

DMS-10 500 Series platform

New platform boosts performance and capacity and prepares your network for the convergence of voice and data traffic

The 500 Series platform enables each DMS-10 system to accommodate up to 20,000 lines. Key 500 Series elements include a high-performance RISC-based processor, a compact Expanded Network with double the capacity of its predecessor, and support for the surveillance assistance mandated in the federal CALEA statute.

About this document

This document is an advance planning tool for network planners, engineers, and marketers who need introductory information about the DMS-10 system's 500 Series platform. It has been designed to complement—not replace—more detailed Nortel Networks technical documents.

For more information

For more detailed information about the DMS-10 or other Nortel Networks products and services, please visit our Web site at nortelnetworks.com or call the Nortel Networks Sales and Marketing Information Center at 1-800-4 NORTEL (1-800-466-7835). For training information, call 1-877-662-5669.

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DMS-10 500 Series platform boosts capacity, performance

The 500 Series platform ushers in a new era for the Nortel Networks DMS-10 switching system, which has logged an impressive record of innovation and dependability spanning more than two decades. The new platform significantly improves system performance and capacity, and it also positions the DMS-10 for the convergence of voice and data that will define tomorrow's network environment.

Key enhancements
—Fast CPU, high-capacity network


Among the platform's attributes is a CPU that's four times faster than its predecessor and a new network that expands capacity to up to 20,000 lines per switch (at 8 ccs). It also enables faster feature delivery, introduces substantial operations, administration, and maintenance (OAM) improvements, and supports richer feature content.

501 Generic: CALEA surveillance functions

A vital component of the 501 Generic, which is the first software release for the 500 Series platform, is the feature supporting CALEA—the Communications Assistance for Law Enforcement Act of 1994 (U.S. Public Law 103-414). The law requires service providers to support legally authorized law enforcement agencies in the monitoring of telephone calls and other subscriber communications. DMS-10 systems must be equipped with the 500 Series platform (but not the new Expanded Network) for basic CALEA compliance. Additional CALEA functionality is planned for delivery in the 502 Generic. (See Chapter 2 on page 12 for further information.)

500 Series innovation extends DMS-10 capabilities

The new 500 Series platform features an advanced high-speed CPU equipped with an industry-standard Ethernet interface, a compact network

500 Series: Ahead of the curve	
 <ul style="list-style-type: none">■ RISC-based CPU that's four times faster than predecessor■ Compact expanded network—supports 20,000 lines per switch in half the space of old network■ OAM enhancements■ AMADNS billing system for reliable collection of billing records■ Mandated CALEA support	<ul style="list-style-type: none">✓ Saves costs✓ Saves space✓ Increases system reliability✓ Protects revenue✓ Expands revenue opportunities

that has twice the capacity of its predecessor, a third-party AMADNS billing system, and OAM data networking capabilities.

State-of-the-art RISC processor

Available with 501 Generic, the new RISC-based processor complex is expected to increase real-time capacity by 400 percent over the 400 Series processor. The added capacity gives the DMS-10 more than enough horsepower to deliver the advanced features demanded by increasingly savvy subscribers and to handle the expected surge in line and trunk growth. An Ethernet interface enables the new CPU to connect to networked computer devices through TCP/IP, FTP, and other widely used data networking protocols.

Non-blocking Expanded Network

Providing enough ports for up to 320 DS-1 loops, the 500 Series Expanded Network has double the capacity in a footprint half the size of the 400 Series Classic Network. It also features non-blocking architecture and full call-path redundancy for greater reliability.

An interim software release is planned to permit early deployment of the Expanded Network in DMS-10 systems with acute capacity needs. General availability is scheduled for the 502 Generic. (For further information about the interim release, see page 8.)

Real-Time Chorus Operating System

In the 501 Generic, the DMS-10 replaces its proprietary switch operating system with the Chorus Real-Time Operating System (RTOS) from Sun Microsystems. Among the benefits of the Chorus system is its support for applications written in the native SL-1 language and in the C and the object-oriented C++ languages.

OAM enhancements

The high-performance 500 Series CPU plays a key role in supporting enhanced OAM capabilities for the new platform. The CPU's 10 Mbps Ethernet ports permit deployment of a high-speed data communications network that uses standard TCP/IP, FTP, and Telnet interfaces to support improved administration, maintenance, and service capabilities. Telnet connectivity through the Ethernet port provides faster throughput than the existing serial interfaces.

Access to OAM functions can be over a LAN/WAN or through a dialup connection. The ACN150 Remote Access Server can be deployed with the 500 Series platform to improve dialup connectivity by serving as a bridge between the DMS-10's serial interface and the LAN/WAN. Deployment of

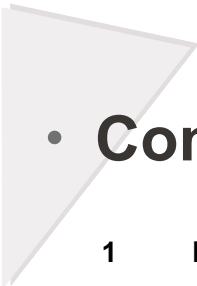
a Baystack 106 Hub or Baystack 310 Layer 2 switch allows additional equipment to be incorporated into the OAM system.

The 500 Series CPU's enhanced memory also contributes to OAM efficiency. Switch overlays can now be stored in resident memory, where they can be accessed instantly to perform OAM functions.

Enhanced billing system

To improve the stability of billing records and DMS-10 billing accuracy, Nortel Networks is offering the Sterling 515 Data Server from Telesciences as an optional billing solution for the 500 Series platform. The Sterling 515 is scheduled for availability with the 502 Generic.

An intelligent data collection device, the Sterling 515 can function as an AMATPS or AMADNS billing server. Its LAN interface complies with the Data Server/Data Processing and Management Interface (DDI) standard contained in Telcordia's AMADNS specification. A DDI enables the secure transfer of billing data to an external Data Processing Management System (DPMS), using the FTP subset of the TCP/IP protocol.



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 · CHAPTER 1

Key 500 Series elements

Though it adds significant capacity and functionality to the DMS-10 switch, the new 500 Series platform retains the basic architecture that characterizes the economical, reliable DMS-10 system.

This chapter describes in detail the features and benefits of two central platform components—the RISC-based CPU and the Expanded Network. Other platform elements are also covered, including the advanced OAM and billing capabilities available with the 500 Series.

The chapter also includes descriptions of 501 Generic feature content. For information about the DMS-10 solution for providing CALEA surveillance capabilities, turn to Chapter 2 beginning on page 12.

The advanced 500 Series CPU becomes generally available with the 501 Generic

RISC processor boosts speed and memory

At the heart of the 500 Series platform is a state-of-the-art processor complex that increases real-time capacity by 400 percent. The new CPU is a 200 Megahertz RISC-based processor with 128 Mbytes of memory and downloadable firmware. An industry-standard Ethernet interface and compatibility with packet data protocols (TCP/IP and FTP) enable the delivery of software loads over the Internet and LAN/WAN access to the DMS-10 for OAM functions.

The Chorus Real-Time Operating System (RTOS) from Sun Microsystems, to be introduced with the new CPU, further improves CPU and system performance. Among other attributes, the RTOS maximizes hard-disk capacity and adds to the CPU's capabilities, and it increases the efficiency of the Ethernet connection by enhancing system loading capabilities.

The new CPU will be generally available with the 501 Generic.

Ethernet connectivity

Each of the two processors in the DMS-10 core is equipped with two Ethernet ports. To allow simultaneous network access while the processors are in split mode and to prevent the interruption of data downloads during CPU switchovers, the two processors share a pair of IP addresses. When the ACN150 Remote Access Server is used as the OAM link to the DMS-10 system, access is more than three times faster than with the previously used serial interfaces.

Expanded Network

The compact DMS-10 500 Series Expanded Network features non-blocking, dual-plane architecture and provides the inherent reliability of full

call-path redundancy. Offering twice the capacity but occupying half the space of its predecessor, the network provides 320 loops in two shelves of a common equipment (CE) frame. The new network interface circuit pack supports 32 loops and can be provisioned as a DS-30A or Multiplex Loop Interface (MLI) cards allowing greater flexibility in loop assignments. Based on versatile digital signal processing (DSP) technology, the network's tone service circuits can also support customer-definable tones.

Figure 1 —
CPU Network Interface shelf (below) has two new circuit packs (highlighted in gray);
Expanded Network bay (bottom of page) can accommodate 320 loops

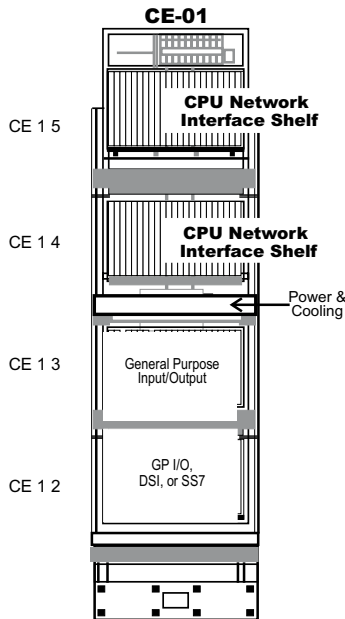
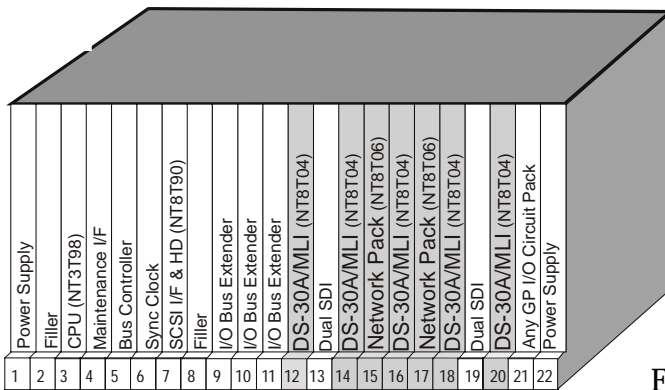
The 500 Series Network is compatible with all DMS-10 peripherals and PE equipment.

Expanded Network available early

The 500 Series Expanded Network is scheduled for general availability with the DMS-10 502 Generic. Nortel Networks recognizes, however, that DMS-10 systems in areas experiencing explosive line growth may need the new network's expanded capacity before the generic's scheduled general availability in late 2Q01.

To accommodate offices that are at or near capacity, we are issuing an interim software load to support early deployment of the Expanded Network. A pre-release version of the 502 Generic, the interim release builds on the already tested and proven 501 Generic.

For further information about the Expanded Network, contact your Nortel Networks representative.



CPU Network Interface module

Housing the Expanded Network is the CPU Network Interface (CNI) module, consisting of two shelves that span a single backplane. Each shelf is designed to hold between two and five network interface cards, which were also developed for release with the new network. The cards can each accommodate 32 loops, for a maximum total of 160 loops per shelf. The two available interface types—DS-30A and MLI—cannot be mixed on the same card. In addition to serving as a peripheral interface, each card is also wired for Global Tone Services (GTS), providing up to 128 channels of tone, receiver, and conference services. (While GTS is functioning, the maximum number of loops a card can service drops from 32 to 28.)

The central switching element is a new network card providing a 10,240 by 5120 non-blocking switching matrix that connects any peripheral or GTS channel on its CNI shelf to any other

peripheral or GTS channel in the system. Each shelf houses two network cards. STM-4 interlinks connect the network cards residing on different shelves in the same CNI module.

Dual-plane architecture: hot-standby redundancy

For the first time on the DMS-10 system, the 500 Series network offers the hot-standby redundancy of dual-plane architecture. With this enhancement, each peripheral loop is connected to both network planes, causing every call to be switched on both planes. If a fault occurs on the active plane, the traffic is instantly picked by its mate without alerting callers that the transfer has occurred.

Advanced data networking capabilities

Using the Ethernet connection built in to the new CPU, the 500 Series platform incorporates sophisticated data networking technology into its OAM structure. With the 501 Generic, the Ethernet connection serves as the conduit for the transfer of files to and from the DMS-10 system. This enables important OAM functions to be performed remotely—including the installation of new generics, incremental updates to software loads, and the replacement of peripheral downloads.

The data network, structured according to industry standards and using industry protocols, can be tailored to individual needs (Figure 2). Routers, hubs, and other standard data networking components form the foundation of the OAM network. In designing the network, it is advisable to segregate OAM traffic from other types of data traffic—such as ISP customer traffic—that might interfere with vital OAM functions or compromise internal security measures.

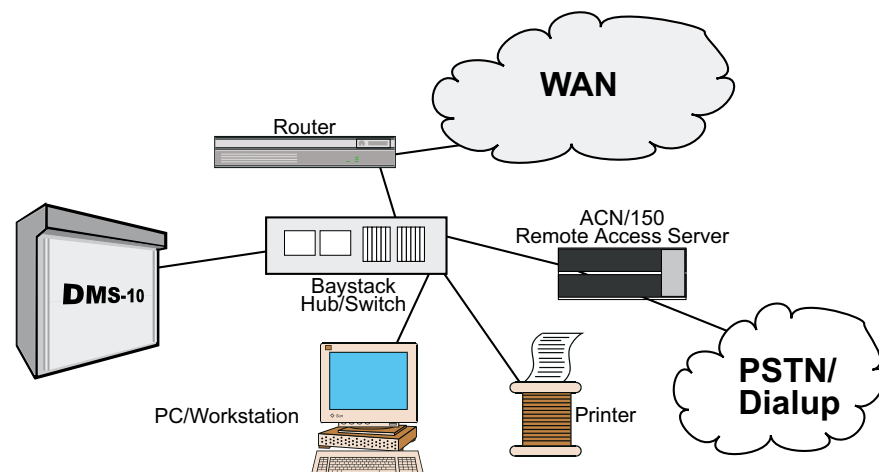


Figure 2—DMS-10 500 Series platform can be remotely administered through OAM data network

Remote Generic Upgrade

The Remote Generic Upgrade feature in the 501 Generic takes advantage of the advanced data networking capabilities of the 500 Series platform. Instead of having an onsite craftsperson activate the installation of a generic, this feature introduces a new set of commands in the Control Equipment Diagnostic overlay enabling the installation to be performed entirely from a remote location.

This feature enables remote activation of the CPU changeover, initialization, split load, sysload, and the unlocking and locking of the data modification operation. To permit monitoring of switch functions, the feature also displays hexadecimal code from the switch on the remote craftsperson's screen.

Among the requirements for this feature is a computer at the remote site to act as the OAM server and an Ethernet link between the server and the DMS-10 to be upgraded. The DMS-10 must also have two System Bus Controllers (NT3T70BD or later), one for each CPU.

501 Generic: Revenue-rich subscriber functionality

The 501 Generic also includes revenue-enhancing features that add significantly to subscriber functionality:

- **DSS Key Expansion**— This feature expands the maximum number of Direct Station Select (DSS) keys permitted on a DMS-10 switch from 255 to 2048. DSS keys on Meridian Business Sets (MBSs) and Meridian Mate add-on units enhance the mini-console capabilities of these devices by allowing incoming calls to be transferred by pressing a single button.
- **Message Desk Service Switch**— This feature helps service providers save costs through consolidation of their voice mail systems without sacrificing the ability to notify all subscribers of waiting messages. If a subscriber is not served by the same DMS-10 switch hosting that subscriber's voice mail server, the Message Desk Service Switch feature allows a visual or stutter-tone message notification to be conveyed to the subscriber's line via ISUP and TCAP messaging. (This feature is optional.)

OAM enhancements

Significant enhancements to DMS-10 OAM capabilities are also delivered in the 501 Generic:

- **Carrier Code Expansion**— This feature increases subscriber options when selecting long-distance carriers by doubling the number of carrier codes that each switch can accommodate. The new maximum for each DMS-10 system is 512, up from 256.

- **Office Data Query (ODQ) enhancement**— Boolean operands (“AND,” “NOR,” “OR,” and “NAND”) can now be used to search for station option groupings with the ODQ overlay, and the craftsperson now has four formats to choose from for graphically displaying ODQ results.
- **Directory Number Hunt (DNH) overflow**— An overflow DN can now be assigned to DNH groups, increasing the likelihood that calls placed to a DNH group will be completed.
- **Timeout reduction**— The overlay timeout interval is reduced from five minutes to two minutes.

CHAPTER 2

CALEA surveillance on the DMS-10

The DMS-10 500 Series platform enables service providers to comply with the federal Communications Assistance for Law Enforcement Act (CALEA), which requires full service provider cooperation with law enforcement agencies conducting legally authorized surveillances of a subscriber or subscribers.

Basic CALEA functionality provided in 501 Generic; more advanced capabilities delivered with 502 Generic

Under the law's provisions, it is up to the provider to deliver the content of subscriber communications as well as call data (such as the digits dialed) to a law enforcement monitoring center. The "trap and trace" devices and central office pen registers currently used for surveillance capture the call data but not content. With full implementation of the DMS-10 CALEA solution, authorities will have access to the voice content and call data communications originating from, terminating to, or forwarded by any subscriber under surveillance (Figure 1).

To allow timely compliance with federal mandates, the DMS-10 501 Generic is equipped for basic CALEA compliance. More advanced CALEA functionality will be rolled out in the 502 Generic.

501 Generic meets J-STD-025 requirements

To give service providers and vendors specific compliance targets, industry and government representatives promulgated a set of standards—known as J-STD-025—outlining basic CALEA compliance. Following are capsule descriptions of the 501 Generic's J-STD-025 features.

- **CALEA basic surveillance**—provides support for basic surveillance on POTS, RES, business, centrex, and ISDN Basic Rate Interface (BRI) lines

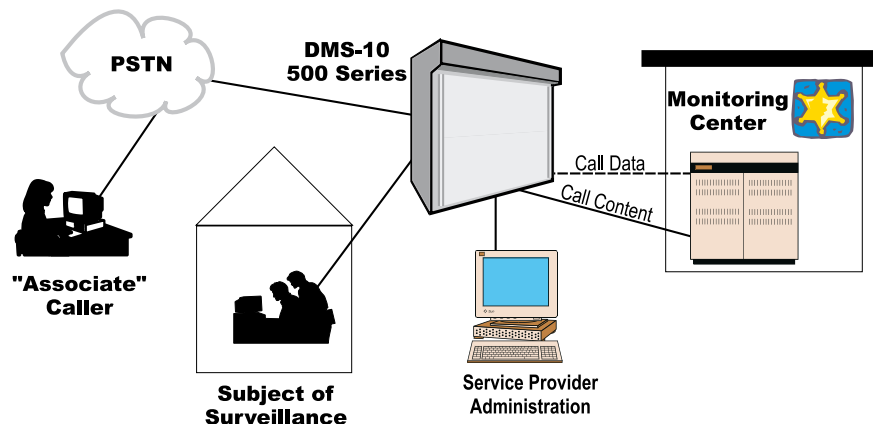


Figure 3—CALEA feature collects voice content, content of voice band data, and call data

- **Redirection interception**—provides support for the interception of communications on forwarded calls controlled by the subscriber under surveillance
- **Call content delivery**—provides support for the use of standard digital trunks as the circuits that deliver call content to the monitoring center
- **Call data delivery**—provides support for delivery of call data messages over an Ethernet facility using TCP/IP protocols
- **CALEA administrative interface**—provides a secure password-protected level accessible via a standard TTY interface
- **J-STD-025 call data message set**—provides for the generation and delivery of call data messages over the CDC interface
- **Feature interaction**—provides interworking with a subset of commonly deployed DMS features (e.g., Call Waiting, Three-Way Calling, Advanced Intelligent Network [AIN] E800, and Local Number Portability)

How DMS-10 handles CALEA functionality

At a DMS-10 central office equipped with the CALEA feature, any subscriber served by that office can be targeted for electronic surveillance. During the surveillance, the content of all incoming, outgoing and redirected calls—plus the relevant call data—is accessed and delivered to the monitoring center of the authorized law enforcement agency or agencies. The interception of communications is transparent to both the subscriber named in a surveillance order (defined in the law as the “subject”) and other parties (known as “associates”) involved in calls placed and received by the subject.

A call content channel (CCC) delivers the content of voice conversations and voice-band data to the monitoring center over digital trunks. Two circuits are required for the CCC, one for the subject’s voice content and the other for the associates’ voice content.

A call data channel (CDC) carries the call data related to monitored calls (origination information, termination attempt, information answer detection). The CDC is a TCP/IP connection linking the switch serving the subject to the monitoring center. Up to five different monitoring centers can receive the voice content and call data from a single subscriber, allowing that subscriber to be the subject of five simultaneous investigations.

Setting up and administering surveillances

As a precondition for service providers’ assistance with electronic surveillance, the law enforcement agency must first present the necessary legal authorization identifying the subject and the specific communications

to be monitored. The service provider then establishes the surveillance through the DMS-10 CALEA feature according to the terms set out in the authorizing document. The feature requires direct involvement by the service provider in all surveillance activities.

Surveillance administration and management are provided through the standard DMS-10 teletype (TTY). To safeguard the privacy of parties under surveillance, a password-protected interface restricts access to surveillance activities and information to personnel authorized by the service provider.

Conducting a surveillance

These are the steps for implementing an electronic surveillance after the required authorization has been obtained:

Step 1: The agency supplies the service provider with the legal authorization identifying the subject of the surveillance and the start and end date for the surveillance.

Step 2: The service provider identifies the subject's switch and provisions a surveillance on all communications between the subject and associates.

Step 3: The service provider activates the surveillance. Voice content and call data are delivered over the CCC and CDC connections.

Step 4: At the end of the period specified in the order, the service provider deactivates the surveillance. Voice content and call data are no longer delivered to the law enforcement agency's monitoring center.

CALEA features in 502 Generic

In addition to the interim monitoring capabilities outlined in J-STD-025, federal officials have also issued a "punch list" of other required CALEA functions for future implementation. The DMS-10 502 Generic is scheduled to include many of the capabilities defined in the punch list.

The CALEA functions planned for the 502 Generic include:

- **Conference call monitoring**— This capability allows the continued monitoring of the remaining parties (associates) in a subject-initiated conference call after the subject goes on hold.
- **Connection/connection break messages**— The connection message reports the addition of a party or parties to a monitored call, and the connection break message reports the dropping of a party.
- **Subject-initiated dialing/signaling information**— With this enhancement, the subject's use of feature keys is added to the list of monitored activities.

- **In-band and out-of-band signaling**—This enhancement adds all signaling sent to the subscriber's phone (such as ringing, busy signals, call waiting tones) not previously carried by the call data channel.
- **Dialed digit extraction**—With this capability, all digits dialed by the subject, such as credit card numbers, are collected and sent to the monitoring center.
- **Timing information**—This enhancement reports call timing information to the monitoring center.

System requirements

Because the 500 Series platform is required for CALEA surveillances, any DMS-10 system still operating on an earlier platform must have its control equipment upgraded to the 500-Series to support the CALEA feature. Delivery of intercepted call data to a monitoring center requires the 500 Series CPU and its Ethernet port. The 400 Series network can handle CALEA surveillance functions. Systems operating with 200 or 300 Series should be upgraded to the 500 Series platform and the Expanded Network for CALEA compliance.

DMS-10 systems nearing maximum loop capacity may need a larger Classic Network to support CALEA or an immediate upgrade to the 500 Series Expanded Network by deploying the 502 Generic.

Digital voice trunks serve as the CCCs that convey the content of a subject's calls to a monitoring center. Because the DMS-10 CALEA feature requires a separate channel for each party in a monitored call, two DS-0s must be provisioned for a two-way call, and additional channels may be required if a conference circuit is used. If the subject has a feature such as Call Forwarding, more circuits are required to monitor multiple calls forwarded by the subject to other numbers.

Previously deployed trunk packs can be reassigned as CCCs. Actual trunking requirements depend on office parameters, traffic patterns, and capacity requirements from law enforcement agencies.

 · CHAPTER 3

Extending DMS-10 capabilities

The two products described in this chapter—Applications Peripheral Release 3.3 and Meridian Mail Release 13—add significantly to the capabilities of the DMS-10 system. They reside on dedicated platforms that function as elements of a DMS-10 node or network.

DMS-10 Applications Peripheral Release 3.3

The DMS-10 Applications Peripheral (DMS-10/AP) economically supports the high-margin SS7 and Advanced Intelligent Network (AIN) services that are popular with subscribers and that hold the potential for further revenue expansion. Among the features in DMS-10/AP software Release 3.3—which is now generally available—are valuable AIN services, some of which subscribers can customize through an Internet interface.

Manufactured for Nortel Networks by Innovative Systems, the DMS-10/AP is a fully redundant platform providing the carrier-grade reliability that is a hallmark of Nortel Networks products. Its support for multiple applications helps lower administrative costs while increasing revenue and customer satisfaction. Innovative Systems currently equips all new DMS-10/APs with software Release 3.2, but the load can be easily upgraded to Release 3.3 by contacting the manufacturer at (605) 995-6120.

In addition to handling AIN and SS7 services, the DMS-10/AP can also function as a service control point (SCP) database and as a versatile delivery vehicle for the announcements supporting AIN and SS7 features and other service types.

New AIN services

New AIN services in DMS-10/AP Release 3.3 are market differentiators designed to increase revenues and market share while enhancing customer satisfaction and the service provider's reputation for innovation. The new services are:

- **Originating Call Management**—The subscriber can use this feature to block the placement of specific call types (such as 900, international, or all long distance calls). The subscriber can also block calls to certain directory numbers or specify a list of numbers to which calls can be placed. Calling restrictions can be overridden by dialing a PIN. An optional capability allows subscribers to administer this feature through a Web page.
- **Account Code Plus**—Expanding the functionality available through Account Codes, this feature allows the business subscriber to allot toll-

calling minutes to employees individually; block calls placed by individual employees to specified NPAs, NPA-NXXs, or directory numbers; and find out the amount of time an employee spends calling a specific local or toll number (such as a home number). The feature also allows the subscriber to administer all of the account codes through a Web site, which also provides real-time usage data. Cumulative data can be automatically e-mailed to subscribers on a weekly or monthly basis.

- **AIN Prepay/Budget Toll**— The use of AIN to provide Prepay/Budget Toll capabilities permits greater scalability than the earlier ISUP-based version of the feature. This service is designed to help subscribers stay within their toll-calling budgets and to allow service providers to extend toll services to subscribers with credit problems. A call in progress when the budgeted allotment runs out is allowed to continue, but subsequent toll calls placed by the subscriber are blocked.

Other new features

Other features in the new release include:

- **Increased Calling Name Capacity**— The DMS-10/AP Calling Name database can now accommodate 500,000 names, up from the previous maximum of 300,000 names. Establishing an in-house database to handle Calling Name queries can save service providers significant costs.
- **Weather Station Interface**— This feature enables service providers to provide current weather information through a weather line, which can generate revenues through the sale of advertising messages.
- **TTY Announcements for Hearing Impaired**— This enhancement to the DMS-10/AP announcement system delivers standard announcements to the hearing impaired in TTY format.
- **Network AIN license**— This option saves costs for the service provider with multiple networked switches by allowing AIN services to be delivered to an entire network from a centralized DMS-10/AP system.
- **High-speed interface**— The direct link to IP-based WANs greatly increases the data transfer rates between the DMS-10/AP and the AP Administration Center (APAC).
- **Service access over Internet**— AIN and other advanced DMS-10 AP services can now be configured and controlled directly over the Internet using the new high-speed interface.

Meridian Mail Release 13

The Meridian Mail voice mail system from Nortel Networks can be deployed on the Messages Services Module (MSM) for centralized messaging systems or larger single-node applications. The General Purpose platform is designed for applications that serve a smaller client base.

Meridian Mail Release 13 is generally available for deployment with the DMS-10 501 Generic. New features in Release 13 include:

- **Pager Digit Expansion**—Meridian Mail can be programmed to notify a subscriber of a waiting message through the subscriber's pager. Activation of this service requires the entry of a remote notification pager identification number (RN/PIN), which the mail system uses to make contact with the pager each time a message is received. The pager alerts the subscriber to a new message by displaying a callback number—the Meridian Mail system's directory number. This enhancement to the pager services allows RN/PINs and callback numbers to be 30 digits, up from the previous maximum of 8 digits.
- **RN Class of Service**—This enhancement allows the members of a Meridian Mail customer group to receive remote notification of waiting messages from up to 15 paging vendors. Previously, remote notification was restricted to a single paging vendor per customer group, even though group members might use different vendors.
- **Unread Message Deletion**—The Meridian Mail administrator can now set the number of days (0-99) that an unread message can remain in a subscriber's mailbox.
- **Message Reception Disable**—This enhancement allows a subscriber to block the reception of all messages, messages received after the mailbox is full, or messages received after a temporary absence greeting (TAG) is recorded.
- **Message Sort Order**—This enhancement allows the subscriber to control how stored messages are sorted—by delivery time (the traditional sorting order), message priority (urgent vs. standard), or message status (read vs. unread). The subscriber can also specify the mailbox entry point.
- **Volume Control**—The user can use keypad commands to increase or decrease the volume at which messages are played.
- **Speed Control Enhancement**—The speed control feature now allows a default speed level, which the user can modify, to be set for each mailbox.
- **Multiple MWI DNs**—This enhancement allows the Message Waiting Indication (MWI) signal, previously restricted to a single directory number (DN), to be sent to up to eight DNs.
- **Nested System Distribution Lists**—System Distribution Lists (SDLs) can be accessed by all users to broadcast messages to colleagues. The SDL nesting provided by this enhancement allows the number of mailboxes covered by a single broadcast to exceed the SDL maximum, which is set at 120 mailboxes. An SDL can now be composed of individual mailboxes, other SDLs, or a combination of SDLs and mailboxes.

- **Personal Mailbox Administration**— This enhancement provides a simple interface for subscriber administration of the following mailbox functions.

- Change password.
- Create and edit personal distribution lists.
- Create and edit remote notification schedules.
- Modify greetings and personal verification.
- Configure the message sort order.
- Adjust the mailbox volume level and playback speed.
- Disable their mailboxes.
- Set the language.

Some of these functions can be performed through the Internet, including resetting the sort order, disabling the mailbox, and adjusting the volume control.

- **Text Notification or Short Message Service**— This enhancement enables Meridian Mail to generate 160-character text messages and send them to a subscriber's e-mail account, PCS device, or pager. The message can be Meridian Mail notification of a waiting voice message or a text message composed by the sender. A waiting-message notification includes the sender's ID, the time the message was received, message tags, the subject, message length, and the Meridian Mail System ID.
- **OAM Enhancements**— When introduced in Release 11, a system event and error report (SEER) trigger used voice mail to alert administrators of SEERs meeting predefined criteria. This enhancement potentially speeds response times by using the industry-standard SNMP to send the alert, enabling the notification messages to be displayed on most network management systems. SNMP also supports an enhancement permitting enterprise network traffic to be retrieved through network management systems. The retrievable information includes the number of messages sent and received and the number of message failures.



• Glossary

AMADNS	Automatic Message Accounting Data Networking System	PCS	Personal Communication System
AP	Applications Peripheral	PIN	Personal Identification Number
APAC	AP Administration Center	PSTN	Public Switched Telephone Network
BRI	(ISDN) Basic Rate Interface	RISC	Reduced Instruction Set Computing
CALEA	Communications Assistance for Law Enforcement Act (1994 federal law)	RN/PIN	Remote Notification/Pager Identification Number
CNI	CPU Network Interface	RTOS	Real-Time Operating System
CPU	Central Processing Unit	SDL	System Distribution List
DDI	Data Server/Data Processing Management Interface	SL-1	Stored Logic 1
DMS	Digital Multiplex Switching	STM	Synchronous Transport Mode
DSP	Digital Signal Processing	TCP	Transport Control Protocol
DNH	Directory Number Hunt	TTY	Teletype
DPSM	Data Processing Management System		
DS	Digital Signal		
FTP	File Transfer Protocol		
IP	Internet Protocol		
ISDN	Integrated Services Digital Network		
MLI	Multiplex Loop Interface		
MWI	Message Waiting Indication		
ODQ	Office Data Query		

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Research Triangle Park, NC 27709
51047.16/12-00 Issue 1



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500 Series Platform for DMS-10 System (51047.16/12-00 Issue 1)

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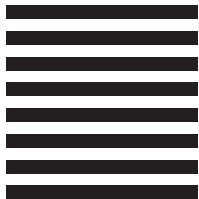
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