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Meridian SL-100

Commercial Systems

Data Schema Reference Manual

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NORTEL NETWORKS™

Meridian SL-100

Commercial Systems

Data Schema Reference Manual

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Publication history

To comply with Nortel Networks Technical Documentation Standards, the Publication history contains updates for the current release and two prior releases.

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Revision 14.01. Standard release of SE07. This release introduces the Line Option for IPCM Phones feature (A00003653).

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Revision 13.01. MSL17 Standard release of this Nortel Networks technical publication (NTP), includes migration to color templates and documentation of the following features:

- Feature A59029642 (e-mobility 802.11 Wireless IP Gateway on Meridian SL-100) adds a new table, IPSETINV, and results in changes to tables IPECARDS and IVDINV.
- Feature A59036861 (Mark Non-IVD LENS) adds a new table, LENTRBL.
- Feature A59028416 (Individual MADN Hold) results in changes to table MDNGRP.

Note: Individual MADN Hold is a DMS-100 (CNA) feature.

May 2001

Revision 12.01. Standard release of MSL15. This version introduces table LDAPTAB and incorporates revisions to the Virtual Office Worker (VOW) feature.

November 2000

Revision 11.01. Standard release of MSL14. This version represents the standard release of this document. This version also incorporates changes to tables IBNFEAT and KSETFEAT due to the addition of the new option SMDI ID Override (IDOVR).

May 2000

Revision 10.01, Standard, MSL12. This version represents the standard release of this document and includes some minor pagination and graphics differences from the previous version.

Contents

About this document

Purpose

Use this document in preparing datafill for a Meridian SL-100 (MSL-100) office to setup a new database, to datafill new database tables, or to make changes to one or more existing database tables. Office-dependent data is stored in a series of data store tables, which are used in conjunction with software programs and circuits to advance the call through the various stages of call processing.

Note: The MSL17 software delivery is part of an on-going evolution. This book is one of several transitional documents that must be used with the following DMS-100 and XPM counterparts for the full complement of documents:

- *DMS-100 Customer Data Schema Reference Manual*
- *XPM Customer Data Schema Reference Manual,*

Disregard the signaling point (SP), Traffic Operator Position System (TOPS), and SuperNode Data Manager (SDM) information as it does not apply to the MSL-100 switch.

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 *Defense Switched Network Master Index of Publications,* .

References in this document

The following documents are referred to in this document:

- *Alarm System Description*
- *Basic Administration Procedures*
- *Basic Translations Tools Guide*
- *Device Independent Recording Package Administration Guide*
- *Digital Recorded Announcement Machine DRAM and EDRAM Guide*
- *Disk Management Subsystem Reference Manual*
- *DMS-100 Provisioning Manual*
- *Extended Peripheral Module Translations Reference Manual*
- *Feature Description Manual*
- *Input/Output System Reference Manual*
- *Integrated Services Digital Networks Service Orders for ISDN Terminals Reference Manual*
- *Linda Maintenance Guide*
- *Log Report Reference Manual*
- *Master Index of Publications*
- *Station Message Detail Recording Reference Guide*
- *NORESTARTSWACT/MTCSWAT User Guide*
- *Office Parameters Reference Manual*
- *Operational Measurements Reference Manual*
- *Service Problem Analysis Administration Guide*
- *SERVORD Reference Manual*
- *Software Optionality Control Module-100 Access Maintenance Manual*
- *Subscriber Carrier Module-100 Access Maintenance Manual*
- *Switch Performance Monitoring System Application Guide*
- *Translations Guide*
- *Trunks Maintenance Guide*

Data schema

How the data schema section is organized

Data schema tables are arranged in alphabetical order by short table name. Each table has a unique name, which is the abbreviation of the long table title. For example, table CLLI is the short table name for the Common Language Location Identifier Table.

Subtables appear after their head table. A subtable is a further refinement of a table and can be identified by a table name, followed by a period (.), followed by another table name. For example, CLLIMTCE.DIAGDATA, where CLLIMTCE is the head table and DIAGDATA is the subtable.

Note: Tables OFCENG, OFCOPT, OFCSTD, and OFCVAR are in the *Office Parameters Reference Manual*.

Data schema overview

The purpose of data schema is to assist the operating company in preparing office-dependent data for the relevant DMS switching unit.

The office-dependent data is stored in a series of data store lookup tables that are used in conjunction with software programs and circuits to advance each call through the various stages of call processing.

The data schema portion of the document provides functional descriptions of tables and their fields, including valid entries for each field. It does not provide translation information, call progression sequence, or complete feature implementation datafill.

Data schema is divided into modules, with each module describing one table. As new software features are added, or capabilities are enhanced, existing table documents are revised, or new tables are written.

Table descriptions

Table descriptions are arranged alphabetically according to short table name. Data schema tables are described in the following paragraphs.

Table name

This section gives the full table name used to derive the short table name that is printed on the page header.

Overview

This optional section gives an overview of the system that the table controls.

Functional description

This section describes how the table is accessed and used by the system, as well as its relation with other tables, feature packages, and feature. If appropriate, a description of how to add, delete, or change tuples in the table is included. For some tables, flow charts and block diagrams are used to help illustrate the functional descriptions.

Datafill sequence and implications

This section lists other tables that must be datafilled before or after the table being datafilled, as well as office parameters that interact with the table. If appropriate, any implication involving the datafill sequence is included.

Table size

This section gives the minimum and maximum number of tuples allowed in the table. If appropriate, information on memory allocation is also included. For more complicated tables, a formula for calculating the table size is included.

Field descriptions

Descriptions of the fields in the table are presented in table format. The first column is the short field name as it appears on the MAP terminal. The second column is the short subfield name as it appears on the MAP terminal. The third column gives the range of possible entries in the field. The fourth column gives the expanded field name and a description of the entries, including any default values.

ANIDATA

Table name

Automatic number identification data table

Functional description

Table ANIDATA is datafilled at three automatic number identification (ANI) levels—NPA (numbering plan area), NXX (three-digit exchange number), and SUB (subscriber)—to provide the ANI screening capability at all three levels on all incoming NSSFGD calls. A lookup table function is also provided for the network system service (NSS) replacement of dialed digits (RDD) feature.

Datafill sequence and implications

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

Table size

0 to 640000000 tuples

Memory is dynamically allocated for this table. The maximum number of tuples depends on the switch configuration.

Datafill

The following table lists datafill for table ANIDATA.

ANIDATA (continued)

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
ANIDIGS		numeric (up to 10 digits)	*Automatic number identification digits* ANIDIGS is a 10 digit field in the format NPANXXXXXX, where: • NPA are digits in the range 200 to 999 • NXX are digits in the range 200 to 999 • XXXX are digits in the range 0000 to 9999 If three digits are entered in this field, enter NPA in field ANITYPE. If six digits are entered in this field, enter NXX in field ANITYPE. If 10 digits are entered in this field, enter SUB in field ANITYPE.
REFAREA		see subfields	*Automatic number identification data reference area* This field consists of subfields ANITYPE and STATUS
ANITYPE		NPA, NXX, or SUB.	*Automatic number identification type* Enter the ANI type in accordance with the instructions set out in field ANIDIGS above.
STATUS		ALLOW, CASUAL, or NOTALW	*Status* Enter the calling party's status as follows: • If the entry in field ANIDIGS is three or six digits, and the entry in field ANITYPE is NPA or NXX, enter CASUAL or NOTALW. • If the entry in field ANIDIGS is ten digits, and the entry in field ANITYPE is SUB, enter ALLOW, CASUAL, or NOTALW.

STATUS = ALLOW

If the entry in subfield STATUS is ALLOW, datafill fields NACUSGRP, NANCOS, ACCTREQ, SUPPRESS, and IDDALLOW.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	NACUSGRP	alphanumeric(up to 16 characters)	*North American numbering plan area customer group* Enter the customer group defined in table CUSTHEAD.
	NANCOS	0 to 511	*North American numbering plan area network class of service* Enter the network class of service (NCOS) of the customer group.
	ACCTREQ	Y or N	*Account code required* Enter Y (yes) if an account code is required for all incoming NSSFGD calls using pure dialing that originate from the offnet address specified by this ANI. Enter N (no) if an account code is not required.
	SUPPRESS	Y or N	*Suppress* Enter Y if offnet originated stations entering the network by way of a NSSFGD trunk using pure dialing are to have their ANI information suppressed, preventing the display of their directory number (DN). Enter N if ANI suppression is not required.
	IDDALLOW	Y or N	*International direct distance dial allowed* Enter Y if a call referencing ANI type SUB with STATUS set to ALLOW is allowed to make international calls outside world zone 1. If this field is set to N, international calls are not allowed and the call is sent to treatment.

ANIDATA (end)

IDDALLOW = Y

If the entry in field IDDALLOW is Y, datafill fields INTLCGRP and INTLNCOS.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	INTLCGRP	alphanumeric(up to 16 characters)	*International customer group* Enter the customer group allowed to make international calls.
	INTLNCOS	0 to 511	*International network class of service* Enter the NCOS of the customer group allowed to make international calls.

Datafill example

The following example shows sample datafill for table ANIDATA.

MAP display example for table ANIDATA

```
ANIDIGS                                                    REFAREA
_____________________________________________________________________

    742223                                          NXX CASUAL
       214                                          NPA NOTALW
2347837000          SUB  ALLOW    BNRRCH    0 N N N
2347837042          SUB  ALLOW    BNRRCH    1 N N N
2347837123          SUB  ALLOW    BNRRCH    1 N N N
```

BROADCST

Table name

Broadcast Call Table

Functional description

Broadcast calls are created to provide the capability of broadcasting one source to multiple destinations. The initial broadcast call is established with one connection from a single input port to a single output port. The maximum number of connections to a single incoming port is sixteen.

The preset broadcast call feature allows a broadcast call with a single directory number (DN) to translate to a preset list of broadcast terminators. Additional directory numbers are specified in table BROADCST to establish the legs of the broadcast call.

Up to eight DNs can be datafilled in table BROADCST for each preset broadcast activation number. At least one DN must be datafilled with a preset broadcast DN. A broadcast call initiated this way can have an initial maximum of eight legs.

Datafill sequence and implications

Table TOFCNAME must be datafilled before table BROADCST.

Table size

0 to 64 tuples

BROADCST (end)

Datafill

The following table lists datafill for table BROADCST.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
BDCTKEY		0 to 63	*Broadcast key* This field is the key to table BROADCST. It contains an integer.
BCORIG		0 to 9 (10 digits)	*Originating broadcast directory number* This field contains a directory number (DN) that corresponds to a DN in table DNINV.
BDCTADDR		0 to 9 (up to 18 digits)	*Terminating directory number broadcast address* This field is a vector of up to eight digit registers. A digit register is a vector of up to 18 digits. If less than eight registers are required, end the list with a $ (dollar sign). There must be at least one terminating DN in each tuple. A terminating DN cannot be the same as any other DN in table BROADCST.

Datafill example

The following example shows sample datafill for table BROADCST.

MAP display example for table BROADCST

```
BDCTKEY    BCORIG
                                    BDCTADDR
____________________________________________________________________

   0  2143456789
       (      92874321) (         55645) (       55363)$
```

CARID

Carrier Identification table

The Carrier Identification (CARID) table holds the datafillable administrative information for peripherals that use a Digital Signal 1 (DS1) carrier. This information allows a switch technician to quickly retrieve trunk information and obtain trouble reporting information.

The following MAP diplay illustrates the CARID command at the MAPCI;MTC;TRKS;CARRIER level.

CARID command at the MAPCI;MTC;TRKS;CARRIER level

```
   CM     MS    IOD    Net    PM    CCS    Lns    Trks    Ext   APPL
   CM Flt Clock 1ClkEr  Istb   1ESA  .               1 CC    1Maj
   M  M                        *C* .  CR C   *C*    M
   POST    Class ML  OS  ALRM  SYSB  MANB  UNEQ  OFFL  CBSY  PBSY INSV
0  Quit_   TRUNKS 0  0   0     0     0     0     87    0     0    84
2  Post_   REMOTE 0  0   1     2     0     0     0     0     4    20
3          TIMING 0  0   0     0     0     0     0     0     0    2
4          DSI
                  N CLASS SITE  DTC CK D ALRM SLIP FRME BER ES SES STATE
5  Loop           0 TIMING      0       0C   0    0<1.0 0  0      INSV
6  Tst_           1 TRUNKS      0       1C   0    1<1.0 0  3      INSV
7  Bsy_           2 TIMING      0       2C   0    0<1.0 0  0      INSV
8  RTS_           3 TRUNKS      0       3C   0    2<1.0 4  0      INSV
9  OffL_          4 TRUNKS      0       4C   0    1<1.0 3  0      INSV
10 DispOpt_       SIZE OF POSTED SET : 20   MORE...
11 Disp_          CARRIER:
12 Next           CARID 3
13                CARID=TRUNK_GROUP_A FT_COLLINS
14 Detail         MISC1=DSX_LOCATION_3_JACK_4
15                MISC2=TROUBLE REPAIR_800_444_5555
16                MISC4=FC_LOG_122_123
17
18  CarID_
      JOEBOB
                TEAM0
  Time 11:29    >Post 1 2
```

CARID (continued)

Datafill

The following table lists the datafill for table CARID.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
CARRKEY		CARID_KEY_AREA	This field indexes into this table and contains the peripheral, peripheral number, carrier number, and entry.
	CARIDPM	DTC, DTCI, LTC, LTCI, RCC, RCC2, SMA, SMA2	Enter the peripheral: DTC – digital trunk controller DTCI – Integrated Services Digital Network (ISDN) digital trunk controller LTC – line trunk controller LTC1 – ISDN line trunk controller 1RCC – Remote Cluster Controller RCC2 – ISDN Remote Cluster Controller SMA – subscriber carrier module access SMA2 – enhanced subscriber carrier module access
	CARIDPM_NUM	0 to 255	Enter the peripheral number.
	CARIDPM_CARR	0 to 53	Enter the carrier number.
	CARIDENTRY_NUM	CARID, MISC1, MISC2, MISC3, MISC4)	Enter one of the following: CARID – carrier identification number MISC1 – miscellaneous 1MISC2 – miscellaneous 2MISC3 – miscellaneous 3MISC4 – miscellaneous 4
CARRCHAR		Up to 55 alphanumeric characters	Enter the administrative information to be appended to specific carrier logs or viewed with the CARID command at the MAP CARRIER level. Use underscore (_) in place of spaces to separate words.

Datafill example

The following example shows sample datafill for table CARID.

MAP display example for table CARID

```
CARRKEY                                              CARID_CHAR
_____________________________________________________________
DTC   0  3  CARID                 TRUNK_GROUP_A FT COLLINS
DTC   0  3  MISC1                    DSX_LOCATION_3_JACK_4
DTC   0  3  MISC2              TROUBLE_REPAIR_800_444_5555
DTC   0  3   MISC4                        FC_LOG_122_123
```

Table name

Call Forward Time Of Time Directory Number Table

Functional description

This table allows a number to have separate forwarding directory numbers (DN) depending on the time of day (TOD).

Datafill sequence and implications

Tables DAYTYPES and TODHEAD must be datafilled before table CFTODDN.

Table size

The maximum table size is 21.504 kbytes.

Datafill

The following table lists datafill for table CFTODDN.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
TODNAME		Vector of up to 8 characters	Enter a valid CFTOD time of day name from table TODHEAD.
TIMEODAYREF		0 to 32767	Enter the reference number for the TODNAME entry in table TODHEAD.
FORWARDING_DN		Forwarding directory number (up to 30 digits)	Enter the forwarding directory number specified for call forwarding time of day.

Datafill example

The following example shows sample datafill for table CFTODDN.

MAP display example for table CFTODDN

```
TABLE CFTODDN

_____________________________________________________________________

TODNAME1        TODREF          CFTODDN
ENGINING          1             9975120
ENGINING          2             9975001
```

Table history

MSL09

This table was created to hold the additional time of day call forwarding directory number.

Supplementary information

None.

Table name

Virtual Office Worker Directory Number Table

Functional description

Telecommuters use VOWDN table when logging into a designated telephone away from the home office. The VOWDN allows the customer to have the same options as on the home DN.

Datafill sequence and implications

There is no requirement to datafill other tables prior to table CUSTSTN option VOWDN.

Table size

Datafill

The following table lists datafill for table CUSTSTN option VOWDN.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
OPTION		CUSTSTN_OPTION	Enter VOWDN.
	NCOS	0 to 511	Enter the network class of service.
	SUBGRP	0 to 7	Enter the subgroup number.
	AUDIT	Y or N	Enter Y(es) to audit or N(o) for no audit.
	HOUR	0 to 23	Enter the hour to begin auditing. This field only displays when AUDIT is Y.
	CFW	Y or N	Enter Y(es) for call forwarding or N(o) for no call forwarding.
	PCCLEN	4 to 10	Enter 4 to 10 digits for the passcode length.

Datafill example

The following example shows sample datafill for table CUSTSTN option VOWDN.

CUSTSTN option VOWDN (end)

MAP display example for table CUSTSTN option VOWDN

```
CUSTNAME OPTNAME OPTION
_____________________________________________________________
BNRRCH VOWDN VOWDN 0 0 Y 0 Y 7
BNRRCH VOWDN VOWDN 0 40 N N 4
```

Table history

MSL10

Table introduction.

Supplementary information

none

Table name

Digital Line Module Inventory Table

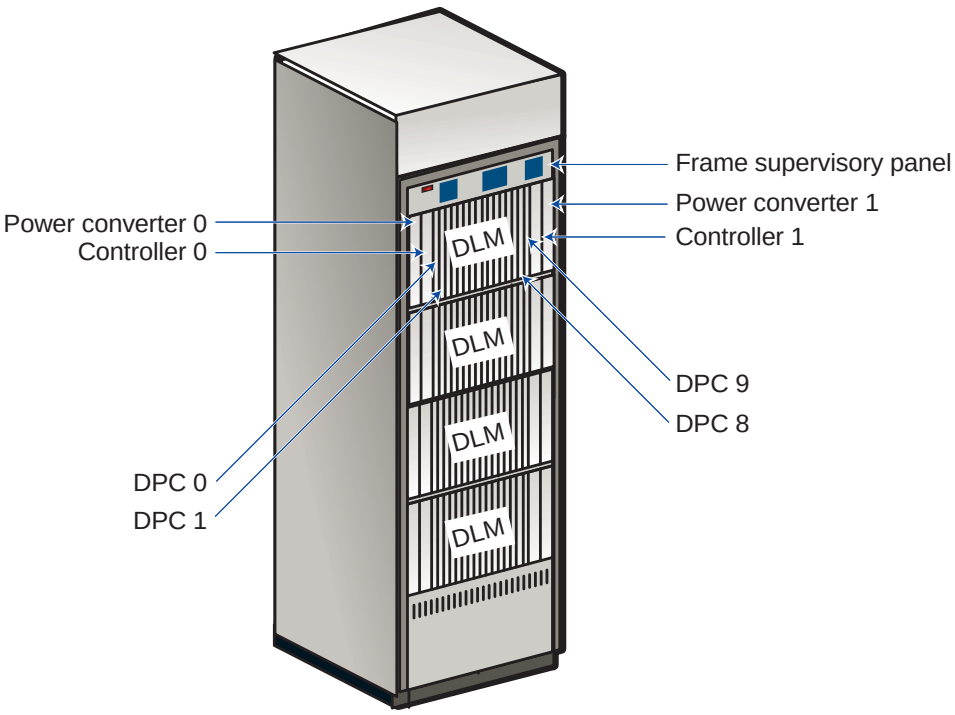
Functional description

The digital line module (DLM) is functionally similar to the line concentrating module (LCM). LCMs are used as an interface for analog lines through the standard analog line card; DLMs are used as an interface for Meridian M2000 and M3000 digital telephones (also called integrated voice and data (IVD) sets) through the digital port card (DPC). The DLM's C-side interface is set up so that to the central control complex (CCC), the DLM looks the same as an LCM.

The configuration of a DLM in a frame differs from that of an LCM. A DLM takes up one shelf position in a frame, whereas an LCM takes up two shelf positions. One physical frame can contain four DLMs but only two LCMs. Since one DLM has a total of 320 circuits and one LCM has 640 circuits, the total number of circuits for each frame is 1280 in both cases.

For IVD sets, a frame equipped with four DLMs can act as an interface for only 640 sets, whereas a frame equipped with two LCMs can act as an interface for up to 1280 sets. This is because IVD sets require two channels for each set; one for voice and one for data.

The layout for a digital line equipment frame (DLE) is shown in the following figure.



Digital Line Equipment Frame

G100164

To identify a unique DLM, the following data must be specified:

- site at which the DLM is located
- floor on which the DLM is located
- row in which the DLM is located
- physical DLE frame in which the DLM is located
- logical DLE frame in which the DLM is located
- DLM shelf (shelf 0 or shelf 1)

DLMINV (continued)

Datafill sequence and implications

The following tables must be datafilled before table DLMINV:

- NETWORK
- LTCINV
- LTCPSINV
- RCCINV
- RCCPSINV

Table size

0 to 255 tuples

Datafill

The following table lists datafill for table DLMINV.

Field descriptions (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
DLMNM		see subfields	*Digital line module name* This field consists of subfields SITE, FRAME, and SHELF.
	SITE	alphanumeric (4 characters)	*Site* Enter the site name assigned to the remote location. If this field is left blank, the default site name is HOST.
	FRAME	0 to 511	*Logical DLE frame number* Enter the logical digital line equipment (DLE) frame number. A logical frame is shown in figure 1. Entries for NT40 range from 0 to 127. Entries for SuperNode range from 0 to 511.
	SHELF	0 or 1	*Digital line module shelf number* Enter the shelf number of the DLM. The lower shelf in a logical frame is shelf 0; the upper shelf in a logical frame is shelf 1.
ADNUM		0 to 4095	*Administrative number* Enter the external administrative number to be associated with the DLM. This number must be unique among all peripheral modules (PM).

Field descriptions (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
FRTYPE		DLEorMCDM	*Frame type* Enter the frame type on which the PM equipment is mounted. Enter DLE for digital line equipment. Enter MCDM for Meridian cabinet digital module.
SHPOS		04, 18, 38, or 52	*Shelf position* Enter the shelf position on which the PM equipment is mounted. Entries outside of this range are invalid.
FLOOR		0 to 99	*Floor* Enter the floor on which the PM frame is located.
ROW		A-H, J-N, P-Z, AA-HH, JJ-NN, PP-ZZ	*Row* Enter the row on the floor, in which the PM equipment frame is located.
FRPOS		0 to 99	*Frame position* Enter the position in the row, of the physical PM equipment frame.
EQPEC		7X49AA 7X4901orMX 85AA	*Equipment product engineering code* Enter the product engineering code (PEC) of the PM. Enter 7X49AA for packaged core digital module (PCDM). Enter 7X4901 for Meridian cabinet digital module (MCDM). Enter MX85AA for a compact remote cluster controller (RCC2).
LOAD		alphanumeric (up to 8 characters)	*Load* Enter the name given to the PM software load. (For a list of available names, see the batch change supplement for the appropriate BCS release.)
DPMC		Y or N	*Digital port maintenance card* Enter Y (yes) if the DLM is equipped with a digital port maintenance card (DPMC). Enter N (no) if the DLM is not equipped with a DPMC.
PRCRNG		Y or N	*PRC range* For NT use only. Enter N.

DLMINV (continued)

Field descriptions (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
CSPMNO		see subfields	*C-side peripheral module number* This field consists of subfields PMT and EXT_PMNO.
PMT		LGC, LTC, RCC, RCC2, SRCC	*Peripheral module type* Enter the type of PM to which the DLM is attached.
EXT_PMNO		0 to 63	*Peripheral module number* Enter the PM number to which the DLM is attached. Entries outside of this range are invalid.
CONTMARK		+	*Continuation mark* Enter + to indicate that additional information for this tuple is contained in the next record.
DLMINFO		see subfield	*Digital line module information* This field consists of subfield DLMSELECTOR and refinements LKINFO, LINKMAP, INTRASW, and ESA.
DLMSELECTOR		HDLMorRDLM	*Digital line module selector* Enter the digital line module selector.

DLMSEL = HDLM

If the entry in subfield DLMSEL is HDLM, datafill refinement LKINFO as described in the following table.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
LKINFO		vector, 2 to 6 values of 0 to 63 or $	*C-side link information* Enter two to six values (0 to 63) to specify the line group controller (LGC) and line trunk controller (LTC) links on which the DLM is assigned. At least two DS30A links must be defined. Enter $ to end the vector if less than six values are entered.

DLMSEL = RDLM

If the entry in subfield DLMSEL is RDLM, datafill refinements LINKMAP, INTRASW, and ESA as described in the following table.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
LINKMAP		vector, 2 to 6 values of 0 to 63 or $	*C-side link information* Enter two to six values (0 to 63) to specify the LTC links connecting the RDLM to the host LTC. At least two DS-1 links must be defined. Enter $ to end the vector if less than six values are entered.
INTRASW		Y or N	*Intraswitching* Enter Y if the RDLM supports intraswitching. Enter N if the RDLM does not support intraswitching.
ESA		Y or N	*Emergency stand-alone capabilities* Enter Y if the RDLM has emergency stand-alone (ESA) capabilities. Enter N if the RDLM does not have ESA capabilities.

Datafill example

Two examples of datafill for table DLMINV are shown in this section.

Example 1

In the following example, the DLM is located at site RTP4. There are four C-side links between the DLM and the host and four entries in the LKINFO vector. The LKINFO entries are shown in brackets for convenience only.

MAP display example for table DLMINV

```
     DLMNM ADNUM FRTYPE SHPOS FLOOR ROW FRPOS  EQPEC
LOAD DPMC PRCRNG
           CSPMNO                                  DLMINFO
__________________________________________________________
RTP4  32 0   1234    DLE     4     1   B    33 7X49AA
DUMM    Y       N
       LGC      11     HDLM           ( 0) (11) (13) (14)$
```

DLMINV (end)

Example 2

In the following example, the RDLM is located at site RCH3. There are four C-side links between the RDLM and the host LTC and four entries in the LINKMAP vector. The LINKMAP entries are shown in brackets for convenience only. The RDLM is not equipped with intraswitching or emergency stand alone capabilities.

MAP display example for table DLMINV

```
     DLMNM ADNUM FRTYPE SHPOS FLOOR ROW FRPOS  EQPEC
LOAD DPMC PRCRNG
           CSPMNO                                DLMINFO
________________________________________________________

RCH3  32 0    567   MCDM     4     3   B    33 7X4901
 DUMM    Y      N
      LGC     11 RDLM          ( 0) (11) (13) (14)$ N
N
```

Call Park Enhancement SYSPARK

The System Park (SYSPARK) feature provides a customer directory number when the called party's location is not known. Directed Call Park must be assigned to a specific key on a Meridian Business sets and integrated voice and data sets (not attendant console sets.) When this key is activated and the # key is pressed twice, the caller parks against a specific SYSPARK DN. The SYSPARK DN displays on the set.

SYSPARK allows calls to be parked within the parker's customer group. Each SYSPARK tuple contains the parking slot number and a customer group associated with the SYSPARK DN for the SYSPARK feature selector. Properly assign each DN to its respective customer group when datafilling the tuple to prevent unretrievable parked calls. Each DN must be able to be translated from within the customer group where it was assigned.

Datafill

The following table lists the datafill for table DNROUTE feature SYSPARK.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
DN		see subfields	*Directory number results* This field includes area code, office code, and station code.
	DN_SEL	FEAT	*Directory number selector* Enter the DN selector FEAT.
	FEATURE	SYSPRK	*Feature* Enter the feature SYSPRK (system park).
	PARKING_SLOT		Enter the Parking_slot number (range 0-49)
	CUST_GRP		Enter the customer group number.

DNROUTE feature SYSPARK (end)

Datafill example

The following example shows sample datafill for table DNROUTE feature SYSPARK.

MAP display example for table DNROUTE feature SYSPARK

```
AREACODE   OFCODE   STNCODE                    DNRESULT
_____________________________________________________________
     919      555      1234                    FEAT SYSPARK
```

Virtual Office Worker DN (VOWDN)

This feature allows telecommuters or a Virtual Office Worker (VOW) who do not have dedicated physical phone sets to access their dedicated directory number (DN) and associated features and options by logging into their dedicated DN from any of a pre-designated group of phone sets. Once logged in, all features and options operate normally, and all calls to the dedicated DN terminate to the set on which the login occurred. When logged in, all calls originated from the set are billed to the dedicated DN.

Datafill sequence

The following chart lists the tables that require datafill to implement Virtual Office Worker. The tables are listed in the order in which they are to be datafilled.

Datafill tables required for Virtual Office Worker

Table	Purpose of table
DNROUTE	The directory number route table lists information for writable DNs in the switch rather than the line equipment numbers (LEN). Table DNROUTE associates a DN with a specific trunk group member.
CUSTSTN	The customer group station option table customizes the use of customer telephone sets.
IBNXLA	The integrated business network translation table defines the dialing plan for each customer group.
AUTHCDE	The authorization code table defines authorization codes and the NCOS account option and security digits.
VOWINV	The VOW inventory table is contains the physical or virtual LENs and additional data associated with a VOW's dedicated DN, the personal VOW ID code, and the primary VOW DN. The VOW personal ID field, VOWPID, is the only field that can be modified with the table editor.

DNROUTE feature VOWDN (end)

Datafilling table DNROUTE

The following table shows the datafill specific to Virtual Office Worker for table DNROUTE. Only those fields that apply directly to Virtual Office Worker are shown. For a description of the other fields, refer to the table DNROUTE description in the *Customer Data Schema Reference Manual.*

Datafilling table DNROUTE

Field	Subfield or refinement	Entry	Explanation and action
FEATURE		VOWDN	This field identifies the DNROUTE feature type. When field FEATURE is datafilled as VOWDN, use field CUSTGRP to identify the customer group to which the VOW belongs.
VOWDNIDX		Numeric, 0-4095	Unique index value for VOWDN type. If not unique, available value is provided.
CUSTGRP		alphanumeric	This field provides the customer group name associated with the VOW.

Datafill example for table DNROUTE

The following example shows sample datafill for table DNROUTE.

MAP display example for table DNROUTE

```
AREACODE   OFCCODE   STNCODE   DNRESULT
-----------------------------------------------------------
919        657       7293       FEAT VOWDN 23 BNRRTP
```

Trunk group member (MEM)

This selector is required to allow direct routing to a trunk member (MEM). The MEM selector allows specification of only one trunk group common language location identifier (CLLI) and one external member number. If the trunk circuit is not available, the call is routed to generalized no circuit treatment (GNCT). The MEM selector is valid for Integrated Business Network (IBN) trunks but cannot use a trunk with the automatic call distribution option.

Datafill

The following table lists the datafill for table DNROUTE feature MEM.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
DNRESULT		see subfields	*Directory number results* This field consists of subfields DN_SEL, CLLI, and MEMNUM.
	DN_SEL	MEM	*Directory number* Enter the directory number (DN) selector MEM.
	CLLI	alphanumeric (up to 16 characters)	*Common language location identifier* Enter the code assigned to the trunk group in table CLLI.
	MEMNUM	0 to 9999	*Member number* Enter the external trunk number of the terminating trunk circuit assigned in table TRKMEM.

DNROUTE feature MEM (end)

Datafill example

The following example shows sample datafill for table DNROUTE feature MEM.

This example shows a DN routed to trunk member CITY0G.

MAP display example for table DNROUTE feature MEM

```
AREACODE  OFCODE     STNCODE                    DNRESULT
_____________________________________________________________
     817     234        8221        MEM   CITY0G       5
```

Network attendant services release link trunk

This key and lamp are required if the customer group to which the console belongs has a dedicated key and lamp assigned to the Network Attendant Services Release Link Trunk (NAS RLT) feature.

This feature also contains information that identifies the console CLLI, which points back to Table CLLI, and the AC key and lamp number.

Datafill

The following table lists the datafill for table FNMAP selector SPECL NRLT.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
KEY		see subfields	*Key* This field consists of subfields CONSCLLI and ACKEY.
	CONSCLLI	alphanumeric (up to 16 characters)	*Console common language location identifier* Contains the code that is assigned to the attendant console in table CLLI.
	ACKEY	2 to 43	*Attendant console key and lamp number* Contains the number of the attendant console key and lamp that are assigned to the Network Attendant Services Release Link Trunk feature.
RESULT		see subfields	*Result* This field consists of subfields KEYSEL and SPFN.
	KEYSEL	SPECL	*Key selector* Special (SPECL) is the key selector.
	SPFN	NRLT	*Special function* NRLT is the special function code for the Network Attendant Services Release Link Trunk feature.

Datafill example

The following example shows sample datafill for table FNMAP selector SPECL NRLT.

FNMAP selector SPECL NRLT (end)

This is an example of assigning key and lamp number 15 to this feature on the attendant console that has the code BNRMCCON1 assigned to it in table CLLI.

MAP display example for table FNMAP selector SPECL NRLT

```
            KEY                                  RESULT
_____________________________________________________________
     BNRMCCON1 15                            SPECL   NRLT
```

Table name

Called-party billing table

Functional description

Table FREECALL maps specified numbering plan areas (NPAs) to 700, 800, or 900 billing characteristics. Once mapped, the specified NPAs assume the call billing characteristics of the 700-, 800-, or 900-type calls to which they are mapped.

At initial program load (IPL), tuples are datafilled in table FREECALL to provide 700, 800, and 900 billing characteristics to 400, 700, 800, and 900 NPAs. Specifically, the 700 NPA is mapped to 700-type billing, the 400 and the 800 NPA are mapped to 800-type billing, and the 900 NPA is mapped to 900-type billing.

The following example shows table FREECALL datafill immediately after IPL.

MAP display example for table FREECALL

```
NPA MAPTON00
----------------------
400 800
700 700
800 800
900 900
```

Note: Table FREECALL does not perform digit replacement.

Datafill sequence and implications

None

Table size

Table FREECALL provides mapping for a maximum of 32 NPAs.

FREECALL (end)

Datafill

The following table lists datafill for table FREECALL.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
NPA		200-999	*Numbering plan area to map* NPA is the key field for table FREECALL. The NPA datafilled in this field maps to the N00-type NPA specified in field MAPTON00.
MAPTON00		700, 800, or 900	*Map to N00-type NPA* Field MAPTON00 specifies the type of N00 call billing attributes assigned to the NPA datafilled in field NPA.

Datafill example

The following example shows sample datafill for table FREECALL.

MAP display example for table FREECALL

```
NPA MAPTON00
----------------------
400 800
700 700
777 700
800 800
886 800
887 800
888 800
900 900
999 900
```

Table history

MSL06

Table FREECALL was introduced in MSL06.

IBNFEAT feature IDOVR

Table name

IBN Set Feature Table

Functional description

The new option IDOVR enables passing intermediate DNs over SMDI links to the Voice Messsage System. When IDOVR is assigned to ksetlines, table IBNFEAT is datafilled.

Datafill sequence and meaning

Current datafill order is unchanged.

Table size

Abbreviated table name	Minimum tuples	Maximum tuples	Information on memory
IBNFEAT	No Change	No Change	No Change

Datafill

The table that follows lists datafill for table IBNFEAT.

Field descriptions

Field	New or Changed	Subfield or refinement	Entry	Explanation and action
OPTIONS	Changed	Refinement	Extended to include IDOVR	New option.
APP	New	Subfield	Subfield of IDOVR	Indicate if the DN has voice mail box in VMS.

IBNFEAT feature IDOVR (continued)

Datafill example

The figure that follows shows sample datafill for table IBNFEAT.

Table IBNFEAT in No Prompt Mode -- Tuple Add

```
<add HOST 00 0 00 05 0 IDOVR IDOVR Y
TUPLE TO BE ADDED:
HOST 00 0 00 05 0 IDOVR IDOVR Y
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
<y
TUPLE ADDED
<
```

Table IBNFEAT in No Prompt Mode -- Tuple Delete

```
> Del HOST 00 0 00 05 0 IDOVR
TUPLE TO BE DELETED:
HOST 00 0 00 05 0 IDOVR IDOVR Y
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
>Y
TUPLE DELETED
>
```

Table IBNFEAT in Prompt Mode -- Tuple Add

```
>add
LEN:
>HOST 00 0 00 5 IDOVR
DNNO:
>0
DF:
>IDOVR
APP:
>Y
TUPLE TO BE ADDED:
HOST 00 0 00 5 IDOVR IDOVR Y
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
>y
TUPLE ADDED
```

Table IBNFEAT in Prompt Mode -- Tuple Change

```
>pos HOST 00 0 00 5 0 IDOVR
HOST 00 0 00 5 0 IDOVR IDOVR Y
>cha DATA
APP: Y
>n
TUPLE TO BE ADDED:
HOST 00 0 00 5 0 IDOVR IDOVR N
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
>y
TUPLE CHANGED
```

Table IBNFEAT in Prompt Mode -- Tuple Delete

```
>pos HOST 00 0 00 5 0 IDOVR
HOST 00 0 00 5 0 IDOVR IDOVR Y
>del
TUPLE TO BE DELETED:
HOST 00 0 00 5 0 IDOVR IDOVR Y
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
>y
TUPLE DELETED
>
```

Table history

MSL 14

The line option IDOVR is added in the OPTIONS list.

Additional information

None.

IBNFEAT feature CWTACT

Call Waiting Activation (CWTACT)

The CWTACT feature activates or deactivates the call waiting feature on Integrated Business Networks (IBN) lines.

Datafill

The following table lists the datafill for table IBNFEAT feature CWTACT.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
DF		CWTACT	*Data feature* Enter CWTACT for the Call Waiting Activation feature.
FEATURE		CWTACT	*Data feature* Enter CWTACT.
CWT_ACTIVE		Y or N	Enter Y to activate or N to deactivate call waiting.

Datafill example

The following example shows sample datafill for table IBNFEAT feature CWTACT.

MAP display example for table IBNFEAT feature CWTACT

```
LEN                DNNO DF      FEATURE       DATA
_____________________________________________________
LCM2 00 0 09 01    0    CWTACT  CWTACT Y
```

Call Waiting Activation (CWTACT)

The CWTACT feature activates the call waiting feature on Integrated Business Network (IBN) line class code 500/2500 sets.

Datafill

The following table lists the datafill for table IBNXLA feature CWTACT.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
KEY		see subfields	*Key* This field consists of subfields XLANAME and DGLIDX.
	XLANAME	alphanumeric (1 to 8 characters)	*Translator name* Enter the name assigned to the translator.
	DGLIDX	vector of up to 18 digits	*Digilator index* Enter the digit or digits assigned as an ambiguous code. The range of this field depends on field MAXDIG in table XLANAME. Field DGLIDX can accept over 10 digits for international translating. The allowable values for the digilator portion of field DGLIDX in table IBNXLA are as follows: MAXDIG value — IBNXLA digilator values 9 — Digits 0 to 9 C — Digits 0 to 9 and B to C F — Digits 0 to 9 and B to F ***Note:*** The allowable digit range for table IBNXLA digilator values is determined for each translator.
RESULT		see subfields	*Result* This field consists of subfields TRSEL, ACR, SMDR, and FEATURE.
	TRSEL	FEAT	*Translations selector* Enter the translation selector FEAT.
	ACR	Y or N	Enter Y for yes or N for no account code.

IBNXLA feature CWTACT (end)

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	SMDR	Y or N	Enter Y for yes or N for no Station Message Detail Recording.
	FEATURE	CWTACT	*Feature type* Enter CWTACT to activate Call Waiting.

Datafill example

The following example shows sample datafill for table IBNXLA feature CWTACT.

MAP display example for table IBNXLA feature CWTACT

```
                    KEY
                                                  RESULT
________________________________________________________
  WARK              76
                                           FEAT N N CWTACT
```

Call Waiting Activation (CWTDEACT)

The CWTDEACT feature deactivates the call waiting feature on Integrated Business Network (IBN) line class code 500/2500 sets.

Datafill

The following table lists the datafill for table IBNXLA feature CWTDEACT.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
KEY		see subfields	*Key* This field consists of subfields XLANAME and DGLIDX.
	XLANAME	alphanumeric (1 to 8 characters)	*Translator name* Enter the name assigned to the translator.
	DGLIDX	vector of up to 18 digits	*Digilator index* Enter the digit or digits assigned as an ambiguous code. The range of this field depends on field MAXDIG in table XLANAME. Field DGLIDX can accept over 10 digits for international translating. The allowable values for the digilator portion of field DGLIDX in table IBNXLA are as follows: *MAXDIG value* *IBNXLA digilator values* 9 Digits 0 to 9 C Digits 0 to 9 and B to C F Digits 0 to 9 and B to F The allowable digit range for table IBNXLA digilator values is determined for each translator.
RESULT		see subfields	*Result* This field consists of subfields TRSEL, ACR, SMDR, and FEATURE.
	TRSEL	FEAT	*Translations selector* Enter the translation selector FEAT.
	ACR	Y or N	Enter Y for yes or N for no account code.

IBNXLA feature CWTDEACT (end)

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	SMDR	Y or N	Enter Y for yes or N for no Station Message Detail Recording.
	FEATURE	CWTDEACT	*Feature type* Enter CWTDEACT to deactivate Call Waiting.

Datafill example

The following example shows sample datafill for table IBNXLA feature CWTDEACT.

MAP display example for table IBNXLA feature CWTDEACT

```
                         KEY
                                                        RESULT
-------------------------------------------------------------------
   WARK                   76
                                               FEAT N N CWTDEACT
```

IPECARDS

Table name

Intelligent Peripheral Equipment Card Type (IPECARDS) Table

Functional description

This table is used to identify product engineering codes (PEC) for new versions of existing intelligent peripheral equipment (IPE) line card types. It eliminates the need to wait for new software loads or patches to add new line card versions to the line up. When a new version of an available line card type is created and datafilled in table IPECARDS, it can be put into service immediately by site personnel.

The following list shows currently available IPE card types.

- NT8D02
- NT8D03
- NT8D09
- NT5D11

Once datafilled, table IPECARDS maps the proper test and diagnostic procedures to the cards and automatically datafills the new line card PECs in table LNINV.

Datafill sequence and implications

Table IPECARDS must be datafilled before table LNINV. Tuples that are not datafilled in table IPECARDS cannot be datafilled in table LNINV. Tuples attempting to use a valid IPE card code that is not datafilled in both tables fail during the one night process (ONP).

Table size

1 to 512 tuples

IPECARDS (continued)

Datafill

The following table lists datafill for table IPECARDS.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
IPEPEC		alphanumeric (1 to 8 characters)	*IPE line card PEC* This field identifies the line card PEC. The default PECs for this field include 8D02, 8D03, 8D09, and 5D11.
CRDCODE		NT8D02, NT8D03, NT8D09, NT5D11	*Card code* This field identifies the type of card datafilled in field IPEPEC.
HARDWARE		ALL, BASIC, ENHANCED	*Hardware type* This field indicates the IPE hardware type. Currently, the only valid entry for this field is BASIC. The other values are for future IPE hardware types.
DIAGNSTC		DEFAULT, CUSTOM	*Diagnostics* This field identifies the type of diagnostics applicable to the line card. It is possible to have a custom diagnostic created for a new line card type. If a custom diagnostic is created, enter CUSTOM.
LINES		LINES_16, LINES_32	*Line type* This field identifies this card type as either a 16 or 32 line card.

Datafill example

The following example shows sample datafill for table IPECARDS.

MAP display example for table IPECARDS

```
IPEPEC    CRDCODE     HARDWARE     DIAGNSTC    LINES
-------------------------------------------------------
8D02CC     NT8D02      BASIC        DEFAULT      LINES-32
8D03GG     NT8D03      BASIC        DEFAULT      LINES-16
8D09XX     NT8D09      BASIC        DEFAULT      LINES-16
5D11ZZ     NT5D11      BASIC        DEFAULT      LINES-16
DE52AA     NT8D02      BASIC        DEFAULT      LINES-32
```

Table history

MSL07

Table IPECARDS was created for software release MSL07.

MSL17

Addition of IPEPEC DE52AA to this table for release MSL17.

IPEINV

Table name

Intelligent Peripheral Equipment Inventory Table

Functional description

All the characteristics of an intelligent peripheral equipment (IPE) are assigned using table IPEINV. The following information is assigned for each frame of an IPE:

- site where the IPE is located
- frame type on which the peripheral module (PM) is mounted
- floor, row, frame position in row, and shelf number
- shelf position associated within an IPE frame
- issue name of the PM software
- PM type and number to which the IPE is assigned
- assignment of IPE control (C)-side PM links

Feature NC0330 (Engineering and Administrative Data Acquisition [EADAS] hardware inventory freeze) is an optional feature that identifies nodes within the DMS-100 family system and remains fixed over dumps and restores. Operational measurements (OM) groups LMD and UTR use field ADNUM as the key for indexing into the OM data.

The above feature requires package NTX218AA (1A/1B EADAS interface).

Datafill sequence and implications

The following tables must be datafilled before table IPEINV.

- SITE
- LTCINV
- LTCPSINV
- RCCINV
- RCCPSINV
- SLLNKDEV (if extended system monitors [XSM] are datafilled in table IPEINV).

Table size

0 to 255 tuples

Datafill

The following table lists datafill for table IPEINV.

Field descriptions (Sheet 1 of 4)

Field	Subfield or refinement	Entry	Explanation and action
IPENM		See subfields.	*IPE module key* This field consists of subfields SITE, FRAME, and SHELF.
	SITE	alphanumeric (1 to 4 characters) or blank	*Site* If left blank, subfield SITE is automatically datafilled with the default value HOST. There is no provision for lines that are remote from the host; therefore, HOST is the appropriate entry in all cases.
	FRAME	0 to 511	*Frame number* Enter the logical IPE frame number to which the line is assigned. See table DLMINV for a description of logical frames.
	SHELF	0 or 3	*Shelf number* Enter the shelf number of the IPE to which the line is assigned.
ADNUM		0 to 4095	*Administrative number* If the operating company office is equipped with the optional feature NC0330 (EADAS hardware inventory freeze), datafill field ADNUM. Enter the administrative number associated with the PM. ***Note 1:*** The value of field ADNUM must be unique across all peripheral inventory tables (DLMINV, IPEINV, LCMINV, LMINV, LTCINV, RCSINV, RCTINV, and VSRINV). Attempts to add a PM with an ADNUM already in use are rejected and the system prompts the user with the next available ADNUM value. ***Note 2:*** Field ADNUM cannot be changed if OM counts for that PM are included in an EADAS/data collection (DC) section associated with OM groups LMD or UTR.

IPEINV (continued)

Field descriptions (Sheet 2 of 4)

Field	Subfield or refinement	Entry	Explanation and action
FRTYPE		IPEC or UEFM	*Frame type* Enter the frame type on which the PM equipment is mounted. Enter IPEC for IPE. Enter UEFM for universal equipment frame module.
SHPOS		0 to 77	*Shelf position* Enter the shelf position, in inches, to indicate how high the PM equipment is mounted above the floor.
FLOOR		0 to 99	*Floor* Enter the floor on which the PM frame is located.
ROW		A to Z, AA to ZZ, except I, II, O, OO	*Row* Enter the row on floor where the PM frame is located.
FRPOS		0 to 99	*Frame position* Enter the frame position in the row of the PM equipment frame.
EQPEC		8D37AAor8D37DC	*Equipment product engineering code* Enter the product engineering code (PEC) of the PM.
LOAD		alphanumeric (up to 8 characters)	*Load* Enter the load file name of the PM software.
CSPMNO		See subfields.	*Peripheral module information* This field consists of subfields PMT and EXT_PMNO.
	PMT	LGC, LTC, RCC, RCCI, or RCC2	*Peripheral module type* Enter the PM type to which the IPE is connected: • LGC (line group controller) • LTC (line trunk controller) • RCC (remote cluster controller) • RCCI (ISDN RCC) • RCC2 (remote cluster controller 2)

Field descriptions (Sheet 3 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	EXT_PMNO	0 to 63	*Peripheral module number* Enter the PM number to which the IPE is connected.
IPEINFO		See subfields.	*IPE information* This field consists of subfields IPESELECTOR and XSMDATA.
	IPE-SELECTOR	HIPE	*IPE selector* Enter HIPE.
	XSMDATA	See subfields.	*Extended system monitor data* This field consists of subfields XSMEQUIP and LKINFO.
	XSMEQUIP	Y or N	*Extended system monitor equipped* Enter Y (yes) if the IPE is monitored by an extended system monitor (XSM) and datafill refinements LOOPID, XSMID, and MODULEID. Otherwise, enter N (no) and go to field LKINFO.
	LOOPID	alphanumeric (up to 16 characters)	*Loop identifier* If the entry in subfield XSMEQUIP is Y, datafill this refinement. Enter a valid datalink identifier that is datafilled in table SLLNKDEV.
	XSMID	0 to 64	*Extended system monitor identifier* If the entry in subfield XSMEQUIP is Y, datafill this refinement. This field identifies which XSM is monitoring the IPE. The value for this field corresponds to the dual inline package (DIP) switch setting for the XSM monitoring the IPEC in which the IPE resides. Enter 0 (zero) for the master XSM. Enter a value from 1 to 64 for the slave XSMs.

IPEINV (continued)

Field descriptions (Sheet 4 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	MODULEID	0 to 4	*Module identifier* If the entry in subfield XSMEQUIP is Y, datafill this refinement. Enter the address for the IPE within its IPEC. The address must correspond to the IPE's position in its IPEC (where 0 [zero] refers to the IPE shelf closest to the floor and 3 refers to the top shelf in an IPEC equipped with four IPEs). The address must also correspond to the shelf number (the second number) in the key for this tuple.
	LKINFO	0 to 63 (vector of up to 6 entries)	*C-side link information* This field specifies the line group controller (LGC)/line trunk controller (LTC)/remote cluster controller (RCC) links on which the host IPE is assigned. A minimum of two and a maximum of six links must be defined. The first link is a message link. All links entered must be type DS30A. Assign even-numbered links to unit 0 (zero) of the C-side peripheral module and odd-numbered links to unit 1. If less than 6 links are required, end the list with a $ (dollar sign). Any entry outside the range of indicated values for this field is invalid.
MRR		0 to 16	*Maximum ringing resource* This field indicates the number of analog sets for which the IPE's ringing generator must simultaneously generate ringing current. The default value for MRR is 8.

Datafill example

The following example shows sample datafill for table IPEINV.

MAP display example for table IPEINV

```
IPENM ADNUM FRTYPE SHPOS FLOOR ROW FRPOS EQPEC LOAD CSPMNO IPEINFO MRR
_____________________________________________________________________
IPE 00 0 8 IPEC 11 0 B 0 8D37DC IPE07BA LGC 0 HIPE N (7) (5) (6) (4) $ 8
IPE 01 0 9 IPEC 11 0 B 1 8D37DC IPE07BA LGC 0 HIPE N (3) (1) (2) (0) $ 16
IPE 02 0 7 IPEC 11 0 B 2 8D37DC IPE07BA RCC 0 HIPE N (19) (17) (16) (15)
(18) (13) $ 16
```

Table history

BCS36

The following changes were made to table IPEINV:

- deleted option UEFM (universal equipment frame) in field FRTYPE
- specified valid PECs for field EQPEC
- corrected range of values for field LKINFO

MSL07

This version added field MRR to allow specification of the maximum ringing resource.

Table name

Internet Protocol Terminal Set Inventory (IPSETINV) Table

Functional description

Table IPSETINV allows you to associate a new Internet Protocol (IP) terminal name with an existing terminal type. The existing terminal type corresponds to a Line Class Code (LCC).

Datafill sequence and implications

The following tables must be datafilled before table IPSETINV.

- IPECARDS
- LNINV

Table size

The table size is 1 to 20 tuples. There is one entry for every new IP terminal name.

Datafill

Table 1 lists the field descriptions for table IPSETINV.

Table 1
Field descriptions for table IPSETINV

Field	Subfield or refinement	Entry	Explanation and action
TERMNAME		alphanumeric (1 to 8 characters, including special characters)	This field lists the new IP terminal name.
TERMTYPE		M2009 M2112 M2018 MADO M3000 M2317 M2008 M2616 M2016S M2216A M 2216B MPDA MCA M2006 M2616CT ATA M3901 M3902 M3903 M 3904 M3905 M3906 DS4096	This field lists the existing IVD terminal types. Each terminal type corresponds to an LCC.
KEYS		Numeric (0 to 76)	This field lists the maximum number of keys that the new IP terminal can contain.
DNS		Numeric (0 to 76)	This field lists the maximum number of keys that work as either a Directory Number (DN) Key or a Feature Key on the new IP terminal.

Datafill example

Figure 1 shows sample datafill for table IPSETINV.

IPSETINV (end)

The sample datafill indicates to the system that

- the new IP terminal name (DS4046) will have the same functionality as the existing terminal type (M2616).
- you can use 11 keys on the DS4046 terminal.
- there is one key that can function as either a DN key or a feature key on the DS4046 terminal. You can use the other keys as feature keys.

Figure 1
MAP display example for table IPSETINV

```
TERMNAME TERMTYPE KEYS DNS
_____________________________________________________________________

DS4046   M2616    11   1
```

From the MAP example in Figure 1, DS4046 has been added to table IPSETINV and now appears in the TERMTYPE field.

IVDINV

Table name

Integrated Voice and Data Set Inventory (IVDINV) Table

Functional description

The Meridian series of digital telephones, also called integrated voice and data (IVD) sets, offer simultaneous voice and data capabilities. The inventory information for these sets is held in table IVDINV.

The current Meridian series offering consists of the M2009, M2112, M2018, M2317, M3000, Meridian asynchronous data option (MADO), and touch asynchronous data option (TADO):

- M2009 – voice set that has nine assignable feature keys
- M2112 – voice set that has 11 assignable feature keys and 1 key for integrated handsfree operation
- M2018 – voice set that has 18 assignable feature keys and provision for 1 add-on module which can be either a corded handsfree module or a dual headset module
- M2317 – voice set that has display, 11 assignable feature keys, 1 key for integrated handsfree operation, and 5 assignable soft keys
- M3000 – voice set that has touch sensitive display screen, 37 assignable soft keys, and integrated handsfree operation
- DS4046 – 802.11 11 Mbps DS third-party wireless handset.
- MADO – The preceding voice sets can have simultaneous asynchronous data capability with the installation of a MADO. The MADO is a single circuit board that mounts within the housing of the voice set itself.
- TADO – The preceding voice sets can have simultaneous asynchronous data capability with the installation of a TADO. The TADO is a single circuit board that mounts within the housing of the voice set itself. For the purpose of datafill, the TADO is treated as a MADO. Use MADO format with a SET_TYPE of MADO to datafill for a TADO.

Table IVDINV has one tuple for six types of hardware. The seventh type, TADO, is treated as a MADO. For the seven different types of hardware, there are six different tuple formats for this table:

- M2009 format
- M2018 format

- M2112 format
- M2317 format
- M3000 format
- MADO format used for MADO and TADO

The Meridian digital telephone series is also datafilled in table IVDINV. The Meridian digital telephone series consists of the M2006, M2008, M2016S, M2216A, M2216B, M2616, M2616CT, analog terminal adapter (ATA), Meridian communications adapter (MCA), and Meridian programmable data adapter (MPDA).

Since the Meridian 2000 series of telephone sets are digital, they cannot be connected to line concentrating modules (LCM) or line modules (LM) through the standard analog line cards. Instead, they must be connected to digital line modules (DLM) through the digital port cards (DPC). The DPCs are very different from the analog line cards in that 1 DPC takes the place of 32 line cards (1 line subgroup). That is, in a physical digital line equipment frame (DLE), there are four DLMs. In each DLM there are ten DPCs. Each of these DPCs has 32 circuits. The 16 even-numbered circuits (0, 2,...30) are for voice channels and the 16 odd-numbered circuits (1, 3,...31) are for data channels. A Meridian set equipped with a MADO is datafilled with two tuples in table IVDINV. The first tuple is for the voice set itself and has a line equipment number (LEN) with an even circuit number. The second tuple is for the data set and has an LEN with a with a circuit number one higher than that of the voice set in which it is installed.

IVD digital lines can also be used with the intelligent peripheral equipment (IPE) frame in the Meridian SL-100 environment.

Analog terminal adapter (ATA)

The ATA adds an analog port to Meridian digital telephone sets. The ATA is designed to fit into the base of the M2006, M2008, M2008HF, M2216, M2616, and M2616CT to save desktop space. The ATA uses the same MSL-100 interface and control as existing M2006 sets and is datafilled as an M2006 set.

Customer data change (CDC)

This option allows the owner of the set to customize the translation and routing parameters.

Key Set Music On Hold (KSMOH)

This option provides music to calls currently placed on hold.

22-key expansion module (M0022)

This option allows the use of the 22-key expansion module.

Display module (M0200)

This option allows the use of the display module.

TeleCenter (TELECNTR)

This option allows the owner of the set to use the Meridian TeleCenter.

Secure Set Option (SSO)

Datafilled in the table as SECURE, this option assigns the secure set option (SSO) feature to an M2016S secure set.

Datafill sequence and implications

The following tables must be datafilled before table IVDINV.

- LNINV
- ASRTABLE
- IPSETINV - only for DS4046 datafill.

Table size

Memory is allocated dynamically. Therefore, table size increases automatically as tuples are datafilled.

IVDINV (continued)

Datafill

The following table lists datafill for table IVDINV.

Field descriptions for table IVDINV

Field	Subfield or refinement	Entry	Explanation and action
LEN		See subfields.	*Line equipment number* This field defines the physical location of the equipment that is connected to a specific telephone line. Because field LEN is common to more than 60 tables, it is documented in a single section to avoid unnecessary duplication. Refer to section “Common entry field LEN” for a complete description of field LEN and associated subfields. Field LEN consists of subfields SITE, FRAME, UNIT, DRAWER or LSG, SHELF, SLOT, and CIRCUIT.
SETDATA		See subfield.	*Set data* This field consists of subfield SET_TYPE.
	SET_TYPE	M2006, M2008, M2009, M2016S, M2018, M2112, M2216A, M2216B, M2317, M2616, M3000, MADO, MCA, MPDA, or DS4046	*Set type* Enter type of Meridian digital telephone set. If the telephone set type is M2616CT, enter M2616. If the telephone set type is ATA, enter M2006.

SET_TYPE = Any entry other than MADO, MPDA, or M3000

If the entry in subfield SET_TYPE is any entry other than MADO, MPDA, or M3000, datafill refinement RING_TYPE as described in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	RING_TYPE	FH, FL, SH, or SL	*Ring type* Enter the code for the type of distinguishable ringing: FH (fast high), FL (fast low), SH (slow high), or SL (slow low). When field SET_TYPE=DS4046, the default value for RING_TYPE is FH

SET_TYPE = M2616, M2008, DS4046

If the entry in field SET_TYPE is M2616, M2008, or DS4046, datafill refinement HANDSFREE as described in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
HANDSFREE		Y or N	*Handsfree* Enter Y (yes) if the Meridian digital telephone set has the handsfree option. Otherwise, enter N (no). When field SET_TYPE=M2008, the default value for HANDSFREE is N. When field SET_TYPE=DS4046, the default value for HANDSFREE is N.

IVDINV (continued)

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
OPTIONS		See subfield.	*Options list* This field consists of subfield OPTION.
	OPTION	CDC, KSMOH, M0022, M0200, TELECNTR (up to 11 options), SECURE	*Option* Enter the options as follows: If field SET_TYPE = M2006, M2008, M2009, M2016S, M2018, M2112, M2216A, M2216B, M2317, M2616, M3000, MADO, or MPDA, enter CDC for customer data change. If field SET_TYPE = M2006, M2008, M2009, M2016S, M2018, M2112, M2216A, M2216B, M2317, M2616, or M3000, enter KSMOH for option Keyset music on hold. If field SET_TYPE = M2016S, M2216A, or M2216B, enter M0022 for the option 22-key expansion module. If field SET_TYPE = M2008, M2016S, M2616, or DS4046 enter M0200 for option display module. If field SET_TYPE = MPDA, enter TELECNTR to specify that Meridian TeleCenter is used. If field SET_TYPE = M2016S, enter SECURE to assign the secure set option (SSO). If no option applies, leave this field blank. Any entry outside the range of values indicated for this field is invalid. ***Note:*** For further information on these options, see table KSETINV.

OPTION = CDC

If the entry in subfield OPTION is CDC, datafill refinement CDC_OWNER as described in the following table.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	CDC_OWNER	alphanumeric (up to 8 characters) or blank	*Customer data change owner* Enter the name of the customer or owner allowed to change this record. This name must first be datafilled in table CDCLENS.

OPTION = M0022

If the entry in subfield OPTION is M0022, datafill refinement M0022_COUNT as described below.

Field descriptions for conditional datafill

Field	Subfield or refinement	Entry	Explanation and action
	M0022_COUNT	1 or 2	*M0022 count* Enter the number of lines to be displayed.

Datafill example

The example shows sample datafill for table IVDINV for an office with eight digital telephones:

- M2009 – set for fast high ringing, the customer data change (CDC) option is not used, and it is not equipped with a MADO unit.
- M2112 – set for slow low ringing, the CDC option is in effect for owner BANKER, and the unit is equipped with a MADO.
- M2018 – set up the same as the M2112.
- M2317 – set for slow high ringing, and the CDC option is not used.
- M3000 – equipped with a MADO unit, and the CDC option is not used.
- M2616 – set for slow low ringing with handsfree, and the CDC option is not used.
- M2008 – set for slow low ringing, and no MADO unit. The M0022 option is used.
- DS4046 – set for fast high ringing, with no handsfree, and no MADO unit. The M0200 option is used.

Seven of the voice sets are connected to the same DPC, that at the host site in frame number 2, shelf 0, subgroup 03. DS4046 is connected to IPE0 in frame 0, shelf 0, subgroup 10.

IVDINV (end)

MAP display example for table IVDINV

```
           IVDLEN       SETDATA                                  OPTIONS
_____________________________________________________________________

HOST  02 0 03 00    M2009 FH                                          $
HOST  02 0 03 02    M2112 SL                              (  CDC NILOWNER)$
HOST  02 0 03 03    MADO                                  (  CDC NILOWNER)$
HOST  02 0 03 04    M2018 SL                              (  CDC NILOWNER)$
HOST  02 0 03 05    MADO                                  (  CDC NILOWNER)$
HOST  02 0 03 06    M2317 SH                                          $
HOST  02 0 03 08    M3000                                             $
HOST  02 0 03 09    MADO                                              $
HOST  02 0 03 07    M2616 SL Y                                        $
HOST  02 0 03 07    M2008 SL                               (   M0022 2)$
IPE0 00 0 1012     DS4046 FH N                            (   M0200  ) $
```

IVDTRBL

Table name

Integrated Voice and Data Trouble Table

Functional description

Table IVDTRBL provides a means of keeping track of defective ports, so that the ports cannot be inadvertently reassigned.

If one port on a port card is determined to be defective, immediate replacement of the card affects 15 other telephone sets (each potentially having both a voice and a data line assigned). Defective port maintenance procedures provide a low impact alternative that involves relocating the set from the bad port to some other available integrated voice and data (IVD) port. The relocation necessitates changes to both hardware connections and datafill.

The hardware connection changes are made at the main distribution frame (MDF). The subscriber loop is disconnected from the bad port and reconnected to an available IVD port.

Datafill corresponding to the bad port (for both the voice line and the data line) is deleted from table IVDINV. This must be preceded by deletion of the applicable entries from tables KSETFEAT, KSETLINE, and DPROFILE. The line equipment number (LEN) of either the voice or the data line (or both) of the bad port is then added to table IVDTRBL. Table IVDTRBL contains no fields other than LEN, which is the key field to the table.

If an attempt is made to add a tuple to table IVDTRBL for a port for which a tuple still exists in table IVDINV, one of two error messages is issued.

If a tuple exists in table IVDINV with the same LEN as that entered, the following error message appears:

```
THIS LEN CANNOT BE ASSIGNED IN IVDTRBL CONTEXT
```

If no tuple for the LEN exists in table IVDINV, but a tuple for the mating LEN is present in table IVDINV, the following error message appears:

```
CANNOT ASSIGN THIS LINE--MATE STILL ASSIGNED IN TABLE
IVDINV
```

In either situation the update is rejected.

IVDTRBL (end)

Datafill sequence and implications

Table LNINV must be datafilled before table IVDTRBL.

Table size

0 to 1000 tuples

Datafill

The following table lists datafill for table IVDTRBL.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
LEN		see subfields	*Line equipment number* This field defines the physical location of the equipment that is connected to a specific telephone line. Because field LEN is common to more than 60 tables, it is documented in a single section to avoid unnecessary duplication. Refer to section “Common entry field LEN" for a complete description of field LEN and associated subfields. Field LEN consists of subfields SITE, FRAME, UNIT, DRAWER or LSG, SHELF, SLOT, and CIRCUIT.

Datafill example

The following example shows sample datafill for table IVDTRBL.

The example shows a typical entry of a defective port with the non-ISDN line equipment number (LEN) 00 1 10 16. The LEN entry for table IVDTRBL must be the same as that used in table IBNLINES.

MAP display example for table IVDTRBL

```
          LEN
_________________________________________

HOST  00 1 10 16
```

KSETFEAT feature IDOVR

Table name

Key Set Feature Table

Functional description

When IDOVR is assigned to KSETLINES, table KSETFEAT is datafilled.

Datafill sequence and meaning

Current datafill order is unchanged.

Table size

No change to table size.

Abbreviated table name	Minimum tuples	Maximum tuples	Information on memory
KSETFEAT	No Change	No Change	No Change

Datafill

The table that follows lists datafill for table KSETFEAT.

Field descriptions

Field	New or Changed	Subfield or refinement	Entry	Explanation and action
OPTIONS	Changed	Refinement	Extended to include IDOVR	New option.
APP	New	Subfield	Subfield of IDOVR	Indicate if the DN has voice mail box in VMS.

Datafill example

The figure that follows shows sample datafill for table KSETFEAT.

KSETFEAT feature IDOVR (continued)

Table KSETFEAT in No Prompt Mode -- Tuple Add

```
<add HOST 00 0 00 05 1 IDOVR IDOVR Y
TUPLE TO BE ADDED:
HOST 00 0 00 05 1 IDOVR IDOVR y
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
<y
TUPLE ADDED
<
```

Table KSETFEAT in No Prompt Mode -- Tuple Delete

```
> Del HOST 00 0 00 05 1 IDOVR
TUPLE TO BE DELETED:
HOST 00 0 00 05 1 IDOVR IDOVR y
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
>Y
TUPLE DELETED
>
```

Table KSETFEAT in Prompt Mode -- Tuple Add

```
>add
FEATKEY:
>HOST 00 0 01 15 1 IDOVR
FEATURE:
> IDOVR
APP:
>Y
TUPLE TO BE ADDED:
HOST 00 0 01 15 1 IDOVR IDOVR Y
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
>y
TUPLE ADDED
```

Table KSETFEAT in Prompt Mode -- Tuple Change

```
>pos HOST 00 0 01 15 1 IDOVR
HOST 00 0 00 05 1 IDOVR IDOVR Y
>cha kvar
>n
TUPLE TO BE ADDED:
HOST 00 0 01 15 1 IDOVR IDOVR N
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
>y
TUPLE CHANGED
```

Table KSETFEAT in Prompt Mode -- Tuple Delete

```
>pos HOST 00 0 01 15 1 IDOVR
HOST 00 0 01 15 1 IDOVR IDOVR Y
>del
TUPLE TO BE DELETED:
HOST 00 0 01 15 1 IDOVR IDOVR Y
ENTER Y TO CONFIRM, N TO REJECT OR E TO EDIT.
>y
TUPLE DELETED
>
```

Table history

MSL 14

The line option IDOVR is added in the OPTIONS list.

Additional information

None.

KSETFEAT feature IPCLIENT

Table name

Key Set Feature Table

Functional description

When lines are assigned the IPCLIENT option, Table KSETFEAT is datafilled.

Datafill sequence and meaning

Current datafill order is unchanged.

Table size

No change to table size.

Table Name	New, Changed or Deleted	Table Control (New/Old/Unchanged)	Table Name
KSETFEAT	Changed	Unchanged	KSETFEAT

Datafill

The table that follows lists datafill for table KSETFEAT.

Field descriptions

Field	New or Changed	Subfield or refinement	Entry	Explanation and action
FEATURE	Changed	Adds a new option.	IPCLIENT	Set feature with primary set type refinement which could be one of the following: • I2001 • I2002 • I2004 • SOFTCLIENT • OTHER

Datafill example

The following figure shows a sample datafill for Table KSETFEAT using SOFTCLIENT as the primary set type refinement.

SOFTCLIENT datafill example

```
TABLE: KSETFEAT
>lis
TOP
FEATKEY FEATURE KVAR
--------------------
IPCM 00 0 00 00 1 IPCLIENT IPCLIENT SOFTCLIENT$
```

Table history

SE07

The line option IPCLIENT is added in the OPTIONS list with the introduction of the Line Option for IPCM Phones feature.

Additional information

None.

LDAPTAB

Table name

Lightweight directory access protocol table (LDAPTAB).

Functional description

This table stores information that is used by the syncing client to establish a connection to the LDAP server and to perform required operations. This table supports the LDAP Synching for Meridian SL-100 feature.

This feature allows customers to change name and/or unique identifiers on the MSL-100 switch and DNs on the LDAP server. This feature aligns the Meridian SL-100 with other Nortel Network products that are synchronizing and interworking with LDAP directories.

Datafill sequence and implications

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

Table size

1 Kb

Datafill

The following table lists datafill for table LDAPTAB.

Field descriptions (Sheet 1 of 3)

Field	Subfield or refinement	Entry	Explanation and action
LDAPKEY		see refinements	Datafill LDAPKEY refinements
	IPADDR, PORTNU	table of 4 (0 to 255), (0 to 32767)	IPADDR, PORTU. Enter address of the LDAP server to be synched with MSL-100 switch , followed by the port number of the LDAP server to be synched with SL100 (example follows). Example of IPADDR, PORTNU entry: LDAPKEY: >192 136 141 161 389
USERNAME		SIXTYFOUR_ CHAR_VECTOR	USERNAME. Enter name used by the LDAP client to bind into the LDAP server. Example of USERNAME entry: USERNAME: >'user_root'

Field descriptions (Sheet 2 of 3)

Field	Subfield or refinement	Entry	Explanation and action
FREQSYNC		0 to 32767	FREQSYNC. Enter the periodicity of the syncs in hours. Example of FREQSYNC entry: >1
MAPPINGS		vector of table ENUMERATED_TYPE and THIRTY_TWO_CHAR_VECTOR	MAPPINGS. Enter names of the attributes on the LDAP server corresponding to Meridian SL-100. The maximum number of mapping parameters (MSL_ATTR_TYPE) is 15 with a minimum of three parameters. Parameters uniqueid, DN, and a name must be datafilled. For more information and examples, see the Supplementary Information section. Example of MAPPINGS entry: MAPPINGS: >COMMON_NAME CN MAPPINGS: >DN EXTERN_PHONE MAPPINGS: >UNIQUEID CORP_UNIQUE_KEY
SYNCPARS		NAME, NULL, PAR1, PAR2, PAR3, PAR4, PAR5 ***Note:*** Only NAME is available with the MSL15 software release.	SYNCPARS. Attributes on the MSL-100 switch that can be synced with the LDAP server. Default value is NAME. Example of SYNCPARS entry: SYNCPARS: >NAME
BASEDN		SIXTYFOUR_CHAR_VECTOR	BASEDN.Enter BaseObject used for initial binding. Example of BASEDN entry: BASEDN: >'c=INDIA|O=TCS-NORTEL'
SHDWIP		table of 4 (0 to 255)	SHDWIP. Enter IP address of the shadow LDAP server. Example of SHDWIP entry: SHDWIP: >191 135 141 99

LDAPTAB (continued)

Field descriptions (Sheet 3 of 3)

Field	Subfield or refinement	Entry	Explanation and action
SHDWPORT		0 to 32767	SHDWPORT. Enter the port number of the shadow LDAP server Example of SHDWPORT entry: SHDWPORT: >389
ESNMAP ***Note:*** ESNMAP is not used in the MSL15 software load		vector of table of 'SMALL_DIGIT_ REGISTER' and 'SMALL _DIGIT_ REGISTER' ESN_MSL multiple with MSL vector of up to 11 (N,1,2,3,4,5,6,7,8, 9,0,b,c,d,e,f) LDAP vector of up to 11 (N,1,2,3,4,5,6,7,8, 9,0,b,c,d,e,f)	ESNMAP. Stores mapping of part of the DN to the ESN. Example of ESNMAP entry: ESNMAP: >919991 351
NUMOFDIG		DIGIT (N,1,2,3,4,5,6,7,8, 9,0,b,c,d,e,f)	NUMOFDIG. Enter the number of digits from the MSL-100 switch that is to be matched with the LDAP server. Example of NUMOFDIG entry: NUMOFDIG: >0 ***Note:*** 0 stands for 10 (see 'Entry')
DIGDEL		character	DIGDEL. Stores the delimiter between the AREACODE, OFFCODE, and STNCODE Example of DIGDEL entry: DIGDEL: >'+'
WAITTIME		0 TO 255	WAITTIME. Enter WAITTIME in seconds. WAITTIME is the time in seconds for which the client on the MSL-100 switch will wait for the response from the LDAP server. Example of WAITTIME entry: WAITTIME: >4

Datafill example

The following example shows sample datafill for table LDAPTAB.

MAP display example for table LDAPTAB

```
ADDING A TUPLE
_____________________________________________________________________
TUPLE TO BE ADDED:
192 136 141 161 389 user_root 1 (COMMON_NAME CN) (DN
EXTERN_PHONE) (UNIQUEID CORP_UNIQUE_KEY)$ (NAME)$ c=INDIA|O=
TCS-NORTEL 192 136 141 99 389 $ 0 + 4
```

Table history

MSL15

Table introduction.

Supplementary information

PASSWORD and SYNCSTAT are hidden fields in this table. The password will be changed by the LDAPCI tool. The SYNCSTAT boolean is changed by the syncing client internally.

The default value of PASSWORD is ‘’ (none). The default value of SYNCSTAT is FALSE and for SYNCPARS is NAME.

The USERNAME, PASSWORD (through LDAPCI), BASEDN, and DIGDEL fields in table LDAPTAB should be populated within single quotes, or the switch converts all letters to upper case.

A pipe (|) should be entered in the place of a blank character in fields USERNAME and BASEDN, as blank characters are not accepted in these fields. Syncing Client will automatically convert pipes to blanks.

In the type ‘NUMOFDIG’, 0 corresponds to A (hexidecimal).

Field Mappings is a vector of table MSL_ATTR_TYPE and a Thirty_two_char_vector. The maximum number of mapping parameters (MSL_ATTR_TYPE) is 15 with a minimum of three parameters. Parameters uniqueid, DN, and a name must be datafilled.

The name related mappings in the mapping field can only be entered in any one of the following ways:

- common name
- display name
- given name and surname
- first name and last name

A maximum of 10 mappings of DN to the ESN can be datafilled in the ESNMAP field.The ESN field is kept for future use.

The maximum size of SYNCPARS is 10. Current design supports only the syncing of the NAME parameter. Consequently, the SYNCPARS field takes only the NAME value as a default.

Table name

LENTRBL

Overview

The MSL17 software release includes Meridian SL-100 feature, “Mark Non-IVD LENS” (A59036861). This feature creates table LENTRBL which stores faulty non-IVD (Integrated Voice and Data) LENs (Line Equipment Numbers). Switch operators manually enter the non-IVD LENs which they identify and mark as faulty in table LENTRBL. A check in this table will verify that LENs are not faulty, before SERVORD to assigns phones to them.

Functional description

Table LENTRBL stores the bad non-IVD LENs identified and entered by the switch-person. This table prevents switch-operators from assigning bad non-IVD LENs through SERVORD. Table LENTRBL supports all the non-IVD LENs which exist in table LNINV, with its status field as HASU (Hardware Assigned Software Unassigned). ISDN LENs that have no LTIDs associated with them may be entered in table LENTRBL. All relevant SERVORD commands which require one or more HASU or ISDN LENs as input check whether the LEN (or LENs) are bad or not. The presence of a LEN (or LENs) in table LENTRBL implies that the LEN (or LENs) is (are) faulty.

Datafill sequence and implications

Tables must be datafilled in the following sequence:

- LNINV
- LENTRBL

Table size

Table size for table LENTRBL is depicted in the following table.

Table Size

Minimum tuples	Maximum tuples	Information on memory
0	Memory for this table is allocated dynamically and therefore table size is increased automatically as more tuples are input. Similarly, memory previously occupied by deleted tuples are reused before extending the table.	26 bits/tuple

LENTRBL (continued)

Datafill

The following table lists datafill for table LENTRBL.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
LEN		Line Equipment Number (same as LEN field in table IBNLINES) ***Note:*** Refer to Nortel Technical Publication (NTP) *NA DMS-100 Customer Data Schema Reference Manual - Volume 1* for information on table IBNLINES	LINE EQUIPMENT NUMBER. This field defines the physical location of the equipment that is connected to a specific telephone line. The technician determines that the non-IVD HASU LEN is faulty and enters the LEN in the table.

Datafill example

The following example shows sample datafill for table LENTRBL.

MAP display example for table LENTRBL (adding a tuple)

```
> table lentrbl
MACHINES  NOT  IN  SYNC  -  DMOS  NOT  ALLOWED
JOURNAL  FILE  UNAVAILABLE  -  DMOS  NOT  ALLOWED
TABLE :    LENTRBL
> add
MACHINES  NOT  IN  SYNC  -  DMOS  NOT  ALLOWED
JOURNAL  FILE  UNAVAILABLE  -  DMOS  NOT  ALLOWED
ENTER   Y   TO  CONTINUE  PROCESSING  OR   N   TO  QUIT
> y
LEN :
> 00  0  00  04
TUPLE  TO  BE  ADDED :
HOST   00  0  00  04
ENTER   Y   TO  CONFIRM,   N   TO  REJECT  OR   E   TO  EDIT
> y
TUPLE  ADDED
```

Table history

MSL17

This table is created to support the deployment of feature “Mark Non-IVD LENS” (A59036861).

Supplementary information

This following supplementary information is applicable to table LENTRBL:

- There is only one field in the table.
- The field, LEN is of the standard format (as in table LNINV). The range and format of this field is shown in the following table.

LEN format example

SITE (4 characters)	LCE (00-511)	LCM (0-1)	LSG (00-19)	LC (00-31)
REM1	01	0	14	06
HOST	07	1	7	30
	02	0	18	26

- The data in the table is manually updated (entered and deleted) by the technician. There is no automation.

MDNGRP

Table name

Multiple Appearance Directory Number Group

Overview

The multiple appearance directory number (MADN) tables (tables MDNGRP and MDNMEM) contain information associated with each MADN group and for each member of a MADN group respectively.

These tables are “change-only” tables. Tuples cannot be added to or deleted from these tables. Each call appearance (CA) of a Call Appearance Call Handling (CACH) directory number (DN) appears as a separate tuple in table MDNGRP.

Note: For ISDN MADN groups only, the particular logical terminal (as defined in table LTDEF) to which the MADN directory number is assigned, must have the ISDN electronic key telephone service (EKTS) and dynamic terminal end-point identifier (DTEI) option.

Functional description

Table MDNGRP contains one tuple for each MADN group or MADN CACH CA that has at least one member datafilled. The tuple contains a list of options, attributes, or both assigned to the MADN group.

Use the Service Order System (SERVORD) to make changes to table MDNGRP. For more information on SERVORD, refer to the *SERVORD Reference Manual.*

If a system error occurs from data corruption, while processing table control commands with DN call type (DNCT), the following error message will be issued:

```
ERROR: FAILED TO READ FROM DNCT PROTECTED DATA.
```

The recommended action is to reissue the command.

If option MADN ring forward (MRF) is assigned to an MADN group in table MDNGRP, the following ring alerting options can be assigned to the individual appearances of the MADN in table MDNMEM:

Privacy release (PRL) is an option that applies to all single call arrangements), including call appearance call handling (CACH) lines with bridging capability and an initial privacy status of PRIVATE.

The privacy (PRV) SCA or CACH lines with bridging capability and an initial privacy status of NONPRIVATE.

MADN group types CACH, EXB and SCA

The following information is required for MDNTYPEs extension bridging (EXB), SCA and CACH:

- The denial treatment type (DENTRMT) defines the type of audible treatment that is given to a member when the member is not successful in accessing the MADN line, when bridging is not allowed or is not possible.
- If the value in field DENTRMT is TONE, reorder tone is heard for a period of 5 s.
- If the value in field DENTRMT is SILENCE, there is no sound for an indefinite period of time.
- Bridging allowed (BRIDGING) indicates if the MADN group has bridging capability.
- Conference bridge size (CONFSIZE) expresses the maximum conference bridge size in terms of parties (including the external party and the member who originally answered the call). For example, a conference bridge size of 6 implies that a maximum of four idle members can bridge into the call.
- All MADN lines with bridging capability, datafilled with a conference bridge size of 3, can potentially make use of one three-port conference circuit for every call.
- All MADN lines with bridging capability, datafilled with a conference bridge size of 4 or more, can potentially make use of at least one six-port conference circuit for every call.
- Bridge tone required (BRGTONE) indicates whether a tone is heard by the external party and all active MADN members if a new member bridges into the call.
- Initial privacy status (INITSTAT) indicates whether a call is normally private.
- A value of PRIVATE implies that all SCA and CACH calls are initially private (normal SCA functionality). Bridging cannot occur unless an active MADN member explicitly releases privacy on the call (using the PRL option).
- A value of NONPRIVATE implies that all SCA and CACH calls are initially not private. Bridging can occur any time unless an active MADN member explicitly enforces privacy on the call (using the PRV option).
- Privacy release mode (PRLMODE) is only applicable to groups whose initial privacy status is PRIVATE.

- The MANUAL mode allows only one member to bridge into the call after privacy has been explicitly released. Privacy is immediately reinstated as soon as a member bridges into the call. Privacy must be explicitly released every time a new member is added to the call. This is the usual operating mode for privacy release.
- The AUTO mode allows any number of members to bridge into the call after privacy has been explicitly released. Privacy is restored by user control only. Privacy is released if a conference bridge of arbitrary size is established.

The following table shows the fields that are automatically set to the values shown if the MDNTYPE in tables IBNLINES or KSETLINE is set to EXB, CACH, or SCA.

EXB or SCA automatic datafill

MDNTYPE			
Field name	**SCA**	**CACH**	**EXB**
DENTRMT	SILENCE	SILENCE	TONE
BRIDGING	Y (yes)	Y (yes)	Y (yes)
CONFSIZE	30	30	3
BRGTONE	N (no)	N (no)	Y (yes)
INISTAT	PRIVATE	PRIVATE	NONPRIVATE
PRLMODE	MANUAL	MANUAL	not applicable

Datafill sequence and implications

The following table must be datafilled before table MDNGRP:

- IBNLINES
- KSETLINE

Table MDNGRP is datafilled internally when a tuple is added to tables IBNLINES or KESTLINE.

A tuple is automatically added to table MDNGRP by the DMS switch if an entry is made in tables IBNLINES or KSETLINE with format MDN, or if a new directory number (DN) of type MDN is created by SERVORD, if an entry for that MADN group does not already exist.

If all members of a MADN group are deleted from tables IBNLINES and KSETLINE, the corresponding entries in tables MDNGRP and MDNMEM are deleted automatically.

Default group attribute settings that are functionally identical to the Privacy Release feature, are automatically entered in table MDNGRP for every SCA group and for the first CACH PCA for a PN. Additional CA's will default to the value of the PCA.

Table size

Data store is segmented into areas of store based on the number of members in a MADN group. The smaller the size of the MADN groups, the larger the number of groups allowed. Up to 64,000 one- to two-member MADN groups can be allowed in the switch. Each CA is considered an individual MADN group.

Datafill

The following table lists datafill for table MDNGRP.

Field descriptions (Sheet 1 of 4)

Field	Subfield or refinement	Entry	Explanation and action
MDNKEY		see subfields	MADN key This field consists of subfields AREACODE, OFCCODE, STNCODE, and CA is equal to fields SNPA and DN in tables IBNLINES or KSETLINE.
	AREACODE	0 to 9 (up to 7 digits)	Area code This field is equal to the entry in field SNPA in table IBNLINES or KSETLINE.
	OFCCODE	0 to 9 up to 7 digits)	Office code This field is equal to the first part of the entry in field DN in table IBNLINES or KSETLINE.
	STNCODE	0 to 9 (up to 8 digits)	Station code This field is equal to the last part of the entry in field DN in table IBNLINES or KSETLINE.
	CA	0 to 16	Call appearance This field contains the CA group number. The default value is 0 for non-CACH and 1 for CACH.
GRPSIZE		1 to 32	Group size This field is equal to the number of members assigned in table IBNLINES or KSETLINE to the multiple appearance directory number (MADN) group. This field cannot be changed.

MDNGRP (continued)

Field descriptions (Sheet 2 of 4)

Field	Subfield or refinement	Entry	Explanation and action
RESULT		see subfields	Result This field consists of subfield MDNTYPE, DENTRMT, CARES, PCA, BRIDGING, CONFSIZE, BRGTONE, INITSTAT, and PRLMODE.
	MDNTYPE	EXB or SCA, MCA,CACH	MADN group type Enter the type of call arrangement. Enter EXB (extension bridging) or SCA (single call arrangement) and datafill refinements DENTRMT and BRIDGING. Enter MCA (multiple call arrangement) and datafill no refinements. Go to field OPTLIST. Enter CACH (call appearance call handling) and datafill DENTRMT. This field is equal to field MDNTYPE in table KSETLINE.
	DENTRMT	SILENCE or TONE	Denial treatment If the entry in subfield MDNTYPE is EXB or SCA, datafill this refinement. This refinement specifies whether a tone is heard by a member who is not allowed to bridge into a call. If a tone is allowed, enter TONE. If a tone is not allowed, enter SILENCE.
	CARES	DOR, DTM, DTMEPI, NULL	Call Appearance Reservation type for the Call Appearance Group. This field can be assigned the following values: • DOR-Terminating Only • DTM-Originating Only • DTMEPI-Originating and Priority Incoming • NULL-Non-reserve (default)
	PCA	Y, N	Primary Call Appearance Enter Y to designate that this is the primary call appearance for the DN.
	BRIDGING	Y or N	Bridging allowed If the entry in subfield MDNTYPE is EXB or SCA, datafill this refinement. Enter Y (yes) if the MADN SCA group has bridging capability and datafill refinements CONFSIZE, BRGTONE, and INITSTAT. Otherwise, enter N (no) and go to field OPTLIST.

Field descriptions (Sheet 3 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	CONFSIZE	3 to 30	Conference bridge size If the entry in refinement BRIDGING is Y, datafill this refinement. This refinement specifies the maximum conference bridge size in terms of parties (including the external party and the member who answered the call).
	BRGTONE	Y or N	Bridging tone If the entry in refinement BRIDGING is Y, datafill this refinement. This refinement specifies whether a tone is heard by the external party and all active MADN members if a new member bridges into the call. To hear a tone enter Y. Otherwise, enter N and go to field OPTLIST.
	INITSTAT	PRIVATE or NON-PRIVATE	Initial privacy status If the entry in refinement BRIDGING is Y, datafill this refinement. If the entry in field MDNTYPE is EXB, enter NONPRIVATE. No refinements are datafilled. Go to field OPTLIST. If the entry in field MDNTYPE is SCA, enter PRIVATE. Datafill refinement PRLMODE.
	PRLMODE	MANUAL or AUTO	Privacy release mode If the entry in refinement INITSTAT is PRIVATE, datafill this refinement. This refinement specifies the privacy release mode. The MANUAL mode allows only one member to bridge into the call after privacy has been explicitly released. The AUTO mode allows any members to bridge into the call after privacy is explicitly released.
OPTLIST		see subfields	Option list This field is a vector of up to four options and their refinements. Each option and each refinement must be separated from the next by a blank space. This field consists of subfield OPTION.

MDNGRP (continued)

Field descriptions (Sheet 4 of 4)

Field	Subfield or refinement	Entry	Explanation and action
	OPTION	MRF,EHLD, MREL, MLAMP, MWINK or $	Option Enter the following options: • MRF for Meridian Digital Centered MADN Hold and datafill refinements AUTO and MRFTIMER. • EHLD for ISDN Hold. This indicates that EKTS mode is in use. This mode emulates the Meridian Digital Centrex (MDC) implementation of MADN Hold. No further datafill is necessary. • MREL and MLAMP to provide take down functionality and lamp updates to the MADN group. No further datafill is required. The MREL and MLAMP values are only valid if assigned to MADN SCA groups (including CACH) with bridging. If bridging is removed from the MADN group, or if the group type changes, an error message appears and the tuple change is rejected. MLAMP cannot be assigned to CACH MADN groups due to BRAFS restrictions with this feature. • MWINK. Enter MWINK to provide a distinctive wink for the MADN HOLD controller to distinguish it from other members of the MADN group. ***Note:*** The MWINK option can only be assigned to MADN lines of the SCA and CACH group types. When MWINK option is present on the MADN group, the MADN group type cannot be changed to MCA and EXB group types. • Enter $ if no option is specified.
	AUTO	Y or N	Automatic If the entry in field OPTION is MRF and if HOLD is automatic, enter Y and datafill refinement MRFTRIMER. Otherwise, enter N for manual.
	MRFTIMER	0 to 60	MRF timer f the entry in refinement AUTO is Y, enter the time, in 1-s intervals, that incoming calls ring the members of the MADN group with ring type ABBR assigned in table MDNMEM, before forwarding ringing to the DELAY ring MADN members.

Datafill example

The following example shows sample datafill for table MDNGRP.

If an MADN SCA group with two members is created by tables IBNLINES or KSETLINE, the following entry is automatically added to table MDNGRP.

MAP display example for table MDNGRP

```
MDNKEY                GRPSIZE  RESULT                OPTLIST
_____________________________________________________________________

613    722   4396   1 2  CACH SILENCE NULL Y Y 30 N  PRIVATE MANUAL $
```

Use the CHF SERVORD command to modify the fields.

Table history

CNA16

Added a new option, MWINK, to the list of MADN group options.

NA008

The following entries are added or changed for NA008:

- modified MDNKEY to include subfield CA
- added MDNTYPE CACH
- added RESULT field refinements CARES and PCA
- Added warning information for table control data corruption errors (feature AF6777).
- Added supplementary information; modification of MADN member attributes of CS ISDN terminals with DN sharing feature (AF6782).

BCS36

Added subfields AREACODE, OFCCODE, and STNCODE

Supplementary information

This section provides information on datafilling table MDNGRP for MADN ring forward.

MADN ring forward (MRF)

This feature provides increased flexibility in the ringing options available to SCA and CACH MADN.

MDNGRP (continued)

The capability is provided for MADN SCA/CACH group appearances to ring on a delayed or abbreviated basis, for a total of four ringing options: always ring, never ring, ring from call termination until MRF activation (abbreviated), or ring after MRF activation (delayed).

The activation of this feature can be automatic or manual.

If the activation is automatic, a time must be datafilled. This is the time that the incoming calls ring the members of the MADN group with ring type ABBR assigned in table MDNMEM before forwarding ringing to the DELAY ring MADN members, unless ringing is forwarded manually by an electronic business set (EBS) user with an MRFM key.

Manual activation provides the capability for the EBS user to manually push the ringing for an incoming call to the appearances of the MADN designated for delayed ringing, by pressing a button on the EBS designated for the MRF Manual (MRFM) feature.

If a MADN group has MRF and Call Forward Don't Answer (CFD) features, the timers for those features must not be set to identical values. If the timers are set to the same value, the operation of the two features can appear erratic to the end users.

For example, if MRF is activated first, then the DELAY ringing members can get a very brief ring splash, truncated by subsequent CFD activation. Alternatively, if CFD is activated first, the DELAY ringing members never receive ringing.

The EBS Make Set Busy (MSB) feature, when active for a set, blocks any ringing of that EBS. Therefore, if MSB is active on an EBS, no calls terminating on the EBS receive ring alerting regardless of the ring option assigned to any MADN members on the set.

The MRF option cannot be deleted from table MDNGRP until all members have been assigned ring types of ALWAYS or NEVER.

The MRF option can only be added as an option to MADN groups of type SCA and CACH. It is not applicable to MADN groups of the extension bridging (EXB) type, nor to MADN multiple call arrangement (MCA) groups.

The MRF manual activation is supported only for key access, and therefore is not supported for a 500/2500 set even though it may give an appearance of a MADN group that has the MRF feature assigned.

Table MDNGRP will allow modification of MADN group attributes of a circuit switched (CS) ISDN terminal with DN shared CALLTYPE.

Note: For more information about DN CALLTYPE sharing, see subfield OPTION in table HUNTGRP and feature AF6782 in the Feature Description Manual.

Table name

Multiple Station Message Waiting Indicators Table

Functional description

Table MSMWI is created in the MSL layer to store instances of feature MSMWI and related feature information. As MSMWI is datafilled through table KSETFEAT, the PRIMARY_LEN and key associated with the SECONDARY_LEN and key are stored.

Table MSMWI contains LENs of Integrated Business Network (IBN) and Key Set terminals. The logical key for IBN LENs is 0.

Table MSMWI is a read-only table, and write access is only permitted through table KSETFEAT.

Datafill sequence and implications

Since table MSMWI. is only datafillable through table KSETFEAT, table KSETFEAT and it's dependencies must be datafilled prior to datafilling MSMWI.

Table MSMWI does not have any dependent users.

Table size

128 bytes to 524,416 bytes

Field information

The field values for table MSMWI are shown in the following table.

(Sheet 1 of 2)

Field Value	Subfield value	Description
MSMWI_KEY		This field consists of subfields PRIMARY_LEN, PRIMARY_LKEY, and INDEX.
	PRIMARY_LEN	This field represents the terminal which has it's message monitored.
	PRIMARY_LKEY	This field name represents the key on the primary terminal and is datafilled with EMW or MWT message waiting features.

(Sheet 2 of 2)

Field Value	Subfield value	Description
	INDEX	This field represents a unique index for each secondary terminal. This enables secondary terminals to have a unique key for each MSMWI entry datafilled. This index is automatically updated as primary terminals are added or deleted to or from the associated secondary terminal.
SECONDARY_LEN		This field represents the secondary LEN of the terminal set datafilled with MSMWI. This set type must be one of the valid terminal types allowed for MSMWI.
SECONDARY_LKEY		This field represents the MSMWI key on the secondary terminal. This key only provides a visual indication when a message is waiting on the associated primary set. Hence, no functionality is provided to retrieve messages left on primary terminal sets.

Datafill example

The following example shows sample datafill for table MSMWI.

MAP display example for table MSMWI

```
       MSMWIKEY                  SLEN SLKEY
_____________________________________________________________________
       LCM1  00 1 09 31 5 1      LCM1  00 0 08 00    0
```

Dump and restore

Table MSMWI does not require any new data.

MSMWI (end)

Activation

Once the MSMWI_KEY type, MSMWI line options, MSMWI PROCVARS, and the MSMWI table routines are bound by the MSL initialization module, MSMWI is ready to be datafilled. These types and constants are bound in at IPL of MSL06 and later DRUs. The initial datafill to setup table LCCOPT is also done during IPL using EXT files.

At this point, MSMWI is available to table KSETFEAT to datafill using service orders. The activation of MSMWI then requires that the primary terminal set have either the MWT or EMW message waiting features assigned. The secondary terminal must also be a valid terminal type for MSMWI.

As instances of MSMWI are datafilled, instances are stored in table MSMWI. Functionality is completely removed when all MSMWI instances are removed from table MSMWI.

Office parameters

Table MSMWI has no office parameters.

NEW_DN

Table name

New directory number.

Functional description

This table allows a number to have separate forwarding directory numbers (DN) depending on the time of day (TOD).

Datafill sequence and implications

Tables DAYTYPES and TODHEAD must be datafilled before table NEW_DN.

The following tables must be datafilled after table NEW_DN.

- DAYOYEAR
- DAYOWEEK
- TIMEODAY

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

Table size

The maximum table size is 21.504 kbytes.

Datafill

The following table lists datafill for table NEW_DN.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
TODNAME		Vector of up to 8 characters	Enter a valid CFTOD time of day name from table TODHEAD.
TIMEODAYREF		0 to 32767	Enter the reference number for the TODNAME entry in table TODHEAD.
FORWARDING_DN		Forwarding directory number (up to 18 digits)	Enter the forwarding directory number specified for call forwarding time of day.

NEW_DN (end)

Datafill example

The following example shows sample datafill for table NEW_DN.

MAP display example for table NEW_DN

```
TABLE NEW_DN
_____________________________________________________________
TODNAME         TIMEODAYREF        FORWARDING_DN
ENGINEERING           1             9975120
ENGINEERING           2             9975001
```

Table history

MSL09

This table was created to hold the additional time of day call forwarding directory number.

Supplementary information

None.

NTWKCLLI

Table name

Network Common Language Location Identifier Table

Functional description

Table NTWKCLLI provides a mapping of local common language location identifiers (CLLI) to unique network identifications by associating a CLLI with a network name that is defined in table NETNAMES. Table NTWKCLLI also assigns this CLLI a network CLLI ID (NETCLLID). Network CLLIs throughout a network are identified through the use of NETCLLIDs.

Datafill sequence and implications

The following tables must be datafilled before table NTWKCLLI.

- CLLI
- NETNAMES

Table size

0 to 1024 tuples

Datafill

The following table lists datafill for table NTWKCLLI.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
CLLI		alphanumeric (1-16 characters)	*Common language location identifier* Enter a character string to specify the local Common Language Location Identifier (CLLI).
NETNAME		alphanumeric(1- 32 characters)	*Network name* Enter the network name to which the customer is associated. ***Note:*** The network name must be defined in table NETNAMES prior to datafilling this field.
NETCLLID		numeric (0-255)	*Network CLLI identifier* Enter the network CLLI identifier.

NTWKCLLI (end)

Datafill example

The following example shows sample datafill for table NTWKCLLI.

MAP display example for table NTWKCLLI

```
CLLI                NETNAME     CLLI

 ___________________________________________________________

 N4IBNSS7           PRIVNET       10
 N2IBNSS7           WESTNET       200
```

PADDATA

Table name

PAD Value Data Table

Functional description

Table PADDATA implements the loss plan for the Meridian SuperNode (Meridian SL-100) system. A loss plan integrates the Meridian SL-100 PBX into the public switched network. This integration involves the definition of how the MSL-100 system interfaces with the network through a variety of circuit types. This interface, from the perspective of the signal levels that carry information over the network, does not address control signaling between the PBX and the network. The loss plan identifies the adjustments to the signal levels that are applied to each type of circuit.

This practice applies to the MSL-100 system, which is a digital switching system that uses μ-law pulse code modulation (PCM). PCM is a digitizing technique for analog signals. μ-law is the industry standard for switching systems in North America. This practice does not apply to the A-law configuration of the MSL-100 system.

This practice performs two functions:

- presents the background information that is essential to understanding the purpose for and content of the loss plan
- presents the default values that are provided with each initial switch's datafill

Datafill sequence and implications

Table PADDATA must be datafilled prior to tables LNINV, TRKGRP, CONF3PR, CONF6PR, and CPOS.

Function of default datafill values

These default values have been incorporated into the initial load to simplify the installation process and to provide a set of values that provide the switch with the ability to provide satisfactory transmission levels. The customer can revise these default values to improve marginal or unsatisfactory service. The terminology and values comply with Electronic Industry Association (EIA) standards as they apply to a PBX. Several additional connection types are also described that are not covered in the EIA standard. Nortel Networks proprietary equipment and special call routing features use these additional connections.

The MSL-100 system does not inherently alter the quality or strength of the signals routed through the system. These signals can originally be either analog or digital.

The following sections describe the concepts and define the terminology used in the loss plan. The following sections also present appropriate transmission information. This information defines and illustrates basic measurements so that the context of the measurements that are used to characterize performance can be better understood.

Basic MSL-100 information

The MSL-100 system is a computer-controlled digital switching system that provides 4-wire paths between connected ports or interfaces. Four-wire transmission provides separate transmit and receive paths or channels. For example, when talking to the other end of a connection, the system carries the subscriber's speech by one path (transmit path). When the other subscriber talks, the system carries that speech on the second path (receive path). This publication describes how the system conditions and adjusts signals on the 4-wire path for optimum performance.

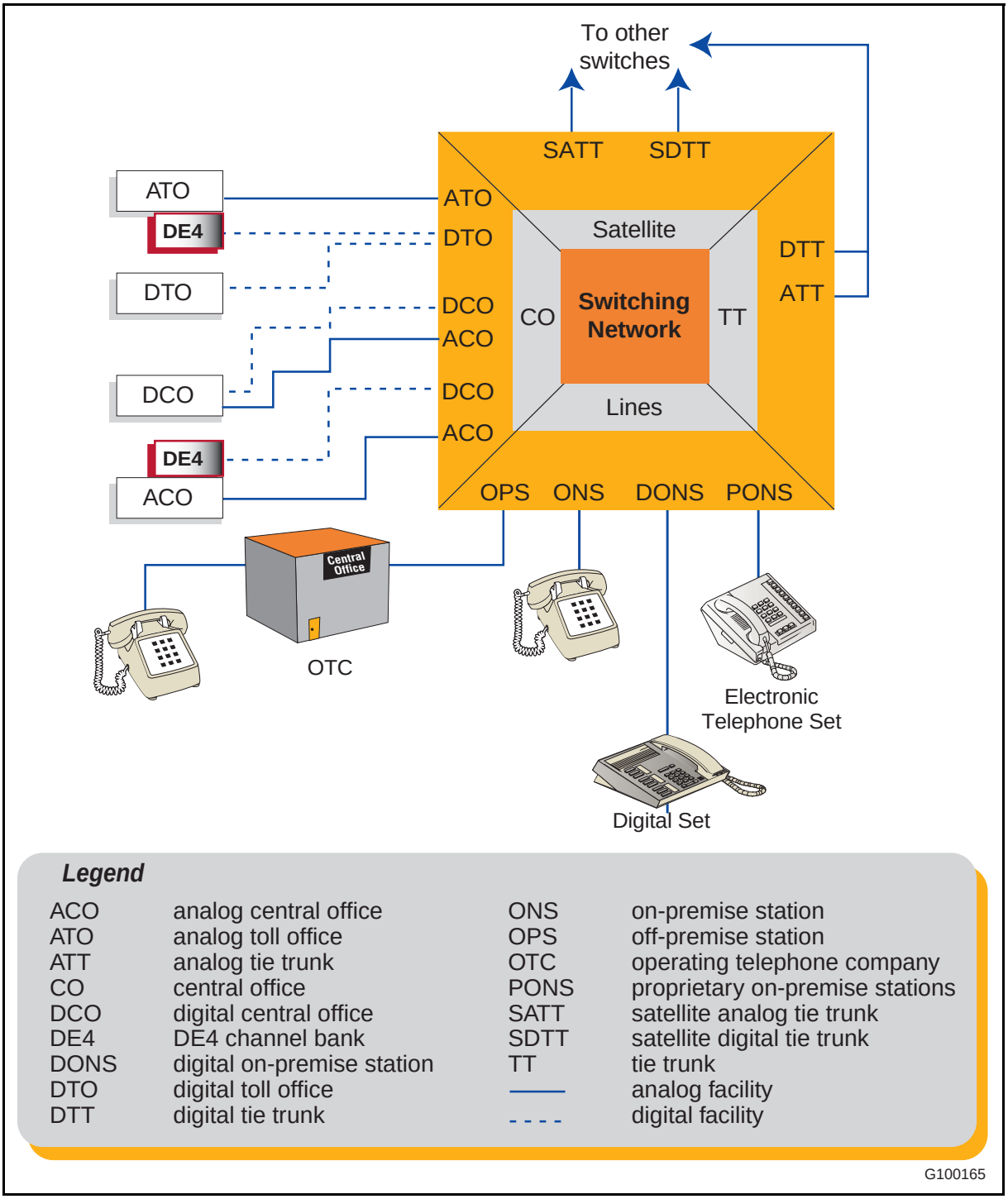
Figure “Meridian SL-100 system interfaces” on page 105 illustrates the MSL-100 system with its complement of line and trunk interfaces. A series of concentric boxes represents the MSL-100 system with the switching network located in the center. The next larger box shows the four main types of interfaces, while the outer box shows the interface types and sample connections.

Architecture

The MSL-100 system contains two primary components: a group of interfaces and the switching network. The interfaces accept signals from external sources and condition these signals for processing by the switch. The network serves to connect the interfaces together under the control of the computer that directs the operation of the switch as shown in Figure “Meridian SL-100 system interfaces” on page 105.

Two main types of interfaces are present in the switch: lines and trunks. Lines (stations) can be connected to other lines (internal calls) or trunks (external calls). A trunk can also be connected to another trunk.

Meridian SL-100 system interfaces



Legend

ACO	analog central office	ONS	on-premise station
ATO	analog toll office	OPS	off-premise station
ATT	analog tie trunk	OTC	operating telephone company
CO	central office	PONS	proprietary on-premise stations
DCO	digital central office	SATT	satellite analog tie trunk
DE4	DE4 channel bank	SDTT	satellite digital tie trunk
DONS	digital on-premise station	TT	tie trunk
DTO	digital toll office	———	analog facility
DTT	digital tie trunk	- - - -	digital facility

G100165

PADDATA (continued)

The following interface characteristics measurements are taken by switch personnel:

- List the types of trunks that are to be used and their CLLI names.
- List the types of station equipment and the location for each line.
- List the transmission level point (TLP) locations (for example, RJ21X, main distribution frame [MDF], digital cross-connect [DSX]) that are used when making measurements. Each trunk or line circuit should have a TLP at the MDF.
- Measure the transmit and receive actual measured loss (AML) levels at the MDF by measuring each circuit, trunk, or line. Compare the anticipated values, or expected measured loss (EML), with the AML. The operating telephone company (OTC) provides the EML values for the circuits that they engineered. Note any circuits that are below the EML by more than 1.5 dB. Make a permanent record of the AML levels.

  Note: Most problems in the field occur due to a change in the AML. The AML must be re-measured early in any trunk or line trouble isolation process.

- Measure and record the transmission levels of digitally interfaced trunks. The local operating company adjusts these levels at the OTC end.
- List trunk TLP at the MDF.
- List station loop TLP at the MDF by making the following measurements and recording the results:
  - Measure the loop loss for each building served by the MSL-100 system and each remote switch. Perform these tests either at the MAP terminal in the trunk test positions (TTP) or line test positions (LTP) or with portable test equipment. Record these values.
  - Measure the loop loss for each floor of multi-story buildings. At a minimum, test the most distant loop and one middle distance loop.
  - Measure the loop loss to the most distant station in large buildings.
  - Measure the loop loss for each off-premise station. Also verify loops that are conditioned by the OTC.

The MSL-100 line and trunk interfaces are available for both analog (voice) and digital (data) signals. The interfaces provide the conditioning necessary for the MSL-100 system to accommodate these signals.

The strength of the signals presented to the MSL-100 by the interfaces must fall within certain guidelines. The loss plan sets these guidelines. The signal strength can vary by a number of methods: manually-switched attenuators (pads), software-controlled pads, or a combination of both types. The software-controlled adjustments allow the MSL-100 system to adjust each type of connection to provide a uniform signal strength to its users and minimize the contrast between different types of connections.

Interface types

The following paragraphs describe the pad groups found in fields PADGRP1 and PADGRP2 of table PADDATA. The trunks in these descriptions connect to either an OTC Class 5 central office or an IEC common carrier Class 4 toll office. The section describes both MSL-100-specific and EIA standard circuit types.

Stations

The MSL-100 system accommodates a variety of station equipment, both analog and digital. The following subsections describe the station equipment:

- DONS – digital on-premise station, digital station equipment (Meridian digital set)
- ONS – on-premise PBX station, an analog line or attendant console
- OPS – off-premise PBX station, an analog line or attendant console
- PONS – proprietary on-premise station, an on-premise electronic telephone set (ETS)
- POPS – proprietary off-premise station, an off-premise ETS. This station connects to the MSL-100 system using cable that is usually rented from the OTC.
- UNBAL – unbalanced line

Analog phones

The Meridian SL-100 system supports rotary and tone dial analog sets. These sets are referred to as 500 and 2500 type sets, respectively. These sets can be used as on- or off-premise (ONS or OPS) stations.

PADDATA (continued)

Electronic telephone set (ETS)
The ETS, an analog voice set that uses digital control signals, can be either on- or off-premises. PONS represents on-premise stations, and POPS represents off-premise stations.

Meridian digital phones
The MSL-100 system supports a variety of digital station equipment. The Meridian sets are digital for both voice and control. The system uses the DONS interface for these stations, which are always on-premise stations.

Trunks

The Meridian SL-100 system accommodates the following trunk interfaces:

- ACO – analog PBX trunk interface to an analog central office (OTC trunk)
- ATO – analog PBX trunk interface to an analog toll office (IEC trunk)
- ATT – analog PBX trunk interface to an analog tie trunk
- CONF – conference bridge, 3- or 6-port
- DCO – digital PBX trunk interface to a digital OTC trunk
- DTO – digital PBX trunk interface to a digital toll office (IEC trunk)
- DTT – digital PBX trunk interface to a digital or combination tie trunk
- SATT – analog PBX trunk interface to an analog satellite PBX tie trunk
- SDTT – digital PBX trunk interface to a digital satellite PBX tie trunk

Data interfaces

Modems interface data equipment over analog lines. These connections are subject to the same considerations as analog circuits, and the system introduces loss as required. Datapath equipment is not treated as an analog circuit, and no loss is introduced.

Remote switches

Remote switching systems connect to the Meridian SL-100 system through a variety of trunk interfaces. These switches are typically equipped with ONS, OPS, DONS, PONS, and POPS line interfaces. The MSL-100 system recognizes the type of remote line interface being used.

The following list shows possible remotes:

- IPE – intelligent peripheral equipment
- MCRM-S – Meridian cabinet remote module-Second series
- RDLM – remote digital line module
- RLCM – remote line concentrating module
- RSC – remote switching center)

Off-net trunks to off-net trunks

The EIA does not describe this connection type (tandem call). However, it is used for special service features (such as call forwarding) that require connections such as ACO-to-ACO.

Analog trunks

Analog trunks can be interfaced by a trunk module (TM), but the preferred method of handling these trunks is to convert them to digital, as described in the following paragraph. ACO trunks originate at an OTC (formerly a Class 5 central office) and can be used for other types of circuits, such as foreign exchange (FX). Analog toll office (ATO) trunks are primarily used for wide area telecommunications service (WATS), but can also be used for direct connection to international gateways.

Digitally-terminated analog (DTA) trunks

The DTA circuit type is digital on one end and analog on the other. The DTA circuit type uses both digital and analog facilities and is unlike combination circuits, which use only digital facilities. This circuit type was omitted by EIA. An MSL-100 digital trunk controller (DTC) connects to external channel bank equipment to provide the analog-to-digital interface. A channel bank converts up to 24 analog trunks into one T1 span. The Nortel Networks DE-3 interfaces one span, or the DE-4 interfaces two spans when set up for Mode 3 operation.

The following assumptions are made:

- The MSL-100 system views the DTC as an analog interface for DTA and inserts loss or gain as required.
- The circuit is engineered as an analog circuit and the required loss or gain adjustment occurs externally to the MSL-100 system (in either the channel bank equipment or other transmission equipment in the path).

PADDATA (continued)

Developing a loss plan

Digital trunks

North American standard T1 carrier is supported and the individual 64-kbits per second channels are compatible with the data format used internally by the MSL-100 system. This 24-channel (time slot) time division multiplex (TDM) format is also referred to as DS1 and is composed of 24 individual DS0 time slots. Each DS0 channel is a 125-µs time slot, which is compatible with 64-kbits per second data (the output of the interface's coder/decoder [CODEC]).

Digital trunks generally originate at an OTC and can be used for other types of circuits, such as FX. IEC trunk interfaces (DTOs) are primarily used for WATS trunks, but can also be used for direct connection to international gateways.

Signals

The MSL-100 system accommodates two types of signals: voice and data. The MSL-100 system uses other types of signals and signaling control. The operation of lines and trunks and are not covered in this publication.

Voice

Analog voice signals are typically limited to frequencies between 300 and 3400 Hertz (Hz). One Hertz equals one cycle per second. The system changes voice into digital form for transmission through the switch. Digitized speech is an approximation of the analog source (voice) and is produced by a CODEC, which outputs a 64-kHz digital data stream containing binary coded samples of the original analog signal. These samples are taken at an 8-kHz rate and comply with the µ-law requirements for North American pulse code modulation (PCM).

Data

Digital signals also exist as a binary coded data stream. These signals are similar to the output of the CODEC, but naturally carry a different type of information with different characteristics.

Units of measure

Decibel

The most common unit of measure in telephony is the decibel (dB). This measure is one tenth of a Bel. The dB indicates the strength or power of a measured signal. The dB has no actual numerical value, but states a ratio. The ratio expresses the difference between two powers,

voltages or currents. The dB states the ratios between signal powers in this publication.

Bel

A Bel is a logarithmic value that states the ratio of two power measurements and is expressed as a base 10 logarithm (log). A Bel equals 10 dB and corresponds to a multiplication factor of 10 for gain (amplification) or to a loss (subtraction) factor of 10 for an attenuator (pad). Log values can be either calculated or found in a variety of engineering documents. For example, the logarithm of 2 equals 0.301. To double the power of a signal, add 3.01 dB or multiply by 2. To reduce the power of a signal by half, subtract 3.01 dB. The 3.01 dB value is rounded-off to 3 dB for convenience.

Stating decibels

Changes in signal levels are stated as either gain or loss. This can be confusing because gain and loss could occur in the same circuit. The presence of a negative value indicates a value that is the opposite of the usual or expected value. Refer to the following values as examples:

- 5 dB loss can be stated as -5 dB gain.
- 5 dB gain can be stated as -5 dB loss.

References

Measurements are taken using a calibrated tone (of a specified frequency and signal level) measuring the changes that occur to the reference tone at various points in the circuit.

Reference level

The accepted telephony standard reference level is 1 milliwatt (1 mW or simply mW). This level equals 0.0 dBm. (The m comes from mW or the 0.001 Watt level of a 1000 Hz analog tone in a 600-ohm circuit [or 1004 Hz for digital]). Other signals that are referenced to this level are also identified as dBm values. The stated signal strength is an absolute power measurement, because the reference signal ties the dB signal level to the absolute value of mW. The dBm signal level eliminates the need to refer to signal levels using mW and to standardize the dB levels as dBm levels.

Reference signal

The accepted standard for digital and carrier equipment is a 1004-Hz tone. When this tone is used at the 1.0-mW power level, the tone is referred to as a milliwatt tone and is the accepted telephony standard.

PADDATA (continued)

Measurements

Test individual circuits by injecting a test tone and making measurements at various points along the circuit. Changes to the test tone give an indication of performance of different portions of the circuit.

Take the measurement of a circuit in either a terminating or bridged mode. Use terminating mode when the circuit is disconnected from its trunk or line card and the test equipment is providing the termination for the circuit. Use bridged mode when the trunk card is still terminating the circuit.

Measurement point

Most measurements occur at standardized locations in the circuit that is being tested. Standardization can be supplied by either the owner of the switch or the OTC. Signals that are referenced to the test point are stated as dB levels that are relative to the TLP. For example, a circuit measured at a +5 TLP measures +5 dBm when operating properly. When the OTC standard is used, the 0 TLP point is located in the OTC.

The MDF acts as the primary TLP location for a PBX. Additionally, a 0 TLP point can be specified for each circuit that is identified as a 0 dBm0 point when the signal level measurement equals 0 dBm. A +5 dBm0 point measures +5dBm at the 0 TLP. When the 0 TLP is used as the test tone connection point, measurements at the other TLP locations should match their respective dB values.

Note: The transmission level of any point in a transmission system equals the ratio (stated in dB) of the power at that point to the power of the same signal at the reference point.

Circuit performance is described as the signal power that is present at some measurement point in the circuit. This power level references the level at other points in the circuit.

Tone source point

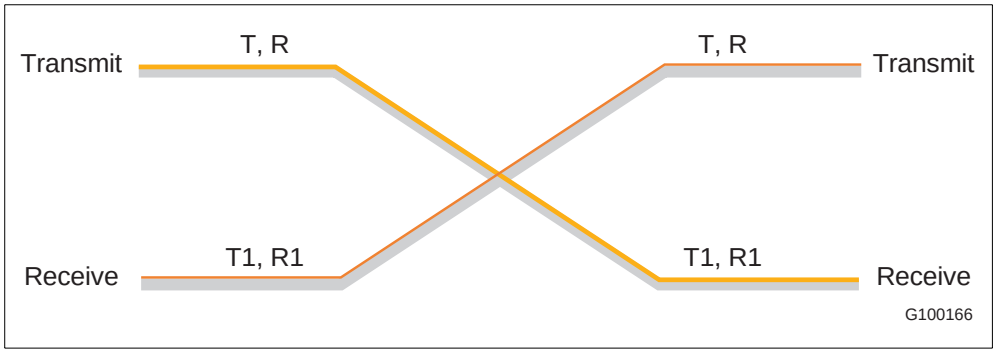
The MSL-100 system or a variety of external test equipment can supply test tones. The MSL-100 test tones comply with the mW test signal standard, and NT1X90 cards in a maintenance trunk module (MTM), NT2X58, provide these tones.

4-wire connections

Each connection contains four wires (4W) and provides two separate paths: transmit and receive. Transmit carries signals away from the reference point through the switch, and receive carries signals to the

reference point. Figure “4-wire connection loss measurement samples” on page 113 shows the connection of a 4-wire circuit between two pieces of equipment. One frequent problem with 4-wire connections is keeping track of your location within the circuit, because the transmit and receive functions are reversed at each connection point in the path. Failure to reverse the signals results in the transmit of one part of a connection sending to the transmit part of the next portion of the connection, which does not work.

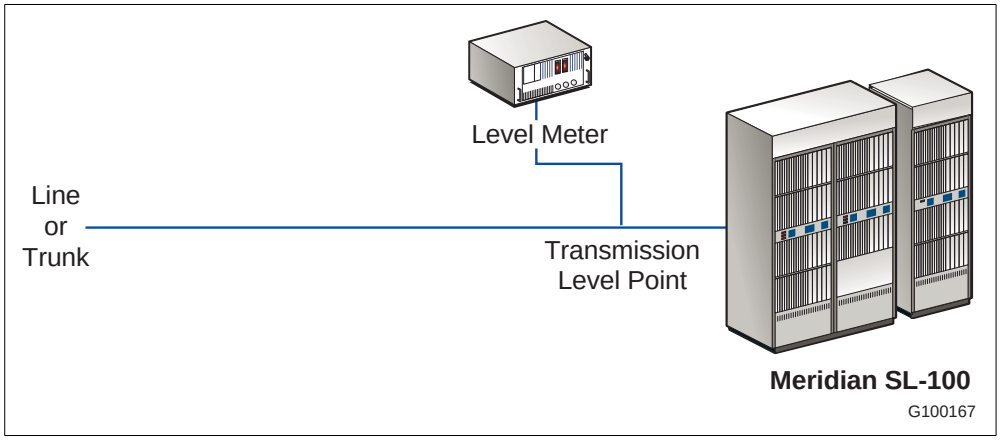
4-wire connection loss measurement samples



Level

Level is the quantity or amount of signal at the measurement point in a circuit. This measurement is absolute when referenced to the mW signal (dBm). Level can also be expressed in dB, which is not absolute. Figure “Signal level measurement diagram” on page 114 shows a signal level measurement.

Signal level measurement diagram

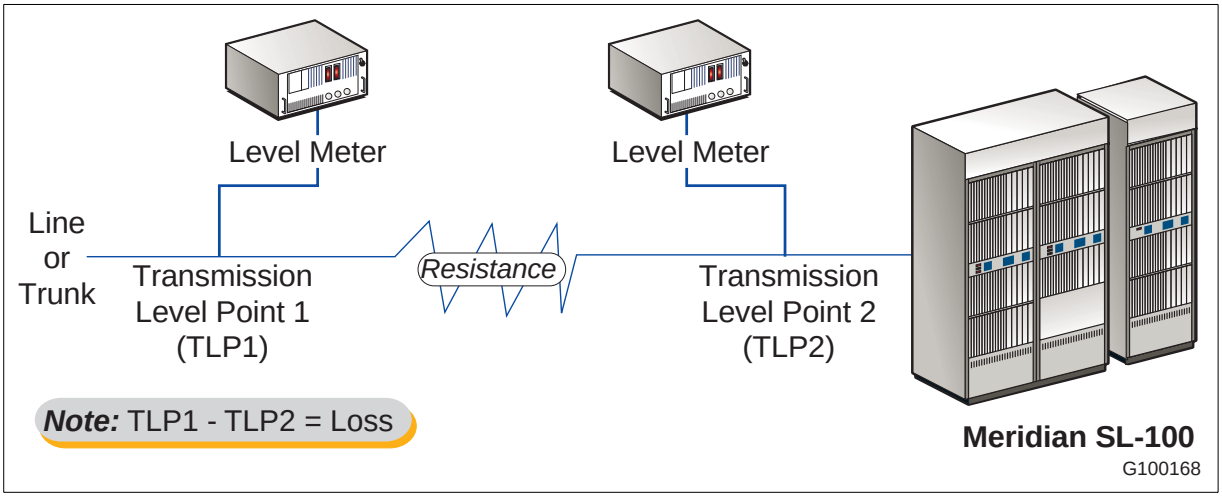


When the signal is too low, the signal is lost in the background noise in the connection. When the signal is too high, distortion, echo, singing, or crosstalk can occur. Echo refers to the reflection of the original signal back to the originator with some delay added. Singing refers to a self-sustaining oscillation (like feedback) that results in a squeal.

Loss

Loss refers to the reduction in strength of a signal. Loss can be caused by the resistance of a length of cable or can be intentionally inserted into a circuit at an appropriate point. Some MSL-100 interfaces provide manually-set attenuators (pads). Additionally, software-controlled loss is available in the MSL-100 network and in the peripheral module (PM) that houses some types of interfaces. (The description of table PADDATA explains the application of loss.) Control of the amount of loss is important to the maintenance of acceptable signal quality. Some signal level value is adopted as the standard and becomes the benchmark, which reduces the contrast between different types of calls. A dB of loss equals the power level multiplied by 0.794. Figure “Basic circuit losses” on page 115 shows the basic circuit losses.

Basic circuit losses



Cable size also directly affects loss. Table “Cable loss” on page 115 gives examples of cable loss.

Cable loss

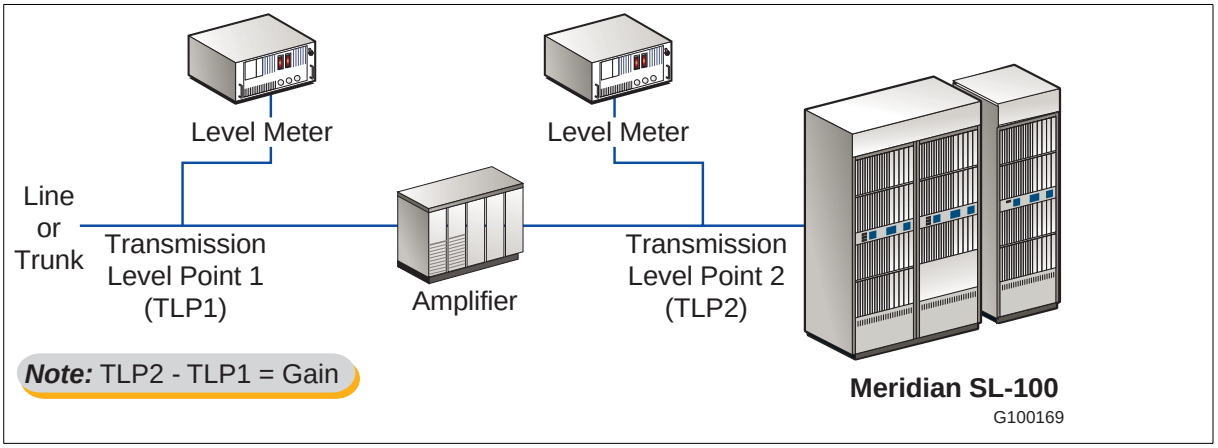
Cable size (AWG)	Loop resistance (Ω)	Loss per km (dB/km)
22	107	1.01
24	170	1.27
26	270	1.61

Gain

Gain refers to the increase in the strength of a signal. An amplifier provides gain, compensates for loss, and restores the level of an attenuated signal. A dB of gain equals the power level multiplied by 1.259. A gain of 3 dB doubles the power of the signal. Figure “Gain level” on page 116 diagrams possible gain level.

PADDATA (continued)

Gain level



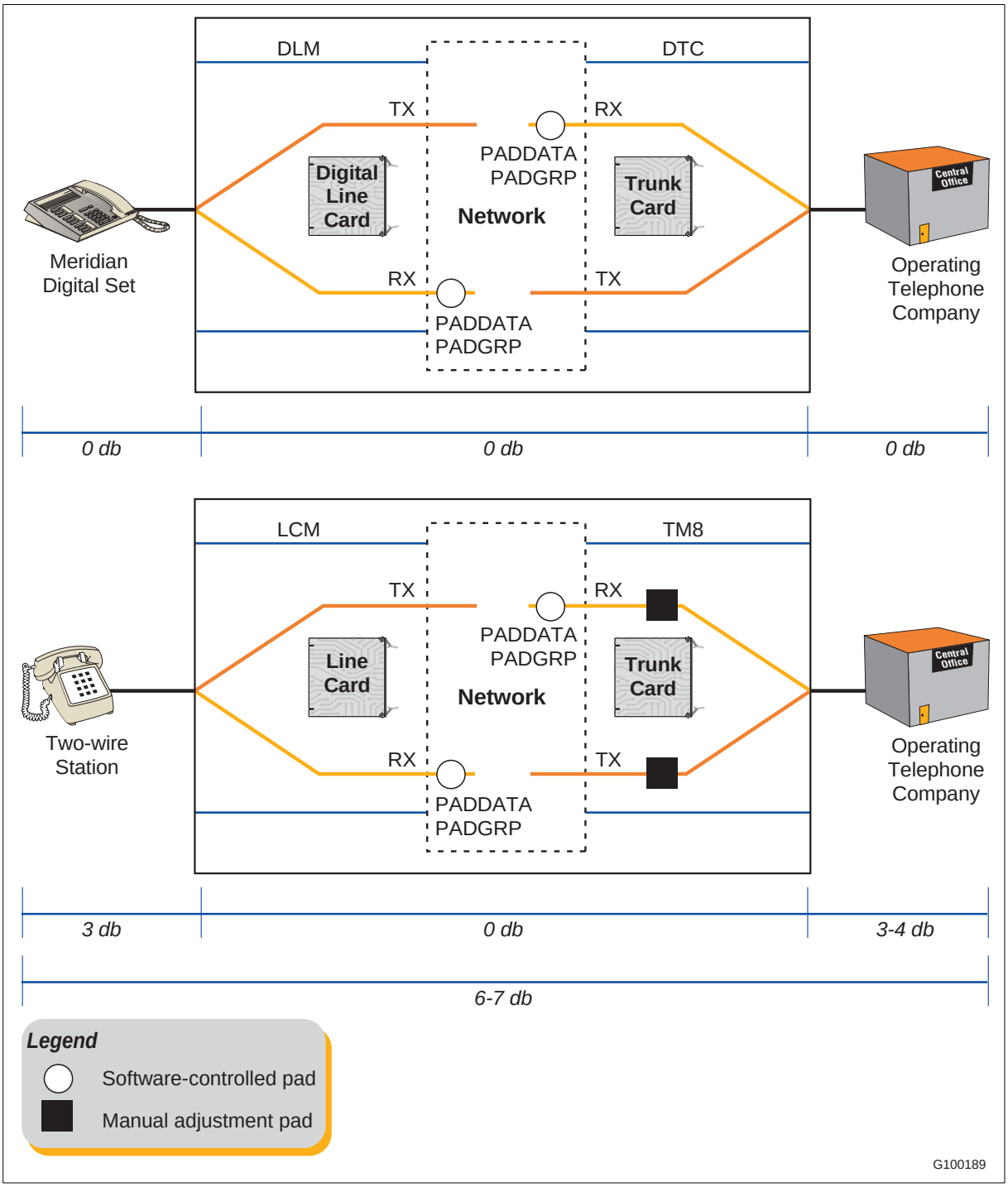
Adjustment types

Two types of pads are available: hardware and software. The software-controlled pads establish the range of operation for each circuit type. The hardware pads fine-tune each circuit. Figure “Pad locations” on page 117 shows the locations of the hardware and software pads.

Hardware

Some line and trunk cards contain manual switches, when appropriate for their application. The manual pads fine-tune each circuit. Figure “Pad locations” on page 117 illustrates pad locations.

Pad locations



PADDATA (continued)

Software

Table PADDATA contains the loss values that are applied by software. This data table lists each possible connection type and contains separate values for the transmit and receive channels of each connection. This loss is divided between the network and the PM. The PM applies the first 7 dB, and the network applies any remainder.

Transmission levels

The principle transmit or receive levels for analog trunks equals -16/+7 dBm for 4-wire circuits. Digital trunks (T1) operate at 0/0 dBm to the switch.

Carrier equipment

Channel banks primarily interface analog trunks to the switch. A variety of interfaces accommodate different types of trunks and their individual signaling requirements.

Datafill sequence and implications

The following tables must be datafilled after table PADDATA.

- LNINV
- TRKGRP
- CONF3PR
- CONF6PR
- CPOS

Datafill for table PADDATA

Datafill for table PADDATA is found in Table “Field descriptions for table PADDATA” on page 119.

Field descriptions for table PADDATA

Field	Entry	Entry	Explanation and action
PADKEY			*Pad data key* This field comprises subfields PADGRP1 and PADGRP2.
	PADGRP1	alphanumeric (up to 5 characters), or UNBAL, LRLM, STDLN, OPS, DONS, PONS, POPS, ONS, IPONS, ATT, DTT, SATT, SDTT, ACO, DCO, ATO, DTO, CONF	*Pad group 1* Enter the pad group name datafilled in field PADGRP of table TRKGRP, LNINV, CONF3PR, CONF6PR, CPOS, or TOPSPOS. The pad group name is one of the reserved names or a customer-defined pad group name.
	PADGRP2	alphanumeric (up to 5 characters), or UNBAL, LRLM, STDLN, OPS, DONS, PONS, POPS, ONS, IPONS, ATT, DTT, SATT, SDTT, ACO, DCO, ATO, DTO, CONF	*Pad group 2* Enter the pad group name datafilled in field PADGRP of table TRKGRP, LNINV, CONF3PR, CONF6PR, CPOS, or TOPSPOS. The pad group name is one of the reserved names or a customer-defined pad group name.
PAD1TO2		1L to 14L, 0G to 7G, or 0 (zero)	*Group 1 to group 2 pad* Enter the pad value used for the connection from pad group 1 to pad group 2. Each entry value of 0L to 14L corresponds to a loss level (in decibels).
PAD2TO1		1L to 14L, 0G to 7G, or 0 (zero)	*Group 2 to group 1 pad* Enter the pad value of the network or line pad for connection from pad group 2 to pad group 1. Each entry value of 0L to 14L corresponds to a loss level (in decibels).

Loss plan information

The following list gives an outline of common loss plan information:

- collecting circuit information
- measuring signal levels
- comparing expected with actual measurements

- making required adjustments
- recording established levels

Collecting interface information

This section outlines how the information that is needed for a loss plan is collected and arranged into an appropriate format.

Refer to other sections in this document for information on specific line, trunk, and station types.

The gather the following information to obtain adequate interface information:

- List the types of trunks that are to be used and their CLLI names (Refer to table CLLI in this document.) See Table “Sample transmission plan worksheet: Trunks” on page 121.
- List the types of station equipment and the location for each line. For a sample form, see Table “Sample transmission plan worksheet: Lines” on page 121.
- List the types of end-to-end facilities and their terminations (analog, T1, microwave, fiber optic, channel bank, or combination analog and digital) in a trunk group record containing the information shown in Figure “Trunk group record information” on page 122.
- List the TLP locations (for example, RJ21X, MDF, DSX) that are to be used when making measurements. Each trunk or line circuit should have a TLP at the MDF.
- Measure the transmit and receive AML levels at the MDF by measuring each circuit, trunk, or line. Compare the anticipated values EML with the AML. The OTC should be able to provide the EML values for the circuits that they engineered. Note any circuits that are below the EML by more than 1.5 dB. Make a permanent record of the AML levels on a list of AML levels.

Note 1: When testing trunks, make a minimum of three test calls on three different trunks in each trunk group. Average these measurements to determine the AML for the trunk group.

Note 2: Most problems in the field occur due to a change in the AML. The AML should be re-measured early in any trunk or line trouble isolation process.

Sample transmission plan worksheet: Trunks

Trunk CLLI	Trunk type	Facility loss (dB)		Pad group acronym
		To demark	MAP terminal	

Sample transmission plan worksheet: Lines

Building, zone, or location	Type of instrument	Facility loss (dB) instrument ID	Pad group acronym

PADDATA (continued)

Trunk group record information

Trunk class	Signal type	CLLI
DID_____ DOD_____ FX_____ IDDD_____ WATS (Band)_____ DSN_____ TIE_____ Other_____	Loop____ E&M____ SF____	
	Address signal in MF___ DP___ DT___ NP___	**Contact # D/E**
	Address signal out MF___ DP___ DT___ NP___	**Trouble report #**
Trunk type 2-Way_____INC_____ OGT_____2-Wire_____ 4-Wire_____ Other_____	**Address signal out** IM____ DD____ WK____ GRDST_____ XD_____	**Type equip. D/E**
		Special information
Milliwatt #		**Card Type**
Silent term #		**Card type D/E**

Trk mem #	Telco ckt #	CPE demark	Telco facility	Telco demark	TLP location	EML (dBm)	MAP measure-ment

The following actions should be performed to obtain adequate measurements:

- Measure and record the transmission levels of digitally interfaced trunks. The local operating company adjusts these levels at the OTC end.
- List trunk TLP at the MDF on a test point list.
- List station loop TLP at the MDF by making the following measurements and recording the results on a Test point list:
  - Measure the loop loss for each building served by the MSL-100 system and each remote switch. Perform these tests either at the MAP terminal in the trunk or line test positions (TTPs or LTPs) or with portable test equipment. Record these values on a transmission plan work sheets as shown in Tables “Sample transmission plan worksheet: Trunks” on page 121 and “Sample transmission plan worksheet: Lines” on page 121.
  - Measure the loop loss for each floor of multi-story buildings. At a minimum, test the most distant loop and one middle distance loop.
  - Measure the loop loss to the most distant station in large buildings.
  - Measure the loop loss for each off-premise station. Also verify loops that are conditioned by the OTC.
  - Ensure that the table PADDATA values are zero (0.0 dB) when making these measurements from the MAP terminal.

A test point list is shown in Figure “Test point list” on page 124.

PADDATA (continued)

Test point list

Trunks		
Trunk CLLI	**TLP type**	**TLP location**

Lines		
Line CLLI	**TLP type**	**TLP location**

Developing a loss plan

After collecting the relevant information (line, trunk, TLP, AML, and EML) and recording it, use a PADDATA worksheet (shown in Figure “Sample PADDATA worksheet” on page 125) to develop the information for table PADDATA datafill.

Identify the losses for each trunk group and line type.

Identify both the transmit and receive levels at each adjustment point and the related TLP.

Determine the required adjustment for each circuit type and trunk group. Produce a list of these changes for use when datafilling table PADDATA.

Sample PADDATA worksheet

Pad acronym		Pad value	
Pad group 1	**Pad group 2**	**Group 1 to 2**	**Group 2 to 1**

Making required adjustments

Make the required adjustments to establish the proper levels to match the AML to the EML values. Make coarse adjustments in table PADDATA. Fine adjustments occur on the individual interfaces (when available).

PADDATA (continued)

Make the required adjustments for the local trunks, tie lines, and WATS trunks in the interface equipment (channel bank) to match the EML with the AML.

CAUTION
Do not let circuits sing.
Use care so that the circuits do not sing. Adjustments to the 2- to 4-wire balance networks could be required to fine-tune circuit operation.

Software

These adjustments occur in table PADDATA. Assign values for all trunk groups and lines. Use table TRKGRP for trunks and table LNINV for lines. Table LNINV requires pad groups for new lines.

Hardware

These adjustments take place in channel banks and trunk modules.

Precision balance networks could be required to reach the EML.

The objective is to adjust the receive pads of digital trunks to measure 0.0 dBm at the MSL-100 interface and the transmit pads to send 0.0 dBm. Analog trunks are typically adjusted to transmit or receive -16/+7 dBm for 4-wire circuits.

Measuring performance

After completing the initial steps, test the actual performance of the circuits to verify proper operation:

- Call processing – Verify the compatibility of dual tone multifrequency (DTMF) tone levels.
- Audio levels – Verify that all possible connection types provide a good quality connection without audible distortion.
- Noise – Verify that the mean noise objectives or system standards are met or exceeded.
- Echo return loss (ERL) – Verify that ERL readings meet or exceed the mean ERL.
- Features – Verify digital sets, electronic telephone sets, data lines, and conference circuits for both operation and quality.

Automatic trunk test

Use the following considerations when establishing automatic trunk testing (ATT). Refer to the other modules in this document for the identified tables.

This test function does not test the actual facility. This function tests only the components up to and including the trunk card. End-to-end testing requires dial-up access to a remote office test line (ROTL).

Perform the following steps:

- Establish the EML at the MAP terminal.
- Verify that table CLLIMTCE contains the proper datafill (EML value).
- Ensure that table PADDATA contains the proper datafill.
- Collect level and noise measurements from each operating company.
- Ensure that table CLLIMTCE, subtable DIAGDATA, and table ATTOPTNS contain the proper datafill.
- Define the time schedule for automatic trunk test.
- Verify that table ATTSCHED contains the proper datafill.
- Ensure that the automatic trunk test is running in the MAP level ATT
- Send the automatic trunk test results to either a printer or disk file.

Recording results

Commit the results of all of the testing to a record that contains information of each of the trunk groups. Use this information to produce the loss plan for the site.

Datafilling table PADDATA

The following sections describe the intricacies of datafilling table PADDATA. Table PADDATA contains the software-controlled pad values that apply to each possible type of connection.

This section specifies the nominal port-to-port loss that is applied by the MSL-100 system to connections between the various types of interfaces. The MSL-100 system can provide loss in the network cards and the PM that houses the line or trunk cards. Table PADDATA identifies the loss value, which the switch divides between the network and the PM.

PADDATA (continued)

These guidelines are based on EIA standards, which used pre-divestiture tandem tie trunk network design for their basis. Particular installations can require modifications to the plan due to voice frequency (VF) level limitations or other unique network situations.

Table PADDATA functions

Related data tables

Table PADDATA relates each connection type by the names used to represent the facilities used for the connection. The datafill for each line and trunk identifies the table PADDATA names used for the line or trunk. The following tables define the relationships between the various line or trunk types and their names:

- Line circuit inventory (LNINV) contains the definitions for each line card slot in the switch. Only provisioned card slots are datafilled. This table does not contain datafill for empty card slots.
- Trunk group (TRKGRP) contains the definitions of the members of each trunk group in the switch.
- Conference 3-port (CONF3PR) contains the definitions of the card slots used for 3-port conference bridges.
- Conference 6-port (CONF6PR) contains the definitions of the card slots used for 6-port conference bridges.

Call translation

Call translation uses the table PADDATA names assigned to the lines and trunks in the tables shown in Figure “Test point list” on page 124 and to identify the pad values to apply to each connection when it is established in the network of the switch. The pad value that is applied to a given connection can be split between the network and the PM that houses the line or trunk card(s). A maximum loss of 7 dB in the network for both lines and trunks and 7 dB in the receive side of the line cards can be applied.

The system scans table PADDATA for an entry that contains the names that represent the lines or trunks involved in the connection. The table is arranged in four columns. The system scans the first two columns for the appropriate entry. The third column holds the transmit value for the connection between the first and second columns. The fourth column holds the transmit value for the connection between the second and first columns.

The system also uses manually-set pads on some line or trunk card types. (A trunk module houses analog trunk cards.) The system applies these pad values in addition to any values specified in table PADDATA

Pad groups

Table PADDATA identifies up to 64 different pad groups. When the system accesses table PADDATA during call translation, the system takes the pad names for both the originator and terminator from the line and trunk definition tables. The system searches table PADDATA for the entry that contains the names of the lines or trunks. Once the system locates the entry, the system applies the pad values for the connection in the network to modify the signal levels accordingly.

Predefined pad groups

Of the 64 possible pad groups in table PADDATA, 52 pad group entries are either hard coded or reserved. Only 12 pad groups, 20 through 31, are customer definable.

Predefined pad groups

The following tables contain the names of the predefined pad groups. Separate tables are provided for lines and trunks. Table “Predefined line names” on page 129 lists the predefined table PADDATA line names. Table “Predefined trunk names” on page 130 lists the predefined table PADDATA group names used for the currently available types of trunks.

Predefined line names

Pad group name	Description
Basic line group	
UNBAL	Unbalanced line
PBX groups	
ONS	On-premise station (line or attendant)
OPS	Off-premise station (line or attendant)
Meridian digital set group	
DONS	Digital on-premise station
Electronic telephone set groups	
PONS	Proprietary on-premise station
POPS	Proprietary off-premise station

PADDATA (continued)

Predefined trunk names

Heading	Heading
PBX trunks	
ATT	Analog trunk interface to analog tie trunk
DTT	Digital trunk interface to digital tie trunk
SATT	Analog trunk interface to satellite analog tie trunk (PBX)
SDTT	Digital trunk interface to satellite digital tie trunk (PBX)
ACO	Analog trunk interface to analog OTC trunk
DCO	Digital trunk interface to digital OTC trunk
ATO	Analog trunk interface to analog toll office (IEC)
DTO	Digital trunk interface to digital toll office (IEC)
Conference bridges	
CONF	Conference bridge, 3-port or 6-port

Line loss ranges

Line loop losses typically fall into the 0-4 dB range. Losses exceeding 4 dB are usually the result of a problem in the circuit.

Trunk loss ranges

Trunk losses are not grouped into categories. These losses occur between the OTC and the MSL-100 system. The channel bank interfaces to the MSL-100 system negate analog trunk losses, which results in 0 dB levels to the switch. Digital trunks likewise are 0 dB at the switch and use the same table PADDATA values as the analog trunks. The receive levels of all trunks should be verified with the far end of the facility (line or trunk).

Basic lines

Three table PADDATA names are used for basic line service.

Unbalanced line (UNBAL)

Application

UNBAL refers to stations that fail to meet the minimum balance requirements for the direct distance dialing (DDD) network. The MSL-100 system uses this station type.

Limitations

The system does not use this group for lines that meet the standard line criteria (ONS or OPS lines).

Example

The system uses this station type for equipment that fails to reach the via net loss (VNL) requirements of the DDD network.

Standard line (STDLN)

Application

STDLN refers to stations that meet the balance requirements of the DDD network. The MSL-100 system does not use this station type.

Long remote line module (LRLM)

Application

LRLM refers to stations located over 50 miles from the host. The MSL-100 system does not use this station type.

PBX lines

Five table PADDATA names are used for the PBX line types. The MSL-100 system uses all of these line types.

Digital on-premise station (DONS)

Application

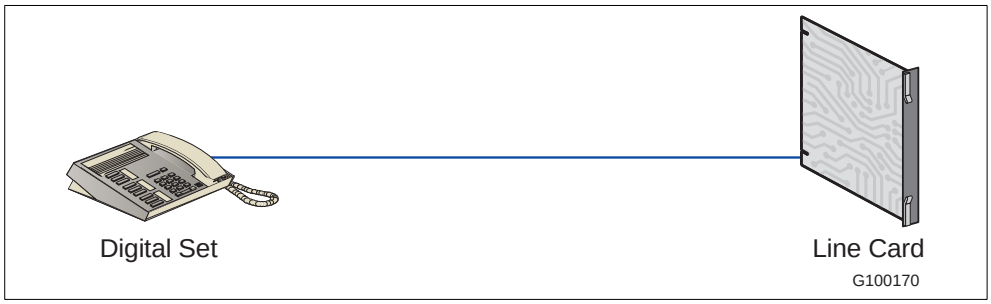
The system uses this line type for Meridian digital sets. Pad values for a digital set on an IPE should be established in this group with a minimum of 6 dB loss for the outgoing and incoming line cards.

Limitations

The system uses this group only for Meridian digital sets that are always directly connected to switch.

Figure “DONS configuration” on page 132 show a DONS configuration.

DONS configuration



Proprietary on-premise station (PONS)

Application

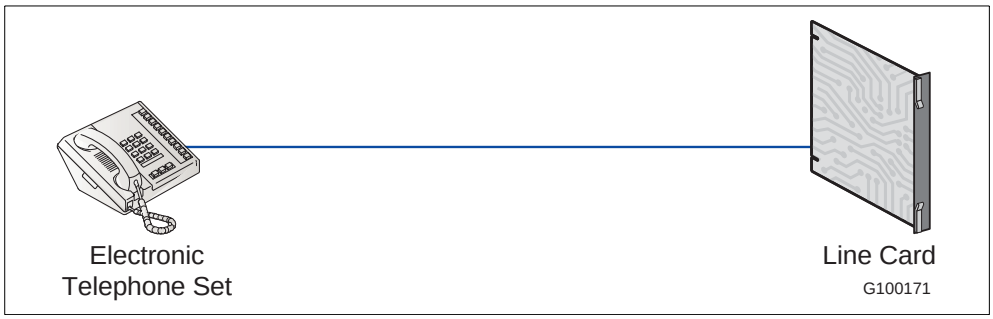
The system uses this group for ETSs in the 0-3 dB loss range. The NT6X21 line card has a fixed 3 dB receive pad.

Limitations

This name represents stations with loss values below 3 dB. Losses exceeding 3 dB use the PONS name. This group is only used for ETS stations.

Figure “PONS configuration” on page 132 show a PONS configuration.

PONS configuration



Proprietary off-premise station (POPS)

Application

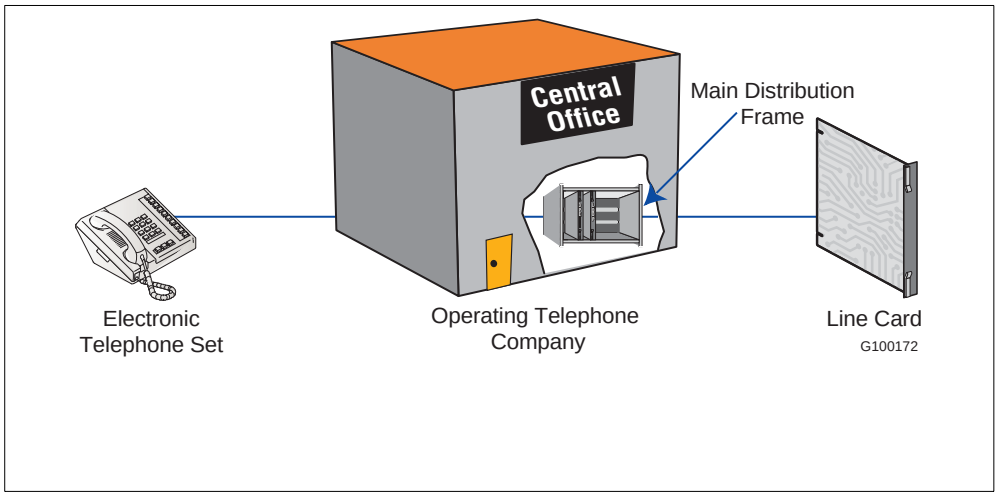
The system uses this group for ETSs that exceed 3 dB loop loss.

Limitations

This name is not used for stations that have less than 3 dB loop loss. Losses below 3 dB use the PONS name. The system uses this name only for ETS stations.

Figure “POPS configuration” on page 133 show a POPS configuration.

POPS configuration



On-premise station (ONS)

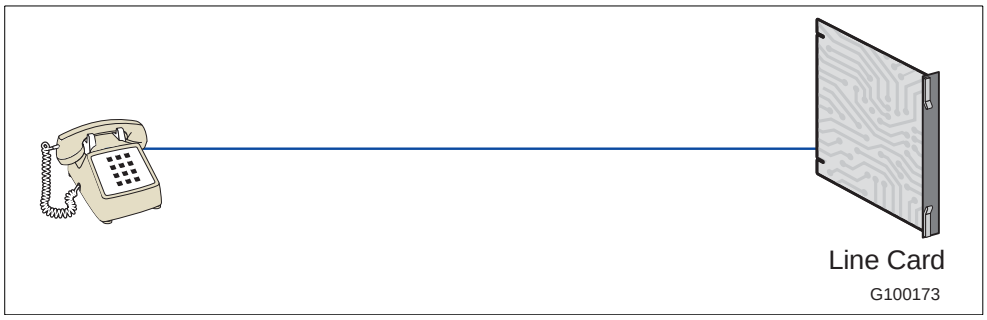
Application

Practically all MSL-100 stations fall into this category with a loss range of 0-3 dB.

Limitations

The MSL-100 system does not use lines that fall into the other line categories. Lines that exceed 3 dB are classed as OPS. Figure “Configuration of local calls over ACO trunk type” on page 133 shows a configuration of a local station with loop loss values of 0-3 dB over an ACO trunk type.

Configuration of local calls over ACO trunk type



Off-premise station (OPS)

Application

MSL-100 stations that are not located in the building that houses the switch fall into this category. The loss range is 3-5 dB. Station losses that exceed 5 dB should be reduced before being placed into service.

PADDATA (continued)

Limitations

The MSL-100 system does not use the this group for lines that fall into the UNBAL or OPS line categories.

Figure “OPS configuration” on page 134 shows an OPS configuration that has stations with loop loss values exceeding 3 dBs.

OPS configuration

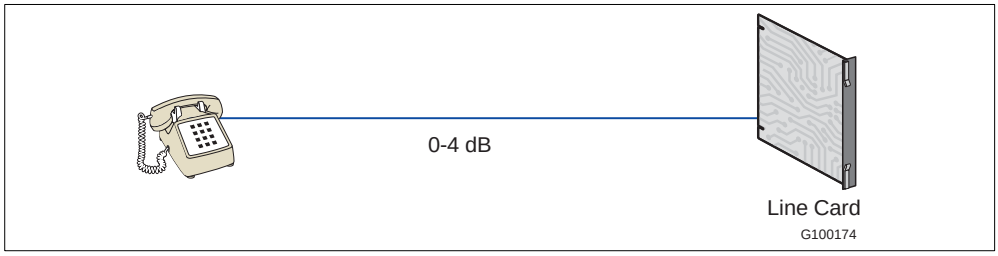


Table PADDATA entries for loss only capability (PBX lines) (Sheet 1 of 2)

PADGRP1	PADGRP2	PAD1TO2	PAD2TO1
DONS (IPE digital sets)	ONS	6L	0
DONS	DONS	2L	2L
DONS (IPE digital sets)	DONS	6L	6L
PONS	DONS	6L	0
PONS	PONS	3L	3L
POPS	DONS	3L	0
POPS	PONS	0	0
POPS	POPS	0	0
ONS	DONS	6L	2L
ONS (IPE digital sets)	DONS	0	6L
ONS	PONS	3L	6L
ONS	POPS	0	3L
ONS	ONS	6L	6L

Table PADDATA entries for loss only capability (PBX lines) (Sheet 2 of 2)

PADGRP1	PADGRP2	PAD1TO2	PAD2TO1
OPS	DONS	3L	0
OPS	PONS	0	3L
OPS	POPS	0	0
OPS	ONS	3L	3L
OPS	OPS	0	0
UNBAL	DONS	3L	0
UNBAL	PONS	0	3L
UNBAL	POPS	0	2L
UNBAL	ONS	3L	3L
UNBAL	OPS	2L	2L
UNBAL	UNBAL	3L	3L

IPE analog on-premise station (IPONS)

Application

Analog sets on the IPE are considered to be on-premises sets, but have a different loss plan than the line concentrating module (LCM) analog lines. Users must establish a new loss pad group called IPONS for these sets. On a station line-to-line connection, the total insertion loss for the analog line card (ALC) or the analog message waiting line card (MLC) is 6 dB ±1 dB. This loss is arranged as 3.5 dB loss for analog to PCM (incoming) and 2.5 dB loss for PCM to analog (outgoing). The total loss is divided between the network and peripheral. The peripheral applies the first 7 dB, and the network applies any remainder. However, the network does not compensate for the set 3.5 dB loss in the incoming direction; and there cannot be total loss less than 2.5 dB. So, the corresponding pad value (field PAD1TO2) should always be set at 3 dB less loss than normal.

One exception to these values is the IPONS-POPS connection. Because of the line loss, this connection requires an end-to-end total loss of 0 dB, which would be specified in table PADDATA as a gain of 3 dB in the PAD1TO2 field. However, this may cause an increase in the line noise level and unsatisfactory line quality.

PADDATA (continued)

Table PADDATA entries for IPE analog sets
Table “Table PADDATA entries for IPE analog sets” on page 136 shows stations with loop loss values exceeding 3 dB and lists example tuples for table PADDATA datafill for IPE analog sets.

Table PADDATA entries for IPE analog sets

PADGRP1	PADGRP2	PAD1TO2	PAD2TO1
IPONS	DONS	3L	2L
IPONS	PONS	0	6L
IPONS	ONS	3L	6L
IPONS	OPS	0	3L
IPONS	UNBAL	0	3L
IPONS	ATT	0	6L
IPONS	DTT	0	9L
IPONS	SATT	0	3L
IPONS	SDTT	0	3L
IPONS	ACO	0	3L
IPONS	DCO	0	3L
IPONS	ATO	3L	9L
IPONS	DTO	0	9L
IPONS	CONF	0	9L
IPONS	IPONS	2L	2L

PBX trunks

The MSL-100 system uses both analog and digital PBX trunks. The figures for these applications show analog trunks as solid lines and digital trunks as dotted lines.

Analog tie trunk (ATT)

Application

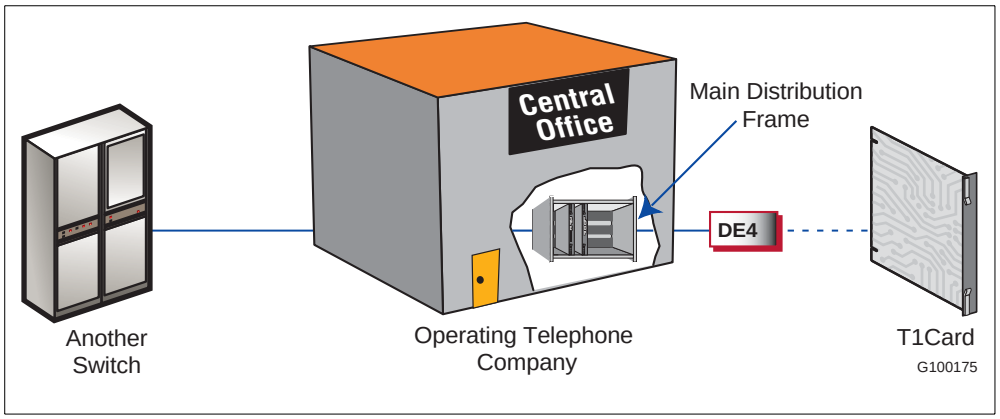
This trunk type applies to analog tie trunks.

Limitations

This name, ATT, is only used for analog tie trunks.

Figure “ATT configuration” on page 137 shows an analog tie trunk connection.

ATT configuration



Digital tie trunk (DTT)

Application

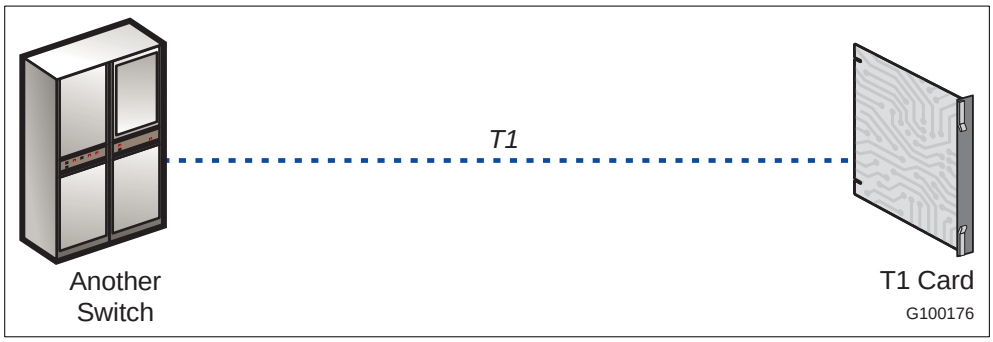
This trunk trunk type applies to digital tie trunks.

Limitations

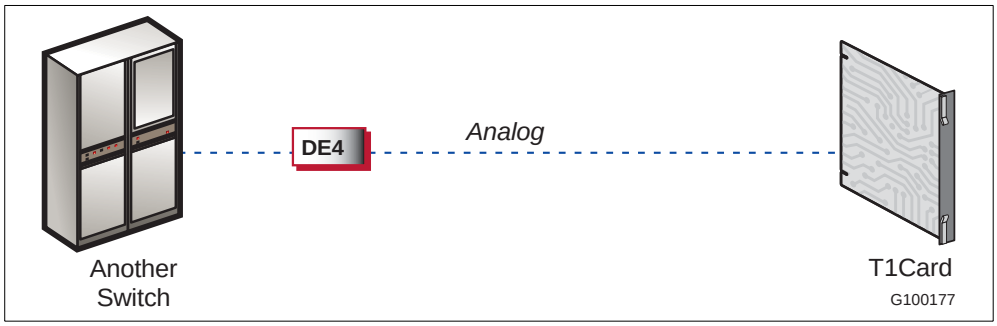
This name, DTT, is is only used for digital tie trunks.

Figures “Digital tie trunk end-to-end connection” on page 137 and “Combination digital tie trunk connection using an analog facility” on page 138 show digital tie trunk connections.

Digital tie trunk end-to-end connection



Combination digital tie trunk connection using an analog facility



Satellite analog tie trunk (SATT)

Application

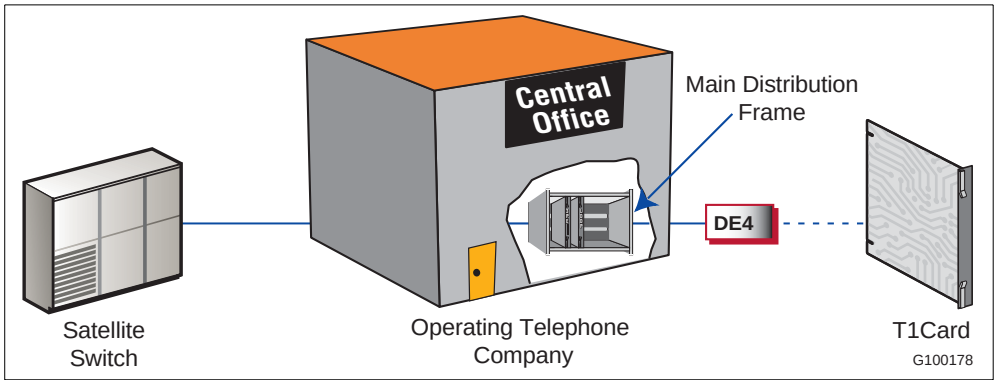
The SATT trunk type applies to connections between the switch and a satellite PBX using an analog tie trunk. The link between the satellite PBX and the DE4 is an unswitched connection in the OTC.

Limitations

This name, SATT, only applies to satellite analog tie trunks.

Figure “SATT configuration” on page 138 shows a satellite analog tie trunk connection with a DE-4 channel bank.

SATT configuration



Satellite digital tie trunk (SDTT)

Application

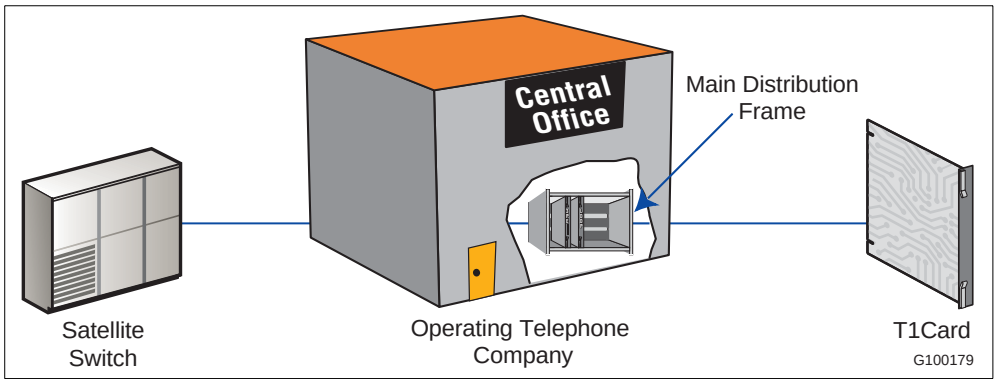
The SDTT trunk type applies to connections between the switch and a satellite PBX using a digital tie trunk.

Limitations

This name, SDTT, only applies to satellite digital tie trunks.

Figure “SDTT configuration” on page 139 shows a satellite digital tie trunk connection.

SDTT configuration



Analog central office (ACO)

Application

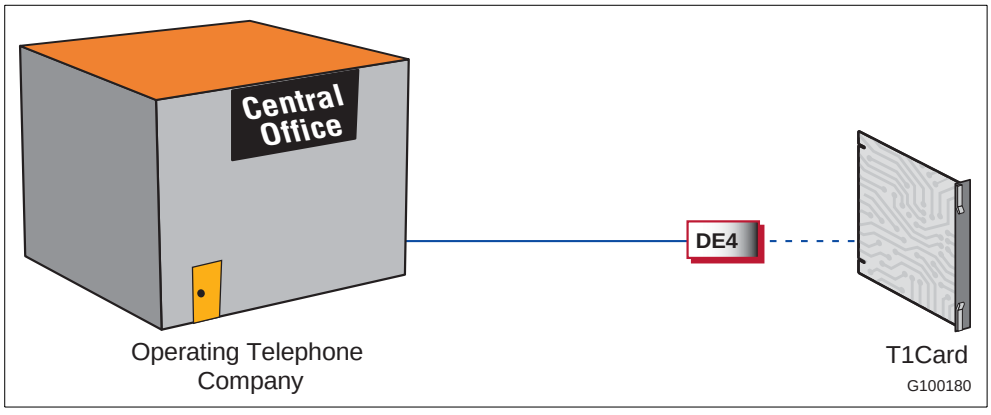
The SATT trunk type exists between an OTC and the MSL-100 system and is an analog trunk.

Figure “An ACO trunk between an OTC and the MSL-100 system” on page 139 shows an ACO trunk between an analog central office and the MSL-100 system.

Limitations

The name, ACO, applies only to analog OTC trunks.

An ACO trunk between an OTC and the MSL-100 system



Digital central office (DCO)

Application

This trunk type applies to either combination analog and digital central office trunk connections or end-to-end digital central office trunk connections.

Limitations

This name applies only to digital OTC trunks.

Figure “DCO in a digital end-to-end connection” on page 140 shows a DCO trunk in a digital end-to-end connection between a central office and the MSL-100 system..

DCO in a digital end-to-end connection

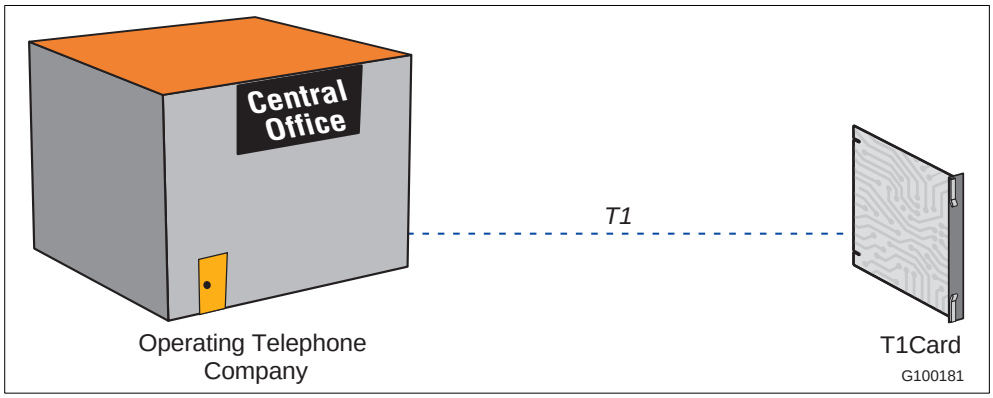
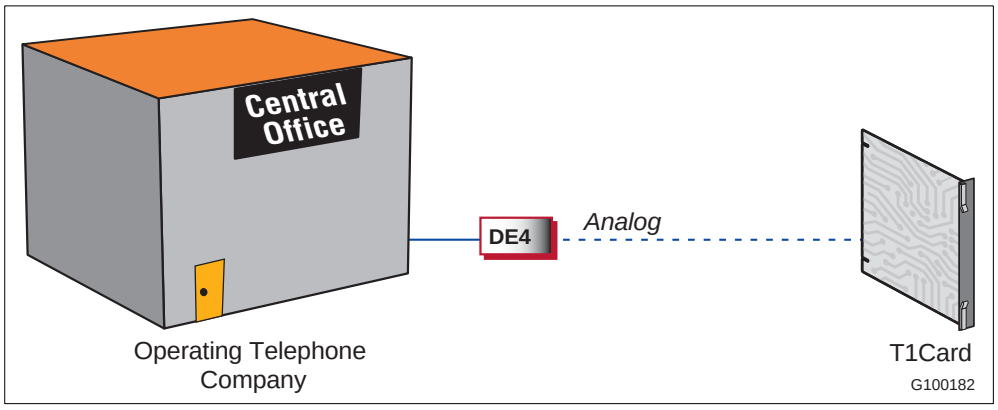


Figure “DCO trunk in a combination trunk application using an analog facility” on page 140 shows a DCO trunk in a combination trunk application using an analog facility.

DCO trunk in a combination trunk application using an analog facility



Analog toll office (ATO)

Application

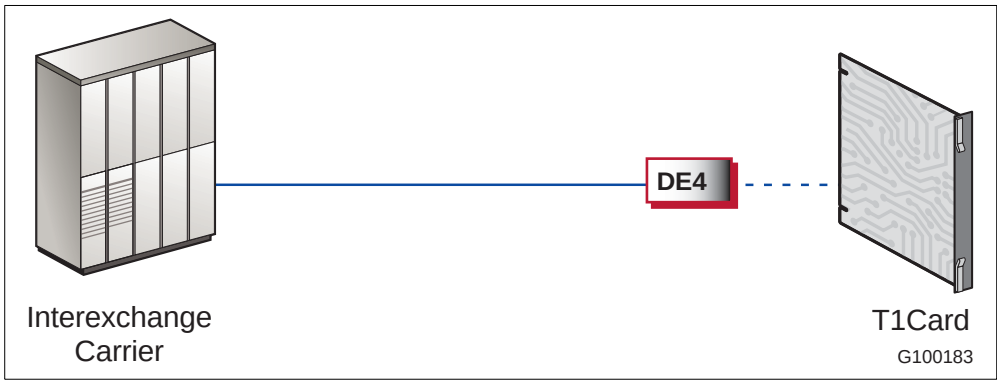
This trunk type applies to analog connections between the IEC and the MSL-100 switch.

Figure “ATO trunk interface between an IEC and the MSL-100 system” on page 141 shows an ATO trunk between an IEC and the MSL-100 system.

Limitations

The name, ATO, applies only to analog IEC trunks connected to the MSL-100 system.

ATO trunk interface between an IEC and the MSL-100 system



Digital toll office (DTO)

Application

This trunk type applies to either combination analog and digital IEC connections or end-to-end digital IEC connections.

Limitations

The name, DTO, applies only to digital or combination IEC trunks connected to the MSL-100 system.

Figure “DTO interface between an IEC and the MSL-100 system” on page 142 shows a DTO trunk in a digital end-to-end connection between an IEC and the MSL-100 system.

DTO interface between an IEC and the MSL-100 system

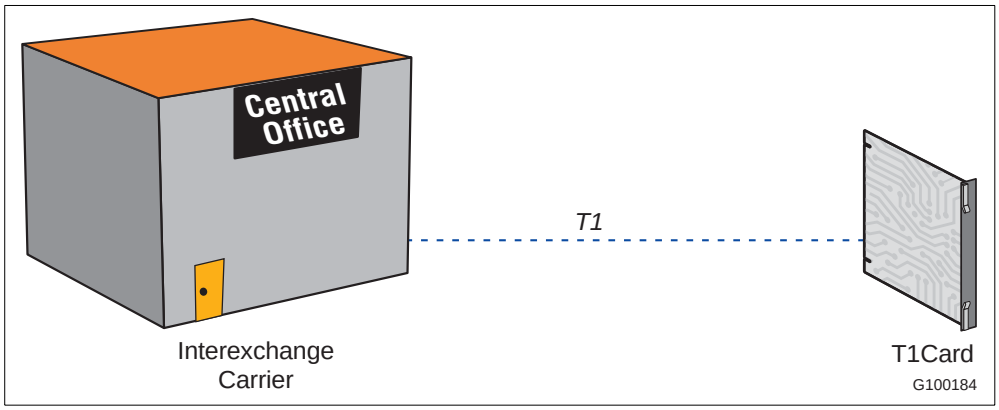
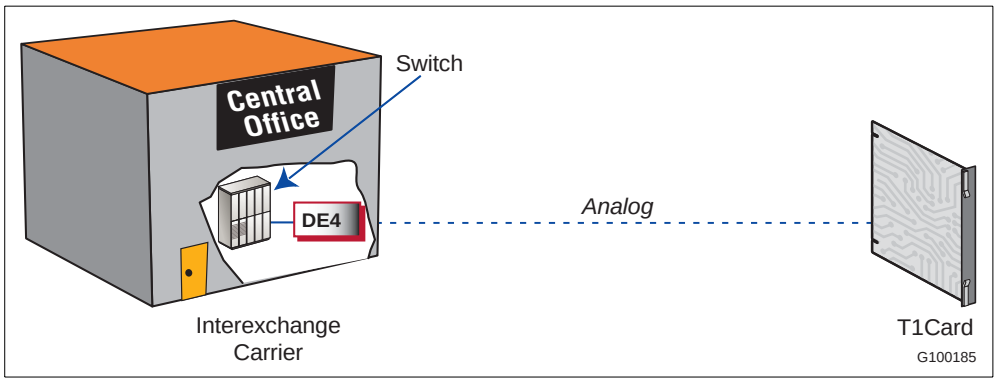


Figure “Combination DTO trunk connection” on page 142 shows a combination DTO trunk connection.

Combination DTO trunk connection



Conference bridge (CONF)

Application

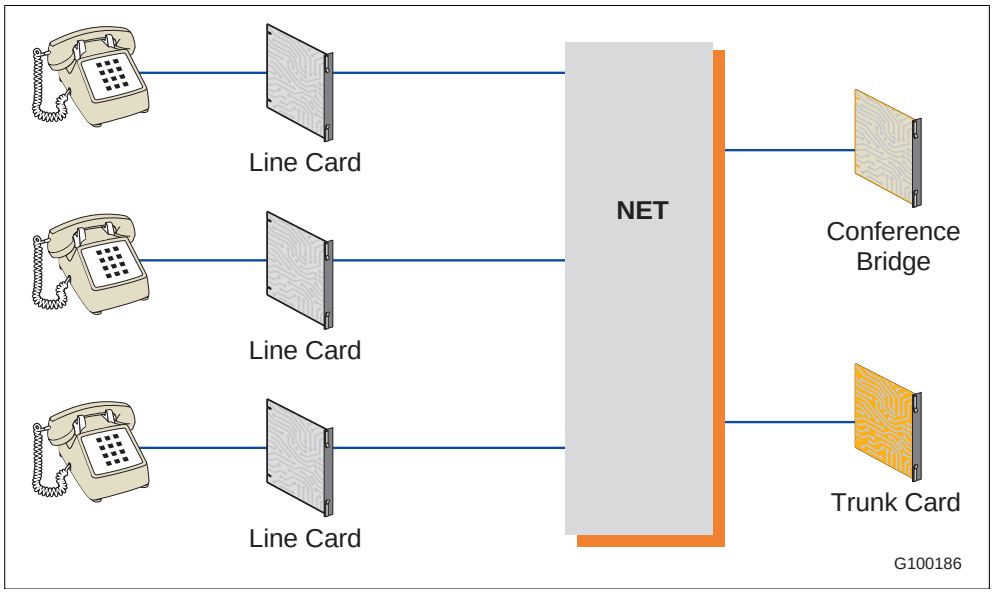
The CONF application applies to both 3- and 6-port conference bridges.

Figure “CONF connection” on page 143 shows a four-port conference involving three stations and one trunk.

Limitations

No limitations apply to this group.

CONF connection



Initial table PADDATA PBX trunk values

Table PADDATA contains the variable loss (or gain) values that are applied to each type of connection. The value that is specified in this table establishes the general level for each type of connection. Separate loss or gain values are used for the transmit and receive call directions.

Datafill for the lines and trunks contains the index into this table. This table uses a two-part key and identifies the PAD1 and PAD2 names and references. There are 64 possible pad groups. Of these, 12 (pad groups 20 through 31) are customer definable.

The system divides table PADDATA into four vertical columns. The first two columns identify the type of connection; the last two columns contain the values applied by the pads. The first column (field PADGRP1) identifies the members of pad group 1, and the second column (field PADGRP2) identifies the members of pad group 2. The third column (field PAD1TO2) contains the value used for the connection from pad group 1 to pad group 2. The fourth column (field PAD2TO1) contains the value used from pad group 2 to pad group 1.

PADDATA (continued)

Table “Table PADDATA values for loss-only capability (PBX trunks)” on page 144 lists the typical values used for each connection type. This table provides the MSL-100 system with a loss-only capability for connections with a satellite μ-law PBX, main μ-Law to a remote, and intra-remote.

Table “Table PADDATA values for loss-only capability (PBX trunks)” on page 144 also shows line and trunk groups and presents the default values, which represent a part of the base MSL-100 datafill.

Table PADDATA values for loss-only capability (PBX trunks) (Sheet 1 of 5)

PADGRP1	PADGRP2	PAD1TO2	PAD2TO1
ATT	DONS	6L	0
ATT	PONS	3L	3L
ATT	POPS	2L	2L
ATT	ONS	6L	3L
ATT	OPS	5L	2L
ATT	UNBAL	5L	2L
ATT	ATT	3L	3L
DTT	DONS	9L	0
DTT	PONS	6L	3L
DTT	POPS	3L	0
DTT	ONS	9L	3L
DTT	OPS	6L	0
DTT	UNBAL	6L	0
DTT	ATT	3L	0
DTT	DTT	0	0
SATT	DONS	3L	0
SATT	PONS	0	3L
SATT	POPS	0	2L

Table PADDATA values for loss-only capability (PBX trunks) (Sheet 2 of 5)

PADGRP1	PADGRP2	PAD1TO2	PAD2TO1
SATT	ONS	3L	3L
SATT	OPS	2L	2L
SATT	UNBAL	2L	2L
SATT	ATT	0	3L
SATT	DTT	0	6L
SATT	SATT	0	0
SATT	SDTT	0	0
SDTT	DONS	3L	0
SDTT	PONS	0	3L
SDTT	POPS	0	2L
SDTT	ONS	3L	3L
SDTT	OPS	2L	2L
SDTT	UNBAL	2L	2L
SDTT	ATT	0	3L
SDTT	DTT	0	6L
SDTT	SATT	0	0
SDTT	SDTT	0	0
ACO	DONS	3L	0
ACO	PONS	0	3L
ACO	POPS	0	3L
ACO	ONS	3L	3L
ACO	OPS	3L	3L
ACO	UNBAL	5L	5L

PADDATA (continued)

Table PADDATA values for loss-only capability (PBX trunks) (Sheet 3 of 5)

PADGRP1	PADGRP2	PAD1TO2	PAD2TO1
ACO	ATT	3L / 5L See note 2)	3L / 5L
ACO	DTT	0 / 3L (See notes 1 and 2)	6L / 9L
ACO	SATT	3L	3L
ACO	SDTT	3L	3L
ACO	ACO	6L	6L
DCO	DONS	3L	0
DCO	PONS	0	3L
DCO	POPS	0	0
DCO	ONS	3L	3L
DCO	OPS	0	0
DCO	UNBAL	2L	2L
DCO	ATT	2L	5L
DCO	DTT	0	6L
DCO	SATT	0	0
DCO	SDTT	0	0
DCO	ACO	3L	3L
DCO	DCO	3L	3L
ATO	DONS	9L	2L
ATO	PONS	6L	6L
ATO	POPS	3L	3L
ATO	ONS	9L	6L
ATO	OPS	6L	3L
ATO	UNBAL	6L	3L

Table PADDATA values for loss-only capability (PBX trunks) (Sheet 4 of 5)

PADGRP1	PADGRP2	PAD1TO2	PAD2TO1
ATO	ATT	3L	3L
ATO	DTT	0	3L
ATO	SATT	6L	3L
ATO	SDTT	6L	3L
ATO	ACO	6L	3L
ATO	DCO	6L	3L
ATO	ATO	3L	3L
DTO	DONS	9L	0
DTO	PONS	6L	3L
DTO	POPS	3L	0
DTO	ONS	9L	3L
DTO	OPS	6L	0
DTO	UNBAL	6L	0
DTO	ATT	3L	0
DTO	DTT	0	0
DTO	SATT	6L	0
DTO	SDTT	6L	0
DTO	ACO	9L	3L
DTO	DCO	6L	0
DTO	ATO	6L	3L
DTO	DTO	0	0
CONF	DONS	9L	0
CONF	PONS	6L	3L
CONF	POPS	6L	3L

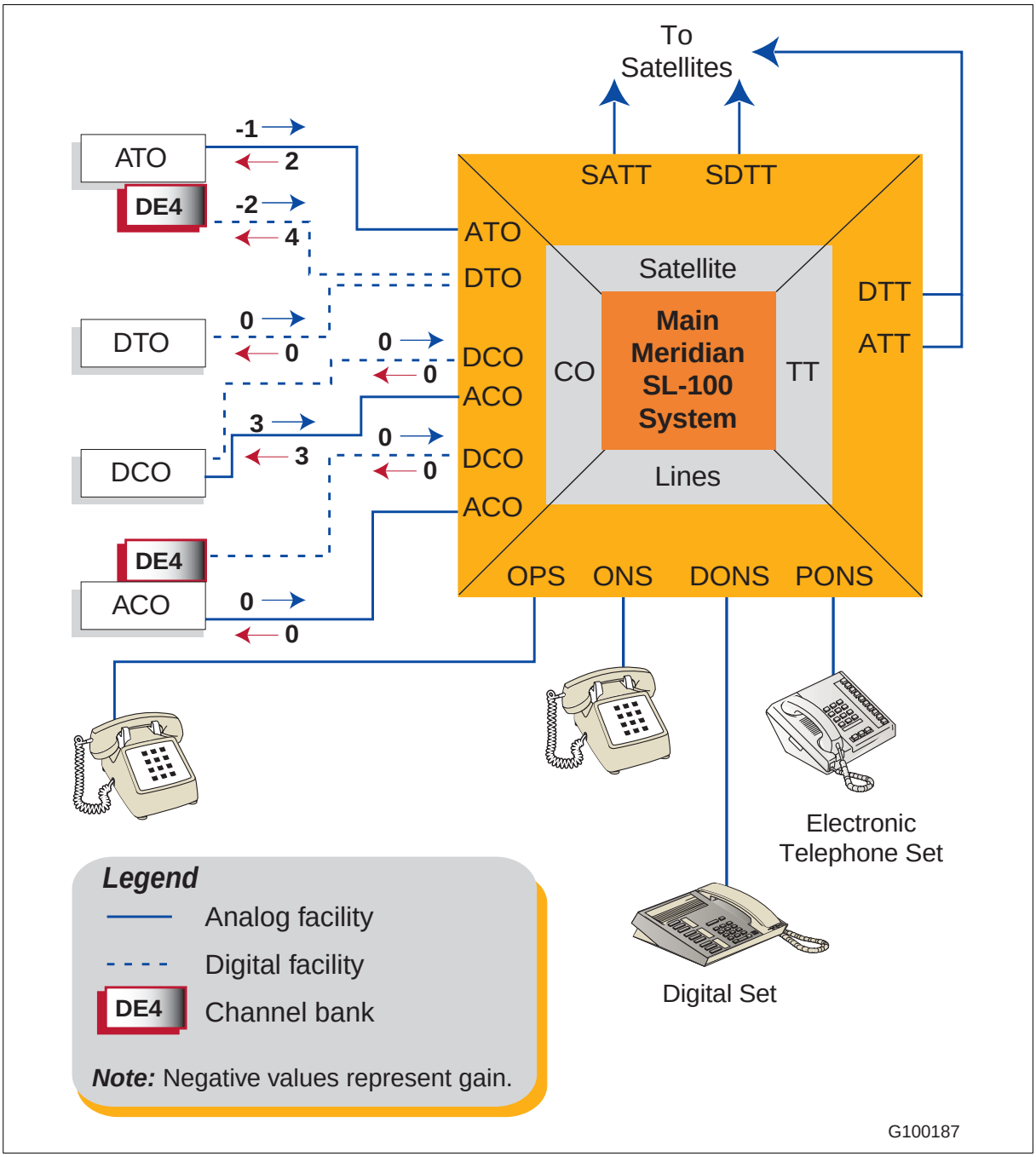
Table PADDATA values for loss-only capability (PBX trunks) (Sheet 5 of 5)

PADGRP1	PADGRP2	PAD1TO2	PAD2TO1
CONF	ONS	9L	3L
CONF	OPS	6L	0
CONF	UNBAL	6L	0
CONF	ATT	4L	1L
CONF	DTT	0	0
CONF	SATT	6L	0
CONF	SDTT	6L	0
CONF	ACO	3L	0
CONF	DCO	6L	0
CONF	ATO	3L	0
CONF	DTO	0	0
CONF	CONF	0	0

Note 1: The low loss value pair is used when a DTT port serves as an interface to a combination tie trunk that connects a satellite PBX and an ACO port.

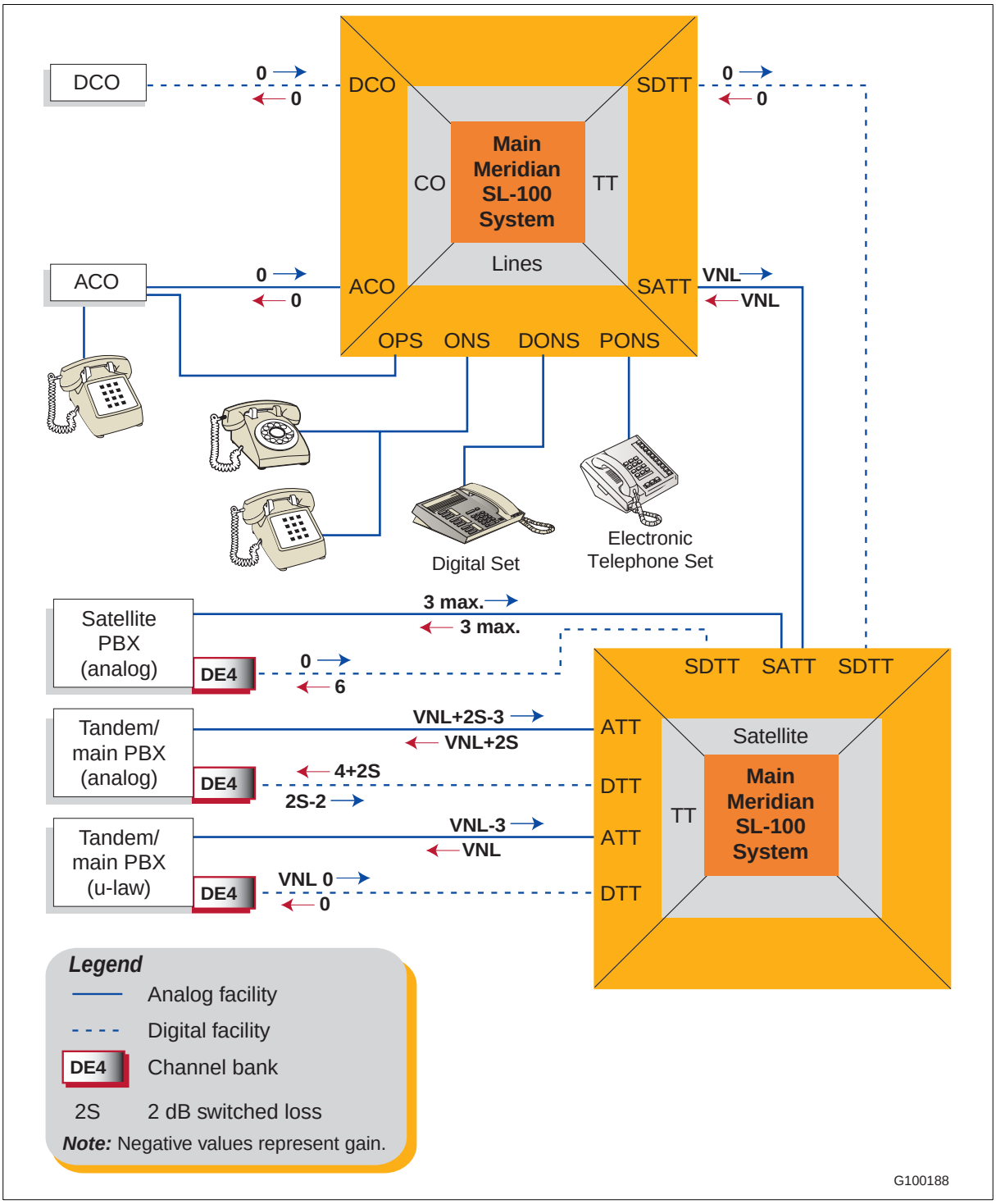
Note 2: It is desirable for the low loss portion to be used when the m-law PBX ACO trunk loss is greater than or equal to 2 dB and the ERL > (18, 13) and the singing return loss (SRL) > (10, 6) when measured into a 900 Ω + 2.16 µF termination at the central office (CO). The notation (n, n) identifies the median value first and the lower limit second.

Loss-only MSL-100 system



PADDATA (continued)

Loss-only MSL-100 system with satellites



Datafill example

Figure “MAP display example for table PADDATA” on page 151 shows sample MAP terminal datafill for table PADDATA.

MAP display example for table PADDATA

PADGRP1	PADGRP2	PAD1TO2	PAD2TO1
ONS	DONS	6L	6L
ONS	PONS	3L	6L
ONS	ONS	6L	6L
		0	6L
For IPE digital sets:			
ONS	DONS	0	6L

REPLDATA

Table name

Replace Dialed Digits Database Table

Functional description

Table REPLDATA is the database table for the REPLDIGS application. The tuples in the table consist of a key and an option area. The key to the table is a ten digit number.

Datafill sequence and implications

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

Table size

0 to 800 tuples

The upper limit is determined by the availability of memory in the DMS. Memory is dynamically allocated for each tuple in table REPLDATA.

Table REPLDIGS can support tuples for up to 800 different NPAs. The total number of possible values for the key field, DIGITS, is 720000000.

Datafill

The following table lists datafill for table REPLDATA.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
DIGITS		numeric (up to 10 digits)	*Replaced digits* Enter a one- to ten-digit string that is passed by the REPLDIGS feature during a TCAP query. DIGITS is a 10 digit field in the format NPANXXXXXX, where: • NPA are digits in the range 200 to 999 • NXX are digits in the range 100 to 999 • XXXX are digits in the range 0000 to 9999
OPTION		REPLACE	*Replace dialed digits* Enter the OPTION and complete the respective refinement fields. The only currently available option is REPLACE with subfields REPLDIGS, REPLOPT_LIST and refinements.

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
	REPLDIGS	0 to 9	*Replacing digits* Enter a one- to eighteen-digit string that replaces the digit string earlier defined in field DIGITS during a TCAP database query.
	REPLOPT_LIST	see subfields	*Replace dialed digits option list* This field consists of subfield REPLOPT and refinements NCOS and COSMAP.
	REPLOPT	COSMAP or NCOS	*Replace dialed digits option* Enter up to two options for each tuple in table REPLDATA. Enter NCOS and refinement field NCOS. Enter COSMAP and refinement fields COSMIN and COSMOUT.
	NCOS	0 to 255	*Network class of service* Enter a number from 0 to 255. The NCOS option only appears when table REPLDATA is resident at a node that performs in-switch table look-ups without TCAP messaging. The value in the NCOS field is used as the NCOS for the call.
	REPLOPT_LIST	COSMAP	*Class of service MAP* Enter COSMAP.
	COSMIN	alphanumeric	*Incoming internal class of service* Enter a one-to eight-character COSMAP value that is used as an index into table COSDATA to get incoming internal NCOS information from the database query. The COSMIN character string must be data filled in table COSMAP.
	COSMOUT	alphanumeric (up to 8 characters)	*Incoming internal class of service* Enter a COSMAP value that is used as an index into table COSDATA to get outgoing network NCOS information for the database response. The COSMIN character string must be data filled in table COSMAP.

REPLDATA (end)

Datafill example

The following is an example of sample datafill for table REPLDATA.

Datafill example for table REPLDATA

```
   DIGITS                                                          OPTION
_____________________________________________________________________
8005556666  (REPLACE 9196577433     (NCOS 10) (COSMAP NIL NIL)$)$
8009786565  (REPLACE 7119671111     (NCOS 10) (COSMAP NIL NIL)$)$
7005176444  (REPLACE    9974797     (NCOS  1)                 $)$
7375554596  (REPLACE       4596                               $)$
7375554797  (REPLACE       4797                               $)$
9225176444  (REPLACE    9974797     (NCOS  1)                 $)$
```

SLNWK

Table name

SL-100 Network Control Table

Functional description

Table SLNWK controls the various data communication applications between the sub-regional control facility (SRCF) and the SL-100. Table SLNWK allows the user to specify the SRCF node name, application type, and the link number used for access over an X.25 data link using a multiprotocol controller (MPC) card.

In order for two applications to establish a connection over the X.25 link, the protocol identification (PROTID) for each must be the same. If applications use the same physical link, each SRCF application must be assigned a unique PROTID.

Datafill sequence and implications

The following tables must be datafilled before table SLNWK.

- MPC
- X25LINK
- RASLAPPL

Table size

0 to 16 tuples

Datafill

The following table lists datafill for table SLNWK.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
NETID		alphanumeric (up to 8 characters)	*Network identification* Enter the network identification.
NETCON		alphanumeric (up to 8 characters)	*Network connection* Enter the network connection from table RASLAPPL.

SLNWK (end)

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
PROTID		0 to 255	*Protocol identification* Enter four values on one line, each separated by one space. The default value is 0 0 0 0.
NODETYPE		SRCF	*Node type* Enter SRCF for the sub-regional control facility.
NODENAME		alphanumeric (3 characters)	*Node name* Enter the name of the SRCF node.
APPLTYPE		FILETRAN, PUBNWM, RMAP, SAS,or SURV	*APPLICATION TYPE* Enter the network control application type. • FILETRAN (file transfer) • PUBNWM (public network management) • RMAP (remote MAP [maintenance and administration position]) • SAS (status assembly system) • SURV (surveillance)
TIMEOUT		0 to 32767	*Timeout interval* Enter the number of seconds to wait for an acknowledgement from the application running on the SRCF.
WINDOW		1 to 10	*Window* Enter the number of messages to send before waiting for an acknowledgement.

Datafill example

The following example shows sample datafill for table SLNWK.

The SRCF data communication interface attempts to establish connection with the remote SRCF SR2 over network connection IN2.

When manual or automatic control measures are applied to the switch, the result of any status changes is sent to the SRCF SR2, using the network output handler over network connection IN2.

After successful connection, the network input handler pools the NCs IN2 for incoming DSN NWM control messages (since the application type is a AAVNWM and PUBNWM and initiates network management-related activity.

After successful connection, the application related to the ANA will send ANA information to the SRCF SR1, using the network output handler over network connection OUT1.

MAP display example for table SLNWK

```
NETID NETCON     PROTID NODETYPE NODENAME APPLTYPE    TIMEOUT WINDOW
NET1   IN1  3 26 148 12   SRCF     SR1    AVNWM      100       7
NET2   OUT1 27 156 19 9   SRCF     SR1    ANA         50       5
NET3   IN2 255 7 6 137     SRCF      SR2  PUBNWM      707       8
```

Table name

Service Circuit Table

Functional description

Table SVRCKT contains the following information for Digitone outpulsing circuits (SVDTMF), R2 interregister signaling circuits (SVMFC), and service observing circuits (SVOBSV).

- pseudo fixed common language location identifier (CLLI)
- service circuit number
- trunk module type and number
- trunk module circuit number
- service circuit product engineering code (PEC)

The maximum number of any one type of circuit is 1024 circuits.

Datafill sequence and meaning

Enter data in table CLLI before you enter data in table SVRCKT.

Table size

Field TRKGRSIZ in table CLLI controls the size of table SVRCKT.

Datafill

Datafill for table SVRCKT appears in the following table.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
SVCTKEY		see subfields	The service circuit key contains subfields CLLI and NUM.
	CLLI	SVDTMF, SVMFC, or SVOBSV	Indicates the CLLI for the circuit. Enter SVDTMF for a Digitone outpulsing circuit. Enter SVMFC for an R2 interregister signaling circuit. Enter SVOBSV for a service observing circuit.
	NUM	0 to 1023	Identifies the service circuit by circuit number.

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
TMTYPE		DTM or MTM	Indicates the trunk module type. Enter DRAM trunk module (DTM) for SVDTMF circuits. Enter maintenance trunk module (MTM) for SVMFC and SVOBSV circuits.
TMNO		0 to 255	Enter the trunk module number.
TMCKTNO		0 to 29	Enter the trunk module circuit number. ***Note:*** When field TMCKTNO is greater than 20, perform a cold restart if you attempt to enter SVDTMF in field CLLI.
CARDCODE		1X80AA, 1X80BA, or 5X29AB	Enter the product engineering code for the correct tone card. Both the 1X80AA and 1X80BA are EDRAM circuit packs, the 5X29AB is a service observing circuit pack. Enter 1X80AA or 1X80BA for SVDTMF circuits depending on site requirements. The following lists show the characteristics of the 1X80AA and 1X80BA circuit packs. 1X80AA • 4.3 minutes of announcement time • 8 single-density or 4 double-density announcement files • direct DS30 link to the network 1X80BA • 17.2 minutes of announcement time • 32 single-density or 16 double-density announcement files • direct DS30 link to the network Enter 5X29AB for SVOBSV circuits.

SVRCKT (end)

Datafill example

Sample datafill for table SVRCKT appears in the following example.

MAP example for table SVRCKT

```
SVCTKEY              TMTYPE  TMNO  TMCKTNO          CARDCODE
_____________________________________________________________

SVDTMF      0          DTM     1       13            1X80AA
SVDTMF      1          DTM     1       14            1X80AA
SVOBSV      2          MTM     1       15            5X29AB
```

Table name

Digital carrier module inventory table

Functional description

This document contains military-specific information about table DCMINV that is not included in the core table DCMINV description. For non-military-specific information, refer to table DCMINV.

Datafill

There is no datafill for this table.

TCNDATA

Table name

Travel Card Number Data Table

Functional description

Table TCNDATA is a database that supports travel card service for a corporate network.

Each entry in table TCNDATA consists of the travel card number (TCN), the network class of service (NCOS) number, an indication of whether an account code is required or not, and an indication of whether a call is allowed to proceed or not.

Datafill sequence and implications

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

Table size

0 to 400 000 tuples

Datafill

The following table lists datafill for table TCNDATA.

Field descriptions (Sheet 1 of 2)

Field	Subfield or refinement	Entry	Explanation and action
CARDNUM		0 to 9(14 digits)	*Travel card number* Enter a travel card number (TCN) with a first-digit range of 2 to 9 and the remaining digits in the range of 0 to 9 each.
CUSTGRP		see subfield	*Customer group* This field consists of subfield CUSTSEL.
CUSTSEL		Y or N	*Customer group selector* Enter Y (yes) if a customer group is required and datafill refinement CUSTGRP. Otherwise, enter N (no).
CUSTGRP		alphanumeric (1 to 16 characters)	*Customer group* Enter the customer group name.
NCOS		0 to 255	*Network class of service* Enter the network class of service.

Field descriptions (Sheet 2 of 2)

Field	Subfield or refinement	Entry	Explanation and action
ACCT		Y or N	*Account code* Enter Y if an account code is required for billing purposes. Otherwise, enter N.
ALLOW		Y or N	*Allow* Enter Y if the call is allowed to proceed. Otherwise, enter N.

Datafill example

The following is an example of sample datafill for table TCNDATA.

In the example, CARDNUM 57894738264846 has an NCOS of 7, no customer group is required, the account code is not required, and the call is allowed to proceed.

MAP display example for table TCNDATA

```
CARDNUM          CUSTGRP NCOS ACCT ALLOW
_____________________________________________
57894738264846     N     7    N    Y
```

VOWDATA

Table name

Virtual Office Worker Data

Functional description

This table is read-only and described for information only. The Virtual Office Worker Data (VOWDATA) table allows telecommuters who do not have a dedicated physical phone set to access their dedicated directory number (DN), features, and options. The telecommuter logs into their DN from a previously designated group of phone sets. Features and options operate normally. All calls to the dedicated DN terminate to the set where the telecommuter is logged in. Calls originating from the set are billed to the dedicated DN.

Datafill sequence and implications

The following tables must be datafilled for the information to appear in table VOWDATA.

- DNROUTE, datafill VOWDN
- CUSTSTN, datafill the following fields:
  - VOWDN
  - NCOS
  - SUBGRP
- IBNXLA, datafill the following fields:
  - VOWIN
  - VOWOUT
  - VOWPCC
  - VOWROUT
- AUTHDCE, datafill the following fields:
  - VOW
  - SW

Table size

VOWDATA contains 0 to 20480 tuples.

Datafill

The following table lists datafill for table VOWDATA.

Field descriptions

Field	Subfield or refinement	Entry	Explanation and action
VOWKEY		0-to 190 to 1023	VOW_KEY used to access this table.
VOWPID		vector of 4 to 10 digits	VOW personal identification number.
VOWPDN		TEN_DIGIT_REGISTER	VOW primary directory number
OLDLEN		EXT_LEN	
TEMPLEN		EXT_LEN	
MATE		Y or N	
MATELN		EXT_LEN (prompt only shows if MATE = Y)	

Datafill example

The following example shows sample datafill for table VOWDATA.

MAP display example for table VOWDATA

```
VOWKEY   VOWPID   VOWPDN   OLDLEN   TEMPLEN   MATE
_____________________________________________________________
2 55 839943 2149975134 IPE0 0 0 2 3 VOW 2 66 N
7 145 5576643 9196577665 DLM0 0 0 4 12 VOW 4 544 Y DLM0 0
4 13
```

Table history

MSL10

Table introduced.

VOWDATA (end)

Supplementary information

none

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