RCCINV (continued)

Field	Subfield or refinement	Entry	Explanation and action
CSPM		Refer to subfields	C-side PM. Contains subfields PMTYPE and XPMNO.
	PMTYPE	PLGC	PM type. Enter the type of peripheral attached to the RCO2. Note this PLGC or LGCO can be part of a host ISDN configuration.
	XPMNO	0 to 255	PM number. Enter the PM number attached to the RCO2 C-side.
CSLNKTAB		0 to 19	C-side link table. This is a vector with a maximum of 16 entries. Enter the PLGC or LGCO P-side PCM-30 links (0—19) where the RCO2 C-side is assigned. Note that all links for an RCO2 must end up at the same PLGC or LGCO. Message links (first and third entries) must be assigned to different shelves (units) of the frame so that corruption or power failure will not affect service. Contains subfield CONTMARK. ***Note:*** You must make changes to fields with multiple entries in the PROMPT mode only.
ESA		Y or N	Emergency stand-alone. Controls if the RCO2 has ESA capability.
INTRASW		Y or N	Intraswitching. Controls if intraswitching is allowed.

Note: When you enter 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. The interface link types are DS-1, DS30, DS30A, or PCM-30. Table control issues a warning when you attempt to assign message links on the same interface card. If you assign message links to the same interface card, an E1 outage can occur if the card fails. An E1 outage is a failure of all message links.

—continued—

Basic call processing (continued)

Datafilling table RCCINV (continued)

Field	Subfield or refinement	Entry	Explanation and action
OPTCARD		Refer to list	Optional card. This is a vector of a maximum of 10 entries. For the RCO2, you must use slot 4 for the ISDN signaling pre-processor (ISP) card. Slots 6 and 7 can be used for the universal tone receiver (UTR) cards, and the class modem resources (CMR) card can only be plugged to slot 5. Examples are CMR5, ISP, UTR6, and UTR7. For an RCO2 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. The DMS-X to HDLC dynamic upgrade cannot be present in the inactive CM. ***Note:*** You must only changes to fields with multiple entries in the PROMPT mode.
	MX76LOC	REM	The NTMX76 card location. Defines the location of the NTMX76 card, either remote or host. Only REM is acceptable for the remote peripheral.

Note: When you enter 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. The interface link types are DS-1, DS30, DS30A, or PCM-30. Table control issues a warning when you attempt to assign message links on the same interface card. If you assign message links to the same interface card, an E1 outage can occur if the card fails. An E1 outage is a failure of all message links.

—continued—

Basic call processing (continued)

Datafilling table RCCINV (continued)

Field	Subfield or refinement	Entry	Explanation and action
	PROTOCOL	HDLC or DMSX	Protocol. Defines if HDLC mode is present and is active. If so, the remote shelf operates in HDLC after initialization. The remote PM must be busied before this value is changed. Entry is mandatory if the NTMX76 card is datafilled.
	NT7X05AA	NT7X05AA	If you enter NT7X05AA, the system prompts for the slot_number. Slot numbers for the NT7X05AA in the RCO2 are 5 and 21, or 7 and 23.
CMRLOAD		alphanumeric	The CLASS modem resource load. Enter the CMR loadname.
TONESET		AUS100	Tone set. Enter AUS100 for international applications. For other applications, enter a blank for DEFAULT.
PROCPEC		MX77AA MX77AA	Processor equipment product engineering codes. Enter the PEC of the 6X45 type card in units 0 and 1 of the RCO2. The PEC must reflect the minimum firmware capabilities in the processor complex of each unit. For the RCO2, the entry value MX77AA has been added.
E2LOAD		alphanumeric	EEPROM file. Contains the name of the loadfile that is loaded in the NTMX77AA EEPROM.

Note: When you enter 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. The interface link types are DS-1, DS30, DS30A, or PCM-30. Table control issues a warning when you attempt to assign message links on the same interface card. If you assign message links to the same interface card, an E1 outage can occur if the card fails. An E1 outage is a failure of all message links.

—continued—

Datafilling table RCCINV (continued)

Field	Subfield or refinement	Entry	Explanation and action
EXTSHELF		Y or N	Extension shelf. Enter Y if the CPM has an extension shelf. If Y, the refinements to this field appear below.
		Refer to subfields	Enter the location of the extension shelf in the following fields: • EXTFRTYP • EXTFRNO • EXTSHPOS • EXTFLOOR • EXTROW • EXTFR • POS • EXTEQPEC • EXTSIDE (L or R)
Note: When you enter 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. The interface link types are DS-1, DS30, DS30A, or PCM-30. Table control issues a warning when you attempt to assign message links on the same interface card. If you assign message links to the same interface card, an E1 outage can occur if the card fails. An E1 outage is a failure of all message links.			
—end—			

Basic call processing (continued)

Entry example for table RCCINV

A sample entry for table RCCINV appears in the following example.

MAP display example for table RCCINV

```
Table: RCCINV

RCCNAME      FRTYPE FRNO SHPOS FLOOR ROW FRPOS EQPEC  LOAD
-----------------------------------------------------------------
MELB RCO2 0
     1101 CRSC   0     5    0     C   0     MX85AA KRI06BF

EXECTAB                                                  CONTMARK
-----------------------------------------------------------------
(POTS POTSEX) (KEYSET KSETEX) (RMM_TERM RSMEX) (ESALINES ESAEX) $


CSPM        CSLNKTAB                                     CONTMARK
   ---------------------------------------------------------------
PLGC 1     (0) (1) (2) (3) (4) (5) (6) (7)                     $


ESA  INTRASW ADDLMSGL    OPTCARD       CMRLOAD          CONTMARK
-----------------------------------------------------------------
Y    Y       N              (UTR6)(MSGMX76 REM HDLC)(CMR5 CMRAG03)
(ISP)$

TONESET PROCPEC        E2LOAD     EXTINFO
-----------------------------------------------------------------
UK100 MX77AA  MX77AA      MX77NH08  CEXT 0 4 0 E 15 MX86AA L
```

Note 1: The xx in field LOAD represents alphanumeric, for example B1.

Note 2: If the shelf has a processor that is not NTMX77, the system automatically enters field E2LOAD with the value of NILLOAD.

Error messages for table RCCINV

The following error messages occur when you enter table RCCINV.

Error messages for table RCCINV

Error message	Explanation and action
`Failed to allocate pslinks table`	The system did not allocate memory for P-side tables.
`Only one CMR card allowed`	You attempted to enter more than one CMR card.
`PEC6X45 must be MX77AA for CPMs–only MX77 processor can be used for CPM`	You attempted to enter MX77 PEC for a non-CPM shelf like the RCC.
`RCO2 can be connected to PLGC only`	An RCO2 cannot connect to any other peripheral on the C-side.
`Delete P-side links prior to deleting the extension.`	You attempted to delete an extension shelf that has P-side links entered in table RCCPSINV.
`Extension PEC must be MX86AA`	You attempted to enter a PEC that is different than MX86AA in the extension shelf.
`XX does not support extension`	You attempted to add an extension shelf to a non-CPM peripheral.
`Info: The remote PM must be busied before this value can be changed.`	You attempted to change protocols before you busied the PM.

Datafilling table Remote Cluster Controller P-Side Link Inventory (RCCPSINV)

Table RCCPSINV contains only P-side link assignments for the RCO2. You can enter a maximum of 54 multiples of P-side link information for the RCO2.

Note: Only 2 PCM-30 C-side links, 0 and 2, are required. The data control table for P-side links is table RCCPSINV. Table RCCPSINV requires you to enter link 1 before you can enter link 2. If table RCCPSINV requires two links, link 1 remains ManB. You must enter data for 3 links in this table.

Basic call processing (continued)

When you add an extension shelf, datafill restrictions apply to RCO2 P-side links connected to the extension shelf. You must enter an extension shelf in RCCINV before you enter the PCM-30 and D-channel handler (DCH) links connected to the extension shelf. You must change all the links that connect to the extension shelf from D30/DCH to NILTYPE or DS30A in RCCPSINV. You must change the links before you delete the extension shelf from table RCCINV. You can enter a maximum of ten DCH cards in table RCCPSINV.

The datafill for table RCCPSINV appears in the following table. The table contains the fields that apply to basic call processing. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table RCCPSINV

Field	Subfield or refinement	Entry	Explanation and action
RCCNAME		Refer to subfields	Remote cluster controller name. Enter the RCC name. Contains subfields SITE, PMTYPE, and RCCNO.
	SITE	alphanumeric	Site. Enter the site name assigned to the remote location. The site name must also appear in table SITE.
	PMTYPE	RCO2	The PM type. Enter RCO2.
	RCO2NO	0 to 127	The RCO2 number.
Note: The PCM-30s are allowed on links 0 to 21 and 24 to 47. The DS30A links are allowed on links 22 to 53. Links 22 and 23 are reserved for the RMM.			
—continued—			

Datafilling table RCCPSINV (continued)

Field	Subfield or refinement	Entry	Explanation and action
PSLNKTAB		Refer to subfields	P-side link table. Contains subfields PSLINK, PSDATA, and CONTMARK. Enter the vector number. ***Note:*** Make changes to fields with multiple entries in the PROMPT mode only.
	PSLINK	0 to 53	P-side link. Enter the RCO2 P-side port number.
	PSDATA	Refer to list	P-side data type. Enter DS30A for links to RMMs or LCMs. Enter D30 for PCM-30 links or enter NILTYPE.
Note: The PCM-30s are allowed on links 0 to 21 and 24 to 47. The DS30A links are allowed on links 22 to 53. Links 22 and 23 are reserved for the RMM.			
—end—			

Basic call processing (continued)

Entry example for table RCCPSINV

A sample entry for table RCCPSINV appears in the following example.

MAP display example for table RCCPSINV

```
Table: RCCPSINV

          RCCNAME                                          PSLNKTAB
-------------------------------------------------------------------
MELB RCO2 0  (0 NILTYPE) (1 NILTYPE) (2 NILTYPE) (3 NILTYPE)
(4 NILTYPE)(5 NILTYPE) (6 NILTYPE) (7 NILTYPE) (8 NILTYPE)
(9 DCH) (10 NILTYPE) (11 NILTYPE) (12 NILTYPE) (13 NILTYPE)
(14 NILTYPE) (15 DS30A) (16 NILTYPE) (17 DCH) (18 NILTYPE)
.
..
(21 NILTYPE) (22 DS30A) (23 DS30A) (24 DS30A)
(25 NILTYPE) (26 NILTYPE) (27 NILTYPE) (28 NILTYPE)
(29 NILTYPE)
...
...
(44 NILTYPE) (45 NILTYPE) (46 NILTYPE) (47 NILTYPE)
(48 NILTYPE) (49 NILTYPE) (50 NILTYPE) (51 NILTYPE)
(52 NILTYPE) (53 NILTYPE)  $
```

Error messages for table RCCPSINV

The following error messages can occur when you enter data in table RCCPSINV.

Error messages for table RCCPSINV

Error message	Explanation and action
`Failed to allocate pslinks table`	This message indicates that the system did not allocate memory for P-side tables.
`Cannot datafill &$ in link &$`	P-side link restrictions for the RCO2 prevent entry.

Datafilling table Line Concentrating Module Inventory (LCMINV)

Table LCMINV lists data assignment for each bay associated with a local or remote LCM unit. The only field that is different for the RSC-S configuration is SITE.

The datafill for table LCMINV appears in the following table. The table contains the fields that apply to basic call processing. Field FRTYPE contains current information. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table LCMINV

Field	Subfield or refinement	Entry	Explanation and action
LCMNM		Refer to subfields	Line concentrating module name. Enter the LCM name. This field contains subfields SITE, FRNO, and UNITNO.
	SITE	alphanumeric	Site. Enter the site name assigned to the remote location. The SITE is a subfield of field LCMNM.
	FRNO	0 to 511	Frame number. Enter the LCM frame number.
	UNITNO	0 to1	Unit number. Enter the LCM unit number.
FRTYPE		Refer to list	Frame type. Enter the frame type that contains the peripheral module equipment. Enter CRSC for the RCO2 shelf. Enter CEXT for the RCO2 extension shelf.
Enter the location of the RCO2 in fields FRNO, SHPOS, FLOOR, ROW, and FRPOS.			
EQPEC		BX30AB	Equipment PEC. Enter the PEC BX30AB for the LCME.
LOAD		alphanumeric	Load. Enter the load for the LCM.

Note 1: The LCM link information that appears starts with link 0. The C-side peripheral links are in parentheses.
Note 2: When you enter fields link information (LNKINFO) or link map (LNKMAP), make sure the 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 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 if the card fails. An E1 outage is a failure of all message links.

—continued—

Basic call processing (continued)

Datafilling table LCMINV (continued)

Field	Subfield or refinement	Entry	Explanation and action
CSPMNO		Refer to subfields	The C-side PM. Contains subfields PMTYPE and XPMNO.
	PMT	RCO2	The PM type. Enter the type of peripheral attached to the C-side of the LCM.
	EXT_PMNO	0 to 199	The PM number. Enter the PM number attached to the LCM C-side.
BICTST		Y or N	The BIC relay test. Include the LCM in the next LCM BIC Relay Test (BRT) schedule.
MEMSIZE		Refer to list	Memory size. Enter the memory size of the processor card used in the LCM. Entry values are 256K and 64K. You must set the MEMSIZE field to 256K if BICTST is set to yes or if XLCM overload feature is implemented. If MEMSIZE is set to 64K, you must set BICTST to no.
LCMTYPE		LCME	The LCM type and link information. Enter LCM or LCME for the enhanced type of LCM. Subfields are RNGDATA and LCDI_INFO.
RNGDATA		refer to subfield	Ring data. Contains of subfield RGEQUIP.
	RGEQUIP	Y or N	Ringing equipment. Enter Y to select ringing type and features.

Note 1: The LCM link information that appears starts with link 0. The C-side peripheral links are in parentheses.
Note 2: When you enter fields link information (LNKINFO) or link map (LNKMAP), make sure the 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 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 if the card fails. An E1 outage is a failure of all message links.

—continued—

Datafilling table LCMINV (continued)

Field	Subfield or refinement	Entry	Explanation and action
RINGDATA (continued)	RNGTYPE	refer to list	Ringing type. Improvements are RNGCADENCE, FREQUENCIES, and PROMVOLT.
	LCDI_INFO	0 to 63	Line concentrating device ISDN information. A maximum of 18 vectors of link numbers (0to 63) of the C-side peripheral in this case the RCO2.
Note 1: The LCM link information that appears starts with link 0. The C-side peripheral links are in parentheses. ***Note 2:*** When you enter fields link information (LNKINFO) or link map (LNKMAP), make sure the 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 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 if the card fails. An E1 outage is a failure of all message links.			
—end—			

Entry example for table LCMINV

A sample entry for table LCMINV appears in the following example.

MAP display example for table LCMINV

```
Table: LCMINV

LCMNM    FRTYPE  SHPOS FLOOR ROW FRPOS  EQPEC   LOAD
-----------------------------------------------------
MELB 02 0   CRSC    4     3     D   1   BX30AB  LCME06AW

CSPMNO  BICTST  MEMSIZE     LCMTYPE
-----------------------------------------------------
RCO2 0    N   56  256K  256K  LCME     Y

-----------------------------------------------
C3C      (12) (14) (13) (15)  $
```

Note: The xx in field LOAD represents alphanumeric, for example, B1.

Basic call processing (continued)

Error messages for table LCMINV

The following error messages occur when you enter data in table LCMINV.

Error messages for table LCMINV

Error message	Explanation and action
`RCO2 is connected to an LCM/LCME only.`	This message indicates that the RCO2 can connect on P-side links to an LCM or LCME (phase one).

Datafilling table Remote Maintenance Module Inventory (RMMINV)

Table RMMINV identifies the following:

- an RLCM
- an RSC-S
- an OPM site with:
  - — the frame type
  - — the frame number
  - — the floor
  - — the row
  - — the frame position
- a PEC
- a PM load and executive program loaded
- a C-side PM attached to each RMM.

The system dynamically allocates memory. The maximum size of this table is 255 entries.

The CSPMINFO field of an RMM can be an RCO2 and the PLGC/LGCO or RCC. You must define the C-side links of RMM to links 22 and 23 of the RCO2.

The datafill for table RMMINV appears in the following table. The table contains the fields that apply to basic call processing. Field FRTYPE contains current values. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table RMMINV

Field	Subfield or refinement	Entry	Explanation and action
RMMNAME		refer to list	The 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. This entry must also appear in tables RCCINV, LCMINV, and SITE.
	PMTYPE	RMM	The PM type.
	RMMNO	0 to 63	The RMM number. This number is different for office and for each site.
FRTYPE		refer to list	Frame type. Enter CRSC for the RCO2 shelf. Enter CEXT for the RCO2 extension shelf. For an RLCM, enter RLCM.
Enter the location of the RCO2 in fields FRNO, SHPOS, FLOOR, ROW, and FRPOS.			
EQPEC		6X13AA	Equipment PEC. Enter PEC for an RMM.
LOAD		alphanumeric	Load. Enter the load for the RMM. Make sure the table PMLOADS contains this datafill.
EXECS		RSMEX	Exec table. Enter the correct execs for the RMM.
CSPMINFO		refer to subfields	The C-side PM information. Contains subfields RMMSELECTOR, CSIDEPM, and CSIDPORT.
	RMM SELECTOR	RMMRCO2	The RMM selector. Enter the type of module that contains the RMM.
	CSIDEPM	refer to subfields	The C-side peripheral module. Contains subfields PMT and EXT_PMNO.
	PMT	RCO2	The PM type. The value in field RMMSELECTOR determines the PM type.
	EXTPMNO	0—127	External PM number. Enter the external PM number where the RMM attaches. This number must also appear in table LCMINV or RCCINV.

—continued—

Basic call processing (continued)

Datafilling table RMMINV

Field	Subfield or refinement	Entry	Explanation and action
			Note: If the field RMMSELECTOR is RMMRCO2, enter subfield CSIDPORT as follows.
	CSIDPORT	22, 23	C-side PORT. Enter the C-side port connected to the RMM. Enter one tuple with 22 and one tuple with 23. Refer to datafill example.
			—end—

Entry example for table RMMINV

A sample entry for table RMMINV appears in the following example.

MAP display example for table RMMINV

```
Table: RMMINV

RMMNAME       FRTYPE FRNO SHPOS FLOOR ROW FRPOS
-------------------------------------------------
MELB RMM 0     CRSC    0     19   3    C   51
MELB RMM 2     CEXT    2     19   3    G   52

EQPEC    LOAD         EXECS      CSPMINFO
-------------------------------------------------
6X13AA   RMM34C       RSMEX    RMMRCO2 RCO2 0 22
6X13AA   RMM34C       RSMEX    RMMRCO2 RCO2 0 23
```

Error messages for table RMMINV

The following error messages can occur when you enter data in table RMMINV.

Error messages for table RMMINV

Error message	Explanation and action
`RMM can be defined on P-side links 22 and 23`	This message indicates only P-side links 22 and 23 of the RCO2 can define the RMM.

Datafilling table Line Circuit Inventory (LNINV)

Table LNINV defines the site, line equipment number, and associated data for each line card circuit. The system can add or delete table LNINV line datafill for remote fiber terminal (RFT) lines in an S/DMS AccessNode system. The system can use SERVORD to perform this action. This *auto-create* feature removes a manual provisioning step. The feature allows RFT line cards to be software-provisioned and service-provisioned in a single step. For additional information, refer to *SERVORD Reference Manual.*

Datafilling table LNINV

Field	Subfield or refinement	Entry	Explanation and action
LEN		refer to subfields	Line Equipment Number. Contains the following subfields: • SITE • FRAME • UNIT • LSG • CIRCUIT
	SITE	alpahnumeric	Site. Enter the site assigned to the remote location.
	FRAME	0 to 99	Frame. The range is 0–99.
	UNIT	0 to1	Unit. The range is 0–1.
	LSG	0 to 19	Line Subgroup. For LCMs the range is 0–19.
	CIRCUIT	0 to 31	Circuit. Enter the circuit number of the line card. The range is from 0–31.
CARDCODE		alphanumeric	Cardcode. Enter the correct line card for the office. The EBS line card (6X21AC) or advanced UDLC line card (6X21AD).
PADGP		character	Pad Group. Enter the name of the pad group assigned to the line circuit in table PADDATA.

—continued—

Basic call processing (continued)

Datafilling table LNINV (continued)

Field	Subfield or refinement	Entry	Explanation and action
STATUS		character	Status. Enter the line inventory availability status. The correct entries are: • HASU • WORKING • UNEQUIP • CUTOFF • RESERVED
GND		Y or N	Ground. Where the line is ground start enter Y (yes) or N (no).
BNV		L or NL	Balanced Network Value. Enter L or NL. Enter L when the line circuit is configured for a loaded network. Enter NL for a network that is not loaded.
MNO		Y or N	Manual override. Enter Y(yes) when the onhook balance network test cannot update field BNV in this table. Enter N (no) to allow the offhook balance network test to update field BNV.
	CARDINFO	refer to subfield	Card Information. Includes subfield CARDTYPE and the improvements of the CARDTYPE.
—end—			

Entry example for table LNINV

A sample entry for table LNINV appears in the following example.

MAP display example for table LNINV

```
Table: LNINV

         LEN CARDCODE PADGRP STATUS GND BNV MNO CARDINFO
_____________________________________________________________
MELB 00 1 00 05 6X21AD STDLN HASU   N  NL   N    NIL
```

Datafilling table Trunk Group (TRKGRP)

Table TRKGRP defines data for each trunk group associated with the switching unit. Each trunk group entry in table TRKGRP contains a CLLI for the trunk group. The entry contains a number of other fields that the trunk group type field GRPTYP determines.

The datafill for table TRKGRP appears in the following table. The table contains the fields that apply to basic call processing. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table TRKGRP

Field	Subfield or refinement	Entry	Explanation and action
GRPKEY		refer to subfield	Group key. This field contains subfield CLLI.
	CLLI	alphanumeric	The CLLI. Enter the CLLI code for the trunk group assigned in table CLLI.
GRPINFO		refer to subfields	Variable group data. When trunk group type is MAINT this field contains the following subfields: • GRPTYP • TRAFSNO • PADGRP • NCCLS • CARD ***Note:*** Make changes to fields with multiple entries in the PROMPT mode only.
Note 1: The operating company provides hardware and software features and feature packages for an office. The set of trunk group types available for a specified office is a function of the hardware and software features and feature packages. ***Note 2:*** Table TRKGRP can have a maximum 2047 trunk groups. The number of CLLIs available to name the trunk groups limit the number of trunk groups.			
—continued—			

Basic call processing (continued)

Datafilling table TRKGRP (continued)

Field	Subfield or refinement	Entry	Explanation and action
	GRPTYP	refer to list	Group type. Enter the group type for the trunk group. For maintenance and test trunks, the range is: • ITL2 • TTL2 • LOOPA • MAINT • SOCKT
	TRAFSNO	0	Traffic separation number. Because maintenance and test trunks do not require this number, enter 0.
	PADGRP	Refer to list	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 conditions enter NPDGP.
GRPINFO (continued)	NCCLS	NCRT	No circuit class. Enter NCRT (no circuit).
	CARD	Refer to list	Card code. Enter the PEC of the maintenance and test trunk card. Examples of values are 2X90AB, 2X96AA, 2X47AA, and 2X11AA.

Note 1: The operating company provides hardware and software features and feature packages for an office. The set of trunk group types available for a specified office is a function of the hardware and software features and feature packages.
Note 2: Table TRKGRP can have a maximum 2047 trunk groups. The number of CLLIs available to name the trunk groups limit the number of trunk groups.

—end—

Entry example for table TRKGRP

A sample entry for table TRKGRP appears in the following example.

MAP display example for table TRKGRP

```
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

  RCO20IBNTO
     IBNTO 0 ELO NCBN RCO20 0 MIDL 0  N ANSDISC
      0 N O 1 8 9 N N N N N N N $
  RCO20IBNTI
     IBNTI 0  ELO NCRT RCO20 0 0 3204001  ANSDISC
      0 Y N N Y N Y Y 0 0 N N N N N $
```

Datafilling table Trunk Subgroup (TRKSGRP)

Table TRKSGRP lists the additional information for each subgroup assigned to a trunk group that appears in table TRKGRP.

You must specify input data for a minimum of one subgroup or a maximum of two subgroups for each trunk group in table TRKGRP. Trunk groups defined as maintenance (MAINT) group types do not require this information.

> ***Note:*** The trunk group entry automatically produces the subgroup data for maintenance and test trunks. This action does not apply to subgroup 1 of trunk groups with code TTU.

The datafill for table TRKSGRP appears in the following table. The table contains the fields that apply to basic call processing. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Basic call processing (continued)

Datafilling table TRKSGRP

Field	Subfield or refinement	Entry	Explanation and action
SGRPKEY		refer to subfields	Subgroup key. This field contains subfields CLLI and SGRP.
	CLLI	alphanumeric	The CLLI. 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. For maintenance and test trunks the number is 0.
CARDCODE		refer to list	Card code. Enter the PEC of the maintenance and test trunk card. Examples of values are 2X90AB, 2X96AA, and 2X11AA.
SGRPVAR		refer to 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 • TRKGDTIM
Note 1: The SIZE field allocates memory for the number of trunk subgroups for the entry with field DATSKEY equal to TRKSGRP. The SIZE field is in table DATASIZE. ***Note 2:*** The maximum number of trunk subgroups equals twice the number of trunk groups. ***Note 3:*** The maximum number of trunk subgroups you can assign is 4096.			

—continued—

Datafilling table TRKSGRP (continued)

Field	Subfield or refinement	Entry	Explanation and action
	SIGDATA	STD	Signaling data. This subfield lists the signaling code. The STD is for standard signaling.
	DIR	OG	Direction. For maintenance and test trunks, the entry is OG (outgoing).
	OPULSTYP	NP	Outgoing type of pulsing. For maintenance and test trunks, the entry is NP (no pulsing).
	OSTARTSG	WK	Outgoing start dial signal. For maintenance and test trunks, the entry is WK (wink).
	IDGTIME	2	Interdigital timing. For maintenance and test trunks, the value is 2.
	NUMSTOPS	0	Number of stop/goes. For maintenance and test trunks, the value is 0.
	CCONT	MW	Coin control. For maintenance and test trunks, the entry is MW (multiwink).
	RNGBCK	IB	Ringback. For maintenance and test trunks, the entry is IB (inband).
	ESUPR	N	Echo suppressor. For maintenance and test trunks, the entry is N (no echo suppressor).
	SAT	N	Satellite. For maintenance and test trunks, the entry is N (no satellite).
	REMBSY	N	Remote make busy. For maintenance and test trunks, the entry is N (feature not assigned).

Note 1: The SIZE field allocates memory for the number of trunk subgroups for the entry with field DATSKEY equal to TRKSGRP. The SIZE field is in table DATASIZE.
Note 2: The maximum number of trunk subgroups equals twice the number of trunk groups.
Note 3: The maximum number of trunk subgroups you can assign is 4096.

—continued—

Basic call processing (continued)

Datafilling table TRKSGRP (continued)

Field	Subfield or refinement	Entry	Explanation and action
SGRPVAR (continued)	DIALMODE		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. A 160 ms elapse time interval before the trunk returns to the idle link list after trunk disconnect.
Note 1: The SIZE field allocates memory for the number of trunk subgroups for the entry with field DATSKEY equal to TRKSGRP. The SIZE field is in table DATASIZE. ***Note 2:*** The maximum number of trunk subgroups equals twice the number of trunk groups. ***Note 3:*** The maximum number of trunk subgroups you can assign is 4096.			
—end—			

Entry example for table TRKSGRP

A sample entry for table TRKSGRP appears in the following example.

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 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
RCO20TO  0   DS1SIG
   STD 2W MF WK N 7 7 MF WK 7 0 N NO NO N N N M 70
```

Datafilling table Trunk Member (TRKMEM)

Table TRKMEM contains data associated with trunks assigned to trunk groups and subgroups specified in tables TRKGRP and TRKSGRP. For an RSC-S, this table identifies circuits associated with static trunks and test equipment used to test lines and trunks. Trunk assignment off the P-side of an RCO2 can occur in table TRKMEM.

The datafill for table TRKMEM appears in the following table. The table contains the fields that apply to basic call processing. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table TRKMEM

Field	Subfield or refinement	Entry	Explanation and action
CLLI		alphanumeric	The CLLI. Enter the code assigned in table CLLI to the trunk group where the trunk is a member.
EXTRKNM		0 to 9999	External trunk name. Enter the external trunk number assigned to the trunk.
SGRP		0 or 1	Trunk subgroup number. Enter subgroup number.
MEMVAR		Refer to refinement	Memory variable area. Improvements are of PMTYPE.
	PMTYPE	RCO2	Variable data for members. For RSC-S applications, this field can change. The trunk can be part of an interoffice trunk or a maintenance trunk. The position of this trunk determines the field. For an interoffice trunk, the subfield is PMTYPE and the improvements of the PMTYPE.
	RCO2NO	0 to 511	Remote cluster controller equipment number. Enter the RCO2 equipment number.

Note 1: The system allocates memory for the total number of trunks that field TRKGRSIZ in table CLLI specifies for the correct trunk groups.
Note 2: You can change field TRKGRSIZ in table CLLI for the correct trunk groups to increase table size . You can perform this action when data is present.

—continued—

Basic call processing (continued)

Datafilling table TRKMEM (continued)

Field	Subfield or refinement	Entry	Explanation and action
MEMVAR (continued)	RCO2CKTNO	0 to 47	Remote cluster controller equipment circuit card number. Enter the RCO2 card number where the TRKGRP member is assigned.
	RCO2CKTTS	1 to 24	Remote cluster controller circuit time slot. Enter the RCO2 time slot number where the TRKGRP member is assigned.
Note 1: The system allocates memory for the total number of trunks that field TRKGRSIZ in table CLLI specifies for the correct trunk groups. ***Note 2:*** You can change field TRKGRSIZ in table CLLI for the correct trunk groups to increase table size . You can perform this action when data is present.			
—end—			

Entry example for table TRKMEM

A sample entry for table TRKMEM appears in the following example.

MAP display example for table TRKMEM

```
Table: TRKMEM

    CLLI         EXTRKNM  SGRP        MEMVAR
-------------------------------------------------
     RCO20TI      0        0          RCO2 0  2  4
     RCO20T2      0        0          RCO2 0  2  4
```

Datafilling table Alarm Scan Group (AMSCGRP)

Table ALMSCGRP records the circuit equipment, location and type of circuit pack that contains scan points. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table ALMSCGRP

Field	Subfield or refinement	Entry	Explanation and action
SCGROUP		0 to 255	Scan group. Enter the scan group number.
TMTYPE		refer to list	Trunk module type. Enter type of trunk module that contains the circuit. Entry values are MTM, OAU, and RMM.
TMNO		0 to 255	Trunk module number. Enter the number of the trunk module that contains the circuit. If the TMTYPE is OMU enter 0.
TMCKTNO		0 to 23	Trunk module circuit number. Enter the trunk module circuit number where the circuit is assigned.
CARDCODE		refer to list	Card code. Enter the PEC of the alarm card. Entry values are 3X82AA, 3X84AA, and 0X10AA.

Entry example for table ALMSCGRP

A sample entry for table ALMSCGRP appears in the following example.

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
      .      .    .       .      .
      .      .    .       .      .
      .      .    .       .      .
     21    RMM    2      11   0X10AA
```

Basic call processing (continued)

Datafilling table Alarm Signal Distributor Group (ALMSDGRP)

Table ALMSDGRP records circuit equipment, location and circuit pack type that contains SD points. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Field	Subfield or refinement	Entry	Explanation and action
SDGRP		0 to 255	Signal distributor group. Enter the signal distributor group number.
TMTYPE		MTM, OAU, RMM	Trunk module type. Enter type of trunk module that contains the circuit.
TMNO		0 to 255	Trunk module number Enter the number of the trunk module that contains the circuit.
TMCKTNO		0 to 23	Trunk module circuit number Enter the trunk module circuit number where the circuit is assigned.
CARDCODE		Refer to list	Card code. Enter the PEC of the alarm card. Values are 3X82AA, 3X84AA, and 2X57AA.

Entry example for table ALMSDGRP

A sample entry for table ALMSDGRP appears in the following example.

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
      8    MTM    6      18   2X57AA
      9    MTM    6      19   2X57AA
     10    MTM    9      18   2X57AA
     11    MTM    9      19   2X57AA
      .     .     .       .      .
     22    MTM   12      18   2X57AA
     23    MTM   12      19   2X57AA
```

Datafilling table Alarm Signal Distributor Point (ALMSD)

Table ALMSD identifies functions that each assigned signal distributor (SD) point in alarm signal distributor groups performs. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table ALMSD

Field	Subfield or refinement	Entry	Explanation and action
FUNCTION		alphanumeric	Function. Enter the alarm function.
SDGROUP		0 to 255	Signal distributor group. Enter the signal distributor group for the SD point.
POINT		0 to 7	Signal distributor point. Enter the SD point number in the signal distributor group.
NORMALST		0 or 1	Normal state. Enter the normal state of the SD point. Entry values are 0 if the SD point is off, or open. If the SD point is on, or closed entry values are 1.
AUDIBLE		Y or N	Audible alarm. Enter Y if the signal distributor point is reset when the audible alarm reset key operates. If the signal distributor is not reset, enter N.
LAMPTEST		Y or N	Lamp test. Enter Y if the SD point is in the lamp test. If the SD point is not in the lamp test, enter N.

Basic call processing (continued)

Entry example for table ALMSD

A sample entry for table ALMSD appears in the following example.

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
 PREFLRF       0     6        0    N      N
```

Datafilling table Alarm Scan (ALMSC)

Table ALMSC identifies the function that each of the assigned scan points in the alarm scan groups perform. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table ALMSC

Field	Subfield or refinement	Entry	Explanation and action
FUNCTION		alphanumeric	Function. Enter the alarm function.
SCGROUP		0 to 255	Scan group. Enter the scan group for the scan point.
POINT		0 to 7	Scan point. Enter the scan point number in the scan group.

—continued—

Datafilling table ALMSC (continued)

Field	Subfield or refinement	Entry	Explanation and action
NORMALST		0 or 1	Normal state. Enter the normal state of the scan point. Entry value is 0, if the scan point is normally off or open. Entry value is 1 if the scan point is normally on or closed.
REPORT		Y or N	Alarm report. Enter Y if the system must log an alarm report. If the system must not log an alarm report, enter N.
ALM		refer to list	Alarm type. Enter the type of alarm to activate. The entry values are: • CR (critical alarm) • MJ (major alarm) • MN (minor alarm) • NA (no alarm)
LOGIC		refer to subfields	Logic. This field contains the following subfields: • LOGIC • SDFUNCT • ALMGRP • ALMXFR • CONTMARK
	LOGIC	Y or N	Logic. Enter Y if the logic associated with the function is fixed. If the logic is not fixed, enter N.
	SDFUNCT	alphanumeric	Signal distributor function. Enter the signal distributor function or functions associated with a specified scan point.
	ALMGRP	Y or N	Alarm grouping. Enter Y if the system activates alarms when the system activates the alarm grouping key. Enter N if the state of the alarm grouping key does not affect the active state of the alarm function.

—continued—

Basic call processing (continued)

Datafilling table ALMSC (continued)

Field	Subfield or refinement	Entry	Explanation and action
	ALMXFR	Y or N	Alarm transfer. Enter Y if the system activates the alarm when the system activates the alarm transfer key. If the alarm is not activated, enter N.
	CONTMARK	+ or $	Continuation mark. Where the record is other than the last for a specified scan point, enter a plus sign (+). The plus sign specifies additional data for the scan point in the next record. Where the record is the last for a specified scan point, enter a dollar sign ($).
		—end—	

Entry example for table ALMSC

A sample entry for table ALMSC appears in the following example.

MAP display example for table ALMSC

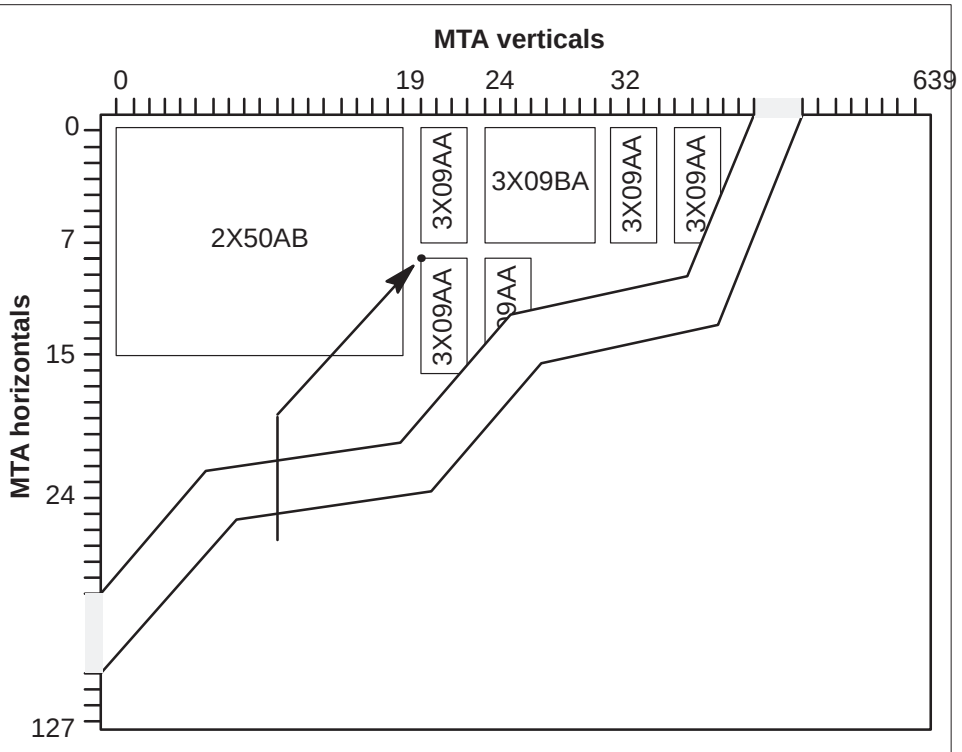
```
Table: ALMSC

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) $
   .           .     .         .  .           .
   .           .     .         .  .           .
 RSC-S0_ABS_ALM  20 2 0  Y  MN N (ABAUD N N)
                                  (ABSVIS N N)
                                  (EXPILDMS N N)
                                  (MNXFR N Y) $
```

Datafilling table MTAMDRVE

The metallic test access (MTA) network is a matrix of vertical and horizontal crosspoints. The matrix is like a minibar that connects specified verticals to horizontals in the MTA. The MTA tests equipment. The horizontal connections in the MTA connect the test equipment to the vertical connections. The circuit lines attach in the vertical connections.

You can interconnect smaller minibar circuits to construct an MTA network of the required size. The smaller minibar circuits serve as building block components. The NT3X09AA Driver allows metallic test access to remote line concentrating devices (LCMs). This condition includes LCMs off the RCO2. The NT3X09AA is a four vertical by eight horizontal circuit. The NT3X09BA is an eight vertical by eight horizontal circuit. An diagram of the MTA matrix appears in the following figure.

MTA matrix

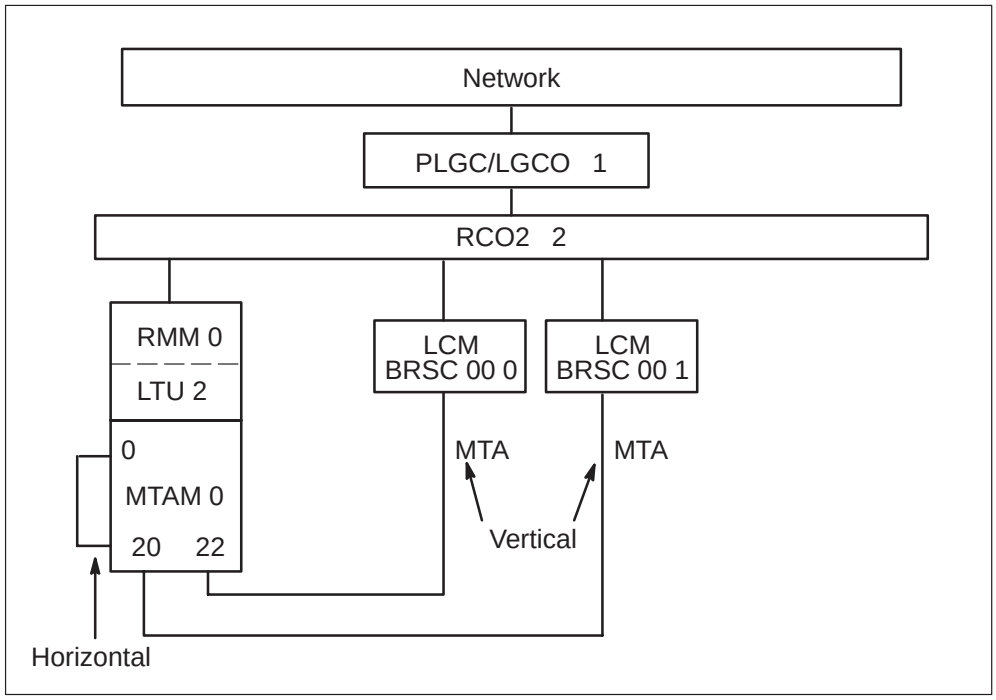


The 0, 0 crosspoint of an MTA driver locates the driver in the MTA matrix. This driver has a vertical start location of 20 and a horizontal start location of 8.

Basic call processing (continued)

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. The NT3X09 does not require an associated minibar switch. The 0, 0 crosspoint in the matrix identifies each minibar driver. An example of the MTA configuration appears in the following figure.

Example MTA configuration



Datafill for table MTAMDRIVE appears in the following example. The table contains the fields that apply to basic call processing. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table MTAMDRIVE

Field	Subfield or refinement	Entry	Explanation and action
MTAMEM		0 to 255	Metal test access minibar driver member. Enter the MTA driver member number. This 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 horizontal start location for the MTAM driver.
TMTYPE		RMM	Trunk module type. Enter type of trunk module that contains the minibar driver.
TMNO		0 to 255	Trunk module number. Enter the number assigned to the maintenance trunk module (MTM).
TMCKTNO		refer to list	Trunk module circuit number. Enter the circuit number of the MTM or RMM where the minibar driver is assigned.
MTACARD		refer to list	MTAM driver card. Enter card code for metal test access minibar driver card. The range is 2X50AB, 3X09AA, 3X09BA.

Datafill example for table MTAMDRIVE

A sample entry for RSC-S basic call processing in table MTAMDRVE appears in the following example. The example tuple corresponds to the example configuration. Note the NT3X09AA has four verticals with a range of 20 through 23. In the example tuples, only verticals 20 and 22 appear.

MAP display example for table MTAMDRIVE

```
Table:  MTAMDRVE

MTAMEM  VERT HORIZ  TMTYPE TMNO TMCKNO  MTACARD
-------------------------------------------------
1        20   0      RMM    0    10     3X09AA
1        22   0      RMM    0    10     3X09AA
2        24   0      RMM    1    10     3X09AA
```

Basic call processing (continued)

Datafilling table Metallic Test Access Vertical Connection Table (MTAVERT)

Table MTAVERT identifies the vertical connection to the MTA matrix. Two connection types can occur. The connection types are single and multiple. A maximum of 32 LCMs can share a metal test pair.

The datafill for table MTAVERT appears in the following table. The table contains the fields that apply to basic call processing. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table MTAVERT

Field	Subfield or refinement	Entry	Explanation and action
VERT		20 to 27	Vertical. Enter the MTA vertical connection number.
VERTCONN		S or M	Vertical connection. Enter M for multiple connections and S for single connections. A maximum of 32 LCM modules can share a metal test pair.
SELECTOR		O	Selector type. You can only use selector O when the entry in VERTCONN is M. You must enter subfields SITE, FRAME, UNIT, and CONTMARK after the selector. This selector is a vector of a maximum of 32 entries.
	SITE	alphanumeric	Site name. Enter the name selected for the remote location.
	FRAME		Frame number. Enter the frame number.
	UNIT	0 or 1	Unit number. Enter the unit number.
	CONTMARK	+ or $	Continuation mark. Enter a plus sign (+) when the record that follows specifies additional data. When the record does not specify additional data, enter a dollar sign ($) after last record.

Entry example for table MTAVERT

A sample entry for RSC-S basic call processing in table MTAVERT appears in the following example.

MAP display example for table MTAVERT

```
Table:  MTAVERT

VERT        VERTCONN
-----------------------------------------------
20          S  L  MELB  00   0
22          S  L  MELB  00   1
```

Datafilling table Metallic Test Access Horizontal Connection (MTAHORIZ)

Table MTAHORIZ lists the assignment of horizontal agents to a horizontal and horizontal group of Integrated Services Digital Network MTAMs. Horizontal agents include the following:

- line test units (LTU)
- metallic test units (MTU)
- operator verification
- metal jacks (MJACK)
- incoming test access trunks
- extended metallic test access
- short circuits.

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

You can multiply (group) a maximum of 32 MTAMs to connect to a single horizontal agent. You can only use a horizontal agent once.

The entry for table MTAHORIZ appears in the following table. The table contains the fields that apply to basic call processing. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Note 1: Horizontals are not reserved for dedicated LTUs. The LTUs that are not dedicated do not have a limit on assignment.

Basic call processing (continued)

Note 2: The system assigns an LTU to the host switching. The horizontal that the LTU is assigned to is multiplied to the minibar switches assigned to the host switching unit. When an LTU is assigned to a remote location, the horizontal is multiplied to all minibar switches assigned to the remote location.

Note 3: The minibar switch is in the host switching unit. The assignment of incoming test and operator verification trunks does not have a limit. 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. The minibar switches are located at the host switching unit.

Note 5: When the minibar switch is remote from the host switching unit, the horizontals are available.

The horizontals are available for the following:

- assignment of incoming test access trunks
- operator verification trunk
- extension of the metal test access feature

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

Note 6: The maximum number of metal jacks at each DMS office is 256.

Note 7: Refer to tables CLLI, TRKGRP, TRKSGRP, and TRKMEM.

Refer to these tables for an assignment of the following

- LTUs
- incoming test access and operator verification trunks to:
  - — trunk group
  - — trunk subgroup
  - — trunk member tables

Note 8: You must enter an LTU or MTU in table TRKMEM before you add the LTU to table MTAHORIZ. You can delete the LTU or MTU from table TRKMEM. The system marks the associated tuple in table MTAHORIZ as deleted. The addition of the LTU or MTU to table TRKMEM restores the tuple.

Note 9: The system dynamically allocates memory for this table to a maximum of 2000 tuples.

Datafilling table MTAHORIZ

Field	Subfield or refinement	Entry	Explanation and action
HORIZ		0 to 127	The MTA horizontal. Enter the MTA horizontal where the test equipment (horizontal agent) connects.
HORIZGRP		0 to 159	The MTA horizontal group. Enter the horizontal group number that identifies the horizontal and the agent of the horizontal as a specified tuple. The horizontal group allows assignment of different test equipment on the same MTA horizontal.
HORIZAGT		refer to subfields	This field contains several subfields. The value of SELECTOR determines the subfields.
SELECTOR		1 to 2 characters	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 test access 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 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. Enter MJ for metal connection to the tip and ring of the subscriber line. Complete subfields CLLI and MJACKNUM. Selectors J and LA are for licensee use only.

Basic call processing (continued)

Datafilling table MTAHORIZ (continued)

Field	Subfield or refinement	Entry	Explanation and action
SELECTOR (continued)	CLLI	alphanumeric	Common language location identifier. Enter LTU for line test unit. Enter MTU for metal test unit. Enter MJACK for metal jack. Operator verification or an incoming test access trunk. Enter the alphanumeric code that represents this trunk group in table CLLI.
	EXTRKNM	0 to 9999	External trunk number. Enter the external trunk number assigned in table TRKMEM to the following: • line test unit • metal test unit • operator verification trunk • incoming test access trunk
	BBTNR	0 to 7	Board-to-board testing number. Enter the number of the board-to-board set that the horizontal associates with.
	EMTAVERT	0 to 639	Extended metal test access column. Enter the associated vertical on the MTA in the host where the horizontal connects.
	MJACKNUM	1 to 256	Metal jack number. Where the entry in subfield CLLI is MJACK, enter the metal jack number.
MTAGRP		refer to subfields	The MTA group. This field contains 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 MTAM driver member number where the horizontal connects.

—continued—

Datafilling table MTAHORIZ (continued)

Field	Subfield or refinement	Entry	Explanation and action
MTAGRP (continued)	HORIZ	0	Read-only field that provides information about the physical horizontal to which the MTA drivers connect. Enter 0 to satisfy table control.
	ALTUSE	Y or N	Automatic line test use. Enter Y to use line test equipment for automatic line testing (ALT), or enter N.
—end—			

Entry example for table MTAHORIZ

A sample entry for RSC-S basic call processing in table MTAHORIZ appears in the following example.

MAP display example for table MTAHORIZ

```
Table: MTAHORIZ

HORIZ HORIZGRP   HORIZAGT    MTAGRP
-------------------------------------------------
8     0          L LTU 0 Y   (0 0)(2 0)      $
```

Basic call processing (continued)

Datafilling table Routine Exercise Schedule (REXSCHED)

Table REXSCHED contains information that the Routine Exercise Text (REX) coordinator or scheduler requires to schedule the REX tests. You can schedule the different REX tests according to the characteristics of the switch. You can exclude tests on specified days of the week. You must include critical nodes that form the core complex from tests.

This table applies only to REX test controllers. Only REX tests available in the office appear in this table. Table REXSCHED is empty when REX tests are not available.

The datafill for Basic call processing for table REXSCHED appears in the following table. The table contains the fields that apply to Basic call processing. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table REXSCHED

Field	Subfield or refinement	Entry	Explanation and action
REXTSTID			The REX Test Identifier. The system automatically defines REXSTIDS. Only REX tests available in the office appear.
	REX_TEST_ID	refer to list	The REX test ID. The system automatically defines REX test identifiers when you enter the inventory tables. Examples follow: • MS_REX_TEST • CM_REX_TEST • SLM_REX_TEST • LGC_REX_TEXT • MSB_REX_TEST • LCM_REX_TEST • LCMCOV_REX_TEST
Note: This table only applies to REX test controllers for series 3 peripherals, applications and file processors. Only available REX tests appear in this table. The REXSCHED table is empty when REX tests are not available.			

—continued—

Datafilling table REXSCHED (continued)

Field	Subfield or refinement	Entry	Explanation and action
ENABLE		N or Y	Enable. Enter either N(o) or Y(es) to disable or enable the REX test. The default value is Y(es).
PERIOD		1 through 7	Period. Enter a number between 1 and 7 to represent the minimum number of days between two consecutive REX tests on the same object. The system must run each test a minimum of once a week. The range is 1 through 7. The default value is 1.
PARALLEL		1 through 99	Parallel. Limits the number of REX tests that can occur in parallel for one group. You can limit the number of parallel REX tests in a group. The default value is set to the maximum number allowed by the maintenance software for each REX tests. The resources required for each test determine this value. The range is 1 through 99.
DAYSDSBL		character	DAYSDSBL. List the days when the system must not invoke the REX test. The day refers to the start time of the REX test. An ALL entry means that the test is disabled every day. The range is the set of MON, TUES, WED, THU, FRI, SAT, SUN, ALL, NONE. The default is NONE (every day).
CONTMARK		+ or $	Continuation Mark. Enter a plus sign (+) to indicate the line continues onto the next record. If the line does not continue onto the next record, enter a dollar sign ($).
Note: This table only applies to REX test controllers for series 3 peripherals, applications and file processors. Only available REX tests appear in this table. The REXSCHED table is empty when REX tests are not available.			
—end—			

Basic call processing (end)

Entry example for table REXSCHED

A sample entry for table REXSCHED appears in the following example.

MAP display example for table REXSCHED

```
Table: REXSCHED

     REXTSTID    ENABLE  PERIOD  PARALLEL     DAYSDSBL

  MS_REX_TEST          Y       1         1         NONE
  CM_REX_TEST          Y       1         1         NONE
  PLGC_REX_TEST        Y       1         1         NONE
  RCO2_REX_TEST        Y       1         1         NONE
  LCM_REX_TEST         Y       1         4         NONE
  LCMCOV_REX_TEST      Y       1         1         NONE
```

Translation verification tools

Basic call processing does not use translation verification tools.

SERVORD

Note: The NPGD operates for LCMs only. Ground start diagnostics do not apply to RCO2s with LCMEs.

Example of adding the 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 $
```

ESA lines and trunks

Functional group

BAS00012

Feature package

NTX149AA ESA lines and trunks

Release applicability

XPM05 and later versions

Requirements

The ESA lines and trunks feature requires the following packages to operate:

- NTX000AA Bilge
- NTX001AA Common Basic
- NTX145AA Remote Switching Center
- NTX270AA New Peripheral Maintenance Package
- NTX901AA Local Features I

Description

The emergency stand-alone (ESA) feature allows call processing to continue a Remote Switching Center-SONET (RSC-S). The RSC-C continues if loss of communication with the host occurs.

When the ESA process, the RSC-S requires routing and translation data to continue processing calls. The host normally stores this data. Data updates and downloads to the RSC-S occur at less busy hours each day.

The ESA task software controls translation facilities for the RSC-S ESA mode call operations. The ESA central controller (CC) is a software module for ESA task software. The ESA CC emulates the DMS CC while the RSC-S is in ESA.

When the host controls the RSC-S, the DMS CC performs translations. When the RSC-S is in ESA, the ESA CC performs translations. For these translations, the ESA CC uses a subset of translation data from the DMS CC. This subset is a snapshot of DMS CC data that ESA call processing requires.

The RSC-S ESA lines feature package is available for RSC-S applications supporting lines only. To activate ESA for the RSC-S, the RCO2 must contain software that provides ESA. The ESA lines feature package requires the following tables for implementation: RCCINV, ESAPXLA, and

ESA lines and trunks (continued)

CUSTHEAD. The ESA office parameters for lines control entry to and exit from ESA control the download of ESA static data.

Table RCCINV

Table remote cluster controller inventory (RCCINV) contains inventory data, except RCO2 P-side link assignments. The following data entries must be in table RCCINV for ESA application.

- Field TRMTYPE in table RCCINV must contain data entry ESALINES.
- Field EXEC in table RCCINV must contain data entry ESAEX.
- Field ESA in table RCCINV is Boolean and must be set to Y if the RSC-S has the ESA option.

The ESA flag in field ESA allows operating company personnel to turn the ESA option ON or OFF. The DMS CC immediately reflects a change in the ESA flag. The system transfers the change indication to the RCO2 when the next update of the static data occurs. You must busy (BSY) and return to service (RTS) the RCO2 immediately after the change of status of the ESA flag.

When you change the flag, a warning appears at the MAP screen. This warning indicates the need for an update of the RCO2 static data or ESA static data. The MAP screen indicates that the RCO2 is in-service trouble (ISTb) and indicates STATIC DATA or ESA STATIC DATA as the reason.

To change the ESA flag, perform the following steps:

1 Change field ESA in table RCCINV to the required setting.

2 Manually busy and return the inactive RCO2 unit to service.

3 Perform a SWACT on the RCO2.

Table ESAPXLA

Table emergency stand-alone prefix translation (ESAPXLA) contains special prefix translation data. Plain ordinary telephone service (POTS) and Meridian Digital Centrex (MDC) customer groups use this prefix translation data. The RCO2 does not use this table in normal operation. Translations occur in the central control (CC). If loss of communication with the host occurs, and the RCO2 enters ESA mode, the system uses this table in the prefix translations.

Table CUSTHEAD

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

For MDC lines, the information in the ESAPXLA prefix tables must link to a specified customer group. Option ESAPXLA allows the specification of the prefix translator name associated with the customer group.

If the ESA feature package is present, enter data in fields OPTION and XLANAME of table CUSTHEAD. If the OPTION field does not have the ESAPXLA option set, prefix translation for the customer group is not available.

Office parameters associated with ESA lines

The office parameters associated with ESA entry and exit include:

- RSC_ESA_NOTIFY_TONE
- RSC_ESAENTRY_BADCSIDE
- RSC_XPMESAEXIT

The RSC-ESA lines feature package uses office parameters that control ESA static data. The necessary office parameters that appear in a switching unit with the ESA software feature package follow:

- RSC_ESASDUPD_BOOL
- RSC_ESASDUPD_HOUR

Note: The *Office Parameters Reference Manual* describes all office parameters.

RSC_ESA_NOTIFY_TONE

This parameter controls a dial-tone burst to alert the end user the RCO2 is in ESA. The parameter determines if the subscriber hears the dial tone burst. This dial-tone burst is 0.25 seconds on and 0.25 seconds off. This parameter is in table OFCENG.

RSC_XPMESAEXIT

The timeout, RSC_XPMESAEXIT is in *Office Parameters Reference Manual*. Application of this timeout occurs ESA-EXIT to protect against bouncing links. Another name for this parameter is the exit delay parameter. This parameter allows time for a bad link to obtain stability after the link recovers.

ESA lines and trunks (continued)

The RCO2 continues to operate in ESA mode during the RSC_XPMESAEXIT timeout period. The CC communicates with the ESA unit every 10 s to determine if the links to the RCO2 can operate. If communications fail again during the RSC_XPMESAEXIT timeout, the CC does not proceed with the ESA-EXIT. If the RSC_XPMESAEXIT parameter is set to zero, the default value of the ESA-EXIT requires manual intervention.

The RSC_XPMESAEXIT office parameter specifies the ESA-EXIT delay time. Operating company personnel must proceed with a manual exit if one of the following two conditions occur. The RSC_XPMESAEXIT office parameter is set to zero. The RCO2 unit is in the ManB state. The following section describes the fields for office parameter RSC_XPMESAEXIT and gives examples of each field.

Fields for RSC-S_XPMESAEXIT

Field	Example
Name	RSC_XPMESAEXIT
Type	SYSTEM_ESA_EXIT
Type	EXIT_DELAY_TYPE
Default	0 (0 s)
Minimum value	0 (0 s)
Maximum value	100 (1000 s)

The timeout status displays the timeout count down during the timeout period at the MAP screen . For example, if approximately 60 s remain in the timeout period, the following message displays: `ESA T.O. 60.` The system updates approximately every 10 s.

For XPM07 and later loads, a new field is added to this office parameter, SYSTEM_ESA_EXIT. This field is a boolean that determines if the system initiates an ESA exit (“Y”), or if a manual ESA exit is required (“N”).

During the ESA-EXIT process, a message displays at the MAP display to indicate the RCO2 exits ESA.

RSC_ESASDUPD_BOOL

The RSC_ESASDUPD_BOOL office parameter is in *Office Parameters Reference Manual*. This parameter specifies if you must schedule static data updates each night. If the value remains at the default value of Y, the static

data are downloaded during the update each night. The following section describes the fields for office parameter RSC_ESASDUPD_BOOL and gives an example for each field.

Fields for RSC_ESASDUPD_BOOL

Field	Example
Name	RSC_ESASDUPD_BOOL
Type	BOOLEAN
Default	YES
Range	YES or NO

RSC_ESASDUPD_HOUR

The RSC_ESASDUPD_HOUR parameter is in *Office Parameters Reference Manual*. This parameter specifies the daily start time for the update each night of static data. The following section describes the fields for office parameter RSC_ESASDUPD_HOUR and gives an example for each field.

Fields for RSC_ESASDUPD_HOUR

Field	Example
Name	RSC_ESASDUPD_HOUR
Type	ESASDUPD_TYPE
Default	1 (01:00 HR), using a 24-hour clock
Range	0 (00:00 HR) to 23 (23:00 HR)

Note that a static data update requires between three to five minutes. Set this parameter so that the data transfer:

- occurs during a low-traffic period
- does not occur while an office image is taken
- does not occur while system software performs automatic routine exercise (REX) tests

To determine when the REX occurs, view parameters CC-REX_SCHEDULED_HR and CMC_REX_SCHEDULED_HR in table OFCENG. The CC tests take approximately 12 min. The CC tests start 15 min after the time set in the parameter. The central message controller

ESA lines and trunks (continued)

(CMC) tests take approximately 15 min and start 5 min after the time set in the parameter.

Modifying ESA parameters

Use the table editor to modify the following parameters:

- RSC_XPMESAEXIT
- RSC_ESAUPD_HOUR
- RSC_ESAUPD_BOOL

Modifying parameters using the table editor

Use the following procedure to change an office parameter using the table editor. The example procedure changes the ESA exit parameter, RSC_XPMESAEXIT, in table OFCENG.

1 To access table OFCENG and position on the parameter, type

>TABLE OFCENG;POS RSC_XPMESAEXIT

2 To request a change of the parameter to the desired value, type

>CHA

3 To enter the new value, type

>n

where

n is the new exit delay in 10 s increments

4 To confirm the change, type

>Y

5 To quit the table editor, type

>QUIT

Note: After you change ESA office parameters, you must reload ESA static data. To transmit the RSC_XPMESAEXIT parameter change in table OFCENG to the RCO2, use the following command to reload ESA static data, type

>LOADPM unit_no CC ESADATA

Operation

Download of data to the RCO2 must occur before ESA entry. The ESA static data is a subset of translation data from the DMS CC. The system generates ESA logs when the downloaded data exceeds the RSC-S ESA

maximum. Entry of the RSC-S ESA mode cannot occur until the ESA task software is loaded with ESA static data.

Download of ESA static data must occur from DMS CC to ESA task software if you change any of the following tables:

- translation data tables
- table ESAPXLA
- table CUSTHEAD

The following section describes ESA CC tables.

ESA CC data tables

Table	Type	Maximum	Download warning
Terminal data	One for each terminal	5760	
Automatic line	One for each AUL line	256	ESA101
Customer group	One for each group	288	ESA102
Prefix header	One for each customer group	288	
Prefix table	One for each ESA prefix translator POTS customer group	16 8	ESA103
Extension header	One for each customer group	288	ESA103
EFG		2304	
ABCD	One for each directory number (DN)	5760	ESA105
Hunt header	One for each huntgroup	2000	ESA106
Hunt member	One for each huntgroup	5000	ESA107

ESA lines and trunks (continued)

Translations table flow

The ESA lines and trunks translation process appears in the following flowchart.

Table flow for ESA lines and trunks

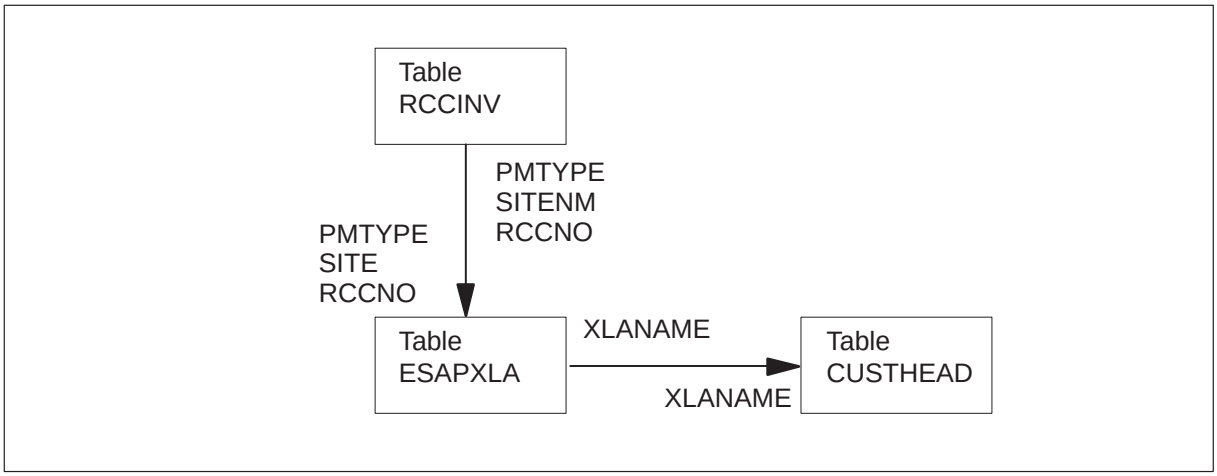


Table CUSTHEAD links a customer group to the prefix translation table name as table ESAPXLA identifies. Field XLANAME table CUSTHEAD corresponds to a prefix translator name. This name is the name assigned in field XLANAME from table ESAPXLA to access prefix translation data.

Table ESAPXLA supports line-to-trunk, trunk-to-trunk, and trunk-to-line call processing in the RSC-S during ESA. Table ESAPXLA contains special prefix translation data. The POTS and MDC customers use the following data. Fields PMTYPE, SITE, and RCCNO in table ESAPXLA correspond to fields PMTYPE, SITENM, and RCCNO from table RCCINV. This feature provides access to inventory data (except P-side link assignments) for the identified RCO2.

Table RCCINV maintains a list of RCO2 data entries in the DMS system. Table RCCINV contains inventory data, except RCO2 P-side link assignments. The table identifies the RCO2 location, required load and exec lineups, and network link connections. Data entries for the C-side PCM-30 assignments for the RCO2 must occur in table RCCINV. Intraswitching data entries occur in table RCCINV.

Data entries for load information for this table occur in field LOAD. This load information 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 first entered in the field NAME from table SITE, PM type, and PM number.

Limits

The following limits apply to ESA lines and trunks:

- When data entries occur in table ESAPXLA for POTS, a maximum of 16 entries can occur for each RSC-S.
- When data entries occur in table ESAPXLA for MDC customer groups, the following condition occurs. A maximum of eight entries can occur for each prefix translator name for each RSC-S.

Interactions

The ESA lines and trunks do not have action between functions.

Activation/deactivation

The ESA lines and trunks do not require the end user to activate or deactivate the lines and trunks.

Billing

The ESA lines and trunks do not affect billing.

Station Message Detailed Recording (SMDR)

The ESA lines and trunks feature package does not affect SMDR.

ESA lines and trunks (continued)

Datafilling office parameters

Office parameters that ESA lines and trunks use appear in the following table. For additional information about office parameters, refer to *Office Parameters Reference Manual*.

Office parameters that ESA lines and trunks require

Table name	Parameter name	Explanation and action
OFCENG	RSC_ESA_NOTIFY_TONE	Defines if the subscriber hears a tone burst when ESA entry occurs. Default: Y
	RSC_ESAENTRY_BADCSIDE	Prevents RCO2 entry into 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 updates of static data must occur each night. Default: YES
	RSC_ESASDUPD_HOUR	Specifies starting time for daily update of ESA static data. Default: 2

Datafill sequence

The following table lists the tables that require datafill to implement ESA lines and trunks. The table list is in the order in which data entries for the tables must occur.

Datafill tables that ESA lines and trunks require

Table	Purpose of table
OFCENG	Office Engineering. This table contains data on engineering parameters for the office. Refer to How to enter data for office parameters for how ESA lines and trunks affect office parameters.
RCCINV	Remote cluster controller inventory. This table contains inventory data for the RCO2. This table does not contain P-side link assignments.
Note: The MDC lines require table CUSTHEAD. The MDC lines must link to a specified customer group in table ESAPXLA.	

—continued—

Datafill tables that ESA lines and trunks require

Table	Purpose of table
ESAPXLA	Emergency stand-alone. This table supports line-to-trunk, trunk-to-trunk, and trunk-to-line call processing in the RSC-S during ESA. Table ESAPXLA contains special prefix translation data for POTS and MDC customers.
CUSTHEAD	Customer Head Group. This table links a customer group to the prefix translation table name that table ESAPXLA identifies.
Note: The MDC lines require table CUSTHEAD. The MDC lines must link to a specified customer group in table ESAPXLA.	
—end—	

Datafilling table RCCINV

The remote cluster controller inventory (RCCINV) table contains the inventory data for the RCO2. Table RCCINV does not contain P-side link assignments.

The datafill for ESA lines and trunks for table RCCINV appears in the following table. Only the fields that apply directly to ESA lines and trunks appear. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

ESA lines and trunks (continued)

Datafilling table RCCINV

Field	Subfield or refinement	Entry	Explanation and action
EXECTAB		refer to subfields	Executive table. This field contains subfields TRMTYPE, EXEC, and CONTMARK. Note that use of more than one combination (eight maximum) can occur for any one PM. ***Note:*** You must make changes to fields with multiple entries in the PROMPT mode only.
	TRMTYPE	ESALINES	Terminal type. Enter the type of PM terminals used. Entry values include the following: • POTS for regular lines • KEYSET for MDC or data lines • RMM_TERM for remote maintenance module (RMM) terminals • ABTRK for regular trunks • ESALINES for ESA lines
Note 1: A loss of ISDN calls occurs during ESA warm switch of activity. The ESA warm switch of activity for stable ISDN calls has support in XPM06. ***Note 2:*** When you enter data for field C-side link table (CSLNKTAB), perform the following action. 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 requirement applies to all interface link types; DS-1, DS30, DS30A or PCM-30. Table control issues a warning if an attempt to assign message links on the same interface card occurs. The assignment of message links to the same interface card can cause an E1 outage if the card fails. An E1 outage is a failure of all message links.			

—continued—

ESA lines and trunks (continued)

Datafilling table RCCINV (continued)

Field	Subfield or refinement	Entry	Explanation and action
EXECTAB (continued)	EXEC	ESAEX	Executive programs. Enter the set of executive programs the PM requires. The TRMTYPE entry specifies this PM. Entry values include the following: • POTSEX if TRMTYPE is POTS • KSETEX if TRMTYPE is KEYSET • RSMEX if TRMTYPE is RMM_TERM • DTCEX or FXODCM if TRMTYPE is ABTRK. The entry value depends on the type of trunking. • ESAEX if TRMTYPE is ESALINES
ESA		Y or N	Emergency stand-alone. Entry values are Y and N. The Y indicates that the RSC-S has the ESA option. The N indicates that the RSC-S does not have the ESA option.
Note 1: A loss of ISDN calls occurs during ESA warm switch of activity. The ESA warm switch of activity for stable ISDN calls has support in XPM06. ***Note 2:*** When you enter data for field C-side link table (CSLNKTAB), perform the following action. 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 requirement applies to all interface link types; DS-1, DS30, DS30A or PCM-30. Table control issues a warning if an attempt to assign message links on the same interface card occurs. The assignment of message links to the same interface card can cause an E1 outage if the card fails. An E1 outage is a failure of all message links.			

—continued—

ESA lines and trunks (continued)

Datafilling table RCCINV (continued)

Field	Subfield or refinement	Entry	Explanation and action
ESA (continued)	WSXWACT	Y or N	Warm exit switch activity. If ESA is set to Y, you can enter Y if RCO2 supports warm ESA exit.
INTRASW		Y or N	Intra-switching can occur. Enter Y if RCO2 intra-switched calling can occur.
Note 1: A loss of ISDN calls occurs during ESA warm switch of activity. The ESA warm switch of activity for stable ISDN calls has support in XPM06. ***Note 2:*** When you enter data for field C-side link table (CSLNKTAB), perform the following action. 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 requirement applies to all interface link types; DS-1, DS30, DS30A or PCM-30. Table control issues a warning if an attempt to assign message links on the same interface card occurs. The assignment of message links to the same interface card can cause an E1 outage if the card fails. An E1 outage is a failure of all message links.			
—end—			

Datafill example for table RCCINV

Sample datafill for table RCCINV appears in the following example.

MAP example for table RCCINV

```
RCCNAME        FRTYPE FRNO SHPOS FLOOR ROW FRPOS EQPEC LOAD
_____________________________________________________________
MELB RCO2 0     CRSC    0   18    0     C   0    MX85AA KRI06AY

EXECTAB                                          CONTMARK
_____________________________________________________________
(POTS POTSEX)(KEYSET KSETEX)(RMM_TERM RSMEX)(ESALINES ESAEX)  $

CSPM          CSLNKTAB                           CONTMARK
_____________________________________________________________
PLGC 1        (0) (1) (2) (3) (4) (5) (6) (7)         $

ESA  INTRASW ADDLMSGL    OPTCARD        CMRLOAD             CONTMARK
_____________________________________________________________
Y    Y       N          (UTR6)(MSG6X69)(CMR18 CMRAG03)         $

TONESET PROCPEC       E2LOAD
_____________________________________
UK100  MX77AA  MX77AA MX77MH08
```

Note: The xx in field LOAD stands for two letters, for example, BZ.

Datafilling table ESAPXLA

The ESA trunk translations tables support call processing during ESA. This call processing consists of line-to-trunk, trunk-to-trunk, and trunk-to-line call processing in the RSC-S. Table ESAPXLA contains special prefix translation data for POTS and MDC customers.

The system does not use this table during normal RCO2 operation. Translations occur in a normal method. If loss of communication with the host occurs and the RCO2 enters ESA, the system uses this table in the prefix translations.

The datafill for the ESAPLXA table appears in the following table. Only the fields that apply directly to RSC-ESA lines appear. Refer to the data schema section of the *Translations Guide* for a description of the other fields. Note that data entries for table ESAPXLA must occur before table CUSTHEAD.

Datafilling table ESAPXLA

Field	Subfield or refinement	Entry	Explanation and action
PXLAKEY		refer to subfields	Prefix translator key. This key identifies a set of prefix digits on a certain site for a given set of customers. This key contains subfields XLANAME, NODE, and PREFIX.
	XLANAME	alphanumeric	Prefix translator name. For performance of this translation for any POTS line on the remote, enter ESAPOTS. For performance of this translation for a specified MDC customer group, enter any name with a maximum of eight characters. Relate this name to a customer group in table CUSTHEAD.
	NODE	refer to subfields	Node. The RLCM, RCC, RCO2, or remote digital line module (RDLM) associated with the translator that XLANAME identifies. The NODE contains subfields PMTYPE, LCMNO, SITE, and RCCNO.

—continued—

ESA lines and trunks (continued)

Datafilling table ESAPXLA (continued)

Field	Subfield or refinement	Entry	Explanation and action
PXLAKEY (continued)	PMTYPE	RCO2	Peripheral module type. This field identifies the peripheral node as an RLCM, an RCC, an RCO2 or an RDLM.
	SITE	alphanumeric	Site. Enter the name assigned to the location of the RCO2.
	RCCNO	0 to 127	The RCC number. For this field, enter the PM number of the RCO2.
	PREFIX	0 to 63	Prefix digits. Enter the 1 to 15-digit prefix with which the translation must associate.
RESULT		refer to subfield	Translation result. This field defines the action to taken when the prefix digits defined earlier are dialed on the remote. This entry is alphanumeric. The RESULT field contains subfield SEL and other entries contingent on the value the user enters for SEL.
	SEL	refer to fields list	Selector. If the entry in PREFIX specifies a line, enter L and complete subfields LEN, AMBIG, and RNGCD.
	LEN	see subfields	Line equipment number. This field defines the line where the call terminates. This entry is alphanumeric. This field contains subfields SITE, FRAME, UNIT, LSG, and CIRCUIT.
	SITE	alphanumeric	Site. Enter the name assigned to the site of the termination line location. Communication with the host does not occur because the remote operates in ESA. This site must match the site that subfield NODE specifies.
	FRAME	0 to 99	Frame. Enter the frame number at this site that contains the line card for the termination line. For PMTYPE RCO2, support for some communication is present. This communication is communication between all the line concentrating modules (LCMs) or the digital line modules (DLMs) that attach to the RCO2.
	UNIT	0 or 1	Unit. Enter the unit number of the LCM, RLCM, DLM, or RDLM for the assigned line.

—continued—

ESA lines and trunks (continued)

Datafilling table ESAPXLA (continued)

Field	Subfield or refinement	Entry	Explanation and action
RESULT (continued)	LSG	0 to 19	Line subgroup. Enter the number of the line subgroup of the unit for the assigned line card. The unit must be an LCM, RLCM, DLM or RDLM unit.
	CIRCUIT	0 to 31	Circuit. 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 completely different, enter N. If the user can dial the prefix digits as the first digits of another number, enter Y. Entry value: Y or N.
	RNGCD	0 to 7	Ringing code. Enter the code for the type of ringing associated with the line specified in the LEN field. This ringing code is for lines on an LCM or DLM.
		—end—	

Datafill example for table ESAPXLA

Sample datafill for table ESAPXLA appears in the following example.

MAP display example for table ESAXPLA

```
                         PXLAKEY
------------------------------------------------
ESAPOTS          RCO2    REM3    0              411
IBN1             RCO2    REM3    0              6
IBN1             RCO2    REM3    0              9
ESATEST          RCO2    REM3    0              611


                         RESULT
------------------------------------------------
L          MELB  00    0    00  02      Y    1
T   SRPXLA
T   SRPDXLA
L          MELB  02    0    01   20     N    1
```

ESA lines and trunks (continued)

Datafilling table CUSTHEAD

To implement ESA lines, the operating company uses table CUSTHEAD. This table specifies the prefix translator name data entry in table ESAXPLA for field XLANAME. An ESA prefix translator defines prefix translation data for an RCO2 that operates in ESA.

> ***Note:*** The operating company can specify all prefix translator names except POTS. The POTS prefix translator name is hard-coded as ESAPOTS. All nodes that require prefix translation for POTS use this prefix name and specify the node.

Datafill specified for table CUSTHEAD appears in the following table. Only fields that apply directly to RSC-ESA lines appear. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table CUSTHEAD

Field	Subfield or refinement	Entry	Explanation and action
OPTIONS		ESAPXLA	Option. This field lists options and associated subfields assigned with section to the customer group. Enter the option.
XLANAME		alphanumeric	Prefix translator name. Enter the one to eight characters assigned to the prefix translator table in field XLANAME of table ESAPXLA

Datafill example for table CUSTHEAD

Sample datafill for table CUSTHEAD appears in the following example.

MAP display example for table CUSTHEAD

```
CUSTNAME CUSTXLA DGCOLNM OPTIONS
------------------------------------------------_
POTSDATA POTSXLA POTS  (VACTRMT 0)(EXTNCOS 0)
COMIBN2  CXN2   IBN2   (VACTRMT 0)(EXTNCOS 0)

     OPTIONS
------------------------------------------------
(SUPERCNF)(MHOLD 10 AUDIO)(CPR Y AUDIO1 3 )
(ESAPXLA IBN1)
```

Tools for verifying translations

To verify the translations that occur during ESA, tool ESATRAVER allows the following action. Operating company personnel can perform a translation verification (TRAVER) on RSC-ESA lines.

SERVORD

The ESA lines and trunks feature does not use SERVORD.

PCM-30 R1 Trunking

Functional group

BAS00012

Feature package

NTXT00AA PCM-30 RSC-S R1 Trunking

Release applicability

XPM05 and later versions

Requirements

The PCM-30 R1 Trunking requires the following feature packages to operate:

- NTXH52AA PCM-30 RSCO Support
- NTXK77AA PCM-30 RSCO-S Support
- NTXP92AA RSC-S Basic

Description

The PCM-30 RSC-S R1 Trunking software package provides P-side trunking off of the RSC-S. This package uses the P-side of the RCO2 to terminate trunks from community dial offices (CDO) and private branch exchanges (PBX). This package supports line-to-trunk, trunk-to-line and trunk-to-trunk calls.

Operation

Does not apply

Translations table flow

The following list describes the PCM-30 R1 Trunking translations tables:

- Table common language location identifier (CLLI) identifies the far end of the trunk group by the following items:
  - — the name of the city or town
  - — the state or province
  - — the building group
  - — the destination of the traffic unit
  - — the code that identifies trunk groups that terminate at the same CLLI location

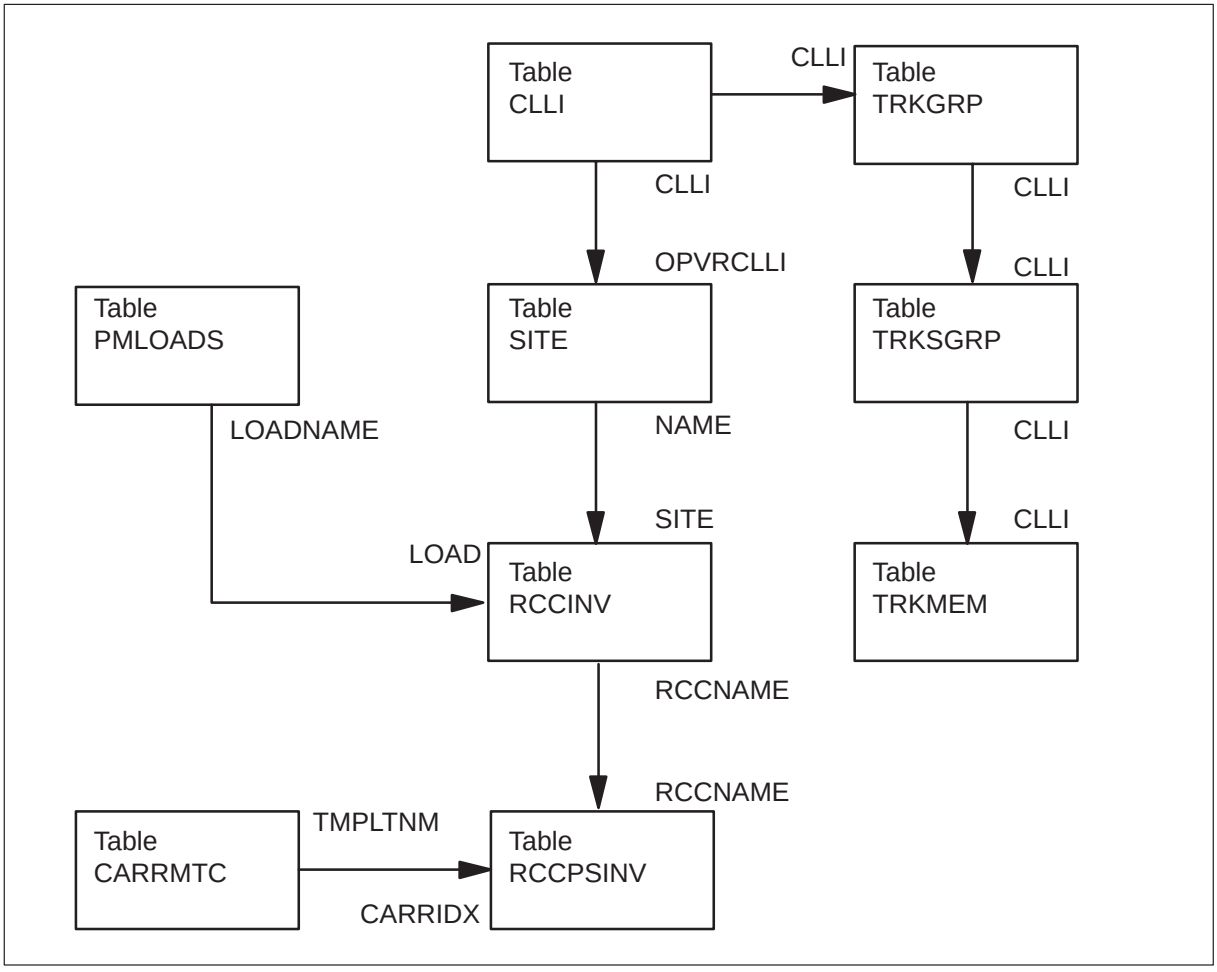
- Table SITE identifies equipment for the switching unit and for all remote locations that connect to the switching unit. This table must contain data before you can assign a LEN or enter a PM. The host switching unit is the first entry in field NAME. Field LTDSN associates with the number required to dial the site and alarm data for remote sites.
- Table PMLOADS stores the device location of each peripheral module (PM) loadfile to map between the load names and load devices. Table PMLOADS must contain the PM loadfiles before the load files in the inventory tables can use the loadfiles.
- Table CARRMTC allows the DMS switch administration to enter maintenance control information in peripherals. Table CARRMTC allows the DMS switch administration to enter 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 RCCINV maintains a list of RCO2s entered in the DMS switch and that contains inventory data for the RCO2s. The inventory data does not include P-side link assignments. The table information identifies the location of the RCO2, the load and execute lineups required and the network link connections. Table RRCINV contains the C-side DS-1 assignments and for the RCO2. Table RRCINV contains intraswitching.
- Table RCCPSINV contains the P-side link assignments for the RCO2. For each tuple added to table RCCINV, the system adds the tuple that corresponds in table RCCPSINV. This table uses field LOAD to identify load information. Field LOAD corresponds to the LOADNAME tuple from table PMLOADS. Field CARRIDX indexes table CARRMTC for maintenance control information about the peripheral. The RCCNAME tuple in table RCCPSINV corresponds to the RCCNAME tuple, from table RCCINV. The RCCNAME tuple stores site information first entered in field NAME from table SITE, the PM type and the PM number.
- Table TRKGRP defines data for each trunk group that associates with the switching unit. Field CLLI in table TRKGRP corresponds to the CLLI code for the trunk group.
- Table TRKSGRP lists additional 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.

PCM-30 R1 Trunking (continued)

- Table TRKMEM lists the data associated with each trunk assigned to one of the trunk groups and subgroups. Tables TRKGRP and TRKSGRP specify the trunk groups and subgroups. This table identifies the circuits associated with static trunks, dynamic trunks and the test equipment to test lines and trunks. Field CLLI in table TRKMEM corresponds to the CLLI code for the trunk group.

The following flowchart describes the PCM-30 R1 Trunking translation process.

Table flow for PCM-30 R1 Trunking



PCM-30 R1 Trunking (continued)

Limits

The following limits apply to PCM-30 RSC-S R1 Trunking:

- On the P-side of the RCO2, this feature supports a maximum of 46 PCM-30 links. Twenty-two PCM-30 links are on the main shelf, and 24 PCM-30 links are on the extension shelf.
- Only the remote maintenance module (RMM) uses ports 22 and 23 on the P-side of the RCO2.
- The RCO2 supports a maximum of 16 PCM-30 links on the C-side of the RC02.
- The first 16 PCM-30 links on the P-side of the RCO2 support CDOs and PBXs.
- The RCO2 does not support Emergency stand-alone (ESA) trunking.

Interactions

The PCM-30 R1 Trunking does not have functionality interactions.

Activation/deactivation by the end user

The PCM-30 R1 Trunking does not require activation or deactivation by the end user.

Billing

The PCM-30 R1 Trunking does not affect billing.

Station Message Detail Recording

The PCM-30 R1 Trunking does not affect Station Message Detail Recording.

Datafilling office parameters

The PCM-30 R1 Trunking does not affect office parameters.

Datafill sequence

The following table lists the tables that require datafill to use PCM-30 R1 Trunking. The tables appear in the order that the tables require datafill.

PCM-30 R1 Trunking (continued)

Datafill tables required for PCM-30 R1 Trunking

Table	Purpose of table
CLLI	Common language location identifier. Contains codes that 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 equipment for the switching unit. This data allows the DMS to recognize equipment for all remote locations that connect to the switching unit.
PMLOADS	Peripheral module loads. Stores the device location of each peripheral module (PM) load file to map between the load names and load devices. The system enters data in the first loads.
CARRMTC	Carrier maintenance. Allows the DMS switch administration to enter maintenance control information in peripherals, OOS limits for alarms and system return-to-service (RTS) occurrences.
RCCINV	Remote cluster controller inventory. Contains inventory data for the RCO2. Does not contain P-side link assignments. Table RCCINV contains RCO2 C-side DS-1 assignments.
RCCPSINV	Remote cluster controller P-side link inventory (RCCPSINV). The RCCPSINV contains the RCO2 P-side link assignments.
TRKGRP	Trunk group. Defines data for each trunk group that associates with the switching unit.
TRKSGRP	Trunk subgroup. Lists additional information for each subgroup assigned to a trunk group listed in table TRKGRP.
TRKMEM	Trunk member. Lists data associated with each trunk assigned to one of the trunk groups and subgroups that tables TRKGRP and TRKSGRP specify. This table identifies circuits associated with static trunks, dynamic trunks and the test equipment to test lines and trunks.

Datafilling table CLLI

The following table describes the datafill specific to PCM-30 R1 Trunking for table CLLI. Fields that apply to PCM-30 R1 Trunking appear. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table CLLI

Field	Subfield or refinement	Entry	Explanation and action
CLLI		see subfields	Common language location identifier. This 16-character field 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.

Datafill example for table CLLI

The following is an example of datafill for the PCM-30 RSC-S R1 Trunking package in table CLLI.

MAP example for table CLLI

```
Table: CLLI

CLLI       ADNUM       TRKGRPSIZ      ADMININF
_____________________________________________________
MELB        12          20             MELBNT
QUEENSLAND 14          20             QTVER90
```

Datafilling table SITE

The following table describes the datafill specific to PCM-30 R1 Trunking for table SITE. The fields that apply to PCM-30 R1 Trunking appear. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

PCM-30 R1 Trunking (continued)

Datafilling table SITE

Field	Subfield or refinement	Entry	Explanation and action
NAME		alphanumeric	Site name. Enter the site name assigned to the remote switching unit. The first character must be alphabetic. Site names can contain a maximum of 4 characters. Site names cannot use PM names. The first entry in this field is for the host switching unit.
LTDSN		00 to 99	Line equipment number test desk site number. Enter a separate 2-digit number to dial the site that appears under field NAME.
MODCOUNT		0	Module count.
OPVRCLLI		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 contains subfields ALMTYPE, TMTYPE, TMNO, CKTNO, and POINT. Refer to Note 2 for information about how to terminate data entry.

Note 1: Make changes to fields with multiple entries in the PROMPT mode. The nonprompt mode does not require current entries.
Note 2: When the next line specifies more data or records, enter the continuation mark (+) in fields with multiple possible entries. Enter the end mark ($) in fields with multiple possible entries after the last entry.

Datafill example for table SITE

The following is an example of datafill for the PCM-30 RSC-S R1 Trunking package in table SITE.

MAP display example for table SITE

```
Table: SITE

   NAME
LTDSN MODCOUNT          OPVRCLLI
                                                    ALMDATA
-------------------------------------------------------------
   HOST
  00        14            VER90                          $
```

Datafilling table PMLOADS

Table PMLOADS stores the device location of every peripheral module (PM) load file to map between load names and load devices. The system reloads the PMs that can have a defective load. Autoload does not require operating company personnel to help locate load files. Autoload reduces recovery time.

Table PMLOADS must contain PM loadfiles before inventory tables can use the load files. The system adds tuples in PMLOADS when LTCINV and RCCINV tuples are added during initial data entry and dump and restore. The system adds a dummy entry when the loadname is not present in the table. For switch operation, change this dummy entry to include the current storage device for the PM load file.

The following table describes the datafill specific to PCM-30 R1 Trunking for table SITE. The fields that apply to PCM-30 R1 Trunking appear. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

PCM-30 R1 Trunking (continued)

Datafilling table PMLOADS

Field	Subfield or refinement	Entry	Explanation and action
LOADNAME		alphanumeric	Peripheral module load name. Enter the XPM load name. Range is a maximum of 32 characters. This loadname must be the same as the load name entered in tables LTCINV and RCCINV.

Datafill example for table PMLOADS

The following example describes sample datafill for the PCM-30 RSC-S R1 Trunking package in table PMLOADS.

MAP example for table PMLOADS

```
LOADNAME
 ACTFILE        ACTVOL
 BKPFILE        BKPVOL   UPDACT
_____________________________________________________________________
ETC05AC
 ETC05AZ        S00DXPM
 ETC05AZ        S00DXPM     N
```

Datafilling table CARRMTC

The following table describes the datafill specific to PCM-30 R1 Trunking for table CARRMTC. The fields that apply to PCM-30 R1 Trunking appear. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table CARRMTC

Field	Subfield or refinement	Entry	Explanation and action
CSPMTYPE		RCO2	C-side node PM type. Enter the PM type of the node on the C-side of the carrier link.
TMPLTNM		DEFAULT	Template name. Enter the template name that can contain a maximum of 16 characters for the PM. This entry also appears in field CARRIDX in table LTCPSINV.

Datafill example for table CARRMTC

The following example describes sample datafill for the PCM-30 RSC-S R1 Trunking package in table CARRMTC.

MAP example for table CARRMTC

```
Table: CARRMTC

CSPMTYPE TMPLTNM RTSML RTSOL                                    ATTR

-------------------------------------------------------------------
RCO2 DEFAULT 255 255 D30 NTMX82AA A_LAW INTERNATL 100 100 150 150 200
200 220 220 50 50 50 50 100 100 100 120 120 130 130 140 140 100 200 200
Y 4 4 17 255 Y Y 5 5 205 914 G714 D30RCC
```

Datafilling table RCCINV

Table remote cluster controller inventory (RCCINV) contains inventory data for the RCO2. Table RCCINV does not include P-side link assignments. The following procedure describes the datafill for table RCCINV. The fields that apply directly to PCM-30 R1 Trunking appear. Refer to the data schema section of the *Translations Guide* for descriptions of the other fields.

Datafilling table RCCINV

Field	Subfield or refinement	Entry	Explanation and action
RCCNAME		see subfields	RCO2 name. Contains subfields SITE, PMTYPE, and RCCNO.
	SITE	alphanumeric	Site. Enter the site name assigned to the remote location. This entry must also appear in table SITE.
	PMTYPE	RCO2	Peripheral module type.
	RCCNO	0 to 127	RCO2 number. Office numbers are different.
LOAD		alphanumeric	Load. Enter the load for the RCO2. Table PMLOADS must contain this datafill.

Note: When you enter data in field C-side link table (CSLNKTAB), 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 condition applies to all interface link types; DS-1, DS30, DS30A, or PCM-30. Table control generates a warning when an attempt occurs to assign message links on the same interface card. When this condition occurs and the card fails, an E1 outage can occur. An E1 outage is a failure of all message links.

PCM-30 R1 Trunking (continued)

Datafill example for table RCCINV

The following is an example of datafill for the PCM-30 R1 Trunking in table RCCINV.

MAP example for table RCCINV

```
Table: RCCINV

RCCNAME      FRTYPE FRNO SHPOS FLOOR ROW FRPOS EQPEC  LOAD
_____________________________________________________________
MELB RCO2 0  CRSC   0   18    0     C   0      MX85AA KRI06AY

EXECTAB
(POTS POTSEX)(KEYSET KSETEX)(ABTRK DTCEX)
(RMM_TERM RSMEX) (ESALINES ESAEX)                 $

CSPM        CSLNKTAB
-------------------------------------------------------------
PLGC 1     (0) (1) (2) (3) (4) (5) (6) (7)        $


ESA  INTRASW    OPTCARD       CMRLOAD
-------------------------------------------------------------
N    Y         (UTR6)(MSG6X69)(CMR18 CMRAG03)     $

TONESET PROCPEC        E2LOAD     EXTINFO
-------------------------------------------------------------
AUS100 MX77AA  MX77AA  MX77NH08   CEXT 0 4 0 E 15 MX86AA L
```

Note: The xx in field LOAD indicates two letters. An example is BZ.

Datafilling table RCCPSINV

Table Remote Cluster Controller P-side link Inventory (RCCPSINV) contains RCO2 P-side link assignments. The RCO2 can accept a maximum of 54 multiples of P-side link information.

When the addition of an extension shelf occurs, the RCO2 P-side links that connect to the extension shelf have datafill limits. The PCM-30 and D-channel handler (DCH) links that connect to the extension shelf can accept data. To accept data, RCCINV must contain data for an extension shelf. To delete the extension shelf from table RCCINV, change all links that connect to the extension shelf from D30/DCH to NILTYPE or DS30A in RCCPSINV. Table RCCPSINV can contain a maximum of 10 DCH cards.

The following table describes the process to enter data for table RCCPSINV. The fields that apply to PCM-30 R1 Trunking appear. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table RCCPSINV

Field	Subfield or refinement	Entry	Explanation and action
RCCNAME		see subfields	Remote cluster controller name. Enter the name of the RCC. The RCCNAME contains subfields SITE, PMTYPE and RCCNO.
	SITE	alphanumeric	Site. Enter the site name assigned to the remote location. Table SITE must contain the site name.

Note 1: The RCO2 supports a maximum of 46 PCM-30 links on the P-side of the RCO2. The external cabinet has 24 of these links.
Note 2: Links 0 to 21 and 24 to 47 accept PCM-30s. Links 22 to 53 accept DS30A links. The RMM uses links 22 and 23.
Note 3: The P-side links on the RCO2 can have community dial office (CDO) or private branch exchange (PBX) trunks that can be assigned. Only the first 16 PCM-30 links on the P-side support CDOs and PBXs.
Note 4: Make changes to fields with multiple entries in the PROMPT mode only. The nonprompt mode does not require current entries.
Note 5: When the next line specifies more data or more records, enter the continuation mark (+) in fields with multiple possible entries. Enter the end mark ($) in fields with multiple possible entries after the last entry.

—continued—

PCM-30 R1 Trunking (continued)

Datafilling table RCCPSINV (continued)

Field	Subfield or refinement	Entry	Explanation and action
RCCNAME (continued)	PMTYPE	RCO2	Peripheral module type. Enter RCO2.
	RCCNO	0 to 127	RCO2 number.
PSLNKTAB (See Notes)		0 to 53	P-side link table. This table contains subfields PSLINK and PSDATA. Enter the vector number.
	PSLINK	0 to 46	P-side link. Enter the P-side port number of the RCO2.
	PSDATA	D30	P-side data type. Enter DS30A for links to RMMs or LCM and D30 for PCM-30 links. For all other conditions, enter NILTYPE.

Note 1: The RCO2 supports a maximum of 46 PCM-30 links on the P-side of the RCO2. The external cabinet has 24 of these links.
Note 2: Links 0 to 21 and 24 to 47 accept PCM-30s. Links 22 to 53 accept DS30A links. The RMM uses links 22 and 23.
Note 3: The P-side links on the RCO2 can have community dial office (CDO) or private branch exchange (PBX) trunks that can be assigned. Only the first 16 PCM-30 links on the P-side support CDOs and PBXs.
Note 4: Make changes to fields with multiple entries in the PROMPT mode only. The nonprompt mode does not require current entries.
Note 5: When the next line specifies more data or more records, enter the continuation mark (+) in fields with multiple possible entries. Enter the end mark ($) in fields with multiple possible entries after the last entry.

—end—

Datafill example for table RCCPSINV

The following is an example of datafill for PCM-30 R1 Trunking in table RCCPSINV.

MAP example for table RCCPSINV

```
Table: RCCPSINV

RCCNAME      PSLNKTAB
-----------------------------------------------------------
MELB RCO2 0  (0 D30 DEFAULT N) (1 D30 DEFAULT N)
(2 D30 DEFAULT N) (3 D30 DEFAULT N) (4 D30 DEFAULT N)
(5 D30 DEFAULT N) (6 D30 DEFAULT N) (7 D30 DEFAULT N)
(8 NILTYPE) (9 NILTYPE) (10 NILTYPE) (11 NILTYPE) (12 NILTYPE)
..
(48 NILTYPE) (49 NILTYPE) (50 NILTYPE) (51 NILTYPE)
(52 NILTYPE) (53 NILTYPE)  $
```

Datafilling table TRKGRP

The following table describes the process to enter data for table TRKGRP. The fields that apply to PCM-30 R1 Trunking appear. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table TRKGRP

Field	Subfield or refinement	Entry	Explanation and action
GRPKEY			Group key. Contains subfield CLLI.
	CLLI	alphanumeric	Common language location identifier. Enter the CLLI code for the trunk group assigned in table CLLI.
GRPINFO		see subfields	Variable group data. When trunk group type is MAINT, the group data contains subfields GRPTYP, TRAFSNO, PADGRP, NCCLS, and CARD.
	GRPTYP	see list	Group type. Enter the group type for the trunk group. Examples of group type are international with metering (MTR) and international with operator (OPR).
	NCCLS	NCRT	No circuit class. Enter NCRT (no circuit).

PCM-30 R1 Trunking (continued)

Datafill example for table TRKGRP

The following is an example of datafill for the PCM-30 R1 Trunkingin table TRKGRP.

MAP example for table TRKGRP

```
Table:  TRKGRP

GRPKEY                                  GRPINFO
_____________________________________________________________
MELB      MTR  0  TLD NCRT     IE MIDL  7 N $
QUEENSLAND +
    IBNTO 0 ELO NCBN RCO20 0 MIDL ANSDISC +
    0 N O 1 8 9 N N N N N N N $
```

Datafilling table TRKSGRP

Table trunk subgroup (TRKSGRP) lists additional information for each subgroup assigned to one of the trunk groups listed in table TRKGRP. Specify input data for a minimum of one subgroup or a maximum of two subgroups for each trunk group listed in table TRKGRP. This condition does not include trunk groups defined as maintenance (MAINT) group types.

PCM-30 R1 Trunking (continued)

The following procedure describes the datafill for table TRKSGRP. The fields that apply to PCM-30 R1 Trunking appear. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

Datafilling table TRKSGRP

Field	Subfield or refinement	Entry	Explanation and action
SGRPKEY		see subfields	Subgroup key. Contains subfields CLLI and SGRP.
	CLLI	alphanumeric	Common language location identifier. The CLLI contains the code assigned in table CLLI to the subgroup of the trunk group.
SGRPVAR		see list	Variable subgroup data. For standard signaling, the group data contains the following subfields: • SIGDATA • DIR • OPULSTYP • OSTARTSG • IDGTIME • NUMSTOPS • CCONT • RNGBCK • ESUPR • SAT • REMBSY • DIALMODE • TRKGDTIM

Note 1: Field SIZE in table DATASIZE allocates memory for the number of trunk subgroups. The entry with field DATSKEY is 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 is 4096.

PCM-30 R1 Trunking (continued)

Datafill example for table TRKSGRP

The following is an example of datafill for the PCM-30 R1 Trunking in table TRKSGRP.

MAP display example for table TRKSGRP

```
Table:  TRKSGRP

SGRPKEY CARDCODE
                                                SGRPVAR
_____________________________________________________________________
QUEENSLAND 0   2X11AA +
          STD OG  NP       WK  0 0 NO NO F N 17 $
   MELB 0 DS1SIG +
          STD OG  DP       IM 70 0 NO NO N N 70 $
```

Datafilling table TRKMEM

The following procedure describes the datafill for table TRKMEM. The fields that apply to PCM-30 R1 Trunking appear. Refer to the data schema section of the *Translations Guide* for a description of the other fields.

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 of which the trunk is a member.
EXTRKNM		0 to 9999	External trunk number. Enter the external trunk number assigned to the trunk.
SGRP		1	Subgroup number. Enter the subgroup numberof the trunk. Enter 0 for maintenance and test trunks, and 1 for others.
MEMVAR		see subfield	Variable data for members. For RSC-S applications, this field depends if the trunk is part of an interoffice trunk or a maintenance trunk. For an interoffice trunk, the subfield is PMTYPE and the appropriate refinements.

—continued—

Datafilling table TRKMEM (continued)

Field	Subfield or refinement	Entry	Explanation and action
MEMVAR (continued)	PMTYPE	RCO2	Peripheral module type. This field is the PM type on which the trunk is mounted. Enter RCO2.
	RCO2NO	0 to 511	RCO2 number.
	RCO2CKTNO	0 to 47	RCO2 circuit number. Enter the RCO2 card number of the assigned TRKGRP member.
	RCO2CKTTS	1 to 24	RCO2 time slot number. Enter the time slot number of the assigned TRKGRP member.
		—end—	

Datafill example for table TRKMEM

```
Table: TRKMEM

    CLLI         EXTRKNM  SGRP       MEMVAR
_____________________________________________________
MELB       0        0          RCO2 0  2  4
QUEENSLAND 0        0          RCO2 0  2  4
```

Tools for verifying translations

The PCM-30 R1 Trunking does not use translation verification tools.

SERVORD

The PCM-30 R1 Trunking does not use SERVORD.

ISDN operations

Functional group

NIO00007

Feature package

The RSC-S UK/Europe Integrated Services Digital Network (ISDN) Call Processing uses the following feature packages:

- NTX750AD ISDN Basic
- NTX145AA Remote Switching Center
- NTX150AA RSC Intra-RSC Calling
- NTXK77AA PCM-30 RSCO-S Support

Release applicability

XPM05

Requirements

To operate Integrated Services Digital Network (ISDN) on RSC-S requires the following feature packages:

- NTXR42AA Firmware Downloading
- NTX000AA Bilge
- NTX001AA Common Basic
- NTXP92AA RSC-S Basic
- NTX100AA Integrated Business Networks-Basic (IBN)
- NTX269AA Universal Tone Receivers (Domestic)
- NTX270AA New Peripheral Maintenance
- NTX901AA Local Features I

International support requires the following feature packages:

- NTXH52AA PCM-30 RSCO Support
- NTXP92AA RSC-S Basic
- NTX001AA Common Basic

European Telecommunications Standards Institute (ETSI) BRI functionality is provided without terminal portability. The ISDN ETSI BRI services require the following feature packages:

- NTX756AA ISDN Display Services
- NTX796AA Enhanced number delivery
- NTX755AC ISDN supplementary services compliance

Description

Integrated Services Digital Network (ISDN) is provided through the remote cluster controller offshore #2 (RCO2) module. The RCO2 module is part of the Remote Switching Center Synchronous Optical Network (SONET) or RSC-S. An RCO2 provides increased ISDN performance capacity.

The packages required for the RSC-S without ISDN are also necessary for the RSC-S with ISDN. The non-ISDN packages provide several base functionalities like intraswitching and emergency stand-alone (ESA). The RSC-S with ISDN builds on these functionalities.

This section addresses datafill categories that define:

- physical hardware parts used in the RCO2 configuration
- the extension shelf
- the names and attributes of the PCM-30 and trunk data links between the parts of the RCO2
- D-channel data connections
- ISDN pre-processor (ISP) card (NTBX01)
- ISDN D-Channel handler card (NTBX02)
- attributes of ISDN service capabilities
- ISDN terminal configuration datafill

ISDN operations (continued)

Profile of basic rate access (BRA)

In this document basic rate interface (BRI) and basic rate access (BRA) services are interchangeable and refer to the same ISDN functionality. The BRA services are available over a two-wire loop. The key attributes of an ISDN line are multiple devices off each line equipment number (LEN) and devices that the system considers logical terminals (LT). Use the following concepts to identify these terminals.

LTID

The logical terminal identifier (LTID) provides a separate logical terminal (LT), or profile, to the exchange termination (ET). The LT or profile contains the following:

- LT group (LTGRP) that is the name of the group of LTs, to a maximum of 32
- LT number (LTNUM) that is the number that identifies the LT in the group, 1 through 1022

TEI

The terminal endpoint identifier (TEI) identifies physical terminals on the same group. The Consultative Committee on International Telegraphy and Telephony (CCITT) defines a maximum of 128 TEIs for each ISDN loop. Northern Telecom (Nortel) uses a maximum of eight TEIs defined for each loop. Nortel has TEI 1 and TEI 2 assigned to devices that associate with ISDN basic rate interface (BRI) B-channels. Nortel has TEI 21 through 26 assigned to devices with BRI D-channels.

Note: A physical terminal has a minimum of one LT.

ISDN variants using protocol version control (PVC)

Static table download from the CC allows PVC specified options to a generic ISDN software module. For NI-1 compatibility for off shore, the static download indicates if the system supports A-Law and variable length directory numbers (DN).

NI-1 functionality in ESA mode

The RCO2 provides almost the same NI-1 intraswitching and ESA functionality as the North American RSC-S platform. The difference between the RCO2 and the RSC-S platform is that ISDN calls do not survive warm ESA entry or exit. The XPM06 release will provide ISDN warm ESA functionality. The RCO2 is not available in a dual configuration. The system does not support interswitching.

Generic Services Framework (GSF) on XPMs

When software enables the GSFXPM ability, the call processing architecture treats ISDN calls as independent entities. The call processing architecture does not treat the calls as calls that associate with a keyset ability. With GSFXPM, the system can support two non-initializing ETSI BRI terminals on one ISDN loop. The system supports multiple active ISDN calls on a terminal and call contention on incoming calls. Enter data in table KSETFEAT to allow more than one call on a terminal.

Office parameters associated with ISDN lines

Office parameters that associate with lines that have ISDN abilities on the RSC-S include:

MAX_BRA_LINES

This parameter in table OFCOPT specifies the maximum number of ISDN basic rate access (BRA) lines that can be assigned. Specify in line increments of 100 the maximum number of lines that can be assigned. The default value of 10 sets the maximum number of links to 1000.

Layer 1 office parameters in table OFCVAR control reports of the following alarms.

- ISDN_LOSS_OF_SIG_DGASP_ALARM
- ISDN_LOSS_OF_SIG_NO_DGASP_ALARM
- ISDN_LOSS_OF_SYNC_WORD_ALARM
- ISDN_NTI_TEST_MODE_ALARM
- ISDN_PERFORMANCE_MON_ALARM
- ISDN_T_SYNC_LOST_ALARM

DAILY_ISDN_LAYER2_PEG_AUDIT_TIME

This parameter specifies the time of day to collect ISDN layer 2 peg counts and generate ISDN200 and ISDN201 log reports.

Collect the following peg counts:

- number of frames with CRC errors
- number of frames that the system receives, good frames plus frames with CRC errors
- number of frames that the system transmits again, except SAPI16 frames
- number of frames that the system transmits

ISDN operations (continued)

BEARER_CAPABILITY

Bearer capability (BC) routing allows the called-address information and bearer capability of the call to route ISDN calls. The setup message of the originating terminal includes bearer capability. The DMS switch adds bearer capability at the terminating end.

The parameter DEFAULT_BEARER_CAPABILITY defines the default BC of an office. The default is normally SPEECH. A change in the default can have a serious impact on call completion. If the value changes to 3_1KHZ, table RTECHAR must be investigated for entries that use a BC of speech. Use value 3_1KHZ in a controlled environment. The A-Law for national ISDN (NI-1) compatible speech and 3.1 KHZ bearer services is implemented on the PLGC and the RCO2.

Changing office parameters

Nortel sets the default value of parameters during load build. Use the following procedure to change an office parameter. Use the table editor to perform the procedure. The following procedure changes the MAX_BRA_LINES parameter in table OFCOPT.

1 To access table OFCOPT and position on the parameter, type

>TABLE OFCOPT;POS MAX_BRA_LINES

2 To request a change of the parameter to the desired value, type

>CHA

3 To enter the new value, type

>n

where

n is the new parameter value

4 To confirm the change, type

>Y

5 To quit the table editor, type

>QUIT

Note: With changes to office parameters, load the static data again. Load the static data again to propagate the parameter changes to the RCO2. To propagate the changes, type

>LOADPM unit_no CC

For additional information about how to enter data in office parameters, refer to *Office Parameters Reference Manual*.

Operation

The description of the datafill for the RCO2 is in terms of physical configuration, service capabilities and bearer capabilities.

Defining the physical configuration

The following translations tables identify the hardware parts and the connections between the parts. This section contains explanations of the tables for ISDN on RSC-S. This section also contains explanations of the tables used in basic call processing for the RSC-S.

Hardware parts

The following tables define the parts used in the RCO2 configuration:

- LTCINV (Line Trunk Inventory)
- LTPSINV (Line Trunk Peripheral Side Inventory)
- RCCINV (Remote Cluster Controller Inventory)
- RCCPSINV (Remote Cluster Controller Peripheral Side Inventory)
- LCMINV (Line Concentrating Module Inventory)
- RMMINV (Remote Maintenance Module Inventory)

PCM-30 and trunk data

The following tables define the names and attributes of the links between the parts of the RCO2 configuration:

- CLLI (Common Language Location Identifier)
- TRKGRP (Trunk Group)
- TRKSGRP (Trunk Subgroup)
- TRKMEM (Trunk Member)
- CARRMTC (Carrier Maintenance)
- PADDATA (Pad Data)

D-channel data

The following tables define D-channel data:

- SPECCONN (Special Connections)
- DCHINV (D-channel Handler Inventory)

ISDN operations (continued)

Defining service capabilities

These tables contain the attributes of the BRA.

- LTGRP (Logical Terminal Group)
- LTDEF (Logical Terminal Definition)
- LTMAP (Logical Terminal Map)
- KSETINV (Key Set Inventory)
- KSETLINE (Keyset Line)
- KSETFEAT (Keyset Features)

Translations table flow

The user can enter data in some of the tables through SERVORD. The user cannot enter data in some to the tables through the table editor.

ISDN operations translations tables interactions

The following tables contain descriptions of ISDN operations translations tables:

- Table SITE identifies the equipment for the switching unit and the remote locations that connect to the unit. Enter data in this table before a LEN is assigned or before the user enters data in a PM. The host switching unit is the first entry in this field. Field NAME associates with the number required to dial the site and alarm data for remote sites. Table SITE uses the same CLLI tuple for operator verification as the tuple entered in table CLLI.

  Table SITE (field NAME) must know the following fields.

  — field SITE in table LCMINV

  — field SITENM in tables RCCINV and RMMINV

  — subfield SITE_ID in table ISTRKGRP

- Table CLLI uses the following information to identify the far end of the trunk group:

  — city or town

  — state or province

  — building group and destination of the traffic unit

  — the code that identifies trunk groups that terminate at the same CLLI location

- Table CLLI stores the maximum number of trunk groups that can be assigned to the trunk group. The table also stores a miscellaneous entry for administrative information that the switching unit does not use.

  The system adds some CLLI codes to table CLLI when the feature is present in the switch. Add other codes to the CLLI table. After you enter data in table CLLI, the following tables reflect the CLLI tables.

  — the trunk group tables

  — the scan and distribution point table

  — the MTA tables

  The CLLI tuple for operator verification must duplicate in field OPVRCLLI in table SITE.

  Note: Enter data in some tables by the kind of trunk group type required. Each trunk group type requires a specified form. Valid trunk group types are TI, TO, T2, IBNTI, IBNTO, IBNT2, PX and ES.

- Table LTCINV contains inventory data, except the P-side link assignment, for PM types. This table defines the PCM-30 line group controller (PLGC) or line group controller overseas (LGCO) on the C-side of the RCO2. Load information for this table is entered in field LOAD and corresponds to the LOADNAME tuple from table PMLOADS.
- Table LTCPSINV contains the assignment of the P-side links for PMs. If D30 is entered in AREASELCT, the CARRIDX field indexes table CARRMTC for maintenance control information about the peripheral.

  Note: The RSC-S can be configured with the PLGC or the LGCO. The datafill entry must be:

  ```
  PLGC
  ```

  Field LTCNAME in table LTCINV corresponds to the LTCNAME field in table LTCPSINV.

  Load information is entered in field LOADNAME. Corresponding entries are entered in field LOAD for tables LTCINV, LCMINV and RMMINV.

ISDN operations (continued)

- Table RCCINV maintains a list of RCO2s entered in the DMS switch. This table contains inventory data, except P-side link assignments, for the RCO2s. The table information identifies the location of the RCO2, the load and exec lineups required and the network link connections. The C-side PCM-30 assignments for the RCO2 are entered in table RCCINV. Intraswitching is entered in table RCCINV.

  Load information for table RCCINV is entered 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. The field RCCNAME stores site information, the PM type and PM number. The site information is originally entered in field NAME from table SITE.

- Table RCCPSINV contains the P-side link assignments for the RCO2. When you add a tuple in table RCCINV, the system adds a corresponding tuple in table RCCPSINV. The CARRIDX field indexes to table CARRMTC for maintenance control information about the peripheral. The RCCNAME tuple in table RCCPSINV corresponds to the RCCNAME tuple from table RCCINV and stores site information. The site information was originally entered in field NAME from table SITE, the PM type and PM number.
- Table LCMINV lists data assignment for each bay that associates 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 the remote locations that connect to the unit. The LOAD field in table LCMINV corresponds to the LOADNAME tuple from table PMLOADS. This field stores the device location of each PM load file.
- Table ISGDEF contains service and channels information for the PM that supports the DCH. The PMTYPE, PMNO fields and the D_CHNL subfield corresponds to the PMTYPE, PMNO and DCHNO tuples in table DCHINV.
- Table DCHINV contains information about the D-channel handler (DCH) for peripherals that contain this card. The PMTYPE, PMNO and DCHNO tuples correspond to the PMTYPE and PMNO fields and the D_CHNL subfield in table ISGDEF.
- Table LTGRP provides the capacity to define a maximum of 32 logical terminal (LT) groups. One of the groups is ISDN. The GROUP field in table LTGRP corresponds to field LTGRP field in table LTDEF.

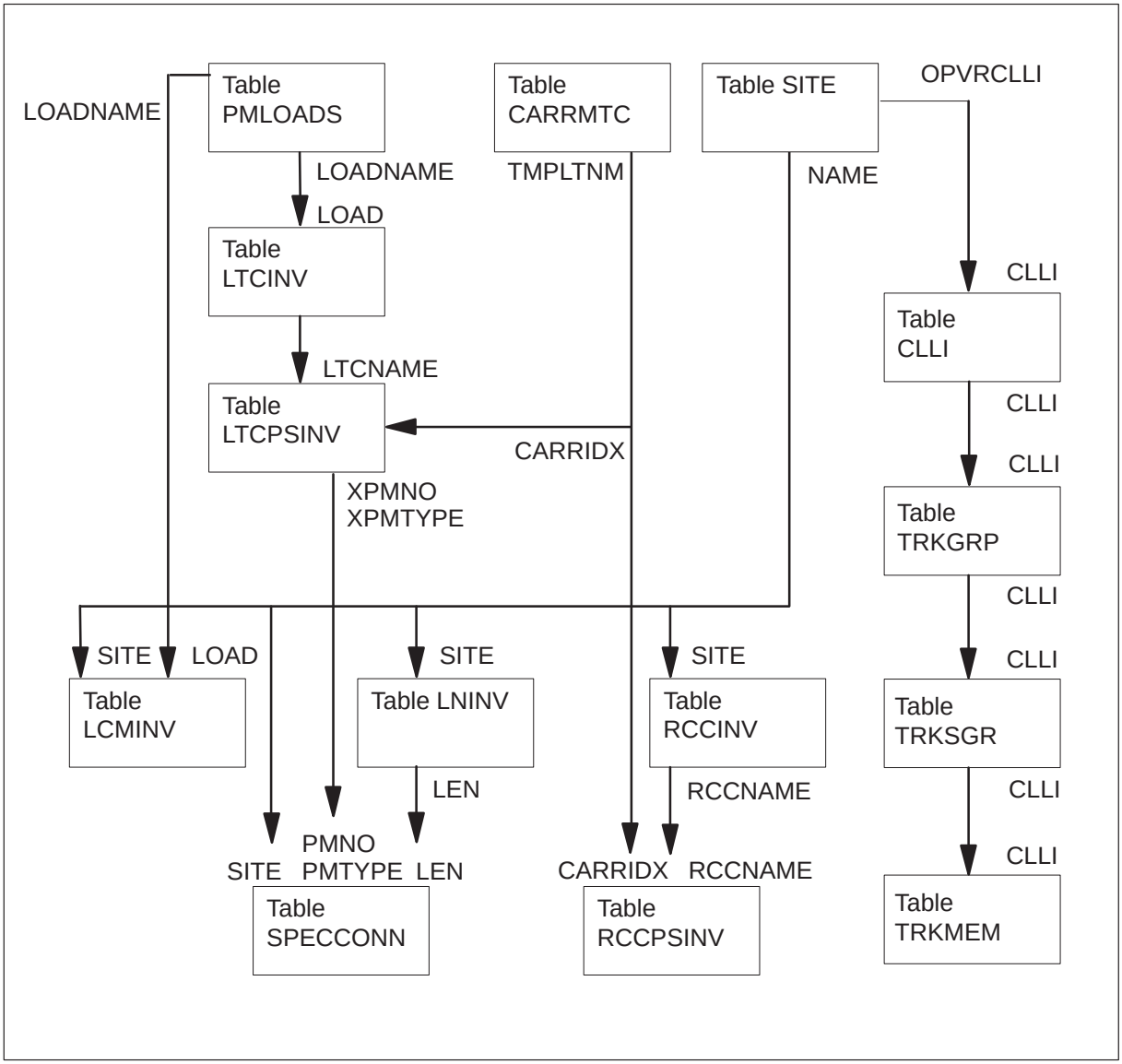
ISDN operations (continued)

- The access privilege (AP) determines if table LTMAP maps the ISDN LTs to a LEN or the TEI. The AP data corresponds to the LTKEY tuple in table LTDEF. Table LTMAP uses the LEN tuple to access data for each line card slot. The LEN is originally entered in table LNINV.
- Table LTDEF defines ISDN terminals and access privileges (AP) for the type of service the terminal can access. The LTDEF field in this table identifies an ISDN LT group. This field corresponds to the GROUP field in table LTGRP.
- Table KSETINV identifies an LTID as an ISDN keyset and defines the attributes. The KSETLEN tuple in table KSETINV is the LTID tuple.
- Table KSETLINE associates call appearances, ISDN LT call activators and indicators, to directory numbers and various feature options. The LTID tuple in table KSETLINE corresponds to the KSETLEN tuple in table KSETINV.
- Table KSETFEAT associates feature appearances, ISDN logical terminal (LT) feature activators and indicators, with feature instances and various feature options. The LTID tuple in table KSETFEAT corresponds to the KSETLEN tuple in table KSETINV.
- Table KSETKEYS defines the business set feature key templates. Use this table to assign dedicated keys. These keys are used on several business sets.

The translation process for the RSC-S with ISDN appears in the flowchart that follows. Tables that are not necessary to implement ISDN on the RSC-S appear in the basic call processing section.

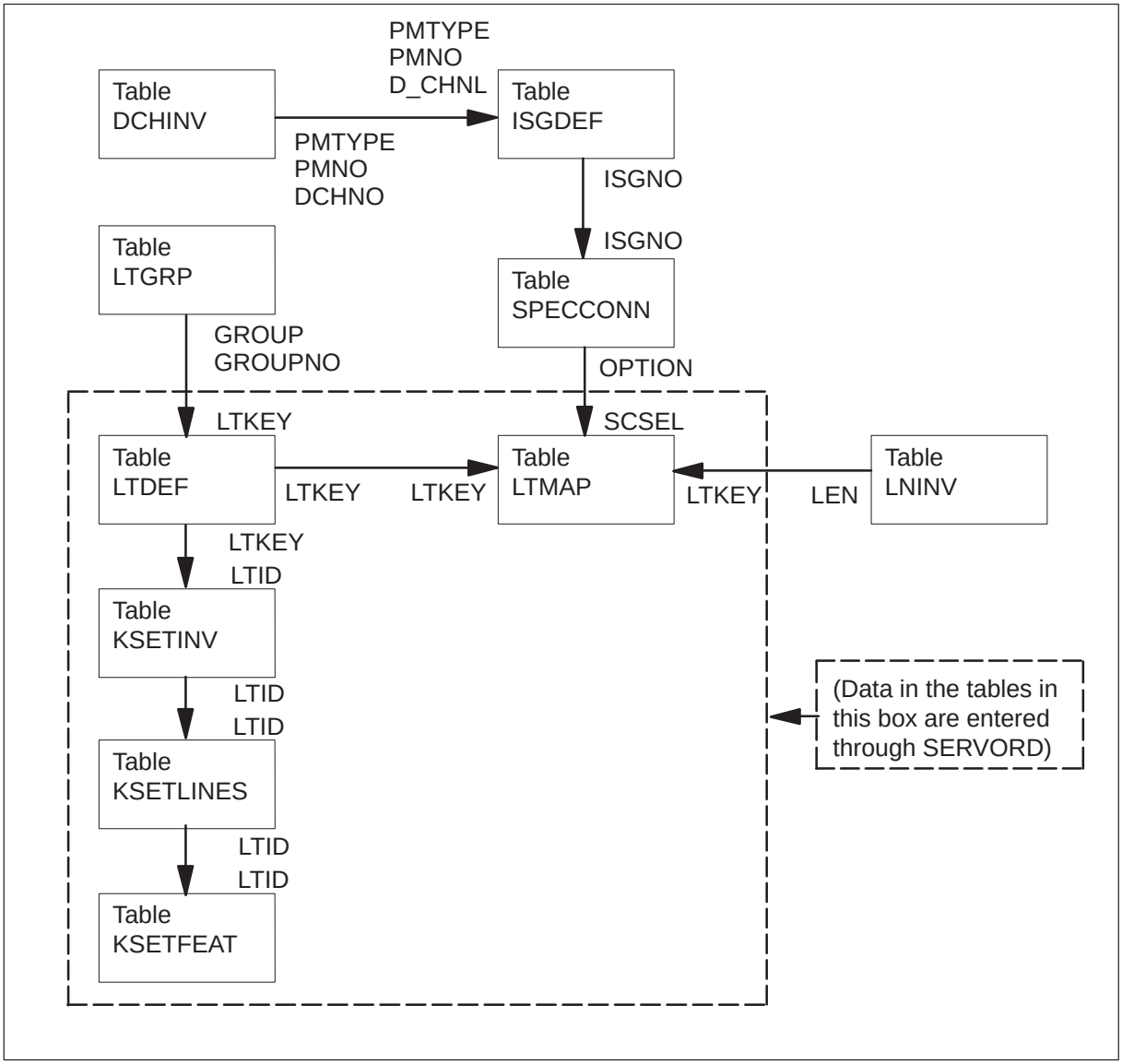
ISDN operations (continued)

Table flow for ISDN operations



ISDN operations (continued)

Table flow for ISDN operations (continued)



ISDN operations (continued)

Limits

The ISDN operations does not have limits.

Interactions

Requirements for the implementation of ISDN enhanced D-channel features are:

- the RCO2 must have the NTMX77 unified processor (UP) card
- the RCO2 must have an enhanced ISDN signal processor card (NTBX01BA)
- the RCO2 must have an enhanced D-channel card (NTBX02BA)
- the table DCHINV tuple DECPEC must have NTBX02BA card information entered

  Note: The system does not allow changes to the DCHPEC code with an attached ISDN service group. The DCH must become a spare DCH before the tuple change.

Activation/deactivation by the end user

The ISDN operations do not require activation or deactivation by the end user.

Billing

The ISDN operations does not affect billing.

Station Message Detail Recording

The ISDN operations does not affect Station Message Detail Recording.

Datafilling office parameters

Office parameters that ISDN operations use appear in the following table. For additional information about office parameters, refer to *Office Parameters Reference Manual*.

Office parameters that are used by ISDN on RSC-S International

Table name	Parameter name	Description
OFCOPT	MAX_BRA_LINES	Specifies the maximum number of basic rate access (BRA) lines that can be assigned. The range is 0 to 10000. The default is 10.

Datafill sequence

The following table lists the tables that require datafill to implement ISDN on RSC-S. The tables appear in the order in which the user enters data.

Datafill requirements for ISDN operations

Table	Purpose of table
CLLI	Common language location indicator. Contains codes that identify the far end of each of the following: • announcement • tone • trunk group • test trunk • national milliwatt test lines • service circuit
SITE	Site. Contains data that allow the DMS switch to recognize equipment for the switching unit and remote locations that connect to the unit.
LTCINV	Line trunk controller inventory. Contains inventory data, except P-side link assignments, for PM types. This table defines the PCM-30 line group controller (PLGC) or line group controller offshore (LGCO) on the C-side of the RCO2.

—continued—

ISDN operations (continued)

Datafill requirements for ISDN operations (continued)

Table	Purpose of table
LTCPSINV	Line trunk controller P-side link inventory (LTCPSINV). Contains XPM peripheral P-side link assignments.
RCCINV	Remote cluster controller inventory. Contains RCO2 inventory data, except P-side link assignments. There is datafill for C-side PCM-30 assignments for the RCO2.
RCCPSINV	Remote cluster controller P-side link inventory. Contains only RCO2 P-side link assignments.
LCMINV	Line concentrating module (LCM) inventory. Lists data assignments for each bay that associates with a local LCM or remote line concentrating module (RLCM) unit.
ISGDEF	ISDN service group definition. Contains service and channels information for the PM that supports the DCH.
DCHINV	D-channel inventory. Contains the following information about the D-channel handler (DCH). • the DCH ID number (different for each DCH) • the name and number of the host PM and the associated NTMX82 port • the NTBX02BA • the PEC • the load file • the port number

Note 1: Enter data in some of the tables by the kind of trunk group required. Each trunk group type requires a specified form. Valid trunk group types are TI, TO, T2, IBNTI, IBNTO, IBNT2, PX and ES.
Note 2: Examples of the datafill of tables required to implement ISDN features appear in the next section. Datafill examples for tables required for basic call processing appear in the basic call processing section.
Note 3: In tables with fields with multiple possible entries, the continuation mark (CONTMARK), a plus sign (+) indicates more entries for the tuple on the next line. A dollar sign ($) indicates the end of entries.

—continued—

ISDN operations (continued)

Datafill requirements for ISDN operations (continued)

Table	Purpose of table
RMMINV	Remote maintenance module inventory. Identifies an RLCM, RSC-S or OPM site with the following information: • the frame type • frame number • floor • row • frame position • PEC • PM load and executive program loaded • the C-side PM attached to each RMM
LTGRP	Logical terminal group. Provides capacity to define a maximum of 32 LT groups. One of the groups is defined as ISDN.
TRKGRP	Trunk group. Defines data for each trunk group that associates with the switching unit.
TRKSGRP	Trunk subgroup. Lists the supplementary information for each subgroup assigned to one of the trunk groups listed that TRKGRP lists.
TRKMEM	Trunk member. Lists the data that associates with each trunk assigned to one of the trunk groups and subgroups that tables TRKGRP and TRKSGRP specify. This table identifies the circuits that associate with static trunks, dynamic trunks and the test equipment used to test lines and trunks.
LNINV	Line circuit inventory. Table lists data for each line card slot.
LTDEF	Logical terminal definition. Defines ISDN terminals and AP for the service the terminal can access.

Note 1: Enter data in some of the tables by the kind of trunk group required. Each trunk group type requires a specified form. Valid trunk group types are TI, TO, T2, IBNTI, IBNTO, IBNT2, PX and ES.
Note 2: Examples of the datafill of tables required to implement ISDN features appear in the next section. Datafill examples for tables required for basic call processing appear in the basic call processing section.
Note 3: In tables with fields with multiple possible entries, the continuation mark (CONTMARK), a plus sign (+) indicates more entries for the tuple on the next line. A dollar sign ($) indicates the end of entries.

—continued—

ISDN operations (continued)

Datafill requirements for ISDN operations (continued)

Table	Purpose of table
SPECCONN	Special connections. Contains connections that the use of Service Orders (SERVORD) cannot modify.
KSETINV	Business set inventory. Identifies an LTID as an ISDN keyset and defines the attributes of the LTID. The keyset can be a T2317 business set, an M5317t business set and terminals or equipment that other manufacturers provide.
KSETLINE	Keyset line. Associates call appearances (ISDN LT call activators and indicators) to directory numbers and various feature options. This table is an current MDC table.
LTMAP	Logical terminal map. Maps the ISDN LTs to a LEN or the TEI from table LTDEF. The AP determines if the LTMAP maps the LTs to a LEN or the TEI
KSETFEAT	Keyset feature. Associates feature appearances, ISDN LT feature activators and indicators, with feature instances and various feature options.

Note 1: Enter data in some of the tables by the kind of trunk group required. Each trunk group type requires a specified form. Valid trunk group types are TI, TO, T2, IBNTI, IBNTO, IBNT2, PX and ES.
Note 2: Examples of the datafill of tables required to implement ISDN features appear in the next section. Datafill examples for tables required for basic call processing appear in the basic call processing section.
Note 3: In tables with fields with multiple possible entries, the continuation mark (CONTMARK), a plus sign (+) indicates more entries for the tuple on the next line. A dollar sign ($) indicates the end of entries.

—end—

Datafilling table LTCINV

Table Line Trunk Controller Inventory (LTCINV) identifies a host XPM peripheral to the DMS software. Information about the peripheral includes location, required load and network link connections. This table supports the universal tone receiver (UTR) as an optional card.

Datafill for table LTCINV appear in the following procedure. This procedure contains fields that apply to RSC-S with ISDN. Refer to the data schema section of the *Translations Guide* for a description of the other fields. The table has an additional field that contains the name of the loadfile for the electrically erasable programmable read-only memory (EEPROM). The inclusion of the ISP option card allows integration of the enhanced D-channel handler (NTBX02BA) card in table DCHINV.

Note: Enter data in table LTCINV after tables CLLI, SITE and PMLOADS. Tables CLLI, SITE and PMLOADS datafill examples appear in the basic call processing section for the RSC.

Datafilling table LTCINV for ISDN on RSC-S International

Field	Subfield or refinement	Entry	Description
LTCNAME		refer to subfields	Line trunk controller name. Contains subfields XPMTYPE and XPMNO.
	XPMTYPE	PLGC	Extended peripheral type of LTC that connects to the RCO2. Enter PLGC. Use the PLGC for ISDN and non-ISDN.
	XPMNO	0 to 255	Extended peripheral module (PM) number of the PLGC.
FRTYPE		LGE	Frame type. Enter LTE for the LTCI or LGE for the LGCI.
EQPEC		6X02UC	Product equipment code (PEC). Enter the code for the PLGC with ISDN.
EXECTAB		refer to subfields	Executive table. Contains subfields TRMTYPE, EXEC and CONTMARK. The terminal type and associated execs are entered together.
	TRMTYPE	KEYSET	Terminal type. Enter the type of terminal models. The plain old telephone service (POTS) is for regular lines. The KEYSET is for ISDN, MBS set, and data lines. The RMM_TERM is for remotes.
	EXEC	KSETEX	Executive programs. Required for PM selected in TRMTYPE. Possible values are KSETEX for KEYSET, POTSEX for POTS and RSMEX for RMM.
OPTCARD		ISP	Optional card. This field is a vector that can have a maximum of ten entries. If the CMR card is included, enter the CMRLOAD. New values for this field include CMR5, UTR15, and UTR17, RAM6X69 and ISP.

Note 1: When the table supports NI-1, make sure that the user entered ISP in the OPTCARD. The ISP is the designator of the enhanced EISP (NTBX01BA) card.
Note 2: Make changes to fields with multiple entries in the PROMPT mode.

—continued—

ISDN operations (continued)

Datafilling table LTCINV for ISDN on RSC-S International (continued)

Field	Subfield or refinement	Entry	Description
TONESET		UK100	TONESET. Enter UK100. Range of values includes DEFAULT, NORTHAM and UK100.
PROCPEC		MX77AA MX77AA	Processor equipment product engineering codes. One PEC is necessary for each PLGC or LGCO unit. Enter the PEC for unit 0 first. The PEC must reflect the minimum firmware capabilities in the processor complex of each unit.
E2LOAD		alphanumeric	EEPROM loadfile name. Contains the name of the loadfile loaded in the NTMX77AA EEPROM.
PEC6X40		6X40AC	For 6X40 equipment PEC. Enter the version of the NT6X40 to be used. The 6X40AC is the required version for ISDN.
Note 1: When the table supports NI-1, make sure that the user entered ISP in the OPTCARD. The ISP is the designator of the enhanced EISP (NTBX01BA) card. ***Note 2:*** Make changes to fields with multiple entries in the PROMPT mode.			
—end—			

Datafill example for table LTCINV

Sample datafill for table LTCINV appears in the following example.

MAP example for table LTCINV

```
LTCNAME   FRTYPE FRNO SHPOS FLOOR ROW FRPOS EQPEC  LOAD
-------------------------------------------------------------
PLGC 1     LGE   1   18    0     C   6     6X02UC KRI06AY

EXECTAB                                          CONTMARK
-------------------------------------------------------------
(POTS POTSEX)(KEYSET KSETEX)(RMM_TERM RSMEX)            $

CSLNKTAB                                         CONTMARK
-------------------------------------------------------------
(0 5)(0 23)(1 5)(1 23)(0 30)(1 30)(0 38)(1 38)
(0 43)(1 43)(0 47)(1 47)(0 54)(1 54)(0 62)(1 62)     $

OPTCARD                                          CONTMARK
-------------------------------------------------------------
(UTR15)(ISP) (NT6X44EA) (RAM6X69)                       $

TONESET  PROCPEC         E2LOAD      OPATTR  PEC6X40
-------------------------------------------------------------
UK100   MX77AA  MX77AA   MX77NH08      $       6X40AC
```

ISDN operations (continued)

Datafilling table LTCPSINV

Table line trunk controller P-side link inventory (LTCPSINV) contains P-side assignments for host peripheral links. You can enter data for these links as DS30A, D30, or DCH. The key for this table is the same for table LTCINV. The system allocates memory for a maximum of 128 tuples. The system adds an entry when you enter a PM in table LTCINV.

The carrier type is set in this table. The value entered after D30 is the same value entered in table CARRMTC. The operating company can choose the value to use.

Only fields that apply to the ISDN on RSC-S appear in the datafill example for table LTCPSINV. Refer to the data design section of the *Translations Guide* for a description of the other fields.

Note: Enter data in tables CLLI, SITE, PMLOADS, LTCINV, and CARRMTC. You must enter this data before you can enter data into table LTCPSINV. Datafill examples for tables CLLI, SITE, PMLOADS, and CARRMTC appear in the basic call processing section for the RSC-S.

Datafilling table LTCPSINV

Field	Subfield or refinement	Entry	Explanation and action
LTCNAME		refer to subfields	Link trunk controller name. Contains subfields XPMTYPE and XPMNO.
	XPMTYPE	PLGC	PM type. Contains the same entry in field XPMTYPE of table LTCINV. The ISDN and non-ISDN RSC-S use PLGC.
Note 1: The AREASELCT value that you choose determines the datafill for the subfields in PSDATA. If AREASELCT is DS30A, DCH, or NILTYPE, other fields do not require datafill. If PSDATA is D30, enter data in subfields CARRIDX and ACTION. ***Note 2:*** The system can define only three DCHs in ports 1, 9, and 17 in an RCO2 main shelf without an extension cabinet. The system can define an additional seven DCHs in an RCO2 with an extension cabinet. The system allows a DCH on links 1, 9, 10-15, and 17-21. ***Note 3:*** A DCH on link 1, 9, or 17 causes the system to not allow a PCM-30 on specified ports. These ports are 1-8, 9-15, and 17-21. ***Note 4:*** Make changes to fields with multiple entries in PROMPT mode only.			

—continued—

Datafilling table LTCPSINV (continued)

Field	Subfield or refinement	Entry	Explanation and action
LTCNAME (continued)	XPMNO	0 to 255	PM number. Contains the unit number of the PLGC in field XPMNO of table LTCINV.
PSLNKTAB		refer to subfields	P-side link table. Contains subfields PSLINK, PSDATA, and CONTMARK.
	PSLINK	1, 9, 17	Vector of P-side ports. Enter the P-side port number to enter. You must enter the D-channel handler (DCH) in odd ports.
	PSDATA	refer to subfield	P-side data. Contains subfield AREASELCT
	AREASELCT	DCH	P-side data. Enter D30 for trunks and remote nodes. Enter DS30A for P-side interface to a local LCM. The DCH interface ISDN loops.

Note 1: The AREASELCT value that you choose determines the datafill for the subfields in PSDATA. If AREASELCT is DS30A, DCH, or NILTYPE, other fields do not require datafill. If PSDATA is D30, enter data in subfields CARRIDX and ACTION.
Note 2: The system can define only three DCHs in ports 1, 9, and 17 in an RCO2 main shelf without an extension cabinet. The system can define an additional seven DCHs in an RCO2 with an extension cabinet. The system allows a DCH on links 1, 9, 10-15, and 17-21.
Note 3: A DCH on link 1, 9, or 17 causes the system to not allow a PCM-30 on specified ports. These ports are 1-8, 9-15, and 17-21.
Note 4: Make changes to fields with multiple entries in PROMPT mode only.

—end—

Datafill example for table LTCPSINV

Sample datafill for table LTCPSINV appears in the following example.

MAP example for table LTCPSINV

```
LTCNAME  PSLNKTAB                                          CONTMARK
------------------------------------------------------------------
PLGC 1 (0 NILTYPE) (1 DCH) (2 NILTYPE) (3 NILTYPE)
(4 NILTYPE) (5 NILTYPE).(6 NILTYPE) (7 NILTYPE) (8 NILTYPE)
(9 D30 ESFB8ZS N) (10 NILTYPE) (11 NILTYPE) (12 NILTYPE)
(13 NILTYPE) (14 NILTYPE) (15 NILTYPE) (16 NILTYPE)
(17 NILTYPE) (18 NILTYPE) (19 NILTYPE)                        $
```

ISDN operations (continued)

Datafilling table RCCINV

The Remote Cluster Controller Inventory (RCCINV) table contains inventory data for the RCO2. Table RCCINV does not include inventory data for the P-side links. Only fields that apply to the ISDN on RSC-S appear in the datafill example for table RCCINV. Refer to the data design section of the *Translations Guide* for a description of the other fields. The inclusion of the ISP option card allows integration of the enhanced D-channel handler (NTBX02BA) card in table DCHINV.

Datafilling table RCCINV

Field	Subfield or refinement	Entry	Explanation and action
FRMTYPE		RCEI	Frame type. Enter RCEI for ISDN on RCO2.
ESA		Y or N	Emergency stand alone. Enter Y. Enter data for WXSWACT if the RCO2 has the ESA option.
	WSXWACT	Y or N	Warm exit switch activity. If ESA is set to Y you can enter Y if RCO2 supports warm ESA exit.

Note 1: An ESA warm switch of activity (SWACT) causes the loss of ISDN calls. An XPM06 supports ESA warm SWACT for ISDN calls with stability.
Note 2: The ISP is the designator of the enhanced ISDN signal processor (NTBX01BA) card.
Note 3: Make changes to fields with multiple entries in PROMPT mode only.
Note 4: When you enter data in field C-side link table (CSLNKTAB), you cannot 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 separation applies to all interface link types. The interface link types are DS-1, DS30, DS30A, or PCM-30. Table control issues a warning if you make an attempt 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.

—continued—

Datafilling table RCCINV (continued)

Field	Subfield or refinement	Entry	Explanation and action
INTRASW		Y or N	Intra-switching allowed. Enter Y if RCO2 intra-switched calling is enabled.
OPTCARD		ISP	Optional card. This entry is a vector of a maximum of ten entries. Examples are UTR15, UTR17, CMR18, MSGMX76, and ISP.

Note 1: An ESA warm switch of activity (SWACT) causes the loss of ISDN calls. An XPM06 supports ESA warm SWACT for ISDN calls with stability.
Note 2: The ISP is the designator of the enhanced ISDN signal processor (NTBX01BA) card.
Note 3: Make changes to fields with multiple entries in PROMPT mode only.
Note 4: When you enter data in field C-side link table (CSLNKTAB), you cannot 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 separation applies to all interface link types. The interface link types are DS-1, DS30, DS30A, or PCM-30. Table control issues a warning if you make an attempt 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.

—end—

ISDN operations (continued)

Datafill example for table RCCINV

Sample datafill for table RCCINV appears in the following example.

MAP example for table RCCINV

```
RCCNAME     FRTYPE FRNO SHPOS FLOOR ROW FRPOS EQPEC LOAD
-----------------------------------------------------------------
MELB RCO2 0 CRSC    0    0     3     C  18    MX85AA KRI06AY

EXECTAB                                              CONTMARK
-----------------------------------------------------------------
(POTS POTSEX)(RMM_TERM RSMEX)(ESALINES ESAEX) (KEYSET KSETEX) $

CSPM     CSLNKTAB                                    CONTMARK
-----------------------------------------------------------------
PLGC 0   (0) (1) (2) (3) (4) (5) (6) (7)               $

ESA INTRASW  OPTCARD                                 CONTMARK
-----------------------------------------------------------------
Y   Y    Y    (UTR6)(ISP)(RAM6X69)                     $

TONESET PROCPEC         E2LOAD
-----------------------------------------------------------------
UK100 MX77AA  MX77AA   MX77NH08
```

Datafilling table RCCPSINV

The Remote Cluster Controller P-side Inventory (RCCPSINV) table contains only the P-side link assignments for the RCO2. A maximum of 54 multiples of P-side link information can contain data for the RCO2. The multiples are 0 through 53.

When you add an extension shelf, the RCO2 P-side links that connect to the extension shelf have datafill restrictions. If you entered data for an extension shelf in RCCINV you can enter data for the PCM-30 and DCH links. These links connect to the extension shelf. All links that connect to the extension shelf must change from D30 or DCH to NILTYPE or DS30A in table RCCPSINV. These links must change before deletion of the extension shelf from table RCCINV.

You can enter data for a maximum of ten DCH cards in table RCCPSINV.

Only fields that apply to the ISDN on RSC appear in the datafill example for table RCCPSINV. Refer to the data design section of the *Translations Guide* for a description of the other fields.

Datafilling table RCCPSINV

Field	Subfield or refinement	Entry	Explanation and action
PSLNKTAB		refer to subfields	P-side link table. Contains subfields PSLINK, PSDATA, and CONTMARK. Enter the vector number.
	PSLINK	0 to 53	P-side link. Enter the P-side port number of the RCO2.
	PSDATA	DCH	P-side data type. Enter DS30A for links to RMMs or LCMs. Enter NILTYPE for links that are not assigned. When you enter DCHs, make sure that the DCHs are on odd ports.
	CONTMARK	+ or $	Continuation mark. Enter a plus sign (+) to continue. Enter a dollar sign ($) to end the vector.
Note: Make changes to fields with multiple entries in PROMPT mode only.			

ISDN operations (continued)

Datafill example for table RCCPSINV

Sample datafill for table RCCPSINV appears in the following example.

MAP example for table RCCPSINV

```
RCCNAME       PSLNKTAB
-------------------------------------------------------
MELB  RCO2 0  (0 NILTYPE) (1 DCH) (2 NILTYPE) (3 NILTYPE)
(4 NILTYPE) (5 NILTYPE) (6 NILTYPE) (7 NILTYPE)
(8 NILTYPE)(9 DS30A) (10 DS30A) (11 NILTYPE) (12 NILTYPE)
(13 NILTYPE) (14 NILTYPE) (15 NILTYPE) (16 NILTYPE)
(17 NILTYPE) (18 NILTYPE) (19 NILTYPE) (20 NILTYPE)
(21 NILTYPE) (22 NILTYPE) (23 NILTYPE) (24 NILTYPE)
(25 NILTYPE) (26 NILTYPE) (27 NILTYPE) (28 NILTYPE)
(29 NILTYPE) (30 NILTYPE) (31 NILTYPE) (32 NILTYPE)
(33 NILTYPE) (34 NILTYPE) (35 NILTYPE) (36 NILTYPE)
(37 NILTYPE) (38 NILTYPE) (39 NILTYPE) (40 NILTYPE)
(41 NILTYPE) (42 NILTYPE) (43 NILTYPE) (44 NILTYPE)
(45 NILTYPE) (46 NILTYPE) (47 NILTYPE) (48 NILTYPE)
(49 NILTYPE) (50 NILTYPE) (51 NILTYPE) (52 NILTYPE)
(53 NILTYPE) $
```

Datafilling table LCMINV

Table Line Concentrating Module Inventory (LCMINV) lists the data assignment for the LCM and expanded line concentrating module (LCME). Enter data for the LCMEs off the RCO2 with the same values as LCMEs configured at the host site.

Only fields that apply to the ISDN on RSC appear in the datafill example for table LCMINV. Refer to the data design section of the *Translations Guide* for a description of the other fields.

ISDN operations (continued)

Datafilling table LCMINV

Field	Subfield or refinement	Entry	Explanation and action
LCMNM		refer to subfields	Line concentrating module name. Enter the LCM name. This field contains subfields SITE, FRNO, and UNITNO.
	SITE	alphanumeric	Site. Enter the site name assigned to the remote location.
	FRNO	0 to 511	Frame number. Enter the LCM frame number.
	UNITNO	0 to1	Unit number. Enter the LCM unit number.
FRTYPE		refer to list	Frame type. Enter the frame type in which the peripheral module equipment sits. Enter CRSC for the RCO2 shelf. Enter CEXT for the RCO2 extension shelf. Enter the location of the LCM in fields SHPOS, FLOOR, ROW, and FRPOS.
EQPEC		refer to list	Product engineering code (PEC) for frame equipment. Enter the PEC for the frame type, CRSC or CEXT, that contains the LCME.
LOAD		alphanumeric	Software load number. Contains the name of the software issue.
CSPMNO		refer to subfields	C-side PM number. Contains subfields PMTYPE and PMNO.

Note 1: Make changes to fields with multiple entries in PROMPT mode only.
Note 2: When you enter data in fields link information (LNKINFO) or link map (LNKMAP), you cannot 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 separation applies to all interface link types. The link interface types are DS-1, DS30, DS30A, or PCM-30. Table control issues a warning if you attempt 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.

—continued—

ISDN operations (continued)

Datafilling table LCMINV (continued)

Field	Subfield or refinement	Entry	Explanation and action
CSPMNO (continued)	PMTYTPE	RCO2	Peripheral module type. Subfield of CSPMNO. Enter the type of PM where the LCM connects on the C-side. Entry values are the following: • LGCO • ILGC • ILTC • PLGC • RCC • PRCC • RCO2
	PMNO	0 to 511	Peripheral module number. Enter the number of the PM where the LCME attaches.
LCMINFO		0 to 53	Line concentrating module information. The C-side link information to the RCO2. Corresponds with information in table RCCPSINV.

Note 1: Make changes to fields with multiple entries in PROMPT mode only.
Note 2: When you enter data in fields link information (LNKINFO) or link map (LNKMAP), you cannot 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 separation applies to all interface link types. The link interface types are DS-1, DS30, DS30A, or PCM-30. Table control issues a warning if you attempt 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.

—end—

Datafill example for table LCMINV

Sample datafill for table LCMINV appears in the following example.

MAP example for table LCMINV

```
LCMNM       FRTYPE SHPOS FLOOR ROW FRPOS EQPEC  LOAD
-------------------------------------------------------
REM3 05 0   CRSC   4     1     F   11    BX30AB KRI06AY

CSPMNO        BICTST   MEMSIZE   LCMTYPE  RGEQUIP
-------------------------------------------------------
RCO2 0            N       256K     LCME    Y

RNGTYPE          LCMINFO              CONTMARK
-----------------------------------------------
C                (8) (10)               $
```

Datafilling table ISGDEF

Table ISDN Service Group Definition (ISGDEF) contains service and channels information for the PM that supports the DCH. Information includes:

- ISDN service group (ISG) number
- name and number of the PM
- basic rate access (BRA) service attributes

When BRA service is specified, the system assigns all 31 channels as BRA. If an ISG is not defined for a DCH, that DCH is a spare on hot standby. More than one spare can be provided.

The number of ISGs cannot exceed the number of DCHs on the RCO2. To prevent this occurrence, perform the following actions:

- make sure you enter data in ISGs before you enter data in DCHs
- you cannot remove DCHs from table DCHINV if the DCHs have an assigned ISG

Table ISGDEF allows the PM type RCO2. The RCO2 PM type has the option of an ISP card.

ISDN operations (continued)

Datafilling table ISGDEF

Field	Subfield or refinement	Entry	Explanation and action
ISGNO		0 to 255	Integrated services group number. Enter the number of the DCH card in the PM.
PMTYPE		RCO2	PM type. Enter the PM that supports the DCH services. Enter PLGC, LGCI, LTCI, or RCO2.
PMNO		0 to127	Peripheral module number.
SERVICE		BRA	Service. Enter the services the ISG provides. The entry value is basic rate access (BRA).
CHNLTAB		refer to subfields	Channel information. This field is a vector with a maximum of 32 entries that specify the functions of each channel. This field contains subfields DCHNL and CHNLTYPE. If you make less than 32 entries use a dollar sign ($) to terminate this field. ***Note:*** You must assign BD channels in descending order starting at 31. You must assign BRA channels in ascending order starting at 0. The system restricts the order of datafill for BD and BRA channels as follows: For one night process (ONP), the warning message "`BD channels must be higher than any BRA channels`" appears. This message informs operating company personnel of the incorrect data ordering in the tuple transferred. The table on the new side accepts the tuple. For non-ONP, the error message "`BD channels must be higher than any BRA channels`" appears. This message informs operating company personnel of the incorrect data ordering in the tuple. The tuple is rejected.

Note 1: Make changes to fields with multiple entries in the PROMPT mode only.
Note 2: For DCH sparing, this table does not contain data for the card to use as the spare. The absence of datafill in table ISGDEF automatically causes the card to become spare.

—continued—

Datafilling table ISGDEF (continued)

Field	Subfield or refinement	Entry	Explanation and action
CHNLTAB (continued)	D_CHNL	1 to 31	D-channel port. Enter the D-channel port assigned on the D-channel card. The ISDN signal processor (ISP) functions reserve port 0.
	CH_TYPE	BRA	Channel type. Enter the type of service the D-channel provides. Enter BRA.
Note 1: Make changes to fields with multiple entries in the PROMPT mode only. ***Note 2:*** For DCH sparing, this table does not contain data for the card to use as the spare. The absence of datafill in table ISGDEF automatically causes the card to become spare.			
—end—			

Datafill example for table ISGDEF

Sample datafill for table ISGDEF appears in the following example.

MAP example for table ISGDEF

```
                              SERVICE
                                                    CHNLTAB
------------------------------------------------------------------
0  RCO2  0
                             (BRA)       $

(0 RESERVED)   (1 BRA)   (2 BRA)   (3 BRA)   (4 BRA)   (5 BRA)
(6 BRA)   (7 BRA)   (8 BRA)   (9 BRA)   (10 BRA)  (11 BRA)
(12 BRA)  (13 BRA)  (14 BRA)  (15 BRA)  (16 BRA)  (17 BRA)
(18 BRA)  (19 BRA)  (20 BRA)  (21 BRA)  (22 BRA)  (23 BRA)
(24 BRA)  (25 BRA)  (26 BRA)  (27 BRA)  (28 BD)   (29 BD)
(30 BD)   (31 BD)  $

1  RCO2    0
                             (BRA)          $

(0 RESERVED)   (1 BRA)   (2 BRA)   (3 BRA)   (4 BRA)   (5 BRA
(6 BRA)   (7 BRA)   (8 BRA)   (9 BRA)   (10 BRA)  (11 BRA)
(12 BRA)  (13 BRA)  (14 BRA)  (15 BRA)  (16 BRA)  (17 BRA)
(18 BRA)  (19 BRA)  (20 BRA)  (21 BRA)  (22 BRA)  (23 BRA)
(24 BRA)  (25 BRA)  (26 BRA)  (27 BRA)  (28 BD)   (29 BD)
(30 BD)   (31 BD)  $
```

ISDN operations (continued)

Datafilling table DCHINV

Table D-Channel Inventory (DCHINV) contains information about the DCH for the peripherals that contain this card. The data includes the following:

- the DCH ID number for each DCH
- the name and number of the host PM
- the associated NTMX82 port
- the PEC (NTBX02BA)
- the load file
- the port number

A maximum of ten DCHs can be defined for each CPM shelf.

Only fields that apply to the ISDn on RSC-S appear in the datafill example for table DCHINV. Refer to the data design section of the *Translations Guide* for a description of the other fields.

Note: You must spare the DCH before the DCHPEC tuple can change. An attempt to change the table with an ISDN service group connected is not permitted.

Datafilling table DCHINV

Field	Subfield or refinement	Entry	Explanation and action
DCHNO		0 to 255	D-channel handler card number.
PMTYPE		RC02	Peripheral module type. Enter the PM that contains the DCH card. Enter PLGC, LGCI, LTCI, or RCO2.
PMNO		0 to 255	Peripheral module number. Enter the unit number.
DCHPEC		BX02BA	D-channel card product equipment code. Enter the D-channel PEC card number (BX02BA) for enhanced D-channel (EDCH) operations.
LOAD		alphanumeric	Software load name. Enter the name of the software load for the DCH card.
PORT		0 to 19	P-side port. Enter the port number assigned in table LTCPSINV.

Datafill example for table DCHINV

Sample datafill for table DCHINV appears in the following example.

MAP example for table DCHINV

```
DCHNO PMTYPE    PMNO    DCHPEC     LOAD      PORT
------------------------------------------------
2     RCO2      0       BX02BA     DCH31AW   1
3     RCO2      0       BX02BA     DCH31AW   9
```

Datafilling table LTGRP

Table LTGRP provides the capacity to define a maximum of 32 LT groups. The system defines one of the groups as ISDN. Group names can be any group of digits or letters to a maximum of eight characters long.

Each group can support a maximum of 1022 LTIDs. With 32 logical groups, table LTGRP can define a maximum of 32 704 LTIDs (32 x 1022). The LT group is the key to this terminal. Enter an LT in table LTGRP before you enter data for an LT from this group in any other table.

> ***Note:*** The ISDN is a permanent entry. You cannot add or delete the ISDN.

Only the fields that apply to the ISDN on RSC-S appear in the datafill example for table LTGRP. Refer to the data design section of the *Translations Guide* for a description of the other fields.

ISDN operations (continued)

Datafilling table LTGRP

Field	Subfield or refinement	Entry	Explanation and action
GROUP		alphanumeric	Logical group name. Enter the name of the logical group of terminals.
GROUPNO		0 to 15	Logical group number. Enter the group number that corresponds to a group name. The number can be from 0 to 31. A group with the SAPI16 option must have a group number from 0 to 15.
OPTIONS		SAP16	Enter the option. The only option available is SAPI16. If this option is specified, you can enter data for circuit switching terminals for this group.

Datafill example for table LTGRP

Sample datafill for table LTGRP appears in the following example.

MAP example for table LTGRP

```
GROUP       GROUPNO OPTIONS
---------------------------------

ISDN        0       (SAPI16)  $
LTCO        1       (SAPI16)  $
PCCC        2       (SAPI16)  $
TESTO       3       (SAPI16)  $
```

Datafilling table LNINV

Table LNINV lists data for each line card slot. The LEN tuple in table LNINV corresponds to the LEN tuple in table LTMAP. With ISDN lines, the values for some of the fields change.

Only fields that apply to the ISDN on RSC-S appear in the datafill example for table LNINV. Refer to the data design section of the *Translations Guide* for a description of the other fields.

Datafilling table LNINV

Field	Subfield or refinement	Entry	Explanation and action
LEN		refer to subfields	Contains subfields SITE, FRAME, UNIT, LSG, and CIRCUIT.
	SITE	alphanumeric	Site. Enter the site name assigned to the remote location.
	FRAME	0 to 99	Frame. Enter the frame number.
	UNIT	0 to 1	Unit. Enter the unit number.
	LSG	0 to 23	Line subgroup. Enter the LSG.
LEN (continued)	CIRCUIT	0 to 15	Circuit. Enter the circuit number of the line card. Note that for ISDN lines the range is 0 to 15. The range is not 0 to 31.
CARDCODE		BX27AA	Card code. Enter BX27AA for ISDN line cards in the LCME.
STATUS		WORKING	Line inventory available state. Enter HASU, WORKING, UNEQUIP, CUTOFF, or RESERVED. You normally control the field RESERVED through SERVORD. The recommended entry is the field WORKING.
GND		N	Ground. For ISDN lines, enter N.
BNV		NIL	Balanced network value. The ISDN lines have a non-loaded network value. Enter NL.
Note: To set up a connection for the four D-channels to one DCH card BRA port, define a LEN as working. Define the LEN in table LNINV. The system maps together the first four ISDN lines in the LCME defined as working in the same drawer.			

—continued—

ISDN operations (continued)

Datafilling table LNINV (continued)

Field	Subfield or refinement	Entry	Explanation and action
MNO		Y	Manual override. An on-hook balance network test does not update field BNV. Enter Y.
CARDINFO		NIL	Card information. This field does not apply to ISDN lines. Enter NIL.
Note: To set up a connection for the four D-channels to one DCH card BRA port, define a LEN as working. Define the LEN in table LNINV. The system maps together the first four ISDN lines in the LCME defined as working in the same drawer.			
—end—			

Datafill example for table LNINV

Sample datafill for table LNINV appears in the following example.

MAP example for table LNINV

```
LEN                 CARDCODE PADGRP STATUS GND BNV MNO CARDINFO
------------------------------------------------------------

REM3  04  1  00  04  BX27AA   NPDGP  WORKING N   NL  Y  NIL
REM3  04  1  00  05  BX27AA   NPDGP  WORKING N   NL  Y  NIL
REM3  04  1  00  06  BX27AA   NPDGP  WORKING N   NL  Y  NIL
REM3  04  1  00  07  BX27AA   NPDGP  WORKING N   NL  Y  NIL
REM3  04  1  01  00  BX27AA   NPDGP  WORKING N   NL  Y  NIL
REM3  04  1  01  01  BX27AA   NPDGP  WORKING N   NL  Y  NIL
REM3  04  1  01  02  BX27AA   NPDGP  WORKING N   NL  Y  NIL
REM3  04  1  01  03  BX27AA   NPDGP  WORKING N   NL  Y  NIL
REM3  04  1  01  04  BX27AA   NPDGP  WORKING N   NL  Y  NIL
```

Datafilling table SPECCONN

Table Special Connections (SPECCONN) contains B-channel to B-channel connections that you cannot modify with the use of SERVORD.

The B-channel to B-channel connection connects a B1 or B2 channel to another B1 or B2 channel. One B1 or B2 channel is on a line card. The end points are on separate LCMEs. The LCMEs have an access privilege (AP) of PB.

ISDN operations (continued)

This table changes to accommodate an RCO2 entry in PMTYPE. The PMTYPE is a subfield of SCSEL. The PCM-30 end point of the RCO2 shelf can be defined in ports higher than 19, to a maximum of 47.

Only fields that apply to the ISDN on RSC-S appear in the datafill example for table SPECCONN. Refer to the data design section of the *Translations Guide* for a description of the other fields.

Datafilling table SPECCONN

Field	Subfield or refinement	Entry	Explanation and action
ENDPT1		refer to subfields	End point 1. Identifies the first end point. Contains subfield SCSEL and refinements.
	SCSEL	refer to list	End point selector. Enter the type of selector for the end point. Enter D30, ISLC, or DCHCHNL.
		D30	If SCSEL contains data for D30, subfield PMTYPE determines the fields to complete.
	PMTYPE	PLGC	PM type. Entries are PLGC or RCO2. If entry is PLGC, enter data for subfields DEQNO, DQCKTNO, and DEQCKTTS. Refer to entry for RCO2.
	DEQNO	0 to 511	DEQNO. Enter external number of the PM.
	DEQCKTNO	0 to 19	DEQCKTNO. This number is the PM circuit number. Enter P-side port of the PM.
	DEQCKTTS	1 to 31	DEQCKTTS. Enter the time slot (channel) on the PCM-30.
	PMTYPE	RCO2	If entry is RCO2, enter data for subfields RCO2NO, RCO2CKTNO, and RCO2CKTTS.
	RCO2NO	0 to 511	RCO2NO. Enter external number of the PM.
	RCO2CKTNO	0 to 47	RCO2CKTNO. This number is the PM circuit number. Enter P-side port of the PM.
	RCO2CKTTS	1 to 24	RCO2CKTTS. Enter time slot (channel) on the PCM-30.
		ISLC	If SCSEL contains data for ISLC, complete the following fields:

—continued—

ISDN operations (continued)

Datafilling table SPECCONN(continued)

Field	Subfield or refinement	Entry	Explanation and action
	LEN	refer to subfields	Line equipment number for the ISDN card. Contains subfields SITE, FRAME, UNIT, DRAWER and CIRCUIT.
		refer to list	Basic rate access channel to nail up. Enter channel on the ISDN loop, D, B1, or B2.
		DCHCHNL	If SCSEL contains data for DCHCHNL, complete the following fields:
	ISGNO	0 to 255	ISDN signal group number. Enter D-channel card number. Table ISGDEF identifies this number.
ENDPT1 (continued)	CHNL	0 to 31	D-channel. Enter D-channel.
ENDPT2		refer to subfields	End point 2. Identifies the second end point. Contains subfield SCSEL and refinements.
			Note: Subfields and refinements for endpoint 2 are the same as endpoint 1.

—continued—

Datafilling table SPECCONN(continued)

Field	Subfield or refinement	Entry	Explanation and action
CONTYPE		CON	Connection type. In the connection type field: • PEND indicates pending • CON indicates connected • CAB indicates connected with A-bit and B-bit signaling • RES indicates reserved
STATUS		ACTIVE	Connection status. In the connection status field: • PMBUSY indicates that the peripheral is busy. • ACTIVE indicates the connection established physically. The system found accuracy. The system checks accuracy continuously. • INACTIVE indicates the connection is not set up. • MTC indicates maintenance breaks the connection. Maintenance uses the connection. • NOINTEG indicates the system made the connection. The system did not find accuracy or lost accuracy. Both XPMs are in service.
—end—			

ISDN operations (continued)

Datafill example for table SPECCONN

Sample datafill for table SPECCONN appears in the following example.

MAP example for table SPECCONN

```
ENDPT1                  ENDPT2           CONTYPE  STATUS
--------------------------------------------------------
D30   RCO2   0   5   1  DCHCHNL 0   28   CON      ACTIVE
D30   RCO2   0   5   2  DCHCHNL 0   29   CON      ACTIVE
D30   RCO2   0   5   3  DCHCHNL 0   30   CON      ACTIVE
D30   RCO2   0   5   4  DCHCHNL 0   31   CON      ACTIVE
D30   RCO2   0   5   5  DCHCHNL 1   28   CON      ACTIVE
D30   RCO2   0   5   6  DCHCHNL 1   29   CON      ACTIVE
D30   RCO2   0   5   7  DCHCHNL 1   30   CON      ACTIVE
D30   RCO2   0   5   8  DCHCHNL 1   31   CON      ACTIVE
```

Datafilling table LTDEF

Table Logical Terminal Definition (LTDEF) defines ISDN terminals and AP for the type of service the terminal can access.

Only fields that apply to the ISDN on RSC appear in the datafill example for table LTDEF. Refer to the data design section of the *Translations Guide* for a description of the other fields.

CAUTION
Make sure you use SERVORD to add and delete tuples to and from table LTDEF. Do not use the table editor to perform this action.
Use of the table editor to enter data into this table can result in assignment of incompatible features to the line. The table datafill appears here for information only.

Datafilling table LTDEF

Field	Subfield or refinement	Entry	Explanation and action
LTKEY		refer to subfields	Logical terminal key. Contains subfields LTGRP and LTNUM.
	LTGRP	alphanumeric	Logical terminal group. Enter the LT group. Group ISDN is defined.
	LTNUM	0 to 1022	Logical terminal number.
LTAP		B, BD	LT access privilege. Enter B for circuit switching.
LTCLASS		BRAFS	LT class of service. Defines set of services allowed for the LT. Basic rate access functional set (BRAFS). ***Note:*** For PVC control of ISDN terminal types use BRAFS and datafill refinement OPTION.
	OPTION	PVC	Optional refinements. Each LTCLASS selection opens a set of optional datafill refinements. Select Protocol Variant Control (PVC) to enable access refinements VERSION and ISSUE.
	VERSION	ETSI	Protocol version. Select ETSI to enable European Telecommunications Standards Institute (ETSI) ISDN terminals.
	ISSUE	0	Protocol variant issue. Select 0 for ETSI BRI protocol.

Datafill example for table LTDEF

Sample datafill for table LTDEF appears in the following example.

MAP example for table LTDEF

```
LTKEY   LTAP
                                          LTCLASS
------------------------------------------------

RCO2 0  23  B       .                     BRAFS
PVC ETSI 0    DEFLTERM
RCO2 0  24  BD
```

ISDN operations (continued)

Datafilling table KSETINV

Table Business Set Inventory (KSETINV) identifies an LTID as an ISDN keyset. Table KSETINV defines the attributes for the LTID. The keyset can be a T2317 business set, an M5317t business set and terminals, or equipment by other manufacturers.

Note: This is a current table in the MDC translations. Note that you must enter data for each line card slot in table LNINV.

Only fields that apply to the ISDN on RSC-S appear in the datafill example for table KSETINV. Refer to the data design section of the *Translations Guide* for a description of the other fields.

CAUTION

Make sure you use SERVORD to add and delete tuples to and from table KSETINV. Do not use the table editor to perform this action.

Use of the table editor to enter data into this table can result in assignment of incompatible features to the line. The table datafill appears here for information only.

Datafilling table KSETINV

Field	Subfield or refinement	Entry	Explanation and action
KSETLEN		see subfield	Keyset line equipment number. The key to table KSETINV. Contains subfield LEN. For ISDN terminals, contains subfields LTGRP and LTNUM.
	LEN	see subfields	Line equipment number for the card to which the keyset attaches. Contains subfields SITE, FRAME, UNIT, DRAWER, and CIRCUIT.
	LTGRP	alphanumeric	Logical terminal group. Enter the LT group name from table LTGRP. This group can contain a maximum of eight characters or digits.
	LTNUM	1 to 1022	Logical terminal number. Enter the LT number.

—continued—

Datafilling table KSETINV (continued)

Field	Subfield or refinement	Entry	Explanation and action
SETDATA		refer to subfields	Set data. Contains subfields KSET and FANUM.
	KSET	ISDNKSET	Keyset. Contains keyset type for ISDN terminals. The only response is ISDNKSET.
	FANUM	2 to 64	Number of feature activators or feature appearance keys (FAP). Enter the number of FAPs that you can program on the LT.
		—end—	

Datafill example for table KSETINV

Sample datafill for table KSETINV appears in the following example.

MAP example for table KSETINV

```
KSETLEN     SETDATA
                                    OPTIONS          CONTMARK
-------------------------------------------------------------
RCO2 0      ISDNKSET    64                             $
RCO2 1      ISDNKSET    64                             $
RCO2 2      ISDNKSET    64                             $
RCO2 3      ISDNKSET    64                             $
RCO2 4      ISDNKSET    64                             $
```

ISDN operations (continued)

Datafilling table KSETLINE

Table keyset line (KSETLINE) associates CAPs with directory numbers (DN) and feature options. The CAPs are ISDN LT call activators and indicators.

CAUTION

Make sure you use SERVORD to add and delete tuples to and from table KSETLINE. Do not use the table editor to perform this action.

Use of the table editor to enter data into this table can result in assignment of incompatible features to the line. The table datafill appears here for information only.

Only fields that apply to the ISDN on RSC appear in the datafill example for table KSETLINE. Refer to the data design section of the *Translations Guide* for a description of the other fields.

Datafilling table KSETLINE

Field	Subfield or refinement	Entry	Explanation and action
KSETKEY		refer to subfields	Keyset key. This field is the key to the KSETLINE table. This field contains subfield LEN. For ISDN terminals, this field contains subfields LTGRP and LTNUM, and subfield KEY.
	LEN	refer to subfields	Line equipment number for the card to which the keyset attaches. Contains subfields SITE, FRAME, UNIT, DRAWER, and CIRCUIT.
	LTGRP	alphanumeric	Logical terminal group. Enter the LT group name from table LTGRP. This group can contain a maximum of eight characters or digits.
	LTNUM	1 to 1022	Logical terminal number. Enter the LT number in the group.

—continued—

Datafilling table KSETLINE (continued)

Field	Subfield or refinement	Entry	Explanation and action
	KEY	1 to 69	Key. Enter the number associated with the physical set key where the DN is assigned. You must program key number 1 for the set primary DN. You must enter data for key number 1 before you enter data for other DNs. For M5317 sets, use keys 1 through 11 for DNs (CAPs). For M5317 sets, use keys 1 through 33 for FAPs.
FORMAT		refer to list	Format of datafill. Possible entries are the following: • directory number (DN) • multiple appearance DN (MDN) • group intercom (GIC) • automatic call distribution (ACD)
		DN	Contains refinements for the format of the datafill. For DN the following apply.
	RING	Y or N	Ringing activated. Boolean yes or no to activate ringing capability.
	DN	numeric	Directory number. Contains the DN attached to the terminal. The DN is a maximum of 15 digits.
FORMAT (continued)	CUSTGRP	alphanumeric	Customer group. Defined in SERVORD while the system attaches a DN to an LTID.
	SUBGRP	0 to 7	Subgroup number.
	NCOS	0 to 255	Network class of service.
	SNPA	000 to 999	Serving number plan area. Contains a three digit area number.

—end—

ISDN operations (continued)

Datafill example for table KSETLINE

Sample datafill for table KSETLINE appears in the following example.

MAP example for table KSETLINE

```
KSETKEY
            FORMAT                  DNRESULT    CONTMARK
-------------------------------------------------------
ISDN51 0  1   DN     Y 2265235 KINGSA 0 10 181    +
                  $
```

Datafilling table KSETFEAT

Table keyset feature (KSETFEAT) associates ISDN LT feature activators and indicators (FAP) with feature instances and options.

Only fields that apply to the ISDN on RSC-S appear in the datafill example for table KSETFEAT. Refer to the data design section of the *Translations Guide* for a description of the other fields.

CAUTION

Make sure you use SERVORD to add and delete tuples to and from table KSETFEAT. Do not use the table editor to perform this action.

Use of the table editor to enter data into this table can result in assignment of incompatible features to the line. The table datafill appears here for information only.

Datafilling table KSETFEAT

Field	Subfield or refinement	Entry	Explanation and action
FEATKEY		refer to list	Feature key. The key to table KSETFEAT. Contains subfields LEN, KEY, and FEAT.
	LEN	refer to subfields	Line equipment number. For non ISDN lines, contains subfields SITE, FRAME, UNIT, DRAWER, or LSG, SHELF, SLOT, CIRCUIT. ***Note:*** For ISDN lines, contains subfield LTID.

—continued—

Datafilling table KSETFEAT

Field	Subfield or refinement	Entry	Explanation and action
FEATURE		alphanumeric	KSET feature. Contains feature type. To support multiple services on ISDN, you must enter data for additional call offering unrestricted (ACOU) and addition functional call (AFC).
KVAR		numeric	Key variable index.
		—end—	

Datafill example for table KSETFEAT

Sample datafill for table KSETFEAT appears in the following example.

MAP example for table KSETFEAT

```
FEATKEY           FEATURE     KVAR
------------------------------------------------
ISDN51  0  1  ACOU  AFC         1
```

Tools for verifying translations

Translations verification (TRAVER) verifies the routing of a call through datafill. The syntax for TRAVER follows:

>TRAVER orig digits trace authcode mfst billno bill_mfst

SERVORD

The SERVORD allows the addition or deletion of line-associated data. With SERVORD you do not need to access tables. Use SERVORD to enter data into these tables automatically. The abbreviated process saves time and minimizes errors.

Use LTID when you enter data for lines for an LCME off an RCO2. The datafill sequence does not change. The prompt and non-prompt modes appear in the following examples. The fields that contain data appear in the examples.

ISDN operations (continued)

SERVORD limits

The ISDN operations does not have SERVORD limits. The SERVORD examples are for ISDN on RSC-S. For complete information on the application of SERVORD, refer to the *SERVORD Reference Manual*.

Setting up a logical terminal (with the use of the SLT command)

Command SLT is a SERVORD command. Command SLT manipulates data associated with an ISDN LT. The SLT command performs the following functions:

- defines a new LT
- deletes an LT
- detaches an LT from a LEN
- attaches an LT to a LEN with the associated option

Providing B-channel switched service

To define a new circuit-switch LT, create an LTID. Associate the LTID with a LEN and a TEI. The SERVORD entry process appears in the following examples.

SERVORD example for creating an LTID in prompt mode

```
SO:
> SLT
SONUMBER :  NOW 90 03 14 AM
>
LTID:
> ISDN  1
FUNCTION:
> ADD
CS:
> Y
PS:
> N
```

SERVORD example for creating an LTID in nonprompt mode

```
>SLT $ ISDN 1 ADD Y N
```

ISDN operations (continued)

SERVORD example for attaching an LEN and TEI to a LTID ISDN operations in prompt mode

```
SO:
>SLT
SONUMBER :  NOW 90 03 14 AM
>
LTID:
>ISDN 1
FUNCTION:
>ATT
LEN
>2 0 6 0
OPTION:
>TEI
TEI:
>1
>
>$
```

SERVORD example for ISDN operations in nonprompt mode

```
>SLT $ ISDN 1 ATT 2 0 6 0 TEI 1 $
```

ISDN operations (end)

SERVORD example for defining the CAP/DN on the M5317T key in prompt mode

```
SO:
>NEW
SONUMBER  :  NOW 90 03  14 AM
>$
DN:
> 8344040
LCC:
> ISDNKSET
GROUP
> ISDNGRP
SUBGRP:
> 0
NCOS:
> 0
SNPA:
> 919
KEY:
> 1
MAXKEYS:
>3  3
RELKEY:
> 24
LATTANAME;
>NILLATA
LTG:
>0
LEN:
>ISDN 1
OPTKEY:
>2 5
OPTION:
>HLD
OPTKEY:
> $
```

SERVORD example for defining CAP/DN on the M5317T key in nonprompt mode

```
>NEW $ 8344040 ISDNKSET ISDNGRP 0 0 919 1 33 24 NILLATA 0 ISDN 1 25
```

Firmware downloading

Functional group

BAS00003

Feature package

NTXR42AA Firmware Downloading

Release applicability

XPM05 and later

Requirements

Firmware downloading has the following feature package requirements:

- NTX000AA Bilge
- NTX001AA Common Basic
- NTX270AA New Peripheral Maintenance
- NTXR34AA XPM-PLUS Basic

Description

The MX77 Firmware Download loads firmware to the EEPROM of the Unified Processor (UP) (NTMX77AA) card. This card is on the main shelf of the Remote Switching Center-SONET (RSC-S) configuration.

Firmware changes can require equipment upgrades. Enhancements to and maintenance of multiple versions of EPROMs can increase costs. There is a method for the upgrade of firmware that can control costs. This method controls the cost to prepare, send, and change EPROMs on all cards. This method does not require the return of all EEPROMs on current UP cards equipped with a previous firmware version.

Operation

The UP contains flash memory chips. The UP upgrade occurs after an image load. The image load resembles the load of software from a host switch. There are two flash EEPROMs or banks on the NTMX77AA card. Each bank is a 256-kb programmable chip. One bank is in the executable mode and the other bank is in the loadable mode. The EEPROM that executes random access memory (RAM) is the executable EEPROM. The EEPROM used for support is the loadable EEPROM. If the executable EEPROM is corrupt, the loadable EEPROM takes over and becomes the executable EEPROM.

The current LOADPM command from the MAP terminal can start a download when a new firmware load occurs.

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 datafilled 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
>LOADFW INACTIVE UPGRADE
>RTS INACTIVE
```

Firmware downloading (continued)

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.

Translations table flow

The following list describes firmware downloading translations tables:

- Table PMLOADS stores the device location of every peripheral module (PM) load file to map between load names and load devices. The PM load files must be present in table PMLOADS before the files can be present in inventory tables. Load information is in field LOADNAME and associated entries are in field LOAD for tables LTCINV, LCMINV, and RMMINV.
- Table LTCINV contains inventory data for PM types, except the P-side link assignments. This table defines the PCM-30 line group controller (PLGC) or line group controller overseas (LGCO) on the C-side of the RCO2. Field LOAD contains load information for this table. The load information corresponds to the LOADNAME tuple from table PMLOADS.

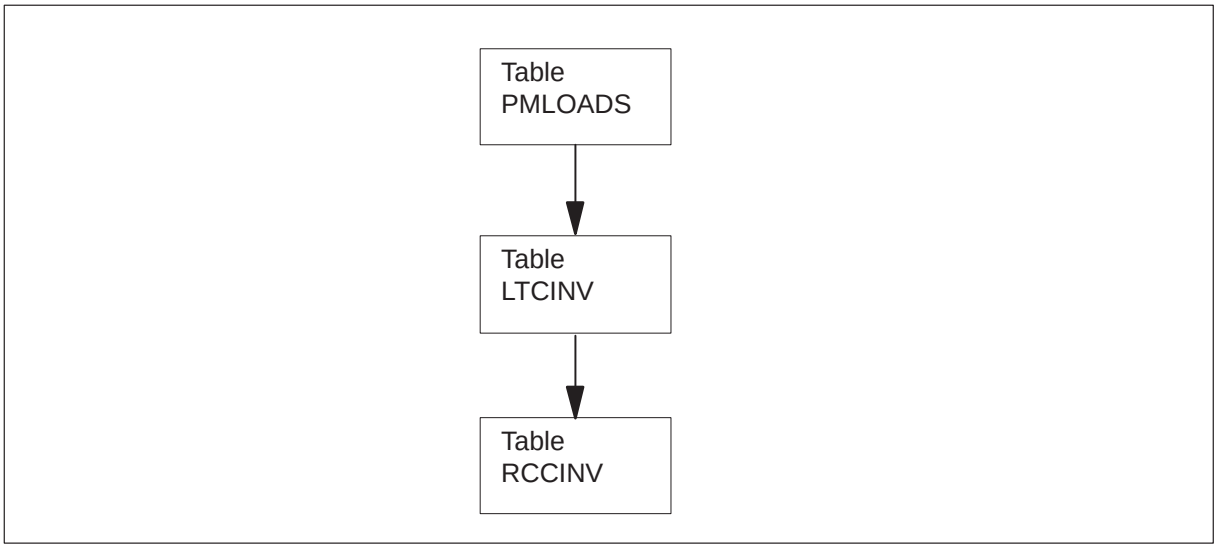
  Note: The RSC-S can be configured with the PLGC or the LGCO. For both configurations, the PLGC must be the data entry.

- Table RCCINV maintains a list of RCO2s entered in the DMS that contains RCO2 inventory data, except P-side link assignments. Table information identifies the location of the RCO2. Table information identifies the required load and execute lineups of the RCO2, and the network link connections of the RCO2. Table RCCINV contains the RCO2 C-side PCM-30 assignments. Table RCCINV also contains intraswitching data.

Firmware downloading (continued)

The firmware downloading translation process appears in the following flowchart.

Table flow for firmware downloading



Limits

The following limits apply to firmware downloading.

- The unit must be at task level. An example of task level is when the unit is loaded with the software load and is in the ManB state.
- The unit must have the NTMX77AA 0D2 card and support new messaging. The EEPROM version must be AB02 or higher.

Interactions

Firmware downloading There are no functionality interactions.

Activation/deactivation by the end user

Firmware downloading There is no activation or deactivation required by the end user.

Billing

Firmware downloading does not affect billing.

Station Message Detail Recording

Firmware downloading does not affect Station Message Detail Recording (SMDR).

Firmware downloading (continued)

Datafilling office parameters

Firmware downloading does not affect office parameters.

Datafill sequence

The following table lists tables that require data to use firmware downloading. Enter the tables in the order that the tables appear in the list.

Datafill tables required for firmware downloading

Table	Purpose of table
PMLOADS	PM loads. Stores the device location of every PM load file to map between load names and load devices. This table permits autoload to locate load files without personnel. Table PMLOADS must contain the expanded peripheral module (XPM) load files before the load files are entered in XPM inventory tables.
LTCINV	Line trunk controller inventory. Contains the inventory data for PM types, except the P-side link assignment. This table defines the PCM-30 line group controller (PLGC). This table also defines the line group controller overseas (LGCO) on the C-side of the RCO2.
RCCINV	Remote cluster controller inventory. Contains inventory data for the RCO2, except P-side link assignments. The RCO2 C-side PCM-30 assignment entries occur in table RCCINV.

Datafilling table PMLOADS

Table PMLOADS stores the device location of every PM load file to map between load names and load devices. The system automatically reloads PMs that contain a load with data that may be corrupt. This reload allows autoload to locate load files without personnel and reduces recovery time.

The PM load files data must be present in table PMLOADS before the load files are entered in inventory tables. For both the first data entry and the dump and restore process, the system adds tuples in PMLOADS. The system adds tuples in PMLOADS when LTCINV and RCCINV tuples are added.

Enter a dummy entry if the load name is not present in the table already. For switch operation, change the dummy entry to include the storage device for the PM load file.

Datafill for table PMLOADS

The following procedure shows the datafill for table PMLOADS. Table PMLOADS stores the device location of every PM load file. This table allows the DMS-100 switch to locate load files.

The XPM Loadfile Patching consists of an active loadfile and a backup loadfile. The active loadfile is the default load that the LOADPM command and most system activities use. If a problem occurs in the load or RTS of the active loadfile, the system uses the backup loadfile. The backup loadfile is the unpatched loadfile shipped by Northern Telecom.

Table PMLOADS adds fields to store the following data:

- the name of the active loadfile. This loadfile is the default load that the LOADPM command and most system initiated activities use.
- the name of the backup loadfile. This loadfile is the load used if a problem occurs in the load or RTS of the active loadfile. The backup loadfile is the unpatched loadfile shipped with the XPM.
- the file locations of the loadfiles.
- the update active loadfile field. This field indicates if the site requires the active file_id update to be automatic. The feature allows the patched loadfile to be loaded to the XPM. A reload can simplify reload and recovery of the XPM. If loadfile patching is available, the active file information update occurs through loadfile patching.

The system uses the active and backup files as part of the load and recovery.

The XPM load files data must be present in table PMLOADS before the files are entered in inventory table LTCINV or table RCCINV. The inventory table enforces this rule.

> ***Note:*** An exception to this rule occurs at the start of data entry and in dump and restore. In these events, the system adds tuples in table PMLOADS when LTCINV tuples are added.

Pre-patched XPM loads

Pre-patched XPM loads background

Pre-patched XPM loads (PPXLs) are XPM loadfiles that have correcting patches in the loadfile. The PPXLs are increased loads built with patch updates. The patch updates created patch files released to the field. There is no functional or technical difference between an XPM load with patches and a PPXL with patches in the load. The PPXLs are the same as CM loads that have internal patches based on date of shipment.

Firmware downloading (continued)

Implementation of PPXLs

Each PPXL loadfile contains a 1K data block at the start. This block contains the patch IDs for the patches in the PPXL. The associated patch files for each patch ID listed in the 1K data block must be present. The patch files must be present when PPXL entry occurs in table PMLOADS.

When PPXL entry in table PMLOADS occurs, the system modifies or creates the loadset. The system modifies the loadset if a loadfile is already present for the base load. The system creates a loadset if the base load is new to the DMS-100 switch.

> ***Note:*** Loadsets group all peripheral units loaded with the same load together. To view all loadsets on the DMS-100 switch, enter the PATCHER CI level and enter the command string INFORM PMALL.

After the PPXL entry in table PMLOADS occurs, manual actions can start the PPXL load. The system recovery controller (SRC) can also load the PPXL automatically. After the PPXL load, the PPXL reduces or eliminates patching because the load includes most or all of the patches.

After the PPXL load occurs, the PPXL can have additional patches added or removed in the same way as for an XPM. The removal of any internal PPXL patches can occur, if the associated patch files are present.

The system adds or removes any patches added or removed after a PPXL reload.

PPXL Naming Convention

The PPXL file names have _<date> attached to the end of the associated base load name. For example, the name of a PPXL load file created for base load ECL03BX is ECL03BX_941129. The base load name remains the same. Base loads are any load that does not have the _<date> suffix.

The inherent value becomes the preservation of the patch stream with the ability to up-issue a PPXL as required. The date identifier indicates the vintage of a PPXL.

PPXL storage requirements

When preparing to load PPXLs occurs, Telcos must double the XPM load storage requirements to provide space for the PPXLs. The PPXLs require storage of the PPXL loadfile on the ACTVOL device. The base load file is on the BKPVOL device.

Loading a PPXL

There are two ways to add PPXLs to an office. The first method upgrades an office to a current base load lineup. This upgrade occurs when the base loadname is not in table PMLOADS. The second method adds PPXLs to offices that have the base loadname in table PMLOADS. ESC03CJ, the current loadname, can attach to ESC03CJ_950105. ESC03CJ_950105 is the PPXL added to the baseload. The two methods follow:

Note 1: The system supports PPXLs on BCS36 or higher CM loads.

Note 2: The application of PATCH JCK19 to the CM must occur before the next step.

Upgrading the base load

To load a PPXL in an office that has a new current baseload, use the following procedure:

1 Copy the base loadfile and the PPXL loadfiles to the disk volumes used for PM loads.

Note: Copy the base load and the PPXL load to two disk volumes for redundancy.

2 Copy the patches associated with the PPXL loads to the same disk volume used in step 1. The load tape shipment includes a list of patches associated with each PPXL load. After the PPXL file is present on disk, obtain a list of patches included in the PPXL. To obtain a list of patches, type:

>XPMLFP

and press the Enter key.

>PATCHLIST FILE ppxl_filename

and press the Enter key.

where

ppxl_filename — is the filename of the PPXL loaded added to the base load

3 Add a new tuple for the base load to table PMLOADS. Enter the base load for the LOADNAME. Enter the base loadname for the ACTFILE. Enter the base load name again for the BKPFILE.

4 Add the base loadname to the correct inventory table, like LTCINV.

5 Edit the tuple added in step 3 to change the ACTFILE field from the base loadfile name to the PPXL filename. Refer to the datafill example for table PMLOADS for an example of this tuple.

Firmware downloading (continued)

6 To set the loadset against both units of the XPM, type

>PATCHER
and press the Enter key.

>SET loadname PM pm_type device_no unit_no
and press the Enter key.

where

loadname	is the name of the loadfile
pm_type	is the type of PM that requires the loadset
device_no	is the device number with a range of 0-255
unit_no	is the unit number, 0 or 1

7 To load the PPXL to each unit of the XPM, type

>BSY UNIT unit_no
and press the Enter key.

>LOADPM UNIT unit_no
and press the Enter key.

>RTS UNIT unit_no
and press the Enter key.

where

unit_no	is the unit number of the XPM to load

8 Perform a SWACT of the XPM and repeat step 7.

Note 1: When loaded, the XPM can have additional patches applied or removed by the same method used with previous XPM loads. The system can remove any patches in the PPXL from the load if the patch file is present on disk.

Note 2: The system adds or removes any patches added or removed after a PPXL reload.

Note 3: The system does not remove non-PPXL patches when the PPXL reload occurs. The system does not remove these patches because the loadset does not contain the removed patches.

Adding PPXLs to a current PM load lineup

Use the following procedure to add PPXLs to a current XPM load alignment:

1 Verify that all patch_ids associated with the PPXL are present on the disk volume that field ACTVOL in table PMLOADS identifies. If any patch_ids are not present, copy the patches from tape to the correct volume. The PM tape shipment contains a list of the patches in each PPXL. After you copy the PPXLs to disk, list the patches in the PPXL. To list the patches in the PPXL, type

>XPMLFP

and press the Enter key.

>PATCHLIST FILE ppxl_filename

and press 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 in table PMLOADS, field BKPVOL.

4 Modify table PMLOADS. If the XPM base loadname is not present in table PMLOADS, use the previous procedure, Upgrading baseload lineup to add a new tuple. Under any other conditions, change the ACTFILE field to the PPXL filename (filename_date). At this point, the system upgrades the loadset if the loadset is present. The system creates a loadset if the loadset is not present.

5 To set the loadset against both units of the XPM, type

>PATCHER

and press the Enter key.

>SET loadname PM pm_type device_no unit_no

and press the Enter key.

where

loadname	is the name of the loadfile
pm_type	is the type of PM that requires the loadset
device_no	is the device number with a range of 0-255
unit_no	is the unit number, 0 or 1

Firmware downloading (continued)

6 To load each unit of the XPM with the PPXL, type

>BSY UNIT unit_no
and press the Enter key.

>LOADPM UNIT unit_no
and press the Enter key.

>RTS UNIT unit_no
and press the Enter key.

where

unit_no is the unit number of the XPM to load

7 Perform a SWACT of the XPM and repeat step 6.

Note 1: When loaded, the XPM can have additional patches applied or removed by the same method used with previous XPM loads. You can remove any patches built in the PPXL from the load. You can remove the patches if the actual patch file is present on disk.

Note 2: The system can add or remove PPXLs after the load of a PPXL occurs. The system can apply and remove these PPXLs after subsequent reloads of the PPXL occur.

Firmware downloading (continued)

The datafill that applies to downloads for table PMLOADS appears in the following table. Only the fields that apply directly to firmware downloads appear. 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	Peripheral module load name. Enter the XPM load name. Range is a maximum of 32 characters. This loadname must be the same as the load name datafill in tables LTCINV and RCCINV.
ACTFILE		alphanumeric	Active load file name. The name of the active XPM loadfile. This loadfill can be the original loadfile or a patched loadfile. Name contains a maximum of 32 characters. Before patching, this name is the original load name. The XPM load file patching updates the field. This condition occurs after the load patches for a period of time. This period is called soak time.
ACTVOL		alphanumeric	Active volume. Identifies the device that contains the active loadfile. Range is the set of disk drive unit (DDU) volumes and system load module (SLM) disks available to the CM or S00DXPM. Name contains a maximum of 16 characters.
BKPFILE		alphanumeric	Backup load file name. Identifies the name of the backup XPM loadfile. The name must be the same name as the LOADNAME field. Name contains a maximum of 32 characters.
BKPVOL		alphanumeric	Backup volume. The device that contains the backup loadfile. Range is the set of DDU volumes and SLM disks available to the CM or S00DXPM. Name contains a maximum 16 characters.
UPDACT		Y or N	Update active filename. Controls if loadfile patching can occur on the loadfile. Controls if system updates table PMLOADS fields ACTFILE and ACTVOL with the patched loadfile name.

Firmware downloading (continued)

Datafill example for table PMLOADS

The following example shows sample datafill for table PMLOADS.

MAP display example for table PMLOADS

```
LOADNAME
 ACTFILE        ACTVOL
 BKPFILE        BKPVOL   UPDACT
_____________________________________________________________
ELI36xx
 ELI36xx        S00DXPM
 ELI36xx        S00DXPM      Y
```

Note: The xx in field LOAD represents two letters like BZ.

Datafilling table LTCINV

Table Line Trunk Controller Inventory (LTCINV) identifies to the DMS software a host XPM peripheral. Information on the peripheral includes location, load required, and network link connections. This table supports the universal tone receiver.

The following table describes the datafill that applies to firmware downloads for table LTCINV. Only the fields that apply directly to firmware downloads appear. Refer to the data schema section of the *Translations Guide* for a description of the other fields. An additional field contains the name of the loadfile that associates with the electrically erasable programmable read-only memory (EEPROM).

Firmware downloading (continued)

Datafilling table LTCINV

Field	Subfield or refinement	Entry	Explanation and action
LOAD			Load. Enter the load the RCO2 must use. The RCO2 displays a load that appears in table PMLOADS.
PROCPEC			Processor equipment product engineering codes. Each PLGC or LGCO unit requires one PEC. Enter the PEC for unit 0 first. The PEC must reflect the minimum firmware capabilities in the processor complex of each unit.
E2LOAD			EEPROM file. Contains the name of the load file loaded in the NTMX77AA EEPROM.

Datafill example for table LTCINV

The following is an example of datafill for table LTCINV.

MAP display example for table LTCINV

```
Table: LTCINV

LTCNAME   FRTYPE FRNO SHPOS FLOOR ROW FRPOS EQPEC  LOAD
_____________________________________________________________
PLGC 1     LGE    1   18    0     C   6    6X02AG  KRI06AY

EXECTAB                                                CONTMARK
_____________________________________________________________
(POTS POTSEX)(KEYSET KSETEX)(RMM_TERM RSMEX)(ABTRK DTCEX)  $

CSLNKTAB                                              CONTMARK
_____________________________________________________________
(9 17)(13 61)(5 14)(0 29)(1 30)(2 31)(3 28)(4 29)     $

OPTCARD                  CMRLOAD            CONTMARK
_____________________________________________________________
(UTR6)(TONE6X79)(MSG6X69) (CMR18 CMRAG03)      $

TONESET   PROCPEC       E2LOAD    OPATTR  PEC6X40
_____________________________________________________________
AUS100    MX77AA  MX77AA  MX77NH08   $     6X40AC
```

Note: The xx in field LOAD represents two letters, like BZ.

Firmware downloading (continued)

Datafilling table RCCINV

Table Remote Cluster Controller Inventory (RCCINV) contains inventory data for the RCO2. The RCCINV does not contain P-side link assignments for the RCO2. The C-side PCM-30 assignments for the RCO2 appear in table RCCINV.

The datafill that applies to firmware downloads for table RCCINV appears in the following table. Only the fields that apply directly to firmware downloads appear. Refer to the data schema section of the *Translations Guide* for a description of the other fields. An additional field contains the name of the loadfile associated with the electrically erasable programmable read-only memory (EEPROM).

Datafilling table RCCINV

Field	Subfield or refinement	Entry	Explanation and action
LOAD			Load. Enter the load the RCO2 is to use. The RCO2 displays a load that appears in table PMLOADS.
PROCPEC			Processor equipment product engineering codes. Each PLGC or LGCO unit requires one PEC. Enter the PEC for unit 0 first. The PEC must reflect the minimum firmware capabilities in the processor complex of each unit.
E2LOAD			EEPROM file. Contains the name of the load file loaded in the NTMX77AA EEPROM.

Note: When you enter field C-side link table (CSLNKTAB), 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 with 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. Assignment of message links to the same interface card can cause an E1 outage (failure of all message links). This condition occurs if the card fails.

Datafill example for table RCCINV

The following is an example of datafill for table RCCINV.

MAP display example for table RCCINV

```
Table: RCCINV

RCCNAME      FRTYPE FRNO SHPOS FLOOR ROW FRPOS EQPEC  LOAD
-----------------------------------------------------------------
MELB RCO2 0  CRSC   0   18    0     C   0     MX85AA KRI06AY
EXECTAB                                      CONTMARK
-----------------------------------------------------------------
(POTS POTSEX)(KEYSET KSETEX)(ABTRK DTCEX)        +
(RMM_TERM RSMEX) (ESALINES ESAEX)                $

CSPM        CSLNKTAB                          CONTMARK
---------------------------------------------------------------
PLGC 1     (0) (1) (2) (3) (4) (5) (6) (7)       $


ESA  INTRASW    OPTCARD       CMRLOAD         CONTMARK
---------------------------------------------------------------
Y    Y         (UTR6)(MSG6X69)(CMR18 CMRAG03)    $

TONESET PROCPEC        E2LOAD     EXTINFO
---------------------------------------------------------------
AUS100 MX77AA  MX77AA      MX77NH08  CEXT 0 4 0 E 15 MX86AA L
```

Note: The xx in field LOAD represents two letters, like BZ.

Translation verification tools

Firmware downloading does not use translation verification tools.

SERVORD

Firmware downloading does not use SERVORD.

Introduction to RSC-M

This chapter describes datafill for the Remote Switching Center Multi-access version of the Remote Controller Overseas (RSC-M) .

Understanding RSC-M translations

Table RSC-M translate (GPPTRNSL) defines the nodes on the peripheral side (P-side) of the RSC-M. Use table GPPTRNSL because the RSC-M is a remote peripheral module (PM) that the remote cluster controller inventory (RCCINV) table defines.

On channel associated signaling (CAS) interfaces, table GPPTRNSL defines six P-side access nodes (ANs). Table GPPTRNSL defines the P-side ANs for each RSC-M that table RCCINV defines. These nodes are the AN line modules that table LNINV defines as the keys for RSC-M lines. Each P-side AN connects to the RSC-M through a maximum of eight pulse code modulation (PCM30) links. Table control checks GPPTRNSL datafill when the system adds lines to the table RCCINV.

When you enter CAS links in table GPPTRNSL, nodes zero to five in table GPPTRNSL define groups of RSC-M links. These groups of RSC-M links connect to the RSC-M. The nodes allow you to enter data in the lines on the links in table LNINV.

Table datafill to CAS link associations

In field LEN of table LNINV, subfield BAY relates to field GROUP in table GPPTRNSL	Explanation
0	Refers to P-side links 0 to 7
1	Refers to P-side links 8 to 15
2	Refers to P-side links 16 to 23
3	Refers to P-side links 24 to 31

—continued—

Table datafill to CAS link associations (continued)

In field LEN of table LNINV, subfield BAY relates to field GROUP in table GPPTRNSL	Explanation
4	Refers to P-side links 32 to 39
5	Refers to P-side links 40 to 47
—end—	

Signaling for the RSC-M

Virtual remote nodes that have AN capabilities and use CAS protocol, communicate with the Digital Multiplex System (DMS). The virtual remote nodes communicate with the DMS over PCM30 links that terminate on the RSC-M. Channel associated signaling protocol defines the actions between non-concentrating ANs and the DMS.

This section explains how the British Telephone user part (BTUP) trunk carrier and DC5 protocol, and the BTUP to CAS Loop Start work together. The DC5 signaling protocols include two variants: the DC5A and the DC5A with delay dial (DC5ADD).

This section describes the protocols that the RSC-M uses for communication and subscriber services. The RSC-M protocols are:

- the CAS protocol for plain old telephone service (POTS)
- the DC5A and the DC5ADD protocols
- the Custom Local Access Signaling Services (CLASS) protocol with dual-tone multi-frequency (DTMF) control

Signaling and communications types

An RSC-M line is not a physical line circuit. An RSC-M line is a 64 Kbit/s channel in a 2 Mbit/s PCM30 carrier.

Channel associated signaling ANs use call supervisory signaling. Call supervisory signaling complies with the CAS protocol of ABCD bits on time-slot 16 (TS16) of each PCM30 link. Messaging channels are assigned to the same link as the associated bearer channel. Data are entered in the dedicated channels as though the carrier channels are physical line cards.

The bearer channels provide virtual line circuits. The circuits support voice calls through connections to dial pulse (DP) or DTMF analog subscriber stations. The circuits also support voice calls through connections to a private branch exchange (PBX). This PBX connects to an AN. These

channels provide CAS protocols to groups of the following analog line interfaces.

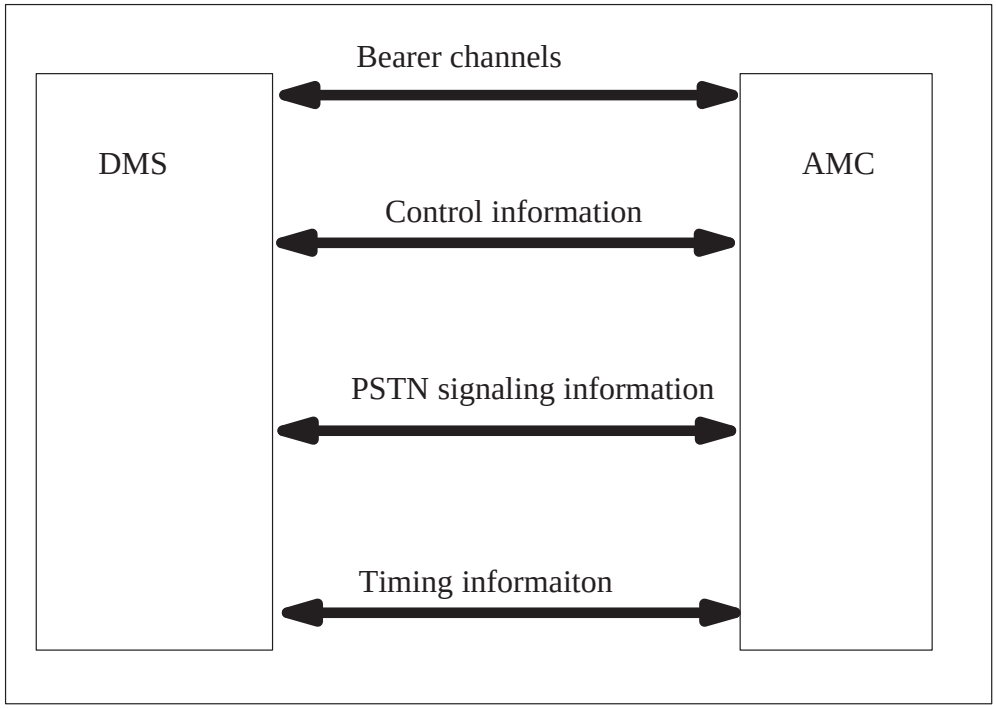
Note: The AN generates the physical subscriber line signaling (off- and on-hook, ring generation).

Implementation of RSC-M interfaces to CAS ANs indicates the following signaling differences:

- the signaling processor (SIGP) circuit card provides the messaging control of CAS links
- the PCM30 link interface circuit cards provide the timing, link identification and CRC4 error detection
- dedicated channels in CAS (non-concentrating) interfaces contain one-to-one, predefined user ports and bearer channels. A line concentration is not present on the AN. Each of the PCM30 channels has a direct one-to-one relationship with a specified line.

The PSTN control information is a stimulus protocol. The PSTN messages define the state of the analog lines that connect to the AN. The DMS must interpret and translate the messages to the national protocol entity user part. The DTMF messaging transmits directly to the DMS when interpretation of state information occurs in the AN.

The CAS interface



Preparing to datafill RSC-M

The AN is a virtual entity to the DMS switch. The datafill of the DMS switch and the AN must coincide. Operating company personnel must coordinate the assignment of directory numbers (DNs) on the DMS switch with the assignment of DNs on the AN. You must enter data in the DMS switch and the AN in the following sequence:

1 Enter data in the DMS switch before the system enables the PCM30 interface.

2 Make sure every AN stand-alone test and datafill is complete.

3 Make sure a reliable interface between the DMS switch and the AN is present.

4 The DMS switch implements the start up process.

5 The DMS switch forces the lines to a permanent lock out (PLO) state, until the AN implements the AN system startup process.

Functional group for the RSC-M

The following table provides the functional group name and the functional group identification code for the RSC-M.

The RSC-M software

Functional group name	Functional group
BAS Remotes Generic	BAS00012

Feature set support

Normally, meridian digital centrex (MDC) station features apply to specified RSC-M lines. These features apply to RSC-M lines that serve subscriber stations with line card (LC) signaling (card code T1LOOP). The system does not support the RSC-M lines that serve PBXs and use EC signaling (card code T1ERTH). The exceptions are routing features, like hunting.

The RSC-M provides the following functions:

- changes in the DMS switch central control (CC) software. The changes enable call processing on virtual lines on generic AN interfaces.
- call process support for the following:
  - — POTS calls
  - — Meridian Digital Centrex (MDC)
  - — CLASS features

- support for RSC-M PM maintenance, carrier maintenance, line maintenance and call processing
- support for static data downloads of information from the AN nodes to the RSC-M. The RSC-M provides information about the card type of the terminals
- support for data and human-machine interface (HMI) for the following:
  - — two additional PM types, that represent the RSC-M and the ANs that connect to the RSC-M
  - — the MAP levels like PM and carrier levels
  - — the EXT shelf definition and support
    - – entry of data in the EXT shelf for RSC-M in table LTCINV
    - – display of circuit cards with possible faults in the EXT shelf
    - – display of EXT shelf information in the PM MAP level through the use of the QUERYPM command
    - – the EXT circuit card (NTMX87AA) diagnostics
  - — P-side port expansion with support for a maximum of 48 P-side links

The following features are available to end users with standard DP or DTMF telephone sets. The end users must have telephone sets that connect to a DMS switch through the RSC-M AN line interface. The available features are:

- call disposal features
- call barring and authorization features
- call forwarding features
- conference call features
- speed calling features
- message waiting features
- uniform call distribution (UCD) features
- ring again (RAG) features
- different features, like Call Pickup, Hunting and Executive Busy Override

CLASS

The CLASS features provide residential (RES) customers with expanded features and capabilities. Calling Number Delivery (CND or CLI) is a CLASS feature. This feature provides the ability to deliver the directory number of the calling party. The CLASS feature also provides the ability to

deliver the current time and date to the Customer Premises Equipment (CPE).

For the CND to occur, the number of the calling subscriber must be available at the destination exchange. The number must pass before the number can appear at the MAP display.

The local exchange sends an ESTABLISH message to the AN with the optional information element called Pulsed Signal: Initial Ring. This message instructs the AN to send an initial ringing pattern to the terminal of the called subscriber. When the AN receives this message, the AN applies a ring burst of 300 ms to the terminal of the called subscriber. The AN sends an ESTABLISH ACKNOWLEDGE message to the LE.

After the first ring burst is complete, the AN sends a SIGNAL message to the LE. The message contains an optional information element called Pulsed Signal: Pulse notification. When the LE receives this message, the LE starts a timer. The LE uses the CLASS modem resource (CMR) circuit card in the RSC-M to transfer DTMF call information to the AN. The LE transfers the DTMF call information on a bearer channel.

The CLASS and custom calling features are:

- F1751—Authorization Codes
- F0776—Call Barring
- F0410, F0411, F0412—Call Forwarding
- F3485—Call Hold
- F1297—Directed Call Park
- F0414, F0848—Call Transfer/Three-way call
- F0413—Call Pickup
- F0451—Call Waiting
- F1640, F1181—Six-way Conference
- F1180—Distinctive Ringing
- F3782—Do Not Disturb
- F1270—Executive Intrusion
- F3489—Group Intercom
- F1172—Hot Line
- F1237—Hunt Group
- F3786—Last Number Redial
- see note—Malicious Call Trace

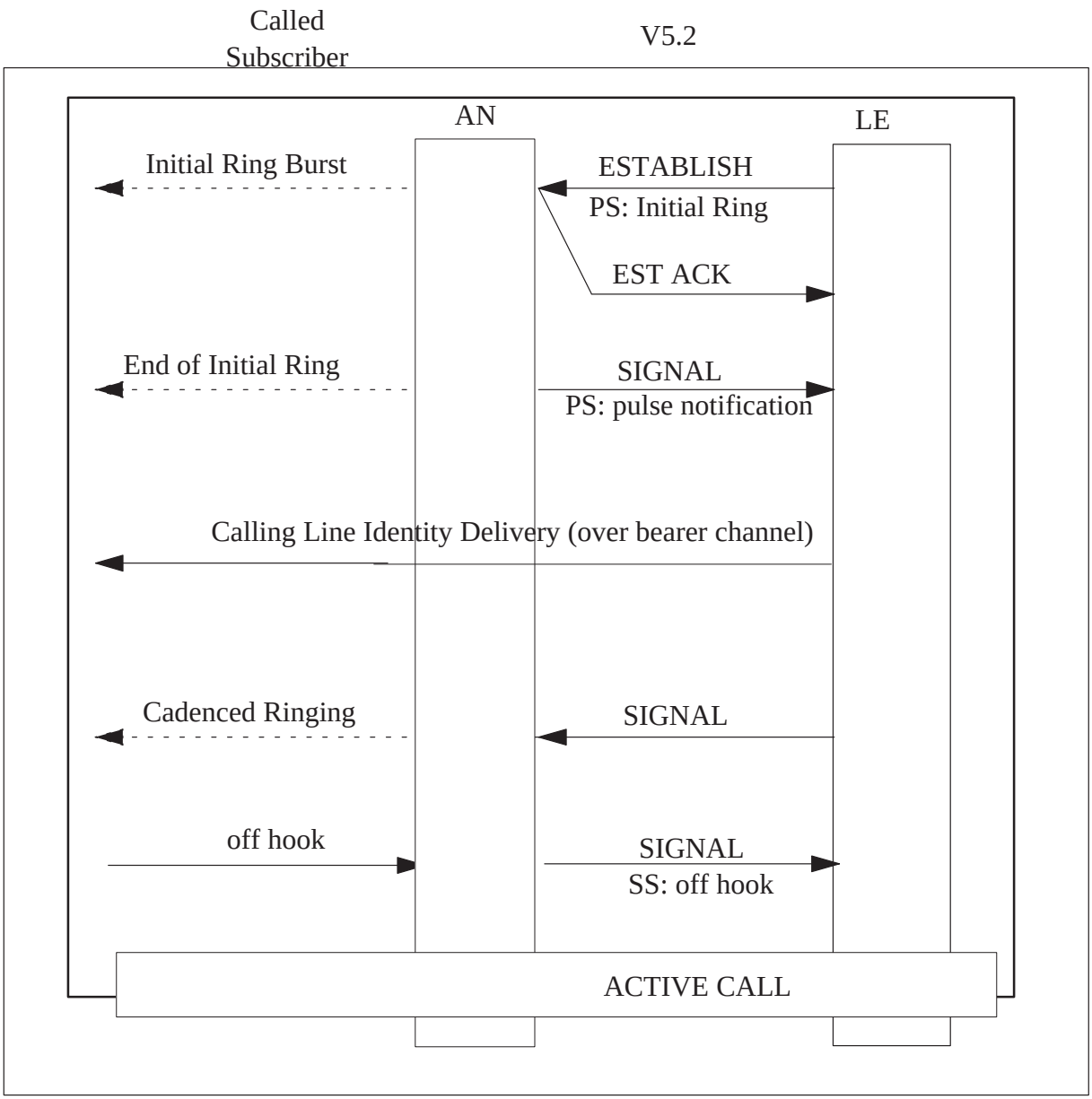
- F3446—Message Waiting – Stuttered Dial Tone
- F6567—Network Ring Again
- F0407, F3704—Private Dial Plan
- F1151—Ring Again
- F0416, F0417—Speed Dialing
- NC0011—Warm Line (d)
- BR19420—Family and Friends Name Delivery
- AG0781—Calling Number Delivery
- AG1515—Dialable Directory Number
- AG1954—Visual Message Waiting Indication

Note 1: The CLASS features display the calling number in North American DN format.

Note 2: The Warm Line is not supported on CAS interfaces.

The following figure illustrates CLASS signaling.

CLASS services signaling



RSC-M call process

The CC call process support for POTS and MDC enables call processing in the RSC-M. The RSC-M interface performs line call processing through the the basic host XMS-based peripheral module (XPM) call process. The AN line card that connects to each subscriber loop completes the line processing (like on-hook detection and ring generation).

Updating static data

Three types of updates provide the inactive unit of the RSC-M with data to control maintenance and call processing. The three types of updates are:

- static data update
- bulk data update
- dynamic data update

Static data update

Static data holds RSC-M and AN configuration information, like the association between RSC-M P-side ports and AN link numbers. The CM sends this information to the two units of the RSC-M. The CM sends this information when a return to service (RTS) on the CM occurs. The CM also sends this information to an in-service (InSv) RSC-M when tables RCCINV or LNINV change.

When operating company personnel alter configuration information, the system sets the RSC-M to an in-service trouble (ISTb) condition. The system informs personnel that a static data mismatch is present. The system provides information on the appropriate way to correct the mismatch.

Static data defines the RSC-M configuration and does not change when calls connect and disconnect. When static data in the host and the RSC-M do not match, data corruption can result. The host determines that a line is present when the RSC-M determines that the line is not present. This mismatch results in the loss of calls.

Feature Node Table Sync Redesign changes the method that clears the ISTb condition for XPMs. These XPMs have software loads that support configuration data table (CDT) management.

Each XPM unit has tables that contain information about nodes to which the XPM connects and terminals that the XPM uses. The two systems that determine unit table mismatches are:

- mate unit matching that compares the inactive unit tables with the active unit, and sets the XPM ISTb when a mismatch occurs. The active unit sends table mapping information to the inactive unit during updates. The use of the NODATADYNC option can busy (BSY) and RTS an inactive unit with an ISTb condition. This action causes a configuration download to that unit.

  Note: Feature XPM Node Table Sync Redesign changes the execution of the command RTS with the NODATASYNC option.

- Node table audits determine if the XPM unit information corresponds to data in the CM table PMNODES. The CM maintains the node information to prevent differences in datafill for the XPM units. To clear an ISTb condition on one unit, set the XPM to BSY and RTS the XPM.

The Node Table Sync Redesign feature introduces the following changes to error handling:

- The system cannot support table control applications that change the reject tuples of the inventory table. The system cannot support these applications when a peripheral does not have the necessary resources.
- The node table audit raises an ISTb condition on an XPM that has a node table mismatch with the CM. Busy and RTS the two units of the XPM to clear the ISTb condition manually.
- A negative acknowledgment from the XPM that causes the loading or the RTS process to abort. This acknowledgment occurs during the download of the CDT node or during a bulk download of port information.
- A negative acknowledgment from the XPM that raises an ISTb condition on the XPM. This acknowledgment occurs during a download of the CDT node or during a dynamic configuration update of port CDT data.
- Two PMDEBUG commands that give operating company personnel the ability to:
  - — determine the tables that bind to the CDT data distribution
  - — display the tuples in those tables

    Obtain a list of the XPM data tables that bind to CDT management. To obtain a list, enter the CHNL:PROT level of the PMDEBUG command, and type:

    SHOWTBLS
    without parameters

    and press Enter.

Display one or more tuples in a table that binds to CDT management. To display the tuples, enter the CHNL:PROT level of PMDEBUG command, and type:

<DISPTBL table_id [<tuple_no> | R <begtuple> <endtuple> | all]

where

table_id	is the name of the table that appears
tuple_no	is the number of a specified tuple that appears
R	is a range of tuples that appear
begtuple	is the beginning tuple of the range
endtuple	is the end tuple of the range
all	is display every tuple in the table

and press Enter.

If table identification is given, every tuple appears in the list. Press the RETURN key to abort list creation.

Bulk data update

When the two units of the RSC-M are InSv, the inactive unit requests a bulk transfer of critical dynamic data. The inactive unit requests the data from the active unit. These data help to maintain established calls and continue call processing if a SWACT occurs. This bulk transfer is a bulk data update. If the inactive unit is out-of-service (OOS), the inactive unit requests a bulk data update when an RTS occurs.

Bulk data include:

- AN status data
- P-side status data
- C-side status (open/closed) data
- call processing data

An example of call processing data is the connection of a specified line circuit to a specified PCM30 channel.

A bulk data update transfers the following information from the active RSC-M unit to the inactive unit. The update transfers the information when the inactive unit is RTS:

- the AN status (InSv or BSY)
- frequency selective ringing (FSR) codes
- subscriber states (idle or BSY)

A bulk data update updates the inactive unit of the RSC-M with the active unit.

Dynamic data update

Dynamic data updates occur continuously. In the inactive unit, the system updates the data that change in the active unit. The dynamic data updates include the following information:

- the AN status (InSv or BSY)
- the FSR codes
- subscriber states
- the channel reassignment
- port states
- the PCM30 link information

When the bulk transfer of critical data is complete, communication continues between the units. Information can continue to flow from the active unit to the inactive unit. This flow of information is called an ongoing update. When the data change, the system updates the inactive unit through an ongoing update. The inactive unit maintains the ability to seize call processing from the mate if a SWACT occurs.

The following table lists critical dynamic data that transfer to the inactive unit. The active unit sends the critical dynamic data to the mate. The active unit first sends the data in bulk form. The active unit begins to send the data continuously as the data in the active unit change.

Critical dynamic data

Dynamic data	Condition for change
Call data	The system establishes or disconnects call
Terminal status	Terminal (line or trunk) is put in service or set to OOS.
Port status	A request for a P- or C-side port change in state (open or close) occurs.
PCM30 maintenance	The system enables or disables maintenance or data synchronization that reports over PCM30 links.
P-side node status	The P-side node (AN) is BSY or RTS.
Protection switching	The system enables, disables, switches or unswitches protection switching.
Nailed-up connections	The system establishes or takes down P-side to P-side nailed-up connection for special services.

The inactive unit can use dynamic data to seize call processing from the mate and retain established calls.

Remote Switching Center Multi-access (RSC-M)

Functional groups

BAS00012

Release applicability

XPM07

Requirements

Future software releases provides the requirement information for the Remote Switching Center Multi-access (RSC-M).

Description

This function describes the RSC-M peripheral with access multiplexers capabilities (AMC). The RSC-M is an international, remote common peripheral module (CPM). The module supports time-division multiplexing (TDM) access from generic AMCs.

Subscribers on AMCs connect to the exchange through 2Mb/s pulse coded modulation (PCM30) links. The RSC-M acts as a central hub for the connection of the 2Mb/s streams. The RSC-M is a remote replacement for host line group controllers (LGC) and line concentrating modules (LCM) with PCM line drawer (PLD) interfaces. The RSC-M allows remote external subscriber lines that connect to AMCs, access to Digital Multiplex Systems (DMS). The RSC-M allows the lines access to DMS through virtual lines over PCM30 carriers. The RSC-M provides access in the same way as the host PLD functions.

Operation

An RSC-M line is not a physical line circuit. An RSC-M line is a 64 Kb/s (bearer) channel in a 32 Mbyte/s PCM30 carrier. Carriers terminate on the RSC-M peripheral and not a Digital Trunk Controller (DTC). Data is entered in the channels as virtual lines.

The AMC, a non-concentrating type interface, uses channel associated signaling (CAS) protocol with dedicated peripheral side (P-side) bearer (speech) channels. For each subscriber line on the AMC node, the system maps a specified voice channel on a P-side PCM30 link. Central side (C-side) concentration of channels occurs like LCMs.

Remote Switching Center Multi-access (RSC-M) (continued)

A standard DMS 28 in. cabinet contains RSC-Ms. A standard DMS 28 28 in. cabinet contains a maximum of four shelves. The line group controller supports groups of main and extension (EXT) shelves. The minimum configuration requires one main shelf.

- On the C-side, each RSC-M shelf can connect to a Line Group Controller Overseas (LGCOi+) host peripheral. The LGCOi+ is entered as a PCM30 Line Group Controller (PLGC). One LGCOi+ supports a maximum of two RSC-M main and extension shelves.
- On the P-side, an RSC-M shelf supports a maximum of 46 PCM30 links that support a maximum of 1380 CAS lines. An RSC-M main shelf can support a maximum of 22 PCM30 links. Each half EXT shelf can support an additional 24 PCM30 links. Use links 22 and 23 for maintenance.

The RSC-M channel capacity appears in the following table.

Channel capacity

Entity	Interface	Main shelf	EXT shelf	Maximum Main & Extension
C-side links	PCM30 links	16	0	16
C-side channels	64 Kb/s channels	480	0	480
P-side links	PCM30 links	22	24	46
P-side channels	64 Kb/s channels	660	720	1380

The system logically maps each PCM30 virtual line channel to a specified private branch exchange (PBX), or subscriber line that a line card in the AMC supports. At the DMS switch, each virtual line is entered as a line of the appropriate type. Physical line information is entered at the AMC and correlated with the virtual line information in the DMS switch.

The RSC-M PM is entered in table remote cluster controller inventory (RCCINV) as RCO2. Each virtual line is assigned to a logical slot in table line inventory (LNINV). The RSC-M unit supports 1380 lines with a half-shelf EXT. The RSC-M unit cannot contain data like an LCM. An LCM has a maximum capacity of 640 lines. Each RSC-M unit has associated virtual line modules in table RSC-M translate (GPPTRNSL). The LNINV entry for a given virtual line includes a reference to the RSC-M line module to which the entry belongs. A line module is present for carrier groups 0–15, 16–31, 32–47, and the lines that the groups support.

Remote Switching Center Multi-access (RSC-M) (continued)

Note 1: This document does not cover translation datafill information for the AMC node.

Note 2: This document does not cover how to provision of the AMC node.

Limits

The RSC-M module can handle a specified volume of traffic from a PBX interface. Traffic throughput from PBX lines can be much higher than from station lines, because of concentration. The PBXs that connect to RSC-M lines can encounter additional concentration in the RSC-M. A risk of overload is present if the lines carry high volumes of traffic.

Interactions

The interactions of datafill and call processing include the following:

- new lines-type definition
- inventory tables changes
- static data and lines maintenance support

Activation and deactivation by the end user

The RSC-M functionality requires activation by the operating company.

Billing

The RSC-M does not affect billing.

Station Message Detail Recording

The RSC-M does not affect Station Message Detail Recording.

Datafilling office parameters

There are no office parameters.

Datafill sequence

The RSC-M translations tables necessary for basic call processing on CAS AMCs appear in the following table. The tables appear in the order in which the user enters data.

Remote Switching Center Multi-access (RSC-M) (continued)

Datafill tables for RSC-M interfaces

Table	Purpose of table
CLLI	Common language location identifier. Identifies the far end of each announcement, tone, trunk group and test trunk. Also identifies national milliwatt test lines, and service circuit used in the RSC-M subsystem.
SITE	Site. Allows the DMS switch to recognize the remote equipment tied to the host.
PMLOADS	Peripheral module loads. Stores a load map between the load names and devices that contains the loads. This permits auto load to locate load files without the intervention of operating company personnel.
PMNODES	Peripheral module nodes. Read-only table, that the DMS switch uses to control XMS-based peripheral module (XPM) unit node tables. The system enters data in table PMNODES when entries are added or changed in inventory tables. An entry is present in table PMNODES for the subtending nodes of each XPM.
LTCINV	Line trunk controller inventory. Contains the inventory data, except the P-side link assignment, for PM types. This table defines the PLGC as the datafill for the LGCOi+ on the C-side of the RCO2.
CARRMTC	Carrier maintenance control. Allows the DMS switch administration to enter maintenance control information in peripherals, out-of-service (OOS) limits, alarms, and system return-to-service (RTS) occurrences.
RCCINV	Remote cluster controller inventory. Contains the RSC-M inventory data, except the P-side link assignments. Table RCCINV allows a limited set of standard plain old telephone service (POTS) line execs, and an EXT shelf definition for RSC-Ms. Table RCCINV stores data about the RSC-M node and the C-side connections to the C-side host node.
Note: The SERVORD tool normally adds the lines. Refer to the SERVORD section of this document for an example.	

—continued—

Remote Switching Center Multi-access (RSC-M) (continued)

Datafill tables for RSC-M interfaces (continued)

Table	Purpose of table
RCCPSINV	Remote cluster controller P-side line inventory. Identifies the RSC-M module type, number, and port identification of the P-side links. Associates types of P-side links that connect the RSC-M and the remote with RSC-M ports. Provides the ability to add, delete, change, and list data about the RSC-M node P-side ports. The key for this table is the same as the key for table RCCINV.
GPPTRNSL	RSC-M translations. Contains definition of P-side nodes of RSC-Ms needed for line announcement. These nodes are the line modules, defined later as the key for RSC-M lines in table LNINV. Enter data in table GPPTRNSL to allow the entry of data in table LNINV, after tables RCCINV and RCCPSINV define the RSC-M.
LNINV	Line circuit inventory. Contains an inventory of subscriber lines and associated line cards. Table LNINV is used for RSC-M line maintenance and describes the virtual location of the line cards in an AMC node. Table LNINV contains physical defined address locations of line cards in RSC-M CAS AMCs interfaces.
Note: The SERVORD tool normally adds the lines. Refer to the SERVORD section of this document for an example.	
—end—	

Datafilling table CLLI

Common language location identifier (CLLI) codes identify the far end of each announcement, tone, trunk group, test trunk, national milliwatt test lines, and service circuit.

The datafill for RSC-M for table CLLI appears in the following tables. Fields that apply directly to RSC-M appear. For complete details on table CLLI, refer to the data schema section of the *Translations Guide*.

Remote Switching Center Multi-access (RSC-M) (continued)

Datafilling table CLLI

Field	Subfield or refinement	Entry	Description
CLLI		refer to subfields	Common language location identifier. This 16-character field identifies the far end of each announcement, tone, trunk group, test trunk, national milliwatt test lines, and service circuit.
	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.
	SUFX	alphanumeric	Suffix. This one-character code identifies trunk groups that terminate at the same CLLI location.
ADNUM		0 to a number one less than the size of table CLLI that appears in table DATASIZE	Administrative trunk group number. Enter a number from 0 to a number one less than the value of table CLLI, that appears in table DATASIZE. The value must be different.
TRKGRSIZ		0–2047	Trunk group size. This four-character field is equal to the maximum quantity of trunk members expected to be assigned to the trunk group.

Note 1: The SIZE field in table data size (DATASIZE) allocates memory for the entry with field DATSKEY equal to CLLI.
Note 2: The maximum number of CLLI codes is 8192.

—continued—

Remote Switching Center Multi-access (RSC-M) (continued)

Datafilling table CLLI (continued)

Field	Subfield or refinement	Entry	Description
ADMININF		refer to subfields	Administrative information. Operating company personnel use 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.
	OFFCLS	alphanumeric	Office class. This field is optional input for administrative purposes.
	TRKGRTYP	alphanumeric	Trunk group type. This field is optional input for administrative purposes.
Note 1: The SIZE field in table data size (DATASIZE) allocates memory for the entry with field DATSKEY equal to CLLI. ***Note 2:*** The maximum number of CLLI codes is 8192.			
—end—			

Datafill example for table CLLI

Sample datafill for table CLLI appears in the following example.

MAP display example for table CLLI

```
     CLLI   ADNUM  TRKGRSIZ                    ADMININF
-------------------------------------------------------
 MH5_RSCM   1204            10                   RSCM
```

Datafilling table SITE

Table SITE contains data for the switching unit and for the remote locations that connect to the switching unit. Before a LEN can be assigned and before you can enter data in a PM, enter data in table SITE. Enter data in table SITE to allow the DMS switch to recognize the equipment.

The first entry in table SITE must be HOST for the host switching unit. The operating company defines site names for the remote locations.

The datafill for RSC-M for table SITE appears in the next table. Fields that apply directly to RSC-M appear. For complete details on table SITE, refer to the data schema section of the *Translations Guide*.

Datafilling table SITE

Field	Subfield or refinement	Entry	Description
NAME		alphanumeric	Site name. Enter the site name assigned to the remote switching unit. The first character must be a letter. Site names can be a maximum of 4 characters in length. The PM type names cannot be used for site names. The HOST is not a valid entry for RSC-M PMs.
LTDSN		00–99	LEN test desk site number. Enter a different two-digit number required to dial the site that appears under field NAME.
Note 1: The system allocates memory for a maximum of 32 sites. ***Note 2:*** Make changes to fields with multiple entries in the PROMPT mode.			

—continued—

Remote Switching Center Multi-access (RSC-M) (continued)

Datafilling table SITE (continued)

Field	Subfield or refinement	Entry	Description
MODCOUNT		0	Module count. Range is 0 to 1000.
OPVRCLLI		Ver90 or alphanumeric	Operator verification CLLI. Enter the CLLI assigned to the operator verification trunk group at the remote location.
	POINT	0–6	Point. Enter the signal distributor point number in the trunk module circuit number assigned to the alarm. Where entry is for the host switching unit, leave blank.

Note 1: The system allocates memory for a maximum of 32 sites.
Note 2: Make changes to fields with multiple entries in the PROMPT mode.

—end—

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
   ----------------------------------------------------
         RSCM
      00             6         MH5_RSCM            $
```

Datafilling table PMLOADS

Table PMLOADS stores the device location of every PM loadfile. This process permits the XPM automatic loading feature to locate load files without the interruption of operating company personnel.

Table PMLOADS lists the active and backup loadfiles. The active loadfile is the default load used with the LOADPM command and most system activities. The system uses the backup loadfile if a problem occurs when the system loads or returns the active loadfile to service. The backup loadfile is the unpatched loadfile shipped. The active and backup loadfiles are used during the application and removal of patches.

Remote Switching Center Multi-access (RSC-M) (continued)

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 a problem occurs when the system loads or returns the active loadfile to service
- the file locations
- the update active loadfile field, indicates if the site wants the system to update the active file. The feature allows the system to load the patched loadfile in the XPM if a reload is necessary. A reload can simplify the reload and recovery of the XPM. The system updates the active file information through loadfile patching, if loadfile patching is enabled.

The system uses active and backup files to load and recover the XPM load files.

Enter the XPM load files in table PMLOADS before you enter the files in table RCCINV. Table RCCINV enforces this rule.

Note: An exception to this rule occurs during the first entry of data, and during dump and restore. During these times, the system enters the tuples in table PMLOADS when you enter the RCCINV tuples.

The datafill for RSC-M for table PMLOADS appears in the following table. Fields that apply directly to RSC-M appear. For complete details on table PMLOADS, refer to the data schema section of the *Translations Guide*.

Datafilling table PMLOADS

Field	Subfield or refinement	Entry	Description
LOADNAME		alphanumeric	Peripheral module load name. Enter the XPM load file name. The range is a maximum of 32 characters.
ACTFILE		alphanumeric	Active load file name. The name of the active XPM loadfile. This name can be the original loadfile or a patched loadfile (PPXL). Range is a maximum of 32 characters.

—continued—

Remote Switching Center Multi-access (RSC-M) (continued)

Datafilling table PMLOADS (continued)

Field	Subfield or refinement	Entry	Description
ACTVOL		alphanumeric	Active volume. Identifies the device that stores the active loadfile. Range is the set of disk drive unit (DDU) volumes and system load module (SLM) disks available to the computing module (CM) (S00DXPM). The range is a maximum of 16 characters.
BKPFILE		alphanumeric	Backup load file name. Identifies the name of the backup XPM loadfile. The name of this loadfile must be the same as the LOADNAME field. The range is a maximum of 32 characters
BKPVOL		alphanumeric	Backup volume. The device that stores the backup loadfile. The range is the set of DDU volumes and SLM disks available to the CM that is, S00DXPM. The range is a maximum of 16 characters.
UPDACT		alphanumeric	Update active filename. Now not in use. The default value is N.
		—end—	

Datafill example for table PMLOADS

Sample datafill for table PMLOADS appears in the following example.

MAP display example for table PMLOADS

```
         LOADNAME
         ACTFILE     ACTVOL
         BKPFILE     BKPVOL      UPDACT
-----------------------------------
         KRI07BE
         KRI07BE     S001DLOADS
         KRI07BE     S001DLOADS      N
```

Datafilling table PMNODES

Table peripheral module nodes (PMNODES) is a read only table, that the CM uses to control XPM unit node tables. The system enters data in table PMNODES when you add or change entries in inventory tables. An entry is present in table PMNODES for the subtending nodes of each XPM. The system updates fields to reflect CM control of configuration data tables (CDT) in the XPM nodes. When the system deletes nodes, holes can appear in the table that cannot be filled when a new node is added. The system manages tuples in table PMNODES to make sure subtending nodes have a higher index than the head node.

The datafill for RSC-M for table PMNODES appears in the following example. Fields that apply directly to RSC-M appear. For complete details on table PMNODES, refer to the data schema section of the *Translations Guide*.

Datafilling table PMNODES

Field	Subfield or refinement	Entry	Description
TABKEY		0 to 4095 0 to 117	Table key. A space separates this two-part key space. This key identifies the XPM that contains the unit node table. The first part is host external node number. The second part is internal index number.
EXTNDNUM		0 to 4095	External node number. External number that the CM assigns to the XPM that field TABKEY identifies.
NODETYPE		RCC_NODE	Node type of XPM. Generic type of PM node. Examples: RCC_NODE, LCM_NODE, and RCS_NODE.
PMTYPE		RCO2	PM type. Specified PM type assigned to the node. Examples: RCO2, LCME, SMSR, and RCC.
LEVEL		0 to 15	PM level. The number of device levels. The XPM node is separate from the messaging host.

—continued—

Remote Switching Center Multi-access (RSC-M) (continued)

Datafilling table PMNODES (continued)

Field	Subfield or refinement	Entry	Description
MSGHOST		0 to 4095	Messaging host. External node transfers messages to this node. A messaging host must be able to transfer messages.
PHYSHOST		0 to 4095	Physical host. External node to which this XPM node physically attaches.
PORTS		0 to 127	Number of ports. Number of P-side ports in the physical host that this XPM node requires.
STPORT		0 to 255	Starting port. First P-side port in the physical host that this XPM node uses.
TERMS		1 to 2048	Number of terminals. Total number of terminals in the physical host that this XPM node requires.
STTERM		0 to 4095	Starting terminal. First terminal in the physical HOST that this XPM node uses.
PROTOCOL		alphanumeric	Message protocol. Type of message protocol that the physical host uses 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). Enter Y if this node is configured as part of an IPML.
MODE		T or P	Table entry mode. Entries in table are made through the terminal (T) or port (P) index process.
SLLCON		Y or N	Site line load control. Enter Y if this node is at a site through Essential Line Service Protection (ESP), or other site line load control features.
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.

—continued—

Datafilling table PMNODES (continued)

Field	Subfield or refinement	Entry	Description
PACKED		Y or N	Packed internal tables. Enter Y if internal node tables are packed on this node. Before this feature, the node table was compressed when the user used NODATASYNC option to RTS the XPM. Compression occurs when the system takes the two units of an XPM out-of-service (OOS) and the CM loads the units.
SUPPCDM		Y Y or N N	Support CDT. Enter Y for each unit if the system supports CDT management.
CMINCTRL		Y or N	CM node control. Enter Y if the node is under CM control.
		—end—	

Datafill example for table PMNODES

Datafill for an RSC-M node, with a remote cluster controller (RCC) node that connects to the RSC-M, appears in the following example.

MAP example for table PMNODES (RSC-M tuple)

```
Table: PMNODES
  TABKEY  EXTNDNUM   NODETYPE   PMTYPE LEVEL MSGHOST  PHYSHOST  PORTS
  33   1        33   RCC_NODE     RCO2     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
```

Datafilling table LTCINV

Table line trunk controller inventory (LTCINV) contains the inventory data, except the P-side link assignment, for PM type PLGC. With the RSC-M configuration, this table contains descriptions of LGCOOi+ as PLGC on the C-side of the RSC-M.

Remote Switching Center Multi-access (RSC-M) (continued)

The datafill for basic call processing for table LTCINV appears in the following table. Fields that apply directly to basic call processing appear. Refer to the data schema section of the *Translations Guide* for a description of the other fields. The system adds a field that contains the name of the loadfile for the electrically erasable programmable read-only memory (EEPROM).

Datafilling table LTCINV

Field	Subfield or refinement	Entry	Description
LTCNAME		refer to subfields	Link trunk controller name. Subfields: XPMTYPE and XPMNO.
	XPMTYPE	PLGC	XPM type. Enter PLGC. ***Note:*** This entry is PLGC for an LGCOi+.
	XPMNO	0 to 255	XPM number. Enter the number of the XPM.
FRTYPE		see list	Frame type. Enter LGE for the LGCOi+. Enter the location of the C-side PM in fields FRNO, SHPOS, FLOOR, ROW, and FRPOS.
EQPEC		alphanumeric	Product equipment code. Enter the frame PEC.
LOAD		alphanumeric	Load. Enter load for PM use. The load must display a load that appears in table PMLOADS.
EXECTAB		TRMTYPE, EXEC	Executive table. Subfields: TRMTYPE, EXEC, and CONTMARK. Enter the terminal type and associated execs together.
	TRMTYPE	refer to list	Terminal type. Enter the terminal models to be used. The POTS is for normal lines, KSET for MBS terminals, ABTRK for normal trunks, and RMM_TERM is for MTC trunks.
	EXEC	alphanumeric	Executive programs. Enter the execs for the terminal type.

Note 1: Make changes to fields with multiple entries in the PROMPT mode. In nonprompt mode, you can leave out current 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 are entered. Enter the end mark ($) in fields with multiple possible entries after the last entry.

—continued—

Remote Switching Center Multi-access (RSC-M) (continued)

Datafilling table LTCINV (continued)

Field	Subfield or refinement	Entry	Description
CSLNKTAB		refer to subfields	C-side link table. Subfields: NMPAIR and NMPORT.
	NMPAIR	0 to 31	Network module pair number. Enter the network link where the PM is assigned, that corresponds to PM C-side links 0 through 15.
	NMPORT	0 to 63	Network module port. Enter the network port that corresponds to the above link.
OPTCARD		see list	Optional card. This field is a vector with a maximum of ten entries. Enter this field when the PLGC/LGCOi+ includes the universal tone receiver (UTR) or GTR TONE, message card and the NT7X05 Peripheral/Remote Loader-16 (PRL). If the PLGC/LGCOi+ includes the CMR card, enter the CMRLOAD. ***Note 1:*** Make changes to fields with multiple entries in the PROMPT mode.
TONESET		AUS100	TONESET. Enter AUS100. Range of values include DEFAULT, NORTHAM, CHINA100, and AUS100.

Note 1: Make changes to fields with multiple entries in the PROMPT mode. In nonprompt mode, you can leave out current 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 are entered. Enter the end mark ($) in fields with multiple possible entries after the last entry.

—continued—

Remote Switching Center Multi-access (RSC-M) (continued)

Datafilling table LTCINV (continued)

Field	Subfield or refinement	Entry	Description
PROCPEC		MX77AA MX77AA or AX74AA AX74AA	Processor equipment product engineering codes. One PEC is required for each LTCO unit. Enter the PEC for unit 0 first. The PEC must reflect the minimum firmware capabilities in the processor complex of each unit. ***Note:*** When the NT7X05 PRL is entered as an optional card, enter MX77AA MX77AA. The AX74AA AX74AA is not allowed as a valid value when the NT7X05 PRL is entered as an optional card. The AX74AA AX74AA cannot be a valid value because the NTAX74 CAP does not support NT7X05 PRL functionality.
E2LOAD		alphanumeric	EEPROM file. Contains the name of the loadfile loaded in the NTMX77AA EEPROM or the optional NTAX74AA EEPROM. ***Note:*** When you enter the NT7X05 PRL as an optional card, enter the loadfile name for the NTMX77 UP. The optional NTAX74AA CAP does not support NT7X05 PRL functionality.
OPTATTR			Optional attribute. If the optional attribute is not a DTC for CCS7, leave blank. Subfield: CONTMARK.

Note 1: Make changes to fields with multiple entries in the PROMPT mode. In nonprompt mode, you can leave out current 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 are entered. Enter the end mark ($) in fields with multiple possible entries after the last entry.

—continued—

Remote Switching Center Multi-access (RSC-M) (continued)

Datafilling table LTCINV (continued)

Field	Subfield or refinement	Entry	Description
PEC6X40		alphanumeric	The 6X40 equipment PEC. Enter the version of the NT6X40 you must use.
EXTINFO			EXTENSION_INFO.

Note 1: Make changes to fields with multiple entries in the PROMPT mode. In nonprompt mode, you can leave out current 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 are entered. Enter the end mark ($) in fields with multiple possible entries after the last entry.

—end—

Datafill example for table LTCINV

Sample datafill for table LTCINV, for an RSC-M provisioned with the NTMX77AA UP, appears in the following example.

MAP example for table LTCINV entered for NTMX77AA UP

```
Table: LTCINV

LTCNAME   FRTYPE FRNO SHPOS FLOOR ROW FRPOS EQPEC  LOAD
_____________________________________________________
PLGC 1     LGE    1   18    0     C   6    6X02AG  OLG07xx

EXECTAB
CONTMARK
_____________________________________________________
(POTS POTSEX)(KEYSET KSETEX)(RMM_TERM RSMEX)(ABTRK DTCEX)$

CSLNKTAB
_____________________________________________________
(9 17)(13 61)(5 14)(0 29)(1 30)(2 31)(3 28)(4 29)     $

OPTCARD                          CMRLOAD
_____________________________________________________
(UTR6)(ISP16)(RAM6X69) (7X05)    (CMR18 CMRAG03)      $

TONESET   PROCPEC          E2LOAD     OPATTR  PEC6X40
_____________________________________________________
AUS100    MX77AA  MX77AA   MX77NH08   $       6X40AC
```

Remote Switching Center Multi-access (RSC-M) (continued)

Note 1: One LGCOi+ supports a maximum of two RSC-M main and extension shelves. Datafill tables and MAP displays indicate the PLGC is the host peripheral. For this reason, the LGCOi+ is referred to as a PCM30 line group controller (PLGC).

Note 2: `xx` in field LOAD and `xxxx` in field E2LOAD represent alphanumeric entries, for example `B1` and `XE01`, in that order.

Note 3: If the shelf has a processor that is not NTMX77 or the optional NTAX74, the system enters the value NILLOAD in field E2LOAD.

Datafilling table CARRMTC

Table carrier maintenance (CARRMTC) allows the DMS switch administration to enter information. This information includes maintenance control information in peripherals, out-of-service limits for alarms, and system return-to-service occurrences.

Table CARRMTC contains the attributes of PCM30 links, like the line coding and frame formats, and maintenance control information.

A carrier maintains communication on links that connect DMS peripherals to channel banks, remote DMS peripherals, remote-to-remote DMS peripherals, or AMC nodes.

A maximum of 16 entries are present in table CARRMTC. These entries are present for each type of peripheral that can provide carrier links in the DMS switch. These entries are used in field CARRIDX of table RCCPSINV when carriers are entered.

The system makes the following checks between table CARRMTC and table RCCPSINV:

- When you enter a carrier index (CARRIDX) in table RCCPSINV, an entry for the PM type, in this event the RSC-M, must be present in table CARRMTC.
- When the system deletes an entry from table CARRMTC, carriers in table RCCPSINV cannot reference the entry. In other occurrences, the system rejects the deletion command.
- When the system changes an entry in table CARRMTC, the system checks table RCCPSINV to determine if the in-service (INSV) carriers reference the entry. If the INSV carriers reference the entry, the system rejects the change command, and a list of INSV carriers appears.

The DMS switch adds the first tuple for the RSC-M to table CARRMTC during initial program load (IPL) or first restart after IPL. The entry is index 0 and has the value DEFAULT in the TMPLTNM field, and default values

for other fields. The default tuple is a CAS interface and has the value of CAS in the signaling type (SIGNTYPE) subfield in field attributes (ATTR).

The system cannot delete this tuple. The system can change fields ES, SES, and thresholds for frame and slip losses. Add tuples other than the default tuple before the tuples can be referenced in table RCCPSINV.

The system can delete these tuples when PCM30 carriers do not associate with the tuples. The system can change tuples in table CARRMTC when the associated PCM30 carriers are manually busy (ManB) or offline (Offl).

The datafill for the RSC-M for table CARRMTC appears in the following tables. Fields that apply directly to RSC-M appear. For complete details on table CARRMTC, refer to the data schema section of the *Translations Guide*.

Datafilling table CARRMTC

Field	Subfield or refinement	Entry	Description
CSPMTYPE		RCO2	C-side node PM type. Enter the PM type of the node on the C-side of the carrier link (in this event, RCO2).
TMPLTNM		alphanumeric	Template name. Enter the template name for the RSC-M (maximum of 16 characters). This entry also appears in the inventory tables, field CARRIDX. The default value is DEFAULT.
Note 1: The DMS switch adds the first tuple for the RSC-M to table CARRMTC during IPL or first restart after IPL. The CAS is SIGNTYPE of the default tuple and the switch cannot delete or change this tuple. ***Note 2:*** Add tuples other than the default tuple before the tuples can be referenced in the table RCCPSINV. ***Note 3:*** Out-of-service timers in the AMC must be greater than the equivalent timers in the DMS switch. ***Note 4:*** Return-to-service timers in the AMC must be smaller than the equivalent timers in the DMS switch.			

—continued—

Remote Switching Center Multi-access (RSC-M) (continued)

Datafilling table CARRMTC (continued)

Field	Subfield or refinement	Entry	Description
RTSML		numeric (0–255)	RTS maintenance limit. Enter the number of times in the audit interval that a carrier the system RTS before the system issues a warning. An entry of 255 disables this feature.
RTSOL		numeric (0–255)	RTS OOS limit. Enter the number of times in the audit interval that the system can RTS a carrier before the carrier is permanently OOS. An entry of 255 disables this feature.
ATTR		see subfield	Attribute. This field consists of subfield SELECTOR and refinements.
	SELECTOR	D30	Selector. For RSC-M enter D30.
	CARD	MX82AA	Card. Enter the PEC of the PCM30 interface card.
	VOICELAW	A_LAW	Voice law. Enter the voice law used in the carrier. A_LAW is used for international switches
	NATLBIT	NATL or INTERNATL	National bit. Enter INTERNATL if the national bit is international.
	LLFAOST	numeric (0 to 255) 30=3 sec	Local loss of frame alignment OOS time. Enter the local loss of frame alignment OOS time limit. This value appears in units of 100 ms. The default value for this field is 30.

Note 1: The DMS switch adds the first tuple for the RSC-M to table CARRMTC during IPL or first restart after IPL. The CAS is SIGNTYPE of the default tuple and the switch cannot delete or change this tuple.
Note 2: Add tuples other than the default tuple before the tuples can be referenced in the table RCCPSINV.
Note 3: Out-of-service timers in the AMC must be greater than the equivalent timers in the DMS switch.
Note 4: Return-to-service timers in the AMC must be smaller than the equivalent timers in the DMS switch.

—continued—

Remote Switching Center Multi-access (RSC-M) (continued)

Datafilling table CARRMTC (continued)

Field	Subfield or refinement	Entry	Description
ATTR (continued)	LLFARST	numeric (0 to 255) 30=3 sec	Local loss of frame alignment RTS. Enter the local loss of frame alignment RTS time limit. This value appears in units of 100 ms. The default value for this field is 30.
	LLMAOST	numeric (0 to 255) 30=3 sec	Local loss of multiframe alignments OOS time. Enter the local loss of multiframe alignments OOS time limit. This value appears in units of 100 ms. The default value for this field is 30.
	LLMARST	numeric (0 to 255) 30=3 sec	Local loss of multiframe alignment RTS time. Enter local loss of multiframe alignment RTS time limit. This value appears in units of 100 ms. The default value for this field is 30.
	RFAIOST	numeric (0 to 255) 30=3 sec	Remote frame alignment indication OOS time. Enter the remote frame alignment indication OOS time. This value appears in units of 100 ms. The default value for this field is 30.

Note 1: The DMS switch adds the first tuple for the RSC-M to table CARRMTC during IPL or first restart after IPL. The CAS is SIGNTYPE of the default tuple and the switch cannot delete or change this tuple.
Note 2: Add tuples other than the default tuple before the tuples can be referenced in the table RCCPSINV.
Note 3: Out-of-service timers in the AMC must be greater than the equivalent timers in the DMS switch.
Note 4: Return-to-service timers in the AMC must be smaller than the equivalent timers in the DMS switch.

—continued—

Remote Switching Center Multi-access (RSC-M) (continued)

Datafilling table CARRMTC (continued)

Field	Subfield or refinement	Entry	Description
ATTR (continued)	RFAIRST	numeric (0 to 255) 30=3 sec	Remote frame alignment indication RTS time. Enter the remote frame alignment indication RTS time. This value appears in units of 100 ms. The default value for this field is 30.
	RMFAIOST	numeric (0 to 255) 30=3 sec	Remote multiframe alignment indication OOS time. Enter the remote frame alignment indication OOS time. This value appears in units of 100 ms. The default value for this field is 30.
	RMFAIRST	numeric (0 to 255) 30=3 sec	Remote multiframe alignment indication RTS time. Enter the remote frame alignment indication RTS time. This value is expressed in units of 100 ms. The default value for this field is 30.
	AISOST	numeric (0 to 255) 30=3 sec	Alarm indication signal OOS time. Enter the alarm indication signal OOS time limit. This value appears in units of 100 ms. The default value for this field is 30.
	AISRST	numeric (0 to 255) 30=3 sec	Alarm indication signal RTS time. Enter the alarm indication signal RTS time limit. This value appears in units of 100 ms. The default value for this field is 30.

Note 1: The DMS switch adds the first tuple for the RSC-M to table CARRMTC during IPL or first restart after IPL. The CAS is SIGNTYPE of the default tuple and the switch cannot delete or change this tuple.
Note 2: Add tuples other than the default tuple before the tuples can be referenced in the table RCCPSINV.
Note 3: Out-of-service timers in the AMC must be greater than the equivalent timers in the DMS switch.
Note 4: Return-to-service timers in the AMC must be smaller than the equivalent timers in the DMS switch.

—continued—

Remote Switching Center Multi-access (RSC-M) (continued)

Datafilling table CARRMTC (continued)

Field	Subfield or refinement	Entry	Description
ATTR (continued)	AIS16OST	numeric (0 to 255) 4=400 msec	OOS time for AIS16 alarm. Enter the OOS time for the AIS16 alarm. This value appears in units of 100 ms. The default value for this field is 4.
	AIS16RST	numeric (0 to 255) 4=400 msec	RTS time for AIS16 alarm. Enter the RTS time for the AIS16 alarm. This value appears in units of 100 ms. The default value is for this field is 4.
	CRCOST	numeric (0 to 255) 5=500 msec	OOS time for CRC4 alarm. Enter the OOS time for the CRC4 alarm. This value appears in units of 100 ms. The default value for this field is 5.
Note 1: The DMS switch adds the first tuple for the RSC-M to table CARRMTC during IPL or first restart after IPL. The CAS is SIGNTYPE of the default tuple and the switch cannot delete or change this tuple. ***Note 2:*** Add tuples other than the default tuple before the tuples can be referenced in the table RCCPSINV. ***Note 3:*** Out-of-service timers in the AMC must be greater than the equivalent timers in the DMS switch. ***Note 4:*** Return-to-service timers in the AMC must be smaller than the equivalent timers in the DMS switch.			

—continued—

Remote Switching Center Multi-access (RSC-M) (continued)

Datafilling table CARRMTC (continued)

Field	Subfield or refinement	Entry	Description
ATTR (continued)	CRCRST	numeric (0 to 255) 5=500 msec	RTS time for CRC4 alarm. Enter the RTS time for the CRC4 alarm. This value appears in units of 100 ms. The default value for this field is 5.
	SIGNTYPE	CAS	Signaling type. Enter CAS for channel-associated signaling
Note 1: The DMS switch adds the first tuple for the RSC-M to table CARRMTC during IPL or first restart after IPL. The CAS is SIGNTYPE of the default tuple and the switch cannot delete or change this tuple. ***Note 2:*** Add tuples other than the default tuple before the tuples can be referenced in the table RCCPSINV. ***Note 3:*** Out-of-service timers in the AMC must be greater than the equivalent timers in the DMS switch. ***Note 4:*** Return-to-service timers in the AMC must be smaller than the equivalent timers in the DMS switch.			
—end—			

Datafill example for table CARRMTC

Sample datafill for table CARRMTC appears in the following example.

MAP display example for table CARRMTC

```
CSPMTYPE TMPLTNM RTSML  RTSOL                ATTR
-------------------------------------------------
RCO2 DEFAULT 255 255 D30 NTMX82AA A_LAW NATL 4 4 17 255
                 4 4 17 255 4 4 17 255 4 4 17 255 4 4 17 255
                 130 20 17 255 N 4 4 17 255  N N 5 5 205
                 914 G714 CAS
```

Remote Switching Center Multi-access (RSC-M) (continued)

Datafilling table RCCINV

Table RCCINV defines the RSC-M. To delete a RSC-M node from table RCCINV, you must delete tuples in GPPTRNSL that correspond to that RSC-M node first.

Datafill for RSC-M for table RCCINV appear in the following table. Fields that apply directly to RSC-M appear. For complete details on table RCCINV, refer to the data schema section of the *Translations Guide*.

Datafilling table RCCINV

Field	Subfield or refinement	Entry	Description
RCCNAME		refer to subfields	Remote cluster controller name. This field consists of subfields XPMTYPE and XPMNO.
	XPMTYPE	RCO2	External peripheral module type. Enter the XPM type.
	XPMNO	0–255	External peripheral module number. Enter the XPM number.

Note 1: For each RSC-M that table RCCINV defines, table RCCPSINV defines a corresponding tube to allow PCM30 links to be entered on the RSC-M P-side. The PCM30 link numbers that correspond to the EXT shelf can be entered if table RCCINV defines the EXT.
Note 2: Before the switch deletes a main or EXT shelf from an RSC-M in table RCCINV, the switch must delete the P-side links from the main or EXT shelf from table RCCPSINV.
Note 3: Make changes to fields with multiple entries in the PROMPT mode.
Note 4: When you enter data in 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 applies to interface link types; DS-1, DS30, DS30A, or PCM-30. Table control issues a warning if an attempt to assign message links occurs on the same interface card. The assignment of message links to the same interface card can cause an E1 outage (failure of all message links) if the card fails.

—continued—

Remote Switching Center Multi-access (RSC-M) (continued)

Datafilling table RCCINV (continued)

Field	Subfield or refinement	Entry	Description
OPTCARD		card list	Optional cards. Enter the list of optional cards. List cards required to support the RSC-M, and appropriate optional cards.
	MX76LOC	REM	MX76 card location. Location of the NTMX76 circuit card if used. ***Note:*** The NTMX76 card is required to provide high-level data link (HDLC) protocol for the extended distance capability (EDC). EDC allows an RCO2 to operate up to 500 mi (800 km) from the host site. ***Note:*** If the NTMX76 card is used at the remote, the card must also be present at the host.
	PROTOCOL	HDLC or DMSX	Protocol. Defines if high-level data link control (HDLC) mode is present and is active. If so, the remote shelf operates in HDLC after initialization. The remote PM must be busied before you change this value. Entry is required if the NTMX76 card is datafilled.

Note 1: For each RSC-M that table RCCINV defines, table RCCPSINV defines a corresponding tube to allow PCM30 links to be entered on the RSC-M P-side. The PCM30 link numbers that correspond to the EXT shelf can be entered if table RCCINV defines the EXT.
Note 2: Before the switch deletes a main or EXT shelf from an RSC-M in table RCCINV, the switch must delete the P-side links from the main or EXT shelf from table RCCPSINV.
Note 3: Make changes to fields with multiple entries in the PROMPT mode.
Note 4: When you enter data in 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 applies to interface link types; DS-1, DS30, DS30A, or PCM-30. Table control issues a warning if an attempt to assign message links occurs on the same interface card. The assignment of message links to the same interface card can cause an E1 outage (failure of all message links) if the card fails.

—continued—

Remote Switching Center Multi-access (RSC-M) (continued)

Datafilling table RCCINV (continued)

Field	Subfield or refinement	Entry	Description
EXTINFO	see subfields	Y or N	Extension shelf information. The boolean field EXTIINFO is set to default value N (no), and indicates the occurrence of an EXT shelf. When this boolean is set to Y (yes), extra fields display to enable the datafill of RSC-M EXT shelves. This field includes the shelf parameters of the EXT that contains the following subfields: • EXTSHELF • EXTFRTYP • EXTFRNO • EXTSHPOS • EXTFLOOR • EXTFLOOR • EXTROW • EXTFRPOS • EXTEQPEC • EXTSIDE If the XPM is an RSC-M equipped with an EXT shelf, enter Y (yes) and datafill the following fields.
Note 1: For each RSC-M that table RCCINV defines, table RCCPSINV defines a corresponding tube to allow PCM30 links to be entered on the RSC-M P-side. The PCM30 link numbers that correspond to the EXT shelf can be entered if table RCCINV defines the EXT. ***Note 2:*** Before the switch deletes a main or EXT shelf from an RSC-M in table RCCINV, the switch must delete the P-side links from the main or EXT shelf from table RCCPSINV. ***Note 3:*** Make changes to fields with multiple entries in the PROMPT mode. ***Note 4:*** When you enter data in 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 applies to interface link types; DS-1, DS30, DS30A, or PCM-30. Table control issues a warning if an attempt to assign message links occurs on the same interface card. The assignment of message links to the same interface card can cause an E1 outage (failure of all message links) if the card fails.			

—continued—

Remote Switching Center Multi-access (RSC-M) (continued)

Datafilling table RCCINV (continued)

Field	Subfield or refinement	Entry	Description
EXTINFO (continued)	EXTSHELF	Y or N	Extension shelf. This field is datafilled with Y (yes) for an RSC-M with an EXT shelf. The field is a boolean with a default value of N (no). If yes, datafill the following EXT subfields.
	EXTFRTYP	CEXT	Extension shelf frame type. This field defines the type of shelf frame. Only EXT shelf type CEXT is allowed for the RSC-M.
	EXTFRNO	0–511	Extension shelf frame number. This field defines the frame number that contains the EXT shelf.
	EXTSHPOS	0 –77	Extension shelf position. This field defines the position in the frame of the EXT shelf.
	EXTFLOOR	0–99	Extension shelf floor. This field defines the floor that contains the EXT shelf.
	EXTROW	A to Z or AA to ZZ	Extension shelf row. This field defines the row that contains the EXT shelf.
	EXTFRPOS	0–99	Extension shelf frame position. This field defines the frame position where the EXT shelf is.
	EXTEQPEC	MX86AA	Extension shelf equipment product equipment code (PEC) code. This field defines the equipment PEC code of the EXT shelf. The value for RSC-M with EXT shelf of the field is MX86AA.

Note 1: For each RSC-M that table RCCINV defines, table RCCPSINV defines a corresponding tube to allow PCM30 links to be entered on the RSC-M P-side. The PCM30 link numbers that correspond to the EXT shelf can be entered if table RCCINV defines the EXT.
Note 2: Before the switch deletes a main or EXT shelf from an RSC-M in table RCCINV, the switch must delete the P-side links from the main or EXT shelf from table RCCPSINV.
Note 3: Make changes to fields with multiple entries in the PROMPT mode.
Note 4: When you enter data in 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 applies to interface link types; DS-1, DS30, DS30A, or PCM-30. Table control issues a warning if an attempt to assign message links occurs on the same interface card. The assignment of message links to the same interface card can cause an E1 outage (failure of all message links) if the card fails.

—continued—

Remote Switching Center Multi-access (RSC-M) (continued)

Datafilling table RCCINV (continued)

Field	Subfield or refinement	Entry	Description
EXTINFO (continued)	EXTSIDE	L or R	Extension shelf side. This field defines the EXT half shelf, left or right side.
Note 1: For each RSC-M that table RCCINV defines, table RCCPSINV defines a corresponding tube to allow PCM30 links to be entered on the RSC-M P-side. The PCM30 link numbers that correspond to the EXT shelf can be entered if table RCCINV defines the EXT. ***Note 2:*** Before the switch deletes a main or EXT shelf from an RSC-M in table RCCINV, the switch must delete the P-side links from the main or EXT shelf from table RCCPSINV. ***Note 3:*** Make changes to fields with multiple entries in the PROMPT mode. ***Note 4:*** When you enter data in 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 applies to interface link types; DS-1, DS30, DS30A, or PCM-30. Table control issues a warning if an attempt to assign message links occurs on the same interface card. The assignment of message links to the same interface card can cause an E1 outage (failure of all message links) if the card fails.			
—end—			

Note: The tuples in table RCCINV change through the addition of the subfield EXT_INFO. Subfield EXT_INFO helps to define extension shelves.

Remote Switching Center Multi-access (RSC-M) (continued)

Datafill example for table RCCINV

Sample datafill for table RCCINV appear in the following example.

MAP example for table RCCINV

```
RCCNAME
     FRTYPE    FRNO SHPOS     FLOOR     ROW  FRPOS     EQPEC     LOAD

                                                                  EXECTAB

CSPM                                                              CSLNKTAB

ESA       INTRASW   ADDLMSGL                                      OPTCARD
TONESET
          PROCPEC        E2LOAD                                 EXTINFO
_____________________________________________________________________________
RM10      RCO2 1
                    CRSC      1    65   1    C    2    MX85AA KRI07BF
(POTS POTSEX)  (KEYSET KSETEX)     (ABTRK DTCES)  (RMM_TERM RSMEX) (ESALINES
ESAEX)    $
    PLGC  0
                                   (   4)    (     5)       (12  )    (  13) $
y         Y         N$
                                (  UTR6 )      (RAM6X69)      ( CMR5  CMR05A ) $
UK100
MX77AA MX77AA       MX77NI05                                    N
```

Datafilling table RCCPSINV

The system adds an entry in table RCCPSINV when an RSC-M peripheral is entered in table RCCINV. The P-side link types first default to NILTYPE. The P-side links that do not have assigned hardware must remain NILTYPE. Software that is not equipped and is assigned to P-side links can generate problems that affect service.

Table RCCPSINV supports P-side port expansion for the RSC-M. The RSC-M is a CPM-based host peripheral. The RSC-M supports a maximum of 46 PCM30 links.

The datafill for RSC-M for table RCCPSINV appears in the following table. Fields that apply directly to RSC-M appear. For complete details on table RCCPSINV, refer to the data schema section of the *Translations Guide*.

Remote Switching Center Multi-access (RSC-M) (continued)

Datafilling table RCCPSINV

Field	Subfield or refinement	Entry	Description
RCCNAME		refer to subfield	Link trunk controller. This field consists of subfields XPMTYPE and XPMNO.
	XPMTYPE	RCO2	External peripheral module type. Enter the extended multi-processor system PM type RCO2.
	XPMNO	0–255	External peripheral module number. Enter the PM number.
PSLNKTAB		refer to subfield	P-side link table. You can enter a maximum of 46 PCM30 links in a RSC-M. The default is NILTYPE. This field consists of subfield EXP P-SIDES.
	EXP P-SIDES	Y	Expanded P-side platform indicator. If the entry in field XPMTYPE is RSC-M, enter Y (yes) and datafill field EXP TAB.
EXP TAB		refer to subfield	Expansion table. This field consists of subfields PSLINK and PSDATA.
	PSLINK	0–47	P-side link. This field defines the number of P-side ports. For RSC-M, enter 0-47. ***Note:*** P-side links 22 and 23 are reserved.
	PSDATA	D30	P-side data. This field describes P-side link type.
Note: Before the switch can delete an EXT from an RSC-M, the switch must delete the P-side links that belong to the EXT (that change to NILTYPE).			

—continued—

Remote Switching Center Multi-access (RSC-M) (continued)

Datafilling table RCCPSINV (continued)

Field	Subfield or refinement	Entry	Description
CARRIDX		MELCAS	Carrier index. Enter a valid template name from table CARRMTC. If this action does not occur, enter DEFAULT for the default template name in table CARRMTC.
ACTION		Y or N	Action. Enter Y (yes) if the carrier is removed from service when a hit-state alarm exceeds the OOS threshold. Enter Y when the OOS limit for frame, slip, errored-second, or severe-errored-second is exceeded. If this event does not occur, enter N (no).
Note: Before the switch can delete an EXT from an RSC-M, the switch must delete the P-side links that belong to the EXT (that change to NILTYPE).			
—end—			

Datafill example for table RCCPSINV

Sample datafill for table RCCPSINV appears in the following example.

MAP example for table RCCPSINV

```
RCCNAME           PSLNKTAB
_____________________________________________________________

RCO2   0    Y       (0 D30 MELCAS Y) (1 D30 MELCAS Y)
(2 D30 MELCAS Y) (3 D30 MELCAS Y) (4 D30 MELCAS Y)
(5 D30 MELCAS Y) (6 D30 MELCAS Y) (7 D30 MELCAS Y)
.
.(22 DS30A) (23 DS30A)
.
.
 (42 D30 MELCAS Y) (43 D30 MELCAS Y) (44 D30 MELCAS Y)
 (45 D30 MELCAS Y) (46 D30 MELCAS Y) (47 D30 MELCAS Y)
```

Datafilling table GPPTRNSL

In table CARRMTC tuple RCO2 must have field CARRIDX subfield ATTR entered as D30. Field SIGNTYPE must be entered CAS.

Remote Switching Center Multi-access (RSC-M) (continued)

Field selector (SEL) contains the definition for data selection for CAS interfaces. If CAS is selected, read-only information appears. This information is about RSC-M P-side links.

Before you delete a tuple from table GPPTRNSL, make sure that lines do not connect to the RSC-M in table LNINV. To delete the AMCs on a RSC-M, delete one or more of the tuples for that RSC-M in table GPPTRNSL. The group number specified is not important. A message requests confirmation to delete, reject, or edit this tuple. After confirmation, the switch deletes the tuples that remain for that RSC-M. A message indicates the deleted tuples.

For CAS interfaces, enter one tuple in table GPPTRNSL for a specified RSC-M. The tuple defined is not important. A message requests a confirmation to add, reject, or edit this tuple. After the confirmation, the system defines the five tuples that remain for the RSC-M. A message indicates the added tuples. Do not use the change command when you enter data in tables with CAS interfaces.

Datafill for RSC-M for table GPPTRNSL appear in the following table. Fields that apply directly to RSC-M appear. For complete details on how to enter data in table GPPTRNSL, refer to the data schema section of the *Translations Guide*.

Datafilling table GPPTRNSL

Field	Subfield or refinement	Entry	Description
AMCNO		refer to subfields	AMC node location. Line module identification for AMCs, composed of subfields SITE, FRAME, GROUP.
	SITE	a maximum of 4 alphanumeric characters	Location. Consists of an alphanumeric site description of the AMC. The entry in this subfield must be a valid entry in the NAME field in table SITE. The HOST is not a valid entry in this field.
Note: Subfield GROUP of field AMCNO in table GPPTRNSL, represents the P-side link group of each RSC-M.			

—continued—

Remote Switching Center Multi-access (RSC-M) (continued)

Datafilling table GPPTRNSL (continued)

Field	Subfield or refinement	Entry	Description
AMCNO (continued)	FRAME	0 to 99	Frame number. Consists of the frame number of the AMC. Entry can be different in the site, or different across the office. These conditions depend on the value of the office parameter UNIQUE_BY_SITE.
	GPP GROUP	0 to 5	Group number. For CAS AMCs, the subfield GROUP represents the RSC-M P-side links group number in the AN frame. If an EXT half shelf is or is not datafilled, subfield GROUP represents the RSC-M CAS P-side links group as follows: • 0 represents P-side links 0–7 • 1 represents P-side links 8–15 • 2 represents P-side links 16–23 • 3 represents P-side links 24–31 • 4 represents P-side links 32–39 • 5 represents P-side links 40–47
CSPMNO		see subfields	C-side PM Node. Contains the name of the RSC-M to which the AMC attaches. This node contains subfields PMNAME and PMNO.
	PMNAME	RCO2	Peripheral module name. Consists of the PM name.
	PMNO	0–127	Peripheral module number. Consists of the number of the attached RSC-M.
Note: Subfield GROUP of field AMCNO in table GPPTRNSL, represents the P-side link group of each RSC-M.			

—continued—

Remote Switching Center Multi-access (RSC-M) (continued)

Datafilling table GPPTRNSL (continued)

Field	Subfield or refinement	Entry	Description
AMC_SEL	SELECTOR	see subfield	AMC type selector. Consists of CAS selector for CAS interfaces.
		MELCAS	CAS interface selected. Refer to the following field.
	PSLINKS	vector of 1 to 16 entries	P-side links. Read-only output of P-side link provisioned. Vector of a maximum of 16 AMC P-side link ports.
Note: Subfield GROUP of field AMCNO in table GPPTRNSL, represents the P-side link group of each RSC-M.			
—end—			

Datafill example for table GPPTRNSL

Sample datafill of CAS for GPPTRNSL table appears in the following example.

MAP example for table GPPTRNSL

```
          AMCNO          CSPMNO
                                                    AMCATTR
-------------------------------------------------------
RSCM     00  0       RCO2    0  MELCAS          $
RSCM     00  1       RCO2    0  MELCAS          $
RSCM     00  2       RCO2    0  MELCAS          $
RSCM     00  3       RCO2    0  MELCAS          $
RSCM     00  4       RCO2    0  MELCAS          $
RSCM     00  5       RCO2    0  MELCAS          $
```

Remote Switching Center Multi-access (RSC-M) (continued)

Error messages for table GPPTRNSL

The following error messages apply to table GPPTRNSL.

Error messages for table GPPTRNSL

Error message	Explanation and action
`ADDING TUPLES . . . Failed to get index to C-side PM`	The switch adds an invalid tuple to table GPPTRNSL, and an RSC-M is not defined. Verify that the switch does not add tuples to table GPPTRNSL. Verify that the switch does not generate swerrs or traps.
`ERROR: Command CHANGE is not available for CAS tuples in table GPPTRNSL.`	The CHA (change) command is entered. This command is invalid in this table. Verify that the switch does not generate swerrs or traps.
`ERROR: The key already exists! Check all line module inventory tables!`	The switch adds an invalid tuple to table GPPTRNSL. Verify that the switch does not generate swerrs or traps.
`ERROR: The key REM1 0 1 already exists! Check all line module inventory tables!`	The switch adds an invalid tuple to table GPPTRNSL and a frame is in use. For example, the key of GPPTRNSL tuple was REM1 0 0 and an LCM is defined in table LCMINV with the key REM1 0 1. In this event, the system generates this error message. Verify that the switch does not add tuples to table GPPTRNSL. Verify that the error message that includes the line module key of the existing LCM is generated. Verify that the switch does not generate swerrs or traps.
`ERROR: Frame parameter should be in the range of 0-99`	When adding a new AMC, the Frame parameter cannot be greater than 99 in table GPPTRNSL.

- continued -

Error messages for table GPPTRNSL (continued)

Error message	Description
`Info: Tuple already exist.`	Enter the CHA command to change a tuple in GPPTRNSL. The tuple is present. Verify that the switch does not generate swerrs or traps.
`Lines still attached to AN.`	An attempt to delete a tuple from table GPPTRNSL occurs through the deletion of an AN defined on the same RSC-M. Verify that the switch does not generate swerrs or traps.
—end—	

Datafilling table LNINV

If you enter a CAS AN in table GPPTRNSL, the system allocates RSC-M P-side links to that AN. This action occurs when a line on the AN is entered in table LNINV.

The following values identify the location of the line card in CAS interfaces:

- logical drawer number
- line module number
- card slot number

For CAS non-concentrating interfaces the line equipment number (LEN) represent the following three subfields:

- Subfield GRP represents one of six PCM30 quad carrier circuit cards (NTMX87) to which the line is assigned.
- Subfield LINE CARRIER represents one of eight carriers on dual carrier packlets (NTMX82) that plug in an NTMX87 circuit card.
- Subfield CHANNEL represents 1 of 32 channels on a PCM30 carrier. Non-concentrating channels map one to one to a physical line on the AN. Time slot 1 maps to card slot 1.

The CAS line card codes are entered on slots 1–15 and 17–31 of each PCM30 carrier. Slot 0 is for maintenance, and slot 16 is for ABCD signaling on each carrier. The same carrier can contain descriptions for different types of lines card codes.

Remote Switching Center Multi-access (RSC-M) (continued)

At the CI level of the MAP display, CAS command LNTOGPP translates SITE, FRAME, GROUP, and DRAWER to RSC-M and carrier number. Command GPPTOLINE translates RSC-M and carrier numbers to the equivalent SITE, FRAME, GROUP, and DRAWER numbers.

Datafill for RSC-M for table LNINV appears in the following table. Fields that apply directly to RSC-M appear. For complete details on table LNINV, refer to the data schema section of the *Translations Guide*.

Note: In table LNINV, a minimum of one line must be declared on a PCM-30 link. The RTS of a link can result in the generation of SWERRs during ESA exit.

Datafilling table LNINV

Field	Subfield or refinement	Entry	Description
LEN		refer to subfields	Line equipment number. On CAS interfaces this field defines the location of the equipment that connects to a specified telephone line. This field consists of subfields SITE, FRAME, BAY, DRAWER, and CARD.
	SITE	4 characters	Key to table SITE. Relates to the key field in table SITE. Site name can be a maximum of four characters in length. The PM type names cannot be used for site names.
	FRAME	0 to 99	Equipment frame number. A unique-by-site number of the frame that contains the RSC-M.
	(BAY) GROUP	0 to 5	GROUP or UNIT number. For CAS interfaces the GROUP number indicates the slot in the RSC-M that contains one of six NTMX87 quad carrier circuit cards. The GROUP also relates to field GROUP in table GPPTRNSL.
	(DRAWER) LINE CARRIER	0 to 7	For CAS interfaces, this field represents the PCM30 carrier that carries this line. The carrier number relates to one of the eight links on the NTMX82 packlets on the NTMX87 circuit card.
	(CARD) CHANNEL	0 to 31	For CAS interfaces this field defines the 64Kb channel on the PCM30 link this line is assigned to.

—continued—

Datafilling table LNINV (continued)

Field	Subfield or refinement	Entry	Description
CARDCODE		see list	Card code. The NT product codes define DMS switch physical line cards. Codes T1LOOP, T1ERTH, DC5A, and DC5ADD on CAS AMCs identify card codes equivalent to the LOOP, EARTH, DC5A, and DC5ADD line cards.
PADGRP		None	Pad group. Disabled, the AMC supplies padding at the line card.
STATUS		HASU, WORKING, UNEQUIP, CUTOFF or RESERVED	Status. Enter the line inventory availability status.
CARDINFO		NIL	Card information. Datafill is not necessary. Enter NIL.
—end—			

Datafill example for table LNINV

Sample datafill for table LNINV appears in the following example.

MAP example for table LNINV

```
            LEN CARDCODE PADGRP STATUS   GND BNV MNO CARDINFO
MUXS  00 0 00 01  T1LOOP         WORKING     N NL  N      NIL
MUXS  00 0 00 02  T1LOOP         WORKING     N NL  N      NIL
MUXS  00 0 00 03  T1LOOP         WORKING     N NL  N      NIL
MUXS  00 0 00 04  T1LOOP         WORKING     N NL  N      NIL
MUXS  00 0 00 17  T1ERTH         WORKING     N NL  N      NIL
MUXS  00 0 00 18  T1ERTH         WORKING     N NL  N      NIL
MUXS  01 1 05 01  DC5A           WORKING     N NL  N
```

Remote Switching Center Multi-access (RSC-M) (continued)

Tools for verifying translations

The RSC-M does not use translation verification tools.

SERVORD

The RSC-M uses SERVORD to add or change lines that connect to an AMC. When the NEW command is used to declare a line in SERVORD, an unblocking command goes to the AMC to which that line connects. If the AMC acknowledges this command, the line state changes to idle (IDL) state. If the AMC does not acknowledge the unblocking command the line is placed in permanent lock out (PLO) state. The AMC converts to IDL when the AMC issues the unblock command.

SERVORD prompts

The SERVORD prompts used to add a 1FR line to an AMC on an RSC-M appear in the following table. Refer to the *DMS-100F Servord Digest* for a complete description of SERVORD command and prompts.

Servord prompts for RSC-M

Prompt	Valid input	Explanation
DN	Numeric	Directory number to be added
LCC	Alphanumeric	Line class code
LATA–NAME	Alphanumeric	Local access and transport area name
LTG	Numeric	Line treatment group
LEN	Numeric	Line equipment number
OPTION	Alphanumeric or $	Option(s) assigned to the line

SERVORD example for the addition of a virtual line on RSC-M

The method for the addition a 1FR line to the RSC-M, with the NEW command, appears in the following SERVORD example.

SERVORD example for RSC-M in prompt mode

```
>NEW
and press the Enter key.
SONUMBER:   NOW 94 5 11 AM
>
and press the Enter key.
DN:
> 2790011
and press the Enter key.
LCC:
> 1FR
and press the Enter key.
LATANAME:
> NILLATA
and press the Enter key.
LTG
>0
and press the Enter key.
LEN:
>0 0 2 0
and press the Enter key.
OPTION
> $
and press the Enter key.
```

History

ISN06 (TDM)

Correction to range of parameter Frame in table GPPTRNSL. CR Q00693785.

History section added.

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