

297-8001-801

DMS-100 Family

North American DMS-100

Feature Description Manual

LEC0015 and up Standard 14.02 May 2001

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Feature Description Manual

Publication number: 297-8001-801

Product release: LEC0015 and up

Document release: Standard 14.02

Date: May 2001

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Printed in the United States of America

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4 LEC cross-reference

4-1

About this document

When to use this document

This document provides feature information for the DMS-100 switch. Feature information helps operating company personnel to prepare for insertion of a new PCL load. The feature also helps personnel to understand elements of the software. Operating company personnel involved in planning and engineering or in maintenance activities can use this document.

How to check the version and issue of this document

Numbers indicate the version and issue of the document. For example, 01.01.

The first two digits indicate the version. When the document is updated to support a new software release, the version number increases. 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 when 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.

You must determine which version of this document applies to your office software, and the order of your product documentation. Refer to the release information in *DMS-10 and DMS-100 Product Documentation Directory*, 297-8991-001.

The order of this document

This document contains descriptions of features that associate with the PCL. This document includes support sections.

Hardware requirements

This section lists the system hardware required for the specified PCLs in the current software release. Hardware requirements are also provided in the individual feature descriptions where applicable.

Summary tables

This section contains a summary table for each specified PCL in the current software release. This table indicates the information that is available in this document for each feature. For instance, the table shows the functional areas that are affected by that feature, such as restrictions and limitations.

Feature descriptions

This section contains a feature description for each feature in this release. The following sections are included in each feature description if they apply to the feature:

- Hardware requirements
- Limitations and restrictions
- Interactions
- Datafill
- Service orders
- Operational measurements
- Logs
- User interface
- Billing

Cross-reference table

This section contains a cross-reference table for each specified PCL in the current software release. The cross-reference tables list the following:

- feature number.
- feature name
- functional group name
- functional group ordering code

The order of reference documentation

The *Feature Description Manual* is part of the reference documentation that supports the Nortel Networks line of DMS-100 Family products. The reference documentation is part of the DMS-100 Family library.

Reference documentation contains the following documents.

Table 1

Number	Title
297-1001-830	<i>Automatic Message Accounting Reference Manual</i>
297-8991-824	<i>Command Interface Reference Manual</i>
297-8991-805	<i>Hardware Description Manual</i>
297-XXXX-351	<i>North American DMS-100 Customer Data Schema Reference Manual</i>
297-XXXX-840	<i>North American DMS-100/200 Log Report Reference Manual</i>
297-XXXX-855	<i>North American DMS-100/200 Office Parameters Reference Manual</i>
297-XXXX-814	<i>North American DMS-100/200 Operational Measurements Reference Manual</i>
297-XXXX-350	<i>North American DMS-100/200 Translations Guide</i>

Note 1: The document layer, XXXX, indicates the product CM load (PCL). In the PCL documentation structure, the document layer number depends on the PCL number for a software load.

Note 2: As of NA0011 (LEC and LET) and EUR010 (EUR) releases, any reference to the data schema section of the *Translations Guide* will be mapped to the *Customer Data Schema Reference Manual*.

1 Hardware requirements

This section provides information about the required gating hardware for this release.

Related PCL release

The related Product Computing-module Loads (PCL) for this release are as follows:

- North American
 - Local Exchange Carrier (LEC) for DMS-100
 - DMS-100/DMS-200 Traffic Operator Position System (TOPS) combination switch (LET)
- Global

Related gating hardware by CSP release

The following Communications Systems Platform (CSP) release gating hardware is required for this release. The platform cannot support Product CM Lineup (PCL) or Product PM Lineup (PPL) without this hardware.

Table 1-1 Hardware requirements

CSP release	PEC (Note)	Product	Description	Reason
06	there is no PEC			
07	9X13KA	ENET	16 MB Processor	Minimum memory= 6 MB
	EX22BA or EX22BB	Line Peripheral Processor (LPP)	8 MB ASU	4 MB LIU7 Exhaust
013	there is no PEC			
014	there is no PEC			
Note: PEC-Product Equipment Code				

2 LEC feature components summary

The following table summarizes the effect of features on hardware and software components. In the table, each feature number cross-references to the hardware and software components that the feature affects.

The feature numbers appear in the left column in alphanumeric order, and the components appear across the top of the table. The components have a correlating section heading in each feature description in this manual. Refer to each feature descriptions in this manual for exact feature information.

The letter Y for a feature number and associated component indicates that the feature description contains information for that correlating section. For example, Y in the *LG* column indicates the feature affects logs. Additional information is available in the Logs section of the feature description in this manual. A blank means the feature does not have an effect on the given component. Information does not appear in the correlating section for the component when the feature number has a blank.

Table 2-1 Available feature information (Sheet 1 of 5)

Feature Number	DS	HW	L&R	IN	DF	SO	OM	LG	UI	BL
59023032	Y		Y					Y		
59022448	Y		Y		Y		Y			
59026486	Y		Y		Y		Y	Y		
59022453	Y	Y	Y	Y	Y			Y		
59026480	Y		Y		Y					

Note: *DS* = Description *HW* = Hardware requirements *L&R* = Limitations and restrictions
IN = Feature interactions *DF* = Datafill *SO* = Service orders *OM* = Operational measurements
LG = Logs *UI* = User interface *BL* = Billing or automatic message accounting *NA* = No activity
 (Features with NA indicate no activity or functionality visible to the end user. Therefore, no feature descriptions are provided.)

2-2 LEC feature components summary

Table 2-1 Available feature information (Sheet 2 of 5)

Feature Number	DS	HW	L&R	IN	DF	SO	OM	LG	UI	BL
59022576	Y		Y		Y					
59006090	Y	Y	Y							
59006127	Y									
59006184	Y	Y	Y			Y				
59006196	Y	Y	Y						Y	
59006202	Y	Y								
59006371	Y		Y		Y			Y		
59006586	Y		Y	Y	Y	Y	Y	Y	Y	
59009522	Y	Y	Y		Y			Y	Y	
59009527	Y	Y	Y		Y					
59010487	Y		Y		Y					
59010576	Y		Y		Y	Y				
59011294	Y		Y	Y	Y			Y		
59011676	Y		Y	Y	Y				Y	
59011802	Y	Y	Y							
59011907	Y		Y	Y			Y			Y
59011948	Y		Y	Y	Y					
59011953	Y		Y		Y					
59011993	Y	Y	Y	Y	Y			Y		
59012000	Y		Y		Y					
59012144	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
59012182	Y					Y			Y	

Note: DS = Description HW = Hardware requirements L&R = Limitations and restrictions
 IN = Feature interactions DF = Datafill SO = Service orders OM = Operational measurements
 LG = Logs UI = User interface BL = Billing or automatic message accounting NA = No activity
 (Features with NA indicate no activity or functionality visible to the end user. Therefore, no feature descriptions are provided.)

Table 2-1 Available feature information (Sheet 3 of 5)

Feature Number	DS	HW	L&R	IN	DF	SO	OM	LG	UI	BL
59012192	Y		Y	Y	Y					
59012468	Y		Y	Y						
59012574	Y		Y	Y	Y					
59012624	Y		Y		Y					
59012642	y		y							
59012655	Y	Y	Y	Y	Y	Y	Y	Y		Y
59012846	Y		Y		Y					
59013034	Y	Y	Y		Y	Y				Y
59013169	Y		Y		Y		Y		Y	
59013088	Y		Y		Y					
59013206										
59013226	Y		Y	Y						
59013267	Y		Y			Y			Y	
59013251	Y		Y					Y	Y	
59013271	Y	Y	Y	Y						
59013322	Y		Y						Y	
59013383	Y		Y	Y	Y			Y		
59013421	Y		Y							
59013430	Y		Y		Y	Y			Y	
59013762	Y				Y					
59013873	Y	Y	Y		Y					
59014046	Y		Y	Y						

Note: DS = Description HW = Hardware requirements L&R = Limitations and restrictions
IN = Feature interactions DF = Datafill SO = Service orders OM = Operational measurements
LG = Logs UI = User interface BL = Billing or automatic message accounting NA = No activity
(Features with NA indicate no activity or functionality visible to the end user. Therefore, no feature descriptions are provided.)

2-4 LEC feature components summary

Table 2-1 Available feature information (Sheet 4 of 5)

Feature Number	DS	HW	L&R	IN	DF	SO	OM	LG	UI	BL
59014614	Y				Y					
59014752	Y				Y			Y		
59015055	Y		Y	Y						
59015125	Y	Y	Y							
59015177	Y									
59015183	Y			Y					Y	
59015195	Y	Y	Y							
59015840			Y							
59016005	Y		Y	Y		Y	Y		Y	
59016379						Y				
59016386	Y	Y	Y		Y					
59016521			Y	Y					Y	
59016574			Y		Y				Y	
59016859										
59016864	Y		Y	Y	Y					
59017193										
59017874	Y									
59018258	Y		Y	Y		Y				
59018498	Y		Y		Y				Y	
59018646	Y		Y					Y		
5902054			Y	Y					Y	
59020277										

Note: DS = Description HW = Hardware requirements L&R = Limitations and restrictions
 IN = Feature interactions DF = Datafill SO = Service orders OM = Operational measurements
 LG = Logs UI = User interface BL = Billing or automatic message accounting NA = No activity
 (Features with NA indicate no activity or functionality visible to the end user. Therefore, no feature descriptions are provided.)

Table 2-1 Available feature information (Sheet 5 of 5)

Feature Number	DS	HW	L&R	IN	DF	SO	OM	LG	UI	BL
59020291	Y		Y	Y					Y	
59019041										
AF7701	Y	Y	Y		Y				Y	
AF7702	Y	Y	Y		Y				Y	

Note: *DS* = Description *HW* = Hardware requirements *L&R* = Limitations and restrictions
IN = Feature interactions *DF* = Datafill *SO* = Service orders *OM* = Operational measurements
LG = Logs *UI* = User interface *BL* = Billing or automatic message accounting *NA* = No activity
(Features with NA indicate no activity or functionality visible to the end user. Therefore, no feature descriptions are provided.)

3 Feature descriptions

This chapter contains a description of each feature applicable to this release. Feature descriptions include information about feature hardware and software components.

Feature descriptions appear in alphanumeric order according to the feature number.

59017604

DIGMAN Support for Random and Circular Hunting

Feature name

DIGMAN Support for Random and Circular Hunting feature

Description

The DIGMAN Support for Random and Circular Hunting feature adds the DMI option to the Supertrunk Group (SG) selector. The option has one parameter (DMI) for specifying an index into table DIGMAN. This feature gives the SG selector access to the table DIGMAN commands, but does not alter the existing functionality of any DIGMAN command.

For example, if a call is routed with the SG selector and the DIGMAN command (referenced by the DMI parameter) is specific to a type of trunk, or if the command is under software optionality control (SOC), then those same restraints will apply.

Hardware requirements

The DIGMAN Support for Random and Circular Hunting feature has no additional hardware requirements.

Limitations and restrictions

The limitations and restrictions that follow apply to DIGMAN Support for Random and Circular Hunting:

- In the North American market, if the universal routing tables (ACRTE, PXRTE, CTRTE, FARTE, OFCRTE, FTRTE, and NSCRTE) are datafilled using the SG selector, the manipulation of the called digits via the DMI (Digit Manipulation Index) option is not supported. There is no software restriction preventing the datafilling of the DMI against the SG selector in these tables, but the DMI index will not be utilized to index into the DIGMAN table and modify the called digits. The called directory number (DN) will remain unchanged.
- In table SUPERTKG, in which individual trunk groups are assigned to a super trunk group, it is assumed that all of these trunks are primary rate interface (PRI or PRA) trunks. This is a basic expectation of the feature that implemented the SUPERTKG table. There is no software restriction preventing any other trunk type to be datafilled into a super trunk group, but it is not supported. Only PRI trunks are supported in table SUPERTKG. Thus, the DIGMAN Support for Random and Circular Hunting feature is supported only for PRI trunks. Although other trunk

59017604**DIGMAN Support for Random and Circular Hunting** (continued)

types can be assigned to super trunk groups and the called digits can now be manipulated, it is not supported.

- Commands in table DIGMAN that are associated with inband signalling are not supported.
- Interaction with IBNT1 and IBNT2 trunks is not supported.

Interactions

The DIGMAN Support for Random and Circular Hunting feature does not interact with other functionalities.

Datafill

The DIGMAN Support for Random and Circular Hunting feature requires datafill in the following tables that include the SG selector:

- FNAPCONT, subtable RTEREF
- HNPACONT, subtable RTEREF
- IBNRTE, IBNRT2, IBNRT3, IBNRT4
- OFRT, OFR2, OFR3, OFR4

Service orders

The DIGMAN Support for Random and Circular Hunting feature does not change the Service Order System (SERVORD).

Operational measurements

The DIGMAN Support for Random and Circular Hunting feature does not change operational measurements (OM).

Logs

The DIGMAN Support for Random and Circular Hunting feature does not introduce logs. However, the functionality of table DIGMAN produces a log entry when the required DMI for a call is not found, or when a DIGMAN command causes all called digits to be removed.

User interface

The DIGMAN Support for Random and Circular Hunting feature does not change the user interface.

59017604

DIGMAN Support for Random and Circular Hunting (end)

Billing

The DIGMAN Support for Random and Circular Hunting feature does not generate billing records or changes.

59021986

E911: Wireless Phase II—Geodetic Location Parm

Feature name

E911: Wireless Phase II—Geodetic Location Parm

Description

The Geodetic Location Parm allows a Public Safety Answering Point's (PSAP) host DMS to receive the geodetic location of a wireless E911 call over the SS7 Network. The existing E911212 log is enhanced to show the latitude and longitude information about E911 wireless calls only. This log generates when the caller or E911 attendant disconnects or transfers the call to a secondary PSAP. This information is not displayed at the PSAP in this preliminary feature offering.

Hardware requirements

The Geodetic Location Parm has no additional hardware requirements.

Limitations and restrictions

The longitude and latitude information appear only in the E911212 log for E911 wireless calls sent over the SS7 Network.

Interactions

The Geodetic Location Parm does not interact with other functionalities.

Datafill

The Geodetic Location Parm does not change data schema tables or office parameters.

Service orders

The Geodetic Location Parm does not change the Service Order System (SERVORD).

Operational measurements

The Geodetic Location Parm does not change operational measurements (OM).

Logs

The E911212 log is enhanced to show the latitude and longitude of wireless calls if the Geodetic Location information is available. This log generates when the caller or E911 attendant disconnects or transfers the call to a secondary PSAP. Two new fields, LAT DEG and LONG DEG, are added to the E911212 log. Latitude and longitude display as degrees, minutes, seconds, and

59021986

E911: Wireless Phase II—Geodetic Location Parm (end)

direction: North (N) or South (S) for latitude, East (E) or West (W) for longitude. If the geodetic information is not available for a wireless call, the message GEODETIC INFORMATION NOT AVAILABLE appears. For wireline calls, N/A appears.

An example of log report E911212 follows with the new fields in bold:

```
E911212 JAN10 15:10:25 0101 INFO E911 CALL EVENT RECORD
ANI          PSAPNAME          POSID      LOGIN      OFFER
9196211235  RALEIGHPOLICE  7708      8888      15:10:00
ANSW         XFR             DISC       XFR DN
15:10:02    15:10:17      15:10:25  9196211901
XFR PSAPNAME XFR ANSW
RALEIGHFIRE 15:10:19
pANI          LAT DEG          LONG DEG
6139110747   45 59'59" N     170 59'59" E
```

Following is an example of an E911212 log generated when a wireline or wireless caller disconnects from the PSAP and the Geodetic Location information is not available.

```
E911212 JAN10 15:10:25 0101 INFO E911 CALL EVENT RECORD
ANI          PSAPNAME          POSID      LOGIN      OFFER
9196211235  RALEIGHPOLICE  7708      8888      15:10:00
ANSW         XFR             DISC       XFR DN
15:10:02    15:10:17      15:10:25  9196211901
XFR PSAPNAME XFR ANSW
RALEIGHFIRE 15:10:19
pANI          LAT DEG          LONG DEG
N/A          GEODETIC INFORMATION NOT AVAILABLE
```

User interface

The Geodetic Location Parm does not change the user interface.

Billing

The Geodetic Location Parm does not generate billing records or changes.

59021993 OFBSR Interface

Feature name

Off-Board Selective Routing (OFBSR) Interface

Description

The geographic area served by an Enhanced 911 Emergency Service (E911) office is divided into emergency service zones (ESZ). Each ESZ is associated with an emergency service number (ESN). Each ESN is associated with a group of public safety answering points (PSAP). Emergency service is provided to all subscribers in an ESZ by the same group of PSAPs, defined by identical ESNs.

Because 911 calls must be routed from the end office to the E911 tandem on dedicated E911 trunks, all the E911 trunks also have an associated ESN (except for calls routed on non-dedicated message and foreign exchange (FX) trunks).

There are two types of routing for E911 calls: selective routing and alternate routing. Selective routing routes a 911 call to a PSAP depending on the ESN associated with the subscriber's directory number (DN). The ESN assigned to the incoming trunk group is the default ESN. Emergency calls coming in the E911 tandem on message or FX trunks are routed based on the default ESN entered in the pretranslator for that trunk group. If the E911 tandem cannot terminate a 911 call to a PSAP, alternate routing allows the tandem to route the call to another DN or ROUTE.

After a 911 call routes to the primary PSAP, the PSAP can transfer the call to another agency that provides service for the specific type of emergency. This method is selective call transfer and is also based on the subscriber's ESN.

The OFBSR interface feature operates from a DMS-100 functioning as an E911 tandem to an external selective-routing database (SRDB) server. A SRDB server supports up to 1,024 ESN tuples for each subscriber in the area. Each ESN tuple contains a primary PSAP DN and up to six selective call transfer DNs for specialized PSAPs.

The OFBSR interface also supports the DUAL OFBSR interface, which allows one switch to work with two external databases for selective routing. If communication fails between the DMS-100 and the primary OFBSR, the secondary OFBSR will be used for selective routing.

When an E911 call is processed within the DMS-100 E911 environment, the selective routing function activates. At this point, a check determines if the

59021993

OFBSR Interface (continued)

OFBSR interface will be used for the call's translation. This check searches for one of two options:

- an option on the incoming E911 facility (trunk or virtual facility group) to select OFBSR.
- an office-wide option (table E911OFC) that selects OFBSR for all E911 calls in the office.

If either of these options is selected, an X.25 query is issued to the OFBSR interface and a timer set for 750 milliseconds begins counting. If the timer expires with no response to the query, a second query launches and the timer resets for another 750 milliseconds. If there is no response to the second query, the call is either default routed based on the ESN of the E911 trunk or routed based on the ESN retrieved from Table E911SRDB.

Note: Currently, the SRDB is implemented as a standard table (E911SRDB) on the DMS-100 and may be updated and queried using standard DMS table control commands.

Hardware requirements

The OFBSR interface uses messaging between the DMS-100 and the Off-Board Selective Routing database, delivered over X.25 datalinks. It also uses the Multiprotocol Controller (MPC) input/output card (1X89) or equivalent functionality available on the Input/Output Module (IOM).

Limitations and restrictions

The OFBSR Interface has no limits or restrictions.

Interactions

The OFBSR Interface does not interact with other functionalities.

Datafill

The OFBSR Interface changes the following data schema tables or office parameters.

Table VIRTGRPS and Table TRKGRP are modified. Option OFBSR is added to indicate that the facility uses the OFBSR interface option. The option will be set to No (N) by default.

Two application IDs will be added to the INDEX field in Table MPCFASTA. These IDs are E911SR01 and E911SR02.

59021993**OFBSR Interface** (continued)

Two E911 office parameters are added to Table E911OFC:

- **USE_OFBSR_INTERFACE** - This option indicates that the OFBSR Interface is used for routing purposes.
- **USE_ONBOARD_SRDB** - This option indicates that the On-Board database (Table E911SRDB) will be used to route calls in the event of OFBSR failure.

Service orders

The OFBSR interface does not change the Service Order System (SERVORD).

Alarms

The OFBSR interface adds the following three alarms. The conditions that raise the alarm differ slightly between the single and dual OFBSR interface:

- **E911_OFBSR_CRITICAL** - For the dual OFBSR interface, this alarm activates when all MPC links to both database servers are unavailable. For the single OFBSR interface, the alarm activates when both MPC links to the database server become unavailable.
- **E911_OFBSR_MAJOR** - For the dual OFBSR interface, this alarm activates when all MPC links to one database server are unavailable. For the single OFBSR interface, the alarm activates when one of the MPC links to the database server becomes unavailable.
- **E911_OFBSR_MINOR** - For the dual OFBSR interface, this alarm activates when any MPC link to either database server is unavailable. This alarm is not raised for the single OFBSR interface.

Operational measurements

The OFBSR interface does not change operational measurements (OM). Existing MPC OMs will be pegged.

Logs

The OFBSR interface adds the following logs:

- E911233: A problem was encountered with the ESN query to the OFBSR database.
- E911234: OFBSR messages are routed to the secondary database.
- E911235: OFBSR messages are routed to the primary database.

User interface

The OFBSR interface does not change the user interface.

59021993

OFBSR Interface (end)

Billing

The OFBSR interface does not generate billing records or changes.

Software optionality control (SOC)

SOC is tracked for the OFBSR Interface.

59022437**E911 Tandem-Tandem Enhancements**

Feature name

E911 Tandem-Tandem Enhancements

Description

Basic 911 (B911) and Enhanced 911 (E911) are both emergency service products provided by the DMS switching group. The E911 Tandem-Tandem Enhancements allow existing E911 functionality to be used in a unique network configuration containing “Dual Super E911 tandems.” This feature has no effect on B911 functionality.

SBC telephone company developed a unique network configuration that uses the concept of two Super E911 tandems to serve the Los Angeles Police Department’s (LAPD) Public Safety Answering Points (PSAPs). These LAPD PSAPs are implemented using a single Network Automatic Call Distribution (ACD) group spanning both Super E911 tandems, creating two Super E911 tandems. The two Super E911 tandems are connected to six existing E911 tandems and to each other with ISUP trunking. The figure Network Routing of E911 Calls shows this configuration below.

In normal E911 network configurations, the original terminating Primary PSAP is located in the same E911 tandem that performed the Selective Routing. This primary PSAP can send the caller to another PSAP by a Fixed, Manual, or Selective transfer. Fixed and Manual transfers include speed calling, quick keys, or manually dialing digits to reach the alternate PSAP. Selective transfer uses tables E911ESN and E911PSAP to get the directory number (DN) of the alternate PSAP.

If the primary PSAP (e.g. LAPD Network ACD PSAP) does not reside in the E911 tandem performing Selective Routing, PSAP transfers become more complex. For example, Fixed transfers using speed call codes cannot be coordinated between E911 tandems. Also, Selective transfers require ESN mappings to be synchronized across all E911 tandems in the network, which is not implemented easily.

The E911 Tandem-Tandem Enhancements extend existing E911 functionality to the network configuration using Dual Super E911 Tandems by implementing new E911 mechanisms. These mechanisms allow PSAP transfers to route back to the E911 tandem that performed Selective Routing, selecting the correct alternate PSAP. See the DMS-100 Family Translations Guide, NTP 297-8001-350 for more information on using the E911 Tandem-Tandem enhancements.

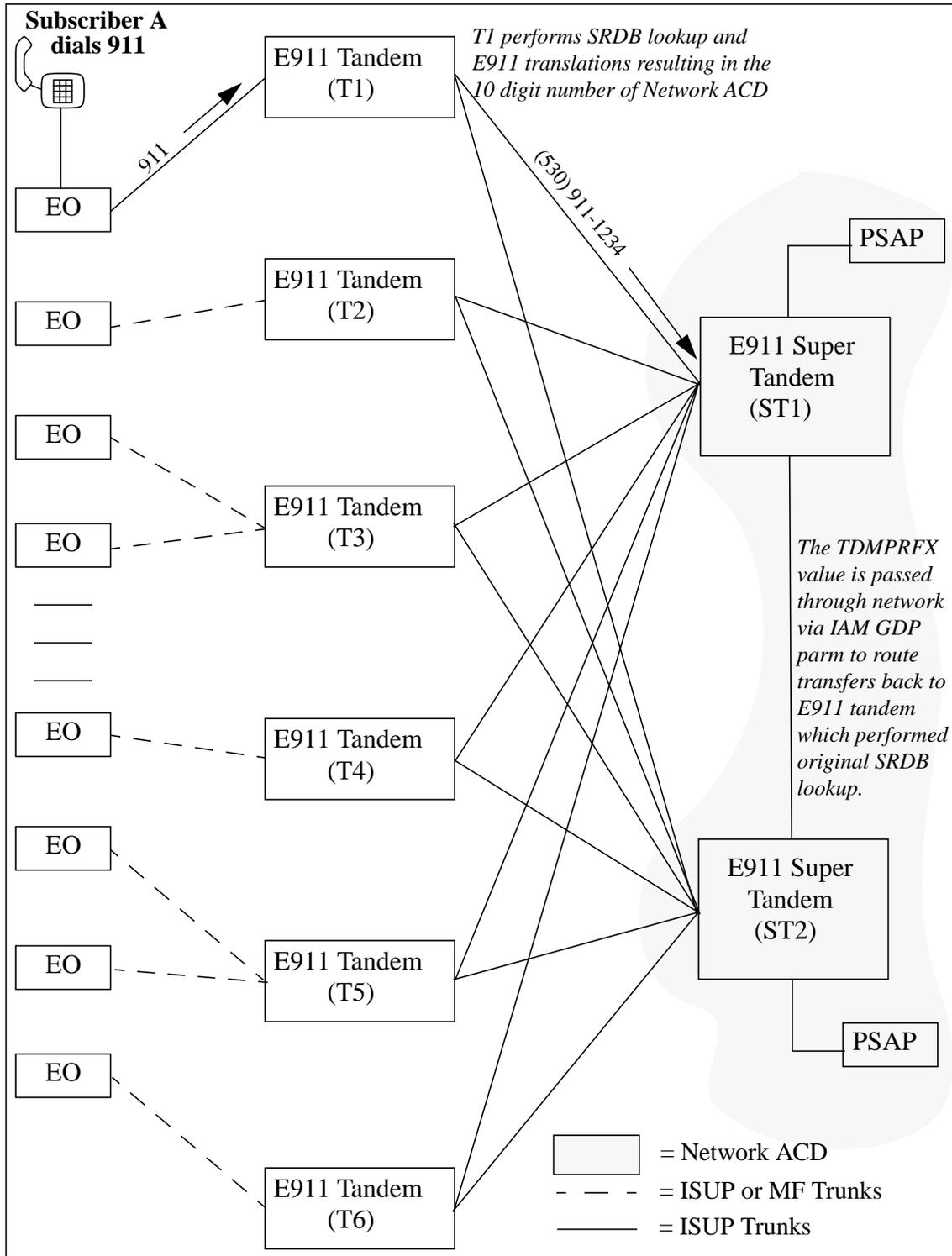
59022437

E911 Tandem-Tandem Enhancements (continued)

Network Routing of E911 Calls

59022437

E911 Tandem-Tandem Enhancements (continued)



59022437

E911 Tandem-Tandem Enhancements (continued)

Hardware requirements

The E911 Tandem-Tandem Enhancements have no additional hardware requirements.

Limitations and restrictions

The limits and restrictions that follow apply to the E911 Tandem-Tandem Enhancements:

- This functionality is limited to E911 calls using ISUP IT for selective routing and transfer because the E911 option and TDMPRFX apply only to ISUP IT trunks.
- PRI PSAP is not supported for this activity.

Interactions

The E911 Tandem-Tandem Enhancements do not interact with other functionalities.

Datafill

E911 Tandem-Tandem Enhancements change the TRKGRP and STDPRT tables and add a new table, E911DRT.

New option TDMPRFX in Table TRKGRP

The new field Tandem Prefix Value (TDMPRFX) is added under the E911 option for ISUP IT trunks. This field takes a value from 0 to 15 with a default of 0. Refer to the TRKGRP table in the Customer Data Schema Reference Manual Volume 10 of 11, NTP 297-8001-351A for more details.

New selector E911RTE in Table STDPRT

The new selector, E911RTE, is added to the STDPRT table, indicating the new table E911TDRT. Refer to the STDPRT table in the Customer Data Schema Reference Manual Volume 9 of 11, NTP 297-8001-3519 for more details.

New table E911DRT

A new table E911TDRT is introduced by this feature. E911TDRT routes a call based on the dialed digits and the TDMPRFX value. Refer to the E911TDRT table in the Customer Data Schema Reference Manual Volume 4 of 11, NTP 297-8001-3514 for more details.

Service orders

E911 Tandem-Tandem Enhancements does not change the Service Order System (SERVORD).

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E911 Tandem-Tandem Enhancements (end)

Operational measurements

The E911 Tandem-Tandem Enhancements does not change operational measurements (OM).

Logs

The E911 Tandem-Tandem Enhancements do not change logs.

User interface

The E911 Tandem-Tandem Enhancements do not change the user interface.

Billing

The E911 Tandem-Tandem Enhancements do not generate billing records or changes.

59022448

ICM Call Held Event Reporting

Feature name

ICM Call Held Event Reporting

Description

The Intelligent Call Management (ICM) Call Held Event Reporting feature is for Automatic Call Distribution (ACD), Meridian Digital Centrex (MDC), and Centrx (CTX) agents, as well as Residential Enhanced Service (RES) environments. This feature also supports the K-SETS with the customer premises equipment (CPE) permanent Hold Key, but does not support K-SETS with the call hold (CHD) and permanent hold (HLD) features. The plain old telephone service (POTS) 500/2500 is supported with CHD and HLD.

The ICM Call Held Event Reporting feature allows the DV_CALL_HELD_U call event message to report to the host application. When a call has been put on hold either manually or with ICM, the host application receives the DV_CALL_HELD_U call event message. When that call is unheld manually or through ICM, the DV_CALL_UNHELD_U call event message reports to the host application.

This feature also supports the DV_UNHOLD_CALL call control message. The host application sends the DV_UNHOLD_CALL call control message to the switch to unhold a call placed on hold manually or through ICM. Then, the switch sends the call event message DV_CALL_UNHELD_U to the host application.

Hardware requirements

The ICM Call Held Event Reporting feature has no additional hardware requirements.

Limitations and restrictions

The limitations and restrictions that follow apply to the ICM Call Held Event Reporting feature:

- BC0948 (Call Hold)
- BV0944 (Permanent Hold)

Interactions

The ICM Call Held Event Reporting feature does not interact with other functionalities.

59022448**ICM Call Held Event Reporting (end)**

Datafill

The ICM Call Held Event Reporting feature changes Table SCAISSERV to receive ICM DV_CALL_HELD_U call event messages by adding the following default tuples:

- the default tuple TPCC15\$ under the third party call control (TPCC) category with the function CALLHELD
- the default tuple SCAICC09\$ under the Switch/Computer Application Interface Call Control (SCAICC) category with the function CALLHELD

In order to receive the ICM call event message DV_CALL_HELD_U, the following session preconditions apply:

- The directory number (DN), with option ECM (extended call management), must set the suboptions CALL_EVENTS and SCAICC to Y.
- The DN must associate with SCAICC.
- The service version must be at least SCAI16.
- The ICM session for the ICM call event message DV_CALL_HELD_U must subscribe to the default tuples TPCC15\$ and SCAICC09\$.

Service orders

The ICM Call Held Event Reporting feature does not change the Service Order System (SERVORD).

Operational measurements

The ICM Call Held Event Reporting feature changes operational measurements (OM) group Switch Computer Application Interface Service 4 (SCAISRV4). This feature adds the register HELDU to the Table SCAISRV4. The total number of registers in the Table SCAISRV4 is 17.

Logs

The ICM Call Held Event Reporting feature does not change logs.

User interface

The ICM Call Held Event Reporting feature does not change the user interface.

Billing

The ICM Call Held Event Reporting feature does not generate billing records or changes.

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ICM Logon Enhancements and Reengineering

Feature name

ICM Logon Enhancements and Reengineering

Description

The Intelligent Call Management (ICM) Logon Enhancements and Reengineering feature modifies the DV_APPL_LOGON message to include an additional parameter to specify a HARD_RESET. Setting this parameter also clears up the corrupt data session and sanitizes the data structure.

A switch/computer application interface (SCAI) session establishes on the Digital Multiplex System (DMS) switch with three associated data structures: session_data, transport_data, and the scaicoms_phys_tuple. When a SCAI session establishes successfully, then all three data structures update. All common fields amongst the three data structures contain the same entries.

This feature affects the following areas:

- DV_APPL_LOGON message
- reengineering of the LOGON, LOGOFF, and ABORT messages
- RETURN_RESULT in the DV_APPL_LOGON message

DV_APPL_LOGON message

Prior to CCM15, when the remote host application server had an abnormal take down, the SCAI on the DMS switch did not clear properly. The remote host application came back up and sent a DV_APPL_LOGON message to the DMS switch to establish a new session. The DMS switch responds with a return error of “already logged on.”

The following outlines the impact of the DV_APPL_LOGON message with the HARD_RESET parameter set to T for X.25 links:

- If the one corrupt switched virtual circuit (SVC) link is the only link in a session, the session ID and session associations release. The SCAI102 log report generates with the reason HARDRESET_SESSION_CLEAR.
- If the corrupt SVC detected is one of multiple SVCs in a session, the switch clears only the session data of the corrupt SVC from the session. The switch does not release the session ID, and all session associations remain intact. The SCAI102 log report does not generate. These actions occur

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ICM Logon Enhancements and Reengineering (continued)

when the corruption is found in the session currently being logged onto or in another session other than the one being logged onto.

Note: If the one corrupt SVC link is the only link in the session being logged onto, the session ID does not release, but session associations release.

When the host application sends a DV_APPL_LOGON message with the HARD_RESET parameter set to T for transmission control protocol (TCP) links, the session ID and session associations release. Both the valid transport (if found) and the corrupt data session clear. The SCAI102 log report generates with the reason HARDRESET_SESSION_CLEAR.

Note: If corrupt transports are detected in both an X.25 and TCP sessions, the SCAI102 log report generates with the reason HARDRESET_TRANS_CLEAR. In both scenarios, the transport data is cleared.

Reengineering of the LOGON, LOGOFF, and ABORT messages

The reengineering of the LOGON, LOGOFF, and ABORT for the X.25 and the TCP/IP sessions move the processing of the DV_APPL_LOGON, DV_APPL_LOGOFF, and DEACTIVATED/DISCONNECT messages from multiple processes to a single process. A message does not process until the previously sent LOGON, LOGOFF, or ABORT messages process and all data structures update. This action minimizes the occurrence of race conditions and corruption.

RETURN_RESULT of the DV_APPL_LOGON message

The RETURN_RESULT from the DV_APPL_LOGON message sent from the switch to the remote host application server has the additional parameter DNASSOC. It indicates that directory numbers (DNs) associated with a session need to be reestablished. The DNASSOC parameter displays in the

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ICM Logon Enhancements and Reengineering (continued)

RETURN_RESULT of a DV_APPL_LOGON message if the following conditions apply:

- The session terminates due to a RESTART (whether WARM, COLD, or RELOAD) or a SWACT that occurs on the switch.
- Option DNASSOC is set to 1 in Table SCAICOMS.
- The logon is the first logon to a session after a RESTART or a SWACT occurrence.
- The DV_APPL_LOGON message has the HARD_RESET parameter set to T.

Note 1: If logging on to other links in a multilink session, the RETURN_RESULT message does not contain the parameter DNASSOC.

Note 2: The switch sends a return result only if the host application sends a modified DV_APPL_LOGON message for the first link of a session taken down due to a RESTART/SWACT.

Limitations and restrictions

The following limitations and restrictions apply to the ICM Logon Enhancements and Reengineering feature:

- Use a modified DV_APPL_LOGON message with the HARD_RESET parameter set to T only when a normal DV_APPL_LOGON message without the HARD_RESET parameter fails. The DV_APPL_LOGON message or LOGON fails with the reason “already logged on.” Do not use the HARD_RESET parameter for an initial logon.
- The SCAI102 log report only generates with the reason HARDRESET_SESS_CLEAR when a corrupt session takedown occurs because a DV_APPL_LOGON has been sent with the HARD_RESET parameter set to T.
- The SCAI102 log report only generates with the reason HARDRESET_TRANS_CLEAR when a corrupt transport occurs because a DV_APPL_LOGON has been sent with the HARD_RESET parameter set to T.
- Use a modified DV_APPL_LOGON message ONLY when the corruption of the SCAI data structures prevents a legitimate DV_APPL_LOGON from succeeding.
- Send a modified DV_APPL_LOGON message with a HARD_RESET parameter set to T over each SVC link separately in an X.25 session with multiple SVC links.

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- Send a DV_APPL_LOGON message with a HARD_RESET parameter set to T to clear allocated session resources to the link. The switch does not release session resources, and the DNs associated to a session remain unaffected.
- The modified DV_APPL_LOGON message sent over a healthy session uses the queue it has been sent as the ultimate reference. All instances of session data other than ours having the queue are tossed. All messages are tossed. If the host application sends a DV_APPL_LOGON message over a healthy and established session, this action causes the loss of messages and the delay of processing subsequent messages for that link.
- The processing of the DV_APPL_LOGON message with the HARD_RESET parameter or set to T takes a substantially longer period of time. Send all messages subsequent to the modified DV_APPL_LOGON message only after the host application receives the return result. The switch sends the RETURN_RESULT parameter to indicate that the corrupt session has cleared and that a new session has established.
- The HARD_RESET parameter set to T in the DV_APPL_LOGON message causes a check to run on all active SCAI sessions on the DMS-100 switch. This action clears any corrupt session resources. The use of the modified DV_APPL_LOGON message can affect any of the sessions.

Interactions

The paragraphs that follow describe how the ICM Logon Enhancements and Reengineering feature interacts with the HARD_RESET functionality.

If the SCAI application sends a DV_APPL_LOGON message with the HARD_RESET parameter set to T to establish a session after the switch completes a RESTART/SWACT, the RETURN_RESULT sent in response contains the parameter DNASSOC set to 1.

If the SCAI application accidentally sends a DV_APPL_LOGON message with the HARD_RESET parameter set to T over the same link twice, the existing session is cleared and new resources are allocated. The RETURN_RESULT does not contain the parameter DNASSOC set to 1.

Datafill

The ICM Logon Enhancements and Reengineering feature creates option DNASSOC in Table SCAICOMS. This option indicates DNs need to be reassociated due to a RESTART/SWACT that occurs on a switch. This feature does not create or change any office parameters.

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ICM Logon Enhancements and Reengineering (end)

Service orders

The ICM Logon Enhancements and Reengineering feature does not change the Service Order System (SERVORD).

Operational measurements

The ICM Logon Enhancements and Reengineering feature does not change operational measurements (OM).

Logs

The ICM Logon Enhancements and Reengineering feature changes log report SCAI102. This log report generates when the HARD_RESET parameter is set to T. The following reasons can be found on the SCAI102 log report:

- the reason HARDRESET_TRANS_CLEAR appears when a valid transport is found in the DMS switch
- the reason HARDRESET_SESSION_CLEAR appears when the session ID and its associations release

User interface

The ICM Logon Enhancements and Reengineering feature does not change the user interface.

Billing

The ICM Logon Enhancements and Re engineering feature does not generate billing records or changes.

59022498**Extended Ringing to External IP**

Feature name

Extended Ringing to External IP

Description

After receiving an O_No_Answer (O_NoA) query or T_No_Answer (T_NoA) query from the service switching point (SSP) for a given call, the service control point (SCP)/Adjunct returns a Send_To_Resource (STR) message. As a response message, STR plays an announcement to the originator. As a conversation package, STR plays an announcement and collects digits.

The ExtendedRinging parameter is in the STR message. Extended ringing functionality allows a service provider to continue to offer the call to the called party while playing an announcement and collecting digits to or from the originator. When the called party answers, the announcement played to the calling party stops, and there is a connection between the calling and called party.

This feature implements the support for extended ringing capability when a resource external to the SSP, (an intelligent peripheral [IP]) plays announcements and collects digits for O_NoA and T_NoA triggers and events.

This feature enhances the extended ringing capability when the resource is internal to the SSP by providing support for T_NoA triggers and events. This is in addition to the O_NoA triggers and events the internal STR currently supports. When the resource is internal, the DMS-100 switch plays an announcement or a tone to the originating party and collects digits.

The SCP can request the extended ringing capability of the SSP by including the parameter in the STR response message. This parameter indicates to the SSP that it should continue alerting the called party. The caller listens to an announcement and the service prompts for digit collection during STR processing.

When the destinationAddress parameter is in the STR message, the announcement or digit collection uses external resources. The absence of the destinationAddress parameter in the STR message implies that the system processes the STR request using the resources internal to the SSP.

Hardware requirements

The Extended Ringing to External IP feature requires primary rate interface (PRI) trunks in order to connect the SSP to an IP.

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Extended Ringing to External IP (continued)

Limitations and restrictions

The limitations and restrictions that follow apply to the Extended Ringing to External IP feature:

- The system supports the extended ringing capability for the Advanced Intelligent Network (AIN) O_NoA and AIN T_NoA trigger and events. The system does not support any other triggers or events.
- The system does not support the extended ringing capability when interacting with conferencing features such as 3WC.
- For O_NoA, all call forwarding completes before the STR message processes with the AIN Extended Ringing parameter. For T_NoA, the feature processes for the timer that expires first (T_NoA or CFDA), and the system cleans up the other feature.

Interactions

The Extended Ringing to External IP feature has the same interactions introduced by the O_No_Answer EDP feature (AJ4099) in NA07, and by the O_No_Answer TDP (A59013226) feature in NA013. Refer to these features for more information. This feature does not modify any existing AIN 0.2 interactions between O_NoA with respect to other events or triggers. The following table describes additional interactions introduced by this feature.

59022498**Extended Ringing to External IP** (continued)**Extended Ringing to External IP feature interactions (Sheet 1 of 6)**

Feature	Description
Automatic Call Back (ACB), Automatic Recall (AR) Note: AIN interaction with ACB/AR provided through SOC: AIN00018	The ACB feature allows a subscriber to redial the last station that the subscriber called, and to queue against that station if it is busy. O_NoA or T_NoA on the call (pre-ACB) has no influence on ACB. The AR feature allows a subscriber to recall the last station that called. O_NoA or T_NoA on the original call (pre-AR) has no influence on AR.
Basic Rate Interface (BRI) features: Additional Call Offering Unconditional (ACOU), Flexible Call (FC)	The system assigns the ACOU feature to a directory number (DN) on a basic rate access functional set (BRAFS) terminal to present incoming calls to idle additional functional call (AFC) keys when the single functional call key (SFC) is not available. An ACOU routed call can encounter O_NoA or T_NoA and invoke the extended ringing (ER) functionality. Flexible calling is a set of capabilities allowing ISDN users to establish and control two or more concurrent calls. If the system establishes a conference call during STR, response processing deactivates ER functionality.

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Extended Ringing to External IP (continued)

Extended Ringing to External IP feature interactions (Sheet 2 of 6)

Feature	Description
Class features: Anonymous Call Rejection (ACRJ), Selective Call Acceptance (SCA), Selective Call Rejection (SCRJ), Calling Name Delivery Blocking (CNAB), Calling Number Delivery Blocking (CNDB), Calling Number Blocking (CNB), Calling Number Delivery (CND), Calling Name and Number Blocking (CNNB), Calling Name and Number Delivery (CNND), Dialable Directory Number Delivery (DDND), TCAP Name Delivery (TCAPND)	Detection of O_NoA is based on the state of the line after the processing of ACRJ, SCA, or SCRJ. If the state is ringing, the call encounters O_NoA, the STR/IP response message processes, and the system invokes ER if applicable. If this feature rejects the call, the system does not detect T_NoA. O_NoA and T_NoA have no impact on the delivery of display information on originating and terminating agents.
Call Blocking	When the user activates call blocking on the line, any incoming calls go to treatment. As a result, the call does not encounter O_NoA or T_NoA.

59022498**Extended Ringing to External IP** (continued)**Extended Ringing to External IP feature interactions (Sheet 3 of 6)**

Feature	Description
Redirecting features: Call Forward Programmable (CFWP) with validation and/or courtesy, Call Forward Universal (CFU), Call Forward (CFW), Call Forward Busy (CFB), Call Forward Busy Line (CFBL), Call Forward Don't Answer (CFD/CFDA/CFGD), Selective Call Forwarding (SCF), Call Forward Timer (CFT)	<p>The CFWP feature can encounter O_NoA and apply ER while the forwarded DN is ringing. Call forwarding variants that are not based on Busy/No_Answer conditions have precedence over T_NoA.</p> <p>CFDA/CFD provides interswitch ER.</p> <p>For intraswitch ER, if the AIN ER SOC option is on, the interaction between O_NoA and CFDA/CFD ensures that O_NoA occurs after call forwarding.</p> <p>When CFDA/CFD and T_NoA triggers are present at the terminating end, the feature that has the shortest no-answer timer has precedence.</p> <p>The CFDA/CFD timer cancels the T_NoA trigger if the CFDA/CFD timer is shorter than the T_NoA timer. The T_NoA timer cancels the CFDA/CFD feature if the T_NoA timer is shorter than the CFDA/CFD timer.</p> <p>The O_NoA trigger/event timer resets to the CFGD timer plus two seconds when the DFGD timer expires under the following conditions:</p> <ul style="list-style-type: none"> • after CFGD forwards the call • INTERNAL = YES • ER SOCs are on • the terminator does not answer <p>The interaction between CFGD and T_NoA is unsupported.</p> <p>For CFWVAL with termination validation, the call can encounter O_NoA or T_NoA and when a STR/IP message is received with ER, the message provides ringing to the called DN. When the called DN answers, the programming succeeds (for example, validation passes). A STR/IP message with no ER parameter does not program the called DN (for example, validation fails).</p> <p>Option CFTD and option CFTB are available to lines with CFD or CFB, respectively. The options interact with O_NoA and T_NoA, as with CFD and CFB.</p> <p>ER applies to the forwarded DN, if applicable, for other call forwarding features.</p>

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Extended Ringing to External IP (continued)

Extended Ringing to External IP feature interactions (Sheet 4 of 6)

Feature	Description
<p>Called Number Display, Called Name Display</p>	<p>The Called Number/Name displayed on the caller's station is not overwritten when the call encounters O_NoA with ER functionality.</p>
<p>Conference features: Three-Way Call (3WC), Usage Sensitive 3WC (U3WC), Call Transfer (CXR)</p>	<p>The 3WC/U3WC feature allows an end user to establish two speech calls and to join them in a conference if the call encounters O_NoA or T_NoA while establishing a second leg. If STR/IP with an ER message comes as a response from SCP, the STR/IP is not processed and the system sends a resource_clear with clear_cause "ABORT" to the SCP.</p> <p>Call transfer allows a subscriber to connect an existing call with a new party. Trigger O_NoA or T_NoA can only be hit before the controller transfers the call. This trigger cannot be hit once the call transfer subscriber leaves the call.</p> <p>The call can not transfer while the call is connected to the IP. The call ignores all transfer attempts.</p>
<p>Call Pickup (CPU), Directed Call Pickup (DCPU)</p>	<p>ER applies when the system invokes O_NoA or T_NoA during the ringing stage and receives STR/IP with ER. When a different terminating agent (an agent with CPU) answers, the system sends a resource clear message with clear_cause "Called party answered" to the SCP and the agents are connected.</p>
<p>Call Waiting features: Call Waiting (CWT), Call Waiting Intragroup (CWI), Cancel Call Waiting (CCW)</p>	<p>ER functionality applies and the call detects O_NoA or T_NoA when the call terminates on an agent that subscribes to CWT or CWI. The CWT or CWI subscriber hears the alerting tone and can hook flash (place the current call on hold) to accept the new call.</p> <p>If the terminator invokes CCW, the line is busy and does not detect O_NoA or T_NoA. ER is not applicable.</p> <p>Note: The ER feature does not modify the support of call waiting on the calling party. That is, if the calling party is in an audible ringing, play announcement, or collect digit state, the calling party will not be alerted of an incoming call, and the incoming caller receives a busy treatment.</p>

59022498**Extended Ringing to External IP** (continued)**Extended Ringing to External IP feature interactions (Sheet 5 of 6)**

Feature	Description
Default Routing	O_NoA and T_NoA do not support this feature.
Dual Line Call Management (DLCM)	DLCM interacts with O_NoA and T_NoA when both lines do not answer. The call invokes ER functionality, if applicable.
Distinctive Ringing/Call Waiting (DRCW)	The call invokes ER functionality, if applicable.
Hook Flash	If the end user attempts a hook flash during the STR/IP response process, the call ignores the hook flash.
Multiple Appearance DN (MADN)	When an O_NoA or T_NoA agent calls an MADN group, the call alerts all group members during the encounter and the call receives a STR/IP with ER.
Messaging features: Access to Messaging or Special Delivery Service (SDS), In-Session Activation (ISA)	<p>The AIN O_NoA and T_NoA events and triggers have precedence over SDS. When the system detects the O_NoA trigger or event, the system permanently deactivates SDS. The system can invoke the SDS when the SCP sends a continue message for the T_NoA trigger or EDPR.</p> <p>The AIN O_NoA and T_NoA events and triggers have precedence over ISA. The system permanently deactivates these switch-based features in case of O_NoA and T_NoA events. After the receipt of a STR/IP message, the SSP sends a Resource_Clear message once STR/IP processing is complete. The system does not invoke the SDS or ISA features even if the system receives a continue message in response to the Resource_Clear message.</p>

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Extended Ringing to External IP (end)

Extended Ringing to External IP feature interactions (Sheet 6 of 6)

Feature	Description
Spontaneous Call Waiting Identification (SCWID) and Deluxe SCWID (DSCWID)	SCWID interacts with ER in the same way that CWT and ER interact. The ER feature applies (when applicable) to a DSCWID subscriber, until the subscriber selects one of the DSCWID disposition options. When the end user selects an option, ER handles the call in the same way as if the called party answered. The system reconnects the calling and called party, removes ER, and DSCWID takes control of the call.
Simultaneous Ringing (SimRing)	When SimRing encounters ER, the SSP sends a Resource_Clear message with the reason "ABORT."

Datafill

The Extended Ringing to External IP feature does not change data schema tables or office parameters.

Service orders

The Extended Ringing to External IP feature does not change the Service Order System (SERVORD).

Operational measurements

The Extended Ringing to External IP feature does not change operational measurements (OM).

Logs

The Extended Ringing to External IP feature does not change logs.

User interface

The Extended Ringing to External IP feature does not change the user interface.

Billing

The Extended Ringing to External IP feature does not generate billing records or changes.

59022523 DP Converter for STR/IP

Feature name

DP Converter for STR/IP and Collect Info

Description

The Dial Pulse (DP) Converter for Send_to_Resource/Intelligent Peripheral (STR/IP) Collect Info feature provides dial pulse to dual tone multi-frequency (DTMF) conversion on receiving the DPConverter parameter in the Send_To_Resource/Collect Info messages. DP-to-DTMF conversion provides for outpulsing of both the dialed DP digits and the equivalent DTMF tones to the terminator/IP.

Hardware requirements

The DP Converter for STR/IP and Collect Info feature has no additional hardware requirements.

Limitations and restrictions

The limitations and restrictions that follow apply to this feature:

- This feature does not support the DPConverter parameter received in the Update, Connect_To_Resource or Originate_Call Messages.
- DP-to-DTMF Conversion is not Supported for ISDN and KSET line agents. Please refer to the table below for more details on Originating Agents not supporting DPConverter parameter.

Agent Type	Line Class Code
IBN - Basic	M5009
	M5112
	M5208
	M5209
	M5212
	M5312
	PSET
ISDN	ISDNKSET - MTF
	ISDNKSET - BRI - NI1 / NI2

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DP Converter for STR/IP (continued)

Interactions

The paragraphs that follow describe how the DP Converter for STR/IP and Collect Info feature interacts with other functions.

Please refer to the *Advanced Intelligent Network Support Implementation Guide* for a list of features that do not interact with the DP Converter for STR/IP and Collect Info feature.

Conference features

The following paragraph applies to the conference features: Meet-me conference, Preset Conference features, Executive Conference MMCONF150, CNF, CNF6, and CNF30.

When the Collect_Information message received from the SCP/Adjunct contains the DPConverter parameter, the SSP provides extended DP-to-DTMF conversion after the call has been placed into a conference. Both DP and DTMF tones are audible to all parties in the conference.

The following paragraph applies to the three-way calling features: 3WC and U3WC.

When a Collect_Information message containing the DPConverter parameter is received from the SCP/Adjunct in any of the call legs of the three-way call, the service switching point (SSP) performs extended DP-to-DTMF conversion for digits received from the originating line after the call is placed into conference. When the Collect_Information message containing the DPConverter parameter is received from the SCP/Adjunct in the first call leg of a three-way call, the SSP does not perform DP-to-DTMF conversion for the second leg of the three-way call. When the DPConverter parameter is received in the second leg of the call, DP Conversion will occur for both legs of the call.

Call waiting features

The following paragraphs apply to the call waiting features: CWT, CWI, CWC, CWO, CWD, TCW, and CWTC.

The SSP does not perform DP-to-DTMF conversion for the corresponding call leg when all of the following conditions hold true:

- when the call is waiting on the originating line, and
- the SCP/Adjunct sends a Collect_Information message containing the DP Converter parameter, and
- the originating line flashes to accept the call

59022523**DP Converter for STR/IP** (continued)

If the originator flashes again to connect to the original terminator, the SSP restores the DP-to-DTMF conversion for this call leg.

For CWTC, when the Collect_Information message received from the SCP/Adjunct contains the DPConverter parameter, the SSP provides extended DP-to-DTMF conversion after the call is placed into a conference.

There is no interaction with the cancel call waiting (CCW) feature.

Call pickup features

The following paragraphs apply to the call pickup features: CPU, DCPU, DCBU, and DCBI.

The call pickup is treated as an answer. If the SCP/Adjunct sends the Collect_Information message with the DPConverter parameter, the SSP provides extended DP-to-DTMF conversion after the call picks up.

For DCBI, if the SCP/Adjunct sends the Collect_Information message with the DPConverter parameter, the SSP provides extended DP-to-DTMF conversion after the call is placed into conference.

Network Facility Access

Network Facility Access (NFA) - IP provides direct connection between a subscriber line and an STR/IP. This ability provides the subscriber access to services provided directly by the IP. The connection can either be through implicit (auto) access or explicit (dialed) access.

With implicit access, the subscriber is directly connected to the IP simply by going off hook. With this method, the subscriber may interact with the IP, or may revert to regular call processing by dialing as normal. There is no feature interaction between NFA implicit access and DPConverter.

With explicit access, the subscriber must first dial an NFA explicit access code. Once the connection to the IP is established, the subscriber may then interact with the IP. During this interaction, the subscriber may enter digits for the IP to interpret; if these digits are dial pulse (DP), they are converted to dual-tone multifrequency (DTMF) digits by the DMS before being relayed to the IP. This functionality is called DP Conversion.

NFA provides extended DP conversion for explicit connection. Whenever extended conversion is activated on an explicit connection to an NFA trunk, it will remain in effect throughout both the explicit connection and any call which the IP might dial for the subscriber. When the NFA starts the extended

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DP Converter for STR/IP (end)

DP conversion and the DPConverter parameter is received in the subsequent STR/IP message, the DP conversion does not stop after the STR/IP connection terminates.

Collect Info and STR-IP

When the SCP/Adjunct sends the Collect_Information message with the DPConverter parameter, the SSP performs DP-to-DTMF conversion for any subsequent STR/IP conversations, even if the STR message does not receive the DPConverter parameter.

Datafill

The DP Converter for STR/IP and Collect Info feature does not change data schema tables or office parameters.

Service orders

The DP Converter for STR/IP and Collect Info feature does not change the Service Order System (SERVORD).

Operational measurements

The DP Converter for STR/IP and Collect Info feature does not change operational measurements (OM).

Logs

The DP Converter for STR/IP and Collect Info feature does not change logs.

User interface

The DP Converter for STR/IP and Collect Info feature does not change the user interface.

Billing

The DP Converter for STR/IP and Collect Info feature does not generate billing records or changes.

59022533**PFC Office Administration**

Feature name

PFC Office Administration

Description

The Public Feature Code (PFC) Office Administration feature allows the assignment of public feature code and specific feature code (SFC) trigger items to customer groups. Individually subscribed triggers take precedence over a group-based subscribed trigger. Only residential (RES) and integrated services digital network (ISDN) basic-rate interface (BRI) agents can trigger on PFC and SFC triggers with a subscription at the customer group level. The functionality applies to the trigger item provisioning interface only.

This feature supports the individual line exclusion of PFC and SFC through option AINDENY. This line option can prevent calls on individual lines from triggering when there is subscription to PFC and SFC triggers on the customer group.

Option AINDENY can exclude individual lines from triggering for:

- particular trigger item IDs of PFC or SFC trigger types
- all group-subscribed trigger items of PFC or SFC trigger types

Hardware requirements

The PFC Office Administration feature has no additional hardware requirements.

Limitations and restrictions

A RES customer group can have RES lines, and an IBN customer group can have IBN, EBS, or ISDN lines. Of these line types, the SFC/PFC customer group subscription only supports RES and ISDN BRI lines. While the system provisions on a customer group, subscription occurs for all the agents within that customer group without any warning or errors. The system checks for an agent during run time (CallP) and triggers RES and ISDN BRI agents only.

The SFC/PFC triggers on a customer group do not support a Continue response. When the system receives a Continue response, the call routes to AINF treatment.

Option AINDENY can only be provisioned for 64K lines.

59022533

PFC Office Administration (end)

Interactions

This feature adds no feature interactions. The feature interactions of SFC/PFC triggers remain the same.

Datafill

Datafill table CUSTTIID to assign SFC/PFC triggers to a customer group.

This feature introduces option AINDENY in table IBNFEAT and table KSETFEAT. Table IBNFEAT stores subscriptions to AIN for RES lines. Table KSETFEAT stores subscriptions to AIN for ISDN BRI lines.

Service orders

This feature introduces option AINDENY for RES and ISDN BRI agents. The line option can exclude individual lines from triggering for customer group-wide trigger item subscriptions of PFC and SFC triggers.

Operational measurements

The PFC Office Administration feature does not change operational measurements (OM).

Logs

The PFC Office Administration feature does not change logs.

User interface

The PFC Office Administration feature changes CI commands: TRAVER, QLEN, QLT, and QDN.

Billing

The PFC Office Administration feature does not generate billing records or changes.

59022554 Enhancement to Trigger LARP

Feature name

Enhancement to Trigger Line Attribute Response Processing (LARP).

Description

This feature also provides functionality to activity trigger 59022754, Enhancement to Trigger LARP, for the CCM changes.

This feature includes the following:

- Enhancement to line attribute response processing (LARP)
- Translation Verification (TRAVER) support to simulate LARP for advanced intelligent network (AIN) response translation for specific digit string/public feature code/N11 (SDS/PFC/N11) triggers
- LARP support for PFC trigger
- LARP support for N11 trigger

Hardware requirements

The Enhancement to Trigger LARP feature has no additional hardware requirements.

Limitations and restrictions

The trigger item provisioning interface implements trigger-specific line attributes by provisioning option LARP on an SDS/N11/PFC trigger item.

The trigger group provisioning interface implements trigger-specific line attributes by provisioning table PODATTR for only the PODP trigger defined in a trigger group. This feature does not affect the PODATTR or trigger group data model functionality. This feature preserves the trigger group functionality existing prior to NA015.

This feature supports TRAVER only for the line attribute response processing simulation. This feature does not support the processing of forwarding attributes in TRAVER.

Interactions

The paragraphs that follow describe how the Enhancement to Trigger LARP feature interacts with other functionalities.

Prior to NA015, the system did not consider the toll free service (TFS) with option LARP as a redirection. To preserve the pre-NA015 functionality for

59022554

Enhancement to Trigger LARP (end)

TFS with LARP, the REDIR parameter must be set to “N”. The FWDATTR parameter must be set to “N” in table TRIGITM. When the ChargePartyStationType or the ChargeNumber parameter is not present in the Analyze_Route message, the ChargePartyStationType depends on the triggering agent rather than the line attributes associated with the toll-free trigger. The AIN TFS uses the original values in the query for the ChargeNumber.

For further information, please refer to the *AIN Service Implementation Guide* (297-5161-022).

Datafill

This feature introduces the REDIR and FWDATTR prompts to table TRIGITM.

Service orders

The Enhancement to Trigger LARP feature does not change the Service Order System (SERVORD).

Operational measurements

The Enhancement to Trigger LARP feature does not change operational measurements (OM).

Logs

The Enhancement to Trigger LARP feature does not change logs.

User interface

The Enhancement to Trigger LARP feature does not change the user interface.

Billing

The Enhancement to Trigger LARP feature does not generate billing records or changes.

59022576

ICM CDN Display and Threshold Route Enhancements

Feature name

ICM CDN Display and Threshold Route Enhancements

Description

The Intelligent Call Management Controlled Directory Number (ICM CDN) Display and Threshold Route Enhancements remove restrictions and allow automatic call distribution (ACD) agents to display the name and the directory number (DN) of the called party. This feature applies under the following conditions:

- The calls route from a CDN incoming call queue.
- The agent's ACD group has the option ACDDISP (automatic call distribution display).

This feature also includes a threshold route (THROUTE) enhancement. Option THROUTE activates with

- an ACD group with the subfield option CDN in a controlled state
- a full incoming queue
- option CDN_THROUTE set to Y in Table ACDGRP

Note: An ACD group with subfield option CDN activates option THROUTE by setting the subfield CDN_THROUTE as Y.

Hardware requirements

The ICM CDN Display and Threshold Route Enhancements feature has no additional hardware requirements.

Limitations and restrictions

The limitations and restrictions that follow apply to the ICM CDN Display and Threshold Route Enhancements feature when the field ACDDISP is activated. If the entry in the subfield is option ACDDISP, enter datafill refinement DISPDIGS (display digits) in Table ACDGRP. Enter the number of the ACD

59022576

ICM CDN Display and Threshold Route Enhancements (continued)

DN or CDN so that the digits display. The following sets support subfield option ACDDISP:

- NT4X20 (EBS with display)
- 2X16 character display set
- M5209
- M5312
- 2X24 character display sets

The following display features are not compatible with EBS (electronic business set).

- Calling Name Blocking (CNAB)
- Calling Name Display (CNAMD)
- Calling Number Display (CND)
- Calling Number Delivery Blocking (CNDB)
- Calling Name and Number Blocking (CNNB)

The Integrated Business Network (IBN) sets as ACD agents do not allow subfield option ACDDISP to affect the agent's display. The following display features are exceptions for IBN:

- Calling Name Display (CNAMD)
- Calling Number Display (CND)

Interactions

The ICM CDN Display and Threshold Route Enhancements feature does not interact with other functionalities.

Datafill

The ICM CDN Display and Threshold Route Enhancements feature gives ACD groups with the option CDN threshold routing. To activate THROUTE

- enter CDN in the subfield OPTION.
- set CDN_THROUTE to Y.

The CDN must be in a controlled state and the call queue full, before threshold routing (THROUTE) activates. Otherwise, the incoming call routes to the default ACD group in subfield DEFAULTGRP.

59022576

ICM CDN Display and Threshold Route Enhancements (end)

Service orders

The ICM CDN Display and Threshold Route Enhancements feature does not change the Service Order System (SERVORD).

Operational measurements

The ICM CDN Display and Threshold Route Enhancements feature does not change operational measurements (OM).

Logs

The ICM CDN Display and Threshold Route Enhancements feature does not change logs.

User interface

The ICM CDN Display and Threshold Route Enhancements feature does not change the user interface.

Billing

The ICM CDN Display and Threshold Route Enhancements feature does not generate billing records or changes.

59022651

SERVORD-CDN Command Support for OPRT Intercept

Feature name

SERVORD-CDN Command Support for OPRT Intercept

Description

The SERVORD-CDN Command Support for Operator (OPRT) Intercept feature addresses the restrictions for an Operator or Machine intercept type and the changes that SERVORD implements for a DMS-100 directory number.

With this change, the SERVORD Change Directory Number (CDN) command is successful if:

- The Directory Number (DN) is associated with an Machine Intercept (ANCT), OPRT or Blank Line Intercept (BLDN) intercept.
- or
- The new DN is not associated with an existing working line.

The SERVORD CDN command changes the DN of an existing line when the new DN is associated with an ANCT, OPRT or BLDN intercept.

The SERVORD-CDN Command Support reduces call delays to customers to a great degree and minimizes the amount of manual intervention by central office personnel when using flow-through Service Order procedures.

Note: This feature does not affect the Change Hunt Directory Number (CHDN) command.

Hardware requirements

The SERVORD-CDN Command Support for OPRT Intercept feature has no additional hardware requirements.

Limitations and restrictions

The SERVORD-CDN Command Support for OPRT Intercept feature has no limitations or restrictions.

Interactions

The SERVORD-CDN Command Support for OPRT Intercept feature does not interact with other functionalities.

59022651

SERVORD-CDN Command Support for OPRT Intercept (end)

Datafill

The SERVORD-CDN Command Support for OPRT Intercept feature does not change data schema tables or office parameters.

Service orders

The SERVORD-CDN Command Support for OPRT Intercept feature reduces the number of intercepts that can reject the CDN command of the Service Order System (SERVORD).

Operational measurements

The SERVORD-CDN Command Support for OPRT Intercept feature does not change operational measurements (OM).

Logs

The SERVORD-CDN Command Support for OPRT Intercept feature does not change logs.

User interface

The SERVORD-CDN Command Support for OPRT Intercept feature does not change the user interface.

Billing

The SERVORD-CDN Command Support for OPRT Intercept feature does not generate billing records or changes.

59022657

DTMF Default Capability

Feature name

Dual-Tone Multifrequency (DTMF) Default Capability.

Description

In NA014, the DMS 100 switch sets the default signalling type to Dial Pulse (DP) rather than Digitone (DT). This means that if DT is not specified on the service order, the switch automatically provisions the line with a signaling type of DP; this default cannot be changed.

The DTMF Default Capability allows you to set the default signalling type for non-keyset lines to either DP or DT. This default is defined in an office parameter named `DEFAULT_SIGNALLING_TYPE` in the `OFCVAR` table.

There are two options associated with this feature:

1. Dial Pulse: This option is coded as DP and the corresponding signalling type is coded as DP.
2. Digitone: This option is coded as DGT and the corresponding signalling type is coded as DT. DGT denotes the line option, while DT denotes the signalling type when DGT option is added to a line.

Hardware requirements

The DTMF Default Capability has no additional hardware requirements.

Limitations and restrictions

The limitations and restrictions that follow apply to DTMF Default Capability:

- adds only 29/59 options to a line since one line is reserved for signalling type DT/DP
- applicable only to non-keyset lines

Interactions

The paragraphs that follow describe how the DTMF Default Capability interacts with other functionalities.

Two new line options, DP and DGT, are added to the `SERVORD`.

A new office parameter, `DEFAULT_SIGNALLING_TYPE`, is added to the `OFCVAR` table.

LDTPSAP option is incompatible with DP option.

59022657**DTMF Default Capability** (continued)

The following Line Class Codes (LCCs) are compatible with DP: 1FR, 2FR, 4FR, 8FR, 10FR, 1MR, RES, IBN, CSD, INW, ETW, EOW, CSP, CFD, CDF, OWT, CCF, ZM, ZMZPA, PBX, TWX, 2WW, PBM.

Datafill

The DTMF Default Capability does not change data schema tables.

An office parameter DEFAULT_SIGNALLING_TYPE has been added to the OFCVAR table, allowing the default signalling type to be set. This parameter is set to either DP or DT to enable the default signalling type.

Service orders

Two new line options, DP and DGT, are added to the SERVORD.

The following Service Order System (SERVORD) commands are affected by the DTMF Default Capability:

- NEW (Establish service)
- ADO (Add Option)
- DEO (Delete Option)
- ADD (Add line to existing group)
- EST (Establish New Group)
- EXBADD (Add LEN(s) to MADN EXB group)
- EXBADO (Add features to primary and secondary LENs)
- EXBDEO (Delete features from LENs in MADN EXB)
- EXBEST (Create MADN EXB group from POTS/DN LEN)

Operational measurements

The DTMF Default Capability does not change operational measurements (OM).

Logs

The DTMF Default Capability does not change logs.

User interface

The DTMF Default Capability does not change the user interface.

59022657

DTMF Default Capability (end)

Billing

The DTMF Default Capability does not generate billing records or changes.

59022754 Enhancement to Trigger LARP

Feature name

Enhancement to Trigger Line Attribute Response Processing (LARP).

Description

This feature contains the CCM changes associated with the 59022554 activity trigger, Enhancement to Trigger LARP. A description of the 59022554 activity trigger follows.

This feature includes the following:

- Enhancement to line attribute response processing (LARP)
- Translation Verification (TRAVER) support to simulate LARP for advanced intelligent network (AIN) response translation for specific digit string/public feature code/N11 (SDS/PFC/N11) triggers
- LARP support for N11
- LARP support for the PFC trigger

Hardware requirements

The Enhancement to Trigger LARP feature has no additional hardware requirements.

Limitations and restrictions

The trigger item provisioning interface implements trigger-specific line attributes by provisioning option LARP on an SDS/PFC/N11 trigger item.

The trigger group provisioning interface implements trigger-specific line attributes by provisioning table PODATTR for only the PODP trigger defined in a trigger group. This feature does not affect the PODATTR or trigger group data model functionality. This feature preserves the trigger group functionality existing prior to NA015.

This feature supports TRAVER only for the line attribute response processing simulation. This feature does not support the processing of forwarding attributes in TRAVER.

Interactions

The paragraphs that follow describe how the Enhancement to Trigger LARP feature interacts with other functionalities.

59022754

Enhancement to Trigger LARP (end)

Prior to NA015, the system did not consider the toll free service (TFS) with option LARP as a redirection. To preserve the pre-NA015 functionality for TFS with LARP, the REDIR parameter must be set to "N". Parameter FWDATTR must be set to "N" in table TRIGITM. When the ChargePartyStationType or the ChargeNumber parameter is not present in the Analyze_Route message, the ChargePartyStationType depends on the triggering agent rather than the line attributes associated with the toll-free trigger. The AIN TFS uses the original values in the query for the ChargeNumber.

For further information, please refer to the *AIN Service Implementation Guide* (297-5161-022).

Datafill

This feature introduces the REDIR and FWDATTR prompts to table TRIGITM.

Service orders

The Enhancement to Trigger LARP feature does not change the Service Order System (SERVORD).

Operational measurements

The Enhancement to Trigger LARP feature does not change operational measurements (OM).

Logs

The Enhancement to Trigger LARP feature does not change logs.

User interface

The Enhancement to Trigger LARP feature does not change the user interface.

Billing

The Enhancement to Trigger LARP feature does not generate billing records or changes.

59022782

Sourcing Patches LNP40 and NPA03 and 10D ACG Enhancement

Feature name

Sourcing Patches LNP40 and NPA03 and 10D ACG Enhancement

Description

This feature also provides functionality to activity trigger 59022792, Sourcing Patches LNP40 and NPA03, for the CCM changes.

This feature accomplishes the following:

- eliminates conflict between ISDN basic rate interface (BRI) and local number portability (LNP) translations
- allows for optional removal of the numbering plan area (NPA) in the called number returned by the service control point (SCP)
- allows LNP calls with ten-digit automatic call gapping (10D ACG) control to be routed to a provisioned treatment

Hardware requirements

This feature has no additional hardware requirements.

Limitations and restrictions

The following limitations and restrictions apply:

Sourcing of patch LNP40

- The customer must provide separate tuples in Table RTECHAR for basic rate interface (BRI) and advanced intelligent network / local number portability (AIN/LNP) translations
- The feature disables routing based on CDN type of number (TON) for BRI originated calls when the customer group of the originator has the BRITONUN option and TON is “national.” For more information, refer to the *North American DMS-100 Translation Guide* and the *National ISDN BRI Service Implementation Guide*.
- Before adding option BRITONUN to a customer group, especially for switches that do not have LNP40, the customer is advised to perform the following actions:
 - Read the NTPs to determine whether BRI routing based on TON is supported for that customer group.
 - Change the datafill accordingly, if applicable.

59022782

Sourcing Patches LNP40 and NPA03 and 10D ACG Enhancement (end)

Routing LNP calls with 10D ACG control to provisioned treatment

This feature requires the LNP00202 SOC to be in the ON state.

Interactions

This feature does not interact with other functionalities.

Datafill

The following paragraphs describe the datafill for these features.

Sourcing of patch LNP40

The sourcing of patch LNP40 adds customer group option BRITONUN to Table CUSTSTN.

Sourcing of patch NPA03

The sourcing of patch NPA03 adds field STRIPNPA to Table LCASCRCN and Table LCAINFO.

Routing LNP calls with 10D ACG control to provisioned treatment

The routing of LNP calls with ten digit ACG control to provisioned treatment adds a tuple, ACG_10D_TRMT, to Table LNPOPTS.

Service orders

This feature does not change the Service Order System (SERVORD).

Operational measurements

This feature does not change operational measurements (OM).

Logs

This feature does not change logs.

User interface

This feature does not change the user interface.

Billing

This feature does not generate billing records or changes.

59022792

Sourcing Patches LNP40 and NPA03 and 10D ACG Enhancement

Feature name

Sourcing Patches LNP40 and NPA03 and 10D ACG Enhancement

Description

This feature contains the CCM changes associated with the 59022782 activity trigger, Sourcing Patches LNP40 and NPA03. A description of the 59022782 activity trigger follows.

This feature accomplishes the following:

- eliminates conflict between ISDN basic rate interface (BRI) and local number portability (LNP) translations
- allows for optional removal of the numbering plan area (NPA) in the called number returned by the service control point (SCP)
- allows LNP calls with ten-digit automatic call gapping (10D ACG) control to be routed to a provisioned treatment

Hardware requirements

This feature has no additional hardware requirements.

Limitations and restrictions

The limitations and restrictions that follow apply to this activity trigger.

Sourcing of patch LNP40

The following limitations and restrictions apply:

- The customer must provide separate tuples in Table RTECHAR for basic rate interface (BRI) and advanced intelligent network / local number portability (AIN/LNP) translations
- The feature disables routing based on CDN type of number (TON) for BRI originated calls when the customer group of the originator has the BRITONUN option and TON is “national.” For more information, refer to the *North American DMS-100 Translation Guide* and the *National ISDN BRI Service Implementation Guide*.
- Before adding option BRITONUN to a customer group, especially for switches that do not have LNP40, the customer is advised to perform the following actions:
 - Read the NTPs to determine whether BRI routing based on TON is supported for that customer group.
 - Change the datafill accordingly, if applicable.

59022792

Sourcing Patches LNP40 and NPA03 and 10D ACG Enhancement (end)

Routing LNP calls with 10D ACG control to provisioned treatment

This feature requires the LNP00202 SOC to be in the ON state.

Interactions

This feature does not interact with other functionalities.

Datafill

The following paragraphs describe the datafill for these features.

Sourcing of patch LNP40

The sourcing of patch LNP40 adds customer group option BRITONUN to Table CUSTSTN.

Sourcing of patch NPA03

The sourcing of patch NPA03 adds field STRIPNPA to Table LCASCRCN and Table LCAINFO.

Routing LNP calls with 10D ACG control to provisioned treatment

The routing of LNP calls with ten digit ACG control to provisioned treatment adds a tuple, ACG_10D_TRMT, to Table LNPOPTS.

Service orders

These features do not change the Service Order System (SERVORD).

Operational measurements

This feature does not change operational measurements (OM).

Logs

This feature does not change logs.

User interface

This feature does not change the user interface.

Billing

This feature does not generate billing records or changes.

59023032 DFIL110 Log Enhancement

Feature name

DFIL110 Log Enhancement

Description

When a carrier specified by either enhanced 800 service (E800) or private virtual network (PVN) database does not appear in the OCCINFO table, the database produces the DFIL110 log report.

Hardware requirements

The DFIL110 Log Enhancement has no additional hardware requirements.

Limitations and restrictions

When the DFIL110 log report prints, the call does not complete. The printing of the DFIL110 log report does not impact system call processing. If using the multiple frequencying (MF) trunking protocol, the dialed digits do not display.

Interactions

The DFIL110 Log Enhancement does not interact with other functionalities.

Datafill

The DFIL110 Log Enhancement does not change data schema tables or office parameters.

Service orders

The DFIL110 Log Enhancement does not change the Service Order System (SERVORD).

Operational measurements

The DFIL110 Log Enhancement does not change operational measurements (OM).

Logs

The DFIL110 Log Enhancement changes the DFIL110 log report to include the Dialed Digits field and the Routing Digits field. The Dialed Digits field indicates the E800 or PVN number that the customer dials. The Routing Digits field displays the routing number used by the E800 or PVN number. This enhancement allows the customer to establish the carrier data error quickly and easily without physically matching the carrier identification code (CIC) of the DFIL110 log report to the routing number of the LINE138 log report.

59023032
DFIL110 Log Enhancement (end)

User interface

The DFIL110 Log Enhancement does not change the user interface.

Billing

The DFIL110 Log Enhancement does not generate billing records or changes.

Feature number
FeatureName

Feature name

<Feature Name>

Description

Hardware requirements

<Feature Name> has no additional hardware requirements.

Limitations and restrictions

<Feature Name> has no limitations or restrictions.

The limitations and restrictions that follow apply to <Feature Name>:

-
-

Interactions

<Feature Name> does not interact with other functionalities.

The paragraphs that follow describe how <Feature Name> interacts with other functionalities.

Datafill

<Feature Name> does not change data schema tables or office parameters.

Service orders

<Feature Name> does not change the Service Order System (SERVORD).

Operational measurements

<Feature Name> does not change operational measurements (OM).

Feature number
FeatureName (end)

Logs

<Feature Name> does not change logs.

User interface

<Feature Name> does not change the user interface.

Billing

<Feature Name> does not generate billing records or changes.

59023416 Network Side Support of PRI Trunks

Feature name

Network side support of AT&T variants (Primary Rate Interface (PRI) trunks).

Description

The Network Side Support of PRI Trunks feature provides basic interworking to 4ESS, 5ESS, and AT&T System 85 PBX. This feature also provides support for trunk type N449.

Hardware requirements

The Network Side Support of PRI Trunks feature has no additional hardware requirements.

Limitations and restrictions

The limitations and restrictions that follow apply to Network side support of PRI trunks:

- patches DMO43 and DMO44 need to be applied for interactions with local number portability (LNP) if using PRI between switches.

Interactions

The paragraphs that follow describe how the Network Side Support of PRI Trunks feature interacts with other functionalities.

This feature interacts with the following advanced intelligent network (AIN) triggers: Offhook Delay, PRI Channel Setup, Custom Dial Plan, Specific Digit String, Specified Carrier, One Plus Prefix, International Prefix, Operator Services, N11, Automatic Flexible Routing, O_Called_Party_Busy and O_NO_Answer.

LNP is supported when using the ISUP trunk between switches.

This feature is applicable to DTCI, LTC and SPM.

Datafill

This feature introduces subfield N449PRI to table LTDEF and table PRIPROF.

59023416

Network Side Support of PRI Trunks (end)

Service orders

The Network Side Support of PRI Trunks feature does not change the Service Order System (SERVORD).

Operational measurements

The Network Side Support of PRI Trunks feature does not change operational measurements (OM).

Logs

The Network Side Support of PRI Trunks feature does not change logs.

User interface

The Network Side Support of PRI Trunks feature does not change the user interface.

Billing

The Network Side Support of PRI Trunks feature does not generate billing records or changes.

59024289 SERVORD Enhancement Command— Change Block of Directory Numbers (CBLKDN)

Feature name

SERVORD Enhancement Command—Change Block of Directory Numbers (CBLKDN)

Description

The SERVORD Enhancement Command CBLKDN changes attributes for blocks of directory numbers (DN) using SERVORD. CBLKDN can be used only for virtual directory number types (VDNTYPE) of Route (RTE) and Call Forwarding Interface Busy (CFIB).

In NA012, a restriction on the North American number format allowed only 3-3-1 or 3-3-4 (NPA-NXX-XXXX) numbers. Station codes had either 1 or 4 digits, which led to tuple failures in one-night processes (ONP) because many tuples in Table DNROUTE had 2 or 3 digits. All existing 2- and 3-digit station codes were expanded to 4 digits to correct the tuple failure. After the tuples were expanded, however, changing the attributes for a DN block required that each tuple in Table DNROUTE be changed manually with the Change (CHA) table command. The new command CBLKDN changes tuple attributes in defined blocks with one command.

Hardware requirements

The SERVORD Enhancement Command CBLKDN has no additional hardware requirements.

Limitations and restrictions

The SERVORD Enhancement Command CBLKDN supports virtual DNs only.

Interactions

The SERVORD Enhancement Command CBLKDN does not interact with other functionalities.

Datavill

The SERVORD Enhancement Command CBLKDN does not change data schema tables or office parameters.

Service orders

The SERVORD Enhancement Command CBLKDN does not change any other commands in the SERVORD.

59024289 SERVORD Enhancement Command— Change Block of Directory Numbers (CBLKDN) (end)

Operational measurements

The SERVORD Enhancement Command CBLKDN does not change operational measurements (OM).

Logs

The SERVORD Enhancement Command CBLKDN does not change logs.

User interface

The SERVORD Enhancement Command CBLKDN does not change the user interface.

Billing

The SERVORD Enhancement Command CBLKDN does not generate billing records or changes.

59026480**Uniform Outpulsing Enhancements**

Feature name

Uniform Outpulsing Enhancements

Description

Originally, Uniform Outpulsing (UOP) restricted the number of digits dialed when routed to an automatic intercept system (AIS), and the non supported routes from standard pretranslations.

This feature supports the following treatment or nontreatment extension dialed calls using UOP:

- a treatment extension dialed call that routes to an AIS.
- a seven digit dialed call that routes to an AIS.
- a nontreatment extension dialed call that routes to a private branch exchange (PBX).

Treatment extension calls, which do not use UOP and route to an automatic intercept (AI) trunk, send seven digits to the AIS. The AIS does not receive more than seven digits for treatment extension calls. This feature allows the use of UOP with treatment extension calls to manipulate and outpulse the 10 digit called number to 7 digits. The software then routes the 7 digits to the AIS.

For UOP non-treatment calls to a PBX, the software outpulses the entire 10 digit called number rather than only outpulsing the dialed extension.

The Uniform Outpulsing Enhancements allow the extended support of the following requirements:

- the combination V (variable) selector and the L (line) route selector in the table STDPRTCT or STDPRT
- the L selector (only) in table STDPRTCT or STDPRT
- treatment extension dialing for calls that route out of tables DNROUTE (Directory Number Route) and DNINV (Directory Number Inventory) when using UOP with Automatic Intercept (AI) trunks
- derivation of a 10 digit Directory Number (DN) for UOP/ISA (Integrated-services Access) calls that consist of 7 digits or less

59026480

Uniform Outpulsing Enhancements (continued)

- 10-digit derivation for UOP/ISA extension dialed calls
- extension dialing for nontreatment calls that route out of Table DNROUTE and Table DNINV

Note: For each of the above requirements to be supported with UOP, the call must route from Table DNROUTE or Table DNINV.

Hardware requirements

The Uniform Outpulsing Enhancements feature has no additional hardware requirements.

Limitations and restrictions

The limitations and restrictions that follow apply to the Uniform Outpulsing Enhancements feature:

- The features of UOP Enhancements work with the existing UOP supported trunks:
 - AI
 - IBNT0/IBNT2
 - PX/P2
 - TO/T2

Note: IBNT0/IBNT2 and PRA/PRI trunks support ISA.

- The following lists the tables compatible with the UOP selector which supports the 10-digit derivation:
 - Tables OFRTX (Office Routes) This includes Tables OFRT, OFR2, OFR3, and OFR4.
 - Subtable HNPACONT.RTEREF (Home Numbering Plan Area Code Route Reference)
- The following lists the tables compatible with the ISA selector which supports the 10-digit derivation:
 - Tables OFRTX
 - Subtable HNPACONT.RTEREF
 - Subtable FNPACONT.RTEREF (Foreign Numbering Plan Area Code Route Reference)
 - Tables IBNRTX (Integrated Business Network Routings) This includes Tables IBNRTE, IBNRT2, IBNRT3, and IBNRT4.

59026480**Uniform Outputting Enhancements** (continued)

- The V selector with the L route selector is a UOP supported route from standard pretranslations.

Note: Any tuple, other than the V and L selectors that route the call out of Table STDPRT, will be rejected. No backward control check exists to Table STDPRT when changing routing table tuples. If a routing table tuple selector is changed to either a V selector with an L route selector or to an L route selector only, check Table STDPRT to ensure that no other entries currently use that route.

- The L selector is a UOP supported route from standard pretranslations.
- UOP does not support any other routes from standard pretranslations.
- UOP does not support equal access (EA) calls.
- To accomplish Uniform Outputting, use the existing DIGCOM (Digit Manipulation Commands) in Table DIGMAN. The DTO (Digits to Output) command must be either the only command or the last command. Refer to the example below.

CASE 1: Output 7 digits

Datafill: (DTO 7)

CASE 7: Substitute the station code and output 4 digits

Datafill: (CL END) (CB 4) (REM 4) (INC XXXX) (DTO 4)

where XXXX equals the station code.

- The UOP Enhancements feature uses the existing SOC (LOC00005) that UOP uses.
- All Table DIGMAN selectors support UOP.
- The 10-digit derivation supports UOP and ISA calls that are seven digits and extension dialed calls.
- The digit manipulation interface (DMI) must be present to set the field TENDIG_REQD to Y in Tables OFRTX, Tables IBNRTX, Subtable HNPACONT.RTEREF, and Subtable FNPACONT.RTEREF. Otherwise, 10-digit derivation can not be done.

59026480

Uniform Outpulsing Enhancements (end)

Interactions

The Uniform Outpulsing Enhancements feature does not interact with other functionalities.

Datafill

The Uniform Outpulsing Enhancement feature adds field TENDIG_REQD to Tables OFRTX, Tables IBNRTX, Subtable HNPACONT.RTEREF, and Subtable FNPACONT.RTEREF.

Service orders

The Uniform Outpulsing Enhancements feature does not change the Service Order System (SERVORD).

Operational measurements

The Uniform Outpulsing Enhancements feature does not change operational measurements (OM).

Logs

The Uniform Outpulsing Enhancements feature does not change logs.

User interface

The Uniform Outpulsing Enhancements feature does not change the user interface.

Billing

The Uniform Outpulsing Enhancements feature does not generate billing records or changes.

59026486

Release Link Trunk for Equal-Access End Office

Feature name

Release Link Trunks for Equal-Access End Office

Description

The Release Link Trunk (RLT) for Equal-Access End Office (EAEO) feature allows a Traffic Operator Position System (TOPS) office to release the control of a call to the originating office. Once the call is released, the EAEO performs the call completion. This action frees the trunk resources of the TOPS office and uses the trunks that belong to the EAEO.

In order for the RLT function to work, the user calls the TOPS office to complete the directory assistance (DA) call. The EAEO receives an integrated services digital network user part release (ISUP REL) with a service activation parameter (SAP) of the RLT_REQUEST_MSG. This action indicates to the EAEO to attempt an RLT. The EAEO confirms the assignment of option RLT to an ISUP intertoll (IT) trunk in Table TRKOPTS.

If a trunk without option RLT receives the RLT_REQUEST_MSG, the following actions occur:

- The call routes to a feature not allowed (FNAL) treatment.
- A DFIL324 log report generates.

This error detection ensures that synchronization for RLT processing exists between the EAEO office and TOPS office. When option RLT is entered in Table TRKOPTS, the connection to the TOPS office deallocates. At this point, the EAEO can generate any automatic message accounting (AMA) records associated with the call to the TOPS office. Then the EAEO office converts the number in the generic address parameter (GAP) to a dialable format. Next, the EAEO office utilizes a pre-defined reverse translator, RLT2DIAL. All RLT calls use RLT2DIAL to ensure reverse translations simplification derives the proper dialable number. Once reverse translations completes, the call then translates, routes, and bills as if the caller dialed the number.

Note 1: Only assign option RLT to ISUP IT trunks. If the request message is sent to a ISUP IT trunk without option RLT set, the call routes to FNAL.

Note 2: Do not enter datafill in Table CUSTHEAD, Table CUSTNTWK and Table DNREVLXA with option RLT2DIAL. The RLT2DIAL reverse translator is reserved for RLT calls only. The EAEO generates the error message “Cannot Specify RLT2DIAL - Reserved for Release Link Trunking” when this action occurs.

59026486

Release Link Trunk for Equal-Access End Office (continued)

Hardware requirements

The Release Link Trunk for Equal-Access End Office feature has no additional hardware requirements.

Limitations and restrictions

The limitations and restrictions that follow apply to the Release Link Trunk for Equal-Access End Office feature:

- Only these multiple-appearance directory number (MADN) trunks are supported; MF/SS7 IBN, PX, and P2.
- Only these originators are supported; POTS, RES, IBN, 2FR, 4FR, 1MR, P-phones, and Huntgrps lines.
- There must be a direct connection between the EAEO and the TOPS office using the ISUP IT trunk. RLT calls that route through an access tandem or from an EAEO to another EAEO then to a TOPS office are not supported.
- Option RLT must be assigned to ISUP IT trunks in Table TRKOPTS.
- RLT does not support attendant console (AC) and PRI/BRI.
- RLT requires that the GAP receive 10-digit numbers.
- The REVXLVER command for reverse translations of RLT calls support only POTS, IBN, and RES agents.

Interactions

The Release Link Trunk for Equal-Access End Office feature does not interact with other functionalities.

Datafill

The Release Link Trunk for Equal-Access End Office feature adds option RLT to field OPTKEY in Table TRKOPTS. The current datafill order is unchanged.

Service orders

The Release Link Trunk for Equal-Access End Office feature does not change the Service Order System (SERVORD).

Operational measurements

The Release Link Trunk for Equal-Access End Office feature introduces the operational measurement (OM) group RLT to release 15. RLT records the total number of RLT attempts made in an EAEO.

59026486**Release Link Trunk for Equal-Access End Office (end)**

Register RLATMPT keeps a count each time the EAEO attempts to utilize option RLT. The EAEO receives an ISUP REL message with a SAP of the RLT_REQUEST_MSG.

Logs

The Release Link Trunk for Equal-Access End Office feature adds the functionality of the DFIL324 log report. The DFIL324 log report generates when an EAEO receives an ISUP REL message and is not set up to process RLT calls. Option RLT must be assigned to the ISUP IT trunk of Table TRKOPTS.

User interface

The Release Link Trunk for Equal-Access End Office feature does not change the user interface.

Billing

The Release Link Trunk for Equal-Access End Office feature does not generate billing records or changes.

59026495

DIGMAN interaction with DNIS/CLID

Feature name

DIGMAN interaction with DNIS/CLID

Description

The dialed number identification service (DNIS) functionality provides the delivery of additional call information to the customer premise equipment (CPE). This feature allows the CPE to receive specific digits, based on the original dialed number. The CPE distributes the incoming calls and routes the calls to appropriate destinations.

The calling line identification (CLID) allows the CPE to know the telephone number of the calling party or the charge number based on the CLID options. The functionality of the CLID to the CPE allows the user to identify the originator of the call.

This feature provides the functionality to allow digit manipulation interaction when the DNIS and CLID options are present on PX, IBNT2 and IBNT0 trunks. If digit manipulation is requested, the called number will be outpulsed according the digit manipulation commands. This feature will also ensure that when digit manipulation is requested and the CLID option is present , the calling number is will be outpulsed according to the outpulsing scheme designated by the OUTSCHM option.

Table IBNRTE

This feature allows digit manipulation interaction with DNIS and CLID

when routing from the IBN routing tables IBNRTE, IBNRT2, BNRT3, and IBNRT4. Only the N route selector is supported by this functionality.

Table TRKGRP

The options DNIS, CLID and OUTSCHM must be on the trunk in order for

digit manipulation to be allowed when routing from the IBN routing

tables. Only trunks types PX, IBNT2 and IBNT0 are supported by this feature.

Table DIGMAN

The user must provision a valid digit manipulation index (DMI) from the DIGMAN table for the route element in the IBN routing tables. The DMI key range is {0–32 767}. Digit manipulation does not occur if the DMI value is '0' in the route element.

59026495**DIGMAN interaction with DNIS/CLID (end)**

Hardware requirements

The DIGMAN interaction with DNIS/CLID feature has no additional hardware requirements.

Limitations and restrictions

This feature only supports the PX, IBNTO, and IBNT2 trunk types.

The feature only supports routing from the IBN routing tables IBNRTE, IBNRT2, IBNRT3 and IBNRT4.

The feature only supports the use of the N selector in the IBN routing tables.

Interactions

This feature functions with the AF7762 (DNIS—Dialed Number Identification Service) feature. The AF7762 feature provides the functionality for the DNIS, CLID, and OUTSCHM options on the PX, IBNTO, and IBNT2 trunks.

Datafill

The DIGMAN interaction with DNIS/CLID feature does not change data schema tables or office parameters.

Service orders

The DIGMAN interaction with DNIS/CLID feature does not change the Service Order System (SERVORD).

Operational measurements

The DIGMAN interaction with DNIS/CLID feature does not change operational measurements (OM).

Logs

The DIGMAN interaction with DNIS/CLID feature does not change logs.

User interface

The DIGMAN interaction with DNIS/CLID feature does not change the user interface.

Billing

The DIGMAN interaction with DNIS/CLID feature does not generate billing records or changes.

4 LEC cross-reference

The following table provides the functional group ordering code and the functionality ordering code for each feature. In the table, the features are sorted by feature number. (See the individual feature descriptions in this manual for specific information about the feature.)

Table 4-1 Features (sorted by feature number) (Sheet 1 of 5)

Feature number	Feature name¹	Functional group ordering code	Functionality ordering code
Feature number	Feature name	Functional group ordering code	Functionality ordering code
59023032	E800 Enhancements for Log110	N/A	N/A
59022448	ICM Call Hold/Unhold Event Reporting	ICM00050	ICM00050
59026486	Release Link Trunks for Equal-Access End Offices	N/A	N/A
59026480	Uniform Outpulsing Enhancements	N/A	N/A
59022453	ICM LOGON Enhancements & Re-engineering	ICM00001	ICM00001
59022576	ICM CDN Display Route Enhancements	ICM00010	ICM00010
59006090	UE9000-DMS POTS World Line Card Support	UAS00001	UAS00001
59006127	UEN9000 TDM Call Data Block Manager	UAS00001	UAS00001
59006184	UE9000 DMS-100 to uEMS Flow-Through Provisioning	UAS00001	UAS00001
59006196	UE9000 Node Maintenance Enhancement	UAS00001	UAS00001
59006202	xDSL Combination Line Cards	UAS00001	UAS00001
59006371	E911 ISUP Parameter Enhancement	ENS00005	ENS00005

Table 4-1 Features (sorted by feature number) (Sheet 2 of 5)

Feature number	Feature name¹	Functional group ordering code	Functionality ordering code
59006586	Call Forward/Interface Busy	NI000047	NI000047
59009522	Firmware Upgrade	BAS00003	BAS00003
59009527	XA40000: XA-Core Provisioning	BAS00003	BAS00003
59010487	Announcement Encapsulator for XA-CORE	TEL00001	TEL00001
59010576	Message Services Functional Component Re-engineer	BAS00003	BAS00003
59011294	OSNC-ISUP Support for Operator Services	ISP70001	ISP70006
59011676	CENTREX E.164 Part II	NPE00003	NPE00003
59011802	RHINO Feature	BAS00003	BAS00003
59011907	Create_Call	AIN00271	AIN00271
59011948	Called Party Address in ICM Messages	ICM00001	ICM00001
59011953	ICM ACD DN Association Limit	ICM00001	ICM00001
59011993	EADAS TCP/IP Interface	NA	NA
59012000	Table XXCODE expansion	LOC00100	LOC00007
59012144	Call Redirect	RES00099	RES00099
59012182	Number Pooling Service Order System Interface	NPE00005	NPE00005
59012192	Number Pooling Feature Interactions	NPE00005	NPE00005
59012468	LNP/MBG Interworking	NPE00005	NPE00005
59012574	LNP Enhancements\SOC	NPE00005	NPE00005
59012624	DND/MSB ONP Survival	MDC00001	MDC00001
59012642	E.164 Utilities Phase-II	NPE00003	NPE00003
59012655	Who's Calling	RES00094	RES00094
59012846	Fan alarm enhancements	TEL00001	TEL00001
59013034	Hunt LOD Expansion	MDC00003	MDC00067
59013088	ISUP Generic Name	RES00003	RES00096

Table 4-1 Features (sorted by feature number) (Sheet 3 of 5)

Feature number	Feature name¹	Functional group ordering code	Functionality ordering code
59013169	DCR Interworking with AIN	AIN00060	AIN00060
59013206	On-Demand B-Channel X.25 Packet Mode Data Service-CM Call Processing	NI000052	NA
59013226	Multiple Extended TCAP Transactions (METT) in the OCM	AIN00272	AIN00272
59013251	AIN Nettools Support for NA013	BAS0270	BAS0270
59013267	On-demand B-Channel X.25 Packet Mode Data-Provisioning, Data Distribution Manager, and XLIU	NI000052	NI000052
59013271	On-demand B-channel X.25 Packet Mode Data Service-Maintenance, Operational Measurements, and XPM Components	NI000052	NA
59013322	Series 70 MMINFO Formatting/HMI Enhancements	BAS00003	BAS00003
59013383	Alternate Trunk Group Selection	LOC00033	LOC00033
59013421	VFG MDR Suppression	AMA00001	AMA00006
59013430	Prevent Deletion Option	SERV0001	SERV0001
59013762	LNP/NPASplit Interworking Enhancements	NPE00005	NPE00005
59013873	CSMI Enhancement–STUB Message Deletion	NA	NA
59014046	DMS CktLoc Command Enhancement	SMA00007	SMA00007
59014614	SS7 Transport Over ATM Networks	TEL00013	TEL00013
59014752	TCAPTRID Removal	TEL00008	TEL00008
59014871	ATM Infrastructure: Commissioning & Maintenance Management	NA	NA
59015055	Temporal Dictionary Enhancement	NA	NA
59015125	CENTREX IP Capacity Enhancement	CIP00001	CIP00002
59015177	SDM Robustness Enhancements	NA	NA
59015183	SDM DCE Enhancements	NA	NA

Table 4-1 Features (sorted by feature number) (Sheet 4 of 5)

Feature number	Feature name^f	Functional group ordering code	Functionality ordering code
59015195	SDM: 9 GB MFIO and Arther 750 Support	NA	NA
59015840	Table IBNXLA Expansion	MDC00001	NA
59016005	Term Resource Available Trigger Processing	AIN00280	AIN00281
59016379	ICM Capability for ISDN BRI	ICM00050	ICM00075
59016386	Increasing the Maximum Number of ICM Sessions from 16 to 96	ICM00001	NA
59016521	Carrier Usage Parameter Processing	AIN00280	AIN0282
59016574	Trunk Maintenance Busy Usage Counts in Packets 18 and 22	OAM00010	NA
59016859	Supplementary ACD Dn Expansion	ACD00001	ACD00081
59016864	ACD Not Ready on Secondary DN Enhancement	ACD00001	ACD00082
59017193	PRI Originating Calling Name Delivery	NI000030	NA
59017874	Patch MBR78 Sourcing	MDC00001	NA
59018258	Re-Engg of NA013 Call Redirect	RES00099	NA
59018498	Flexible Restoral	BAS00003	NA
59018646	ALIT Enhancement: Generation of Logs ALT112 and ALT113	NA	NA
AF7701	UE9000 Node Maintenance	UAS00001	UAS00001
AF7702	UE9000 Line Maintenance	UAS00001	UAS00001

Table 4-1 Features (sorted by feature number) (Sheet 5 of 5)

Feature number	Feature name'	Functional group ordering code	Functionality ordering code

DMS-100 Family
North American DMS-100
Feature Description Manual

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Publication number: 297-8001-801
Product release: LEC0015 and up
Document release: Standard 14.02
Date: May 2001
Printed in the United States of America

