



555-4001-108

Meridian SL-100/Nortel Networks Communication Server 2100

Application Planning Guide

SE07 Standard 02.04 September 2004

Meridian SL-100/Nortel Networks Communication Server 2100

Application Planning Guide

Publication number: 555-4001-108

Product release: SE07

Document release: Standard 02.04

Date: September 2004

Copyright © 2004 Nortel Networks,
All Rights Reserved

Printed in the United States of America.

NORTEL NETWORKS CONFIDENTIAL: The information contained in this document is the property of Nortel Networks. Except as specifically authorized in writing by Nortel Networks, the holder of this document shall keep the information contained herein confidential and shall protect same in whole or in part from disclosure and dissemination to third parties and use same for evaluation, operation, and maintenance purposes only. Changes or modifications to the Meridian SL-100 without the express consent of Nortel Networks may void its warranty and void the user's authority to operate the equipment.

Information is subject to change without notice. Nortel Networks reserves the right to make changes in design or components as progress in engineering and manufacturing may warrant.

*Nortel Networks, the Nortel Networks logo, the Globemark, Unified Networks, DMS, MAP, Meridian, MSL, Nortel, Northern Telecom, NT, OPTera, SL-100, and SuperNode are trademarks of Nortel Networks.



v

Publication history

September 2004

Version 02.04, SE07, Standard. Second standard release of this document.

March 2004

Version 01.01, SE06, Standard. First standard release of this document.

Contents

About this document	xiii
Introduction	17
Introduction	17
Overview of Application Planning Guide	17
Nortel Networks Meridian SL-100	18
Benefits of Meridian SL-100	18
Evolution of Meridian SL-100	19
Nortel Networks Communication Server 2100	19
“Superclass” softswitch for large enterprises	19
XA-Core or Compact Processors	20
Benefits of Nortel Networks Communication Server 2100	20
Overview of the SE07 Release	21
Access training and documentation for Meridian SL-100/ Communication Server 2100	22
<hr/>	
SECTION I: Software Ordering	
Software ordering	25
Introduction	25
SE07 software release	25
Meridian SL-100/Communication Server 2100 software architecture	26
Product Computing-module Loads (PCLs) and Software Optionality Control (SOC)	27
Software options	28
Software options included at no charge in SE07	29
Orderable software options	29
Software ordering codes	32
Base software loads	32
Base loads added functionality	32
Software upgrades	32
SE07 upgrade path	33
Design Release Units (DRUs) in SE07	33
SE07 Software options	33
Features available with Base software loads for Meridian SL-100/Communication Server 2100	34

ACD Agent Expansion 30,000	34
MSL ESDN Class Feat Enhc	35
MSL GIAC Paging Modification	35
MSL Line Option for IPCM phones option	36
Mediant 2000 Gateway	36
MSL Table CARID for SPM	37
ECAN Enhancements	37
MSL SuperNode Data Mgr option	38
MSL SuperNode Data Mgr II option	38
MSL Geographic Survivability option	39
MSL Realtime Billing option	39
MSL OM Format to CSV option	40
MSL Real time OMs option	40
MSL CS 2100 Hybrid option	41
MSL CS 2100 Compact option	41
MSL CS 2100 Intrwk SPM IP option	42
MSL CS 2100 Gtrwy Cont. option	42
MSL IPCM Base Software option	43
MSL IPCM Client Enabler option	43
MSL MG 9000 ESA option	44
MSL Media Server 2010 option	44
MSL Real Time Portal option	45
H.323 Gatekeeper option	45
MSL IEMS option	45
MSL 10-Digit Local Display option	46
MSL Buzz Tone Length option	46
MSL CND Pub Disp option	47
MSL Disable Ans Sup option	48
MSL ISDN BRI option	48
MSL CCS7 option	51
MSL Packet Handler option	52
MSL DWS option	53
MSL ISDN PRI option and MSL PRI on RSC-S option	54
MSL CompuCALL (SCAI) option	56
MSL CLASS option	57
MSL SMDI option	60
MSL ACD option	61
MSL Enhanced SMA option	62
MSL ICM option	62
MSL IP Client option	64
MSL IP Line option	64

SECTION II: Value-added Applications

Remote office	69
Introduction	69
Nortel Networks Remote Office 9150	70
Remote Office 9150 features and benefits	71
Remote Office 9150 document references	72
Nortel Networks Remote Office 9110 and 9115	73
Remote Office 9110/9115 features and benefits	74
Remote Office 9110/9115 document references	76
Nortel Networks Meridian Digital Telephone IP Adapter	77
Meridian Digital Telephone IP Adapter features and benefits	78
Meridian Digital Telephone IP Adapter document references	80
<hr/>	
Voice messaging	81
Introduction	81
Nortel Networks CallPilot 2.5	81
CallPilot 2.5 features and benefits	84
CallPilot 2.5 document references	86
Nortel Networks CallPilot 3.1 (planned for early 2005)	87
Network Message Service (NMS)	88
ISUP Signaling to SMDI	89
SMDI Signaling to TCAP Messaging	90
NMS features and benefits	90
NMS configurations	90
Network Message Service document references	92
<hr/>	
Conferencing and announcements	93
Introduction	93
Nortel Networks Meridian Integrated Conference Bridge (MICB) Release 3.0	94
Nortel Networks MICB features and benefits	95
MICB document references	95
Nortel Networks ICB Release 4.0	96
New features available with ICB Release 4.0	96
<hr/>	
System management	101
Introduction	101
Nortel Networks Optivity Telephony Manager for Meridian SL-100 Release 2.0	102
Integration of Optivity Network Management System (NMS)	102
Optivity Telephony Manager features and benefits	104
Optivity Telephony Manager document references	106
Real-time Station Message Detail Recording	106
<hr/>	
Voice and data services	109
Introduction	109
Nortel Networks Integrated Services Digital Network (ISDN)	110
National ISDN	111
ISDN Basic Rate Interface (BRI)	115

- ISDN Primary Rate Interface (PRI) 116
- ISDN Operations, Administration and Maintenance 118
- Specialized data services 120
- Narrowband Services 120
 - ISDN data services 122
- Wideband services 123
 - Dialable Wideband Services (DWS) 124
- Common Channel Signaling 7 (CCS7) 127
 - Available services for CCS7 128
 - CCS7 trunk signaling features and benefits 129
 - Available services for CCS7 Trunk Signaling 130
 - CCS7 document references 130

Call Centers and Computer Telephony Integration (CTI) 131

- Introduction 131
- Nortel Networks Automatic Call Distribution (ACD) 132
 - ACD features and benefits 133
 - ACD document references 134
- Nortel Networks Intelligent Call Management (ICM) 136
 - ICM in a Meridian SL-100 configuration 137
 - ICM in a Communication Server 2100 Compact configuration 138
 - Nortel Networks ICM features and benefits 140
 - ICM document references 142
- Nortel Networks Symposium products 143
 - Symposium server requirements 143
 - Nortel Networks Symposium TAPI Driver for ICM Release 1.1 144
 - Nortel Networks Symposium Call Center Server (SCCS) Release 5.0 (planned release 2004) 149
 - Nortel Networks Symposium Call Center Web Client Release 4.5 158
 - Nortel Networks Call Center Management Information System (CC MIS) Release 5.2 162
 - Nortel Networks Symposium Agent Release 2.3 165
 - Nortel Networks Symposium LinkPlexer Release 1.2 168
 - Nortel Networks Symposium Web Center Portal 4.0 173
 - Nortel Networks Media Processing Server 500 (MPS 500) Release 2.1 176
 - Nortel Networks Media Processing Server 1000 (MPS 1000) Release 2.1 179
 - Nortel Networks Peri-ICM Release 2.0 183
- LDAP Synching 187
 - LDAP Synching limitations and restrictions 191
 - LDAP Synching features and benefits 192
 - LDAP Synching document references 192

Custom Local Area Signaling (CLASS) 193

- Introduction 193
- Overview of CLASS features 194
 - Benefits of CLASS features 194
- CLASS features over CSS7 195
- CLASS Features over PRI 197
 - CLASS features over PRI with the NI-2 variant only 198
 - CLASS features over PRI with the NI-2 variant and NTNA variant 198

Limitations and restrictions for PRI variants NTNA and NI-2	209
PRI variant NTNA limitations and restrictions	209
PRI variant NI-2 limitations and restrictions	209
CLASS hardware requirements	210
CLASS feature and card definitions	210
CLASS hardware notes	212
Implementing CLASS	213

SECTION III: Appendices

Appendix A: Safety and regulatory requirements	217
Introduction	217
Safety and regulatory requirements	217
Appendix A: Functionality descriptions	219
Introduction	219
SE07 software functionality listing	219
List of terms	307



About this document

Purpose and audience

This Application Planning Guide provides information on enterprise features and applications that work with the Meridian SL-100 and the Nortel Networks Communication Server 2100. This product information will help you make a new or upgrade purchase decision.

Note: For information about the hardware platform for the Meridian SL-100 and the Communication Server 2100 (CS 2100), refer to the *Meridian SL-100/CS 2100 Product Guide* (NTP 555-4001-806).

For more detailed technical information about the features and applications that work with the Meridian SL-100/CS 2100, refer to the Document reference section after the description of each feature or application in this document.

Release

This release of the Meridian SL-100/Communication Server 2100 Application Planning Guide covers features and applications in the Succession for Enterprise Release 07 (SE07).

Market

This release of the Meridian SL-100/Communication Server 2100 Application Planning Guide includes features and applications that are common to the Meridian SL-100/CS 2100.

Related documents

Table 1 lists related documents for the Meridian SL-100 and Communication Server 2100.

Table 1
Related documents for the Meridian SL-100 and Communication Server 2100

Description	Document number
<i>Meridian SL-100/Nortel Networks Communication Server 2100 Product Guide</i>	NTP 555-4001-806
<i>Meridian SL-100 DSN Feature Description Manual (Federal)</i> <i>Meridian SL-100 Commercial Systems Feature Description Manual (Commercial)</i>	NTP 555-4021-801 NTP 555-4031-801
<i>DMS-100 Feature Description Manual</i>	NTP 297-1001-801
<i>DMS-100 BCS0-BCS27 Feature Description Manual</i>	NTP PLN-1001-003

How to check the version and issue of this document

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

Version	<ul style="list-style-type: none"> • First two digits indicate the version (01.01) • Version number increases each time the document is updated to support a new software release. • Example: The first release of a document is 01.01. The second release of a document in the next software release is 02.01
Issue	<ul style="list-style-type: none"> • Second two digits indicate the issue (01.01) • Issue number increases each time the document is revised, but re-released in the same software release cycle. • Example: The first release of a document is 01.01. The second release of a document in the same software release is 01.02

FOR MORE INFORMATION



To determine if you have the latest version of this document, and how documentation for your product is organized, check the release information in the *Meridian SL-100 Master Index of Publications*.

Giving feedback

Send feedback about this Application Planning Guide to the following e-mail address:

- DLMSLDDT@nortelnetworks.com



Introduction

Introduction

This chapter contains the following information:

- “Overview of Application Planning Guide” on page 17
- “Nortel Networks Meridian SL-100” on page 18
- “Evolution of Meridian SL-100” on page 19
- “Nortel Networks Communication Server 2100” on page 19
- “Overview of the SE07 Release” on page 21
- “Access training and documentation for Meridian SL-100/Communication Server 2100” on page 22

Overview of Application Planning Guide

This Application Planning Guide contains the following information:

- Summary of existing, updated and new Nortel Networks enterprise features and applications that operate with Nortel Networks Meridian SL-100 and Communication Server 2100.
- Features and applications are common to both the Meridian SL-100/Communication Server 2100 Commercial and Federal markets. Information about features or applications specifically for the Federal market is not contained in this Application Planning Guide.
- Features and applications are released in the Meridian SL-100/Communication Server 2100 SE07 Release, or released separately within the Release SE07 time frame (before the Meridian SL-100/Communication Server 2100 Release SE08).
- Summary of future Nortel Networks enterprise features and applications for the Meridian SL-100/Communication Server 2100 to assist you with your future network planning.

Note: For information about the hardware platform for Meridian SL-100 and CS 2100, refer to the *Meridian SL-100/Communication Server 2100 Product Guide* (NTP 555-4001-806).

18 Introduction

Nortel Networks Meridian SL-100

The Nortel Networks Meridian SL-100 enterprise switch is tailored for large enterprise networks of 4,000 plus lines, and has been an industry-leading enterprise Private Branch Exchange (PBX) for over two decades.

The Meridian SL-100 system has the following features:

- The largest member of Nortel Networks enterprise family of business communications systems.
- Combines the advanced hardware and software architecture of the DMS-100 with the premier PBX software features of the Meridian into a single enterprise solution.
- Available in two configurations:
 - The Meridian SL-100 SuperNode SE, with its 50,000-port capacity.
 - The Meridian SL-100 SuperNode, designed for higher capacity (up to 100,000 ports).

Benefits of Meridian SL-100

The Meridian SL-100 includes the following benefits:

- **Proven Reliability.** Six-nines reliability is delivered using Nortel Networks carrier-based architecture as the foundation for the Meridian SL-100. The Meridian SL-100 is the largest PBX in North America.
- **Flexibility.** The Meridian SL-100 combines both carrier and Nortel Networks Meridian business features in a single enterprise solution. This allows the deployment of the features you need where you need them.
- **Investment Protection.** As your business grows and changes, Meridian SL-100 systems and applications can grow right along with it – from 4,000 to 100,000 ports.
- **Proven Track Record.** The Meridian SL-100 has delivered the valued features and applications, such as Unified Messaging and Call Centers to customers for 20 years.

Evolution of Meridian SL-100

With the evolution of Voice over Internet Protocol (VoIP), Nortel Networks has updated the Meridian SL-100 platform to support VoIP architecture and protocols in the current software – now called the Succession for Enterprise (SE07) Release. The SE07 Release delivers the complete feature suite available on the Meridian SL-100 and continues to evolve a platform for delivery of new capabilities in the future with the Nortel Networks Communication Server 2100. The migration to VoIP introduces the following benefits:

- An end-to-end network solution that supports all enterprise services.
- Rapid revenue growth by enabling new services while preserving the revenue flow from existing services.
- Accelerated service innovation by supporting open programmable interfaces and a complete open service environment.
- Reduced cost for deploying and operating the network.
- Smooth migration of services from Time Division Multiplexing (TDM) infrastructure to a packet infrastructure.
- Leveraged investment in the existing infrastructure.
- Reduced transition risk while maintaining existing standards for reliability.

Nortel Networks Communication Server 2100

“Superclass” softswitch for large enterprises

Nortel Networks Communication Server 2100 delivers the ubiquity, quality and reliability of the traditional TDM telephony network on a next-generation packet network. Built on proven, industry-leading, Linux-based software, it is both carrier-grade and fault tolerant, with system robustness associated with the DMS SuperNode. The Communication Server 2100 (CS 2100) is the ideal platform for government, universities, hospitals, financial institutions and major Fortune 500 companies that require the reliability of carrier-grade networks, scalability up to 200,000 ports, enterprise business features and ease of operations associated with a tandem softswitch. It is the cornerstone of a complete IP solution for large campus enterprises.

XA-Core or Compact Processors

Nortel Networks is the only vendor delivering a Superclass softswitch offering flexible solutions based on customer requirements and investment protection with two processors available: XA-Core or Compact. Installed base customers can protect their investment and cost effectively migrate to packet networks with XA-Core or leverage the Compact processor. The Compact-based system is built on a commercial, off-the-shelf platform, allowing enterprises to ride the technology curve and enabling full-featured greenfield and evolutionary networks in a reduced-footprint solution. New capabilities are available with the Compact, such as Geographic Survivability, allowing for the geographic dispersal of primary communication server processors.

For more information about the Communication Server 2100 XA-Core or Compact, refer to the section "Communication Server 2100" in the *Meridian SL-100/Communication Server 2100 Product Guide* (555-4001-806).

Benefits of Nortel Networks Communication Server 2100

The Communication Server 2100 includes the following benefits:

- **Carrier-grade technology designed for the enterprise business.** The system technology is the same technology deployed by major North American and global carriers. Nortel Networks is the vendor of choice for VoIP technology in the carrier space where reliability and services cannot be compromised. With 99.999 percent reliability, the Communication Server 2100 enables highly reliable solutions over IP.
- **Extensive service offering.** The Communication Server 2100 expands traditional enterprise services and offers advanced multimedia services such as productivity enhancing collaborative capabilities and presence-enabled call handling and directory services.
- **Open standards.** The Communication Server 2100 was designed with open standards to provide multi-vendor compatibility, such as H.248, H.323, MGCP and Session Initiation Protocol for Telephony (SIP-T) interfaces for the enterprise. The architecture promotes compatibility with standards-compliant packet switching equipment, TDM circuit-switched facilities, and Network Management System (NMS) and billing operations.

- **Highly scalable, single system.** As a multi-function switch, scalable to 165,000 trunks and 200,000 lines, the Communication Server 2100 lowers a customer's network operational expenses and complexity. Large regional areas can be treated as one network. Interoperability features provide flexibility by offering customers an end-to-end Nortel Networks solution or a multi-vendor solution based on their requirements.
- **Leveraging the power of Nortel Networks portfolio breadth.** The Nortel Networks Communication Server 2100 leverages the breadth of Nortel Networks portfolio by embedding the reliability and performance of Passport 8600, the transport and flexibility of Optera, and the capacity and capability of the Passport Carrier Data portfolio. It delivers a complete solution from the wide range of Nortel Networks capabilities.
- **Simplified management.** Management of the Nortel Networks Communication Server 2100 is simplified by the use of the Integrated Element Management System (IEMS) which is in extended beta during 2004, and will be released for General Availability in the SE07 release. This solution brings a simplified view of the Communication Server 2100 solution with the power to quickly provision and manage the components of the Communication Server 2100.

Overview of the SE07 Release

The SE07 release offers the following functionality:

- Adds further features and functionality to support the VoIP architecture and protocols.
- Provides a bridge from the Meridian SL-100 to the Communication Server 2100, allowing customers to evolve to enterprise IP networks at their own pace.
- Migrates previous Meridian SL-100 software releases to the SE software stream. Along with new SE07 features and functionality, the majority of the features and functionality introduced in previous MSL releases, are available in the SE07 release.
- Operates with the Meridian SL-100 and the Communication Server 2100 (XA-Core and Compact).

22 Introduction

Access training and documentation for Meridian SL-100/ Communication Server 2100

Access complete curriculum paths, course descriptions and online registration for the Meridian SL-100/Communication Server 2100 at www.nortelnetworks.com/training

Access complete documentation for the Meridian SL-100/Communication Server 2100 at www.nortelnetworks.com/documentation

Software Ordering





Software ordering

Introduction

This chapter contains the following information:

- [“SE07 software release” on page 25](#)
- [“Meridian SL-100/Communication Server 2100 software architecture” on page 26](#)
- [“Software ordering codes” on page 32](#)

Meridian SL-100/Communication Server 2100 software is a layered software architecture supporting rapid feature development, enhanced switch performance, simplified ordering and faster deployment of services to end users.

Release SE07 is the current software release for Meridian SL-100 and Communication Server 2100.

SE07 software release

SE07 highlights are below:

- SE07 provides all the required software functionality for packet-based signaling on the Communication Server 2100 (XA-Core or Compact) or an existing Meridian SL-100 platform.
- SE07 can be installed in a hybrid configuration – The Communication Server 2100 hybrid configuration allows the Communication Server 2100 to simultaneously manage Time Division Multiplexing (TDM) network elements and packet network elements.

The features for all Meridian SL-100\Communication Server 2100 system Product Computing-module Loads (PCLs – stand-alone and combined applications) are developed in the SE development stream. When the SE development stream is updated, each new product release is given a sequential number (for example, SE07, SE08). The availability of a new SE version allows new PCLs to be assembled from the SE development stream.

26 Software ordering

Nortel Networks advertises availability for Meridian SL-100 system features by introducing the SE product release in which the feature is available. For example, a feature may become available in SE06. That means that PCLs built from SE06 and later will contain the feature. Note that the PCL represents the ordered part of the software load. The MSL product release cannot be ordered, but represents the vintage of software from which the PCL is built.

Meridian SL-100/Communication Server 2100 software architecture

The Meridian SL-100/Communication Server 2100 software contains four major software layers:

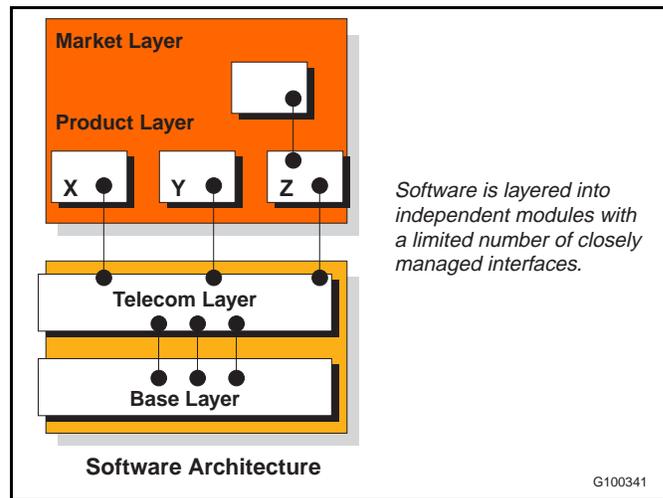
- Base layer
- Telecom layer
- Product layer
- Market layer

Software layering has the following advantages:

- The switch software is partitioned into relatively independent software modules with well-defined interfaces to other software modules. This software partitioning allows the software to take advantage of object-oriented programming and other efficiencies for faster service development.
- A software layer can be quickly and reliably updated and tested because there are few interactions to consider outside that layer.
- The application layers can be enhanced independently to quickly meet the specific requirements of customers.

[Figure 1 on page 27](#) illustrates the software layers that make up the Meridian SL-100/Communication Server 2100 software.

Figure 1
Software layering



Product Computing-module Loads (PCLs) and Software Optionality Control (SOC)

Nortel Networks delivers the software layers together in a Product Computing-module Load (PCL).

This is no need to consider software layers when ordering Meridian SL-100\Communication Server 2100 software. Each new PCL automatically includes the latest available features in each software layer – Base, Telecom, Product, and Market – as well as Extended Peripheral Module (XPM) software.

Each PCL contains all the Generally Available software for a particular switch application in a particular market. There is no need to reload software to deploy a Generally Available feature, because all features are already present in the switch.

With PCLs, the customer receives software in the exact configuration it is developed. The customer chooses the services to be deployed either by choosing one of the PCLs applicable to their market or purchasing one of the software options in the PCL.

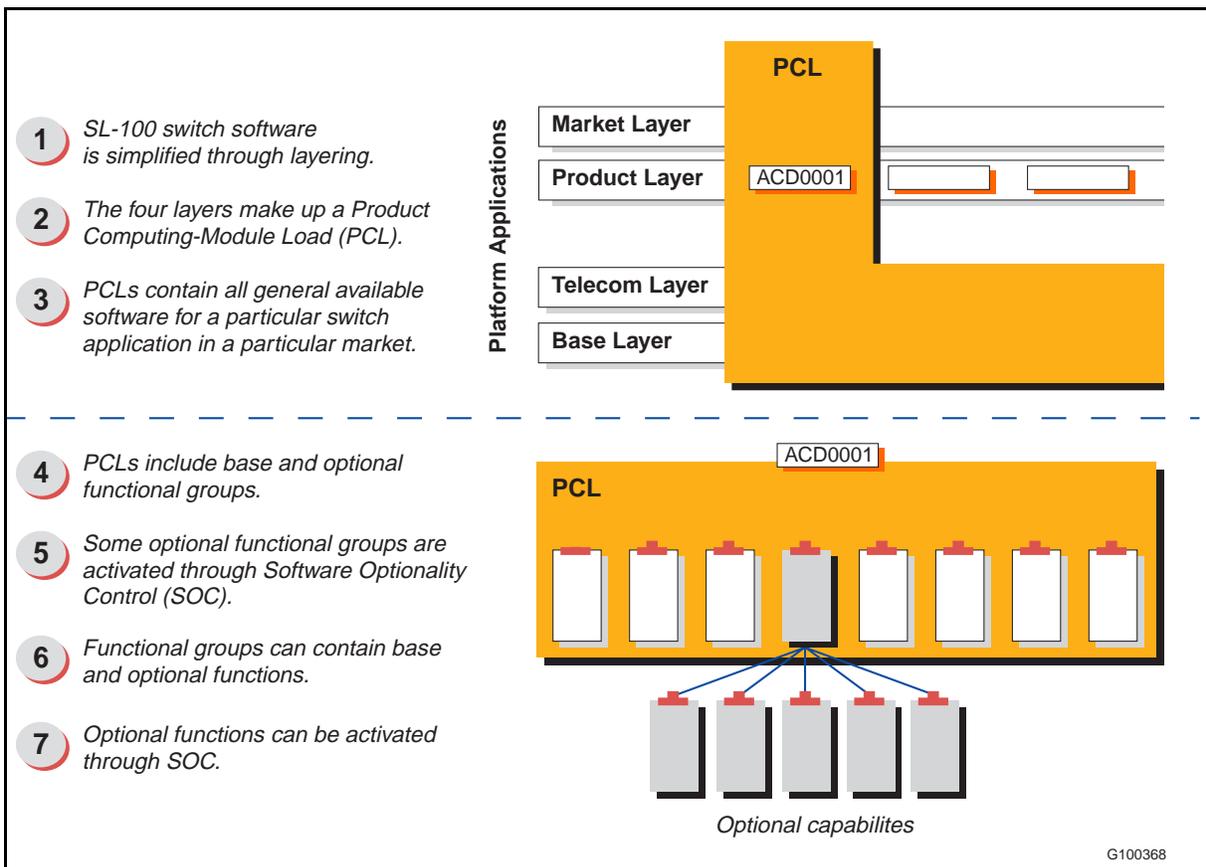
Each PCL has a PCL name and corresponding ordering code that describes the PCL product type, market application and the MSL/SE product release from which the PCL is built. Any addition or changes to PCLs in subsequent MSL/SE product releases may apply to that release only. *Please verify any future PCLs and ordering codes through the appropriate marketing literature and customer documentation.*

28 Software ordering

Software options in the PCL are activated by the Software Optionality Control (SOC). Nortel Networks uses the SOC utility to activate newly purchased functionality that is considered “optional”. Nortel Networks distributes software passwords to activate options licensed by the customer. These small password files, known as Software Control Files, will be transferred to customers through the same network where they receive software patches.

Figure 2 illustrates PCLs and SOC.

Figure 2
Product Computing Load (PCL) and Software Optionality Control (SOC)



Software options

All generally available Meridian SL-100/Communication Server 2100 system features reside in the software load. When a customer purchases software, for a new system or an upgrade to an existing system, they have the right to use all features resident in the software load, except the software options in [Table 2 on page 29](#) that are ordered separately. The customer must purchase these software options from Nortel Networks before use (unless previously purchased).

Software options included at no charge in SE07

In previous releases of Meridian SL-100/Communication Server 2100 software, the following Right-To-Use (RTU) software options required the customer to purchase them. The software options were free in SE06 and are free for those customers migrating from SE06 to SE07:

- “MSL CCS7 option” on page 51
- “MSL Packet Handler option” on page 52
- “MSL DWS option” on page 53
- “MSL CompuCALL (SCAI) option” on page 56
- “MSL CLASS option” on page 57
- “MSL SMDI option” on page 60
- “MSL Enhanced SMA option” on page 62

Note: Customers must purchase the hardware associated with each software option above.

Orderable software options

Table 2 lists the software options that are orderable in the SE07 base software load for all new systems and upgrades. Unless previously purchased, these Right-to-Use (RTU) Required software options must be purchased from Nortel Networks before use.

Table 2
Orderable software options for SE07 (Sheet 1 of 2)

Software options	Order code	MTC	Increment
ISDN – PRI	00033464	MSL00105	per T-1
PRI on the RSC-S	00043354	MSL00113	per remote
ISDN – BRI	00033465	MSL00100	per LCME line
Automatic Call Distribution (ACD) Enabler	00033994	MSL00109	per agent
Intelligent Call Management	00045497	MSL00119	per link & per agent
Intelligent Call Management Enabler	00045498	MSL00119	per agent
IP Telephony IGW Client Enabler	00045978	MSL00126	per client
IP Telephony Line Gateway Enabler	00045979	MSL00127	per gateway
MSL SuperNode Data Manager Base S/W option	00049369	MSL00140	per SDM

30 Software ordering

Table 2
Orderable software options for SE07 (Sheet 2 of 2)

Software options	Order code	MTC	Increment
Geographic Survivability Option	00049350	MSL00146	per Compact Communication Server 2100 deployed with Geographic Survivability
Realtime Billing Option	00049314	MSL00148	per SDM
OM Format to CSV Option	00049369	MSL00149	per SDM
MSL CS 2100 Hybrid Option	00049370	MSL00142	per Communication Server 2100 (XA-Core or Compact) deployed supporting both TDM and IP.
MSL CS 2100 Compact Option	00049315	MSL00143	per Communication Server 2100 using Compact Communication Server
MSL CS 2100 Gateway Controller Option	00049373	MSL00145	per GWC port (DS0) supporting 3rd party gateways
MSL CS 2100 Interworking SPM IP	00049372	MSL00144	per IW-SPM-IP
MSL IPCM Base Software	00048820	MSL00147	per gateway
IPCM Client Enabler Option	00048821	MSL00138	per client
Media Server 2010	MSL00167	MSL00167	per domain
Real Time Portal Feature	00049397	MSL00156	per domain
<p>For software options, you must purchase Right-To-Use unless previously purchased. Requires Nortel Networks Hardware and Software Engineering to activate.</p> <p>To simplify the tracking of your RTU options, beginning with MSL06, each option possesses a Master Tracking Code (MTC). The MTC eliminates the need to check several separate codes to verify RTU at the switch (in the SOC utility listing).</p>			

Refer to the *Load Content Record (LCR)* for features in this release that are included or must be purchased for the Meridian SL-100/Communication Server 2100 market. The *Load Content Record* is included with the customer documentation and delivered to site before the software upgrade. Though resident in the load, those features identified as “INACTIVE” in the LCR are features which are required for lower layer interdependencies and/or have not been verified in the Meridian SL-100/Communication Server 2100 environment.

The end user is responsible for any service impact associated with the unauthorized activation of features that are Not Generally Available to the Meridian SL-100/Communication Server 2100 market.

Please refer to [“Software ordering codes” on page 32](#) for Meridian SL-100/Communication Server 2100 software options and ordering codes.

32 Software ordering

Software ordering codes

This section contains the software options and ordering codes that are common to the Meridian SL-100/Communication Server 2100.

Base software loads

Table 3 lists the Commercial Base software loads available in SE07 for the Meridian SL-100/Communication Server 2100.

Table 3
Commercial Base Software loads for Meridian SL-100/Communication Server 2100

PCL name	Description	Order Code
SNMSL007	Commercial IVD	SE000007
SCMSL007	Commercial Compact load for Meridian SL-100/Communication Server 2100	SEC00007

Note: Table 4 lists the order codes for the added functionality that must be purchased with each base load.

Base loads added functionality

Table 4 list the order codes for the functionality that must be purchased with each base load.

Table 4
Base loads added functionality

Description	Increment	Order code
MSL System Line Enabler (non-LCME)	00033472	per wired line
MSL Enhanced System Line Enabler (LCME)	00033465	per wired LCME line

Software upgrades

Table 5 list the software upgrades and order codes for Meridian SL-100/Communication Server 2100 software releases.

Table 5
Software upgrades

Description	Increment	Order code
From MSL17 to SE06 TDM or Hybrid	Per site	00048290
From SE06 to SE07 TDM or Hybrid	Per site	00049578
Please contact your Nortel Networks authorized Meridian Distributor for site specific pricing.		

SE07 upgrade path

You must be operating a Meridian SL-100 (TDM) or Communication Server 2100 XA-Core/Compact (IP packet) with release SE06 to upgrade to release SE07.

Design Release Units (DRUs) in SE07

SE07 PCLs are built on other Development Release Units (DRUs). Table 6 lists all the DRUs included in SE07.

Table 6
DRUs included in SE07

DRU name	Description
MSL20	Meridian SL-100 custom layer
CSP20	Computing Services Platform, which includes the layers listed below.
BASE21	Base Layer
TL20	Telecom Layer
CCM20	DMS 100 Common Layer
XPM20	Extended Peripheral Module Layer
SHR20	Shared Layer
CNA20	DMS-100 Custom Layer
MSH20	Multi-service Hub
Note: SHR20 is a library and only selected Load Content File (LCFs) are incorporated in SE07.	

SE07 Software options

Table 7 lists the items controlled by software options for SE07.

Table 7
SE07 software options (Sheet 1 of 2)

Description	Functional group	Master Tracking Code (MTC)	More information
MSL ESDN Class Feat Enhc	MSL BASE	MSL00162	Refer to Table 9 on page 35
MSL GIAC Paging Modification	MSL BASE	MSL00163	Refer to Table 10 on page 35

34 Software ordering

Table 7
SE07 software options (Sheet 2 of 2)

Description	Functional group	Master Tracking Code (MTC)	More information
H.323 Gatekeeper option	MSL Succession Enterprise	MSL00165	Refer to Table 30 on page 45
MSL IEMS option	MSL Succession Enterprise	MSL00166	Refer to Table 31 on page 45

Features available with Base software loads for Meridian SL-100/Communication Server 2100

The following tables contain features that are available with Base software loads for the Meridian SL-100/Communication Server 2100.

ACD Agent Expansion 30,000

Table 8 lists the functionality for ACD Agent Expansion 30,000 option.

Table 8
ACD Agent Expansion 30,000 option

Functionality name	ACD Agent Expansion 30,000
Functionality group	MSL ACD OPT
Functionality description	This feature extends the maximum number of ACD agents provisioned on a single Meridian SL-100 switch from 9,999 to 30,000 agents. This activity does not increase the number of ACD groups per switch or the number of ACD agents per group. It only increases the switch-wide maximum number of total ACD agents. This feature is controlled by SOC. The level of SOC purchased determines the maximum number of ACD agents on the switch up to a maximum of 30,000 agents.
Right-To-Use Required	Yes
Master Tracking Code	MSL00109
Order code	00033994, 00045497, 00045498
Increment	Per Agent

MSL ESDN Class Feat Enhc

Table 9 lists the functionality for MSL ESDN Class Feat Enhc option.

Table 9
MSL ESDN Class Feat Enhc

Functionality name	MSL ESDN Class Feat Enhc
Functionality group	MSL BASE
Functionality description	The MSL ESDN CC Feature Enhancements allows the following to existing feature options to be assigned to ESDN lines (these features were previously restricted from being added to an ESDN): <ul style="list-style-type: none"> • Customer Originated Trace (COT) • Message Waiting (MWT)
Right-To-Use Required	Yes
Master Tracking Code	MSL00162
Order code	MSL00162
Increment	per switch

MSL GIAC Paging Modification

Table 10 lists the functionality for MSL GIAC Paging Modification option.

Table 10
MSL GIAC Paging Modification (Sheet 1 of 2)

Functionality name	MSL GIAC Paging Modification
Functionality group	MSL BASE
Functionality description	The Group Paging for GIAC Enhancement feature modifies the existing functionality of the GIAC feature to: <ul style="list-style-type: none"> • add the capability to assign one key for paging which saves the originator three keystrokes (the originator previously had to press four keystrokes). • create a one-way communication path for broadcasting the originator's message, rather than the existing two-way conference style. • expand the maximum member group size to 99 users (plus the originator).
Right-To-Use Required	
Master Tracking Code	MSL00001

36 Software ordering

Table 10
MSL GIAC Paging Modification (Sheet 2 of 2)

Order code	
Increment	per switch

MSL Line Option for IPCM phones option

Table 11 lists the functionality for MSL Line Option for IPCM phones option.

Table 11
MSL Line Option for IPCM phones option

Functionality name	MSL Line Option for IPCM phones option
Functionality group	MSL Succession Enterprise
Functionality description	The IPCLIENT line option has been created for the M5216 LCC to differentiate IPCM sets from M5216 sets provisioned on a CS 2100.
Right-To-Use Required	No
Master Tracking Code	MSL00139
Order code	N/A
Increment	per switch

Mediant 2000 Gateway

Table 12 lists the functionality for Mediant 2000 Gateway.

Table 12
Mediant 2000 Gateway (Sheet 1 of 2)

Functionality name	Mediant 2000 Gateway
Functionality group	MSL Succession Enterprise
Functionality description	In a CS 2100 configuration, the AudioCodes Mediant 2000 trunk gateway provides access to the Public Switched Telephone Network (PSTN). The Mediant 2000 Gateway provides options for 1, 2, 4, 8 and 16 spans of independent, simultaneous Voice over Packet calls. It supports up to 16 DS1s and communicates using the H.248 protocol. It supports NTNA PRI for both the network and user side.
Right-To-Use Required	No
Master Tracking Code	MSL00139

Table 12
Mediant 2000 Gateway (Sheet 2 of 2)

Order code	Order codes per span: <ul style="list-style-type: none"> • 1 00049915 • 2 0049916 • 4 00049917 • 8 00049918 • 16 00049919
Increment	per gateway

MSL Table CARID for SPM

Table 13 lists the functionality for MSL Table CARID for SPM.

Table 13
MSL Table CARID for SPM

Functionality name	MSL Table CARID for SPM
Functionality group	MSL Base
Functionality description	This feature adds the SPM peripheral to table CARID
Right-To-Use Required	No
Master Tracking Code	MSL00001
Order code	
Increment	

ECAN Enhancements

Table 14 lists the functionality for ECAN Enhancements.

Table 14
ECAN on SPM (Sheet 1 of 2)

Functionality name	ECAN Enhancements
Functionality group	MSL BASE
Functionality description	
Right-To-Use Required	No
Master Tracking Code	MSL00001

38 Software ordering

Table 14
ECAN on SPM (Sheet 2 of 2)

Order code	N/A
Increment	

MSL SuperNode Data Mgr option

Table 15 lists the functionality for MSL SuperNode Data Mgr option.

Table 15
MSL SuperNode Data Mgr option

Functionality name	MSL SuperNode Data Mgr option
Functionality group	MSL Succession Enterprise
Functionality description	This option enables the SuperNode Data Manager (SDM) to support Command Line Interfaces with security, secure file transfer and basic billing capabilities.
Right-To-Use Required	
Master Tracking Code	MSL00140
Order code	00049369
Increment	

MSL SuperNode Data Mgr II option

Table 16 lists the functionality for MSL SuperNode Data Mgr II option.

Table 16
MSL SuperNode Data Mgr II option

Functionality name	MSL SuperNode Data Mgr II option
Functionality group	MSL Succession Enterprise
Functionality description	
Right-To-Use Required	
Master Tracking Code	MSL00141
Order code	
Increment	

MSL Geographic Survivability option

Table 17 lists the functionality for MSL Geographic Survivability option.

Table 17
MSL Geogrphic Survibilty option

Functionality name	MSL Geogrphic Survibilty option
Functionality group	MSL Succession Enterprise
Functionality description	This option enables the support for the Communication Server 2100 Compact Communication Server to be split by up to 120 km (75 miles). This capability delivers a higher degree of reliability by avoiding facility failures while not duplicating communications assets in a network
Right-To-Use Required	Yes
Master Tracking Code	MSL00146
Order code	00049350
Increment	

MSL Realtime Billing option

Table 18 lists the functionality for MSL Realtime Billing option.

Table 18
MSL Realtime Billing option

Functionality name	MSL Realtime Billing option
Functionality group	MSL Succession Enterprise
Functionality description	This option allows billing records to be available for transfer from the SDM 30 seconds after the call is disconnected. Realtime billing downloads a small group of records to the Device Independent Recording Package (DIRP) billing file on the downstream destination as the records are added to the open billing on the SDM. To deliver records, Realtime billing uses File Transfer Protocol (FTP) through an Ethernet connection. This option also allows for the creation of filters that allow the display of records only matching a specific search criteria. The MSL Realtime Billing option should be applied for each SDM deployed at a customer site at customer request.
Right-To-Use Required	Yes
Master Tracking Code	MSL00148
Order code	00049314
Increment	per SDM

40 Software ordering

MSL OM Format to CSV option

Table 19 lists the functionality for MSL OM Format to CSV option.

Table 19
MSL OM Format to CSV option

Functionality name	MSL OM Format to CSV option
Functionality group	MSL Succession Enterprise
Functionality description	This option provides the SDM Operational Measurement Delivery (OMD) application. SDM OMD collects customer-defined Operational Measurement (OM) data from the Communication Server 2100, and stores the data in OM report files on the SDM in comma separated value (CSV) format. The MSL OM Format to CSV option should be applied for each SDM deployed at a customer site at customer request.
Right-To-Use Required	Yes
Master Tracking Code	MSL00149
Order code	00049315
Increment	per SDM

MSL Real time OMs option

Table 20 lists the functionality for MSL Real time OMS option.

Table 20
MSL Real time OMs option

Functionality name	MSL Real time OMs option
Functionality group	MSL Succession Enterprise
Functionality description	This option
Right-To-Use Required	
Master Tracking Code	MSL00150
Order code	
Increment	

MSL CS 2100 Hybrid option

Table 21 lists the functionality for MSL CS 2100 Hybrid option.

Table 21
MSL CS 2100 Hybrid option

Functionality name	MSL CS 2100 Hybrid option
Functionality group	MSL Succession Enterprise <ul style="list-style-type: none"> • CS2B COMMSVR2000 BASE • CS2C COMMSVR2000 COM • CS2N COMMSVR2000 NA
Functionality description	This option enables the support of traditional TDM equipment and allows for the migration from TDM-based systems to be soft witch systems. "Back office" services like call center, billing, etc can be protected with little to no investment in those "back office" operations.
Right-To-Use Required	Yes
Master Tracking Code	MSL00142 = MSL Succession Enterprise <ul style="list-style-type: none"> • CS2B0001 = CS2B COMMSVR2000 BASE • CS2C0001 = CS2C COMMSVR2000 COM • CS2N0001 = CS2N COMMSVR2000 NA
Order code	00049370
Increment	

MSL CS 2100 Compact option

Table 22 lists the functionality for MSL Succession Enterprise Compact option.

Table 22
MSL CS 2100 Compact option

Functionality name	MSL CS 2100 Compact option
Functionality group	MSL Succession Enterprise
Functionality description	This option enables the Compact Communication Server within the Communication Server 2100 solution. The Compact Communication Server is an open hardware and software architecture.
Right-To-Use Required	Yes
Master Tracking Code	MSL00143
Order code	00049371
Increment	

42 Software ordering

MSL CS 2100 Intrwk SPM IP option

Table 23 lists the functionality for MSL CS 2100 Intrwk SPM IP option.

Table 23
MSL CS 2100 Intrwk SPM IP option

Functionality name	MSL CS 2100 Intrwk SPM IP option
Functionality group	MSL Succession Enterprise
Functionality description	This option is a bridge between TDM and IP. It allows for seamless migration of users from TDM and IP. It simplifies the deployment of IP by allowing for the sharing of database translations for TDM and IP. This option simplifies management and operations of a converged network by implementing one set of rules for TDM and IP.
Right-To-Use Required	Yes
Master Tracking Code	MSL00144
Order code	00049372
Increment	

MSL CS 2100 Gtrwy Cont. option

Table 24 lists the functionality for MSL CS 2100 Gtrwy Cont. option.

Table 24
MSL CS 2100 Gtrwy Cont. option

Functionality name	MSL CS 2100 Gtrwy Cont. option
Functionality group	MSL Succession Enterprise • CSB COMMSVR2000 BASE
Functionality description	When deploying non-Nortel Networks gateways (for example, the Mediatrix Analog Gateway) the MSL Succession Enterprise Gateway Controller option drives those ports/gateways.
Right-To-Use Required	Yes
Master Tracking Code	MSL00145 = MSL Succession Enterprise • CS2B0002 = CSB COMMSVR2000 BASE
Order code	00049373
Increment	

MSL IPCM Base Software option

Table 25 lists functionality for MSL IPCM Base Software option.

Table 25
MSL IPCM Base Software option

Functionality name	MSL IPCM Base Software option
Functionality group	MSL Succession Enterprise
Functionality description	The Meridian SL-100 IP Client Manager integrates seamlessly with existing corporate networks to unify the delivery of voice and data over IP connections. The IPCM acts as a gateway for UNISTim IP terminals in a Meridian SL-100 or Communication Server 2100 solution.
Right-To-Use Required	Yes
Master Tracking Code	MSL00147
Order code	00048820
Increment	per-gateway

MSL IPCM Client Enabler option

Table 26 lists the functionality for MSL IPCM Client Enabler option.

Table 26
MSL IPCM Client Enabler option

Functionality name	MSL IPCM Client Enabler option
Functionality group	MSL Succession Enterprise
Functionality description	This option allows UNISTim IP clients served by an IPCM gateway to provide users access to the Meridian Business Set feature suite, in addition to advanced features available to IP telephony clients.
Right-To-Use Required	Yes
Master Tracking Code	MSL00138
Order code	00048821
Increment	per-client

44 Software ordering

MSL MG 9000 ESA option

Table 27 lists the functionality associated with MSL MG 9000 ESA option.

Table 27
MSL MG 9000 ESA option

Functionality name	MSL MG 9000 ESA option
Functionality group	MSL Succession Enterprise
Functionality description	This feature maintains call processing for MG 9000 lines and MG 9000 Access Bridging Interface subtending lines even when there is a failure on the call control link back to the Communication Server 2100.
Right-To-Use Required	
Master Tracking Code	MSL00151
Order code	
Increment	

MSL Media Server 2010 option

Table 28 lists the functionality associated with MSL Media Server 2010 option.

Table 28
MSL Media Server option

Functionality name	MSL Media Server 2010 option
Functionality group	MSL Succession Enterprise
Functionality description	This option is software to enable the Media Server 2010 (MS 2010). The MS 2010 is used to support conference, announcements and Lawful Intercept within a pure IP softswitch. The MS 2010 is not currently supported on a hybrid system. Existing announcement and conference services can be used in a hybrid system.
Right-To-Use Required	Yes
Master Tracking Code	MSL00167
Order code	
Increment	

The following hardware is required for the MS 2010:

- NTRX51JJ AMS, 120 Ports, Conferencing
- NTRX51JK AMS, 120 Ports, Conferencing

MSL Real Time Portal option

Table 29 lists functionality for MSL Real Time Portal option.

Table 29
MSL UAS Real Time Portal option

Functionality name	MSL Real Time Portal option
Functionality group	MSL Succession Enterprise
Functionality description	This option is software that enables the Network Address Translation (NAT) and Firewall Traversal capabilities within the CS 2100 platform.
Right-To-Use Required	Yes
Master Tracking Code	MSL00156
Order code	00049397
Increment	

H.323 Gatekeeper option

Table 30 lists functionality for MSL H.323 Gatekeeper option.

Table 30
H.323 Gatekeeper option

Functionality name	H.323 Gatekeeper option
Functionality group	MSL Succession Enterprise
Functionality description	
Right-To-Use Required	Yes
Master Tracking Code	MSL00165
Order code	
Increment	

MSL IEMS option

Table 31 lists functionality for MSL IEMS option.

Table 31
MSL IEMS option (Sheet 1 of 2)

Functionality name	MSL IEMS option
Functionality group	MSL Succession Enterprise

46 Software ordering

Table 31
MSL IEMS option (Sheet 2 of 2)

Functionality description	
Right-To-Use Required	Yes
Master Tracking Code	MSL00166
Order code	
Increment	

MSL 10-Digit Local Display option

Table 32 lists functionality for 10-Digit Local Display option.

Table 32
MSL 10-Digit Local Display option

Functionality name	MSL 10-Digit Local Display option
Functionality group	MSL BASE
Functionality description	This option allows all 10 digits (three-digit area code and seven-digit number) to be displayed on a display phone for non-intra-group calls from a PRI or CCS7 trunk. This option requires a SOC code to activate it. This option is no additional charge to the customer.
Right-To-Use required	No
Master Tracking Code	MSL00132
Order code	No
Increment	per switch

MSL Buzz Tone Length option

Table 33 lists functionality for MSL Buzz Tone Length option.

Table 33
MSL Buzz Tone Length option (Sheet 1 of 2)

Functionality name	MSL Buzz Tone Length option
Functionality group	MSL BASE

Table 33
MSL Buzz Tone Length option (Sheet 2 of 2)

Functionality description	This option allows the use of a preferred tone duration when it is invoked during an active call. This option requires SOC to activate it. This option is no additional charge to the customer.
Right-To-Use required	No
Master Tracking Code	MSL00133
Order code	N/A
Increment	per switch

MSL CND Pub Disp option

Table 34 lists functionality for MSL CND Pub Disp option.

Table 34
MSL CND Pub Disp option

Functionality name	MSL Calling Number Delivery (CND) Public Display option
Functionality group	MSL BASE
Functionality description	This option controls delivery functionality on Meridian SL-100/Communication Server 2100 loads using public network calls that have less than 10-digits. When this option is activated <ul style="list-style-type: none"> • the subscriber can choose whether or not to answer the call • number recognition allows the subscriber to answer calls with personalized greeting • the date and time of the incoming call are displayed • the subscriber can see digits displayed from other phone switches This option comes with the Base load and requires SOC to activate it. This option is no additional charge to the customer.
Right-To-Use required	No
Master Tracking Code	MSL00137
Order code	N/A
Increment	Per switch

48 Software ordering

MSL Disable Ans Sup option

Table 35 lists functionality for MSL Disable Ans Sup option.

Table 35
MSL Disable Ans Sup option

Functionality name	MSL Disable Ans Sup option
Functionality group	MSL BASE
Functionality description	<p>This option is used to control Answer Supervision Throttling for Direct Inward Dialing (DID) calls for Per Trunk Signaling (PTS) trunks.</p> <p>This option comes with the Base load and requires SOC to activate it. The customer must meet regulatory requirements before it is activated. This option is no additional charge to the customer.</p>
Right-To-Use required	No
Master Tracking Code	MSL00111
Order code	N/A
Increment	per switch

MSL ISDN BRI option

Table 36 lists functionality for the MSL ISDN BRI option.

Table 36
MSL ISDN BRI option

Functionality name	MSL ISDN BRI option
Functionality group	MSL ISDN BRI Note: This option includes the options in Table 37.
Functionality description	<p>Extensions are subject to a Per-LCME wired Line charge. You must purchase the following hardware for this options:</p> <ul style="list-style-type: none">• LCME Peripheral with:<ul style="list-style-type: none">— NTBX02BA Enhanced D-channel Handler CP, and— NTBX27AA ISDN 2B1Q U Line Card
Right-To-Use required	Yes, if previously purchased
Master Tracking Code	MSL00100
Order code	00033465
Increment	

Table 37
Functionality included in the MSL ISDN BRI option (Sheet 1 of 2)

Functional Group Number	Functional Group Name	Functionality Name
MDC00058	MDC-MDC Minimum	MDC Line Capacity Inc
NI000007	NI0 ISDN Base	NI0 ISDN Basic AccessN
NI000007	NI0 ISDN Base	NI0 ISDN Adv Signaling
NI000008	NI0 NI-1 BRI	NI0 ISDN EKTS
NI000008	NI0 NI-1 BRI	NI0 ISDN Suppl Svcs
NI000008	NI0 NI-1 BRI	NI0 ISDN Display Svcs
NI000008	NI0 NI-1 BRI	NI0 ISDN/ISUP Interwkg
NI000008	NI0 NI-1 BRI	NI0 CLASS on NI0N
NI000008	NI0 NI-1 BRI	NI0 ISDN Routing
NI000008	NI0 NI-1 BRI	NI0 INFO & Enh Num Del
NI000008	NI0 NI-1 BRI	NI0 Multipoint EOC1
NI000009	NI0 NI-1 BRI Enhanced Mtc	NI0 Integrated Tst Base
NI000009	NI0 NI-1 BRI Enhanced Mtc	NI0 Tsting NI0N Services
NI000009	NI0 NI-1 BRI Enhanced Mtc	NI0 TL-1 Tsting I/F Base
NI000009	NI0 NI-1 BRI Enhanced Mtc	NI0 TL-1 Parsing I/F Base
NI000050	NI0 NI 2/3 BRI Svcs Ph1	NI0 Call Tpe Prov DN Bas
NI000050	NI0 NI 2/3 BRI Svcs Ph1	NI0 IVDT Sim Acc 2 B Chs
NI000050	NI0 NI 2/3 BRI Svcs Ph1	NI0 IVDT Sim Acc 2 B Chs
NI000050	NI0 NI 2/3 BRI Svcs Ph 1	NI0 Non-Initial Terms
NI000050	NI0 NI 2/3 BRI Svcs Ph 1	NI0 2 Simut nVce Calls
NI000050	NI0 NI 2/3 BRI Svcs Ph 1	NI0 Dflt TSP LITD On Lp
NI000050	NI0 NI 2/3 BRI Svcs Ph 1	NI0 Intwk NI-1 Svcs
NI000050	NI0 NI 2/3 BRI Svcs Ph 1	NI0 IVDT/NIT ISDN Plft
NI000051	NI0 N1 2/3 BRI Svs Ph II	NI0 Calling Name
NI000051	NI0 N1 2/3 BRI Svs Ph II	NI0 DCH Supt 2 Term+

50 Software ordering

Table 37
Functionality included in the MSL ISDN BRI option (Sheet 2 of 2)

Functional Group Number	Functional Group Name	Functionality Name
NI000051	NI0 N1 2/3 BRI Svs Ph II	NI0 EKTS CACH
NI000051	NI0 N1 2/3 BRI Svs Ph II	NI0 Flex Expl Xter N Con
NI000051	NI0 N1 2/3 BRI Svs Ph II	NI0 Flex 1 Call Trans UCD
NI000051	NI0 N1 2/3 BRI Svs Ph II	NI0 Flex3 Intwkg Atten
NI000051	NI0 N1 2/3 BRI Svs Ph II	NI0 Flex5 Simu asgn 3/6
NI000051	NI0 N1 2/3 BRI Svs Ph II	NI0 Flow Thru Prov Enh
NI000051	NI0 N1 2/3 BRI Svs Ph II	NI0 I/Fconfig PhII
NI000051	NI0 N1 2/3 BRI Svs Ph II	NI0 Intrm I/F Config Enh
NI000051	NI0 N1 2/3 BRI Svs Ph II	NI0 ISDN1 Inwkg Std Ann
NI000051	NI0 N1 2/3 BRI Svs Ph II	NI0 Prmtr Dwmlng V1
NI000051	NI0 N1 2/3 BRI Svs Ph II	NI0 TR303 NI-2 Compl
NI000051	NI0 N1 2/3 BRI Svs Ph II	NI0 CFW Uniformity
NI000051	NI0 N1 2/3 BRI Svs Ph II	NI0 ACB&AR
NI000051	NI0 N1 2/3 BRI Svs Ph II	NI0 Music on Hld
NI000052	NI0 NI-2 BRI Services	NI0 Net Prvd Cng Pry No
NI000052	NI0 NI-2 BRI Services	NI0 Fre Frmt SPID Prov
NI000052	NI0 NI-2 BRI Services	NI0 8 FITS On A Loop
NI000052	NI0 NI-2 BRI Services	NI0 MTCE Mult Terms
NI000052	NI0 NI 98 Enhmts Ph 1	NI0 Flex Clg De conf fac
NI000060	NI0 NI 98 Enhmts Ph 1	NI0 Aub Msg Wtg Ind
NI000060	NI0 NI 98 Enhmts Ph 1	NI0 Automatic SPID
NI000060	NI0 NI 98 Enhmts Ph 1	NI0 B Ch rest On TSP
NI000060	NI0 NI 98 Enhmts Ph 1	NI0 BRIV OE

MSL CCS7 option

Table 38 lists the functionality for MSL CCS7 option.

Table 38
MSL CCS7 option

Functionality name	MSL CCS7 option
Functionality group	MSL CCS7 OPT Note: This option includes the options in Table 39
Functionality description	You must purchase the following hardware for this option: <ul style="list-style-type: none"> • NT9X76AA STP Signaling Terminator CP • NT9X77AA STP V.35 I/F Paddleboard • NTEX22BB LG Processor/F Bus I/F Channelized Access: <ul style="list-style-type: none"> • NT9X76AA STP Signaling Terminator CP • NTEX26AA Channel Bus I/F • NTEX22BB LG Processor/F Bus I/F • NTZZ30MA Network I/F Unit
Right-To-Use required	Yes
Master Tracking Code	MSL00101
Order code	00033457 or 00044299
Increment	

Table 39
Functionality included in the MSL CCS7 option (Sheet 1 of 2)

Functional Group number	Functional Group Name	Functionality Name
EQA00001	EQA Local	EQA C7ISUPIrlta CntnEAE0
MDC00008	MDC MBS Std.	MDC Dist CWT Ringback
MDC00006	MDC MBG Std.	MDC Net Number Disp
MDC00006	MDC MBG Std.	MDC NRAG
MDC00006	MDC MBG Std.	MDC Net Msg Svc
MDC00005	MDC MBG Min	MDC IOBN ISUP Netinfo
ISP70001	ISP7 Base ISUP	ISP7 CCS7 Trnk Signlng
ISP70001	ISP7 Base ISUP	ISP7 Mass Trnk Conversion
ISP70001	ISP7 Base ISUP	ISP7 ISUP Option Controls

52 Software ordering

Table 39
Functionality included in the MSL CCS7 option (Sheet 2 of 2)

Functional Group number	Functional Group Name	Functionality Name
ISP70001	ISP7 Base ISUP	ISP7 2W Emulation
TEL00008	TEL CCS7 Base	TEL CCS7 Base

MSL Packet Handler option

Table 40 lists the functionality for MSL Packet Handler option

Table 40
MSL Packet Handler option

Functionality name	MSL Packet Handler option
Functionality group	MSL Packet Hand OPT Note: This option includes the options in Table 41.
Functionality description	The customer must purchase the following hardware for this option: • NTZZ30NA X.25/X.75 Link Interface Unit in the Link Peripheral Processor (LPP).
Right-To-Use required	Yes
Master Tracking Code	MSL00102
Order code	00033459
Increment	

Table 41
Functionality included with the MSL Packet Handler option (Sheet 1 of 2)

Functional Group Number	Functional Group Name	Functionality Name
NI000007	NI0 ISDN BASE	NI0 ISDN OAMBase; DPN
NI000007	NI0 ISDN BASE	NI0 ISDN Provisioning
NI000007	NI0 ISDN BASE	NI0 Integrated PH Mtc
NI000007	NI0 ISDN BASE	NI0 ISDN OAM Proc
NI000007	NI0 ISDN BASE	NI0 DPN PH Mtc
NI000007	NI0 ISDN BASE	NI0 ISDN Test Access

Table 41
Functionality included with the MSL Packet Handler option (Sheet 2 of 2)

Functional Group Number	Functional Group Name	Functionality Name
NI000010	NI0 NI-1 Packet	NI0 DMS Plt Base
NI000010	NI0 NI-1 Packet	NI0 DMS PH SERVORD

MSL DWS option

Table 42 lists the functionality for MSL DWS option.

Table 42
MSL DWS option

Functionality name	MSL DWS option
Functionality group	MSL DWS OPT <i>Note:</i> This option includes the options in Table 43.
Functionality description	The following hardware must be purchased for this option: <ul style="list-style-type: none"> • Meridian SL-100 architecture, including ENET switching matrix. • ISDN DTCL with Enhanced Time Switch (NTAX78) and NTSX05AA Processor. • DS-1/PRI interface cards (NT6X50AB) to enable clear-channel, 64 kbps unrestricted data capabilities. • T1/PRI cable
Right-To-Use required	No, if purchased in SE06 release or later
Master Tracking Code	MSL00104
Order code	00033463
Increment	

Table 43
Functionality included with the MSL DWS option

Functional group number	Functional group name	Functionality name
NI000040	NI0 NI-2 DWS Scvs	NI0 Dialable DWS NI-2
NI000073	NI0 PRI DWS Base	NI0 DWS Flexible ACC NTNA
NI000073	NI0 PRI DWS Base	NI0 Enh Time SW
NI000073	NI0 PRI DWS Base	NI0 DWS Base
NI000073	NI0 PRI DWS Base	NI0 DWS PRI Base

54 Software ordering

Table 43
Functionality included with the MSL DWS option

Functional group number	Functional group name	Functionality name
NI000073	NI0 PRI DWS Base	NI0 DWS PRI Test Tool
NI000073	NI0 PRI DWS Base	NI0 DWS PRI End Office

MSL ISDN PRI option and MSL PRI on RSC-S option

Table 44 lists the functionality for MSL ISDN PRI option and MSL PRI on RSC-S option.

Table 44
MSL ISDN PRI option and MSL PRI on RSC-S option

Functionality name	MSL ISDN PRI option and MSL PRI on RSC-S option
Functionality group	MSL ISDN PRI OPT Note: These options include the options in Table 45 on page 55 .
Functionality description	The following hardware must be purchased for the MSL ISDN PRI option: <ul style="list-style-type: none">• NT6X50AB DS-1 CP.• NTB01BA ISDN Signal Processor CP (in the MCTMI Frame). The customer must purchase the following hardware for the PRI on RSC-S option: <ul style="list-style-type: none">• NTMX75BA Minimum
Right-To-Use required	If feature package NTX790AC was purchased prior to MSL03, software Right-To-Use is granted and extensions are not subject to a Per-T1-charge (grandfathered). If feature package NTX790AC was purchased with MSL03 or above, software Right-To-Use is granted, but extensions are subject to a Per-T1-charge. PRI on the RSC-S is a separate RTU charge and is not grandfathered under the Host PRI RTU.
Master Tracking Code	MSL00105 and MSL00113
Order code	00033464 and 00043354
Increment	

Table 45
Functionality included with the MSL ISDN PRI and MSL PRI on RSC-S options
(Sheet 1 of 2)

Functional group number	Functional group name	Functionality name
MDC00006	MDC MBG Std.	MDC Net Msg Svc
MSL00113	MSL ISDN PRI Opt	MSL PRI on RSC-S
NI000024	NI0 RLT on NI-1 PRI	NI0 RLT on NTNAPRI
NI000030	NI0 ISDN PRI CNAM	NI0 Calling Name Delivery
NI000033	NI0 NI-1 PRI	NI0 PRI ISA
NI000033	NI0 NI-1 PRI	NI0 PRI CCS7 Interwkw
NI000033	NI0 NI-1 PRI	NI0 PRI Enh Num Del
NI000033	NI0 NI-1 PRI	NI0 Back-up D-Channel
NI000033	NI0 NI-1 PRI	NI0 PRI and DWS DTA
NI000033	NI0 NI-1 PRI	NI0 4ESS Interworking
NI000033	NI0 NI-1 PRI	NI0 5ESS Interworking
NI000033	NI0 NI-1 PRI	NI0 PRI Networking
NI000033	NI0 NI-1 PRI	NI0 PRI Network Disp
NI000033	NI0 NI-1 PRI	NI0 PRI MWI
NI000033	NI0 NI-1 PRI	NI0 PRI Base
NI000014	NI-0 NI-1 Tandem	NI0 ISDN/ISUP i/w
NI000043	NI0 PRI NI-2 Base	NI0 Call by Call NI-2
NI000043	NI0 PRI NI-2 Base	NI0 D Ch Backup NI-2
NI000043 (Network Side Only)	NI0 PRI NI-2 Base	NI0 2B Ch Trfr NI-PRI
NI000043	NI0 PRI NI-2 Base	NI0 NI-2 PRI Variant
NI000043	NI0 PRI NI-2 Base	NI0 NI-2 PRI MTC Basic
NI000043	NI0 PRI NI-2 Base	NI0 NI-2 PRI CC
NI000043	NI0 PRI NI-2 Base	NI0 NI-2 PRI Scrng
NI000043	NI0 PRI NI-2 Base	NI0 NI-2 TR 1268 Dch BKUP

56 Software ordering

Table 45
Functionality included with the MSL ISDN PRI and MSL PRI on RSC-S options
(Sheet 2 of 2)

Functional group number	Functional group name	Functionality name
NI000043	NI0 PRI NI-2 Base	NI0 NI-PRI B&D ch Mtc
NI000043	NI0 PRI NI-2 Base	NI0 NI0 PRI NI-2 to ISUP

MSL CompuCALL (SCAI) option

Table 46 lists the functionality for MSL CompuCALL (SCAI) option.

Table 46
MSL CompuCALL (SCAI) option

Functionality name	MSL CompuCALL (SCAI) option
Functionality group	MSL Compucall OPT Note: This option includes the options in Table 47 on page 57 .
Functionality description	<p>You must purchase the following hardware for this option:</p> <ul style="list-style-type: none"> •NT1X89BB Enhanced Multi-Protocol CP or NTFX30AA Input Output Module (IOM) <p>To provide service between the switching system and the call center to employ MSL CompuCALL, you need these components:</p> <ul style="list-style-type: none"> • CompuCALL base software in the Meridian SL-100 (or Meridian SL-100 ACD Server) to send and receive SCAI messages • The SCAI transport mechanism to physically link the switch to the computer or other external processor and carry SCAI messages. • Application Programming Interface (API) software and business application software for the customer's computer system – both provided by computer and software vendors (The API, which resides in the computer system, converts SCAI messages into information that can be used by the computer's business application software.)
Right-To-Use required	Right-to-use is granted with the purchase of SE06 release or higher.
Master Tracking Code	MSL00106
Order code	00033467 & 00033468
Increment	

Table 47
Functionality included with the MSL CompuCALL (SCAI) option

Functional group number	Functional group name	Functionality name
ACD00002	ACD Compu-CALL Base	ACD CompuCALL Base
ACD00002	ACD Compu-CALL Base	ACD Compucall-FUNC
ACD00002	ACD Compu-CALL Base	ACD Compucall Functionality
ACD00002	ACD Compu-CALL Base	ACD Ctrx Coord V&Dta

MSL CLASS option

Table 48 lists functionality for MSL CLASS option.

Table 48
MSL CLASS option (Sheet 1 of 2)

Functionality name	MSL CLASS option
Functionality group	MSL CLASS OPT Note: This option includes the options in Table 49.
Functionality description	<p>You must purchase the following hardware for CLASS features:</p> <ul style="list-style-type: none"> • NT6X78AB Class Modem Resource CP <p>You must purchase the following hardware for Enhanced CLASS features:</p> <ul style="list-style-type: none"> • NT6X78AB Class Modem Resource CP • NT6X92BB/BC/EA UTR Circuit Card • NT6X69AD/QA Message and Tone Circuit Card • XPM+ • DRAMS – Optional <p>You must purchase the following hardware for Distinctive Ringing/Call Waiting:</p> <ul style="list-style-type: none"> • NT3X68AC is not required. The NT6X69AD/QA provides the tones <p>Note 1: RES001000, CNDBO (nodal), and RES00101, CNDBO (network), are provided as part of MSL00107 CLASS, but require separate activation. Activation requires that each customer meet regulatory requirements.</p> <p>Note 2: For more information on CLASS hardware, refer to insert Xref to "CLASS hardware requirements" on page 210) of this document.</p>
Right-To-Use required	Right-to-use is granted with the purchase of SE06 release or higher.
Master Tracking Code	MSL00107

58 Software ordering

Table 48
MSL CLASS option (Sheet 2 of 2)

Order code	00033470 & 00033471
Increment	

Table 49
Functionality included with the MSL CLASS option (Sheet 1 of 3)

Functional group number	Functional group name	Functionality name
DTP00001	DTP Datapath	DTP CLASS for DataPath
MDC00004	MDC CLASS on MDC	MDC CLASS on MVP
MDC00004	MDC CLASS on MDC	MDC Customer Originated Trace Feature key Access
MDC00004	MDC CLASS on MDC	MDC MDC Class
MDC00004	MDC CLASS on MDC	MDC CLASS on MBS
MDC00004	MDC CLASS on MDC/MVP II	MDC CLASS on MDC/MVP II
MDC00004	MDC CLASS on MDC	MDC CLASS Name-MADN
MDC00004	MDC CLASS on MDC	MDC SCWID/DSCWID
MDC00004	MDC CLASS on MDC	MDC Teen Service
MDC00024	MDC TCAP name Delivery	MDC TCAP Name Del-MBG/MDC
NI000008	NI0 NI-1 BRI	NI0 CLASS on ISDN
RES00002	RES Advd Cstm Calling	RES SLE/ACBAR TCAP Query Disable
RES00003	RES Disp Funct & Prvcy	Calling No. Delivery Blocking Override
RES00003	RES Disp Funct & Prvcy	RES Calling Num Dsply
RES00003	RES Disp Funct & Prvcy	RES Calling Num Del Blk
RES00003	RES Disp Funct & Prvcy	RES Call Waiting Display
RES00003	RES Disp Funct & Prvcy	RES Call Wtg Delux (TR)
RES00003	RES Disp Funct & Prvcy	RES CMR OMs
RES00003	RES Disp Funct	RES CNAMD Interwork (TCAPNM) Local Lookup

Table 49
Functionality included with the MSL CLASS option (Sheet 2 of 3)

Functional group number	Functional group name	Functionality name
RES00003	RES Disp Funct & Prvcy	RES Dialable Num Del Blk
RES00003	RES Disp Funct & Prvcy	RES Call Nm Disp SW/TCAP
RES00003	RES Disp Funct & Prvcy	RES Visual Msg. Waiting
RES00003	RES Disp Funct & Prvcy	RES VSLE & Call Logging
RES00003	RES Disp Funct & prvcy	RES Anonym. Caller Rej.
RES00003	RES Disp Funct & prvcy	RES Calling Na Del Blkng
RES00003	RES Disp Funct & prvcy	Single USOC for DSCWID & CFDA
RES00005	RES Non-Disp Serv.	RES AR Limited to 1
RES00005	RES Non-Display Services	RES Auto. Callback
RES00005	RES Non-Disp Serv.	RES Cust Tracing Enh
RES00005	RES Non-Display Services	RES Dist Ring Call Wtg
RES00005	RES Non-Display Services	RES Select Call Accept
RES00005	RES Non-Display Services	RES Selective Call Fwd.
RES00005	RES Non-Display Services	RES Selective Call Rej.
RES00005	RES Non-Display Services	RES Customer Tracing
RES00005	RES Non-Display Services	RES Auto. Recall
RES00006	RES Service Enablers	QCUST Command Enhancements
RES00006	RES Service Enablers	RES Enablers-RES Base
RES00006	RES Service Enablers	RES Enablers-CLASS LIOD
RES00006	RES Service Enablers	RES Enablers-Enh RES Svc
RES00006	RES Service Enablers	RES Enablers-Scr Lst Edit
RES00006	RES Service Enablers	RES Enablers-Prot (TR)
RES00007	RES Signaling Routing OAM	RES CLASS NPA Split

60 Software ordering

Table 49
Functionality included with the MSL CLASS option (Sheet 3 of 3)

Functional group number	Functional group name	Functionality name
RES001000	RES CNDBO (nodal)	RES CNDBO (nodal)
RES00101	RES CNDBO (network)	RES CNDBO (network)

MSL SMDI option

Table 50 lists functionality for MSL SMDI option.

Table 50
MSL SMDI option

Functionality name	MSL SMDI option
Functionality group name	MSL SMDI OPT Note: This option includes the options in Table 51.
Functionality description	You must purchase the following hardware for CLASS features: <ul style="list-style-type: none">• Voice mail systems interface to the Meridian SL-100 through an Input/Output Controller (IOC), the Enhanced High Speed Multi-Protocol Controller (NT1X89BB) or NTFX30AA Input Output Module.
Right-To-Use required	Right-to-use is granted with the purchase of SE06 release or higher.
Master Tracking Code	MSL00108
Order code	00033488
Increment	

Table 51
Functionality included with the MSL SMDI option

Functional group number	Functional group name	Functionality name
RES00004	RES I/F Functionality	RES Simpl Mess Desk I/F
RES00004	RES I/F Functionality	RES High Speed SMDI
RES00004	RES I/F Functionality	SMDI ID Override

MSL ACD option

Table 52 lists functionality for MSL ACD option.

Table 52
MSL ACD option

Functionality name	MSL ACD option
Functionality group	MSL ACD OPT <i>Note:</i> This option includes the options in Table 53.
Functionality description	
Right-To-Use required	Right-to-use is granted if feature package NTX407AB was purchased prior to MSL03. Extensions are subject to a per-agent charge.
Master Tracking Code	MSL00109
Order code	00033994
Increment	

Table 53
Functionality included with the MSL ACD option

Functional group number	Functional group name	Functionality name
ACD00001	ACD Base	ACD MIS
ACD00001	ACD Base	ACD CP Control
ACD00001	ACD Base	ACD Basic
ACD00001	ACD Base	ACD Enhanced
ACD00001	ACD Base	ACD Load Mgmt
ACD00001	ACD Base	ACD on 2500 Sets
ACD00004	ACD Networking	ACD Supergroup
ACD00004	ADC Networking	ACD Network ACD on SS7
ACD00004	ACD Networking	ACD Network ACD on PRI
ACD00101		

62 Software ordering

MSL Enhanced SMA option

Table 54 lists functionality for MSL Enhanced SMA option.

Table 54
MSL Enhanced SMA option

Functionality name	MSL Enhanced SMA option
Functionality group	MSL Enhanced SMA OPT Note: This option includes the options in Table 55.
Functionality description	The customer must purchase the following hardware for this option: • CMVI Cabinet or MVIE frame and Associated Pack Fill
Right-To-Use required	Right-to-use is granted with the purchase of the SE06 release or higher.
Master Tracking Code	MSL00110
Order code	00036464
Increment	

Table 55
Functionality included with the MSL Enhanced SMA option

Functional group number	Functional group name	Functionality name
SMA00001	SMA TR303 I/F	SMA TR303 MVI-28
SMA00002	SMA TR303 I/F	MBS/TR303 ACCESS
SMA00010	SMA TR303 I/F	RDT Refresh
SMA00012	SMA TR303 I/F	ESMA with ICB

MSL ICM option

Table 56 lists functionality for MSL ICM option.

Table 56
MSL ICM option (Sheet 1 of 2)

Functionality name	MSL ICM option
Functionality group	MSL ICM OPT Note: This option includes the options in Table 57 on page 63 .
Functionality description	
Right-To-Use required	Right-to-use is granted if this option was previously purchased. Extensions are subject to a per-Link and/or a per-Agent charge.

Table 56
MSL ICM option (Sheet 2 of 2)

Master Tracking Code	MSL00119
Order code	00045497 and 00045498
Increment	

Table 57
Functionality included with the MSL ICM option

Functional group number	Functional group name	Functionality name
ICM00001	ICM Call Manager I/F	ICM Ethernet TCP/IP I/F
ICM00002	ICM Call Manager I/F	ICM Increased ACE Groups / Session
ICM00003	ICM Call Manager I/F	ICM Originating Inbound DN
ICM00010	ICM Call Center Server	ICM DMS-Server Int
ICM00013	ICM Network ICM	ICM Network ICM
ICM00014	ICM ICM PRI Networking	ICM PRI Networking
ICM00020	ICM Call Queue Management	ICM Call Treatments
ICM00021	ICM Call Queue Management	ICM Give Multi RAN
ICM00021	ICM Call Queue Management	ICM Selective Queueing
ICM00050	ICM Enhanced ICCM Func	ICM 3WC Status Reporting
ICM00050	ICM Enhanced ICCM Func	ICM CONFIG CTRL 1
ICM00050	ICM Enhanced ICCM Func	ICM ECM STATUS QUERY
ICM00050	ICM Enhanced ICCM Func	ICM Emerg Key Enhs
ICM00050	ICM Enhanced ICCM Func	ICM ICM MADN Support
ICM00050	ICM Enhanced ICCM Func	ICM ICM TAPI Extensions
ICM00050	ICM Enhanced ICCM Func	ICM LINE OF BUSINESS
ICM00050	ICM Enhanced ICCM Func	ICM Load Management Enhs
ICM00050	ICM Enhanced ICCM Func	ICM MDC RES Call Queuing
ICM00050	ICM Enhanced ICCM Func	ICM Message Wait Indicator
ICM00050	ECM Enhanced ICCM Func	ICM Variable Wrapup

64 Software ordering

MSL IP Client option

Table 58 lists functionality for MSL IP Client option.

Table 58
MSL IP Client option

Functionality name	MSL IP Client option
Functionality group	MSL IP Client OPT
Functionality description	The customer must purchase the following hardware for the MSL IP Line option and the MSL IP Client option: <ul style="list-style-type: none">• IP ready LTCI• NT7X07AA IP Gateway card• Gatekeeper• Terminal Proxy Server• IP Client device
Right-To-Use required	Right-to-use is granted if this option was previously purchased. Extensions are subject to a per-link and/or a per-agent charge.
Master Tracking Code	MSL00126
Order code	00045978
Increment	Per-link or per-agent

MSL IP Line option

Table 59 lists functionality for MSL IP Line option.

Table 59
MSL IP Line option (Sheet 1 of 2)

Functionality name	MSL IP Line option
Functionality group	Note: This option includes the options in Table 60 on page 65 .
Functionality description	The customer must purchase the following hardware for the MSL IP Line option and the MSL IP Client option: <ul style="list-style-type: none">• IP ready LTCI• NT7X07AA IP Gateway card• Gatekeeper• Terminal Proxy Server• IP Client device
Right-To-Use required	Right-to-use is granted if this option was previously purchased. Extensions are subject to a per-gateway charge.
Master Tracking Code	MSL00127

Table 59
MSL IP Line option (Sheet 2 of 2)

Order code	00045979
Increment	per-gateway

Table 60
Functionality included with the MSL IP Client option and MSL IP Line option

Functional group number	Functional group name	Functionality name
CIP00001	CIP Centrex VoIP	CIP CM2XPM Development CIP Centrex MBS VoIP CIP Centrex VoIP Basic CIP Enhancements
MDC00058	MDC-MDC Minimum	MDC Line Capacity Inc
MSL00126	MSL IP Client Opt	MSL IP Client Opt
MSL00127	MSL IP Line Opt	MSL IP Line Opt

Value-added Applications





Remote office

Introduction

Nortel Networks Remote Office applications enable enterprise telecommuters to connect to their workplace from remote locations.

Note: For information about Meridian SL-100 remote access hardware, refer to the chapter “Meridian SL-100 remote units” in the *Meridian SL-100/Communication Server 2100 Product Guide* (555-4001-806).

This chapter contains information about the following Nortel Networks Remote Office applications for the Meridian SL-100/Communication Server 2100:

- “Nortel Networks Remote Office 9150” on page 70
- “Nortel Networks Remote Office 9110 and 9115” on page 73
- “Nortel Networks Meridian Digital Telephone IP Adapter” on page 77

70 Remote office

Nortel Networks Remote Office 9150

Table 61 lists feature information for Nortel Networks Remote Office 9150.

Table 61
Nortel Networks Remote Office 9150 feature information

Platform compatibility	Meridian SL-100 and Communication Server 2100
Platform requirements	Meridian SL-100: Release MSL12 or higher, Enhanced XPEC Controller Card (NT7D07BA), IPE09AA IPE peripheral software, XPM 13 baseline Communication Server 2100: Release SE06 or higher, Enhanced XPEC Controller Card (NT7D07BA), IPE09AA IPE peripheral software, XPM 13 baseline
Ordering information	Please refer to the current Product Catalog, or contact your Nortel Networks Channel Account Manager. For more information, contact your Nortel Networks representative, call 1-800-4-Nortel or 1-800-466-7835 from anywhere in North America, or go to the Nortel Networks website at http://www.nortelnetworks.com .

Nortel Networks Remote Office 9150 extends cost-effective, high-quality voice features to small remote offices with up to 32 users, by leveraging a host Meridian SL-100, or Communication Server 2100.

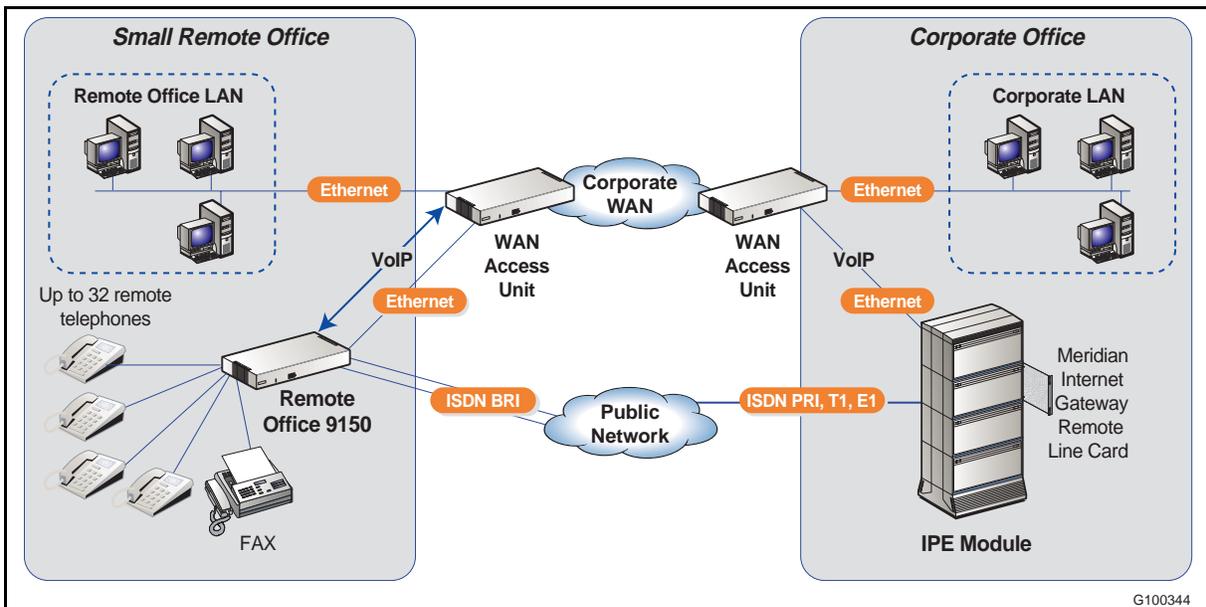
Nortel Networks Remote Office 9150 is able to use packet or circuit-switched networks as the primary route for voice connectivity to the Meridian SL-100 or Communication Server 2100, depending on customer requirements and preferences.

Users seamlessly share the high-value applications such as CallPilot, Meridian Mail, and Symposium Call Center Server, allowing users at even the smallest remote offices to receive state-of-the-art features and functionality.

The solution is highly flexible and can use a customer's IP WAN and/or ISDN BRI connections to support voice connectivity between a Remote Office site and the main Meridian SL-100, or Communication Server 2100.

Figure 3 on page 71 shows an example of a Remote Office 9150 network configuration.

Figure 3
Remote Office 9150 network configuration



Remote Office 9150 features and benefits

Nortel Networks Remote Office 9150 offers the following features and benefits:

- Actively monitors key QoS parameters on VoIP sessions.
- Dynamically switches calls from packet networks to circuit-switched networks if voice quality degrades – Guaranteed Voice Quality and reliability. Teleworkers can benefit from a VoIP solution and the reliability of a dial-up analog line.
- Seamlessly supports distributed call center agents to a small office from a single call center server.
- BRI trunk connections support local inbound and outbound calls providing a “local presence” and toll savings.
- Fully survivable if remote unit loses contact with Meridian SL-100/Communication Server 2100.
- Supports multiple codecs to maximize WAN bandwidth.
- G.729 (8 kbps) encoding supports up to eight simultaneous calls back to the Meridian SL-100 on a single ISDN B-channel.
- Extension-to-extension calls are locally switched at the remote site.

72 Remote office

Remote Office 9150 document references

Table 62 lists documentation references for Remote Office 9150.

Table 62
Remote Office 9150 document references

Document title	Document number
<i>Meridian SL-100/Communication Server 2100 Product Guide</i>	555-4001-806
<i>Remote Office and R_C Release Notes</i>	P0988417
<i>Reach Line Card</i>	555-8421-210
<i>Remote Office 9150 Installation and Administration Guide</i>	555-8421-215
<i>Remote Office Network Engineering Guidelines</i>	555-8421-103

Nortel Networks Remote Office 9110 and 9115

Table 63 lists feature information for Nortel Networks Remote Office 9110/9115.

Table 63
Nortel Networks Remote Office 9110/9115 feature information

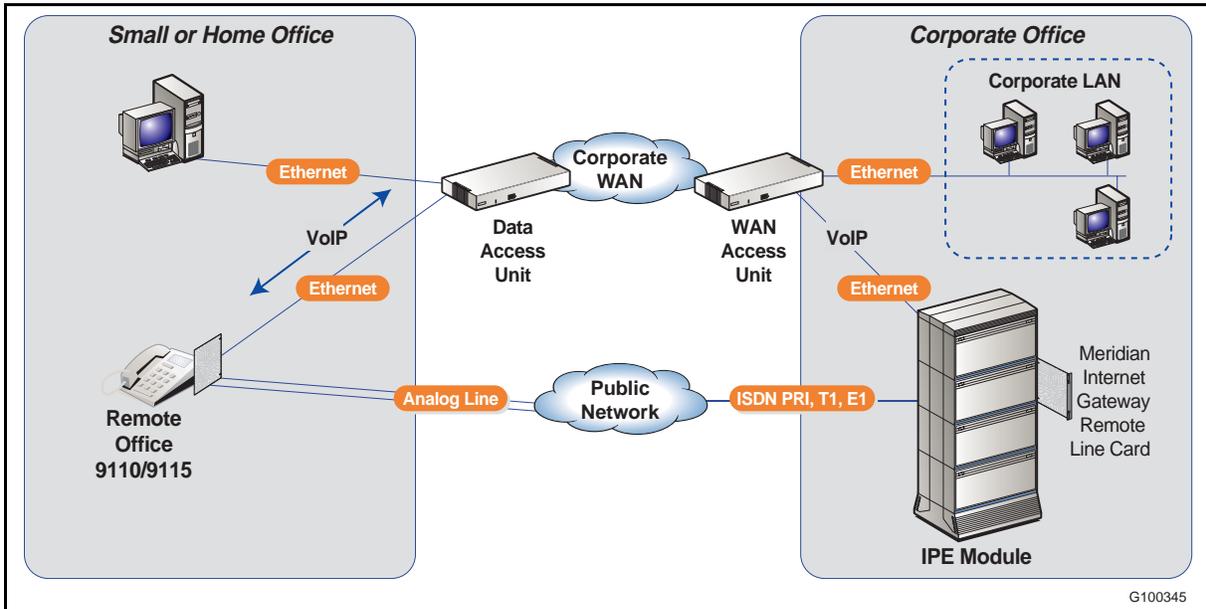
Platform compatibility	Meridian SL-100 and Communication Server 2100
Platform requirements	<p>Meridian SL-100: Release MSL12 or higher, enhanced XPEC Controller Card (NT7D07BA), IPE09AA IPE peripheral software, XPM 13 baseline</p> <p>Communication Server 2100: Release SE06 or higher, enhanced XPEC Controller Card (NT7D07BA), IPE09AA IPE peripheral software, XPM 13 baseline</p>
Ordering information	<p>Please refer to the current Product Catalog, or contact your Nortel Networks Channel Account Manager.</p> <p>For more information, contact your Nortel Networks representative, call 1-800-4-Nortel or 1-800-466-7835 from anywhere in North America, or go to the Nortel Networks website at http://www.nortelnetworks.com.</p>

Nortel Networks Remote Office 9110 (internal model) and Remote Office 9115 (external unit) provide full-featured voice communications between telecommuters and their corporate site, while maintaining voice quality and reliability, using Voice over IP (VoIP) technology. The high-speed data technologies (xDSL and Cable Modem), as well as the established ISDN services, can be leveraged to connect the corporate host site to the remote location for both voice and data.

[Figure 4 on page 74](#) illustrates an example of Nortel Networks Remote Office 9110/9115 in a network configuration.

74 Remote office

Figure 4
Remote Office 9110/9115 network configuration



Remote Office 9110/9115 features and benefits

Remote Office 9110/9115 offer the following features and benefits:

- Transparent feature and application access – Access to the full range of features and applications available on Meridian SL-100, including CallPilot Unified Messaging and Optivity Telephony Manager.
- Integrated host solution – no external equipment is required at the host site. The Meridian Internet Gateway Reach Line Card (RLC) is an Intelligent Peripheral Equipment (IPE) line card which installs in an IPE. As teleworking deployments grow, install additional line cards for more ports.
- Supports all remote solutions – The RLC supports a mix of products including models 9110 and 9115, and 9150 unit. Spare RLC ports can be used to support locally attached digital telephones until needed for remote users.
- Flexible access options – The Remote Office 9110 and 9115 can extend the digital telephone over an IP network and/or the dial-up circuit-switched network using an analog telephone line. It supports traditional analog line, broadband IP connection, or both.

- Quality of Service (QoS) switching – when the digital telephone connection is extended using Voice over IP, the IP network QoS is monitored. If QoS falls below pre-programmed acceptable thresholds, the 9110 and 9115 units will establish a connection over the analog line interface to the PBX Meridian Internet Gateway Reach Line Card. The call in progress will then be dynamically and transparently moved from the IP network to the analog line to ensure voice quality. Teleworkers can benefit from a VoIP solution and the reliability of a dial-up analog line.
- Simultaneous local calling – the primary function of the Remote Office 9110 and 9115 solution is to extend the digital telephone set from the PBX to the remote user location. The remote telephone has access to the PBX trunks to make and receive calls. When using the IP network to connect between sites, the analog line is available to make or receive local calls while maintaining PBX connectivity over the IP network. This allows calls to be made or received within the local community without the PBX, which may be located in a distant city.
- Multiple users per port – The Meridian Internet Gateway Reach Line Card supports two methods of sharing ports between users. The multi-user ports allow up to eight remote teleworkers to access a specific telephone configuration (RLC port) on a shared basis. Examples would be remote agents, on-call technical support staff, evening help desk, etc. Any of the eight users can access the assigned line card port, but only one at a time. They could work different shifts during the day, or different days during the week. The dynamic pool ports are used in a call center environment. Remote agents call a specific number and are assigned to an available port. The telephone configuration is not important, because the agent ID used at log-in would identify the user for routing of calls and report details.
- Full remote agent functionality – the remote agent telephone provides all call center functionality available to local agents at the PBX. Management reports and supervisor monitoring include both local and remote agents. Both first-party and third-party call control CTI applications are supported with Remote Office 9110 and 9115. CTI applications are able to monitor and intelligently control incoming and outgoing calls to the remote telephone set.
- Secure – Compatible with many different security models and can operate over a Nortel Networks Contivity 100 for fully encrypted operation.
- Easy to Install and Support – Requires no end-user retraining and follows similar programming of remote phones as local headquarters phones.

76 Remote office

- E911 Compatibility – E911 calls routed correctly to the local analog line for fast local response.
- Scalable – Multiple cards in a system can scale up to large installations. The Meridian Internet Gateway Reach Line Card is available in 16- and 32-port versions, with each port supporting one user.

Remote Office 9110/9115 document references

Table 64 lists documentation references for Nortel Networks Remote Office 9110/9115.

Table 64
Remote Office 9110/9115 document references

Document title	Document number
<i>Meridian SL-100/Communication Server 2100 Product Guide</i>	555-4001-806
<i>Release Notes for Remote Office and RLC</i>	555-8421-102
<i>Reach Line Card Installation and Administration Guide</i>	555-8421-210
<i>Remote Office 911x Series Installation and Administration Guide</i>	555-8421-220
<i>Remote Office Network Engineering Guidelines</i>	555-8421-103
<i>Remote Office Product CD-ROM</i> – contains firmware and software as well as PDF documentation	NTDR81AG

Nortel Networks Meridian Digital Telephone IP Adapter

Table 65 lists feature information for Nortel Networks Meridian Digital Telephone IP Adapter.

Table 65
Meridian Digital Telephone IP Adapter feature information

Platform compatibility	Meridian SL-100 and Communication Server 2100
Platform requirements	<p>Meridian SL-100: Release MSL12 or higher, Remote Office 1.4 Reach Line Card software, Meridian Digital phone sets, 10BaseT ethernet cable</p> <p>Communication Server 2100: Release SE06 or higher, Remote Office 1.4 Reach Line Card software, Meridian Digital phone sets, 10BaseT Ethernet cable</p>
Ordering information	<p>Please refer to the current Product Catalog, or contact your Nortel Networks Channel Account Manager.</p> <p>For more information, contact your Nortel Networks representative, call 1-800-4-Nortel or 1-800-466-7835 from anywhere in North America, or go to the Nortel Networks website at http://www.nortelnetworks.com.</p>

Nortel Networks Meridian Digital Telephone IP Adapter enables customers to take advantage of IP telephony, but still make the most of their existing capital investment in digital telephones. The Meridian Digital Telephone IP adapter converts your Meridian digital telephones into Voice over IP (VoIP) telephones that plug directly into an IP-based LAN.

The Meridian Digital Telephone IP Adapter extends a single digital telephone from the Meridian SL-100/Communication Server 2100, over the Corporate WAN, to a desktop or remote office.

In conjunction with the Meridian Internet Gateway Remote Line Card in the IPE, this solution uses VoIP technology to route voice conversation and telephone set signals between your digital telephone and the host Meridian SL-100/Communication Server 2100 over the existing IP data network

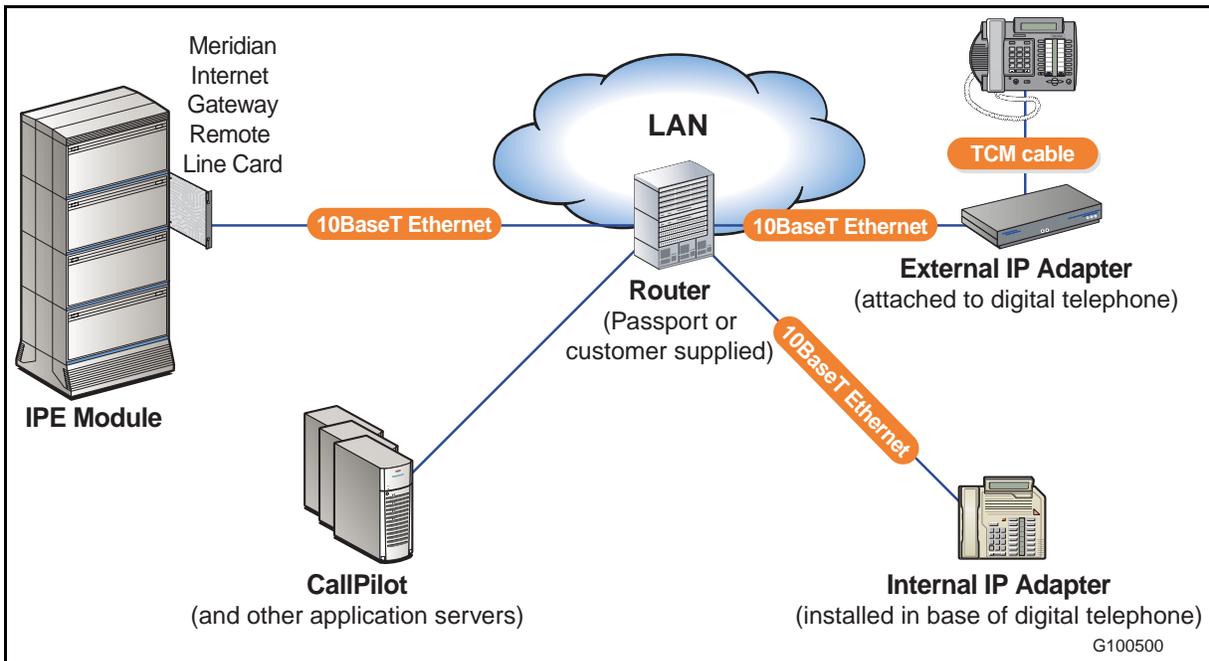
There are two types of Meridian Digital Telephone IP Adapter units:

- The Meridian Digital Telephone Internal IP Adapter is a circuit card (Reach Line Card) that installs in the base of your Meridian digital telephone.
- The Meridian Digital Telephone External IP Adapter is a unit that attaches to your Meridian digital telephone.

Voice and signaling information between your Meridian digital phone and the Reach Line Card installed on the IPE is relayed over the IP network. 10BaseT Ethernet provides the voice and data connections between the IP Adapter unit, the IP network and the Meridian SL-100/Communication Server 2100.

Figure 5 illustrates an example of Nortel Networks Meridian Digital Telephone IP Adapter (External and Internal) in a network configuration.

Figure 5
Meridian Digital Telephone IP Adapter network configuration



Meridian Digital Telephone IP Adapter features and benefits

Nortel Networks Meridian Digital Telephone IP Adapter offers the following features and benefits:

- Investment protection – You can IP-enable existing digital phones, converting them to VoIP, allowing an upgrade to your infrastructure without disturbing existing functionality and end-users.
- More choices for IP phones – you can deploy existing Meridian Digital telephones alongside IP phones in an IP infrastructure. IP Adapter-equipped digital phones, coupled with IP phones, provide you with one of the broadest selections of VoIP telephones available in the marketplace today.

- Easy to install and support – Users can keep their existing phones, operating exactly as before, without any end-user retraining and still get all of the benefits of moving to VoIP-based communications. IP-enabled digital phones are easy to set up and administer. Configuring features on an IP-enabled digital phone is performed in the same way as you would a standard digital phone. IP settings can be configured automatically using the Dynamic Host Control Protocol (DHCP), over the network, or through the telephone itself.
- Full VoIP access to many features – IP-enabled digital phones offer users full VoIP access to the entire Nortel Networks suite of Meridian SL-100, Communication Server 2100, CallPilot, and Symposium Call Center Applications, as well as many third-party applications designed to work with the Nortel Networks communications platforms.
- Flexible solution – IP Adapters allow unprecedented flexibility. Phones can now be moved between digital and IP infrastructures as needed.

Reach Line Cards (RLC) used to support IP adapters can simultaneously support other applications, such as Remote Office 9110/9115 telecommuters, Remote Office 9150 branch offices and directly attached digital phones. One-slot RLC can support 16 simultaneous IP Adapters; Dual-slot RLC can support 20 simultaneous IP Adapters.

- Scalable – IP Adapters offer a tremendously scalable IP-based solution. Multiple Reach Line Cards can be installed in a system to scale up to very large numbers of VoIP users.
- Cost benefits – moving digital phones to an IP-based infrastructure can allow significant cost savings from adds, moves and changes, since IP-based phones can be plugged into any available LAN connection. Offices can now be wired with generic LAN connections, and devices can be moved without re-wiring or moving lines.

A converged infrastructure (voice and data carried over a single network) can save on other administrative costs and increase efficiency, since only one network (and signaling technology) need be maintained.

80 Remote office

Meridian Digital Telephone IP Adapter document references

Table 66 lists documentation references for Meridian Digital Telephone IP Adapter.

Table 66
Meridian Digital Telephone IP Adapter document references

Document title	Document number
<i>Meridian SL-100/Communication Server 2100 Product Guide</i>	555-4001-806
<i>Reach Line Card Installation and Administration Guide</i>	555-8421-210
<i>Meridian Integrated Telephone IP Adapter</i>	555-8421-211



Voice messaging

Introduction

Nortel Networks Voice Messaging applications enable enterprise customers to easily integrate voicemail, e-mail, and fax services, and access these voice messaging services from any location by phone or web-enabled PC.

This chapter contains information about the following Nortel Networks Voice Messaging products:

- “Nortel Networks CallPilot 2.5” on page 81
- “Nortel Networks CallPilot 3.1 (planned for early 2005)” on page 87
- “Network Message Service (NMS)” on page 88

Nortel Networks CallPilot 2.5

Table 67 lists feature information for Nortel Networks CallPilot 2.5.

Table 67
Nortel Networks CallPilot 2.5 feature information

Platform compatibility	Meridian SL-100 and Communication Server 2100
Platform requirements	Meridian SL-100: Release MSL10 or higher Communication Server 2100: Release SE06 or higher CallPilot connection to switch requires a Station Message Desk Interface (SMDI) link and T1 connection (Line Side T1 cards in the Meridian SL-100).
Ordering information	Please refer to the current Product Catalog, or contact your Nortel Networks Channel Account Manager. For more information, contact your Nortel Networks representative, call 1-800-4-Nortel or 1-800-466-7835 from anywhere in North America, or go to the Nortel Networks website at http://www.nortelnetworks.com .

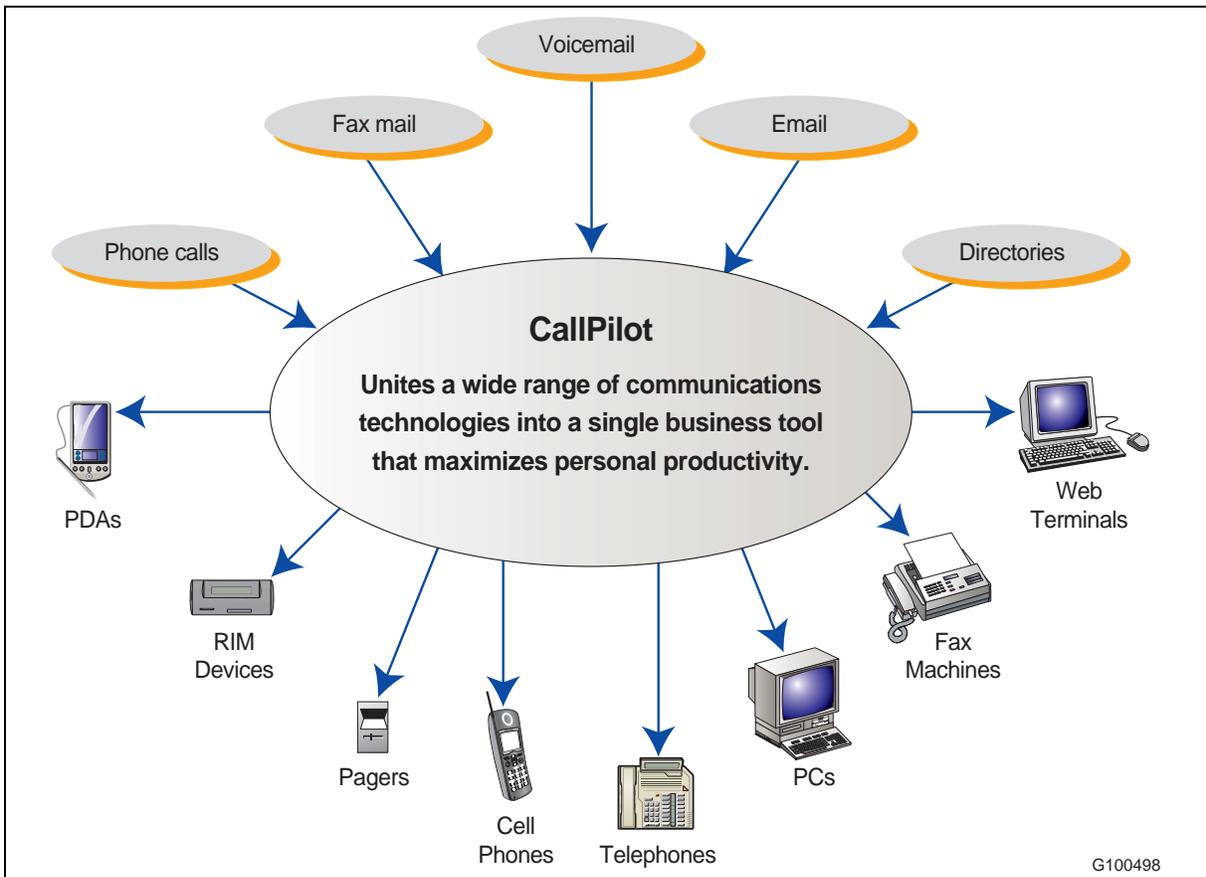
82 Voice messaging

Nortel Networks CallPilot 2.5 is now available for the Meridian SL-100 and Communication Server 2100. CallPilot 2.5 replaces CallPilot 1.07. Upgrades from CallPilot 1.07 to CallPilot 2.5 are at no charge.

Nortel Networks CallPilot 2.5 is the leading unified messaging application in the market today. It combines voicemail, e-mail, and fax messages into a single mailbox that users can access from any location by phone or a PC using a Web browser GUI.

Figure 6 illustrates how Nortel Networks CallPilot 2.5 unites a wide range of business technologies into a single business tool that maximizes productivity.

Figure 6
Call Pilot 2.5 unites communication technologies into a single business tool



For Meridian SL-100, CallPilot is available in model 1002rp, a PC server, rackmount configuration.

The CallPilot server connects to the Meridian SL-100/Communication Server 2100, the administrative PC, and, the customer LAN (CLAN) (connection to the CLAN only where Desktop Messaging is enabled).

CallPilot achieves channel connectivity to the Meridian SL-100/Communication Server 2100 through 24-channel T1 spans.

For CallPilot, the Meridian SL-100 or Communication Server 2100

- uses Line Side T1 cards or channel banks to send the voice and data signals to the CallPilot server.
- provides Simplified Message Desk Interface (SMDI) connectivity to the CallPilot server using either an IOC shelf with an NT1X89 card or an IOM (NTFX30). CallPilot performs call control signaling to the Meridian SL-100/Communication Server 2100 using the SMDI signaling link. If co-located within 15.2 meters (50 feet) of the Meridian SL-100, a serial cable can be used for the SMDI link. If more than 15.2 meters (50 feet) apart, a dedicated modem link is required.

All T1 ports connect to the CallPilot server at the Dialogic DT1/480SC Dual-Span T1 card. The DT1/480SC card supports 48 channels and resides in the CallPilot server. A maximum of two Dialogic DT1/480SC Dual-Span T1 cards can be configured in the Tower and Rackmount platforms for a maximum of 96 channels. Calls from the switch arrive at the DT1/480SC card and are passed on to the MPB16-4 cards, which process the voice and data signals. A 9 drop SCbus cable connects the DT1/480SC card to the MPB16-4 card.

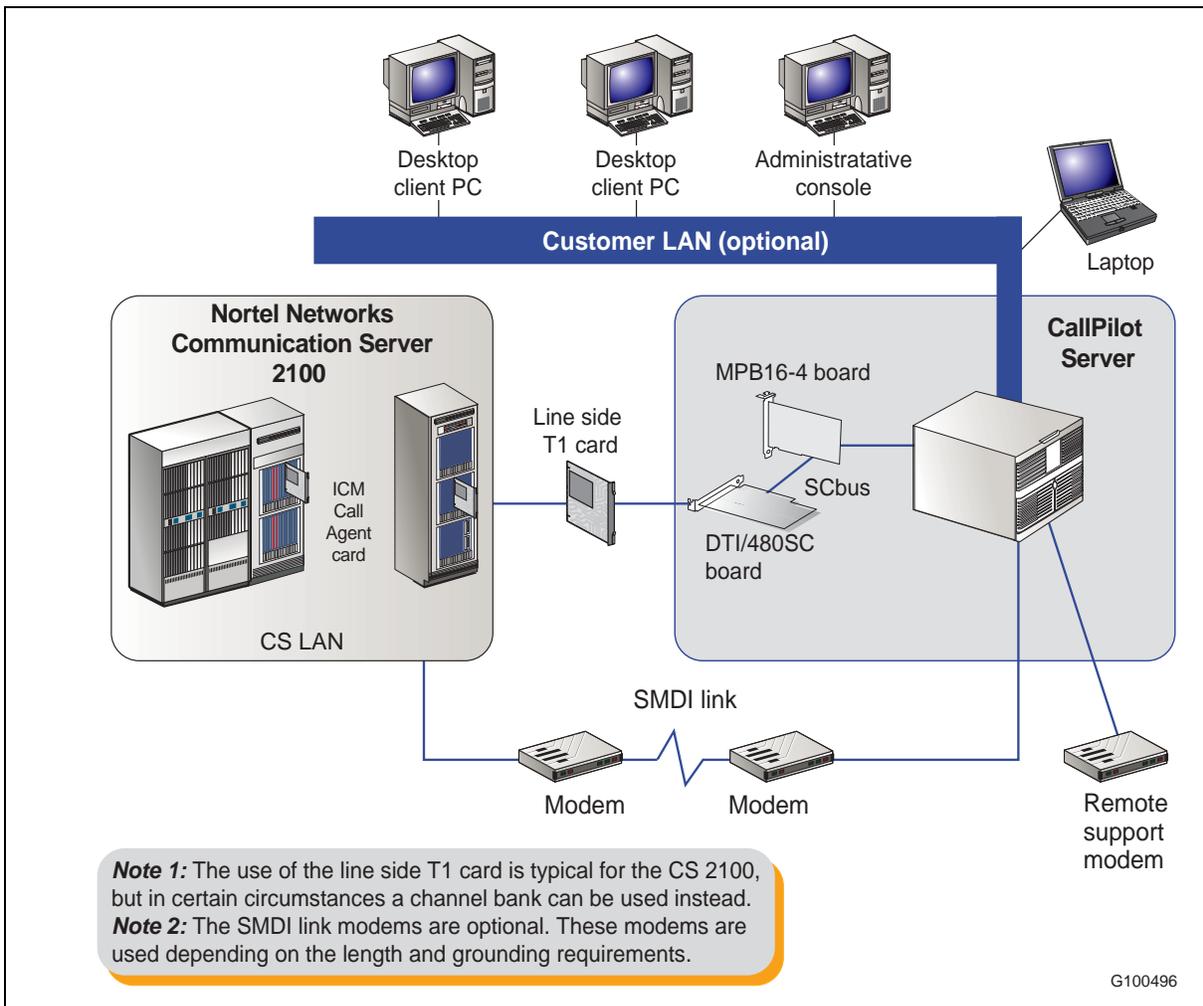
CallPilot client software is installed on an Administrative PC running Windows 98/NT Workstation/2000 Professional/XP professional. The administrative PC provides administrative ability for the switch, server, and CallPilot software, access to CallPilot operational reports, and the ability to develop multimedia applications with both voice and fax functionality. You can connect an administrative PC directly to the server, remotely through a modem, or to the customer LAN.

The CallPilot server connects to a modem to allow remote access by a support PC for installation, maintenance and diagnostics.

You can install desktop client messaging software on client PCs to enable mailbox users to receive phone, fax and voicemail on their PCs.

[Figure 7 on page 84](#) shows an example of a CallPilot rack-mount server integrated with the Communication Server 2100.

Figure 7
Call Pilot 2.5 integration with Communication Server 2100



CallPilot 2.5 features and benefits

CallPilot 2.5 includes the following features and benefits:

- CallPilot administration is now done over the Web using CallPilot manager on PCs running Windows that are browser-enabled. CallPilot Reporter is also now a Web application.
- Enhanced management of the messaging network – configure extensive network security enhancements; configure network broadcast capability for mailbox class members; automatically add a permanent remote user and record a spoken name on the user’s behalf; configure time and date stamps on messages and voice prompts to be indicated in the user’s time zone, instead of in the time zone of the CallPilot server.

- Enhanced backup and restore capabilities – CallPilot Manager provides enhanced backup and restore capabilities and simplified processes. Both significantly reduce the workload for CallPilot administrators.
- Easier delegation of administrative tasks.
- Enhanced features for CallPilot Reporter – new web-based interface; increased accessibility with data remaining on your Web server and available at all times; personalized settings that allow you to save your custom reports, settings, and log for future sessions; use the Reporter Log to track changes that you perform; track changes made by administrators using the Reporter’s Administration Action report.
- Easier to use resulting in minimal training required – with simpler user interfaces, New AUIs, and Web messaging administration, your training costs will be minimal.
- My CallPilot – a Web browser based client that allows users to administrate and use their own mailbox. Access My CallPilot from the CallPilot desktop using a simple menu choice. Web messaging is incorporated into My CallPilot.
- CallPilot Text-to-Speech (TTS) feature – users review e-mail by phone using TTS, which is capable of reading e-mail aloud in 18 different languages and dialects. Listen to an e-mail, respond to e-mails by voice mail, and print out e-mails on any fax machine.
- Increases end user productivity with enhancements to Unified Messaging – improved integration with Lotus Notes; support for new environments with Macintosh OS “MyCallPilot” web client and support for Citrix “thin client”; address book improvements; fax improvements; the ability to call the sender of an e-mail with a single click in a Microsoft Outlook mail client.
- Provides new switch integrations – Use T1/SMDI connectivity to integrate CallPilot 1002rp rackmount server with Meridian SL-100 (1002rp replaces 1001rp). CallPilot 1002rp rackmount server has the following capabilities:
 - Dual PIII 866 Mhz CPU
 - Maximum 96 “Voice only” channels
 - Maximum 48 “Fax only” channels
 - Maximum 24 “SR only” channels
 - 2400 hours of storage
 - Maximum 7800 UM Clients per server

- Maximum 7500 Voice Only Users
- Built-in redundancy – RAID I, Fans, Power Supplies
- Excels in compatibility with your existing systems – supports the widest array of e-mail clients available, does not impact e-mail servers or generate high volumes of LAN or WAN traffic – all message unification comes at the desktop, open system that supports industry standard digital networking (VPIM and AMIS).
- CallPilot 2.5 unified messaging supports the following clients:
 - GroupWare clients: Microsoft Outlook 98 (Corporate Mode), Microsoft Outlook 2000, Microsoft Outlook 2002 (XP), Lotus Notes 5.0x, Lotus Notes 6.0, GroupWise 6.0x and GroupWise 6.5
 - Internet mail clients: Microsoft Outlook Express 5.x, Microsoft Outlook Express 6.x, Microsoft Outlook 98 (Internet Mail Mode), Microsoft Outlook 2000 (Internet Mail Mode), Microsoft Outlook 2002 (XP) (Internet Mail Mode), Netscape 6.2x, Netscape 7x and Qualcomm Eudora Pro 5.x
 - Web clients (My CallPilot): Netscape 6.2x, Netscape 7.x, Microsoft Internet Explorer 5.x and Microsoft IE 6.x
 - Operating Systems: Windows 98 SE, Windows 2000 Professional, Windows XP Professional, Win NT 4.0 SP6a and Macintosh OS 9.0, 9.1
 - Web Server: Microsoft Internet Information Server 4 on Windows NT Server 4.0 SP6a and Microsoft Internet Information Server 5 on Windows 2000 Server SP1 and above
 - Thin Clients: Citrix MetaFrame 1.8 Windows 2000 Server, Windows 2000 Advanced Server or Windows 2000 Datacenter Server, Citrix MetaFrame XP (Standard, Enterprise, or Advanced editions) on Windows 2000 Server, Windows 2000 Advanced Server or Windows 2000 Datacenter Server

CallPilot 2.5 document references

Table 68 lists documentation references for CallPilot 2.5.

Table 68
CallPilot 2.5 document references (Sheet 1 of 2)

Document title	Document number
<i>Meridian SL-100/Communication Server 2100 Product Guide</i>	555-4001-806
<i>CallPilot Installation and Configuration Part 3: T1/SMDI and CallPilot Server Configuration</i>	555-7101-224

Table 68
CallPilot 2.5 document references (Sheet 2 of 2)

Document title	Document number
<i>What's New Guide</i>	555-7101-901
<i>Planning and Engineering Guide</i>	555-7101-101
<i>Upgrade Guide</i>	P0607573
<i>Application Builder Guide</i>	555-7101-325
<i>Meridian Mail to CallPilot Migration Utility Guide</i>	555-7101-801

Nortel Networks CallPilot 3.1 (planned for early 2005)

CallPilot 3.1 will contain all the features of CallPilot 2.5, plus the following updates:

- Support for Microsoft Windows 2003 operating system
- Reliability improvements
- Serviceability and quality improvements
 - Prevent common mistakes
 - Reduced time to troubleshoot
- T1/E1 refresh
- Rackmount refresh
- Unified Messaging plus Unified Communications (UC) Enhancements
 - Directory Call
 - Launch IM session
- LDAP Customer Directory Integration
 - Automate Subscriber moves/adds/changes from customer directory
 - Microsoft Active Directory
 - Other Directory servers
- “New Message” Waiting Enhancements
 - Multiple Message Waiting Indication (MWI) DN's
 - Multiple Remote Notification (RN) targets

88 Voice messaging

- Message Forward Rule
 - Option to forward messages to e-mail store
 - Symposium Web Server Portal Interworking
- Administrative Enhancements
 - Push installation (SMS)
 - Centralized control of desktop configuration

Network Message Service (NMS)

Table 69 lists feature information for Nortel Networks Network Message Service (NMS) for the Meridian SL-100/Communication Server 2100.

Table 69
Network Message Service feature information

Platform compatibility	Meridian SL-100 and Communication Server 2100
Platform requirements	Meridian SL-100: Release MSL07 or higher Communication Server 2100: Release SE06 or higher NMS activation requires CCS7 and SMDI Right-to-Use options. NMS over PRI requires PRI and SMDI options.
Ordering information	Please refer to the current Product Catalog or contact your Nortel Networks Channel Account Manager. For more information, contact your Nortel Networks representative, call 1-800-4-Nortel or 1-800-466-7835 from anywhere in North America, or go to the Nortel Networks website at http://www.nortelnetworks.com .

Network Message Service (NMS) enables customers to offer message service over a wide area to a large number of subscribers economically.

The service employs the CCS7 backbone network already installed or planned for Custom Local Area Signaling (CLASS) and other network services.

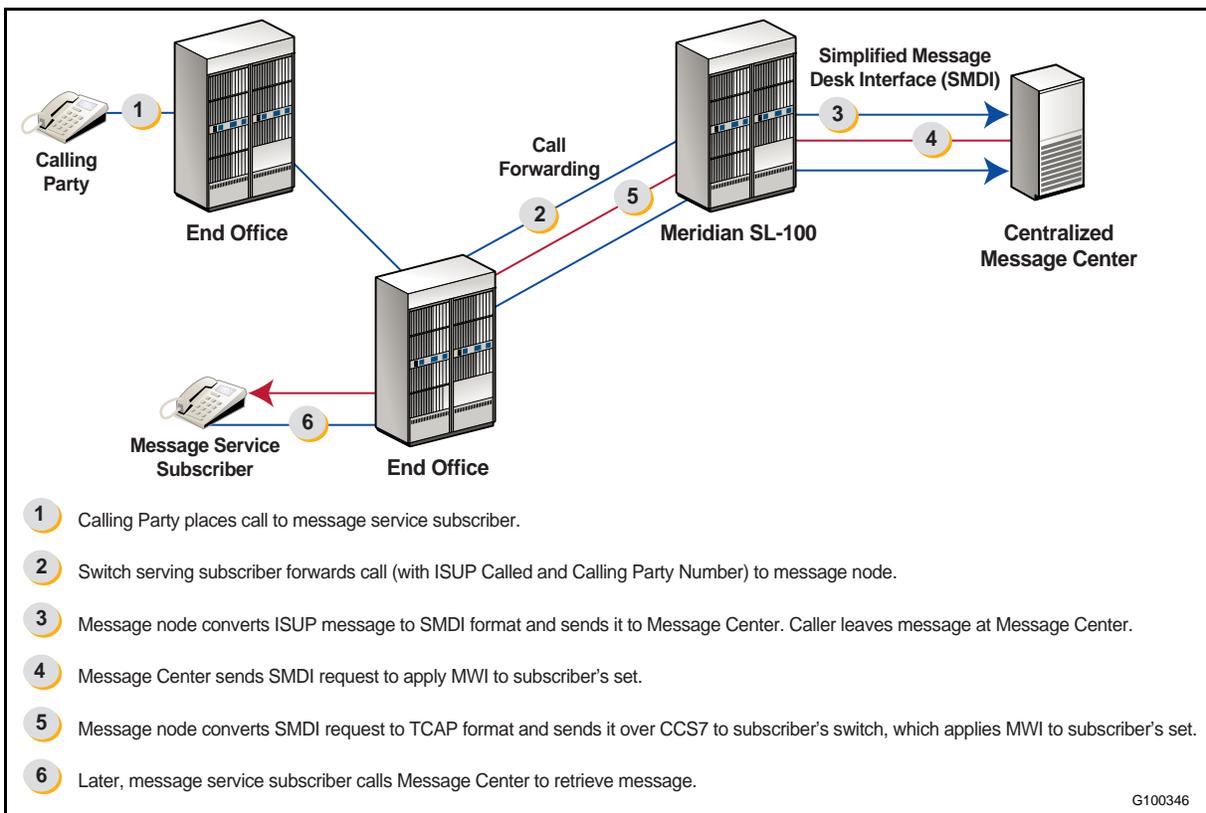
Because it is based on CCS7 and Simplified Message Desk Interface (SMDI) standards, Network Message Service works with any compliant voice-message node, switching system or message device.

NMS provides Message Waiting Indication (MWI) to users served by multiple Meridian SL-100 switches using CCS7.

Figure 8 shows how message service works in a CCS7 network. There are two components of NMS operation:

- Conversion between CCS7 Integrated Services User Part (ISUP) signaling and SMDI.
- Interworking between SMDI and Transaction Capability Application Part (TCAP) to apply MWI over CCS7 links with TCAP messaging.

Figure 8
CCS7 Network Message Service



ISUP Signaling to SMDI

When an incoming call (from inside or outside the LATA) is forwarded to the message center for a user, Call Forward Reason, Called Number and (optionally) Calling Number are sent by CCS7 ISUP messaging, converted in the message node to an SMDI format, and sent to the message center.

SMDI Signaling to TCAP Messaging

After the message is recorded, the message center sends a message over the SMDI link to apply MWI to the subscriber's set. Software in the voice message node converts that request into a TCAP message that can be sent to other Meridian SL-100/Communication Server 2100 hosts in the CCS7 network. The TCAP message instructs the switch serving the user to apply MWI to the set.

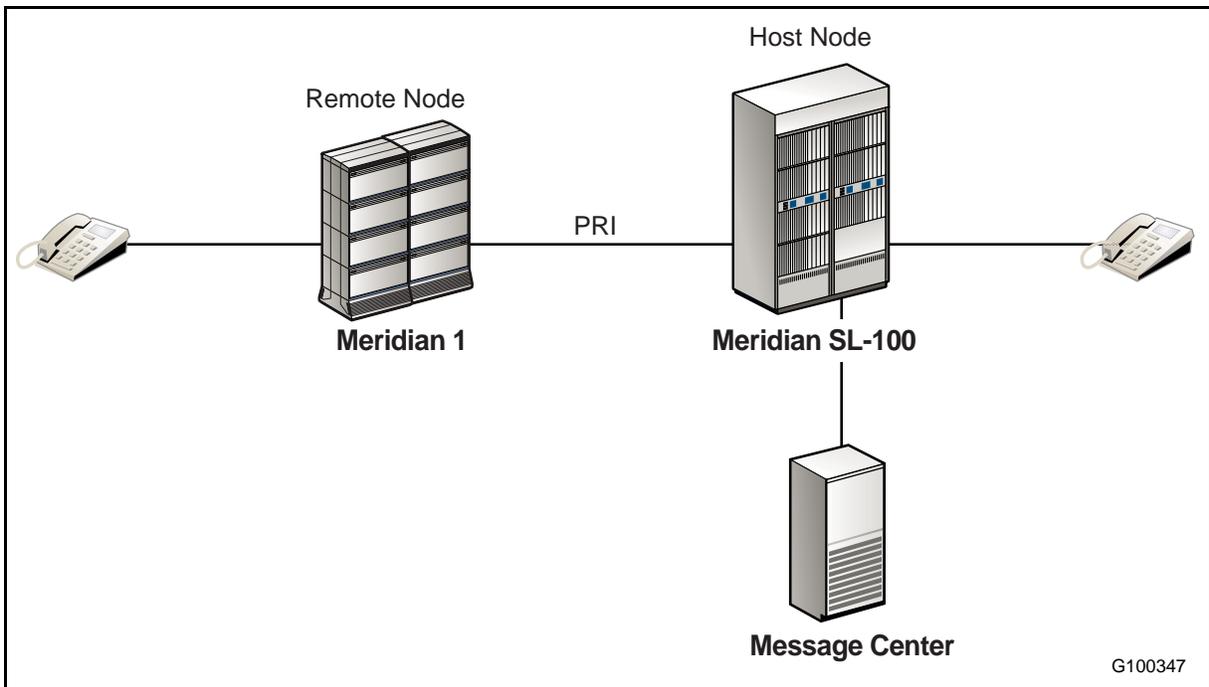
NMS features and benefits

Network Message Service centralizes message service operation, freeing the customer from having to provision, maintain and administer SMDI interface at multiple switches. Through the wide area deployment of message service, calls can be completed with fewer call attempts, billable traffic is increased and the need for interoffice facilities is reduced.

NMS configurations

Meridian 1 to Meridian SL-100 connectivity is through PRI trunks. Figure 9 illustrates a Meridian 1 to Meridian SL-100 connection through PRI trunks.

Figure 9
Meridian 1 connects to the Meridian SL-100 by PRI trunks



To support NMS over CCS7, Message Waiting Indication (MWI) can be passed over proprietary PRI between two Meridian SL-100s (refer to Figure 10), or a DMS-100 and a Meridian SL-100 (refer to Figure 11), regardless of the location of the SMDI link.

Figure 10
MWI passed over PRI that connect two Meridian SL-100s

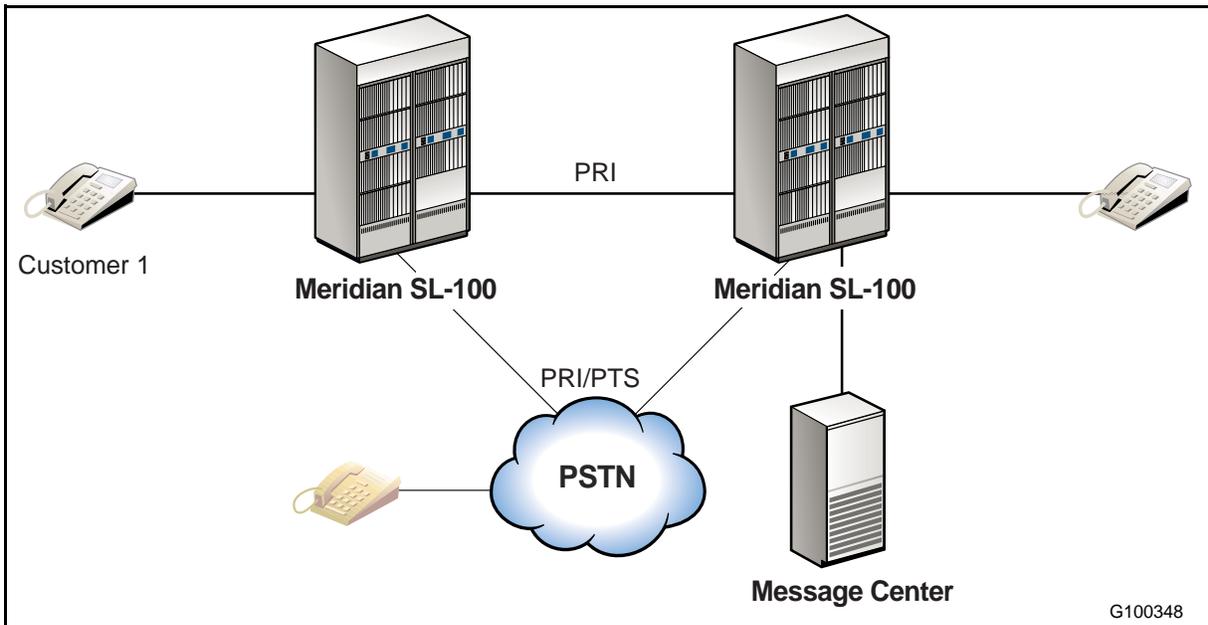
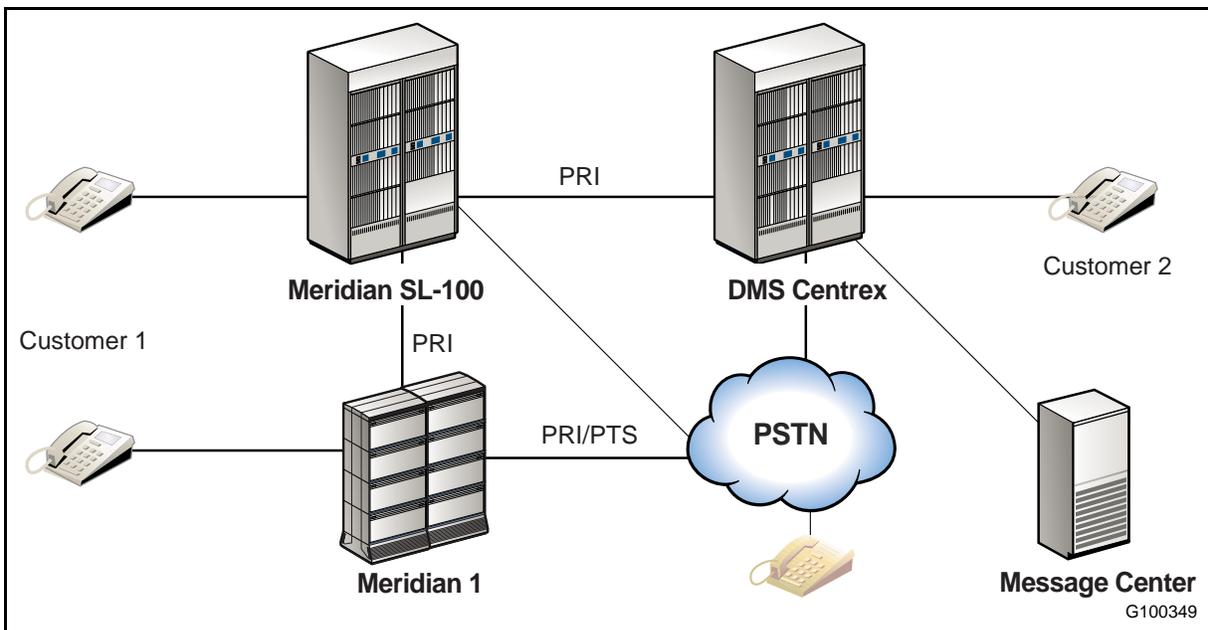


Figure 11
MWI passed over PRI that connect a DMS-100 and a Meridian SL-100



92 Voice messaging

Network Message Service document references

Table 70 lists documentation references for Network Message Service.

Table 70
Network Message Service document references

Document title	Document number
<i>Meridian SL-100/Communication Server 2100 Product Guide</i>	555-4001-806
<i>Meridian SL-100 Meridian 1 Interworking Services Guide</i>	555-4001-026



Conferencing and announcements

Introduction

Nortel Networks Conferencing and announcements products enable customers with a Meridian SL-100/Communication Server 2100 to schedule and administer integrated conferences and announcements for their enterprise network.

This chapter contains information about the following Conferencing and Announcement products:

- [“Nortel Networks Meridian Integrated Conference Bridge \(MICB\) Release 3.0” on page 94](#)
- [“Nortel Networks ICB Release 4.0” on page 96](#)

Note: The Universal Audio Server (UAS) and Media Server 2010 provide conferencing and announcement services for an IP softswitch. For more information, refer to the chapter “Media Servers” in the *Meridian SL-100/Communication Server 2100 Product Guide* (555-4001-806).

Nortel Networks Meridian Integrated Conference Bridge (MICB) Release 3.0

Table 71 lists Nortel Networks Meridian Integrated Conference Bridge feature information.

Table 71
Meridian Integrated Conference Bridge feature information

Platform compatibility	Meridian SL-100 and Communication Server 2100
Platform requirements	<p>Meridian SL-100: Release MSL09 or higher, supports up to 32 ports per card using the FLXA feature, requires ACD Basic, ACD Routing Enhancement, MSL Digital Phones M2000-Display, MSL Flex LEN on IPE, MSL Enhanced Peripheral Equipment (IPE).</p> <p>Communication Server 2100: Release SE06 or higher, supports up to 32 ports per card using the FLXA feature, requires ACD Basic, ACD Routing Enhancement, MSL Digital Phones M2000-Display, MSL Flex LEN on IPE, MSL Enhanced Peripheral Equipment (IPE).</p>
Ordering information	<p>Please refer to the current Product Catalog or contact your Nortel Networks Channel Account Manager.</p> <p>For more information, contact your Nortel Networks representative, call 1-800-4-Nortel or 1-800-466-7835 from anywhere in North America, or go to the Nortel Networks website at http://www.nortelnetworks.com.</p>

Nortel Networks Meridian Integrated Conference Bridge (MICB) Release 3.0 is server-based audio conference application running on a Meridian SL-100/Communication Server 2100 Intelligent Peripheral Equipment (IPE) line card.

Nortel Networks MICB Release 3.0 allows users to schedule and administer multiple simultaneous conferences using a Browser User Interface (BUI) or a Telephone User Interface (TUI).

MICB Release 3.0 provides specific announcements and tones that relate to events during the conference (for example, advising on the status of the conference connection, announcing a conferee joining or leaving the conference, warning of the termination of the conference).

After the MICB Release 3.0 card installs into an IPE, it communicates with the system software by emulating a digital line card, which allows existing software to control the operation of the MICB. Each port on the MICB card configures as an Automatic Call Distribution (ACD) M2616 digital telephone set.

Nortel Networks MICB features and benefits

MICB Release 3.0 includes the following features and benefits:

- Browser User Interface (BUI) – Intuitive web-based BUI for scheduling and administering multiple conferences simultaneously. ICB provides a faster Internet browser.
- Telephone User Interface (TUI) – Menu-driven scheduling/reservation capability by any Dual-tone Multifrequency (DTMF) telephone using the keypad.
- MICB card plugs into one slot of an IPE module and requires no Tie trunk cards to connect it into the Meridian SL-100/Communication Server 2100 – No tie trunk cards lowers costs and requires less support and maintenance.
- Connect two ICB cards together – MICB card has 32 ports (maximum 32 conferees) and can be easily bridged with another ICB card. Two MICB cards connected together (dual card) allow up to 62 conference ports (maximum 62 conferees). MICB dual card does not require an external server for administration control of dual card conferences.
- Provides announcements and tones – Advises the chairperson/ conferees on the status of the conference connection, indicates when a conferee joins or leaves the conference and warns when the conference is about to end.
- Single number access to all meetings.
- Multi-language voice prompts in 10 languages.
- Conference password security – Requires the chairperson and/or conferees to enter a Dual-tone Multifrequency password before entering the conference.
- E-mail notification – Conference confirmation/cancellation/attributes to scheduler; pre- and post-meeting notification.

MICB document references

Table 72 lists documentation references for ICB.

Table 72
ICB document references

Document title	Document number
<i>Meridian SL-100/Communication Server 2100 Product Guide</i>	555-4001-806
<i>Meridian SL-100 Meridian Integrated Conference Bridge Service Implementation Guide</i>	555-4001-135

Nortel Networks ICB Release 4.0

Nortel Networks Integrated Conference Bridge Release 4 is the fourth generation of Nortel Networks conference bridge. The Integrated Conference Bridge release 4 as its predecessors MICB, MICB2 and MICB 3 implements “meet-me” audio conference bridge. The audio conference bridge provides the capability to hold meetings and conferences from distance using phones, without moving anybody from their office. At the appointed time, each participant calls the number set for the bridge, or is called by the chairperson and is connected to the bridge.

The Integrated Conference Bridge Release 4 (ICB 4) system supports various types of meetings – regular meetings with defined start and end time; permanent or “always on” bridge meetings which can be accessed at any time; emergency bridges etc. More than one active meeting can exist simultaneously on the same card, limited only by the total ports used and by the configuration of the conference access numbers.

New features available with ICB Release 4.0

End-user features available with ICB Release 4.0

The following end-user features are available with ICB Release 4.0:

- **MS Outlook integration** – Outlook users can schedule an ICB conference from the Outlook GUI.
- **Meeting close second warning message** – ICB 4 adds a second and final warning to indicate that meeting will be closed in two minutes.
- **Copy a conference** – User or Super user can schedule a new conference by copying an existing conference without having to re-enter all of the detailed information.
- **Calendar for scheduling meetings** – A calendar icon is added to the “Schedule a New Conference” window. It is a more friendly way to choose a date. Clicking on the calendar icon opens a new window called “Calendar – Select Date”.
- **Chairperson Control of Conferee Volume** – Allows the chairperson to control volume for individual participants using the BUI Chairperson control.
- **Current speaker indication** – This feature provides to the BUI Chairperson Control an indication which participant is the current speaker. The current speaker is indicated by a different color in the participant’s row on the “participant list”. Every time that the “Conference Call Manager” window is refreshed the current speaker is updated.

- **Questions and Voting display** – In a lecture meeting there is often a need to allow questions and answer or to vote on particular items. This can be managed by adding DTMF commands for conferees the results of which would displayed on the BUI Conference Control screen.
- **Ad-hoc meeting** – This feature provides the ICB users the ability to create an “ad hoc” meeting using the available card resources (ports and DNs that are not booked for other meetings). The meeting is not scheduled from the BUI or Outlook. It is created automatically by the ICB card when the user dials to the card and enters their TUI login as meeting ID and their TUI password. The user is now the chairperson of this new meeting.
- **Executive users** – This feature provides a new type of user called “Executiveuser”. The Executive user is a user that
 - can access the scheduling application for scheduling, viewing and modifying their own meetings.
 - and can view meetings of all users.This user can schedule meetings from the BUI or Outlook.

Administration features available with ICB Release 4.0

The following Administration features are available with ICB Release 4.0:

- **Default conference settings** – This feature allows the administrator to set some defaults of the conference parameters.
- **Outlook integration as a key coded option** – The Outlook integration feature is provided as a keycode option. So the customer can purchase not only ports, but also this feature. In the Browser User Interface (BUI), in the “Card Upgrade” window, a new field is added to support this option. The options are “ADVANCED” for advanced features and “BASIC” for basic features.

The ADVANCED features are: Outlook integration.

The BASIC features are: all other features.
- **Define Outlook users** – The administrator BUI is changed to include users access permission to the Outlook GUI. In user configuration the administrator can define the following for each Super User and Regular User:
 - Outlook Only
 - BUI Only
 - Outlook and BUI

98 Conferencing and announcements

- **Separated User and Administrator BUI Help text** – In ICB 4 the Help is separated so super user and regular user cannot see the administrator help text. This provides only the information the current user requires when looking for help.
 - **Increased the capacity of users up to 500** – Card can host up to 500 BUI users. The same goes for dual ICB: each card can have up to 500 users. The Scheduling BUI server can handle up to 20 users simultaneously (the same as MICB3).
 - **Billing Report enhancement** – In ICB 4 the following information is added to the Billing report:
 - Report showing for each meeting the **booked ports and the actually used ports**.
 - Report showing for each event the **owner ID** that booked this meeting.
 - Report showing for each event the **department number** of the user that booked this meeting. The existing Billing account is to be used for department number.
- To support the list above, ICB 4.0 adds the following information to the billing report:
- **Owner ID** is an attribute of a user (up to 10 characters), defined by the administrator (as user ID for browser login). Each user has a unique ID. This field is added to all events.
 - **Ports booked** is the number of ports that were booked by the user. This field is added to all Meeting End events.
 - **Used ports** is the number of ports that actually were used (the high water mark for ports used). This field already was used in all Meeting End events.
- **Enlarge the recurring limit to 52 iterations** – In MICB3 the recurring is limited to 30 iterations. In ICB 4 this number is enlarged to 52.
 - **Define ICB Time Zone** – Scheduling from Outlook BUI will translate the user time zone to the ICB time zone. Calculation is done automatically. ICB 4 provides a new attribute called “Time Zone” in the Installation Wizard
 - **E-mail Notification – add Toll Free Prefix** – ICB 4 provides another prefix called Toll Free prefix for 800 access.
 - **Define volume level default** – The volume of the speech, voice prompts and voice records heard on ICB 4 calls can be controlled.

The administrator can affect the volume on the overall system. The volume is handled separately for the following options:

- Voice Prompt Playing – prompts that announced to participant not in a conference.
- Voice recording (for example, to save participant name).
- Participants in a conference
- Speak direction
- Listen direction

ICB release 4.0 hardware

ICB 4 is based on a new hardware platform called Telrad Services Platform (TSP). Its interface toward the rest of the Meridian 1/ Succession 1000/Meridian SL-100 is an emulation of the Extended Digital Line Card (XDLC), so it is software transparent. The card is designed with 32 voice ports which is supported on a Meridian SL-100 having the minimum software release of MSL09. The new ICB card is the NT5D51BC.

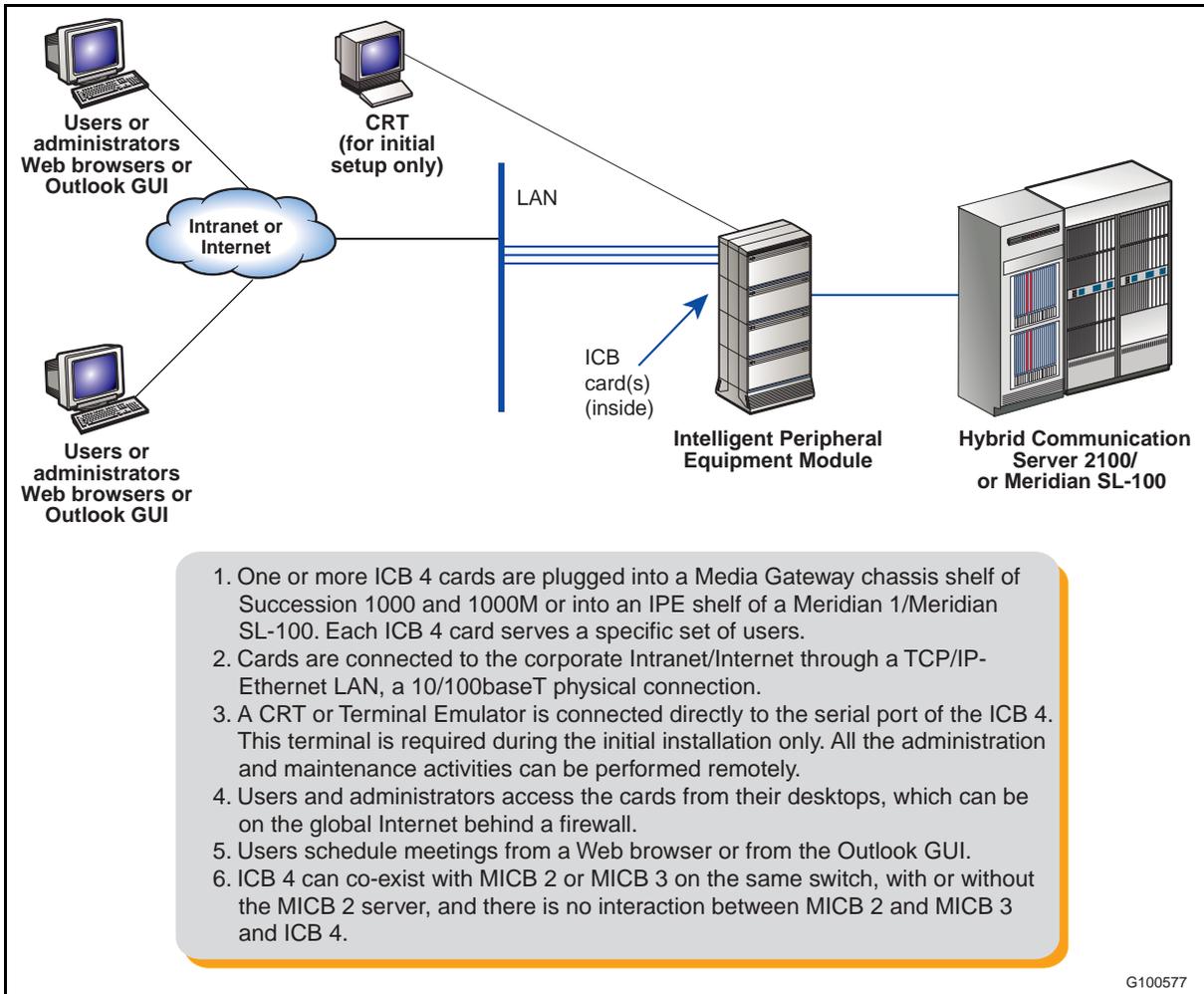
ICB 4 is either a single card or a pair of cards (if dual meeting is required). For dual meeting only, the primary card uses ports on the secondary card; for all other purposes (users access, scheduling) each card is an individual system. This means that

- Each card (primary, secondary) has its own list of users. There is no “common list” for both cards.
- To schedule a conference, users log to the card in which their account is defined. If a user (the person) has two accounts, one on each card, they must try each card separately to find available resources for the conference. There is no automatic “pooling” between the cards.
- A dual meeting can be scheduled by users of the primary card only.

[Figure 12 on page 100](#) shows the interaction between an ICB Release 4.0 line card and a Hybrid Communication Server 2100 or Meridian SL-100.

100 Conferencing and announcements

Figure 12
ICB Release 4.0 line card interaction with a Hybrid Communication Server 2100
or Meridian SL-100





System management

Introduction

Nortel Networks System management products for enterprise enable customers with a Meridian SL-100/Communication Server 2100 to manage their telephony network.

This chapter contains information about the following enterprise System Management products that work with the Meridian SL-100/Communication Server 2100:

- [“Nortel Networks Optivity Telephony Manager for Meridian SL-100 Release 2.0” on page 102](#)

Note: Optivity Telephony Manager for Meridian SL-100 currently works only for the Meridian SL-100.

- [“Real-time Station Message Detail Recording” on page 106](#)

Nortel Networks Optivity Telephony Manager for Meridian SL-100 Release 2.0

Table 73 lists feature information for Nortel Networks Optivity Telephony Manager for the Meridian SL-100.

Table 73
Optivity Telephony Manager for Meridian SL-100 feature information

Platform compatibility	Meridian SL-100 only
Platform requirements	<p>Meridian SL-100: MSL11 Release or higher, Meridian SL-100 must be equipped with a LIS or FLIS shelf on which an EIU is installed. While only one EIU is required for operation of OTM, a second EIU would provide redundancy. The EIU must be connected to the same LAN segment as the Windows systems on which the OTM applications will run.</p> <p>To use the Enhanced IPE and M3900 tools, the Meridian SL-100 must be equipped with enhanced IPEs and M3900 sets.</p>
Ordering information	<p>Please refer to the current Product Catalog or contact your Nortel Networks Channel Account Manager.</p> <p>For more information, contact your Nortel Networks representative, call 1-800-4-Nortel or 1-800-466-7835 from anywhere in North America, or go to the Nortel Networks website at http://www.nortelnetworks.com.</p>

Nortel Networks Optivity Telephony Manager (OTM) is a premier software management application that provides fault, configuration, accounting and performance management for telephony networks.

Companies can rely on this integrated suite of management tools for configuration, control and analysis of their telephony network, either through a Windows Graphical User Interface (GUI) or Web browser interface.

Optivity Telephony Manager for Meridian SL-100 Release 2.0 uses a multi-tier client server architecture. It is comprised of the Java Windows client application, Java Windows/NT server framework, and the Meridian SL-100 switch with an installed Ethernet Interface Unit (EIU) that interfaces to the Application Unit Interface (AUI). The application uses the Simple Network Management Protocol (SNMP) that operates on top of TCP/IP and UDP.

Integration of Optivity Network Management System (NMS)

Integration of OTM for Meridian SL-100 Release 2.0 with Optivity Network Management System (NMS) is available through Optivity Telephony Manager for Meridian.

Optivity Network Management System (NMS) integration has the following benefits:

- Integration of Optivity Network Management System (NMS) enables the voice folder in the Optivity Network Management System InfoCenter to turn red when a critical or major log is received from the Meridian SL-100.
- Optivity Telephony Manager for Meridian 1's consolidated alarm browser provides the ability to view consolidated alarms once the alarm browser is launched from Optivity Telephony Manager for Meridian SL-100.

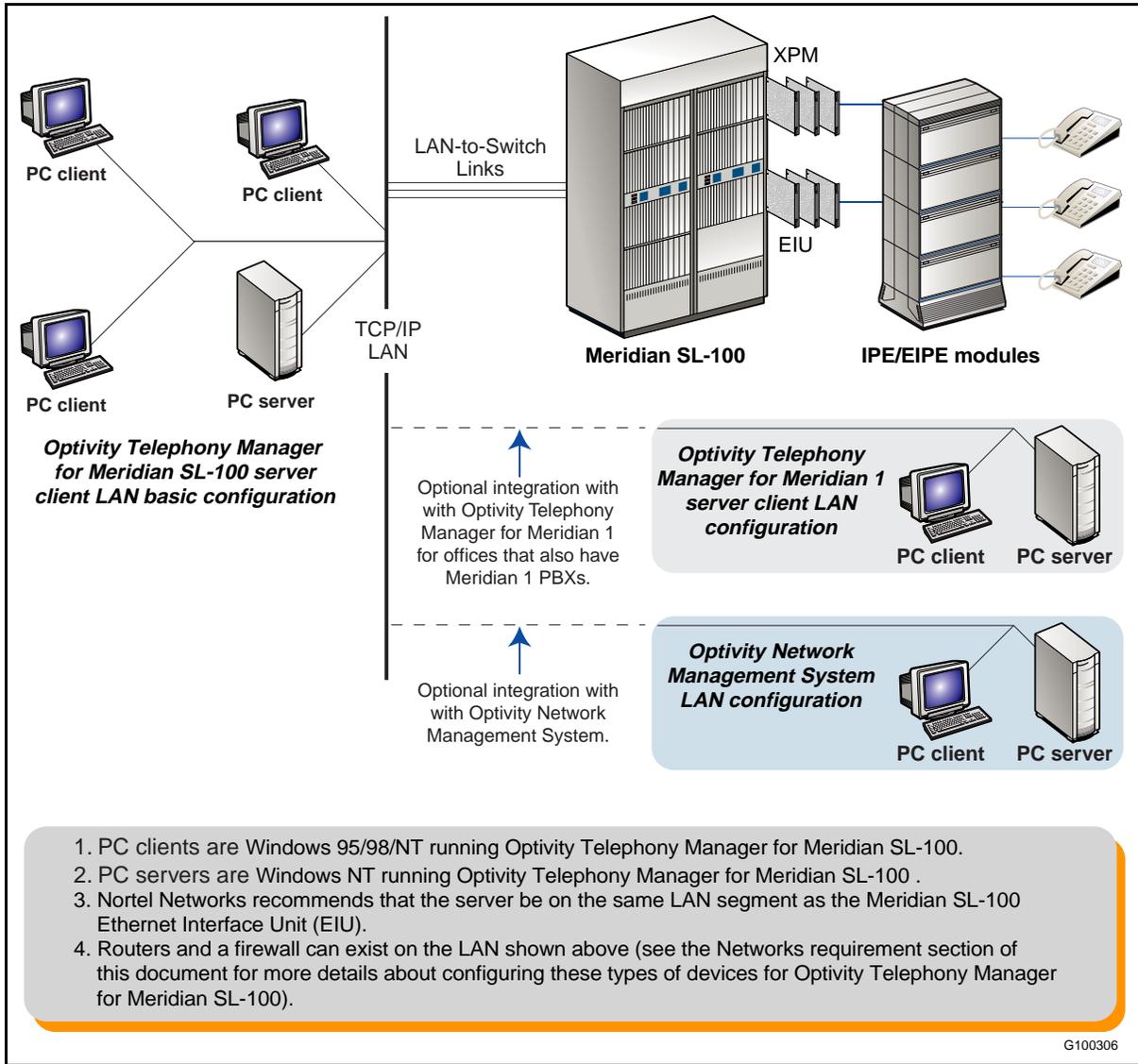
OTM software and hardware requirements

OTM for Meridian SL-100 has the following hardware and software requirements:

- OTM server with NT Server 4.0 with SP5 or Windows 2000 TCP/IP and UDP protocols Network card drivers JRE 1.3.1

[Figure 13 on page 104](#) illustrates an example of Nortel Networks Optivity Telephony Manager for Meridian SL-100 in an enterprise network.

Figure 13
Optivity Telephony Manager for Meridian SL-100 configuration



Optivity Telephony Manager features and benefits

Optivity Manager for Meridian SL-100 includes the following features and benefits:

- GUI Interface for easy network management.
- User administration with logins and privileges.

- Single management solution – OTM provides a complete package of features such as fault management for monitoring supported devices, configuration management for setting up the Meridian SL-100 and performing moves/adds/changes, call accounting features such as The Telecom Billing System and performance features such as Traffic Analysis. Rather than purchasing multiple packages from multiple vendors, OTM encompasses a complete management solution in one application.
- Fault consolidation – OTM can consolidate faults from the Meridian 1, Succession 1000, IP line and trunk cards, CallPilot, Meridian Mail, Symposium Call Center Server (SCCS), Business Communication Manager and the Meridian SL-100. Alarms can then be forwarded from OTM to Optivity Network Management System or HP OpenView for a consolidated view of telephony and data elements.
- Manage traditional telephony and IP Telephony through the same interface – Manage Meridian SL-100 systems through the same OTM interface, which protects your investment.
- Retrieval of switch equipment information such as information pertaining to core nodes, c-side peripherals, carriers, trunks, links, LENS and DNS.
- Database queries of the switch equipment inventory and events.
- Receipt of switch events (full text reports previously only available from switch logs accessible through “Logutil”).
- Watcher functionality is provided for event-triggered actions. Watcher sounds an audible alarm (if desired) and sends an e-mail notification when any designated log event is received
- Increased capacity for events and equipment inventory.
- Event browsing features provide event annotations.
- Real time query of equipment status.
- In-service transfers of software loads to enhanced E-IPEs. All transfers can be completed while the E-IPE is in service. Rebooting from the OTM for Meridian SL-100 application, however, is not possible while in service.
- Maintenance of firmware loads for the M3900 series phone sets through E-IPEs. Because phones must be out of service during the download of new firmware loads, OTM for Meridian SL-100 Release 2.0 allows downloads to be scheduled for a range of sets during non-service hours.

Optivity Telephony Manager document references

Table 74 lists documentation references for Optivity Telephony Manager for Meridian SL-100.

Table 74
Optivity Telephony Manager document references

Document title	Document number
<i>Meridian SL-100/Communication Server 2100 Product Guide</i>	555-4001-806
<i>Installing and Configuring Optivity Telephony Manager</i>	553-3001-230
<i>Using Optivity Telephony Manager</i>	553-3001-330
<i>Using Optivity Telephony Manager Telemanagement Applications</i>	553-3001-331

Real-time Station Message Detail Recording

Table 75 lists feature information for Nortel Networks Real-time Message Detail Recording for the Meridian SL-100/Communication Server 2100.

Table 75
Real-time Message Detail Recording feature information

Platform compatibility	Meridian SL-100 and Communication Server 2100
Platform requirements	Meridian SL-100: Release MSL11 or higher Communication Server 2100: Release SE06 or higher
Ordering information	Please refer to the current Product Catalog or contact your Nortel Networks Channel Account Manager. For more information, contact your Nortel Networks representative, call 1-800-4-Nortel or 1-800-466-7835 from anywhere in North America, or go to the Nortel Networks website at http://www.nortelnetworks.com .

Real-time Message Detail Recording provides a real-time Station Message Detail Recording (SMDR) enhancement to the SMDR feature introduced in MSL11. It is also referred to as “Real-time Billing over EIU”.

Real-time Message Detail Recording provides the following capabilities:

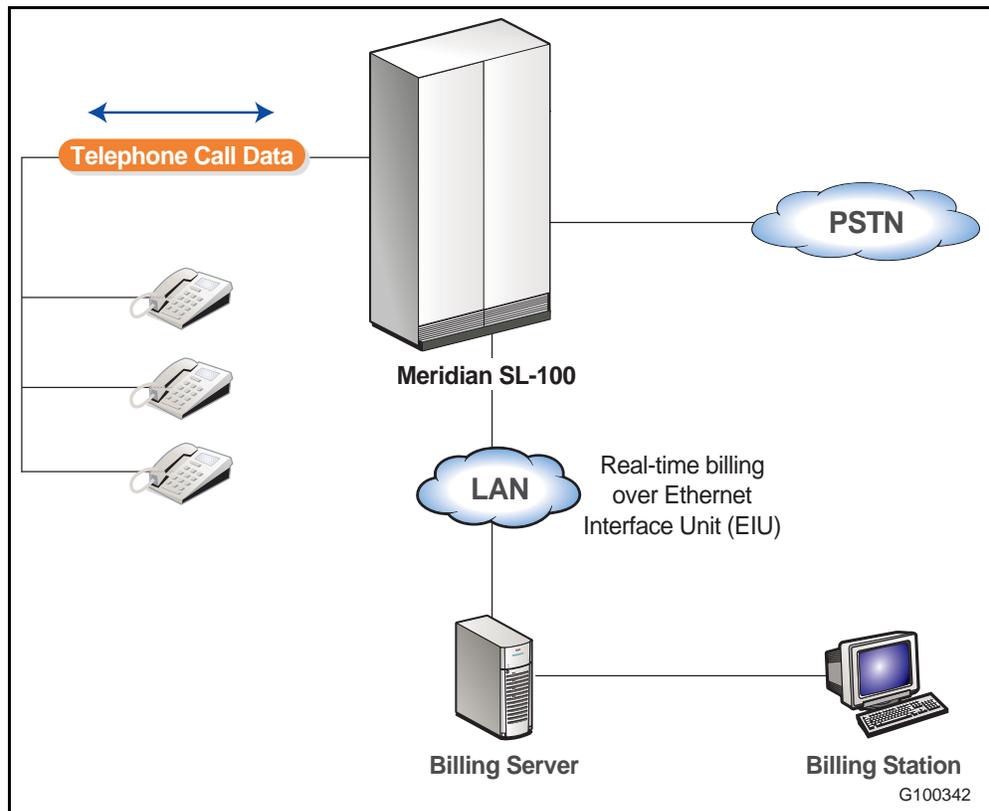
- Immediate access to billing records
- Input into a fraud management system (real-time)
- Data to assist in monitoring network engineering requirements (real-time)

Real-time SMDR uses the EIU to deliver billing information spooled immediately upon call completion. This capability enables enterprises, such as hotels and hospitals, to gather billing information, real-time, for calls made by guest or patients. This billing information is available immediately upon call completion for both local and long distance.

To enable this service, real-time SMDR delivers a billing stream from the Meridian SL-100 over Ethernet through an Application Interface Unit (AIU) to the organization's downstream processor. The information can then be passed on to a billing station, such as a checkout desk or cashier's station terminal. The real-time billing feature also provides the capability to generate revenue from the guest or patient's use of telephone set features.

[Figure 14 on page 108](#) shows how the Real-time SMDR feature is configured.

Figure 14
Station Message Detail Recording network configuration



Real-time SMDR provides data to support fraud management. An enterprise can track phone usage and the historical calling characteristics of subscribers. Real-time SMDR can pass this information to a third-party fraud management system for analysis. A telephone administrator can notice unusual phone usage and initiate immediate investigation. For instance, if a subscriber who historically has not made international calls, suddenly has such call types attributed to their phone, the administrator can contact the subscriber to determine if the subscriber has, in fact, been making long-distance calls. If the subscriber answers, "No", the administrator is alerted to the fraud situation and can take steps to stop future fraudulent use of the subscriber's terminal or codes.

Real-time SMDR also provides data that can support monitoring of network traffic. This aspect of the feature enables a telephone administrator to use information about traffic over the system/switch in real-time. They can use that information to calculate the grade of service being delivered. If the grade of service falls below acceptable levels, the administrator can add resources or rearrange resources to bring the grade of service back within an acceptable range.



Voice and data services

Introduction

Nortel Networks voice and data services enable voice and data to be efficiently and seamlessly integrated over a Meridian SL-100/Communication Server 2100.

This chapter describes the following voice and data services that work with the Meridian SL-100/Communication Server 2100:

- [“Nortel Networks Integrated Services Digital Network \(ISDN\)” on page 110](#)
 - [“National ISDN” on page 111](#)
 - [“ISDN Basic Rate Interface \(BRI\)” on page 115](#)
 - [“ISDN Primary Rate Interface \(PRI\)” on page 116](#)
 - [“ISDN Operations, Administration and Maintenance” on page 118](#)
- [“Specialized data services” on page 120](#)
- [“Narrowband Services” on page 120](#)
- [“Wideband services” on page 123](#)
- [“Common Channel Signaling 7 \(CCS7\)” on page 127](#)

Nortel Networks Integrated Services Digital Network (ISDN)

Table 76 lists Nortel Networks Integrated Services Digital Network (ISDN) feature information.

Table 76
Nortel Networks ISDN feature information

Platform compatibility	Meridian SL-100 and Communication Server 2100
Platform requirements	Meridian SL-100: Release MSL07 or higher, DTCL, LTCL. Communication Server 2100: Release SE06 or higher, PVG, Mediant.
Ordering information	Please refer to the current Product Catalog, or contact your Nortel Networks Channel Account Manager. For more information, contact your Nortel Networks representative, call 1-800-4-Nortel or 1-800-466-7835 from anywhere in North America, or go to the Nortel Networks website at http://www.nortelnetworks.com

ISDN is a set of standards for end-to-end digital voice/data transmission over the public switched network. These standards, defined by the International Telecommunications Union (ITU), are modified for North America in accord with the recommendations of Bell Communications Research (Bellcore). ISDN specifies physical interfaces, electrical characteristics, protocols for encoding information in the network and standards for the operation and processing of calling features such as Call Waiting and Call Forward.

ISDN subscriber-side interfaces connect switching systems to privately owned equipment such as computers, telephones, voicemail devices and Private Branch Exchanges (PBXs). There are currently two major ISDN subscriber interfaces:

- Basic Rate Interface (BRI) line service
- Primary Rate Interface (PRI) trunk service

ISDN services can be extended between switches by Common Channel Signaling No. 7 (CCS7) or PRI trunks, permitting more efficient use of network resources and allowing the delivery of advanced network services such as Calling Line Identification (CLID).

National ISDN

National ISDN achieves industry convergence on a single ISDN implementation and removes many obstacles that have hindered ISDN deployment. A single standard stops the proliferation of proprietary implementations, allowing terminal and switching equipment from different vendors to interwork. This helps lower ISDN equipment costs, reduce operations expenses and improve service ubiquity. National ISDN also ensures service uniformity, making services easier to understand and market.

National ISDN-1

The National ISDN-1 (NI-1) specifications developed by Bellcore partition ISDN capabilities into functional areas. These areas constitute a set of network building blocks that form the foundation upon which uniform ISDN services can be developed in response to market demand.

The NI-1 requirements and Meridian SL-100/Communication Server 2100 capabilities in each area are summarized in the following list:

- Access, call control and signaling

Under this category there are the following requirements:

- Definition of a uniform Basic Rate Interface (BRI) protocol: This requirement is the definition of uniform Basic Rate Interface protocol. It enables “terminal portability”, which means that a switch supports ISDN voice and data terminals from many manufacturers, allowing customers to choose from different terminal vendors and keep their ISDN terminals when moving to another location. The Meridian SL-100/Communication Server 2100 have terminal portability.
- Definition of uniform CCS7 interoffice and internetwork interfaces for internetworking BRI: Since December of 1990, Nortel Networks has met all CCS7 standards, which define the language different switches will use when communicating with one another. CCS7 supports ISDN services across multiple switches, enabling the wide area coverage necessary for service ubiquity.

- Uniform interface configurations for BRI
 - Definition of two uniform user-to-network interface configurations for BRI: The Meridian SL-100/Communication Server 2100 support both of the interface configurations required by NI-1 (single user with multiple applications and single line shared between two users.)
- Uniformity of BRI services
 - Establishment of a minimum set of BRI services to be provided to the end user in either a uniform or supplier-specific manner: The feature-rich foundation of the Meridian SL-100/Communication Server 2100 exceeds the NI-1 BRI service requirements, providing numerous Bellcore-compliant services in addition to those required for NI-1. The Meridian SL-100/Communication Server 2100 also allows NI-1 lines to interwork with pre NI-1 ISDN lines and analog lines. This essential capability is unique to the Meridian SL-100/Communication Server 2100. Other switch vendors require that ISDN lines be kept strictly separate.
- Primary Rate Interface (PRI) capabilities
 - Definition of a basic set of PRI capabilities, in a supplier-specific manner: The Meridian SL-100/Communication Server 2100 PRI product provides true multivendor interoperability and has been successfully tested with a number of PBXs, switches and multiplexers from other suppliers.
- Data capabilities
 - Introduction of a fundamental set of circuit-switched and packet-switched data capabilities: Nortel Networks pioneered circuit-switched data capabilities and is also a world leader in packet switching technology. Building on this foundation of expertise, the Meridian SL-100/Communication Server 2100 offers fully NI-1 compliant data capabilities.
- Operations support capabilities
 - Introduction of fundamental operations capabilities, either in a uniform or supplier-specific manner, that will allow service providers to provision and maintain their National ISDN offerings: The Meridian SL-100/Communication Server 2100 provides a robust set of operations capabilities for National ISDN.

National ISDN-2

National ISDN-2 builds on the foundation laid by NI-1, by further standardizing the interface protocols and services, and expanding the functionality. Both NI-2 PRI (trunking) and BRI (line) capabilities are supported in phases beginning in Release MSL07.

Under National ISDN-2 the network and user sides have different capabilities with regard to particular functionalities. Network-side implementation refers to the Meridian SL-100/Communication Server 2100 acting as the CO or originating switch.

The following capabilities are supported from both the network and user perspectives beginning in Release MSL09 (with the exception of Two B-channel Transfer):

- NI-2 PRI capabilities
 - Basic call – provides NI-2 PRI access, call control and signaling capabilities including:
 - Support of TR-1268 compliant PRI trunking
 - Interworking to CCS7 in accordance with TR-444
 - B-channel availability procedures (allows the Meridian SL-100 to mark a channel as “out of service” and skip that channel in call processing)
 - Calling Line Identification Services (supports the delivery, restriction, and blocking calling number delivery services over PRI based upon service parameters and privacy indicators)
 - Redirecting Numbers
 - Screening Functions
 - Backup D-channel and Multiple T-1 support – supports a spare signaling channel on a second PRI span to enhance survivability should the primary D-channel fail.
 - Call by Call – provides trunking efficiencies by allowing several services over a single trunk. Channels can be dynamically allocated based on busy hours of different call types (DID, DOD, INWATS, OUTWATS, Foreign Exchange and Tie lines).

- Two B-channel Transfer – allows the Meridian SL-100/Communication Server 2100 to more efficiently use PRI trunk connections for ISDN traffic. When a call is forwarded or transferred from an NI-2 TBCT compliant PBX back to the originating Meridian SL-100, two channels in a PRI trunk are used. Two B-channel Transfer allows an NI-2 TBCT compliant PBX to notify the originating (network-side) Meridian SL-100 to drop the superfluous channel, making that channel available for future calls. Both B-channels must be on the same PRI span.
- Billing capabilities – The Meridian SL-100 provides NI-2 compliant single-stream AMA/SMDR records for circuit-mode and packet-mode calls.
- Dialable Wideband – NI-2 compliant fractional circuit-switched services are available in MSL09 and above.
- Calling Name delivery – The Meridian SL-100 serves as both network and user side for delivery of Calling Name. Calling Name will be accepted by the Meridian SL-100 from a network side switch assuming presentation is allowed. In addition, Calling Name will be built into the setup message of the Meridian SL-100, and sent to the next PBX in the customer network.
- NI-2 BRI capabilities

The Meridian SL-100 provides a high degree of uniformity for BRI services, including the following key capabilities (for additional information, see the full listing of functionalities under NI000050, NI000051, NI000052 and NI000060 included in the BRI Option):

 - Single Directory Number – allows an integrated terminal to have one Directory Number. The same number can be used for all circuit-switched call types and can simultaneously access both B-channels.
 - Single Terminal Endpoint Identifier (TEI) – A single TEI can be used to operate an integrated terminal, regardless of the number of call types or whether one B-channel or two B-channels are being used simultaneously.
 - Assignment of feature keys to a default terminal service profile for non-Initializing terminals – provides non-initializing terminals the ability to use feature keys for feature activation and deactivation.

- Calling Name delivery – offers name delivery to the called party from the ISDN set.
- Parameter downloading – enables an initializing terminal to read certain parameters directly into its memory, synchronizing the terminal and switch databases.
- Shared Directory Number with different call types – allows a Directory Number to be shared between a circuit non-initializing terminal or fully initializing terminal and a packet mode terminal.
- Electronic Key Telephone service and virtual key application – provides call handling flexibility for multiple appearances of the same Directory Number using Call Appearance Call Handling (CACH) so that calls can originate from and terminate to any combination of call appearances. In addition, the end-user can provision the call offering sequence.

ISDN Basic Rate Interface (BRI)

The Basic Rate Interface (BRI) is the basic subscriber loop, delivering two 64-kbps B-channels and one 16-kbps D-channel over a standard twisted-pair loop. Each of the circuit-switched B-channels can transmit voice or data simultaneously, while the D-channel transmits call control messages and user packet data.

ISDN voice services

Meridian SL-100 ISDN is a complete business service that offers the largest number of productivity-enhancing voice features in the industry.

Meridian SL-100 ISDN offers functional-signaling features in accordance with Bellcore standards. Already, over 200 standard features designed to Bellcore Technical Recommendations (TRs) have been implemented on Meridian SL-100 ISDN lines. Standard ISDN allows service providers to offer a consistent grade of service to all customers, regardless of the serving switch. When fully implemented, standard ISDN will allow a wider choice of telephone and terminal vendors, because they will build their products to the same standards.

For customers with special feature needs, Nortel Networks also offers Meridian Feature Transparency, a line option that gives ISDN Business Sets access to the full set of Meridian SL-100 features. Standard ISDN lines have access to the standard Bellcore features.

Circuit-switched data

The ISDN user has access to digital circuit-switched data service at up to 64 kbps over either or both B-channels, with access to ISDN data features and value-added services such as Bearer Capability.

Packet-switched data

ISDN packet services switch data in “packets” of digital information. Each packet is individually addressed and sequentially numbered by the Packet Assembler/Disassembler (PAD) in the transmitting terminal. The packets are then routed individually over ISDN lines and trunks, private networks, or Public Packet-Switched Networks (PPSNs). When the packets reach their destination, the PAD in the destination terminal places the packets in sequential order and removes the addressing information, restoring the data to the form originally transmitted by the originator.

Packet switching is the most cost-effective transmission technology for lower-speed “bursty” data applications. With its end-to-end error checking and correction, packet switching offers a superior level of data connectivity.

Meridian SL-100 ISDN fully supports these packet services:

- D-channel packet data from 1200 bps to 9.6 kbps using X.25 LAPD (CCITT 1988)
- B-channel packet data (provisioned) up to 64 kbps using X.25 LAPB (CCITT 1984 and 1988)
- X.75/X.75' networking among multivendor packet networks

Customer wiring is simplified, because access to both packet-data service and circuit-switched data service is over one standard twisted-pair loop. Each Meridian SL-100 ISDN loop can support up to eight packet-data terminals, the CCITT standard.

Note: Software Right-to-Use is required to deploy ISDN BRI Services, unless previously purchased.

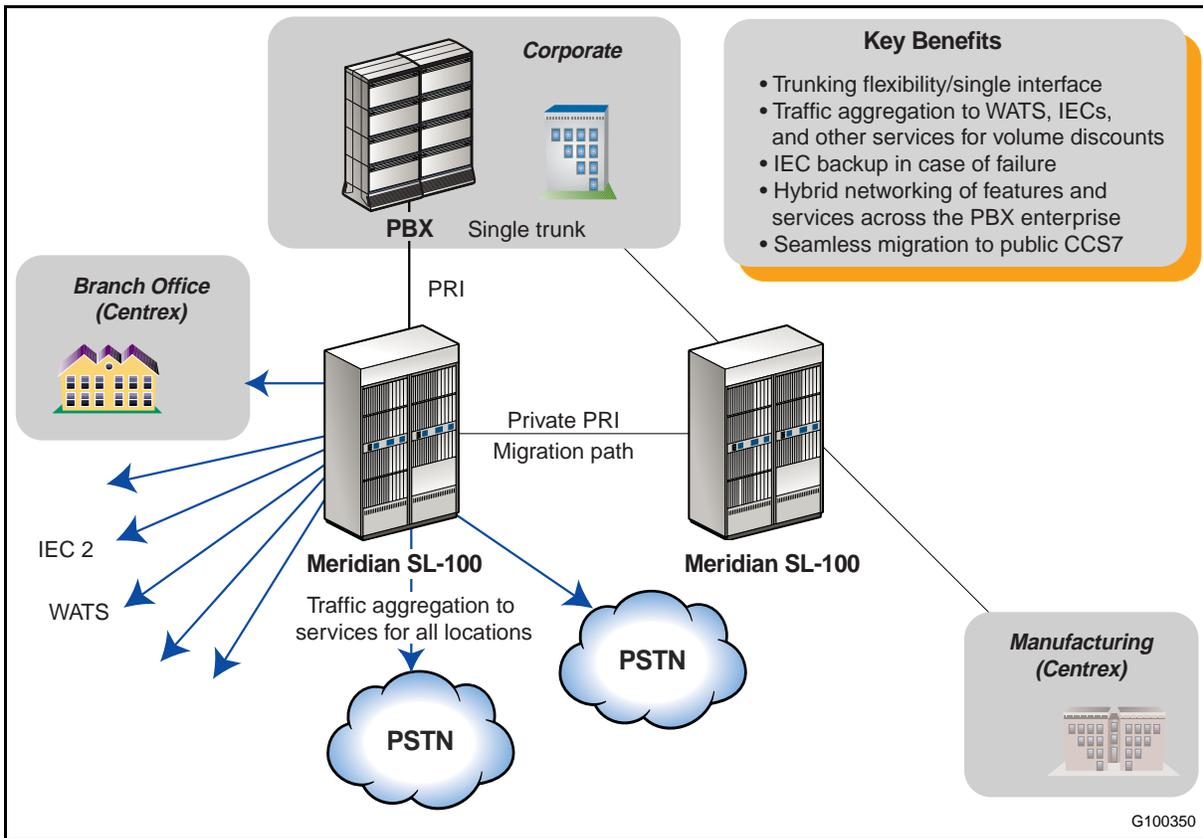
ISDN Primary Rate Interface (PRI)

Businesses are increasingly managing hybrid networks of public and private facilities. The problems of maintaining access to public network services, connectivity with network elements and a consistent grade of service at all customer locations are becoming more complex. The Nortel Networks Primary Rate Interface (PRI) capability can help customers solve these problems, while increasing enterprise network capacity.

The Primary Rate Interface is a CCITT-defined ISDN trunking technology that delivers 64-kbps clear channels and standardized out-of-band signaling. PRI can serve Customer Premises Equipment – such as a Private Branch Exchange (PBX), Local Area Network (LAN) gateway, or host computer – or it can serve as a trunk interface between central switches. PRI is a practical, cost-effective option that can deliver significant cost savings and service improvements to the PBX owner.

Figure 15 illustrates the benefits of PRI in a hybrid network.

Figure 15
PRI improves hybrid networking



PRI benefits

PRI has the following benefits:

- Access to Dialable Wideband Service – PRI is the subscriber access to Dialable Wideband Service (DWS), which allows subscribers to indicate the desired bandwidth (from 128 kbps through 1.536 Mbps in 64-kbps increments) and dial a single standard Directory Number to make a connection to any multi-rate ISDN subscriber. This service is supported for both proprietary PRI and NI-2.

- Integrated Services Access (ISA) – ISA provides call-by-call service selection to increase the efficiency of PBX-to-CO trunks. Trunk types are allocated dynamically on the PRI link within customer-determined limits to accommodate changes in traffic so that multiple trunk types can share the same physical facilities. This service is supported for both proprietary PRI and NI-2.
- Network-wide calling features – Network-wide calling features such as Calling Line ID, Call Forward with Reason and Network Ring Again increase call handling productivity. Because Nortel Networks PRI interworks with CCS7, PRI delivers these not only within the company, but also across the CCS7 public network.
- Enhanced Equal Access – Enhanced Equal Access centralizes access to multiple Interexchange Carriers (IECs) at a single Meridian SL-100. Because the business is not “locked in” to a single IEC, it can choose the service options and price that best suit its current needs. Access to multiple IECs through the end switch ensures continued long distance service in case of IEC failure – an impossibility with dedicated Tie trunks to a single IEC. Multiple access also permits a customer to aggregate traffic to each IEC to obtain volume discounts.
- Network reliability – PRI links are more robust and reliable than other kinds of trunking. Backup D-channel for PRI links provides a backup D-channel that automatically takes over for a failed primary D-channel (NI00001 and NI000043), enhancing the survivability of PRI links. This capability is now available from a network-side perspective in MSL08 and above.

Note: Software Right-to-Use is required to deploy ISDN PRI services, unless previously purchased on the host.

ISDN Operations, Administration and Maintenance

ISDN Basic Access Software

Basic Access Software (Functional Group NI000007) is an option (Right-To-Use required) as part of the Base load. However, the functionality will not become operational, until the ISDN LGC/DTCI peripheral hardware (NTSX05AA Processor, EISP, and EDCH) is installed.

Table 77 lists Base OAM&P functionality for ISDN.

Table 77
Base OAM&P functionality for ISDN

Functionality	Feature	Name	Description
NIO ISDN Test Access	AQ0875	ISDN Digital Test Access	Provides monitoring of circuit-switched B-channels and D-channel packet data connections (Bd) by an external protocol analyzer.
TEL Telecom Layer func	AL2540	NTSX05AA Processor Integration in ISDN LGC/LTC-I	Required to support the rollout of National ISDN-2 and ISDN-3 features on the Meridian SL-100.
NIO ISDN BASE	AF4839	RSC-S Digital Test Access	Provides host Digital Test Access (DTA) equivalency to RSC-S.
NIO Multipoint EOC1	AQ0947 AQ0948	Multipoint EOC 1	Supports the multipoint embedded operations channel on the Meridian SL-100, allowing digital loopback testing on intermediate elements of ISDN 2B1Q loops.
NIO Integrated Tst Base	Various	Integrated Testing Base	Gives the Meridian SL-100 family the cost-effective infrastructure to support testing of current and future subscriber services.
NIO Tsting NION Services	Various	Testing ISDN Services	Adds standalone NT1 test capability and ISDN line card and loop testing to the standard Meridian SL-100 testing system.

Enhanced DCH Integration in ISDN LGC/LTC (Functional Group NI000007)

The Enhanced D-Channel Handler (EDCH) integrates the EDCH into the ISDN Line Group Controllers and Line Trunk Controllers (LGC/LTC). The EDCH provides a 300 percent improvement in memory. The additional memory, along with the 25 percent improvement in real-time provided by the EDCH, is essential for the continued rollout of ISDN features and enhancements (AS2572).

Hardware: This feature requires the NTSX05AA Processor, the Enhanced ISDN Signaling Pre-processor (NTBX01AB) and the Enhanced D-Channel Handler (NTBX02BA).

Enhanced DCH Patcher

This feature reduces time to repair by providing Source Code Patching for the new Enhanced D-Channel Handler (EDCH) circuit card. Feature AL2572 integrates the EDCH into the ISDN LGC/LTC. The Enhanced DCH Patcher requires Functional Group BAS00003 and the EDCH.

Specialized data services

Demand for data communications services is increasingly outstripping the demand for voice communications and data networking is recognized as an essential element of corporate communication structures. Many businesses view their data networks as a strategic asset that differentiates them from their competitors.

The Nortel Networks data communications portfolio can provide business customers reductions in private line leasing and administrative costs and by offering additional value-added data services across the spectrum of transmission bandwidths – from narrowband to wideband to broadband.

Narrowband Services

Narrowband offers bandwidths of up to 64 kbps. Narrowband services meet the needs of lower-bandwidth data applications, including access to public data networks and low-speed data transport.

Nortel Networks narrowband data service portfolio includes:

- SL-100 Modem Pooling

The Narrowband data services portfolio provides data access services and lower-bandwidth data transport services through Meridian SL-100 switching systems. The Nortel Networks narrowband portfolio of access technologies can support a wide range of data services and applications.

Narrowband data services positions the Meridian SL-100 as a key resource in developing enterprise data networks by providing “value-added” data services such as those listed below:

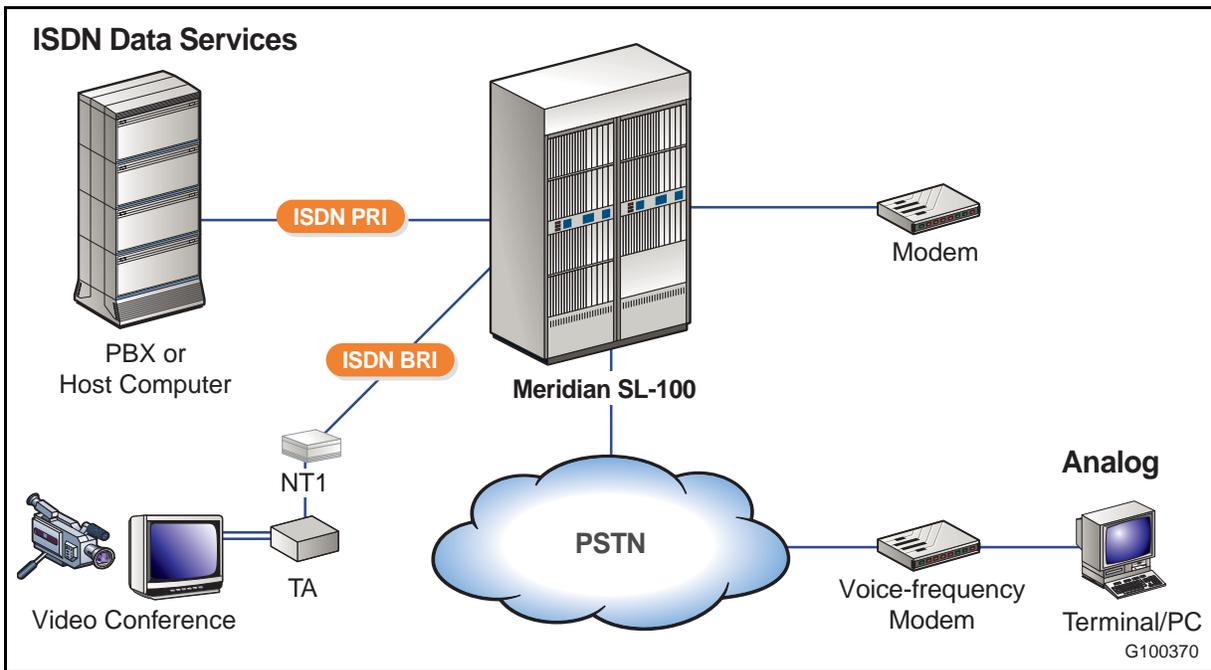
- Local or Wide Area Networking – Nortel Networks Narrowband Data Services can connect users within a building or locality, or across a state or continent. Narrowband services can be used to access wideband data transport services.

- Convenience and cost effectiveness – Because Narrowband Data Services are provided over standard twisted-pair wiring, moving data terminal equipment becomes as easy and inexpensive as moving a telephone. And after the move, data service can be restored much faster than it would be if a private line network had to be reconfigured. In addition, network management is easier because the existing voice switching network is used for switching Narrowband Data Services.
- Flexible access to multiple hosts and peers – Since Nortel Networks narrowband services provide switched access, there is no need for data terminal equipment to be limited to dedicated access to a given network, host or set of peers. Data terminals can access multiple networks, hosts and peers as quickly and as easily as dialing a normal voice call.
- Additional security for data – Narrowband lines are assigned to specifically defined customer groups in the central switch. A customer group can include all of a customer's lines or a subset of them (for instance, the lines serving the accounting department or the lines serving both accounting and payroll). Through their ability to block all calls from outside the customer group on an optional basis and to allow only calls from specified customer groups, narrowband services provide an additional level of data security beyond that provided by the customer's host computer.
- Digital connections to the analog world – Meridian SL-100 Modem Pooling supplies the analog-to-digital and digital-to-analog conversions needed for end-to-end data transmission when analog trunks or modems are involved in the connection.
- System reliability – Nortel Networks Narrowband Data Services are unsurpassed in terms of survivability, bit-error rate, redundancy within the network and integration within the switch. The customer gains the inherent reliability of services provided across the enterprise.

All narrowband services are completely compatible. As [Figure 16 on page 122](#) illustrates ISDN Data Services interwork transparently with one another and with analog voice frequency modems.

Narrowband service compatibility also includes access to Wideband Data Services. ISDN B-channels are compatible with frame relay, providing access to a public frame relay network. This compatibility enables customers to select the combination of narrowband services that best meets their application needs.

Figure 16
Meridian SL-100 Narrowband data services



Any of these data capabilities can serve as access technologies to support most hybrid data applications. The user's specific requirements for efficiency and performance determine the optimum supporting technology.

ISDN data services

ISDN data services are summarized in the following list:

- ISDN Basic Rate Interface delivers fully integrated voice services and digital circuit- and packet-switched (X.25, X.75/X.75') data transport at speeds of up to 64 kbps to as many as eight devices over a single twisted pair. ISDN data services at 64 kbps also provide access to high-speed data networks (X.75/X.75').
- ISDN Primary Rate Interface, with 23B+D connectivity, not only supports Dialable Wideband Service (DWS), but enables data terminals served by a Meridian SL-100 ISDN node to have fully digital circuit - and packet-switched ISDN interworking with data terminals served by PBXs. Meridian SL-100 PRI also provides the efficiency and speed of clear 64-kbps channels for connections to high-speed data networks or host computers.

- 3270 Switched Access Service (Coax elimination) connects IBM 3270 - and 3194-family terminals and host computer cluster controllers using a Terminal Interface (TIF) unit and Control Unit Interfaces (CUIFs) to standard twisted-pair wiring and the Meridian SL-100 switched network. The switched access and public facilities used by 3270 Switched Access Service make it a cost-effective alternative to dedicated private-line data networks.

Wideband services

Wideband services offer bandwidths greater than 64 kbps and less than 45 Mbps. Wideband services meet the needs of data applications requiring high-speed data transport and access.

Nortel Networks offers wideband circuit-switched data service which provides users up to 1.5 Mbps of bandwidth in 64-kbps increments.

Nortel Networks Wideband data services offer bandwidths greater than 64 kbps, allowing high-speed data transport and access, as well as supporting a diverse range of data services and applications.

Wideband data services offer users and their customers the following advantages:

- Metropolitan or Wide Area Networking – Central switch-based Wideband Data Services can connect users within a building or locality, or across a state or continent. Central switch-based Wide Area Networks (WANs) offer the required bandwidth for fast LAN-to-LAN, LAN-to-host, host-to-host and terminal-to-host communications.
- LAN interconnect services – To meet the demands of the fast-growing LAN interconnection market, frame relay provides a fast-packet service. The frame relay network meets the demands of LAN interconnection configurations, offering high-speed bandwidth on demand, point-to-multipoint connections, robustness and minimal CPE investment.
- Video conferencing – Dialable Wideband can provide customers with video conferencing services that are as simple to operate as dialing the phone. Users are no longer required to schedule fractional or whole DS-1 services before a conference.
- Reliability of central switch services – Nortel Networks central switch-based Wideband Data Services are unsurpassed in terms of survivability, bit-error rate, redundancy within the network and integration within the switch. With Nortel Networks wideband products, the user gains the inherent reliability of services.

Dialable Wideband Services (DWS)

Dialable Wideband Services (DWS) provides a simple way for users to extend their existing ISDN services to match the higher bandwidth requirements emerging for video conferencing, multimedia, imaging, and other high-speed applications. DWS bridges the gap between narrowband services (64 kbps) and broadband services (> 1.536 Mbps). Dialable Wideband Services, the Nortel Networks version of multi-rate ISDN, offers dialable, on-demand bandwidth in 64 kbps increments up to 1.536 Mbps. It is also available on the Meridian SL-100 for the NI-2 standardized version, NX64.

DWS is based on an extension of the current ISDN Primary Rate Interface standard. This technology enables users to provide wideband connectivity within the boundaries of the existing circuit-switched facilities. DWS permits an end user to set up wideband calls (from 128 kbps through 1.536 Mbps) over an ISDN Primary Rate Interface (PRI) in real-time and in the same manner as any other circuit-switched ISDN connection. The bandwidth of the call is determined by the originating end user at the time of call setup.

DWS benefits

DWS addresses the needs of both current and future wideband subscribers.

DWS has the following benefits:

- On demand, dial-up bandwidth – DWS provides the end user with the flexibility to dial a single Directory Number, select the desired bandwidth (Nx64 kbps where N = 2 to 24) on a per-call basis, and to dial any other multi-rate ISDN subscriber.
- Standards based – DWS is based upon American National Standards Institute (ANSI) standards and is therefore compatible with many CPE products.
- Constant delay performance – DWS is a circuit-switched service and is therefore appropriate for applications that have stringent delay requirements, such as video conferencing.
- Flexible access to Public Switched Wideband services – A variety of public carriers have deployed and tarified multi-rate ISDN services. With integrated access to the public network, wideband services can be extended far beyond the boundaries of the enterprise network.

- Savings on Carrier services – multi-rate ISDN services are typically priced lower than the equivalent bandwidth derived by inverse multiplexing multiple dialed channels. For example, one H0 circuit (384 kbps) is priced approximately 25 percent less than six inverse multiplexed DS0 (64 kbps) circuits. Similarly, the cost of one H11 circuit (1.536 Mbps) is approximately 40 percent less than 24 DS0 circuits.
- Call setup performance – The call setup time for DWS can be as much as an order of magnitude faster than other alternate methods of delivering switched wideband services.
- Call recording – Dialable Wideband calls generate a single call record, instead of multiple records. Each record indicates the call duration and the bandwidth allocated for the call, which simplifies the billing and traffic measurement process.

DWS applications

Dialable Wideband Services allow several sophisticated applications to be easily integrated into the enterprise network.

Prime examples of DWS applications are listed below:

- Video transmission – The number of video conferencing systems in use has grown dramatically over the last few years. Businesses increasingly use these systems for intracorporate and intercorporate communications. With DWS, video users can easily interconnect with other video conferencing wideband subscribers. The current and constantly improving video compression algorithms make it possible to achieve excellent quality at 768 kbps (half a T-1).
- Distance learning – Distance learning represents another ideal application for DWS. For example, many universities cannot afford expert instructors in every field of study. Through distance learning, scarce professional teaching resources can be shared with other educational institutions. An interface from the classroom to the Public Network using DWS offers a cost-effective means of delivering course instructions to students who do not have convenient access to the main, centralized campus.
- On-demand LAN/WAN interconnectivity – DWS can also be used for interconnecting Local Area Networks into Wide Area Networks. DWS can connect LANs anywhere in the network to create corporate or intercorporate WANs on-demand. This ability to make intercorporate connections can be of particular advantage to corporations that need to share information with key suppliers and customers.

- Imaging (medical, engineering or scientific imaging applications) – DWS is also ideal for imaging applications. With DWS, a hospital can cost effectively provide on-the-spot consultation and diagnostic services to remote clinics in small towns or rural areas. A remote clinic could use an X-ray scanner to record information about a patient's condition, and forward the information to another location that has the latest analysis equipment.
- Video to the desktop – New, emerging technologies are expanding the capability for LANs to provide isochronous (constant delay) communications for applications such as video to the desktop. One of the most promising of these new technologies is called ISOEthernet™ (a registered trademark of National Semiconductor). With ISOEthernet™, you have the ability to meld multi-rate ISDN and 10BaseT technologies, delivering Nx64 kbps services to the desktop. An interface from the LAN to the Public Network over DWS facilities provides intercorporate multimedia bandwidths to a large number of subscribers who need to more effectively communicate with suppliers, customers and strategic business partners.

DWS limitations and restrictions

Dialable Wideband Service in the Meridian SL-100 market is available with the following limitations and restrictions:

- All the B-channels used on an incoming or outgoing wideband call must reside on the same physical PRI facility and be in the same trunk group.
- A satellite hop is not supported.
- Off-hook and on-hook queuing are not supported for wideband trunk groups.
- IBN and DTMF digit collection (that is, PIN digits, account codes, authorization codes, etc.) is not supported. Wideband calls routed to an operator receive the ORIGINATION_DENIED treatment.
- Internal echo canceller control is not supported.
- B-channel negotiation is not supported
- Wideband test calls are not supported.
- Continuity testing is not supported for wideband trunk group agencies.

Note: Software Right-to-Use is required to deploy Dialable Wideband Services, unless previously purchased.

Common Channel Signaling 7 (CCS7)

Table 78 lists feature information for Nortel Networks Common Channel Signaling 7 (CCS7) for the Meridian SL-100.

Table 78
CCS7 feature information

Platform compatibility	Meridian SL-100
Platform requirements	Meridian SL-100: Release MSL07 or higher
Ordering information	Please refer to the current Product Catalog or contact your Nortel Networks Channel Account Manager. For more information, contact your Nortel Networks representative, call 1-800-4-Nortel or 1-800-466-7835 from anywhere in North America, or go to the Nortel Networks website at http://www.nortelnetworks.com .

The Link Peripheral Processor (LPP) supports Common Channel Signaling 7 for a Meridian SL-100 environment.

Note: For more information about the LPP, refer to the Meridian SL-100 hardware overview chapter in the *Meridian SL-100/Communication Server 2100 Product Guide* (555-4001-806).

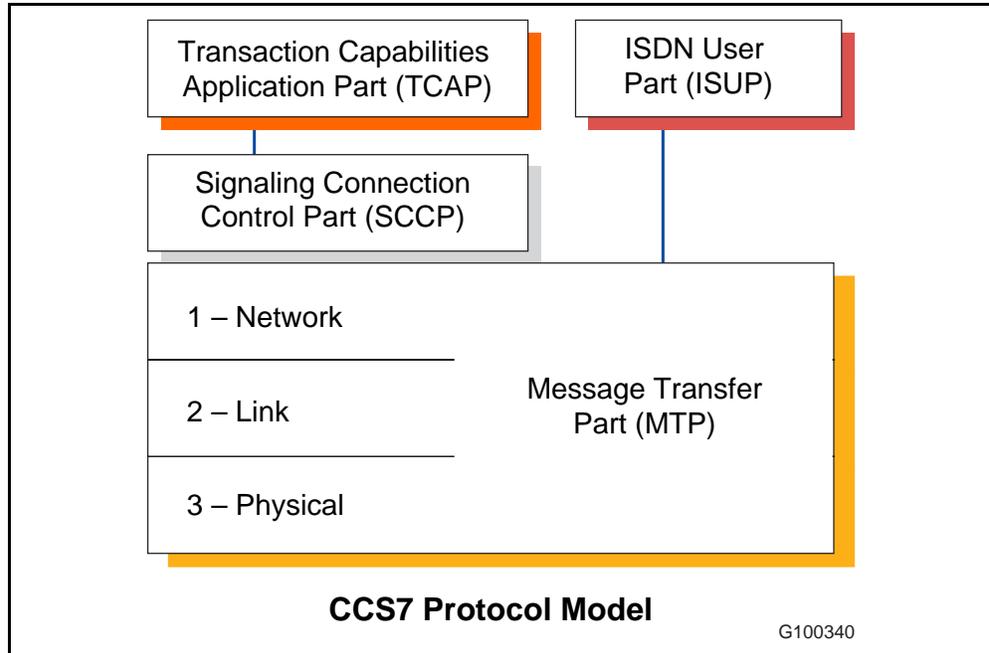
CCS7 signaling and control functions are divided into the following four protocol levels:

- Message Transfer Part (MTP) – The MTP contains Open Systems Interconnection (OSI) Layer 1 (physical characteristics), Layer 2 (link characteristics) and Layer 3 (network characteristics). The MTP is a connectionless transport system, providing a reliable transfer of messages between physically separated users or applications.
- Signaling Connection Control Part (SCCP) – The SCCP completes Layer 3 of the OSI architecture by providing additional functions to the MTP for connection less services, as well as CCS7 network, point code and subsystem management. The MTP and SCCP together are called the Network Service Part (NSP).
- Transaction Capabilities Application Part (TCAP) – The TCAP is an application layer protocol providing services to support non-circuit-related, transaction-oriented applications such as database-dependent replacement number and calling card services.

- ISDN User Part (ISUP) – The ISUP defines the CCS7 protocol that supports signaling functions required for POTS. It provides voice and non-voice services in an Integrated Services Digital Network (ISDN).

Figure 17 illustrates the CCS7 protocol model.

Figure 17
CCS7 Protocol model



Available services for CCS7

The following services are currently available for CSS7:

- Gateway Screening (Functional Group BAS00003) paves the way for the end-to-end delivery of CCS7-based advanced network services by allowing network providers to control access to their CCS7 databases and to protect against unauthorized use of other CCS7 facilities and services. This capability enables the secure interaction of CCS7 equipment across the enterprise, permitting advanced features to be extended to all facilities.
- LPP Enhanced Maintenance and BERT (Functional Group TEL00008 [OPT]) reduces expenses and extends maintenance abilities by providing DS-0A loopback recognition and Bit Error Rate Test (BERT) capabilities.
- The V.35 Subrate Links package (Functional Group BAS00003) enables the V.35 version of the LIU7 paddleboard to administer CCS7 links at subrates of 2.4 kbps through 19.2 kbps.

- MTP Preventative Cyclical Retransmission (PCR) (Functional Group BAS00003) provides error recovery for CCS7 Signaling Data Links (SDLs) that have high propagation delays. This capability increases network reliability and speed by allowing the efficient operation of SDLs, including satellite communications, that have a one-way delay of 15 milliseconds or more.
- CCS7 Protocol Monitor Tool (PMT7) (Functional Group TEL00008 [OPT]) provides access to a protocol test tool to monitor and test key protocol areas of CCS7 messages.
- MTP/SCCP on LPP-Based Platforms (Functional Group TEL00008 [OPT]) provides the base CCS7 protocol capability for the LPP to handle MTP- and SCCP-level messages.

CCS7 trunk signaling features and benefits

For the network providers, CCS7 increases both the efficiency of interoffice trunking facilities and the opportunities for network-wide services. With CCS7 trunk signaling, premium services such as ISDN and CLASS can be easily and efficiently extended across the network.

CCS7 trunk signaling offers the following benefits for Meridian SL-100 customers:

- Improves call setup times for calls, including 800 service and PVN calls.
- Expands ISDN service across public/private boundaries.
- Provides the platform for transparently extending Meridian SL-100 business services nationwide to multilocation customers.
- Extends the reach of such CLASS features as Calling Number Delivery, Calling Number Delivery Blocking and Customer-Originated Trace.

CCS7 trunking capabilities interwork fully with both existing Multi Frequency (MF) trunks and CCS7 networks. The Meridian SL-100 can provide direct associated signaling between switches.

Available services for CCS7 Trunk Signaling

The following services are currently available for CCS7 trunk signaling:

- CCS7 Trunk Signaling (Functional Group ISP70001) with DTC7 Module Split (AJ1498) enhances the robustness of the CCS7 network by providing overload protection for Digital Trunk Controllers. Also, ISUP Maintenance Procedural Enhancements increase OAM&P flexibility by giving network providers the option of throttling specific CCS7 User Part log reports.
- CCS7 2-Wire Emulation of Continuity Test (Functional Group ISP70001) with CC COT (AJ1485) and XPM COT (AJ1486) Enhancements for Cutover eases the capping or replacing of an analog switch by enabling continuity tests to be performed on trunks between the Meridian SL-100 and other vendor two-wire switches.

CCS7 document references

Table 79 lists documentation references for CCS7.

Table 79
CCS7 document references

Document title	Document number
<i>Meridian SL-100/Communication Server 2100 Product Guide</i>	555-4001-806



Call Centers and Computer Telephony Integration (CTI)

Introduction

Nortel Networks powerful Call Center and Computer Telephony Integration (CTI) applications are ideal for any workplace that handles large volumes of incoming calls for numerous call center requirements, such as customer inquiries, product sales and service and message taking. This chapter contains information about the following Nortel Networks Call Center and CTI products for the Meridian SL-100/Communication Server 2100:

- “Nortel Networks Automatic Call Distribution (ACD)” on page 132
- “Nortel Networks Intelligent Call Management (ICM)” on page 136
- “Nortel Networks Symposium products” on page 143
 - “Nortel Networks Symposium TAPI Driver for ICM Release 1.1” on page 144
 - “Nortel Networks Symposium Call Center Server (SCCS) Release 5.0 (planned release 2004)” on page 149
 - “Nortel Networks Symposium Call Center Web Client Release 4.5” on page 158
 - “Nortel Networks Call Center Management Information System (CC MIS) Release 5.2” on page 162
 - “Nortel Networks Symposium Agent Release 2.3” on page 165
 - “Nortel Networks Symposium LinkPlexer Release 1.2” on page 168
 - “Nortel Networks Symposium Web Center Portal 4.0” on page 173
- “Nortel Networks Media Processing Server 500 (MPS 500) Release 2.1” on page 176

132 Call Centers and Computer Telephony Integration (CTI)

- “Nortel Networks Media Processing Server 1000 (MPS 1000) Release 2.1” on page 179
 - “Nortel Networks Peri-ICM Release 2.0” on page 183
- “LDAP Synching” on page 187

Nortel Networks Automatic Call Distribution (ACD)

Table 80 lists Nortel Networks ACD feature information.

Table 80
Nortel Networks ACD feature information

Platform compatibility	Meridian SL-100 and Communication Server 2100
Platform requirements	Meridian SL-100: Release MSL12 or higher Communication Server 2100: Release SE06 or higher
Ordering information	Please refer to the current Product Catalog, or contact your Nortel Networks Channel Account Manager. For more information, contact your Nortel Networks representative, call 1-800-4-Nortel or 1-800-466-7835 from anywhere in North America, or go to the Nortel Networks website at http://www.nortelnetworks.com .

Nortel Networks Automatic Call Distribution (ACD) enables the Meridian SL-100/Communication Server 2100 to offer ACD capabilities to customers who have call center requirements.

Nortel Networks ACD efficiently handles calls by equally distributing incoming calls to a designated group of agent positions (ACD telephones). Balancing the call workload between agents ensures that each customer receives prompt and professional service. Each Meridian SL-100/Communication Server 2100 switch can support up to 9999 agents and 1024 groups (configuration dependent).

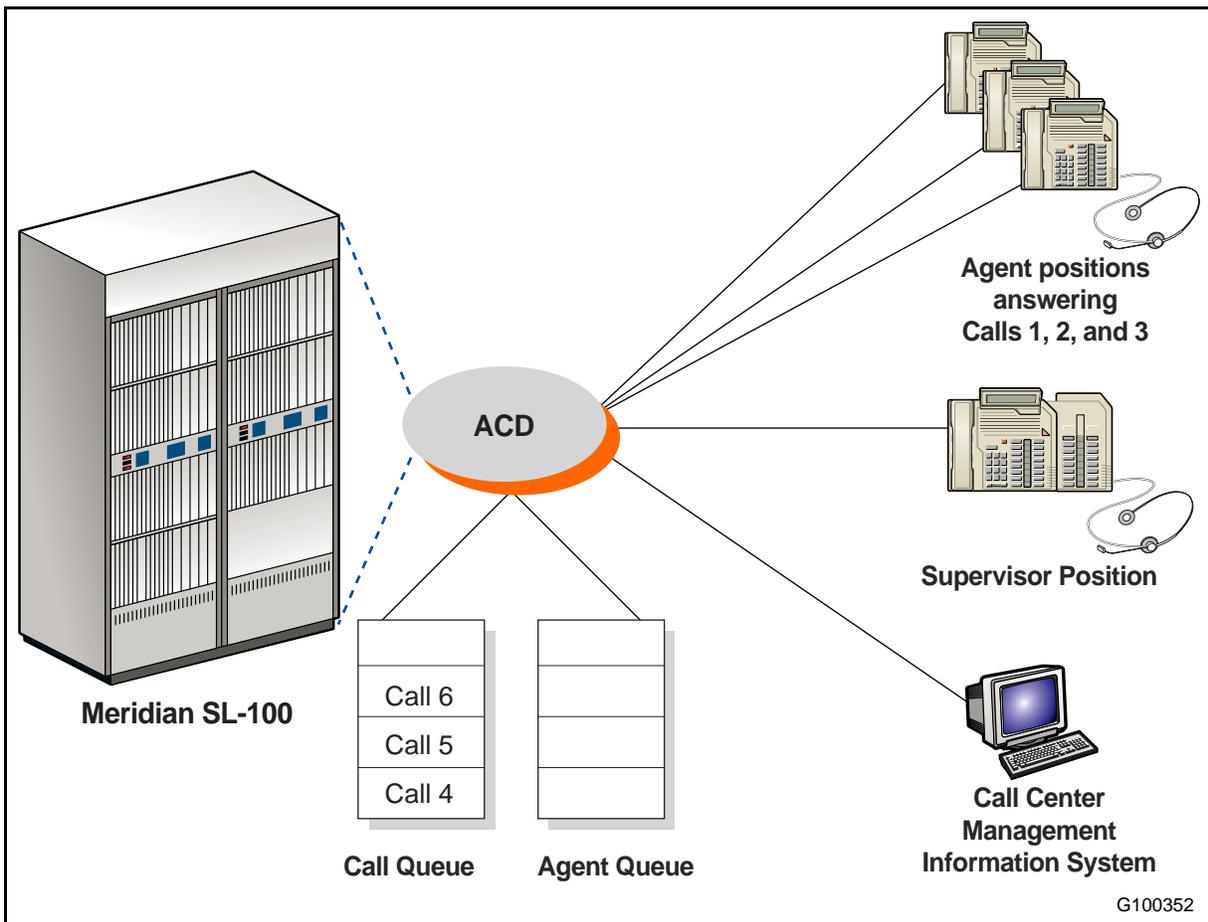
Nortel Networks ACD answers each call immediately and, if necessary, holds it in a queue until it is directed to the next available agent position. The agent positions are queued so that the agent who has been idle the longest gets the first incoming call. When all agents are busy, calls are queued and answered in order of arrival.

Nortel Networks ACD effectively manages groups of agents by providing a full set of supervisory features, including advanced Management Information Systems that provide both real-time data and historical reports.

Nortel Networks ACD supports several terminal options (for example, M2216 ACD agent and supervisor sets, M5216 ACD business sets, 2500-type sets, M3905 sets) allowing functional and cost efficiency on an application-specific basis. For more information about terminals, refer to the *Meridian SL-100/Communication Server 2100 Product Guide* (555-4001-806).

Figure 18 illustrates Nortel Networks ACD for the Meridian SL-100.

Figure 18
Automatic Call Distribution (ACD) for the Meridian SL-100



ACD features and benefits

Meridian SL-100/Communication Server 2100 ACD offers the following features and benefits:

- ACD call center software is broken down into three basic components: call processing features, agent features and supervisor features:

- Call Processing features: Enables you to customize ACD configurations to meet your organization's unique needs, handling high volumes of incoming calls and distributing them to answering agents or devices.
- Agent features: Designed to ensure that customers receive the best possible service by providing agents with productivity tools.
- Supervisor features: Enables administrative staff to monitor agent's work and provide agents with the support they need. Supervisors can access current status displays, as well as historical information collected by the system, in the day-to-day management of call center operations.
- Both agents and supervisors use the flexible Meridian digital ACD telephones, with built-in displays, add-on key modules, optional data adapters and a choice of standard headset connections. Additionally, single-line telephones can be assigned as agents and can access ACD features by dialing codes.
- Working in concert, the various ACD features will save you time and money, and help you generate new revenues by increasing customer satisfaction and encouraging repeat business.
- A sophisticated Automatic Call Distribution service using the most modern telecommunications hardware and software: Customers can have a system that can be continually tailored to meet their changing needs. (For example, a second large capital investment is not required if the growth of a division was underestimated, or money is not wasted if a reorganization reduces the size of an ACD group).
- Assurance that their Automatic Call Distribution system will stay competitive without continual expenditures on system operation, administration, maintenance and expansion.
- Fully integrated with other Meridian SL-100 features, such as Ring Again and Calling Name Display
- Evolvable to ISDN, which allows agents to send and receive data transmissions while simultaneously answering calls.
- True networking capability, using CCS7 or ISDN PRI, to link agents in multiple locations, providing optimum use of agents.

ACD document references

[Table 81 on page 135](#) lists documentation references for Nortel Networks ACD.

Table 81
ACD document references

Document title	Document number
<i>Meridian SL-100/Communication Server 2100 Product Guide</i>	555-4001-806
<i>Automatic Call Distribution Maintenance Guide</i>	297-2041-500

Nortel Networks Intelligent Call Management (ICM)

Table 82 lists Nortel Networks ICM feature information.

**Table 82
Nortel Networks ICM feature information**

Platform compatibility	Meridian SL-100 and Communication Server 2100
Platform requirements	Meridian SL-100: Release MSL12 or higher, Ethernet Interface Unit (EIU), LPP Communication Server 2100: Release SE06 or higher, Call Agent card, SAM21 shelf
Ordering information	Please refer to the current Product Catalog, or contact your Nortel Networks Channel Account Manager. For more information, contact your Nortel Networks representative, call 1-800-4-Nortel or 1-800-466-7835 from anywhere in North America, or go to the Nortel Networks website at http://www.nortelnetworks.com .

Nortel Networks Intelligent Call Management (ICM) is an enhanced version of Meridian CompuCALL allowing organizations with an Meridian SL-100/Communication Server 2100 to offer leading-edge Computer Telephony Integration (CTI) solutions to end users over Ethernet TCP/IP links.

Instead of the Meridian SL-100/Communication Server 2100 system being responsible for all the call processing (including routing and treatments), ICM permits a Nortel Networks or third-party CTI application to dictate specific call handling decisions. ICM requires an Ethernet Interface Unit for connectivity to the Meridian SL-100.

Sophisticated CTI applications require increased messaging bandwidth. To meet this need, Nortel Networks introduced the TCP/IP-based ICM link. ICM provides cost-effective, flexible configurations using industry-standard Ethernet technology – replacing the original CompuCALL X.25 transport. ICM's TCP/IP links transmit data at speeds up to 350 kbps versus 19.2 kbps with X.25 transport.

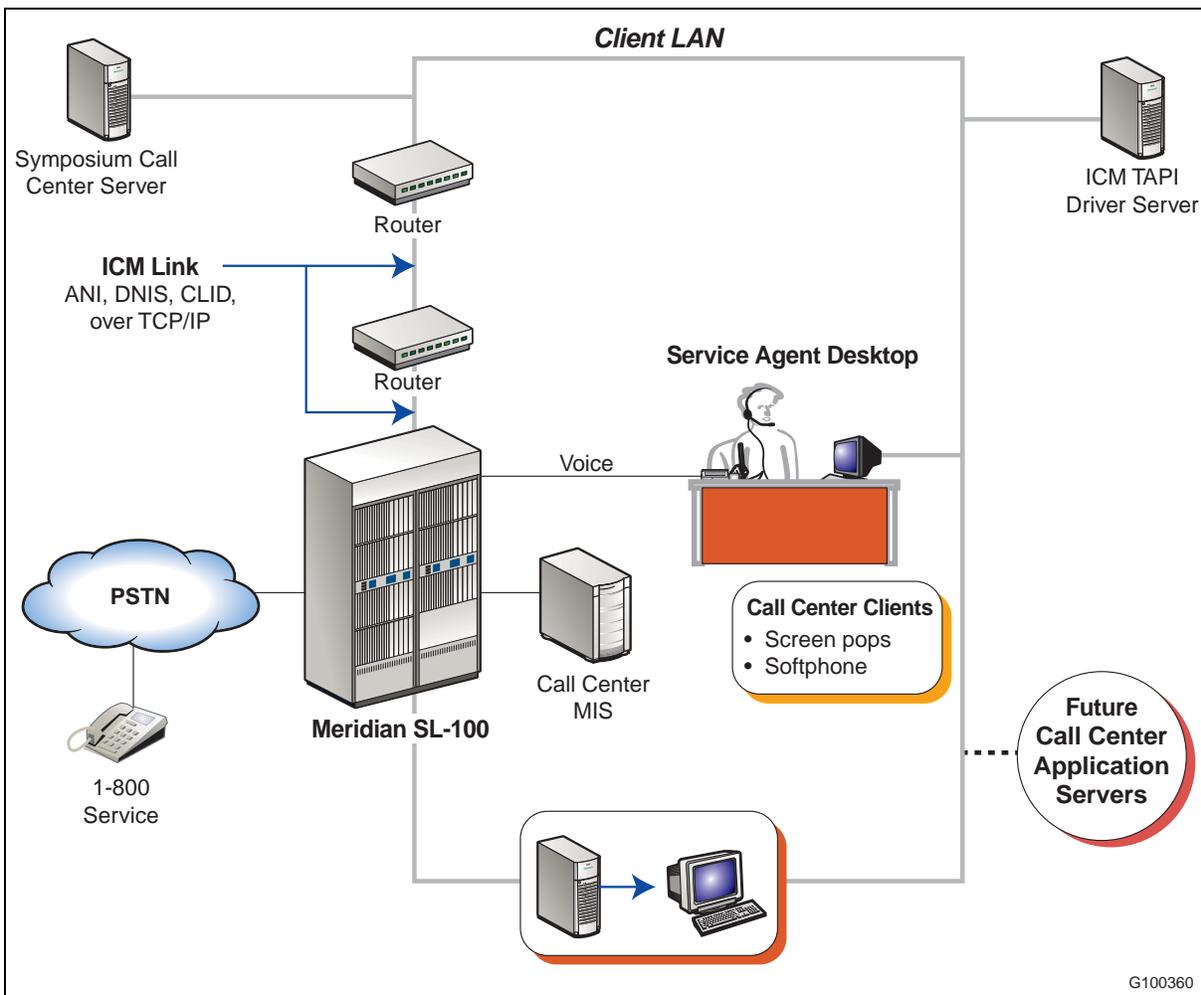
ICM supports standard call center applications, putting customers in charge of their own call flows. CTI applications that work with Nortel Networks ICM are Q.SyS Phoneware, IBM CallPath, AnswerSoft Sixth Sense and Nortel Networks' Symposium Telephony Application Programming Interface (TAPI) server.

ICM in a Meridian SL-100 configuration

ICM interfaces between the Meridian SL-100 and a call center workstation by way of TCP/IP over an ethernet network. The Ethernet network connects to an Ethernet Interface Unit (EIU) housed in a Link Peripheral Processor (LPP). The LPP is deployed in a Meridian SL-100. With ICM, each Meridian SL-100 can support up to 16 Ethernet TCP/IP addresses (customers) for connection to customer sites – 96 Ethernet TCP/IP addresses with CCM14. ICM requires additional Customer Premises Equipment (for example, routers and hubs).

Figure 19 illustrates the Intelligent Call Management (ICM) configuration with a Meridian SL-100.

**Figure 19
Intelligent Call Management (ICM) configuration with a Meridian SL-100**



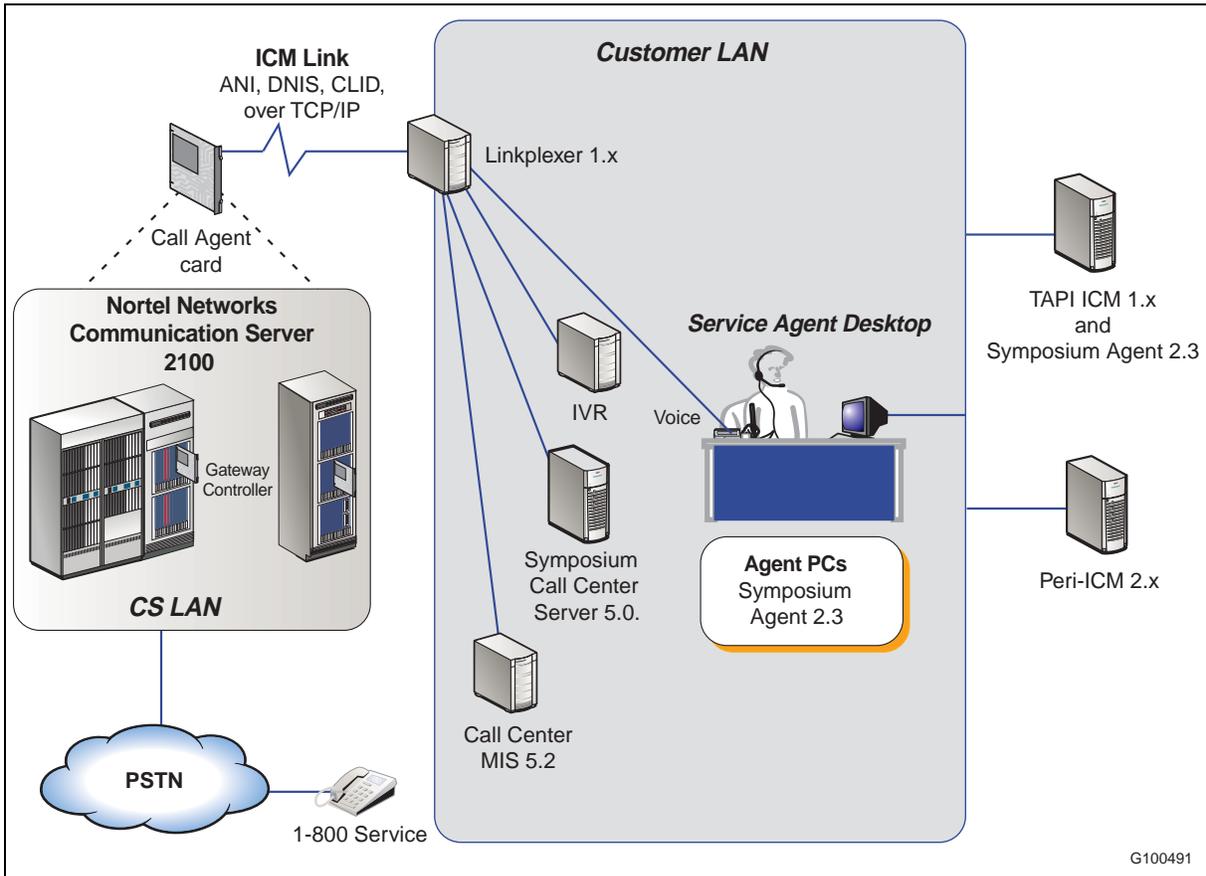
138 Call Centers and Computer Telephony Integration (CTI)

ICM in a Communication Server 2100 Compact configuration

In a Communication Server 2100 Compact configuration, ICM interfaces to an ethernet port on a Call Agent card, instead of an EIU. The Call Agent card is inserted in a SAM21 controller shelf.

Figure 20 illustrates the Intelligent Call Management (ICM) configuration with a Communication Server 2100.

Figure 20
Intelligent Call Management (ICM) configuration with a Communication Server 2100



The ICM link introduces new and expanded call center and non-call center functionality. New capabilities for screen-based telephony, call-handling, and messaging are available through the following Nortel Networks applications:

- Nortel Networks Symposium Call Center Server (SCCS) – uses the ICM link and the Meridian SL-100/Communication Server 2100 to offer a suite of applications that includes call processing and agent handling, management and reporting, and third-party application interfaces for call centers. For more information, refer to [“Nortel Networks Symposium Call Center Server \(SCCS\) Release 5.0 \(planned release 2004\)” on page 149.](#)
- Nortel Networks Symposium TAPI Driver for ICM – Nortel Networks Telephony Applications Programming Interface (TAPI) software provides translation services between a Windows telephony server and a Meridian SL-100/Communication Server 2100 system. This functionality enables Microsoft Windows clients running TAPI applications to manage Centrex voice or ACD calls on the user’s desktop. Symposium TAPI Driver supports the ICM Link, allowing control of the Call Queue and Controlled Directory Number messages from a user’s desktop using a TAPI application. For more information, refer to [“Nortel Networks Symposium TAPI Driver for ICM Release 1.1” on page 144.](#)
- Interactive Voice Response (IVR) – enables the caller to communicate with a host computer through touch-tone key presses or voice recognition, automating routine inquiries and transactions. IVR gives customers direct, confidential access to information and services 24 hours a day. It can also reduce agent call volume significantly – often resulting in substantial off-loading of calls. Also available are time-in-queue and position-in-queue announcements.
- Outdialing (through Symposium Partnering Programs) – automatically places outbound calls during call agent lulls. When the dialer finds a live customer, it links the agent immediately. Skills-based routing helps ensure that the most qualified agent receives the call. Outdialing makes the best use of an agent’s time and eliminates unnecessary downtime.
- Predictive Dialing (through Symposium Partnering Programs) – verifies the availability of call agents and the probability of reaching a customer in person to determine the rate to automatically place outbound phone calls. Dialing is automatic, providing increases in efficiency ranging from 70 to 300 percent.

140 Call Centers and Computer Telephony Integration (CTI)

- Agent headgear and terminals – Offers ergonomically designed single-line or multi-line telephones for fast, convenient access to call center capabilities. The latest in display technology is built in, including a two-line by 24-character display. Many terminals offer headset capability and comfortable and efficient headsets.
- Remote agent support– Enables agents to work from off-site locations with the same productivity and customer service as those in the main call center. Agents receive calls and information on their screens just as if they were actually sitting in the call center. Remote agents appear on supervisor screens along with other call center agents, providing integrated monitoring and management.
- Symposium Agent – A client-server application that automates business applications. It enables call center managers to cost-effectively design customer interaction applications. These applications range from data retrieval applications that dramatically improve customer service, to fully-customized tele-sales, to tele-service solutions that help agents generate new revenues. By automating many routine agent tasks, Symposium Agent enables agents to focus on solving customer issues, rather than collecting customer information. For more information, refer to [“Nortel Networks Symposium Agent Release 2.3” on page 165.](#)

Nortel Networks ICM features and benefits

Nortel Networks ICM includes the following features and benefits:

- ICM Call Center Server functionality – enables the server of the end user to share call processing responsibilities with the switch. Currently, the Meridian SL-100 call processing software is fully responsible for Call Control Routing (CCR). ICM Call Center Server functionality introduces Controlled Directory Number (CDN) queues that can be used in conjunction with ACD subscribers.

Each CDN queue can hold a maximum of 511 calls. Calls placed into a CDN queue remain there until the system receives a message from the host computer instructing the switch on how to handle the call, or a specified timeout triggers the system to redirect the call to a default destination. The CDN acts as a temporary place to hold incoming calls while user applications determine where to route the calls – providing the basis for innovative call center CTI applications.

ICM Call Center Server functionality provides the basic framework for Nortel Networks or third-party applications (running on the host computer) for subscribers requiring increased CCR capabilities. It provides new application-based revenue opportunities for new and existing Centrex customers, and allows a server to make call-by-call routing decisions based on a caller's dynamic needs.

- ICM Call Queue Management – After a call is put into an ACD or CDN queue, the end user's host computer can instruct the system to apply a specific treatment to the call using the Selective Queuing feature. Selective Queuing lets the host computer route any queued call, regardless of its place in the queue. This capability expands subscriber control and allows the end user more choices for call disposition. End users have the ability to assign different treatments locally on a call-by-call basis. A single message sent by the host computer determines the call treatment. Callers maintain their priority and place in queue regardless of the call treatment.

Up to six call treatments can be defined and include one, or a series, of the following: recorded announcement, music, service tones, ringing and silence.

ICM Call Queue Management gives end users greater control over their call queues and call treatments; allows call treatments to be applied to individual calls, not just groups; and supports new telephony applications such as user call screening.

- ICM reduces facilities costs offering the immediate benefit of a more cost-effective link. Now the data portion of an incoming call can travel over an industry-standard TCP/IP transport. This flexible link can involve the Internet or a corporate intranet for all or part of the connection.
- Supports third-party solutions. Migrating the CompuCALL specification to an open TCP/IP transport introduces the Internet's standard transport-level protocol to the Meridian SL-100/Communication Server 2100's CTI system. The ICM link supports a wide range of applications, because many of these applications depend on TCP/IP for reliable, full-duplex operation for connectionless, best packet delivery service.
- Enables Skills-base Routing through Symposium Call Center Server (SCCS).
- Allows each call to be uniquely identified to support interswitch transfers and applications that track call history.
- Displays the use of the Emergency Key feature and records statistics on its use.

142 Call Centers and Computer Telephony Integration (CTI)

ICM document references

Table 83 lists documentation references for Nortel Networks ICM.

Table 83
ICM document references

Document title	Document number
<i>Meridian SL-100/Communication Server 2100 Product Guide</i>	555-4001-806

Nortel Networks Symposium products

Nortel Networks comprehensive Symposium products create versatile, end-to-end customer care centers that deliver complete, seamless customer experiences. Companies can start modestly with a single call center or ambitiously, with a global, multimedia center with thousands of representatives.

Introduced in 1997, the Nortel Networks Symposium product line provides Computer Telephony Integration (CTI) and call center applications. Nortel Networks Symposium products continue to evolve, signifying Nortel Networks' commitment to provide state-of-the-art products and services for call centers and CTI markets.

Symposium server requirements

Nortel Networks provides the software applications for the Symposium product line. However, the customer or distributor must provide the hardware server platform based on the minimum hardware requirements.

The following Nortel Networks Symposium applications require their own server:

- Symposium Call Center Server Release 5.0
- Symposium LinkPlexer Release 1.2
- Symposium Call Center Web Client Release 4.5
- Peri-ICM Release 2.0
- Symposium Agent Release 2.3 and TAPI Driver for ICM Release 1.1 (both applications can reside on one server)

144 Call Centers and Computer Telephony Integration (CTI)

Nortel Networks Symposium TAPI Driver for ICM Release 1.1

Table 84 lists Nortel Networks Symposium TAPI Driver Release 1.1 for ICM feature information.

Table 84
Symposium TAPI Driver for ICM Release 1.1 feature information

Platform compatibility	Meridian SL-100 and Communication Server 2100
Platform requirements	Meridian SL-100: Release MSL12 or higher, ICM Link, EIU, LPP Communication Server 2100: Release SE06 or higher, Call Agent card, ICM Link, SAM21 shelf
Ordering information	Please refer to the current Product Catalog, or contact your Nortel Networks Channel Account Manager. For more information, contact your Nortel Networks representative, call 1-800-4-Nortel or 1-800-466-7835 from anywhere in North America, or go to the Nortel Networks website at http://www.nortelnetworks.com .

Symposium Telephony Application Programming Interface (TAPI) Driver for Intelligent Call Management (ICM) provides a cost-effective interface that enables CTI applications running on Windows NT/Windows 2000 server to monitor and intelligently control incoming and outgoing calls within the Meridian SL-100/Communication Server 2100.

The Symposium TAPI Driver for ICM translates between the message set generated by a TAPI Release 2.1/2.3/3.0 compliant application and the ICM message set understood by the Meridian SL-100/Communication Server 2100. With ICM TAPI Driver, Meridian SL-100/Communication Server 2100 users are able to take advantage of off-the-shelf CTI solutions – making it possible to extend CTI support throughout an enterprise economically and with less complexity.

The Symposium TAPI Driver supports the Intelligent Call Management (ICM) link. This enables control of the Call Queue and Controlled Directory Number messages from a user's desktop which is operating a TAPI application.

The ICM TAPI driver software works in a distributed client/server environment that logically integrates the telephone on a user's desktop with client and server-based applications. The telephone is physically connected to the switch and is not physically connected to the PC. Users' desktops do not require special telephones, connectors, PC circuit cards or new wiring.

The ICM TAPI driver software connects to the Meridian SL-100/Communication Server 2100 through the ICM link (TCP/IP connection). The Client PC is equipped with the Remote TAPI Service Provider (SP) software and a TAPI application such as Nortel Networks Symposium Agent.

Symposium TAPI Driver for ICM enables intelligent answering and routing. Intelligence from the public network – such as Caller ID, Automatic Number Identification (ANI), and Dialed Number Identification Service (DNIS) – is passed from the SL100/Communication Server 2100 system to the TAPI-based telephony server. This capability enables access to information about the caller, or assistance in call routing, or other purposes defined by the CTI application. The result is coordinated voice and data and screen-based telephony into both knowledge worker and call center environments.

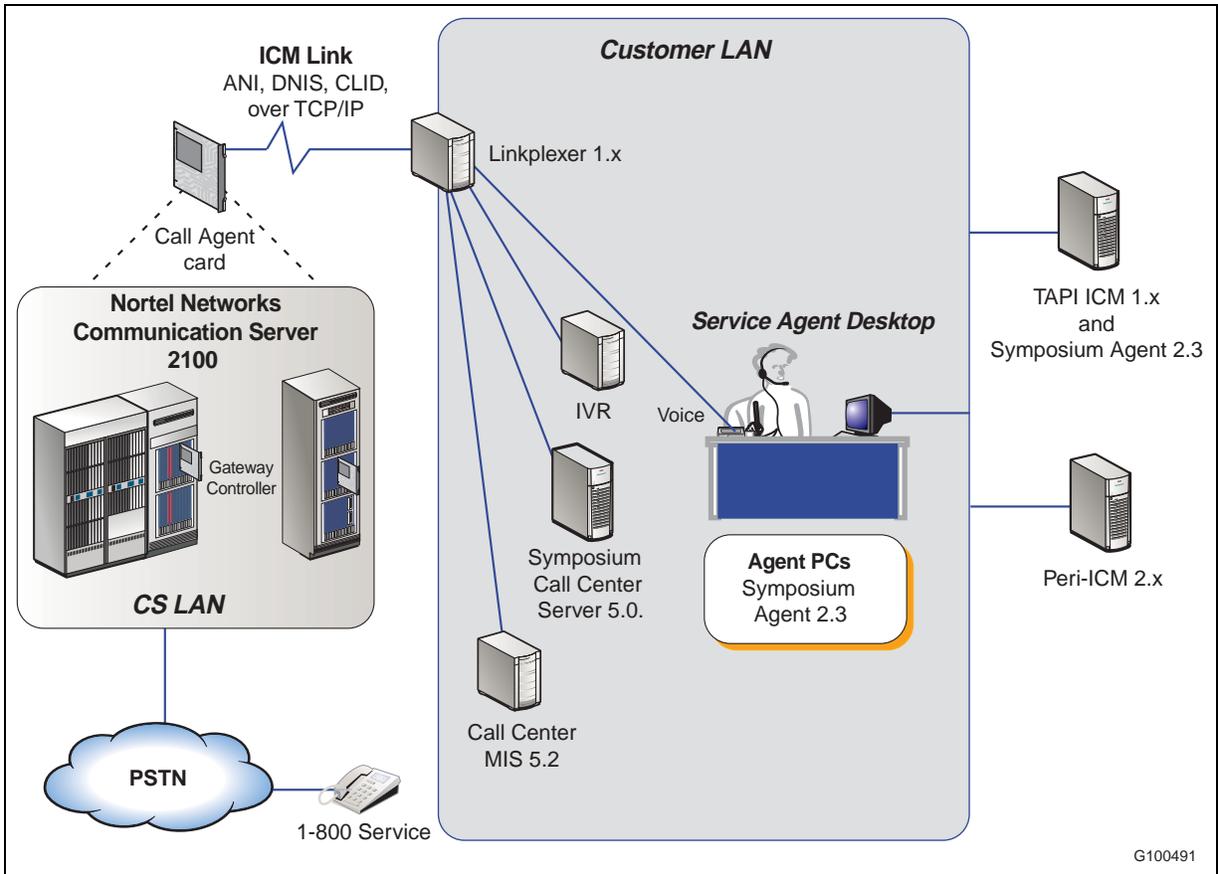
The Symposium TAPI Driver for ICM provides for a non-proprietary call control interface into the Meridian SL-100/Communication Server 2100 system. This interface provides a TAPI application with the control and management of voice, data and IVR. Additionally, this interface enables enhanced call control support.

The Symposium TAPI Driver for ICM handles up to 1200 lines opened at a time. This implies there can be 1200 clients that can attach through the Remote Server Provider (RSP) to the server.

Meridian SL-100/Communication Server 2100 TAPI Server communicates over a TCP/IP connection to the Meridian SL-100/Communication Server 2100 using ICM messages. When a user's TAPI application starts, the ICM link is automatically established. The TAPI driver for ICM connects to client PCs over a TCP/IP LAN.

[Figure 21 on page 146](#) illustrates ICM TAPI server with a Communication Server 2100.

Figure 21
An example of TAPI ICM 1.2 Server in a Communication Server 2100 network configuration



Symposium TAPI Driver for ICM Release 1.1 features and benefits
Symposium TAPI Driver for ICM Release 1.1 provides the following features and benefits:

- Basic Call Control includes support for the following features:
 - Make Call Answer Call
 - Release Call
 - Hold Call
 - Un-hold Call
 - Conference Call
 - Transfer Call (Blind and Supervised)

- The following ACD features are supported:
 - Login/Logout
 - Ready/Not Ready
 - Make Set Busy
 - Make Set In Service
- Exchange API Interface – The ICM TAPI driver can be used to pass private data to an application involved in bringing up a screen of data, commonly referred to as screen pops.
- Dynamic Database – The dynamic database allows the removing or adding of lines without any of the applications having to shutdown the server.
- Integration with IVR Units – The Symposium ICM TAPI driver offers an open interface to IVR systems that allows IVR systems to pass call related data, such as caller entered digits, to the TAPI server then onto the TAPI-compliant applications.
- Predictive Dialing – The ICM TAPI driver supports outbound and predictive dialing application products that use the TAPI interface for call control and monitoring.
- Switch Failure Recovery – The ICM TAPI Driver detects when the link is dropped and the switch does not respond. The ICM TAPI Driver reinitializes after three minutes.
- ICM TAPI Release 1.1 supports Symposium Call Center Server Release 5.0.
- The ICM TAPI 1.1 driver is a full function service provider for Microsoft's Telephony Application Programming Interface (TAPI) Releases 2.1, 2.3 and 3.0 for Windows 2000.
- ICM TAPI Release 1.1 supports Microsoft Server operating system Windows 2000 on a Pentium III 1GHz server.
- Supports the latest SCAI 17 release.
- Incorporates new messages to track calls to non TAPI monitored devices.
- Improve error logging and utilities.
- Eliminates the need to edit the Windows Registry to enable maintenance configuration features.

Symposium TAPI Driver for ICM document references

[Table 85 on page 148](#) lists documentation references for Nortel Networks Symposium TAPI Driver for ICM.

148 Call Centers and Computer Telephony Integration (CTI)

Table 85
Symposium TAPI Driver for ICM document references

Document title	Document number
<i>Meridian SL-100/Communication Server 2100 Product Guide</i>	555-4001-806

**Nortel Networks Symposium Call Center Server (SCCS) Release 5.0
(planned release 2004)**

Table 86 lists feature information for Nortel Networks Symposium Call Center Server (SCCS) Release 5.0.

**Table 86
Nortel Networks Symposium Call Center Server (SCCS) Release 5.0**

Platform compatibility	Meridian SL-100 and Communication Server 2100
Platform requirements	<p>Meridian SL-100: Release MSL09 or higher, Automatic Call Distribution (ACD), Intelligent Call Management (ICM) Link, ICM switch translation software Release ICM00001, ICM00010, ICM00020</p> <p>Communication Server 2100: Release SE06 or higher, Automatic Call Distribution (ACD), Intelligent Call Management (ICM) switch translation software Release ICM00001, ICM00010, ICM00020</p>
Ordering information	<p>Please refer to the current Product Catalog, or contact your Nortel Networks Channel Account Manager.</p> <p>For more information, contact your Nortel Networks representative, call 1-800-4-Nortel or 1-800-466-7835 from anywhere in North America, or go to the Nortel Networks website at http://www.nortelnetworks.com.</p>

Nortel Networks Symposium Call Center Server (SCCS) Release 5.0 is Nortel Networks next generation call center application that works with the Meridian SL-100/Communication Server 2100. SCCS Release 5.0 is designed to provide a call center solution for varied and changing business requirements by offering a suite of applications that includes call processing and agent handling, management and reporting, and third-party application interfaces.

SCCS components

The following is a list of SCCS components:

- Server (supplied by distributor or customer) containing Symposium Call Center Server (SCCS) software application.
- SCCS clients provide the Graphical User Interface to the product. The Operations PC workstation connected to either the dedicated LAN or Customer LAN, operates the SCCS client application and administers the SCCS.
- Meridian SL-100/Communication Server 2100 switch for telephony services and voice network connectivity.
- Front End Interactive Voice Response (IVR) system for voice processing capabilities (optional).
- Third-party Application (optional).

SCCS hardware and software requirements

SCCS is built on a client/server architecture with functionality distributed among various component as follows:

- The SCCS server performs the call processing and data collection services, and provides the repository for administration data. The server for SCCS is a general purpose Intel Pentium-based platform running Microsoft Windows 2000. The server for SCCS includes a software base for applications including system management, fault management, server configuration, event scheduling and a time server. The minimum hardware requirements for the server are as follows:
 - Intel-based Pentium II CPU at 300 MHz in a single or dual CPU configuration (the Quad CPU is not supported)
 - 256 Mbytes of RAM memory (higher RAM is supported providing partitioning takes into account the larger swap file.), 8 GB minimum disk space, SCSI Controller, one floppy drive, CD-ROM drive, two serial ports (RS232) and one parallel port
 - One Ethernet network interface card (for ELAN) and one Ethernet (or token ring) network interface card (for CLAN)
 - Video card +Monitor (800x600 minimum resolution), keyboard, mouse, external modem and backup tape drive

Note: Enhanced performance can be expected through additional RAM and faster, dual processors, while fault tolerance can be achieved through RAID hot-swap drives, redundant and hot-swap power supplies and fans and hot-swap network interface cards.

- The clients for SCCS are PCs running Microsoft Windows 95, Windows 98 or Windows 2000 and they provide a Graphical User Interface to the product.
- The Administration workstation is a PC running the SCCS Client Application and is used to administer the server. The Administration workstation can be connected to either the Embedded LAN (ELAN) or Customer LAN (CLAN).

If calls are to be successfully routed in SCCS, the resources shared by SCCS and the Meridian SL-100/Communication Server 2100 must be configured to be able to exchange information. A Controlled Directory Number (CDN) on the Meridian SL-100/Communication Server 2100 is the initial point of entry for any call processed in SCCS. A CDN serves as a holding place while information is gathered from the call (for example, Calling Line Identification number) and treatments that are applied to the call (for example, recorded announcements). The call information gathered by the CDN is sent from the Meridian SL-100/Communication Server 2100 to SCCS. The SCCS uses this information to define the path the call follows through the call center.

SCCS offers Skills-based Routing (SBR). SBR moves queuing logic from the Meridian SL-100 software to the SCCS. In SCCS, there are no ACD DNs. Instead, SCCS uses SBR to automatically route callers to the agent best suited to handle specific inquiries or customer segments (Skillsets). Call agents are assigned to skillsets rather than queues, and calls are queued to skillsets. Skillsets are not numbers you can dial and they can only be reached through Control Directory Numbers (CDNs). Incoming calls to the Meridian SL-100, or calls originated internally by the Meridian SL-100, must first arrive at a CDN before they have access to skillsets. Scripts then provide customized and specialized treatment and routing of calls.

SCCR uses scripts to define the behavior of SBR call processing. Scripts combine the features of a programming language with a set of functions unique to call center processing needs. Scripts determine what skillsets a call requires, queue the calls to skillsets, provide music, etc. A script executes for each call, and each call can execute a number of either primary or secondary scripts, depending on customer requirements. Scripts can send data, query and receive responses from a customer developed application. Data is passed between script and the application by including variables as parameters within the script.

Real-time Statistics Multicast (RSM) interface provides basic status reporting capability to third-party application developers using IP Multicast technology. This allows third-party applications to interface with the Symposium Call Center Server responsible for collecting and maintaining real-time display statistics. The third-party application can obtain real-time statistics from the Symposium Call Center Server for use in basic call center status reporting applications such as readerboards and agent desktop applications.

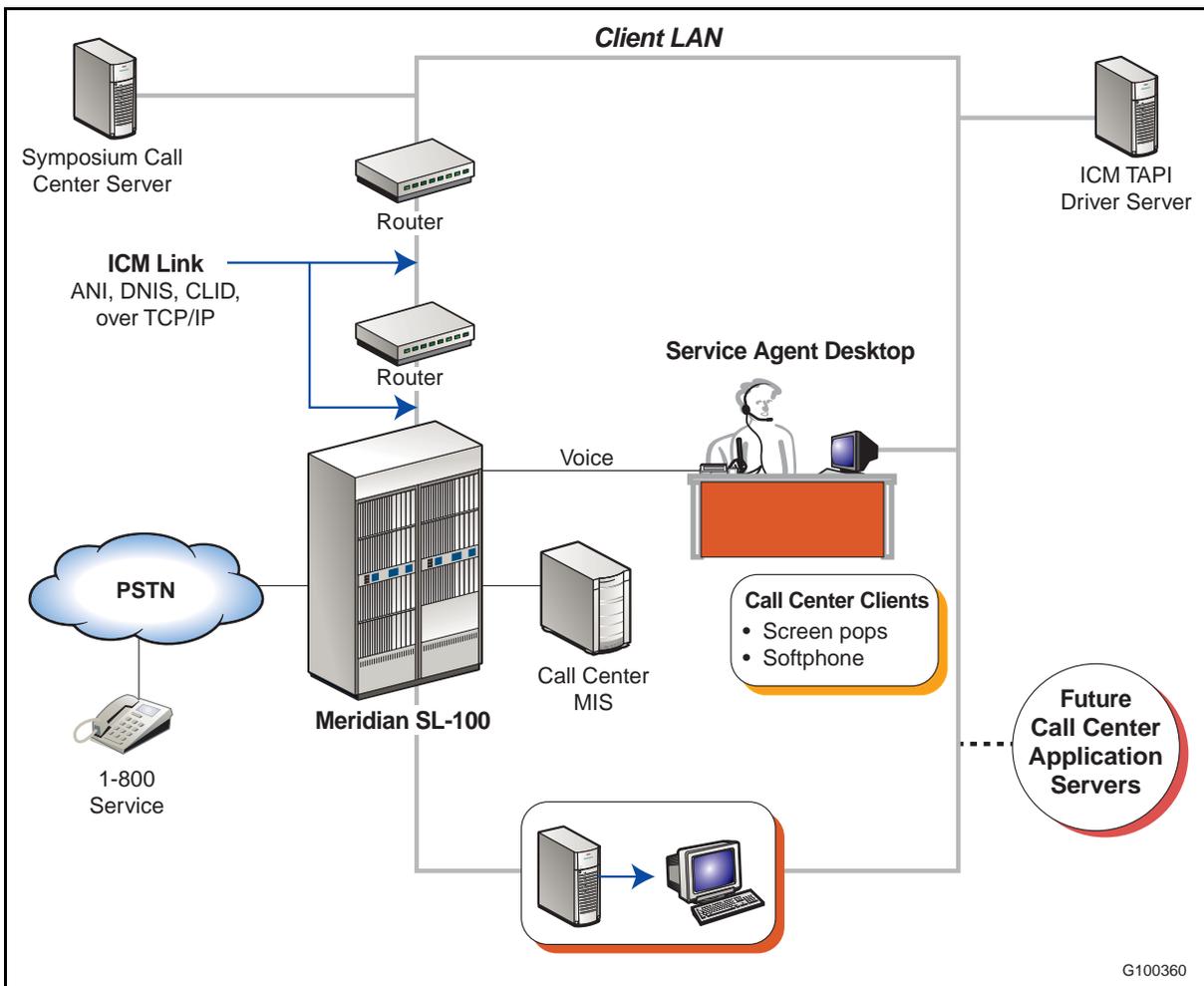
152 Call Centers and Computer Telephony Integration (CTI)

SCCS with the Meridian SL-100

With the Meridian SL-100, the server for SCCS and the Meridian SL-100 connect to an Embedded LAN (ELAN). The Meridian SL-100 ICM link running on a TCP/IP protocol over an Ethernet Interface Unit (EIU) provides the interface between the Meridian SL-100 switch and the SCCS.

Figure 22 illustrates an example of a SCCS configuration with Meridian SL-100.

Figure 22
Symposium Call Center Server (SCCS) configuration with the Meridian SL-100



SCCS with the Communication Server 2100

With the Communication Server 2100, the SCCS server and the Communication Server 2100 connect to an Embedded LAN (E LAN). The Meridian SL-100 ICM link running on a TCP/IP protocol interfaces to an Ethernet port on a Call Agent card, instead of an EIU. The Call Agent card resides in a SAM21 controller shelf.

SCCS Release 5.0 features and benefits

SCCS Release 5.0 provides the following features and benefits for Meridian SL-100/Communication Server 2100:

- Intelligent Call Handling – Customize call routing and treatments based on customer-defined combinations of call center conditions.
- Skill-based Routing (SBR) – Automatically route callers to the agent best suited to handle specific inquiries or customer segments.
- Comprehensive Management Reporting – Provides managers with decision-making tools – from real-time displays to historical reports – reflecting contact center activity, agent performance, resource utilization and trends.
- Open Interfaces – Supports third-party applications such as readerboards, workforce adherence and scheduling.
- Investment Protection – Grows and adapts to your company's evolving needs, employing open architecture, flexible design and built-in scalability.
- Real-Time Statistics Multicast (RSM) enhancements – SCCS Release 5.0 provides RSM enhancements that allow for improved inter operability with Nortel Networks Remote Agent Observe and other third-party applications that access RSM data. With Release 5.0, the agent record is expanded to store the following information, which is now available in the agent multicast stream:
 - Answering Application ID: enables access to the Symposium Call Center Server application for which the agent is currently answering a call.
 - Answering CDN: enables access to the Controlled Directory Number (CDN) for which the agent is currently answering a call.
 - Answering DNIS: enables access to the Dialed Number Identification Service (DNIS) for which the agent is currently answering a call.

Note: This feature is only available through Symposium Web Client.

154 Call Centers and Computer Telephony Integration (CTI)

- Scripting enhancements include the following:
 - Larger Master Script Size: SCCS Release 5.0 allows all scripts to support 50,000 characters. This increase allows for greater complexity in the master script for those customers wishing to write their call processing script with a large element of call processing performed in the master script.
 - Agent ID/Skillset in HDX: For SCCS Release 5.0, the variable types Agent ID and Skillset are available in the Host Data Exchange (HDX) command set. This enhancement results in simpler scripts with increased scripting flexibility, especially with regard to Symposium Web Center Portal integration – Agent ID and Skillset can be passed from Symposium Web Center Portal and used directly in Symposium Call Center Server scripts, making integration scripts more manageable.
 - Wild variables: SCCS Release 5.0 introduces a new type of call variable: wild variable. Wild variables are modifiable by the call and client, and accessible to all calls, opening up new possibilities for script design. For example, putting the call center into emergency operation with a call to a designated CDN can set a wild variable flag indicating emergency, which other calls can check.

Two new script commands specific to wild variables are introduced: READVAR and SAVEVAR. A new wild variable table holds the “wild” value of the call variable. All calls have access to this table and calls can save their current value of a particular call variable to the table using SAVEVAR for other calls to access using READVAR. Usage of this feature is enabled completely by scripting.
- Platform Vendor Independence (PVI) – Customers will purchase their servers for SCCS from various vendors, other than Nortel Networks.
- Centralized administration of network skillsets and routing tables.
- Comprehensive real-time displays and network reports.
- Capacity enhancements – increased agent capacity, skillset capacity and IVR capacity including the following:
 - Increased agent capacity: Increases agent capacity to 3300 active and 6000 configured agents.
 - Increased skillset capacity: Allows you to have a maximum of 1000 skillsets, including system-defined skillsets, local skillsets and networked skillsets. With Release 5.0, all 1000 skillsets are capable of being networked.

- Increased IVR capacity: Supports up to a maximum of 1000 IVR ports.
- Database Integration Wizard – Delivers a Symposium Database Integration service that
 - provides interfaces to Open Database Connectivity (ODBC) for accessing company databases and to TAPI for attaching data to calls without custom programming.
 - enables modification of database access/call data attachment without requiring software changes.
 - provides access to ODBC and TAPI while consuming just a single connection to the HDX server.

Database Integration is delivered as a robust Windows 2000 service, fully integrated on the SCCS Release 5.0 server, with an intuitive Graphical User Interface (the Database Integration Wizard).

The Database Integration Wizard simplifies integration with ODBC-compliant contact center applications and/or Computer Telephony Integration applications (using Symposium TAPI Service Provider). Database queries can be easily integrated into call flows (for data directed routing, customer validation, etc.) and customer data can be transferred to an agents workstation for screen pops.

- Historical reporting enhancements – SCCS Release 5.0 includes the following historical reporting enhancements:
 - new historical reporting fields
 - pegging enhancements for Agent Login/Logout
 - support for Crystal Reports 9.0
 - new Network Consolidated Skillset Call Distribution report
- Improved Server install and uninstall – SCCS Release 5.0 provides enhancements to the server installation and uninstallation process:
 - streamlined installation process
 - elimination of install-time PEPs
 - improved uninstallation process

156 Call Centers and Computer Telephony Integration (CTI)

- Server upgrade and migration: For the Meridian SL-100, SCCS Release 5.0 supports the following direct upgrade paths using the platform migration process:
 - SCCS Release 4.0 → SCCS Release 5.0
 - For any release prior to SCCS 4.0, you must migrate to SCCS Release 4.0 (for Release 3.0 Meridian SL-100 sites) as an intermediate step and then migrate to SCCS Release 5.0.
- PVI updates – PVI updates for Symposium Call Center Server Release 5.0 include the following:
 - support for a quad CPU configuration
 - support for remote access through VPN client (Contivity)
 - support for configuration of dynamic disks on Windows 2000
- Enables the exchange of real-time data and host data.
- Integrates with multimedia transaction handling and web-enabled functionality.
- Supports Time Division Multiplexing (TDM) and/or a Voice over IP (VoIP) network infrastructure.
- SCCS Release 5.0 for Meridian SL-100/Communication Server 2100:
 - support for SCAI17 with backward compatibility to SCAI12
 - support for iButton adapter alternatives to the parallel port
 - support for call hold/unhold reporting
 - ability to display skillset name on the agent telset display when routing a call to an agent
- Support for pcAnywhere – SCCS 5.0 provides support for pcAnywhere 11.0. It is supplied with SCCS 5.0 on a separate CD.
- Symposium Standby Server – Release 5.0 supports the integration of Symposium Call Center Server and Sybase Replication Server to support warm standby replication.
- Upgraded Sybase ASE compatibility – Symposium Call Center Server Release 5.0 uses Sybase ASE 12.5.

SCCS document references

Table 87 lists documentation references for SCCS

Table 87
SCCS document references

Document title	Document number
<i>Meridian SL-100/Communication Server 2100 Product Guide</i>	555-4001-806
<i>What's New in Release 5.0</i>	297-2183-802
<i>Supervisor's Guide</i>	297-2183-907
<i>Historical Reporting and Data Dictionary</i>	297-2183-803
<i>Administer's Guide for the DMS/MSL-100</i>	297-2183-401
<i>Planning and Engineering Guide</i>	297-2183-106
<i>Installation and Maintenance Guide</i>	297-2183-202
<i>Scripting Guide for the DMS/MSL-100</i>	297-2183-913
<i>Setup Guide for the DMS/MSL-100</i>	P0911820
<i>Symposium and DMS/MSL-100 Switch Guide</i>	297-2183-912

Nortel Networks Symposium Call Center Web Client Release 4.5

Table 88 lists feature information for Nortel Networks Symposium Call Center Web Client Release 4.5.

Table 88
Nortel Networks Symposium Call Center Web Client Release 4.5

Platform compatibility	Meridian SL-100 and Communication Server 2100
Platform requirements	Meridian SL-100: Release MSL09 or higher, SCCS 4.0 or higher Communication Server 2100: Release SE06 or higher, SCCS 4.0 or higher
Ordering information	Please refer to the current Product Catalog, or contact your Nortel Networks Channel Account Manager. For more information, contact your Nortel Networks representative, call 1-800-4-Nortel or 1-800-466-7835 from anywhere in North America, or go to the Nortel Networks website at http://www.nortelnetworks.com .

Symposium Call Center Web Client Release 4.5, a browser-based thin client, is compatible with Symposium Call Center Server Release 4.0 or higher. Symposium Call Center Web Client is a browser-based tool for call center administrators and supervisors. You can use Symposium Call Center Web Client to manage and configure a call center and its users, define access to data, and view real-time and historical reports.

Note: Symposium Call Center Web Client Release 4.5 comes bundled with Symposium Call Center Server Release 5.0.

Symposium Call Center Web Client provides the following functions with these components:

- Contact Center Management – Add, edit, view or delete users on a server in Symposium Call Center Server (SCCS), agent to supervisor assignments, or agent to skillset assignments.
- Access and Partition Management – Add, edit, view or delete Symposium Call Center Web Client users, partitions, access classes, report groups for Historical Reporting, basic rights to different Symposium Call Center Web Client components.
- Configuration – Configure and administer SCCS, upload and download SCCS configuration and user information.
- Scripting – SCCS uses scripts to route calls. Create and modify call routing instructions for your call center.
- Real-Time Reporting – View the dynamics of call activity. Real-time displays are available for both networked and single sites.

- Historical Reporting – Use to gather information about past performance of the call center.
- Emergency Help – System notifies the supervisor automatically whenever an agent presses the Emergency key on their phone. The Emergency Help panel shows information about the agent, including the agent's name, location and time when the Emergency key was pressed.
- Audit Trail – Records the actions performed in the Configuration component and identifies the user ID of the person who made the changes.
- Agent Desktop Displays – Provides real-time skillset monitoring to agents.

Figure 23 shows the browser-based launch pad for Symposium Call Center Web Client Release 4.5.

Figure 23
Nortel Networks Symposium Call Center Web Client Release 4.5 launch pad



Symposium Call Center Web Client Release 4.5 features and benefits

Nortel Networks Symposium Call Center Web Client Release 4.5 provides the following features and benefits:

- Centralized Management – client software is moved to a dedicated application server and accessed through an Internet Explorer browser for centralized installation, configuration, management and administration.
- New Agent Desktop Displays – Real-time displays provide agents with performance statistics.
- Improved User Management – Drag-and-drop agent reassignments save time and simplify supervisor assignments. Multiple sites can be managed using a single Web browser.
- Graphical Real-Time Displays – View critical real-time contact center information through a collection of graphical displays that can be customized.
- Historical Reporting – Centralized reporting enables sharing of public reports and provides e-mail notifications on the completion of scheduled reports.
- Improved User Interface – Real-time displays, reporting, configuration, and user management screens have been re-designed to further enhance usability and data presentation.
- Multiple Report Templates – More than 70 standard report templates are available.
- Standard Internet browser enables connections to powerful management tools, reports and real-time displays from virtually any computer within their corporate network.
- Network Consolidated Real-Time Displays – New network consolidated displays show call information from multiple locations, allowing for grouping and subtotals of call statistics.
- Increased Security – Web clients now can be separated from the Symposium server by a firewall.
- Enhanced Service Bureau Support – Real-time and historical reports can be partitioned for a service bureau environment. Skillsets and applications can also be filtered.

Symposium Call Center Web Client document references

[Table 89 on page 161](#) lists documentation references for Symposium Call Center Web Client.

Table 89
Symposium Call Center Web Client document references

Document title	Document number
<i>Meridian SL-100/Communication Server 2100 Product Guide</i>	555-4001-806
<i>Planning Installation Administration Guide SU02 Dec2003</i>	297-2183-117
<i>Supervisor's Reference Guide SU02 Dec2003</i>	297-2183-918
<i>Data Extraction Tool User's Guide for Meridian 1</i>	297-2183-919

162 Call Centers and Computer Telephony Integration (CTI)

Nortel Networks Call Center Management Information System (CC MIS) Release 5.2

Table 90 lists feature information for Nortel Networks Call Center Management Information System (CC MIS) Release 5.2.

Table 90
Nortel Networks Call Center Management Information System Release 5.2

Platform compatibility	Meridian SL-100 and Communication Server 2100
Platform requirements	Meridian SL-100: Release MSL07 or higher with CCM10, CCM11, or CCM12, SCCS 4.0 Communication Server 2100: Release SE06 or higher, Symposium TAPI Driver for ICM, Symposium Agent
Ordering information	Please refer to the current Product Catalog, or contact your Nortel Networks Channel Account Manager. For more information, contact your Nortel Networks representative, call 1-800-4-Nortel or 1-800-466-7835 from anywhere in North America, or go to the Nortel Networks website at http://www.nortelnetworks.com .

Nortel Networks Call Center Management Information System (CC MIS) 5.2 is the command center for your Centrex ACD call center, enabling the Call Center manager to view agent and queue statistics in real-time, generate a wide variety of standard and reports that can be customized, execute changes to ACD parameters and much more. Add wallboards from Nortel Networks complete line and supervisors can keep agents informed of their performance. The familiar Windows interface and user-friendly screens make operation simple and training of new supervisors easy.

CC MIS is flexible. The 25-agent Mini MIS can grow to the largest multi-node network call center in convenient increments. CC MIS can be partitioned with firewalls enabling one system to securely handle multiple customers. And Skillset Routing helps ensure that the caller is directed to the most qualified agent. CC MIS enables you to provide the very best customer service.

CC MIS Release 5.2 features and benefits

Nortel Networks CC MIS Release 5.2 offers the following features and benefits:

- **Data Access Control** – A data access option group was added to privilege level definition, along with two options that can be used to control supervisor access to agent identities and agent performance information.
- **NAP-Level Agent Lists** – The ability to create agent lists was extended to support Network Access Partitions (NAPs).
- **Extended List Definitions** – The list definition capability was extended to allow creation of lists of walkaway codes, Line of Business (LOB) codes and subgroups for use in reports parameters.
- **NAP-Level Agent Definition** – The ability to define agents using Network Access Partitions was added; the actual agent definitions remain in the local partitions associated with the NAP. In order for NAP supervisors to have access the agent definition, they need to have the agent definition option enabled in their associated privilege definition.
- **Report Sorting** – The capability to specify how lists affect sorting of reports was added. The report information can be produced in the same order as the list or the report information can be produced in natural order.
- **Simultaneous Supervisor Editing** – Administrative modes are no longer limited to one supervisor at a time. Any number of supervisors can be editing public definitions at any given time.
- **Tool Tip Help** – Tool tips have been added that provide ACD group name or number when the cursor is hovered over an ACD group in the real-time display modes. Note: This does not apply to the Navigator window in the Agent Status Display.
- **Data Only Reports** – The ability to create data only reports was added.
- **Supervisor Messaging** – The ability for supervisors to send short one-line messages to other logged-in supervisors has been added. In order to send messages, a supervisor must have the messaging option enabled, which is a new supervisor option in privilege level definition. Supervisors without this option enabled can still receive messages from other supervisors and reply to those messages.
- **Windows XP Support** – Windows XP is now supported for the client software.

164 Call Centers and Computer Telephony Integration (CTI)

CC MIS document references

Table 91 lists documentation references for Nortel Networks CC MIS.

Table 91
CC MIS document references

Document title	Document number
<i>Meridian SL-100/Communication Server 2100 Product Guide</i>	555-4001-806
<i>CC MIS Maintenance and Administration Guide</i>	297-2671-545
<i>CC MIS Getting Started Guide</i>	297-2671-175
<i>CC MIS System Description</i>	297-2671-150
<i>CC MIS Release Notes</i>	297-2671-211

Nortel Networks Symposium Agent Release 2.3

Table 92 lists feature information for Nortel Networks Symposium Agent Release 2.3.

Table 92
Nortel Networks Symposium Agent Release 2.3 feature information

Platform compatibility	Meridian SL-100 and Communication Server 2100
Platform requirements	<p>Meridian SL-100: Release MSL07 or higher with ICM, Symposium TAPI Driver for ICM, one of the following phones: M5000 series, POTS, M2008, M2216, or M2616</p> <p>Communication Server 2100: Release SE06 or higher, Symposium TAPI Driver for ICM, one of the following phones: M5000 series, POTS, M2008, M2216, or M2616</p>
Ordering information	<p>Please refer to the current Product Catalog, or contact your Nortel Networks Channel Account Manager.</p> <p>For more information, contact your Nortel Networks representative, call 1-800-4-Nortel or 1-800-466-7835 from anywhere in North America, or go to the Nortel Networks website at http://www.nortelnetworks.com.</p>

Nortel Networks Symposium Agent is a sophisticated Computer Telephony Integration (CTI) productivity solution that enables call center agents to provide highly intelligent and personalized customer care. Its thin-client/server-based application framework takes full advantage of industry-standard desktop and server components to integrate all of the computer and telephony tasks into a single, cohesive interface. Symposium Agent automates business applications using data provided by the carrier network, or information provided by the caller through touch-tone or speech recognition.

Server requirements for Symposium Agent Release 2.3

Symposium Agent Release 2.3 has the following server requirements:

Note: Symposium Agent and TAPI server for ICM can reside on one server.

- Microsoft windows NT Server 4.0 with Service Pack 6.0 or higher, Internet Explorer 4.0 or higher, Microsoft Data Access Components 2.1 or higher, Sybase Adaptive Server 12.0, TAPI Server or Remote TAPI Service Provider (if running separate servers).

Windows 2000 Server or Windows 2000 Advanced Server software, Sybase Adaptive Server 12.0.

- Pentium II 400 MHz or higher, minimum 256 MB RAM, 6 GB disk space, CD-ROM drive, mouse, keyboard and monitor.
- Ethernet connection.

Client requirements for Symposium Agent Release 2.3

Symposium Agent Release 2.3 has the following client requirements:

- Windows 95, Windows 98, or Windows NT Workstation 4.0 with Service Pack 4.0 or higher, Windows 2000 Professional, Internet Explorer 4.0 or higher, Microsoft Data Access Components 2.1 or higher (if you are using Windows 2000 Professional, you do not need to install Internet Explorer or MS Data Access Components), Remote TAPI Service Provider.
- Pentium PC 200 MHz or higher, minimum 25 Mbytes free hard disk space, minimum of 32 Mbytes of RAM.
- Ethernet connection.

Symposium Agent Release 2.3 features and benefits

Symposium Agent Release 2.3 includes the following features and benefits:

- A third-party CTI call center application that integrates your telephone and PC in an easy-to-use Graphical User Interface.
- Allows agents to handle calls directly from their computer while simultaneously viewing or entering data into a file related to the call.
- Uses rules-based intelligence to automatically launch desktop applications.
- Access caller data from multiple applications and populate on a custom-defined form. Events trigger the software to provide relevant caller data from the caller's repositories (client/server and host-based) and deliver the data together with the call to the agent's desktop. Data collected by IVR systems can also be passed to the agent's desktop.
- Centralized Call Rule and Trigger administration makes it easier to integrate telephony-enabling legacy applications. The Call Rule's database resides on a PC server and is configured from any Web browser.
- Provides support for powerful OLE, DDE, and keystroke integration and pre-packaged agentTriggers for Microsoft Outlook, Remedy, Siebel98, Siebel SupportTEAM, and Clarify ClearCallCenter applications.

- Centralized Agent Data administration dramatically simplifies solution management. All data is stored on a common server, allowing for a central point of storage and administration. This function supports agent mobility – all agent data configuration moves with the agent when they move to a different phone. This includes browser-based configuration, administration, and centrally stored speed dial lists and agent directories.
- AgentExplorer provides a unified interface to all Symposium Agent functions and a browser-based interface to many other Intranet and Internet services and add-in applications.
- AgentCompass makes it possible to develop powerful, dynamic (telephony-enabled) Web applications that put critical information at an agent's fingertips. AgentCompass applications can simplify data entry, guide agents through complex transactions and help agents cross-sell company products.
- AgentTelephony improves agent productivity by including access to LDAP directories, agent messaging service, centrally-stored agent call and event logs, including unattended event logging and centrally administered dialing plans.
- Symposium Agent connects to the host using CompuCALL (SCAI or ICM) on the agent's Microsoft Windows PC or NT-based desktop with a TAPI 2.1 client.

Symposium Agent document references

Table 93 lists documentation references for Symposium Agent.

Table 93
Symposium Agent document references

Document title	Document number
<i>Meridian SL-100/Communication Server 2100 Product Guide</i>	555-4001-806
<i>Installation Guide</i>	sainstall0101
<i>Programmer's Guide</i>	saprogram0101
<i>Planning and Engineering</i>	sape0601
<i>Symposium Agent 2.3 Supplementary Technical Information</i>	P-2003-0157

Nortel Networks Symposium LinkPlexer Release 1.2

Table 94 lists feature information for Nortel Networks Symposium LinkPlexer Release 1.2

**Table 94
Nortel Networks Symposium LinkPlexer Release 1.2**

Platform compatibility	Meridian SL-100 and Communication Server 2100
Platform requirements	<p>Meridian SL-100: Release MSL09 or higher, Intelligent Call Management (ICM) link, Ethernet Interface Unit (EIU)</p> <p>Communication Server 2100: Release SE06 or higher, ICM link</p>
Ordering information	<p>Please refer to the current Product Catalog, or contact your Nortel Networks Channel Account Manager.</p> <p>For more information, contact your Nortel Networks representative, call 1-800-4-Nortel or 1-800-466-7835 from anywhere in North America, or go to the Nortel Networks website at http://www.nortelnetworks.com.</p>

Nortel Networks Symposium LinkPlexer Release 1.2 is a Windows 2000 Server application that acts as a proxy server between multiple IP clients and the Meridian SL-100/Communication Server 2100. This arrangement allows the IP clients to share the same session and the resources of the Meridian SL-100/Communication Server 2100. LinkPlexer 1.2 can connect to the switch through TCP/IP (ICM) or X.25 (CompuCALL) (the Communication Server 2100 does not support X.25 connections). When LinkPlexer 1.2 acts as an IP-capable server, it allows applications that can only connect over TCP/IP to communicate with a switch that uses an X.25 connection.

Note: Windows NT 4.0 with Service Pack 6 is supported to enable an upgrade without having to change operating systems.

Symposium LinkPlexer 1.2 allows applications to share Directory Number (DN) association between different eBusiness applications. For example:

- Interactive Voice Response (IVR) voice ports controlled by IVR and monitored by Symposium Call Center Server (SCCS).
- A system where, SCCS performs the call routing, the IVR controls the voice response system, and Symposium TAPI Server/Symposium Agent controls softphones and screen pops.
- When agent positions are controlled by TAPI Server/Symposium Agent (TAPI) (or desktop CTI) are monitored by SCCS.
- In systems where call queues and agent positions monitored by third-party applications, such as voice recorders.

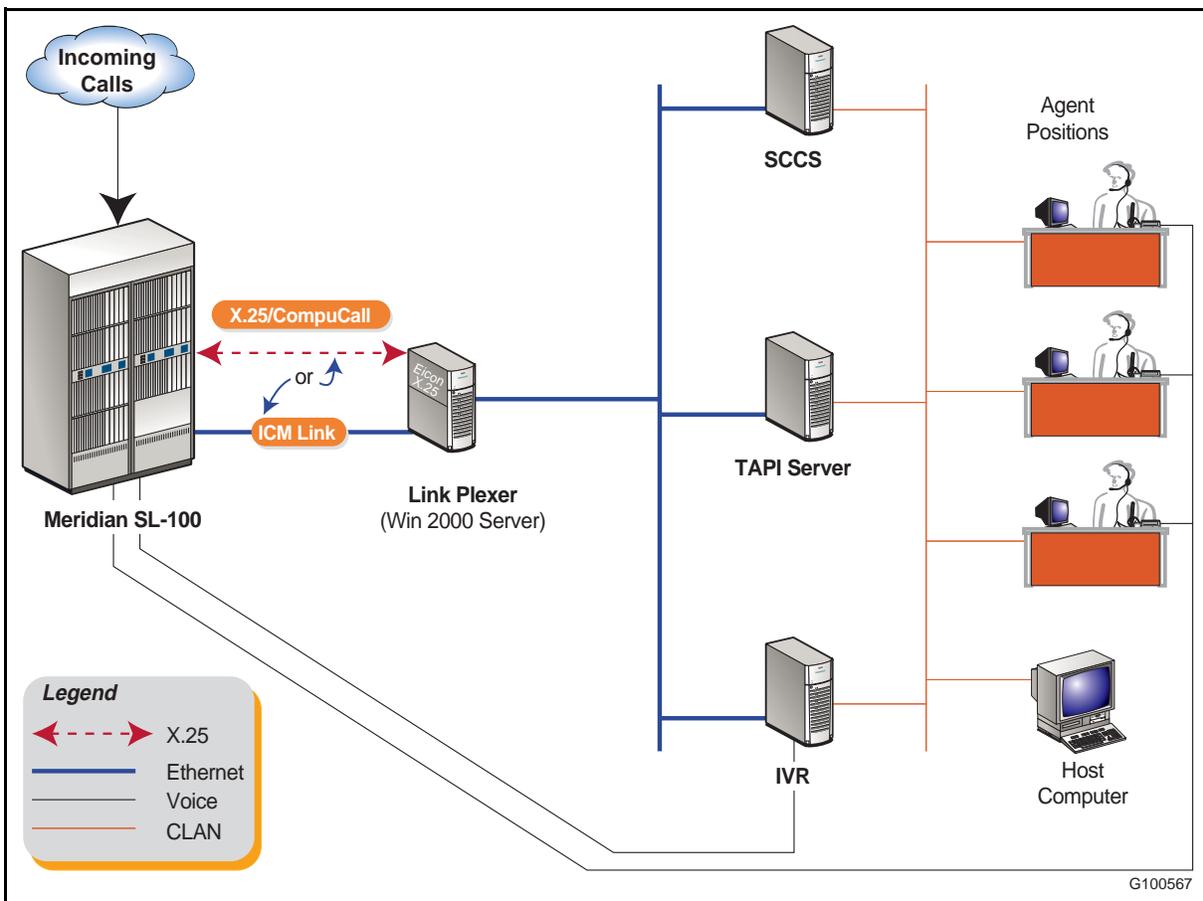
Figure 24 illustrates the Symposium LinkPlexer Release 1.2 architecture.

Server requirements for LinkPlexer Release 1.2

Symposium LinkPlexer Release 1.2 has the following server requirements:

- Pentium III – 900MHz, MS Windows 2000, 128 MB RAM, 18 GB storage.
- Security dongle and keycode; parallel port for dongle.
- LinkPlexer supports two Network Interface Cards (NICs). Two NICs are required if LinkPlexer is co-resident with the ICM TAPI Driver.
- If X.25 is being used, two communication ports are required (only one for ICM), Eicon card, Motorola V.3600 modem.

Figure 24
Symposium LinkPlexer 1.2 architecture



Symposium Linkplexer Release 1.2 features and benefits

Symposium LinkPlexer Release 1.2 has the following features and benefits:

- DN association sharing – Both CompuCALL and Intelligent Call Management (ICM) limit the association of resources to a single session. Two host applications with simultaneous CompuCALL/ICM application sessions established with a given switch cannot have the same resource associated with the two sessions at the same time. LinkPlexer 1.2 overcomes this limitation by propagating all resource messages from the Meridian SL-100 to all clients.

For example:

A dv-call-offered message from the Meridian SL-100 is propagated to all clients and not just the client that originally issued the dv-dn-association request.

- ICM application multiplexing – The Meridian SL-100 only allows one resource to be associated per link session with the switch. However, LinkPlexer 1.2 acts as a proxy server between multiple ICM applications and a DMS, Meridian SL-100 CompuCALL, or ICM switch link. It enables ICM clients to share, over TCP/IP, the same session and Meridian SL-100 resources and manages messages to and from the switch.
- Connectivity of ICM client to CompuCALL – LinkPlexer 1.2 supports a single connection to the Meridian SL-100 switch, either Ethernet TCP/IP or X.25. This connection allows ICM-only applications to access CompuCALL-equipped systems. LinkPlexer relays messages to the X.25/ICM link on the switch.
- Messaging – LinkPlexer 1.2 has three general types of messaging and tracks each message from an application to the Meridian SL-100. The initial response message is sent only to the sending application. Event messages are broadcast to all connected applications. To the application communicating with LinkPlexer 1.2, the socket exactly emulates the Meridian SL-100 ICM interface.
- DN Association Management – LinkPlexer 1.2 keeps a track of which DNs and Agent Position IDs are associated with each agent/client (for example, SCCS, TAPI etc.) connection. This is required to ensure that DNs and Agent Position IDs associated with a particular agent/client connection are not disassociated by a dv-Dn-Associate (delete) being received from another agent/client connection.

- Session Management – Session Management is carried out by LinkPlexer 1.2 and operates as follows:
 - On LinkPlexer 1.2 service startup, a connection is established with the switch and a login session is started (by sending a dv-Appl-Logon message).
 - When the last agent/client disconnects from LinkPlexer 1.2, the link between LinkPlexer 1.2 and the switch is also disconnected. After a short period (less than 10 seconds) LinkPlexer 1.2 will re-establish the connection to the switch and restart the login session (by sending a dv-Appl-Logon message).
- Client connection management – LinkPlexer 1.2 manages all client connections to ensure connection integrity. A client connection is any successful socket connection to LinkPlexer 1.2. Each connection uses one client license. The number of client connections is limited, by the keycode, to 150. LinkPlexer 1.2 maintains the integrity of the connection between the LinkPlexer 1.2 server and each connected client. This allows LinkPlexer 1.2 to free the client license when a client disconnects.
- Generation of dv-Set-Offhook-U on behalf of Softphone – LinkPlexer 1.2 enables multiple applications to monitor and control devices on a single link. In the direct-connect to the Meridian SL-100 scenario (no LinkPlexer 1.2), the application always has knowledge of the operations being performed on a device, since the application is responsible for instructing the Meridian SL-100 to perform the operation. With LinkPlexer 1.2, an application can initiate an operation on a device that negatively impacts another application on the link.
- Migration – LinkPlexer 1.2 facilitates the introduction of Nortel Networks applications (such as SCCS) into existing CompuCALL or ICM-based networks without the need to displace the existing applications. LinkPlexer 1.2 architecture is component architecture, rather than a monolithic model with SCCS as the focal point.
- Connectivity – LinkPlexer 1.2 provides conversion of ICM to X.25 and vice-versa allowing ICM-only applications to be used with existing CompuCALL links.
- Compatibility – LinkPlexer performs no protocol conversion. Applications conforming to the NIS Q218 CompuCALL/Meridian SCAI Interface Specification should work in a LinkPlexer integrated environment.

Symposium LinkPlexer document references

[Table 95 on page 172](#) lists documentation references for Symposium LinkPlexer.

172 Call Centers and Computer Telephony Integration (CTI)

Table 95
Symposium LinkPlexer document references

Document title	Document number
<i>Meridian SL-100/Communication Server 2100 Product Guide</i>	NTP 555-4001-806
<i>LinkPlexer 1.2 Installation and Configuration Guide</i>	P0993516

Nortel Networks Symposium Web Center Portal 4.0

Table 96 lists feature information for Nortel Networks Symposium Web Center Portal Release 4.0.

Table 96
Nortel Networks Symposium Web Center Portal 4.0

Platform compatibility	Meridian SL-100 and Communication Server 2100
Platform requirements	<p>Meridian SL-100: Release MSL09 or higher, Symposium Call Center Server Release 5.0, TAPI-ICM</p> <p>Communication Server 2100: Release SE06 or higher, Symposium Call Center Server Release 5.0, TAPI-ICM</p> <p>Note: Symposium Web Center Portal Release 4.0 can only be supported on Symposium Call Center Server Release 5.0</p>
Ordering information	<p>Please refer to the current Product Catalog, or contact your Nortel Networks Channel Account Manager.</p> <p>For more information, contact your Nortel Networks representative, call 1-800-4-Nortel or 1-800-466-7835 from anywhere in North America, or go to the Nortel Networks website at http://www.nortelnetworks.com.</p>

Symposium Web Center Portal (SWCP) Release 4.0 is a Microsoft Windows NT client/server multimedia contact center application blending e-mail, web and telephony communications using Symposium Call Center Server and Symposium Express applications. SWCP is a modular, software-only solution that can be implemented in stages. The modules are E-mail Manager with Click-to-Call, Multimedia Manager and Web Communication Manager.

Agents can view, respond to, and track requests from the Internet. Unlike conventional e-mail requests to a single e-mail account, Symposium Web Center Portal lists all of your customers' requests, and records all of your agents' responses with the initial request. This allows you to measure and control the volume of traffic from the Internet. Supervisors and administrators can view real-time displays of contact center activities and run historical reports.

The agent/client interface presents the agent with a browser-based Graphical User Interface. Symposium Web Center Portal agents can respond to contacts through a variety of media, including callback responses, e-mail, Internet text chat and form sharing.

Symposium Web Center Portal 4.0 offers intelligent e-mail routing, call blending, text chat capability, click-to-call features, and the management tools to easily integrate today's Web-based customer inquiries into the dynamic contact center environment.

The Symposium Web Center Portal system is integrated directly with Symposium Call Center Server through the Host Data Exchange (HDX) and OAM interfaces. The HDX interface allows for the integration with Symposium Call Center Server scripting for the purposes of routing. The OAM interface allows Symposium Web Center Portal to access the information in the Symposium Call Center Server about configured agents, supervisors, skillsets, and the mapping of these users to skillsets.

Symposium Web Center Portal is also integrated with the TAPI server through the Dynamic Transaction Handler (DTH). The DTH presents multimedia contacts to Symposium Call Center Server to queue, route and report in the same way as Symposium Call Center Server handles voice contacts. TAPI call data identifies the Symposium Web Center Portal contact for the associated call. The Portal Desktop then uses this data to route the contact to the appropriate agent.

Symposium Web Center Portal Release 4.0 features and benefits

Symposium Web Center Portal provides these functions with these components:

- E-mail Manager with Click-to-Call has the following features:
 - Skill-Based Routing handles e-mail inquiries as effectively and efficiently as phone calls.
 - Prioritization and preferred Agent Routing – Queue to Individual Agents.
 - Automated responses to Frequently Asked Questions.
 - Customer Initiated call back request.
 - Configured option to Pull or Push e-mails to Agents.
 - Single point of administration for skillsets, supervisors and agents.
 - Single Agent Login for Symposium Web Center Portal and Symposium Call Center Server.
 - Agent productivity tools.
- Click-to-Call offers customers an immediate or scheduled call back with the click of a button. Connects customers with agents when they need help and at their convenience.
- Agent Interface allows an agent to view the details of a customer transaction after accepting a click-to-call request.
- In Symposium Web Center Portal 4.0, the Portal server runs on the Windows 2000 Server and Windows 2000 Advanced Server operating systems.

- Symposium Web Center Portal 4.0 uses Sybase 12.5.
- Symposium Web Center Portal 4.0 requires that TAPI be installed on every agent desktop to enable unified login with Symposium Call Center Server.
- Escalation and Case Management of e-mails. E-mails can be forwarded to another skillset, a list of e-mail addresses or a specific agent.
- Leverages the same business routing rules for e-mails and phone calls.
- Offers priority routing to preferred customers' e-mails.
- Improves first “call” resolution.
- Reduces contact handling costs.
- Improves staff productivity and morale.
- Preserves full contact center investment, including integration of business applications.
- Reduces cost of deployment and total cost of ownership.
- Symposium Web Center Portal Release 4.0 empowers businesses to “Web-enable” their contact centers and expand the way they do business with their customers – anytime, anywhere, anyway.
- Nortel Networks Symposium Web Center Portal Release 4.0 opens the door for companies to increase revenue, reduce their costs of customer service, offer anytime/anywhere access to their products and services, and, most importantly, increase customer loyalty as customers increasingly use the Internet for business.

Symposium Web Center Portal document references

Table 97 lists documentation references for Symposium Web Center Portal.

Table 97
Symposium Web Center Portal document references

Document title	Document number
<i>Meridian SL-100/Communication Server 2100 Product Guide</i>	555-4001-806
<i>Nortel Networks Symposium Web Center Portal – Planning and Engineering Guide</i>	297-2183-115

Nortel Networks Media Processing Server 500 (MPS 500) Release 2.1

Table 98 lists feature information for Nortel Networks Media Processing Server 500 (MPS 500)

Table 98
Nortel Networks Media Processing Server 500 (MPS 500)

Platform compatibility	Meridian SL-100 and Communication Server 2100
Platform requirements	Meridian SL-100: Release MSL09 or higher Communication Server 2100: Release SE06 or higher
Ordering information	Please refer to the current Product Catalog, or contact your Nortel Networks Channel Account Manager. For more information, contact your Nortel Networks representative, call 1-800-4-Nortel or 1-800-466-7835 from anywhere in North America, or go to the Nortel Networks website at http://www.nortelnetworks.com .

The Media Processing Server (MPS) 500 is the ideal self-service solution for medium-sized enterprises. This full-featured, competitively-priced solution provides an advanced suite of capabilities including a full portfolio of Advanced Speech solutions, VoiceXML and Session Initiation Protocol (SIP). Nortel Networks integration packages and native interfaces enable MPS 500 to seamlessly integrate with numerous CTI applications for fast, intelligent call routing.

The MPS 500 consists of one Telephony Media Server (TMS) which supports eight T1/E1 spans (up to 240 ports) or comparable capacity VoIP channels. The MPS 500 is capable of providing full IVR functionality including fax, caller message recording, conferencing, speech recognition and text-to-speech (using OSCAR resource servers), SQL database access, host screen scrape access and CTI integration. It the supports building and running of an application to control a given call.

Media Processing Server 500 features and benefits

Nortel Networks Media Processing Server 500 has the following features and benefits:

- Improves contact center efficiency – automates routine requests and frees agents for more complex inquiries.
- Delivers friendlier self-service and more personalized customer experience – using robust, multi-language advanced speech capabilities.
- Extends your web applications to callers by using VoiceXML, JAVA and other internet technologies.

- Supports a hybrid environment of traditional and VoIP telephony protocols that enables smooth transition to VoIP without costly hardware upgrades.
- DTMF interfaces improve contact center efficiency by automating routine requests and freeing agents for more complex inquiries.
- Industry standard application development – MPS 500 extends your web applications to callers by using VoiceXML, JAVA and other internet technologies
- Dual application development environment provides customers the choice to develop applications in VoiceXML or PeriProducer. This integration strategy provides investment protection and a migration path from one environment to another if and when required.
- Simultaneous support for digital and IP telephony including Session Initiation Protocol enables phased migration to VoIP that fits your business strategy without costly upgrades and positions your business for evolution to Engaged Applications.
- Multiple host and database access enables MPS 500 to simultaneously pull customer information from multiple databases. MPS 500 easily integrates into an existing data and network infrastructure without costly re-engineering.
- Native CTI Interfaces – MPS 500's standard, "out-of-the-box" integration packages accelerate deployment, simplify system integration and deliver faster return on investment.
- Browser-based system management that runs as a Java client or in industry standard browser window, streamlines system configuration and management.
- Fax: Send, Receive, Compose – increases customer satisfaction by automating the distribution or collection of documents such as part lists, application forms, registration, claim forms, confirmations etc. through an MPS 500 application for faster, more convenient customer access.
- Conference improves customer service by increasing probability of first call resolution by providing capability to conference a caller with additional agents or supervisors.
- Announcements reduce the volume of routine inquiry calls and increase contact center efficiency by freeing agents to handle more complex transactions. MPS 500 announcements, stored in industry standard audio file format (MMF or .wav), are easy to create, reducing costs and providing flexibility.
- Available on Solaris or Windows Operating System, MPS 500 lets you choose the operating system that best suits your corporate infrastructure.

178 Call Centers and Computer Telephony Integration (CTI)

- Switch Independent – The MPS 500 interfaces to all of the most common PBXs, including Meridian SL-100 and Communication Server 2100. For businesses with a variety of PBXs in their Network, the MPS 500 is the self-service solution that can interface to them all.
- Modular architecture – enables the MPS 500 to easily expand capability and size so you can buy what you need today, accommodate future growth and protect your investment.

Media Processing Server 500 document references

Table 99 lists documentation references for Media Processing Server 500.

Table 99
Media Processing Server 500 document references

Document title	Document number
<i>Meridian SL-100/Communication Server 2100 Product Guide</i>	555-4001-806
<i>Nortel Networks Media Processing Server 500 Customer Supplied Rack Solutions</i>	P0608292
<i>Nortel Networks Media Processing Server 500 Release Notes</i>	P0608366
<i>Media Processing Server Series 500 (MPS 500) Overview</i>	P0603951
<i>MPS 500 Hardware Installation and Maintenance Manual</i>	P0603484

Nortel Networks Media Processing Server 1000 (MPS 1000) Release 2.1

Table 100 lists feature information for Nortel Networks Media Processing Server 1000 (MPS 1000).

Table 100
Nortel Networks Media Processing Server 1000 (MPS 1000)

Platform compatibility	Meridian SL-100 and Communication Server 2100
Platform requirements	Meridian SL-100: Release MSL09 or higher Communication Server 2100: Release SE06 or higher
Ordering information	Please refer to the current Product Catalog, or contact your Nortel Networks Channel Account Manager. For more information, contact your Nortel Networks representative, call 1-800-4-Nortel or 1-800-466-7835 from anywhere in North America, or go to the Nortel Networks website at http://www.nortelnetworks.com .

The MPS 1000 is Nortel Networks multimedia self-service solution for enterprise high volume call centers. The ideal platform for mission-critical installations that require continuous availability and high transaction throughput, the MPS 1000 provides automated transaction handling and application controlled call handling uniquely combined in an integrated, non-blocking system. The MPS 1000 supports comprehensive networking and data communication.

The MPS 1000 is the next hardware and software generation of the VPS/is. It runs on the Solaris and Windows platforms and offer all available call processing options. The MPS 1000 is offered in the same rack systems as the current VPS/is systems.

The Nortel Networks Media Processing Server 1000 starts at four DS1 connections and scales up to 384 DS1 connections. All DS0 connections in the Nortel Networks Media Processing Server 1000 can be bridged together. The 384 DS1 connections are distributed across 48 Telephony Media Servers residing in 12 chassis. Each Telephony Media Server is capable of supporting eight DS1 connections. The Nortel Networks Media Processing Server 1000 is capable of providing full IVR functionality including OSCAR resources (for example, LVR, TTS, etc.), programmable switching functionality, or a mixture of both. The Nortel Networks Media Processing Server 1000 also provides fault resiliency with the call protect feature.

Media Processing Server 1000 features and benefits

Nortel Networks Media Processing Server 1000 has the following features and benefits:

- A highly scalable solution, the MPS 1000 supports:
 - 96 ports to 9216 ports (T1) or
 - 120-11520 ports (E1) or
 - 120-11520 VoIP ports or
 - a combination of digital and VoIP connections in a single system
- Smaller systems can easily be expanded over time, delivering a growth path that matches the needs of your business.
- The MPS 1000 is designed to offer the following options for writing self-service applications:
 - the intuitive, graphical development environment of PeriProducer and
 - the text-based markup language of VoiceXML
- VoiceXML applications can invoke PeriProducer applications, and vice versa. Nortel Networks implementation of VoiceXML complies to version 2.0 of the VoiceXML specification.
- For customers who are committed to JAVA for their Business Logic, the MPS 1000 provides a Java Services Bridge (JSB) as a message interface between Nortel Networks self-service applications created with PeriProducer and any Java facility accessible through a Java API.
- System management is simplified through the use of the PeriView suite of GUI tools. PeriView runs as a standalone java client application or in a common web browser window industry-standard browser.
- Compact footprint reduces floor-space requirements, saving real estate and maintenance costs. A single, typical telco-grade cabinet supports up to 1536 T1 or 1920 E1 channels in a 0.5 square meter/5.2 square foot.
- The MPS 1000 easily integrates into your existing infrastructure by supporting a wide variety of telephony and network protocols, hosts and databases essentially eliminating the need for costly re-engineering.

- Many shared system resources are not required by a port for the full duration of the call, nor are they required by all lines at any given time. The MPS 1000 is unique in its ability to dynamically allocate such resources to ensure maximum usage, while at the same time reducing the amount of hardware required and ultimately reducing system cost speech resources.
- Additional features supported include Conference, Fax and Caller Message Recording.
- The MPS 1000 delivers mission-critical reliability through redundant system components for protection against lost service revenue. Redundant hardware can be configured to ensure the continuous operation of critical components.
- For friendlier self-service and more personalized customer experience, the full suite of Advanced Speech capabilities are supported, including:
 - Large Vocabulary Recognition
 - Natural Language Understanding
 - Speaker Verification
 - Text to Speech
- Since the MPS 1000 supports both digital and IP voice protocols, customers who require a hybrid digital/VoIP environment are provided a smooth migration path designed to protect existing hardware investment. The MPS 1000 supports H.323 and SIP protocols.
- The MPS 1000's non-blocking, programmable call-handling platform delivers connectivity of any port to any port, or to any shared resource, reducing hardware requirements and monthly trunking costs, while increasing system flexibility.

Media Processing Server 1000 document references

Table 101 lists documentation references for the Media Processing Server 1000.

Table 101
Media Processing Server 1000 document references (Sheet 1 of 2)

Document title	Document number
<i>Meridian SL-100/Communication Server 2100 Product Guide</i>	555-4001-806
<i>Media Processing Server Series 1000 Software Installation Guide</i>	P0988081
<i>Media Processing Server Series Telephony Reference Manual</i>	P0988082

182 Call Centers and Computer Telephony Integration (CTI)

Table 101
Media Processing Server 1000 document references (Sheet 2 of 2)

Document title	Document number
<i>Media Processing Server Series COMMGR Reference Manual</i>	P0988083
<i>Media Processing Server Series System Reference Manual</i>	P0988084
<i>Media Processing Server Series Caller Message Recording</i>	P0988085
<i>Media Processing Server Series GeoTel Features User Manual</i>	P0988087
<i>Media Processing Server Series Solaris System Operator's Guide</i>	P0988097
<i>Media Processing Server Series Application Programming Guide</i>	P0988090
<i>Media Processing Server Series Transition Guide</i>	P0988098
<i>Media Processing Server Series 1000 Release Notes</i>	P0988100
<i>Simple Network Management Protocol in the MPS Environment</i>	P0989517
<i>Glossary of Media Processing Server Series Terminology</i>	P0991722
<i>MPS Disk Mirroring Installation, Configuration, and Recovery</i>	P0992698
<i>Java Services Bridge User's Guide</i>	P0987095
<i>Java Services Bridge Release Notes</i>	P0989404
<i>HTML Service Daemon User's Guide</i>	P0988465

Nortel Networks Peri-ICM Release 2.0

Table 102 lists Nortel Networks Peri-ICM Release 2.0 feature information.

**Table 102
Nortel Networks Peri-ICM Release 2.0 feature information**

Platform compatibility	Meridian SL-100 and Communication Server 2100
Platform requirements	<p>Meridian SL-100: Release MSL12 or higher, ICM Link, EIU</p> <p>Communication Server 2100: Release SE06 or higher, Call Agent card, ICM Link, SAM21 shelf</p>
Ordering information	<p>Please refer to the current Product Catalog, or contact your Nortel Networks Channel Account Manager.</p> <p>For more information, contact your Nortel Networks representative, call 1-800-4-Nortel or 1-800-466-7835 from anywhere in North America, or go to the Nortel Networks website at http://www.nortelnetworks.com.</p>

Nortel Networks Periphonics Intelligent Call Management Link (Peri-ICM) Release 2.0 is a native VPS/is implementation of the DMS ICM interface. It delivers Automatic Number Identification (ANI) and Dialed Number Identification Service (DNIS) information from a Nortel Networks Meridian SL-100/Communication Server 2100 to a Nortel Networks Integrated Voice Response (IVR) system.

Peri-ICM offers the following:

- Supports ICM Link over TCP/IP behind a Meridian SL-100/Communication Server 2100.
- Supports ICM Link over TCP/IP behind LinkPlexer.
- Supports an interface to SCCS to provide Customer Entered Data (CED) delivery.

Peri-ICM along with IVR integration components (IVR/SCCS Integration package and IVR/TAPI integration package) provide an open, yet integrated environment for enhanced voice processing, call/data delivery, screen pops and other call center-related applications in client/server installations.

The Peri-Link Server Release 2.0 provides support to Peri-ICM (Release 1.0 and Release 2.0), the IVR to Symposium Call Center Server (IVR to SCCS) interface, and/or the IVR to TAPI Server interface in situations where integration is required to a Solaris-based VPS/is (Rel 5.4.1 and above) and/or to multiple (NT or Solaris-based) VPS/is (Rel 5.4.1 and above) systems.

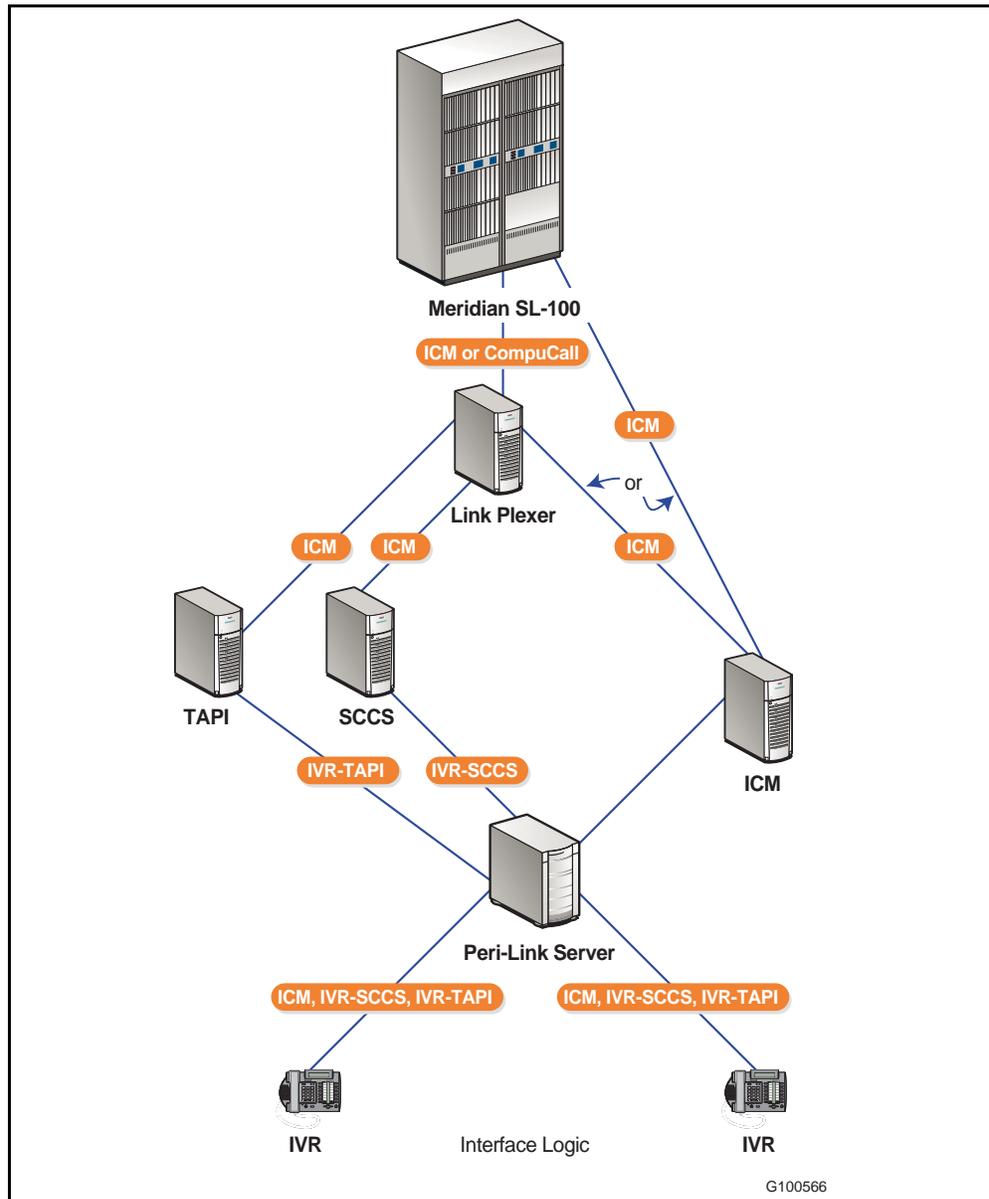
184 Call Centers and Computer Telephony Integration (CTI)

From a hardware perspective, Peri-Link Server is an external Microsoft WinNT server available as a rackmounted unit or a desk unit.

Note: The Peri-Link server is not required for a single WinNT VPS/is using Peri-ICM (Release 2), IVR-SCCS and IVR-TAPI.

Figure 25 is an example of Peri-ICM and IVR integration with a Meridian SL-100.

Figure 25
Peri-ICM and IVR integration with a Meridian SL-100



Peri-ICM Release 2.0 features and benefits

Peri-ICM Release 2.0 includes the following features and benefits:

- Allows for digital call transfers that save up to four seconds per call.
- Enables ACD agents to digitally login and logout of IVR ports, providing significantly faster login/logout than traditional DTMF functionality.
- Peri-ICM provides tight integration between the Nortel Networks IVR and a Meridian SL-100, by enabling the IVR application to send/receive all required telephony requests, responses and event messages to and from the Meridian SL-100.
- The IVR/Symposium Call Center Server (SCCS) Integration Package has the following capabilities:
 - Provides an interface to pass IVR collected data from the VPS/is to SCCS. This data can be used to retrieve skillset queue information such as estimated wait time, number of agents logged into the skillset, ready and not ready, number of calls in queue, and to select a skillset on which to queue the call. It then matches caller needs to agent skills, thereby allowing the call center to offer preferred customer treatment and priority.
 - Includes the CSHDX and the CSRSM interfaces. The CSHDX interface provides “Skills-Based Routing” information to the SCCS. The CSRSM interface provides statistics from SCCS to the Processing Server application script.
 - In a Meridian SL-100/Communication Server 2100 configuration, passing IVR collect data from the VPS/is to the SCCS for the purposes of skill set selection and call routing uses the SCCS Host Data Exchange (HDX) interface and requires Peri-ICM Release 2.04.
 - Passing the real-time skill queue data from the SCCS to the VPS/is enables IVR applications with “Estimated Wait Time” and other “Time in Queue” applications to use the Real-time Statistics Multicast (RSM) interface on SCCS.

Note: SCCS 4.0 or higher is required to support HDX or RSM.

- The IVR/TAPI Integration Package has the following capabilities:
 - Provides an interface to pass IVR collected customer-entered data from the VPS/is to the TAPI Server (Meridian SL-100/Communication Server 2100). TAPI can use this data to populate the screen pop or to trigger events with the TAPI Server/Driver. The passing of screen pops with customer-entered data provides better agent information and eliminates the need for customers to provide information multiple times.
 - In a Meridian SL-100/Communication Server 2100 configuration, the TAPI interface used is IVR.DDL.
 - IVR/TAPI can run directly on one Windows 2000 VPS/is. A Peri-Link Server is required for Solaris VPS/is or a configuration with multiple VPS/is (Windows 2000 or Solaris).
 - Requires VPS/is 5.4.2 or higher.
 - Requires TAPI Server 2.1/2.2 or higher for Meridian SL-100/Communication Server 2100 environments.
- Peri-Link Server 2.0.4 – a Windows 2000 Server that provides a dedicated processing environment for Peri-IPML, IVR/SCCS interfaces, IVR/TAPI interfaces and IVR CTI Desktop Toolkit.

Peri-ICM document references

Table 103 lists documentation references for Nortel Networks Peri-ICM.

Table 103
Peri-ICM document references

Document title	Document number
<i>Meridian SL-100/Communication Server 2100 Product Guide</i>	555-4001-806

LDAP Synching

Table 104 lists feature information for Nortel Networks LDAP Synching.

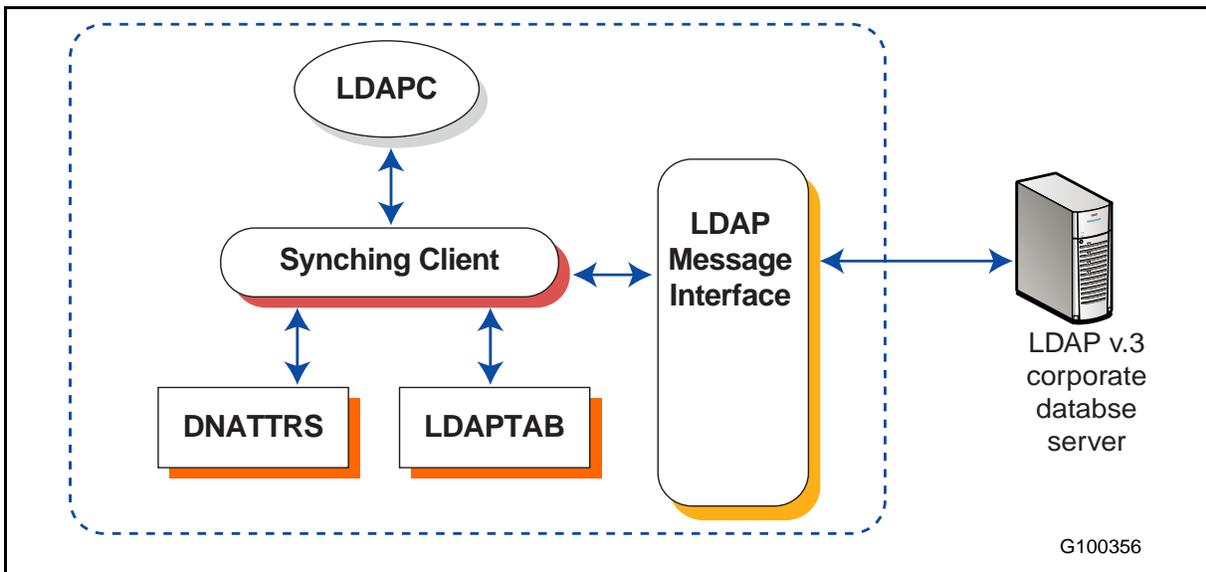
Table 104
Nortel Networks LDAP Synching

Platform compatibility	Meridian SL-100
Platform requirements	Meridian SL-100: Release MSL15 or higher, ICM link, EIU
Ordering information	<p>Please refer to the current Product Catalog, or contact your Nortel Networks Channel Account Manager.</p> <p>For more information, contact your Nortel Networks representative, call 1-800-4-Nortel or 1-800-466-7835 from anywhere in North America, or go to the Nortel Networks website at http://www.nortelnetworks.com.</p>

Lightweight Directory Access Protocol (LDAP) Synching for the Meridian SL-100 can automatically update a corporate LDAP version 3 database with telephone number changes from the Meridian SL-100. In addition, when changes are made in the corporate LDAP version 3 database, LDAP Synching has the ability to update the name associated with a Directory Number on the Meridian SL-100. The Meridian SL-100 can synchronize with an LDAP version 3 authoritative database on three attributes: Directory Number, name and a unique identifier.

With LDAP Synching for Meridian SL-100, the Meridian SL-100 functions as an LDAP client and synchronizes to an LDAP version 3 corporate database server. [Figure 26 on page 188](#) illustrates the LDAP architecture.

Figure 26
LDAP architecture



The Synching Client is responsible for Start-up and Continuous Synchronization. It communicates with and extracts information from the LDAP version 3 corporate database server using the LDAP Messaging Interface. The LDAP Messaging Interface encodes and decodes messages to and from the LDAP version 3 corporate database server. The start-up process associates the DNs on the Meridian SL-100 with a unique identifier (Unique ID) on the LDAP version 3 corporate database server. On the Meridian SL-100, information associated with the DN is stored as follows:

- The name associated with the DN is stored in Table DNATTRS.
- The unique ID associated with a DN is stored in either Table IBNFEAT or KSETFEAT.

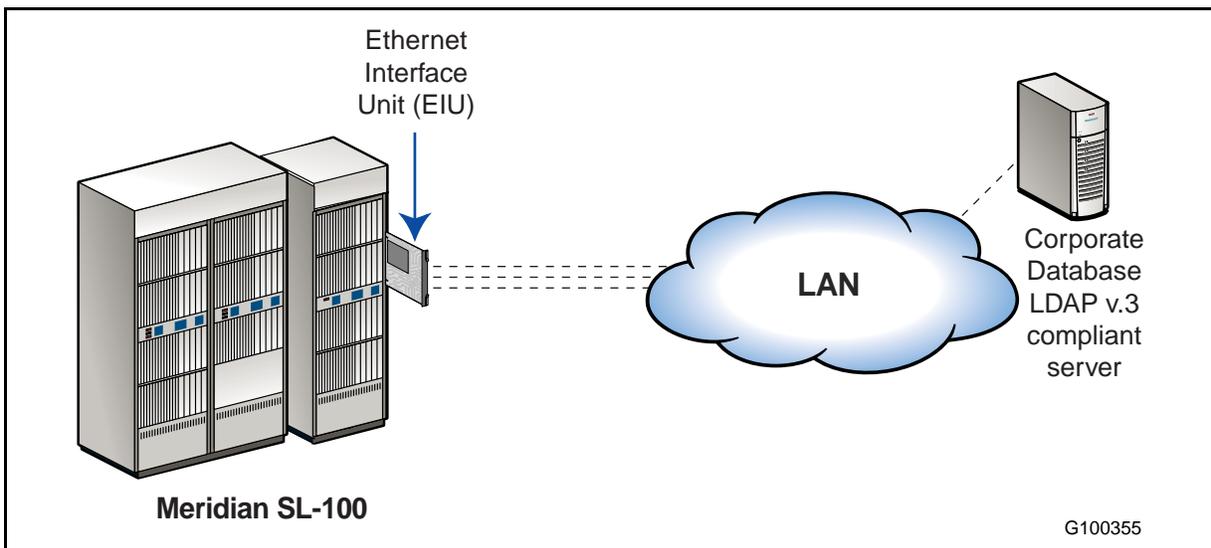
Changes in the name or unique ID are identified and queued against the Synching Client. The Synching Client reads Table LDAPTAB to connect to the LDAP version 3 corporate database server. Table LDAPTAB contains the IP address, LDAP server port and other information needed to connect to the LDAP version 3 corporate database server. The Synching Client then compares data that resides on the Meridian SL-100, using the unique identifier to match up the DN and name with the data that resides on the LDAP version 3 corporate database.

The Directory Numbers that reside on the Meridian SL-100 and on the LDAP version 3 corporate database must have a unique identifier in order for synchronization to occur. If the data on the Meridian SL-100 differs from that on the corporate database, the Synching Client makes the appropriate modifications. DN changes associated with a Unique ID in the Meridian SL-100 are communicated to the LDAP version 3 corporate database server. Name changes in the corporate database are communicated to the Meridian SL-100.

There is a TCP/IP connection between the Meridian SL-100 and the LDAP version 3 corporate database server. The TCP/IP connection is opened using the new CI tool LDAPCI. A maximum of 100 queries can be made every time a TCP/IP connection is opened with the LDAP version 3 corporate database server. LDAP Synching for Meridian SL-100 continues to synchronize with the corporate database, until all the updates for the session are completed. In Table LDAPTAB, customers may specify the frequency of the synchronization in hours.

Figure 27 illustrates the TCP/IP connection between the Meridian SL-100 and LDAP version 3 corporate database server. The connection between the Meridian SL-100 and the LDAP version 3 server should be in the same LAN or in a LAN configured in such a way that both IP addresses can communicate.

Figure 27
TCP/IP connection between Meridian SL-100 and LDAP version 3 corporate database sever



For the initial synchronization of the Meridian SL-100 with an LDAP version 3 corporate database, the subcommand POPULATE in the LDAPCI tool is used to initially populate the unique IDs. The POPULATE command also populates Table DNATTRS with “unknown” for the Public Network Name. During the startup phase, the Meridian SL-100 will loop through every DN in the Meridian SL-100 and try to find a Unique ID for that DN. It will then associate that unique ID to the DN. If the Meridian SL-100 does not find a unique ID for that DN on the LDAP version 3 corporate database server, it deletes that DN from the LDAP version 3 corporate database server.

After the initial synchronization of the Meridian SL-100 and the LDAP version 3 corporate database server, in which the DNs and Unique IDs are associated, the synching process should be started using LDAPCI and repeat itself based on the datafill in the field FREQSYNC (Frequency of Sync) in Table LDAPTAB.

The continuous synchronization command, START, updates Table DNATTRS with the actual names that reside in the LDAP version 3 Corporate Database Server. It then keeps the Meridian SL-100 and the LDAP version 3 corporate database in synchronization. The synching client needs to be started manually the first time through the START command in LDAPCI. DN changes on the Meridian SL-100 are communicated to the LDAP version 3 corporate database server, and name changes on the LDAP version 3 corporate database server are communicated to the Meridian SL-100. After synchronization is completed, the synching client automatically stops. In the event that it should be necessary to manually stop the synchronization, a STOP command is provided with the LDAPCI tool.

Mappings contain the names of the attributes on the LDAP version 3 corporate database server that correspond to attributes on the Meridian SL-100. Flexibility is provided on the Meridian SL-100 to allow the administrator to dataflow the mappings to match up to those on the LDAP version 3 corporate database server.

In the event that the primary corporate database server should not be available for synchronization with the Meridian SL-100, LDAP Synching provides the capability for the Meridian SL-100 to synchronize with a shadow database that is LDAP version 3 compliant.

Access to the LDAP version 3 corporate database server is authenticated by a password during each query/update to the LDAP server from the Meridian SL-100. The password is encrypted and can only be changed from the LDAPCI tool.

LDAP Synching limitations and restrictions

LDAP Synching has the following imitations and restrictions:

- The name associated with a directory number on the LDAP version 3 corporate database should be stored as one of the following categories:
 - DISPLAY NAME
 - COMMON NAME
 - FIRST & LAST NAME
 - GIVEN NAME & SURNAME
- The network where the Meridian SL-100 and the LDAP version 3 corporate database reside, should be a secure network. Currently, KERBEROS authentication is not provided with this feature.
- For synchronization to occur, the LDAP version 3 corporate database server must have a unique identifier for each DN that resides on the Meridian SL-100. If the LDAP version 3 corporate database does not have a unique ID associated with an entry that contains a DN, the Meridian SL-100 deletes that DN from the LDAP version 3 Corporate Database Server.

Note: If there is an entry (or entries) on the LDAP version 3 Corporate Database Server with a DN but no unique ID and the DN does not reside on the Meridian SL-100, the Meridian SL-100 ignores that entry.

- This feature provides components of the LDAP protocol to allow the Meridian SL-100 to synchronize with an LDAP version 3 server. However, the Meridian SL-100 is not fully LDAP version 3 compliant.
- Synchronization can occur with only one LDAP version 3 server at a time.
- The USERNAME and PASSWORD (through LDAPCI), BASEDN and DIGDEL fields (in Table LDAPTAB) should be populated within single quotes so that the Meridian SL-100 does not convert these fields to upper case characters.
- In Table LDAPTAB, blank characters are not accepted in the USERNAME and BASEDN fields. PIPES (|) should be entered for any blank characters needed. The Synching client will convert these to blanks.

192 Call Centers and Computer Telephony Integration (CTI)

- In Table LDAPTAB, the number of digits to be synchronized with the LDAP version 3 Corporate Database Server must be specified. In LDAPTAB, there is a provision to enter the Electronic Switched Network (ESN) mappings. However, the ESN cannot be synchronized with the LDAP version 3 authoritative database.
- During each synching session, a maximum of 1,000 DN changes in Table DNATTRS are queued for synching. All of the tuple deletions in Table DNATTRS are queued for synchronization. However, the queue can only take a maximum of 1,000 per synching session. It is recommended that when more than 1,000 DN changes in DNATTRS are needed that the synching session be run after each 1,000 DN changes are entered. The frequency of the synching sessions can be datafilled in the field FREQSYNC of the new Table LDAPTAB.

LDAP Synching features and benefits

LDAP Synching includes the following features and benefits:

- Reduces your costs and manpower requirements to update your corporate LDAP databases with telephone number changes.
- Updates the Meridian SL-100 system with name and/or unique identifier changes made in the corporate LDAP database.

LDAP Synching document references

Table 105 lists documentation references for LDAP Synching.

Table 105
LDAP Synching document references

Document title	Document number
<i>Meridian SL-100/Communication Server 2100 Product Guide</i>	555-4001-806



Custom Local Area Signaling (CLASS)

Introduction

Nortel Networks offers a substantial suite of Custom Local Area Signaling Services (CLASS) features for the Meridian SL-100/Communication Server 2100.

Note: For SE07, some CLASS features do not yet work with the Communication Server 2100.

CLASS feature availability depends on the Meridian SL-100/Communication Server 2100 Product Computing-Module Load (PCL) of the customer. Therefore, not all CLASS feature enhancements may be available to all customers.

This chapter contains the following information about the Nortel Networks CLASS features available for the Meridian SL-100/Communication Server 2100:

- [“Overview of CLASS features” on page 194](#)
- [“CLASS features over CSS7” on page 195](#)
- [“CLASS Features over PRI” on page 197](#)
- [“Limitations and restrictions for PRI variants NTNA and NI-2” on page 209](#)
- [“CLASS hardware requirements” on page 210](#)
- [“Implementing CLASS” on page 213](#)

Overview of CLASS features

The Meridian SL-100/Communication Server 2100 offers the following CLASS features:

- Network CLASS with Common Channel System 7 (CCS7) trunks to the network.
- CLASS features over Primary Rate Interface (PRI) using PRI trunks with either
 - the Nortel Networks North America (NTNA) variant, or
 - the National Integrated Services Digital Network-2 (NI-2) variant.

With the PRI NTNA variant, the Meridian SL-100/Communication Server 2100 must be connected to a DMS-100 central office.

With PRI NI-2 variant, CLASS features over PRI are supported if the Meridian SL-100/Communication Server 2100 is connected to a DMS-100 and/or a 5ESS central office switch.

Benefits of CLASS features

CLASS features have the following benefits:

- CLASS features offer enhanced capabilities that provide users with greater privacy, security, and the flexibility to better manage their incoming and outgoing telephone calls.
- CLASS features are already in customer homes, and users are familiar with their features and benefits.
- Providing CLASS features to business increases user satisfaction and productivity, and requires little or no training for the end users. It also provides revenue opportunities for many business environments.

CLASS features over CSS7

Table 106 explains the CLASS features delivered over CSS7 services.

Table 106
CLASS features over CSS7 (Sheet 1 of 3)

CLASS feature name	CLASS feature description
Customer Originated Trace Feature Key Access	<ul style="list-style-type: none"> Enhances the CLASS COT feature by allowing users to activate Call Tracing through a feature key on an MBS, M2000 or M3900 series telephone set. Provides Meridian SL-100/Communication Server 2100 users with the capability to initiate a query on the last call terminated (which may be the active call) by a feature key access method. This activity also permits an ACD agent to initiate the query on the last call terminated, which may be the call on which the ACD agent is active. Overcomes the limitation of dialing the feature access code for COT activation from an MBS or IVD set. It allows the query on an incoming/active call when the call is in stable state (that is, talking state, for users and ACD agents). Upon activation of COT from the called party, the Calling party will be put on hold. Upon completion of COT tone/announcement to the calling party, which in this case is COT requesting party, connection between the calling party and the calling party will be restored if both parties are still in the call. For calls extended by the Attendant Console, the calling number may not be available. For ACD Agents, COT Feature Key Access cannot be activated against a call in the call-waiting queue. However, it can be activated using the COT access code.
Single USOC for DSCWID and CFDA	<ul style="list-style-type: none"> Changes option DSCWID of subfield FEATNAME of field FEATDATA in Table RESOFC to include a new option CFDCHECK. However, if the option CFDCHECK is set to N, any type of DSCWID and any type of default treatment is assigned to the line, regardless of the line having the CFDA/CFD option. The customer is responsible for ensuring that scripts based on whether the line has the CFDA/CFD are downloaded. <p>Note: When DSCWID is assigned to a line in SERVORD, a validation is made to determine if Call Forward Don't Answer is assigned to the line. If CFDA/CFD is not assigned to the line, none of the SCWID types, except proprietary, can be assigned. Also, lines cannot have default treatment specified as FWD (forward) in case CFDA/CFD is not present.</p>

196 Custom Local Area Signaling (CLASS)

Table 106
CLASS features over CSS7 (Sheet 2 of 3)

CLASS feature name	CLASS feature description
RES CNAMD INTERWORK (TCAPNM) Local Lookup	<ul style="list-style-type: none"> • By using the TCAPNM suboption, names can be locally datafilled in order to avoid performing TCAP name queries. This capability allows Meridian SL-100/Communication Server 2100 customers to avoid sending a TCAP name query through a Service Transfer Point (STP) to the TCAP name database located at a Service Control Point (SCP). • By setting the TCAPNM suboption to LOCAL, calling party Directory Numbers (DNs) that have an entry in the local Meridian SL-100 name database or the Party Info Parm (PIP) parameter of the Initial Address Message (IAM) will use the local lookup feature to obtain the name from that local Meridian SL-100 database. • RES CNAMD INTERWORK (TCAPNM) Local Lookup has the following limitations and restrictions: <ul style="list-style-type: none"> — Administrative requirement to maintain two name databases, TCAP name database and local Meridian SL-100/Communication Server 2100 database. — Local database consists of entries in Meridian SL-100/Communication Server 2100 table and names pass via the Party Info Parm (PIP) in the Initial Address Message (IAM). Names in the local Meridian SL-100/Communication Server 2100 table have precedence. — SUPPRESS NAME line option of a line-to-line call will affect the local name lookup privacy status, unlike the TCAP name since the TCAP name privacy is stored at the SCP. — TCAP name privacy status located at the SCP will not be used to determine local name lookup privacy. — The TCAP name local lookup feature applies to all agents that are compatible with the TCAP name framework (that is, CLASS RES and IBN, MDC M5000, and ISDN).
QCUST Command Enhancements	<ul style="list-style-type: none"> • When performing the CI command QCUST after a CKLN, a record 12 is output. The record 12 indicates that the old LEN is now unassigned. The QCUST retrieves all the line data within all the customer groups. • When QCUST was originally designed, RESFEAT was not included in the tables to traverse. With this feature enhancement, Table RESFEAT will also be transversed in order for the features such as ADSI, CNAMD, CND, DDN, DRCW, SCA, SCF and SCRJ to be displayed for a customer group.

Table 106
CLASS features over CSS7 (Sheet 3 of 3)

CLASS feature name	CLASS feature description
ACB, AR, and ACRJ on IVD M2000/M3900 Series Sets	<ul style="list-style-type: none"> • Automatic Callback (ACB), Automatic Recall (AR), and Anonymous Caller Rejection (ACRJ) features are available on the Intelligent Peripheral Equipment (IPE) for the Meridian Digital M2000 series terminals beginning with Release MSL10 and for the M3900 series terminals beginning with software Release MSL11. • ACB enables Meridian Digital users to enter a feature code that will automatically set up a call to the last Directory Number that was dialed, regardless of whether the call was answered, unanswered or busy. • AR enables Meridian Digital users to enter a feature code that will automatically set up a call to the Directory Number of the last incoming call. If the DN called is busy, the user is notified and instructed by an announcement/display. Automatic processing of the call continues until both lines are idle. • ACRJ allows Meridian Digital users to reject calls for calling name and number display information that has been intentionally blocked. The only calls that are rejected are calls that have had information blocked.
RES SLE/ACBAR TCAP Query Disable	<ul style="list-style-type: none"> • This feature provides the option to disable TCAP query functionality that is currently used by the ACB, AR and SLE features. The SLE features include SCRJ, SCA, SCF and DRCW. Disabling TCAP query for these features will allow networks without full TCAP connectivity the ability to provide limited versions of these features. Each feature will have an option to independently disable the TCAP query. <p>Note: Note that when TCAP is disabled, SLE numbers that are user programmed cannot be validated.</p>

CLASS Features over PRI

CLASS Features over PRI (NTNA and NI-2 Variants) provides CLASS features using PRI trunks for customers who do not have CCS7 trunking to the network. From Meridian SL-100 Release MSL10 or higher, customers can implement CLASS network-type services using PRI connectivity to the public network. The following CLASS features can be implemented across PRI trunks using either the NTNA variant to a DMS-100 central office, or the NI-2 variant to a DMS-100 and/or 5ESS central office.

198 Custom Local Area Signaling (CLASS)

CLASS features over PRI with the NI-2 variant only

Table 107 explains CLASS features over PRI that are available only with the NI-2 Variant.

Table 107
CLASS features over PRI with NI-2 variant only

CLASS feature name	CLASS feature description
Anonymous Caller Rejection (ACRJ)	<p>Allows subscribers with or without CLASS Calling Number Display and Calling Name Display to reject calls for which calling name and number display information has been intentionally blocked. Only calls for which the information has been blocked are rejected.</p> <p>Note: ACRJ is only available with the NI-2 variant. For a call to be anonymous, it must be blocked in both name and number.</p>

CLASS features over PRI with the NI-2 variant and NTNA variant

Table 108 explains CLASS features over PRI available with the NI-2 and NTNA Variant.

Table 108
CLASS features over PRI with the NI-2 and NTNA variant (Sheet 1 of 3)

CLASS feature name	CLASS feature description
Automatic Recall (AR)	<ul style="list-style-type: none">• Enables a user to enter a feature code that will automatically set up a call to the Directory Number of the last incoming call.• CLASS feature Automatic Recall has the following limitations and restrictions:<ul style="list-style-type: none">— Automatic Recall will not monitor the set state and continue to try to place a call to the last incoming Directory Number. In order for AR to work over PRI, it is required that the SLE/ACBAR NOTCAP SOC option must be enabled in the Meridian SL-100 (set to "ON"). In addition, in Table RESOFC, the TCAP Query Enable must be set to "N" (No).— A user can automatically reoriginate a call to the last incoming DN by entering the activation code. If the two-level feature activation is provided, the user will hear an automatic recording announcing the DN of the last incoming call. However, with a CCS7 network, if the DN is busy, the user is notified and instructed by an announcement, and automatic processing of the call continues until both DNs are idle. With a PRI network, automatic processing of the call is not supported. <p>Note: Because of the differences in how this feature operates when using PRI trunking vs. CCS7, customers may wish to rename this feature to their user base to avoid confusion with the feature operation in the public network.</p>

Table 108
CLASS features over PRI with the NI-2 and NTNA variant (Sheet 2 of 3)

CLASS feature name	CLASS feature description
Auto Recall Blocking of Private Calls (CABOP)	<ul style="list-style-type: none"> • Provides functionality to prevent the disclosure of a “private” Directory Number upon activation of Automatic Recall. Without this feature, when AR is activated to a long distance number that is a private number, the telephone number may appear on the billing record. • There are three office-wide options for a RES line and two office-wide options for IBN and M5000 set lines. <ul style="list-style-type: none"> — RES Line Options are described below: <ul style="list-style-type: none"> – All Automatic Recall activated calls to private numbers are blocked. – Only long-distance Automatic Recall activated calls to private numbers are blocked. – No Automatic Recall activated calls to private numbers are blocked. — IBN and M5000 set Line Options are described below: <ul style="list-style-type: none"> – All Automatic Recall activated calls to private numbers are blocked. – No Automatic Recall activated calls to private numbers are blocked.
Call Waiting Deluxe (DSCWID)	<ul style="list-style-type: none"> • Enhances Call Waiting Display by allowing the user options on how to handle an incoming second call. The calling party is provided audible ringing, and the DSCWID called party is alerted that a call is “waiting”. • The called party can choose one of several options for the incoming call: <ul style="list-style-type: none"> — Answer the new call and put the existing call on hold — Disconnect the existing call and answer the new call — Forward the new call — Connect the new call to a busy announcement — Put the new call on hold after connecting to a hold announcement — Conference the new call with the existing call <p>Note: This feature requires an ADSI-compliant telephone or display device.</p>
Calling Name Delivery (CNAMD)	<ul style="list-style-type: none"> • Displays the name associated with the incoming DN party after the first ringing cycle. The date and time of an incoming call are also displayed. • Requires a telephone set or an adjunct to the phone capable of displaying an alphanumeric set of characters.
Calling Name/Number Delivery (CNND)	<ul style="list-style-type: none"> • Allows the user to have their name and number delivered on a per-call basis to a called party. If the user’s line or customer group, or the Meridian SL-100/Communication Server 2100, is configured to suppress the calling name and number, then dialing the access code for this feature will send the calling party’s name and number for that call.

200 Custom Local Area Signaling (CLASS)

Table 108
CLASS features over PRI with the NI-2 and NTNA variant (Sheet 3 of 3)

CLASS feature name	CLASS feature description
Calling Number Delivery (CND)	<ul style="list-style-type: none">Identifies the 10-digit DN of the calling party. The calling number is displayed on a telephone set or adjunct that is capable of displaying the incoming DN – after the first ringing cycle. Date and time of the incoming call are also displayed.
Restrictions and limitations for CLASS features CNAMD, CND, and CNND	
<ul style="list-style-type: none">For NTNA, Calling Name Delivery (CNAMD), Calling Number Delivery (CND), and Calling Name/Number Delivery (CNND), Table NETNAMES must be datafilled as follows: PUBLIC 010 (NMDSP SETUP) \$ in order for all calling name and number delivery and blocking features to function correctly.The DMS-100 central office from which the Meridian SL-100/Communication Server 2100 PRI trunks are provided should have Table ISDNPARM and Table TRKSGRP datafilled.If the Central Office has CCS7 and uses TCAP then the name cannot be delivered to the Meridian SL-100 using NTNA. The Meridian SL-100 cannot initiate a query to the DMS-100 with NTNA.	

Restrictions and limitations for CLASS features CNAMD, CND, and CNND

CLASS features CNAMD, CND, and CNND have the following limitations and restrictions:

- For NTNA, Calling Name Delivery (CNAMD), Calling Number Delivery (CND), and Calling Name/Number Delivery (CNND), Table NETNAMES must be datafilled as follows: PUBLIC 010 (NMDSP SETUP) \$ in order for all calling name and number delivery and blocking features to function correctly.

Note: For features that are dependent upon Name Display with NTNA, if the name is not delivered to the Meridian SL-100/Communication Server 2100, the feature will not display the name.

- For NI-2, Calling Name Delivery (CNAMD), Calling Name/Number Delivery (CNND) and Calling Number Delivery (CND) the following dataflow is required:

TAB LTDATA – entry required for both USER and NETWORK side trunk as follows:

```
ISDN <LTID> SERV SERV Y Y ALWAYS TCAP_CNAM N $
TAB CUSTNTWK
<cust_grp_for_network> PUBLIC 2 $CLID OFFNET
TCAPNM LOCAL $<cust_grp_for_user> PUBLIC 2 $CLID
OFFNET TCAPNM LOCAL $
TAB NETNAMES
PUBLIC 0 0 NMDSP SETUP $
```

TAB ISDNPARAM – The following entry maps to the PARMNAME field in Table TRKSGRP for NI2 trunk:

```
TEST SETUP BOTH MAP DIE MAP $
```

- In addition, the DMS-100 central office that contains the Meridian SL-100/Communication Server 2100 PRI trunks must have certain parameters and options set up for the NI-2 PRI name that is sent to the Meridian SL-100/Communication Server 2100:
 - 1) Determine the name of the NI-2 PRI trunk group on the DMS-100 that is to hook to the Meridian SL-100.
 - 2) Go to Table LTMAP and find the LTERM_INDEX (LTKEY) associated with the desired NI-2 PRI trunk group.
 - 3) Go to Table LTDATA and position on that same LTKEY with “SERV” as the third part of the key. Ensure that the TCAP_CNAM option is specified and that “N” is chosen for the CNAM_SUSP portion of that option.
 - 4) Go to Table OFCENG and position on IAM_USE_NAME_CHARS. Ensure this is set to “Y”.
 - 5) Go to Table TRKSGRP and position on the trunk subgroup associated with this NI-2 PRI trunk. Locate the “PARMNAME” field of that tuple – it is the last field before the PM type is specified.
 - 6) Using the information from “PARMNAME”, go to Table ISDNPARAM. Locate a tuple with the key “<Parmname>” SETUP, <both, in, out>. Ensure that DFLTACT is set to MAP.

202 Custom Local Area Signaling (CLASS)

Calling No. Delivery Blocking (CNDB)

CLASS feature Calling No. Delivery Blocking (CNDB) is described below:

- This feature allows users to prevent Calling Number Delivery on a per-call basis by dialing an access code. Individual lines can be set up either to send or suppress calling number information. When the line is set up to send calling number information, dialing the access code suppresses the calling number information for that call. If the line is set up to suppress calling number information, dialing the access code sends the calling number information for that call.
- CLASS No. Delivery Blocking (CNDB) has the following limitations and restrictions:
 - With NTNA, the privacy indication requested by the CLASS CNDB service must be correctly mapped into the outgoing PRI SETUP message from the Meridian SL- 100/Communication Server 2100.

Calling No./Name Delivery Blocking (CNNB)

CLASS feature Calling No./ Name Delivery Blocking (CNNB) is described below:

- This feature allows users to control the display of their DN or their name and number at a terminating station on a per call basis. CNNB is activated by dialing an access code and it is available to users whether their telephone has Calling Name Delivery or Calling Number Delivery assigned.
- CLASS No./Name Delivery Blocking (CNNB) has the following limitations and restrictions:
 - For NTNA, “Unknown Name” may be displayed, instead of “Private Name.” The message “Private Number” may be displayed, depending upon the set and trunk type. Although the privacy flag is only sent across the network for the number, the name is not displayed to the terminating party. The originating switch blocked the name from being sent.

CALLOG

CLASS feature CALLOG is described below:

- Call Logging provides a log entry for the unanswered, busy and forwarded calls of a user - even if the caller does not leave a message. Each log will provide the following information:
 - Calling party Directory Number and name (if available)
 - Time and date
 - Number of times that the calling party called
 - Status of the called party's line when the call was logged
 - Current status (new or old entry)

Note: This feature requires an ADSI-compliant telephone or display device.

- CALLOG has the following limitations and restrictions:
 - For NTNA and NI-2, it will not initiate Automatic Recall (AR) on a softkey.

CLASS on IPE

CLASS feature CLASS on IPE is described below:

- This feature provides support for CLASS functionality to CLASS or 2500-type sets designed to work with CLASS features. Many of the non-display features worked prior to this feature.
- CLASS Display features require the NT8D09AL or lower line cards.
- This feature provides the capability to display the incoming Calling Line Identification and calling party's name on CLASS, ADSI and 2500-type sets with display adjuncts that are datafilled on the IPE.
- This feature ensures that display messages for CNDB, CNAB and CNNB are provided per CLASS feature descriptions and that CLASS feature Message Waiting Indication functions properly on the IPE.
- The following CLASS features are supported on the IPE and over PRI trunks:
 - Anonymous Caller Rejection (ACRJ)
 - Automatic Recall (AR)
 - Auto Recall Blocking of Private Calls (CABOP)
 - Calling Name Delivery (CNAMD)
 - Calling Name/Number Delivery Blocking (CNNB)

204 Custom Local Area Signaling (CLASS)

- Calling Number Delivery (CND)
- Calling Number Delivery Blocking (CNDB)
- Callog
- CLASS Message Waiting Indication (CMWI)
- Customer Originated Trace (COT)
- Dialable Number Delivery (DDN)
- Selective Call Acceptance (SCA)
- Selective Call Forwarding (SCF)
- Selective Call Rejection (SCRJ)
- Spontaneous Call Waiting Identification (SCWID)
- Spontaneous Call Waiting Identification with Disposition (DSCWID)

CLASS Per Use SMDR Billing

CLASS feature CLASS Per Use SMDR Billing is described below:

- This feature provides the capability to charge end users a fee based on usage as opposed to a flat monthly rate.
- This feature has the ability to generate an SMDR extension record based on usage sensitivity upon successful completion of Customer Originated Trace (COT), Calling Number Delivery Blocking (CNDB), Automatic Recall (AR), Calling Number Delivery (CND), Selective Call Acceptance (SCA), Selective Call Forwarding (SCF), Selective Call Rejection (SCRJ), Distinctive Ringing/Call Waiting (DRCW), Calling Name Delivery (CNAMD), Dialable Number Delivery (DDN), Deluxe Spontaneous Call Waiting Display (DSCWID) and Bulk Calling Line Identification (BCLID) features.
- Optionality for the generation of the billing record after successful completion of a CLASS features.
- When a DF09 SMDR record is generated, there is the generation of a corresponding Meridian SL-100/Communication Server 2100 log.
- CLASS Per Use SMDR Billing has the following limitations and restrictions:
 - Some logs/records may not generate due to restrictions/limitations defined for the specific features. As an example, CLASS Feature Code 0066 AR timeout: A log/record generates when the feature is activated, but not completed (timed out) because the originator or terminator was off-hook. Since AR does not monitor the set and continue to try to place the call, this type of record would not be applicable.

CLASS Message Waiting Indicator (CMWI)

CLASS feature CLASS Message Waiting Indicator (CMWI) is described below:

- This feature provides a visual indication at the user's station that messages are waiting and offers several message waiting options:
 - With display sets or adjuncts, message waiting indicator on the display with date and time that the messages were left (if the voicemail system provides this function)
 - Lights a visual indicator lamp
 - Audible indication (intermittent dial tone)
 - Combination of audible and visual
- CLASS Message Waiting Indicator (CMWI) has the following limitations and restrictions:
 - With NI-2, Network Message Waiting cannot be used with NI-2 to display message waiting notification (light the message waiting lamp).

COT and SCF on IVD Sets

CLASS feature COT and SCF on IVD Sets is described below:

- This feature provides the capability for CLASS features, Customer Originated Trace (COT) and Selective Call Forwarding (SCF) on the IPE for M2000 and M3900 type sets (Integrated Voice and Data Sets). This capability is available for M2000 sets beginning with software release MSL10, and for M3900 sets beginning with software release MSL11.
- This feature provides the ability for users with the following IVD sets to activate COT and SCF:
 - M2616, M2008, M2008HF, M2006, M2216ACD and M2317
 - M3901, M3902, M3903, M3904 and M3905

Customer Originated Trace (COT)

CLASS feature Customer Originated Trace (COT) is described below:

- This feature allows users to activate an immediate trace of the last incoming call, without requiring prior approval and manual intervention by switch personnel.
- COT is activated on a per-call basis and the service is deactivated when the user goes on-hook.

206 Custom Local Area Signaling (CLASS)

- Two-level feature activation is available, which provides recorded announcements that inform the subscriber of the state of the COT.
- The Meridian SL-100/Communication Server 2100 prompts the user for a decision to proceed or not to proceed with the trace.

Note: When the calling number is blocked, the number can be sent over the PRI trunk with a flag indicating that the number should not be displayed to the called party. If the called party initiates COT, the number can be traced. However, some telephone companies may not send the calling number to a PBX, if the calling party blocks it.

Dialable Number Delivery (DDN)

CLASS feature Dialable Number Delivery (DDN) is described below:

- This feature delivers the DN of the calling party after the first ringing cycle.
- The difference between Calling Number Delivery and Dialable Number Delivery is the CND delivers the 10-digit DN of the calling party; however, DDN only delivers the digits required for the called party to return the call. For example, if the incoming call is local, a 7-digit DN is displayed, if it is an intra-LATA toll, 1+7-digit number is displayed.
- The 10-digit telephone number is always sent across the network.
- DDN allows the Meridian SL-100/Communication Server 2100 to translate the number into a dialable number (that is, 7 digit vs. 10 digit).

Distinctive Ring/Call Waiting Tone (DRCW)

CLASS feature Distinctive Ring/Call Waiting Tone (DRCW) is described below:

- With this feature, incoming calls for up to 31 DNs can be automatically identified by distinctive ringing.
- If the user is engaged in conversation and a call from one of the designated DNs arrives, a distinctive call waiting tone accompanies the incoming call. Calls from other DNs ring normally.
- DRCW is accessed by dialing a service-specific access code.
- Modifications to the DRCW list can be made by using the keypad.
- Refer to [“Limitations and restrictions for PRI variants NTNA and NI-2” on page 209](#) for restrictions/limitations applicable to this feature.

RES SLE/ACBAR TCAP Query Disable

CLASS feature RES SLE/ACBAR TCAP Query Disable is described below:

- This feature should be activated in the Meridian SL-100 (set to “ON”).
- In Table RESOFC, the TCAP Query Enable must be set to “N” (No).

Selective Call Acceptance (SCA)

CLASS feature Selective Call Acceptance (SCA) is described below:

- This feature uses the Screening List Editing function to store up to 31 DNs from which a user wishes to receive calls.
- An incoming call from a DN that is not on the SCA list is routed to an announcement stating that the called party does not wish to receive the call.
- SCA is accessed by dialing an access code and modifications to the list are made with the telephone keypad.
- Refer to [“Limitations and restrictions for PRI variants NTNA and NI-2” on page 209](#) for restrictions/limitations applicable to this feature.

Selective Call Forward (SCF)

CLASS feature Selective Call Forward (SCF) is described below:

- This feature allows users to ensure that selected calls reach them when they are away from their telephone.
- Incoming calls for up to 31 DNs can be forwarded to another telephone.
- Calls from DNs that are not on the SCF list will receive whatever treatment the user has arranged (that is, voicemail, etc.).
- SCF is accessed by dialing an access code and entries can be changed using the keypad.
- Refer to [“Limitations and restrictions for PRI variants NTNA and NI-2” on page 209](#) for restrictions/limitations applicable to this feature.

Selective Call Rejection (SCRJ)

CLASS feature Selective Call Rejection (SCRJ) is described below:

- This feature allows the user to selectively program a list of up to 31 DNs from which calls are rejected or blocked.
- Incoming calls that are on the SCRJ list are routed to an announcement informing the caller that the called party does not wish to receive the call.
- It is accessed by dialing an access code and modifications to the list are made using the keypad.
- Refer to [“Limitations and restrictions for PRI variants NTNA and NI-2” on page 209](#) for restrictions/limitations applicable to this feature.

Spontaneous Call Waiting Display (SCWID)

CLASS feature Spontaneous Call Waiting Display (SCWID) is described below:

- This feature displays the name and/or number of a waiting call immediately upon the call's arrival at the called party's line, allowing the called party to decide whether to continue their call in progress or to answer the incoming call.
- ADSI-compliant display capability is required to receive and display the incoming call information.
- Spontaneous Call Waiting Display (SCWID) has the following limitations and restrictions:
 - With both NTNA and NI-2 when Tie trunks are used, the CWI (Call Waiting Intragroup) option should be assigned.
 - Name display is not currently supported with this feature. In a normal CCS7 central office configurations, the messaging using NI-2 to the telephone set on the Meridian SL-100/Communication Server 2100 does not fit the SCWID messaging. If the name were to be sent, it would require interrupting the speechpath again.

Visual Screen List Editing (VSLE)

CLASS feature Visual Screen List Editing (VSLE) is described below:

- This feature allows users of an ADSI-compliant telephone set to perform screen list editing of CLASS features SCF, SCA, SCRJ and DRCW using softkeys.
- Refer to [“Limitations and restrictions for PRI variants NTNA and NI-2” on page 209](#) for restrictions/limitations applicable to this feature.

Limitations and restrictions for PRI variants NTNA and NI-2

With the following SLE features, there are restrictions/limitations with both NTNA and NI-2. Announcements need to be set up for these features to provide appropriate treatment:

- Distinctive Ring/Call Waiting Tone (DRCW)
- Selective Call Acceptance (SCA)
- Selective Call Forward (SCF)
- Selective Call Rejection (SRFJ)

PRI variant NTNA limitations and restrictions

With NTNA, the following limitations and restrictions apply:

- If no SS7 Links are available to perform TCAP query of DN's off another switch, then the TCAP_QUERY_ENABLED field for each of the SLE features in Table RESOFC must be set to "N". The RES00073 SLE/ACBAR TCAP ON SOC option can be ON or IDLE.
- Without a TCAP query, a check cannot be done to ensure that the DN entered in the list is a valid number.

PRI variant NI-2 limitations and restrictions

With NI-2, the following limitations and restrictions apply:

- If no SS7 Links are available to perform TCAP query of DN's off another switch, then the TCAP_QUERY_ENABLED field for each of the SLE features in Table RESOFC must be set to "N". The RES00073 SLE/ACBAR TCAP ON SOC option can be ON or IDLE.
- The datafill in Table LTDATA (same as that required for CNND) is required to support incoming calls where the DN and Name are blocked.
- Without a TCAP query, a check cannot be done to ensure that the DN entered in the list is a valid number.

210 Custom Local Area Signaling (CLASS)

CLASS hardware requirements

Table 109 lists CLASS minimum hardware requirements. Refer to the “CLASS hardware notes” on page 212 for specific information about CLASS hardware.

Table 109
CLASS minimum hardware requirements

Feature	6X17 AC/BA	6X21 AC	6X51 AB/AC	6X69 AC	6X69 AD/QA	6X78 AB	1X80 AA/BA	6X92 BA/BC/EA
ACB	M	M	M	M	O	O	O	N/A
ACRJ	M	N/A	M	M	O	O	O	N/A
AR	M	M	M	M	O	O	O	N/A
CALLOG	M	N/A	M	N/A	M	O	O	M
CMWI	M	N/A	M	M	O	M	O	N/A
CNAMD	M	N/A	M	M	O	M	O	N/A
CND	M	N/A	M	M	O	M	O	N/A
CNDB	M	M	M	M	O	M	O	N/A
CNNB	M	M	M	M	O	M	O	N/A
COT	M	M	M	M	O	O	O	N/A
DDN	M	N/A	M	M	O	M	O	N/A
DRCW	M	M	M	M	O	O	M	N/A
DSCWID	M	N/A	M	N/A	M	O	O	M
SCA	M	M	M	M	O	O	M	N/A
SCF	M	M	M	M	O	O	M	N/A
SCRJ	M	M	M	M	O	O	M	N/A
SCWID	M	N/A	M	N/A	M	O	O	M
VSLE	M	N/A	M	N/A	M	O	O	M

Note: M = Mandatory O = Optional

CLASS feature and card definitions

Table 110 on page 211 defines CLASS features and cards that are listed in Table 109.

Table 110
Definitions of CLASS features and cards

CLASS feature definitions	CLASS card definitions
ACB = Automatic Callback	6X17AC/BA = Analog Line Card
ACRJ = Anonymous Caller Rejection	6X21AC = P. Phone (MBS) Line Card
AR = Automatic Recall	6X51AB/AC = LCM Processor
CALLOG = Call Logs	6X69AC = Message Protocol and Tone Circuit Pack
CMWI = CLASS Message Waiting Indication	6X69AD/QA = Message Protocol and Tone Circuit Pack
CNAMD = Calling Name Delivery	6X78AB = CLASS Modem Resource Card
CND = Calling Number Delivery	3X68AC = Distinctive Ringing/Call Waiting Circuit Pack
CNDB = Calling Number Blocking	1X80AA/BA = Enhanced Digital Recorded Announcement
CNNB = Calling Name/Number Blocking	6X92BB/BC/EA = Universal Tone Receiver
COT = Customer Originated Trace	
DDN = Dialable Number Delivery	
DRCW = Distinctive Ringing/Call Waiting	
DSCWID = Call Waiting Deluxe	
SCA = Selective Call Acceptance	
SCF = Selective Call Forwarding	
SCRJ = Selective Call Rejection	

212 Custom Local Area Signaling (CLASS)

CLASS hardware notes

The following notes refer to the CLASS hardware and features listed in [Table 109 on page 210](#).

Note 1: For XPM+, MSL03 and above is required. Universal Tone Receiver (UTR) circuit card (NT6X92BB/BC/EA) is required for Enhanced Display Services, such as VSLE, SCWID, DSCWID, and CALLOG.

Note 2: The NT2X17 Line cards in the older line module may work for other CLASS functions, but Calling Name and Number will not be displayed on sets. NT2X17 line cards are not supported for CLASS features.

Note 3: NT6X17AA/AB cards do not support CLASS Calling Name and Calling Number features.

Note 4: Early versions of the 6X21 may not deliver the message to the display immediately. The 6X21AC delivers immediately (MBS sets do not require CMR cards). The user cannot assign CND or CNAMD to a MBS set which uses a 6X21 line card, but a user can assign some of the SLE CLASS features to the MBS sets. In addition, Calling Name and Calling Number features cannot be assigned to MBS sets.

Note 5: CLASS features which can be assigned to MBS sets include the following: Automatic Recall (AR), Automatic Callback (ACB), Customer-Originated Trace (COT), Selective Call Acceptance (SCA), Selective Call Rejection (SCRJ), Selective Call Forwarding (SCF) and Distinctive Ringing/Call Waiting (DRCW).

Note 6: The ELCM/LCM must have 6X51AB and the larger 256K load to support Calling Number delivery. This load is required to support the Incoming and Outgoing Call Memory (ICM and OCM).

Note 7: If announcements are used, DRAMS or EDRAMS are required.

Note 8: If a site is installing an ESMA, a MX76CA circuit card is needed.

Implementing CLASS

The following information is important to consider when implementing CLASS:

- CLASS Features which use AMA versus SMDR are not currently supported in the Meridian SL-100 market (for example, Subscription Usage Sensitive Pricing/Billing).
- If EDRAM is implemented with CLASS Services, appropriate DRAM software and hardware are needed (other interdependencies may be applicable).
- The implementation of CLASS features requires careful planning from a user's perspective to consider the complicated hardware, software and memory provisioning implications, as well as the extensive impact to software translations. As a result, all proposals for CLASS services contain a minimum amount of Nortel Networks Hardware and Software Engineering labor.
- Interdependencies for ISDN and Datapath should be verified, if NI000008, NI0 NI-1 BRI with CLASS on ISDN, and/or DTP00002, DTP Datapath with Datapath Screen List Editing are implemented.
- Already present in the Meridian SL-100 system, MDC00001, MDC Minimum, and MDC 00003, MDC Standard are required interdependent features for CLASS.
- RES00027, Visual Message Waiting, requires the following interdependencies: MDC MDC00003, MDC Standard; MDC 00006, MDC MBG Std; and RES 00004, RES I/F Functionality.

Appendices





Appendix A: Safety and regulatory requirements

Introduction

This chapter describes the safety and regulatory requirements for Meridian SL-100/Communication Server 2100 PBX systems and accessories.

Safety and regulatory requirements

The Meridian SL-100/Communication Server 2100 system and accessories have been tested and met the following regulatory requirements:

- FCC Part 15 and Part 68.
- Industry of Canada CS-03 Issue 8 and ICES 003 Issue 3.
- All terminals used in Meridian SL-100 system are Hearing Aid Compatible (HAC).
- Effective January 1, 2000, all telephones (including cordless telephones) manufactured in the United States for domestic use, or imported for use in the U.S., must have volume control. Secure telephones, telephones used with public mobile services and telephones used in private radio services are exempted.
- Effective April 21, 1998, ISDN phones must have FCC Part 68 approvals.
- Effective August 28, 1998, all CPE equipment connecting to telephone networks must survive two types of surge tests.

218 Appendix A: Safety and regulatory requirements

The Meridian SL-100/Communication Server 2100 is capable of providing the following functions:

- User access to interstate and intrastate providers of operator services through the use of access codes conforming to the Telecommunications Act of 1996.
- Proper Answer Supervision conforming to FCC Part 68, Paragraph 68.314(h) of 1990.
- 15-Digit International Direct Distance Dialing (IDDD) conforming to ITU-T and Bellcore recommendations.



Appendix A: Functionality descriptions

Introduction

This chapter describes software features up to and including the SE07 Release that are common to the Meridian SL-100/Communication Server 2100. Optional features and hardware dependencies are indicated.

SE07 software functionality listing

Functionalities within the “TEL Telecom Layer func” are no longer broken out separately in this document. These are basic telecom functions and are contained within all loads. If specific functionality descriptions are required, refer to the *Meridian SL-100 Translations Guide* (555-4031-350).

Note: The *Application Planning Guide* is for planning purposes only and is not a comprehensive provisioning guide. Nortel Networks reserves the right to add, delete or change content without notice.

Table 111 shows an example of a functionality description as described in this chapter.

Table 111
Sample entry for functionality descriptions

Name, group code/name	Description
<ul style="list-style-type: none"> Name: RES Selective Call Rej. FG. RES00005 [OPT] FGN. RES Non-Display Services H/W Required: NT6X78AB 	<ul style="list-style-type: none"> This functionality allows the user to selectively program a list of up to 31 DNs from which calls are rejected or blocked. Incoming calls that are on the SCR list are routed to an announcement informing the caller that the called party does not wish to receive the call. It is accessed by dialing an access code and modifications to the list are made using the keypad.
<ul style="list-style-type: none"> LEGEND: Name = Functionality name FG = Functional Group Code [OPT] = Right-to-Use Required FGN = Functional Group Name H/W = Required Hardware 	

220 Appendix A: Functionality descriptions

**Table 112
SE07 Functionality listing (Sheet 1 of 87)**

Name, group code/name	Description
<ul style="list-style-type: none"> • ACD Agent Increase FG.ACD00001 [OPT] FGN.ACD ACD Base 	<p>This enhancement increases ACD datafill capacity as follows:</p> <ul style="list-style-type: none"> • The maximum number of ACD agents per group from 256 to 512. • The maximum total number of ACD agents from 5000 to 9999. <p>The actual number of ACD agent maximum configuration can vary from switch to switch, subject to engineered capacities and feature limitations.</p>
<ul style="list-style-type: none"> • ACD Basic FG.ACD00001 [OPT] FGN.ACD Base 	<p>This software provides basic agent supervisor capabilities for Meridian SL-100 Meridian Automatic Call Distribution (ACD).</p> <p>The following features (together) enable a supervisor to continuously monitor (visually) or observe (audio-monitor) individual ACD agent activities on both the agent's Primary Directory Number (ACD calls) and one Designated Secondary Directory Number (DSDN):</p> <ul style="list-style-type: none"> • ACD Observe – Agent Enhanced • ACD Status – Lamp Enhancement • ACD – Limited Enhanced Agent <p>Call monitoring and call observe work together to allow a supervisor to both monitor and observe agent activity as an agent moves from call to call (a supervisor's set with display is needed for full functionality).</p> <p>Some other features provided by this functionality are as follows:</p> <ul style="list-style-type: none"> • ACD Observe – Agent/Three Way Calling • Agent – Status Lamp • Automatic Call Distribution Show • Call – Agent Key • Display Queue – Status Key • Observe – Agent Key
<ul style="list-style-type: none"> • ACD CompuCALL Agent Desktop Functionality FG.ACD00019 FGN.ACD CompuCALL 	<p>This feature enhances the existing CompuCALL capabilities to provide basic ACD agent desktop functionality on Meridian Business Sets. Specifically, the feature provides the following benefits:</p> <ul style="list-style-type: none"> • Three-way call or Call Transfer events and lamp synchronization. • CC MIS (Call Center Management Information System) notification for calls originated, terminated and released from secondary DNS, using CompuCALL Call Control messages.

Table 112
SE07 Functionality listing (Sheet 2 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • ACD CompuCall Base FG. ACD00002 [OPT] FGN.ACD Compu-CALL Base H/W: NT1X89BB 	<p>This software supports a variety of applications requiring switch-to-host communications. Together, the features in this functionality provide base support for Meridian COMPUCALL services, such as</p> <ul style="list-style-type: none"> • interface to initial message transport medium (X.25). • common data structure and datafill for all Meridian COMPUCALL applications. • capability to use multiple links in a Meridian COMPUCALL session. • support for multiple application sessions over a single Meridian COMPUCALL link. • application level flow control. • mechanisms for recovery by redundant or additional links.
<ul style="list-style-type: none"> • ACD Compucall-FUNC FG. ACD00002 [OPT] FGN.ACD Compu-CALL Base H/W: NT1X89BB 	<ul style="list-style-type: none"> • This Meridian CompuCALL software provides concurrent delivery of a voice call and data from the customer's business computer to an ACD agent.
<ul style="list-style-type: none"> • ACD Compucall Functionality FG. ACD00002 [OPT] FGN.ACD Compu-CALL Base H/W: NT1X89BB 	<ul style="list-style-type: none"> • This functionality provides for greater interworking between Meridian SL-100 ACD call processing functions (for example, consultation/transfer and conferencing) and voice processing units (for example, Interactive Voice Response {IVR} systems, Voice Response Units {VRU's}, etc.) thus allowing increased call processing efficiency. For instance, Voice Processing Integration uses IVR systems and VRUs to obtain additional information about callers and direct them to the appropriate agent. • In addition, an IVR system can request the transfer of a call from the IVR system to an ACD Directory Number using SCAI messaging on the SCAI link. The call is then transferred instantaneously, eliminating the dead space normally heard during a manual transfer.
<ul style="list-style-type: none"> • ACD CompuCALL RSBBscr FG. ACD00014 FGN.ACD CompuCALL 	<ul style="list-style-type: none"> • This feature provides basic web-based telephony functions available with the Nortel Networks Web Call Manager, including the delivery of Calling Name using TCAP query. In addition, the feature introduces the ability to control the delivery of Caller Name, number or both using a TCAP query.
<ul style="list-style-type: none"> • ACD CompuCALL SCallCtrl FG. ACD0002 [OPT] FGN.ACD CompuCALL 	<p>This features enhances the existing CompuCALL interface by allowing the following new CompuCALL host application-initiated capabilities:</p> <ul style="list-style-type: none"> • Answer – allows the host computer application, on behalf of the users, to answer an incoming call. • Release – allows the host computer application, on behalf of the user, to release the current call. • Hold – during an active call, this feature allows the host computer application to place the call on hold. • Unhold – with a call on hold, this feature allows the host computer to return the call to active status.

222 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 3 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • ACD CP Control FG.ACD00001 [OPT] FGN.ACD Base 	<ul style="list-style-type: none"> • This software provides basic ACD system and station features. Modifications to IBN tables are included to denote Electronic Business Sets as ACD agent/supervisor sets.
<ul style="list-style-type: none"> • ACD Ctrx Coord V&Dta FG.ACD00002 [OPT] FGN.ACD Compu-CALL Base 	<ul style="list-style-type: none"> • This functionality provides messaging for Meridian SL-100 lines to support deliver of data screen with the voice call to non ACD agents.
<ul style="list-style-type: none"> • ACD ACD Group Increase FG.ACD00001 [OPT] FGN.ACD Base 	<ul style="list-style-type: none"> • This feature expands the maximum number of ACD groups from 256 to 1024.
<ul style="list-style-type: none"> • ACD Enhanced FG.ACD00001 [OPT] FGN.ACD Base 	<ul style="list-style-type: none"> • ACD Station Maintenance and Configuration Enhancements provides several enhancements for ACD stations. Some enhancements are: Optional "Not Ready" capability, ACD Station Ringer Test and Emergency Key back-up tracking. ACD Agent Stability During Switch Maintenance allows agents to maintain their logged-in status and to continue to receive calls after switch events. • This software also makes PIN Number Origination and Class of Service available. PIN Number Origination provides configuration flexibility over the current PIN methodology. PIN partitions are introduced that allow duplicate PINs to exist within different partitions. This allows users to select any subset of possible PIN numbers they wish to use. • This functionality also enhances the current agent-observation capabilities by providing the ability to automatically observe selected call types in order to gauge the service level provided by the call center. • Additionally, this software allows the user to predefine the layout of Automatic Call Distribution (ACD) feature keys for business sets.
<ul style="list-style-type: none"> • ACD Load Mgmt. FG.ACD00001 [OPT] FGN.ACD ACD BASE 	<ul style="list-style-type: none"> • This functionality allows senior supervisors to manipulate the configuration of Meridian ACD groups to optimize the handling of current ACD call traffic.
<ul style="list-style-type: none"> • ACD MIS FG.ACD00001 [OPT] FGN.ACD ACD Base 	<ul style="list-style-type: none"> • The Automatic Call Distribution Management Information System (ACDMIS) provides the Down Stream Processor with the ability to request and assemble ACD information from the Meridian SL-100. This information can then be used for historical reports and real-time statistics. This software also counts the number and records the time of occurrence of calls redirected to Night Service and calls that reach Threshold Route after not finding an available Overflow Route, thus enhancing the MIS with additional data. • This software also allows the Meridian ACD Load Management and ACDSHOW capabilities to be implemented from a supervisor terminal linked to the downstream processor.

Table 112
SE07 Functionality listing (Sheet 4 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • ACD Network ACD on PRI FG.ACD00004 [OPT] FGN.ACD Networking 	<ul style="list-style-type: none"> • This software offers optional functionality that extends the reach and range of ACD base, enhanced and optional software to very large and/or multi node call centers.
<ul style="list-style-type: none"> • ACD Network ACD on SS7 FG.ACD00004 [OPT] FGN.ACD Networking 	<ul style="list-style-type: none"> • This software offers optional functionality that extends the reach and range of ACD base, enhanced and optional software to very large and/or multi node call centers.
<ul style="list-style-type: none"> • ACD on 2500 Sets FG.ACD00001 [OPT] FGN.ACD ACD Base 	<ul style="list-style-type: none"> • This functionality provides system/station software and features required to support Automatic Call Distribution (ACD) on 2500 sets, as well as the capability for a 500/2500 set to be designated as an ACD supervisor position and allows the user of such a set to use the ACD Observe Agent feature.
<ul style="list-style-type: none"> • ACD Routing Enh FG.ACD00001 [OPT] FGN.ACD ACD Base 	<ul style="list-style-type: none"> • Currently, when a call to an ACD group in Night Service or Overflow is rerouted to another ACD group in Night Service or Overflow, the call terminates to a busy tone, instead of continuing to reroute. This feature provides up to three reroutes.
<ul style="list-style-type: none"> • ACD Supergroup FG.ACD00004 [OPT] FGN.ACD Networking 	<ul style="list-style-type: none"> • This functionality introduces the capability to network ACD groups locally within the Meridian SL-100 or across a network of Meridian SL-100 switches. Networked ACD provides the capability for each NACD group to broadcast status information about its own ACD load traffic and store ACD load status information about the rest of the network. This package also provides Priority and Time Based Overflow Queues, Algorithm Implementation, RLM Enhancements and MIS Enhancements.
<ul style="list-style-type: none"> • AFG Add Option FG.MDC00014 FGN.MDC Tailored MDC3 	<ul style="list-style-type: none"> • Access Feature Group (AFG) Add Option is included in the Service Order Simplification Feature Group. This feature increases the flexibility of AFG and allows the administrator to customize the AFG by adding features to or taking them away from a specific line using simple SERVORD commands. This feature currently supports MBS sets only. Development is planned in MSL06 to support IVD terminals. <p>Quick conference key feature which reduces the number of keystrokes required to transfer an incoming call. Provides Public Service Access Point (PSAP) agent capability to transfer a call by activation of a single predefined feature key on an MBS or IVD set. Assignment of feature is not limited to E911 agents.</p>

224 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 5 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> AFG Add Option FG.MDC00014 FGN.MDC Tailored MDC 3 	<ul style="list-style-type: none"> This functionality provides enhancements to the Access Feature Group feature. The new capabilities include the following: (1) additional line options supported by feature groups, (2) feature group support for business set options requiring assignment of dedicated key is provided, partitioning of various applications with power features (PF) option is provided, and access to feature group definition tables provided for CDC users using Partitioned Table Editor. <p>This feature supports MBS and IVD sets, except for Power Feature options on IVD Terminals.</p>
<ul style="list-style-type: none"> BAS Bellcore CAMA Format FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> This software enables Automatic Message Accounting (AMA) records to be produced in a format which is compatible with Bell specifications. In addition, a variety of recording options are provided to meet Bell requirements.
<ul style="list-style-type: none"> BAS Bellcore LAMA Format FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> This software formats the Automatic Message Accounting data of the Meridian SL-100 to the Bell LAMA format and provides a variety of recording options required by Bell. It also provides new AMA record types (call codes) for Conference Trunk Usage and Call Forwarding Activation/Continuation/Deactivation. An enhancement to the existing record types is provided by adding a service feature field. This software was enhanced in BCS 28 and 29 by adding VFG AMA support for FX and ETS calls, by adding AMA test call capability to designate an originating or terminating line as an Automatic Message Accounting test call line, by adding a new line option that allows an originating or terminating line (IBN or POTS) to be designated as an Automatic Message Accounting test call line and by adding AMA test call enhancements that enable the AMATEST option to be used on business sets, data units and selected trunk group types.
<ul style="list-style-type: none"> BAS Business Lines FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> This functionality provides additional data regarding INWATS lines by pegging. It also allows access to 800-service (INWATS) lines from local lines, local incoming trunks and local test trunks. In addition this feature provides: the ability for Meridian SL-100 users to receive telephone calls which have been placed without charge to the originating party from within specified areas, full and measured time services, an enhancement to the Outward Wide Area Telephone Service (OUTWATS) by increasing the number of geographical zones that can be defined, OUTWATS screening to be done on the first six digits of the called number as opposed to only the NPA's three digits and the option to accommodate both INWATS and OUTWATS on the same line.

Table 112
SE07 Functionality listing (Sheet 6 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • BAS CAMA FG. BAS00003 FGN. BAS Generic 	<p>CAMA includes administration and Number Identification Charging features. Administration features include the following options:</p> <ul style="list-style-type: none"> • AMA Failure Routing Options • “Blue Box” Fraud Prevention • Flexible Long Duration Call Reporting • Route Transfer RONI/CAMA Positions <p>Number Identification Charging includes the following options:</p> <ul style="list-style-type: none"> • AMA Record of Tandem Switch Seizure-only Calls • AMA Single Entry Format • Automatic Rotation of Storage Device • BCD Recording • CAMA Supervision, including: <ul style="list-style-type: none"> —Answer Timing —Called Disconnection Timing • End of Tape Alarm • Magnetic Tape Local Inhibit • ONI Services • ONI Switching on ANI Fail • Option to Record Uncompleted Calls • Printout on ANI Failure • Receipt of Bell ANI Format • Remote ONI <ul style="list-style-type: none"> —To TOPS —To WE TSPS • Total Calls Summary on AMA Record
<ul style="list-style-type: none"> • BAS Cancel Call Waiting FG. BAS00003 FGN. BAS Generic 	<ul style="list-style-type: none"> • This functionality allows the customer to assign the Cancel Call Waiting feature on either a line-by-line or a switch-wide basis. Previously, Cancel Call Waiting could only be assigned on a switch-wide basis.
<ul style="list-style-type: none"> • BAS CallProgres/Cmfrt Tone FG. BAS00003 FGN. BAS Generic 	<ul style="list-style-type: none"> • This software provides the caller with audible tones during the post-dial delay of a CCS7 call setup that requires Service Switching Point database query. The tones inform the caller that the call is in progress, thus reducing abandons and retries due to uncertainty about the progress of the call.
<ul style="list-style-type: none"> • BAS Call Waiting [POTS] FG. BAS00003 FGN. BAS Generic 	<ul style="list-style-type: none"> • This functionality allows non-controlling parties in a three-way call, who have Call Waiting, to have incoming calls waited against them. Previously, if a party, having the Call Waiting feature, was engaged in a three-way call, calls to that party were not call waited.

226 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 7 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> BAS Centralized Alarms FG. BAS00003 FGN. BAS Generic 	<ul style="list-style-type: none"> This functionality provides Centralized Alarm Reporting (CALM) capabilities, which allows OAM activities for the Large Business Remote (LBR) switching network at a hosting Dynamic Network Controller (DNC).
<ul style="list-style-type: none"> BAS Civic Services FG. BAS00003 FGN. BAS Generic 	<ul style="list-style-type: none"> This software provides Bureau Forced Disconnect, Bureau to Trunk Integrity Check and Calling Party Switch Hook Status (AC/DC Signaling). The Civic Services feature also provides: Outpulsing Over 911 Trunks, Ringback (Coded Ringing and Timed), Ringdown Trunk for 911 Service, 911 Service/Call Hold and 911 Service (Trunk) with Automatic Number Identification (ANI) Outpulsing.
<ul style="list-style-type: none"> BAS Cing No Announcement FG. BAS00003 FGN. BAS Generic 	<ul style="list-style-type: none"> This functionality provides Calling Number Announcement (CNA) and CNA Enhancements. The Meridian SL-100 uses these features to: 1) verify Service Order/line transfer cross-connections, 2) to verify assignment records, 3) to identify pairs in the event of a cable cut and 4) to identify two- and four-party line users (when ANI is used). The Enhanced CNA provides options for announcement over the line only, loudspeaker only, or a combination of line and loudspeaker.
<ul style="list-style-type: none"> BAS CM COMMON FG. BAS00003 FGN. BAS Generic 	<ul style="list-style-type: none"> This software enhances the DMS-Bus clock software to improve the reliability of the software.
<ul style="list-style-type: none"> BAS Coin Services FG. BAS00003 FGN. BAS Generic 	<ul style="list-style-type: none"> This functionality provides timed initial and overtime periods. Coins are collected 30 seconds before the end of each charging period. The sound of the coin being collected provides an indication to the calling party that the initial period is near completion and that the calling party must either hang up or make an overtime deposit to continue uninterrupted. At the end of each period, if a disconnection has not been detected, an overtime coin test is made. If a coin is present, timing for the next period commences. If a coin is not present, either an announcement or a tone as specified by the telephone company is returned to instruct the customer to make an overtime deposit. Another coin test is performed after the announcement and if a coin is not present, the call is terminated.
<ul style="list-style-type: none"> BAS Dialable Line Ckt ID FG. BAS00003 FGN. BAS Generic 	<ul style="list-style-type: none"> This functionality allows identification of tip and ring cable pairs in the outside plant environment. It also provides a convenient, dialable method of inserting a short, when it is required, for fault diagnosis.
<ul style="list-style-type: none"> BAS Digital Sub Svcs FG. BAS00003 FGN. BAS Generic H/W: NT6X78AB 	<ul style="list-style-type: none"> This software introduces a new type of trunk (PX), modifications to the trunk group data for P2 trunks, new link options for PBX lines and a new table for the PBX customer group option. This type of trunk group can be connected with various kinds of PBX's.

Table 112
SE07 Functionality listing (Sheet 8 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> BAS Dual RCC FG.BAS00012 FGN.BAS Remotes Generic 	<ul style="list-style-type: none"> This functionality allows the Remote Switching Center (RSC) to double its capacity from 5,760 to 11,520 lines. In addition to enabling larger initial RSC applications and cost-effective growth for RSCs already deployed, the dual RCC configuration minimizes costs through its intraswitching and interswitching features. Intraswitching permits calls that originate and terminate within one RCC to be switched without using links to the host, except during initial call setup. This capability enables substantial conservation of host resources and reduced expenses for DS-1 links, host interface equipment, repeaters and other network resources. Interswitching further reduces cost by permitting local switching between two Arcs in the dual configuration, thus significantly increasing the number of subscriber calls that can be switched without using host links or draining host capacity.
<ul style="list-style-type: none"> BAS Enhanced Coin Svcs. FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> This functionality allows the generation of an Automatic Messaging Accounting (AMA) record for all calls made from a coin line with a call code of 136. Thus, the telephone company can track and account for all calls made, including the number dialed and the duration of each call, so that the billing requirements for private coin line companies and inter-exchange carriers can be reconciled accurately and so that the revenue levels of company-owned coin stations can be verified.

228 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 9 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> BAS Enhanced Netwk Mgmt FG.BAS00003 FGN.BAS Generic 	<p>The following features are provided with this functionality:</p> <ul style="list-style-type: none"> A code blocking (CBK) control that provides a means of blocking a percentage of the traffic destined for a congested area based on the destination code. Directional Reservation Equipment (DRE) that gives priority to completing traffic by reserving a number of idle trunks in a group for this completing traffic (applied to two-way trunk groups). An incoming trunk busy (ITB) control that allows the Network Manager to restrict incoming attempts to an overloaded switch by selectively removing from service (that is, busy out) a percentage of incoming or two-way trunk groups that are equipped for remote-make-busy. Network management improvements. A network management status. Controlled input/output. The Flexible Reroutes (FRR) feature. Outgoing trunk group control. Position and display for continuous status information. Protective Reservation Equipment (PRE). Route Controls – cancel from/skip, Cancel to Route Controls that limit traffic attempts over one-way outgoing or two-way trunk group and routes to a specified announcement. Route Controls – Reroute and Network Management Signal Distribution (NWMSD) which enable dynamic allocation of memory so that each site uses only as much data store as is necessary for the “New Table Control”.
<ul style="list-style-type: none"> BAS Enhanced TWC [POTS] FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> This functionality allows a non-controlling party in an existing three-way call to invoke the three-way call feature and add another party to the call, thus chaining three-way calls together.
<ul style="list-style-type: none"> BAS Enh Call FWD [POTS] FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> This software allows calls that terminate to a busy station to be forwarded to another (remote) station inside or outside the Meridian SL-100 switch. The Directory Number of the remote station is fixed and must be entered when this package is assigned to a POTS line. The permitted number of simultaneously forwarded calls is also fixed and must also be entered when this package is assigned.
<ul style="list-style-type: none"> BAS Enablers-10 Dig LIOD FG.BAS00003 FGN.BAS Generic H/W: NT6X78AB 	<ul style="list-style-type: none"> This functionality enhances the flexibility of CLASS routing by increasing the called-party field of the TCAP (Transaction Capabilities Application Part) message from six to ten digits. This capability allows the correct and efficient routing of CLASS calls to Directory Numbers whose NNX code exists in more than one central switch. This feature requires CCS7 hardware and software and Network CLASS capabilities.

Table 112
SE07 Functionality listing (Sheet 10 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • BAS Feature Group A FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> • This functionality provides better terminator billing to produce records when a local (for example, seven-digit) call terminates to a line.
<ul style="list-style-type: none"> • BAS FGB AMA End ATT fmt FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> • This functionality allows Feature Group B (FGB) calls that are routed through a FGB access tandem to be billed in the end office and provides non-zero data for the AMA records.
<ul style="list-style-type: none"> • BAS FGB AMA Tndm ATT fmt FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> • This functionality involves the routing and billing of ENFIA type calls through a tandem switch to an OCC switch.
<ul style="list-style-type: none"> • BAS Intra RLCM Calling FG.BAS00012 FGN.BAS Remotes Generic 	<ul style="list-style-type: none"> • This software provides three basic functionalities: 1) Intraswitching OM (RLCM) which provides Operational Measurements (OM) for intra-switched calls on the Remote Line Concentrating Module (RLCM). This data provides the customer with measurements that are useful for equipment provisioning for the remote site, 2) RLCM Intra-switched End-To-End Signaling which enables an Electronic Telephone Set to outpulse Dual Tone Multifrequency (DTMF) digits while active on a call. The regular End-To-End Signaling feature works on non-intraswitched calls only. This package provides the same capability to an ETS user when the call is intraswitched on a RLCM and 3) RLCM Intraswitching – This package allows calls that both originate and terminate within a RLCM to be switched without using DS-1 links to the host, except during initial call setup. Links within the RLCM, containing 32 channels each, are specifically assigned for intraswitching. All IBN features can be invoked on intraswitched calls, except for End-To-End Signaling from Meridian SL-100 Electronic Telephone Sets.
<ul style="list-style-type: none"> • BAS Intra-RLM Calling FG.BAS00012 FGN.BAS Remotes Generic 	<ul style="list-style-type: none"> • This functionality provides for intra and inter-bay calling, within the same RLM, without utilization of the DS-1 links to the host switches, except during the call setup stage. The intra bay link provides the basic capability of establishing 12 connections per bay. This capability can be extended to provide an additional 12 connections per intra-bay link at the expense of inter-bay and DS-1 links to the host switch. An inter-bay link on the other hand, provides the capability of establishing 24 inter-bay connections.
<ul style="list-style-type: none"> • BAS 1A/1B EADAS I/F FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> • The EADAS/DC interface provides a data link to AT&T EADAS data collection centers. EADAS computers at these centers poll the Meridian SL-100 for Operational Measurement data. The Meridian SL-100 collects and stores the data, and in response to the polls, uses the EADAS/DC interface to transfer the data to the AT&T EADAS/DC center. Once the data has been sent to an EADAS/DC center, it can be transferred to an AT&T EADAS network management location where network administrators can monitor network performance.

230 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 11 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> BAS Line Card Monitor FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> This functionality enables the switch to analyze and perform troubleshooting on faulty lines.
<ul style="list-style-type: none"> BAS Line Log Reduction FG.BAS00007 FGN.BAS Logs 	<ul style="list-style-type: none"> This functionality reduces log messages in the Meridian SL-100 by as much as 30 percent. Benefits include lower operations costs, improved operations performance and reduced processing demands on OSs. The reduction in volume is achieved by suppressing permanent signal/partial dial (PSPD) logs, until all checks and tests have been completed. Many logs such as those generated by customer dialing errors are eliminated. The result is more meaningful logs, making it easier for the OS to analyze the logs in identifying potential cable troubles.
<ul style="list-style-type: none"> BAS Line Test Pos (LTP) FG.BAS00003 FGN. BAS Generic 	<ul style="list-style-type: none"> With this software, automatic line testing, line transmission tests, LTP-digitone testing, LTP monitor, talk, balance off-hook tests, LTP-send functions (coin and ringing), software control of cut-off relay on posted lines and tone generation are features made available.
<ul style="list-style-type: none"> BAS Local AMA FG.BAS00003 FGN.BAS Generic H/W: NT6X78AB 	<ul style="list-style-type: none"> This functionality provides: an Automatic Message Accounting (AMA) failure routing option, an AMA single entry format, automatic rotation of storage devices, Binary Coded Decimal (BCD) recording, an end of tape alarm, flexible long duration call reporting, Local Automatic Message Accounting (LAMA) supervision (answer timing and called disconnect timing), magnetic tape local inhibit that is provided at the Maintenance and Administration Position (MAP) to prevent tampering with the tape drive through the front panel switches on the drives, Operator Number Identification (ONI) services, the option to record uncompleted Direct Distance Dialing (DDD) calls on Automatic Message Accounting (AMA) tape, remote ONI to Traffic Operator Position System (TOPS) and recording of AMA tape call counts by call type at the end of the tape when a tape transfer is executed.
<ul style="list-style-type: none"> BAS Local CDR FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> Local Call Detail Recording facilitates the charging of local calls. With this feature lines that are assigned to this service may be billed an amount proportional to the conversation time for all local calls.
<ul style="list-style-type: none"> BAS Local Features I FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> This functionality provides the base administration and maintenance options, in addition to routing and translations. There are several basic features contained in this package. In BCS35 (GA BCS36), this package was enhanced in a way that allows existing MDC trunk features, such as Line Screening Code Restrictions, to be extended across an MBG and operate transparently. The feature also improves Attendant Console operations in an MBG.
<ul style="list-style-type: none"> BAS Local Features II FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> This functionality provides the base administration and maintenance options, in addition to routing and translations. There are several basic features contained in this package.

Table 112
SE07 Functionality listing (Sheet 12 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • BAS Maint Assistance Pkg FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> • This functionality offers the following features: Basic Operational Measurements, Circuit Locate (Core, Line, Trunks) and Silent Switchman which enables a technician to test the Outside Plant without the need of a second person in the switch to open the cable pair. An alarm sending and checking feature which conveys alarm indications to a remote point whenever a switch is unattended is also made available. In addition, this feature provides: call tracing, flexible alarm sending, identification of alarms, Intercept, Output ANI Digits, identification of killer trunks, incoming/outgoing trunk irregularities detection, threshold and exception reporting, trunk circuit type identification and a trouble log that provides a history of all errors encountered in the system over a certain time frame.
<ul style="list-style-type: none"> • BAS Multilink ASCII Drvr FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> • This software makes Multi-Link ASCII Device Driver and 1X67 Firmware Throughput Enhancement features available.
<ul style="list-style-type: none"> • BAS Multiunit Msg Rt Svc FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> • This functionality produces billing information for message rate local calls. It provides data structures to help the telephone companies in defining the characteristics of Multi-unit Message Rate Services. The service can be assigned only to single- or two-party lines and to PBX trunks with line terminations at the Central switch.
<ul style="list-style-type: none"> • BAS New Periph Maint Pkg FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> • This functionality provides a speech test for the links between a Line Module (LM) and a network. The test can be initiated either manually from the NET level of the Maintenance and Administration Position (MAP) or by the system, when the Meridian SL-100 detects a problem with a LM speech link. This feature also enhances the real time generation of Peripheral Module (PM) 180 log reports. Two other features offered by this package are: XPM Party Audit which provides an audit to monitor XMS-based Peripheral Module (XPM) memory for parity errors and the LCM Takeover/Takeback Enhancement which reduces the time of Pulse Code Modulation (PCM) transmission breaks to approximately 100 milliseconds (ms) during CC-controlled LCM active switches. Recent improvements made to this package include Enhanced 6X69 Diagnostics, CC Static Data Manager, PCM Diagnostic Enhancements Phase I, XPM Static Data Manager, XPM RTSS – Memory Recovery, Enhanced Warm SWACT and adding MAPCI perform level for the DTCL.
<ul style="list-style-type: none"> • BAS NOS Data Collection FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> • The XFER Subsystem Table feature in this functionality provides a table to replace command DEFINE at the Remote Data Polling System level of a MAP terminal. The information contained in table XFERSSYS can be edited using table editor commands and is not lost during a software upgrade. Some other features made available through this software are: Automatic Trunk Testing Report, Conversion of NOS File Transfer to Generic RO Service, File Transfer Server for Bell of PA and Killer Trunk Report Separation.

232 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 13 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> BAS Office HW Inv Pkg FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> This functionality provides the telephone companies with a mechanism for establishing and maintaining an inventory of operational and spare circuit cards. The data is stored in the DMS data store. The resulting database is also used by Nortel Networks for support, engineering and change control purposes.
<ul style="list-style-type: none"> BAS Offnet Access Svcs FG.BAS00004 FGN.BAS Generic OAM 	<ul style="list-style-type: none"> This functionality allows calls that are made on a Meridian SL-100 to access offnet information and services. This feature also provides access to information on the billing of these calls such as Station Message Detail Recording (SMDR) information, Automatic Number Identification (ANI) information and account codes information. NSS Dialtone Immediate is included in this functionality.
<ul style="list-style-type: none"> BAS OM Enhancements FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> This functionality provides the following Operational Measurement (OM) enhancements: a five-minute OM register transfer period option in addition to the 15- and 30-minute periods, three registers containing a rolling 15-minute history in five minute segments and four registers containing a rolling one hour history in 15-minute segments.
<ul style="list-style-type: none"> BAS Online Peripheral SW FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> This software allows PM S/W loads to be kept in the protected area of the main memory, rather than on a magnetic tape. It is required for unmanned switches equipped with a single magnetic tape drive for the office image. However, any switch can be equipped with this package in order to take advantage of increased speed of loading, as well as freeing up a MTU for other purposes.
<ul style="list-style-type: none"> BAS OPM Maintenance FG.BAS00012 FGN.BAS Remotes Generic 	<ul style="list-style-type: none"> This functionality provides the necessary host software to automatically rotate and recharge the emergency batteries to protect against AC failure. If an AC failure should occur, this package automatically reschedules the recharge of emergency batteries.
<ul style="list-style-type: none"> BAS 4X opr Bell Fmt ANI FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> This functionality provides Coin Control Capability on Super CAMA (SC) trunk groups.
<ul style="list-style-type: none"> BAS OSS I/F Enhancement FG.BAS00004 FGN.BAS Generic OAM 	<ul style="list-style-type: none"> This functionality provides a new command ITALK that enhances the flexibility of the user's Operation Support System (OSS) by enabling the OSS to use any BCS syntax (from BCS30 onward) to talk to the Meridian SL-100.
<ul style="list-style-type: none"> BAS PBX Interface I FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> This functionality provides Stop Hunt Key Interaction With Overflow, Directory Number Hunting (DNH) With Call Waiting Termination (CWT) and Preferential Hunt Options, Hunt Group Enhancements and Hunt Group Size Expansion.

Table 112
SE07 Functionality listing (Sheet 14 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> BAS PBX Interface II FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> This functionality provides answer supervision to PBXs for Toll Calls, called party hold where a terminator having the option has the control to disconnect the call, Direct Inward Dialing (DID) to a PBX and Direct Outward Dialing (DOD) from a PBX on the same transmission facilities using a two-way trunk, the capability for an incoming call from the exchange network (not special circuits, for example, FX, WATS) to reach a specific station line without attendant assistance and provides two commands in the Service Order repertory to allow association of Directory Numbers (or block of DN) with an office route (for example, DID trunk group, test lines).
<ul style="list-style-type: none"> BAS Poll OM Data via Dpk FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> This software permits a micro or mini-computer based centralized system to automatically dial over the Direct Distance Dialing (DDD) or DATAPAC network to reach Meridian SL-100 switches and extract Operational Measurement (OM)/Automatic Message Accounting (AMA) data from the disk or tape file. Thus, the OM and AMA tapes need not be physically dismounted from the switch and transported to the data processing center for downstream processing. This package also provides the Meridian SL-100 with a DATAPAC interface in accordance with CCITT 1980 specifications for Link Access Procedure Balanced (LAPB) mode. LAPB provides a common standard for link access, in addition to the currently available LAP.
<ul style="list-style-type: none"> BAS 411 Rec on Mag Tape FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> This functionality provides a facility to allow XMS-based Peripheral Modules (XPM) to support service tones for different markets using the new common hardware.
<ul style="list-style-type: none"> BAS Remote Call FWD FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> Remote Call Forwarding (RCF) Base Directory Number (DN) allows the Meridian SL-100 switching system to assign the Multiunit Message Rate billing option to a Remote Call Forwarding base Directory Number. This feature permits the accurate billing of RCF service as a message rate service, as is normally required for business services.
<ul style="list-style-type: none"> BAS Remote Act of LLC FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> This software enhances the current Line Load Control (LLC) capability by providing the ability to activate or deactivate LLC for all sites connected to the Meridian SL-100. With this feature, sites can be controlled independently of the Meridian SL-100.
<ul style="list-style-type: none"> BAS Remt MB via Scan Pt FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> This functionality allows the Meridian SL-100 user to select any outgoing to two-way trunk circuit, or group of trunk circuits and remove them from, or return them to, service.

234 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 15 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> BAS ROTL FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> The Remote Office Test Line (ROTL) capability provided by this package is an essential part of the Automatic Trunk Testing (ATT) system. The ATT system schedules and performs transmission and signaling tests on trunk circuits connecting different switches in the area. To perform maintenance testing over a specific circuit, an Automation Products Company (APC) is connected at each end of the test circuit. The controller end (ROTL) provided by this package enables: 1) communication with the central processor in a predetermined format, 2) direct/indirect connections, or both, to the circuit being tested, 3) initialization and performs the requested test(s) and 4) it reports the measured results to the central processor. The ROTL can also perform as the Responder, at the responding end. In addition, this package provides a mapping facility between the Common Language Location Identifier (CLLI) group numbers and the Meridian SL-100 CLLI groups.
<ul style="list-style-type: none"> BAS RLCM FG.BAS00012 FGN.BAS Remotes Generic 	<ul style="list-style-type: none"> The Remote Line Concentrating Module (RLCM) is a member of the Meridian SL-100 remotes based on the LCM (Line Concentrating Module). The RLCM provides a physical capacity of 640 lines. This package provides host switch line features and the testing and maintenance capabilities to the RLCM.
<ul style="list-style-type: none"> BAS RLM FG.BAS00012 FGN. BAS Remotes Generic 	<ul style="list-style-type: none"> This functionality provides: RLM interface with #3 Line Test Controller (LTC), RLM interface to Badger 612A, variable quantities of T1 lines depending on traffic, Digital Carrier Module-Remote (DCM-R) diagnostics, T1 maintenance, High-Level Data Link Controller (HDLC) maintenance and Reswitch HDLC over a secondary T1 link. This package also allows: line testing using line test units (LTU/MAP), RLM maintenance that comprises all the aspects associated with the Line Module (LM) base, the service of remote lines with host switch features. RLMs can be located up to a maximum of more than 161 km (100 miles) from the host switch, with the size ranging from 100 lines up to 1280 lines interfacing with from two to eight DS-1 links. In addition, this software provides signaling channel supervision and basic translation and routing.
<ul style="list-style-type: none"> BAS RLM EmrgncyStnd Alne FG.BAS00012 FGN.BAS Remotes Generic 	<ul style="list-style-type: none"> This functionality allows abbreviated dialing (dialing from three to seven digits) to complete a call to another line in the Emergency Stand Alone (ESA) mode. This allows Meridian SL-100 switches that support Directory Numbers of less than seven digits to have their RLMs in ESA mode behave in the same way as with the standard operation. This package also provides the ESA optional feature that enables the RLM to provide service between Meridian SL-100 users in the event of a complete failure of DS-1 links (between the RLM controllers and the host switch DCM-Rs).
<ul style="list-style-type: none"> BAS RSC FG.BAS00012 FGN.BAS Remotes Generic 	<ul style="list-style-type: none"> The RSC is a Meridian SL-100 remote. It is based on the enhanced peripherals and has a physical line capacity of 5,760 lines. This feature provides the capability to support lines in the RSC.

Table 112
SE07 Functionality listing (Sheet 16 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> BAS RSC Enh ESA-Lns only FG.BAS00012 FGN.BAS Remotes Generic 	<ul style="list-style-type: none"> This functionality provides RSC Warm Entry/Warm Exit to ESA.
<ul style="list-style-type: none"> BAS RSC En ESA (L&Tks) FG.BAS00012 FGN.BAS Remotes Generic 	<ul style="list-style-type: none"> This functionality provides for ESA capability. It allows “warm” entry and fast (one-minute) “cold” exit for dual non-ISDN RSC’s in the ESA state.
<ul style="list-style-type: none"> BAS RSC ESA OPLnettrk FG.BAS00012 FGN.BAS Remotes Generic 	<ul style="list-style-type: none"> This software enables the RSC to emulate the Clear Coded Channel (CCC) whenever contact with the host has been lost.
<ul style="list-style-type: none"> BAS RSC-intra RSC Cling FG.BAS00012 FGN.BAS Remotes Generic 	<ul style="list-style-type: none"> This functionality provides the capability for switching intra RSC line-to-line calls within the RSC.
<ul style="list-style-type: none"> BAS RSC-Rem-Off Rmt FG.BAS00012 FGN.BAS Remotes Generic 	<ul style="list-style-type: none"> This functionality supports the connection of an RLCM or Outside Plant Module (OPM) to the peripheral side of a RCC. The connection of the RLCM/OPM to an RCC is accomplished with DS-1 links.
<ul style="list-style-type: none"> BAS RSC-S BASIC FG.BAS00012 FGN.BAS Remotes Generic 	<ul style="list-style-type: none"> This functionality provides Remote Switching Center-Second series (RSC-S) compliance with the Nortel Network offering of National ISDN-1 (NI-1) as described in the ISDN Basic Rate Access User – Network Interface Specification (NIS S208-6 issue 1.0) for Functional Call-Control Signaling (basic call) and Supplementary Services.
<ul style="list-style-type: none"> BAS RSC-S Extend Dist FG.BAS00009 FGN.BAS RSC-S H/W: NTMX76AA (Messaging Circuit Card) 	<ul style="list-style-type: none"> Network providers deploying the Meridian Cabinet Remote Module - Second series (MCRM-S) can reach farther than ever into the network with Extended Distance Capability (EDC; BAS00009). With this software, the MCRM-S can be deployed at distances greater than 241 km (150 miles) from the host, depending on transmission characteristics of the host links. The specific distance depends on the transmission facilities being used, as well as traffic levels the switch has been engineered to meet. However, service to distances of up to 840 km (500 miles) are possible.

236 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 17 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> BAS RSC Trunking FG.BAS00012 FGN.BAS Remotes Generic 	<ul style="list-style-type: none"> This functionality allows trunks to intraswitch at the RCC or use network channels through dynamic channel allocation. Dynamically-allocated trunks use intraswitch channels whenever possible. This software also provides RLCM ESA Table Control which handles the collecting and delivery of translation data to the RLCM ESA processor to support ESA translation and call processing. Translation data is delivered automatically from the host to the RLCM on a daily basis. Manually-initiated delivery at any convenient time also can be arranged.
<ul style="list-style-type: none"> BAS Service Analysis FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> This software provides a service analysis for calls on intertoll, TOPS and Auxiliary Operator Services System (AOSS) trunks that route to AOSS positions.
<ul style="list-style-type: none"> BAS SubLine Usage FG.BAS00003 FGN.BAS Generic H/W: NT6X78AB 	<ul style="list-style-type: none"> This functionality allows the Meridian SL-100 user to assign registers to measure usage on particular Meridian SL-100 user lines. It will also provide for two peg count line measurement registers to be assigned, when assigning a usage register, one each to count originating and terminating attempts.
<ul style="list-style-type: none"> BAS Sw Bit Err Rate Mntc FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> The purpose of this software is to provide a tool that allows a Meridian SL-100 user to monitor the bit error rate performance of a switch. A bit error rate is a measure of the number of bits in error in a transmission stream.
<ul style="list-style-type: none"> BAS SYNC & STRATUM 2.5 FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> This functionality deals with synchronization of a digital network and the use of plesiochronous (not synchronized, but virtually zero slips) operation on digital links between networks requiring the use of a highly-accurate clock.
<ul style="list-style-type: none"> BAS Term Call Blng (NT) FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> This functionality provides the option to automatically produce billing records when a call terminates to a specified line, similar to INWATS calls. The software is implemented as a hunt group option.

Table 112
SE07 Functionality listing (Sheet 18 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • BAS Toll Features I FG.BAS00003 FGN.BAS Generic 	<p>SAS Toll Features I includes the following:</p> <p><i>Administration</i></p> <ul style="list-style-type: none"> • Calling Line Identification (CLID) – Trunk Termination Directory Assistance Charging (411 Calls on AMA) Traffic and Operational Measurements <p><i>Maintenance</i></p> <ul style="list-style-type: none"> • Test Lines: <ul style="list-style-type: none"> — Loop Around — Open Circuit Termination — Short Circuit Termination — 1120 – Nonsynchronous (originating) — 1 1 8 1 – Synchronous (originating) <p><i>Signaling and supervision</i></p> <ul style="list-style-type: none"> • Special Billing Codes • Switched ~/DP Pulse Conversion <p><i>Switching and translation</i></p> <ul style="list-style-type: none"> • Home/Foreign Area Translation and Screening • Local Call Intercept • Office Code Sharing – Thousands Digit Translation • Routing Across NPA Boundaries • Trunk Class Screening • Unauthorized/Code Blocking <p><i>Toll Services</i></p> <ul style="list-style-type: none"> • Switched Access from Operator (Non-Coin) • Switched Access to Operator (Non-Coin) • Verification Switching

238 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 19 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> BAS Toll Features II FG.BAS00003 FGN.BAS Generic 	<p>This functionality includes the following:</p> <p><i>Administration</i></p> <ul style="list-style-type: none"> Magnetic Tape for Operational Measurements <p><i>Maintenance/testing</i></p> <ul style="list-style-type: none"> E&M Test Repeat Two Test 104 Originating and Terminating Test Line 105 Terminating Test Line <p><i>Switching and Translations</i></p> <ul style="list-style-type: none"> Combined MF Trunk Group (1+, 0+, 0-, Coin, Non-Coin) Combined Verification and Toll Completing INWATS/OUTWATS Local Tandem Nailed-up Connection Tandem Switching, No Digits Incoming <ul style="list-style-type: none"> — One-way Trunks — Two-way Trunks <p><i>Toll Services</i></p> <ul style="list-style-type: none"> Coin Control, Line Number Method
<ul style="list-style-type: none"> BAS Traffic Sep Peg Cut FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> This functionality implements the Traffic Separation Measurement System (TSMS) needed in the Equal Access End Office (EAEO) environment. The separation uses the destination number and the carrier number to separate the traffic. This feature also provides: overflow peg counts required in the EAEO environment, point-to-point peg counts for the direct dial, operator assisted and no prefix type calls. In addition, this package extends the Traffic Separation Measurement System (TSMS) capability of attempt pegs to type 3 traffic calls from the Meridian SL-100 or remote lines and this package extends existing TSMS capabilities to include Integrated Business Network (IBN) peg counts.
<ul style="list-style-type: none"> BAS Traffic Sep Report FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> This functionality provides output reports for the Traffic Separation Measurements System (TSMS) that are needed in the equal access environment. It extends the TSMS to MDC lines and incorporates the MDC TSMS into the reports generated by the TSMS, provides a traffic separation output report of the OMs with a summation of registered data and multiple column output and it extends the "TMS Report Summarized" features' capabilities to include PDAB/PDTC (Partial Dial Abandon/Partial Dial Timeout) type of calls.
<ul style="list-style-type: none"> BAS Traffic Sep Usage FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> This functionality also implements the TSMS needed in the Equal End Office (EAEO) environment. This software provides an optional feature that supplements the basic traffic analysis to satisfy traffic separation requirements (setup and connect time usage). It also extends existing TSMS capabilities to include IBN usage measurements, as well as extending the TSMS capability of usage measurements to type 3 traffic calls.

Table 112
SE07 Functionality listing (Sheet 20 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> BAS TTP Digit Verificatn FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> This functionality provides a feature that monitors the signaling path of the Meridian SL-100 message system. All incoming messages from the trunk peripheral module (digital or analog) are intercepted and displayed on the Trunk Test Position (TTP) for the monitored circuit. This feature also has the ability to verify Meridian SL-100 translation data. By specifying a called number and an incoming trunk group using a TTP position, the actual routing of calls can be verified without setting up a connection.
<ul style="list-style-type: none"> BAS Unauth Dgt Svc Det FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> This functionality identifies DP Meridian SL-100 users using Digitone Receivers for digit collection. When the feature is activated, Digitone Receivers are allocated to all calls, including those originating from DP classed Meridian SL-100 users. Thus, service is provided for unauthorized Meridian SL-100 users too. Lines using unauthorized DT phones are identified.
<ul style="list-style-type: none"> BAS Vert Services [POTS] FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> This functionality provides OM Peg Count of feature activation, Call Forwarding, Call Waiting, Custom Calling – Four-Second Delay Cancellation, Fixed Call Forwarding, Three-Way Calling, Toll Call Forwarding and Speed Calling (long/short list).
<ul style="list-style-type: none"> Generic BAS XPM+ in RSC FG.BAS00012 FGN.BAS Remotes 	<ul style="list-style-type: none"> The combined features of this functionality provide support for unified processor capabilities for the Remote Switching Center.
<ul style="list-style-type: none"> BAS XPM Maintenance FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> This functionality is a powerful maintenance tool that identifies and prioritizes, at the MAP, the most significant line- or trunk-related problems requiring maintenance attention, thereby optimizing the effectiveness of switch maintenance personnel. The MAP enables a technician to quickly identify the system element at fault and thus perform the required maintenance actions. This software eliminates the need for printing, sorting and analysis of logs for trouble identification.
<ul style="list-style-type: none"> BASE BILGE FG.BASE0001 FGN.BASE 	<ul style="list-style-type: none"> This functionality contains root-level call processing tasks that are common to all features and phones. It is the operating system software for the Meridian SL-100 switch.
<ul style="list-style-type: none"> BASE BILINGUAL INTERFACE FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> This software enables the Meridian SL-100 user interface (MAP or other VDU) to operate in both English and French. It is a truly bilingual system in which a terminal user can select the language of preference. This selection is made by a MAP command on a per-terminal basis. The MAP terminal keyboard can be arranged to provide bilingual designations. All descriptive messages are resident in the machine in both languages.
<ul style="list-style-type: none"> BASE CM BILGE FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> BASE CM BILGE provides base operating software common to support SL-100 configurations.

240 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 21 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • BASE COMMON BASIC FG.BASE0001 FGN.BASE 	<ul style="list-style-type: none"> • This functionality provides software to verify line drawer states over BCS applications, improve the memory fault detection ability of the CC, improve the return-to-service sequence to the CMC and modify the descriptiveness of CC mismatch logs. Recent improvements to this package include CC Warm SWACT MMI Enhancements – Phase II and BUS Message Flow Control – Phase III. Subsequent enhancements were made since this feature's introduction: 1. Enhancements to the existing Auto Apply feature, and 2. Enhancements to the TABAUDIT feature.
<ul style="list-style-type: none"> • BASE DISK DATASTORAGE SYS FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> • This functionality provides: Semi-automatic DIRP Disk to Tape Copy, Data Recording and Recall (Storage of AMA and OM Data and Automatic Remote Transmission of AMA/OM Data), an optional Journal File feature which provides the facility to record activated Data Modification Orders (DMOs) and Service Orders for backup purposes in the event that the contents of the data table are inadvertently destroyed, the capability to store OM register contents on magnetic disk and poll the current files at predetermined intervals, disk storage of peripheral loads, loading and unloading of non-resident programs and a 14-inch Winchester Disk Drive that can replace the tape drive for Office Image loading and dumping. The time required for either loading or dumping is reduced, because of higher transfer speeds and direct positioning capabilities.
<ul style="list-style-type: none"> • BASE DIRPPARALLEL STOREINC FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> • This functionality allows an increase in Device Independent Recording Package recording media and modifies DIRP-related user interface commands for easier operation.
<ul style="list-style-type: none"> • BASE DMS SNSE COMMON FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> • This functionality addresses the software and firmware issues related to introducing the SuperNode SE Platform (SNSE). Central and Local DMS-BUS S/W maintenance issues are addressed by this package. All SNSE DMS-BUS development, except for the support of both CMIC links on one interface card (feature A00857) and the support of SR-128 MS-ENET links (feature A00858) are addressed by this feature. All SNSE S/W and F/W development is integral to the SL-100 product structure and is within the DMS stream.
<ul style="list-style-type: none"> • BASE DMS SuperNode SLM FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> • This software modifies System Load Module (SLM) hardware to accommodate the use of higher capacity tape cartridges and disk drives. It also modifies P-side Message Controller (PMC) and SLM maintenance software to support the high performance Fault Tolerance File System (FTFS). In addition, this package provides further modifications to the special operations layer of the System Load Module file system and enables Computing Module (CM) and Message Switch (MS) image dumps to be prescheduled and transported to the System Load Module without user intervention.

Table 112
SE07 Functionality listing (Sheet 22 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • BASE ENHANCED ADMIN FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> • This functionality provides the following: 1) an “echo” of Service Orders both at the input terminal and remote terminal located at the MDF, as they are being entered, 2) a loading of data modifications into the Meridian SL-100 from a magnetic tape or from a file on some external device containing all Data Modification Order (DMO), 3) a DMO pretesting which allows routing data to be validated and tested before being placed in service and 4) a facility for storing Table Editor commands or DMOs which are intended to be executed at some later date.
<ul style="list-style-type: none"> • BASE ENH SECRTY PW ENCRIP FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> • This functionality is identical to Base ENH SECRTY W/O PW ENCRIP (see next entry) with one exception: passwords are encrypted to provide additional security.
<ul style="list-style-type: none"> • Base ENH SECRTY W/O PW ENCRIP FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> • With this functionality a customer can control a user’s access by controlling login access to Attendant Consoles. Attendant Consoles can be selectively enabled or disabled. This software also implements an audit trail for all security related events by providing up to 1000 secure reports. The Automatic Logout of Dial Up Line feature increases the Meridian SL-100 system security by automatically logging out unauthorized terminal users. Other features made available with this functionality are: Enhanced Command Screening, Password Control and Security Table Enhancements.
<ul style="list-style-type: none"> • BASE ENH SECURITY PKG II FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> • This functionality provides a further level of access control, automatic dialback on modems to control remote terminal access to the switches.
<ul style="list-style-type: none"> • BASE FAULT TOLRT FILE SYS FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> • This software serves as the foundation for state-of-the-art capabilities for management of billing and intelligent networking data.
<ul style="list-style-type: none"> • BASE IEM EVNT CONSOLIDATN FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> • This functionality allows applications on such new components as the File Processor (FP) to chain together logs into a consolidated message that provides all pertinent information about a potential problem. Instead of spending valuable time trying to analyze numerous log messages, technicians can get right to the task of finding a problem and fixing it.

242 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 23 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> BASE MS BASE LINK MAINT FG.BAS00003 FGN.BAS Generic 	<p>This feature provides the following enhancements:</p> <ul style="list-style-type: none"> Support for datafill and maintenance of SubRate 256 (SR256) and 128 (SR128) DS512 inter-Message Switch (inter-MS) links. Improvements to existing inter-MS link maintenance to prevent message loss on controlled link closure. Indication of failure to open the Frame Transport System (FTS) messaging route on Return To Service (RTS) and in-service test of an inter-MS link. Groundwork for the future implementation of the automatic rerouting of Input/Output Utility Interface (IOUI) messages through the inter-MS links when link outages prevent tandem messaging through a single MS.
<ul style="list-style-type: none"> BASE MS BILGE FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> This functionality provides the reception of static data tables from the Central Controller (CC) necessary for ESA translation and call processing. Along with table reception, this feature provides storage allocation for these tables and rudimentary auditing procedures for checking of the validity of data.
<ul style="list-style-type: none"> BASE MS COMMON FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> This functionality enhances the original software code to improve its reliability. The approach taken is to make each clock's function into Finite State Machines (FSM). Using FSM to describe each clock's function provides a well understood behavioral model that can be validated and optimized by known theoretical methods. Tools can be use to simulate the clock software and generate test cases to validate the clock functions under a controlled environment. This method allows each clock function to be data independent of other clock functions, permitting easy evolution of the clock software.
<ul style="list-style-type: none"> BASE OM SELECTIVE OUTPUT FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> This functionality gives the OM system the ability to generate totals for the fields of OM groups LMD, TRK, CARR and SLU, while also providing the ability to print selected tuples of an OM group.
<ul style="list-style-type: none"> BASE ROBUSTNESS ENH FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> This functionality addresses corruptions and/or unauthorized manual actions which affect operating system data as they relate to system stability. It provides software interface procedures to calculate and maintain checksums over critical semi-static run time system data on a software module basis.
<ul style="list-style-type: none"> BASE SLM FILE SYSTEM FG.BAS00003 FGN.BAS Generic H/W: NT9X76AA, NT9X77AA, NTEX22BB 	<ul style="list-style-type: none"> BASE SLM FILE SYSTEM supports the Device Independent Recording Package (DIRP) on SLM II capability. This functionality allows a customer to move existing Disk Drive functions into SLM II.

Table 112
SE07 Functionality listing (Sheet 24 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • BASE SYNC CESIUM MSTR CLK FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> • This functionality deals with synchronization of a digital network and the use of plesiochronous (not synchronized, but virtually zero slips) operation on digital links between networks requiring the use of a highly-accurate clock.
<ul style="list-style-type: none"> • BASE SYNC STRATUM 3 FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> • This functionality supports the Bellcore Synchronization Plan and offers the appropriate mode of operation to provide the prescribed minimum bit slip between switches. A Stratum 3 switch synchronizes its local oscillator to an external clock (Stratum 2 or a slave with higher integrity). Recent enhancements to this software include: Outgoing Timing Link OAM – 1 and Master – External Remote Clock synchronization support.
<ul style="list-style-type: none"> • BASE SUPERNODE ENH MSGING FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> • This software consists of a group of features that increases the robustness capacity and adds additional performance enhancements to the messaging component of the Integrated Link Maintenance (ILM) within the LPP. Also there are features that add support for the Frame Transport System (FTS) which provides messaging and routing functionalities to a wide range of devices in various Meridian SL-100 products.
<ul style="list-style-type: none"> • BASE SYNCBITS COMPOSITMSTR FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> • The Meridian SL-100 clock can be synchronized to work as a slave to an internal building timing system master clock. Previously, this connection was made by means of a 24-voice-channel, DS-1 span line. This functionality provides a dedicated link that connects the clock directly to the DMS Bus, thus freeing the DS-1 link and allowing the 24 channels to be used for voice transmission.
<ul style="list-style-type: none"> • BASE SYNC CESIUMLORANCMS TR FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> • The Meridian SL-100 clock can be synchronized to work as a slave to a master external Stratum I clock. Previously, this connection was made by means of a 24-voice-channel, DS-1 span line. This functionality provides a dedicated link that connects the clock directly to the DMS Bus, thus freeing the DS-1 link and allowing the 24 channels to be used for voice transmission.
<ul style="list-style-type: none"> • BASE SYS LOAD MODULE II FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> • This functionality doubles the size of the tape drive and quadruples the capacity of the disk drive provided by System Load Module I.
<ul style="list-style-type: none"> • BASE TELCO DEF LOGINBANER FG.BAS00003 FGN.BAS Generic 	<ul style="list-style-type: none"> • This functionality provides a customer banner to be displayed to users following a successful login. The purpose of this software is to increase the security precautions available to a Meridian SL-100 customer.
<ul style="list-style-type: none"> • Call Forwarding Restriction FG.RES00002 FGN.Advd Cstm Calling 	<ul style="list-style-type: none"> • This feature enables the switch to restrict the types of phone numbers that can be programmed by users as call forward destinations. These restrictions can be overridden on a per-line basis to allow truly universal call forwarding for users requesting it.

244 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 25 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • Call Park Recall Notification Enhancement FG.ACD00001 FGN.ACD ACD BASE 	<ul style="list-style-type: none"> • This feature enables the Call Park feature to send notification to any ACD agent that receives a “recalled” parked or transferred call, regardless of which agent originated the Call Transfer or Call Park feature. With this capability, all ACD agents can be better prepared to treat these special calls with appropriate courtesy.
<ul style="list-style-type: none"> • DN Auto Display Enhancements FG.MSL00003 FGN.MSL IVD 	<ul style="list-style-type: none"> • The DN Auto Display Feature allows for the automatic display of incoming call information without having to use the “INSPECT” key. Prior to MSL12, the functionality of this capability was restricted to Keys 1 through 9. This new enhancement expands this capability to all keys. The DN Auto Display Feature can be used on the following telephone series: M3900, M2000, M5000.
<ul style="list-style-type: none"> • EQA C7ISUPlrIta CntnEAEO FG.EQA00001 [OPT] FGN.EQA Local H/W: NT9X76AA, NT9X77AA, NTEX22BB 	<ul style="list-style-type: none"> • This functionality enables the Equal Access End Office (EAEO) to establish InterLATA connection for signaling which contains carrier information to the Access Tandem (AT) by means of CCS7 signaling. This feature also enables the EAEO to establish InterLATA connection for CCS7 trunk groups that connect directly from the EAEO to the Inter Exchange Carrier (IEC).
<ul style="list-style-type: none"> • EQA EA Alt Sw Point FG.EQA00001 [OPT] FGN.EQA Local 	<ul style="list-style-type: none"> • In a Large Business Remote (LBR)/Host environment it will be necessary to tandem operator control signals through the Host switch to the LBR. The software currently employed to handle SuperCAMA (SC) to Operator traffic in a toll environment can also be used to tandem operator signals through the Host switch.
<ul style="list-style-type: none"> • EQA EAEO Enhancements FG.EQA00001 [OPT] FGN.EQA Local 	<ul style="list-style-type: none"> • This functionality allows multiparty lines in an equal access environment to be routed to a Centralized Automatic Message Accounting (CAMA) position for identification, before being outpulsed to an Inter Exchange carrier. The carrier then receives the Directory Number of the subscriber for AMA billing and the user knows the originating number for access charge verification.
<ul style="list-style-type: none"> • EQA En.WATS Opratn (POTS) FG.EQA00001 [OPT] FGN.EQA Local 	<ul style="list-style-type: none"> • This functionality extends the Equal Access services already provided in normal toll service.
<ul style="list-style-type: none"> • EQA Equal Acc End Office FG.EQA00001 [OPT] FGN.EQA Local 	<ul style="list-style-type: none"> • Feature Group B and D signaling on access to carrier trunks is supported by this software. This functionality provides the Access to Carrier (ATC) trunk groups for direct trunk connections to Inter Exchange Carriers (IEC). In addition, this software will make FGD Carrier Identification Code Expansion available.
<ul style="list-style-type: none"> • EQA Equal Access for ACT FG.EQA00002 FGN.EQA Toll 	<ul style="list-style-type: none"> • EQA Equal Access for ACT provides the expansion of the FNPACONT Table for access tandem environments to accommodate the expansion of NPAs from the current 160 as part of the FCC/Bellcore North American Numbering Plan enhancements.

Table 112
SE07 Functionality listing (Sheet 26 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • EQA Equal Access OSS FG.EQA00001 [OPT] FGN.EQA Local 	<ul style="list-style-type: none"> • This functionality provides an Operational Support System with all information necessary to process calls arriving on a single combined trunk group that contains various types of traffic.
<ul style="list-style-type: none"> • EQA IBN IraLATA PIC EAEO FG.EQA00001 [OPT] FGN.EQA Local 	<ul style="list-style-type: none"> • This software provides IntraLATA carrier pre-subscription, screening and routing capabilities for MDC stations and PX trunks of an Equal Access End Office (EAEO) that wish to choose a primary carrier for their IntraLATA services, which includes ISDN subscribers.
<ul style="list-style-type: none"> • EQA POTS IraLATA PICeao FG.EQA00001 [OPT] FGN.EQA Local 	<ul style="list-style-type: none"> • This functionality allows the Equal Access End Office (EAEOs) to choose a carrier to provide their IntraLATA service.
<ul style="list-style-type: none"> • Equal Access Intermediate Tandem FG.EQA00002 FGN.EQA Toll 	<ul style="list-style-type: none"> • This functionality allows the users to extend Equal Access (EA) capabilities for long distance carrier service to subscribers served off non-conforming end offices by means of an Equal Access Intermediate Tandem (EAIT).
<ul style="list-style-type: none"> • ISDN BASE [DMS-250] FG.ISDN0001 FGN.ISDN Base Platform Suppt 	<ul style="list-style-type: none"> • This functionality enables trunk group types to use ISUP trunk signaling.
<ul style="list-style-type: none"> • ISP7 2W Emulation FG.ISP70001 [OPT] FGN.ISP7 Base ISUP H/W: NT9X76AA, NT9X77AA, NTEX22BB 	<ul style="list-style-type: none"> • This functionality eases the capping or replacing of an analog switch by enabling continuity tests to be performed on trunks between the Meridian SL-100 and other vendor's two-wire switches. The Meridian SL-100 – a four-wire switch – performs the test by emulating a two wire switch and initiating and transmitting the appropriate high/low tones.
<ul style="list-style-type: none"> • ISP7 Mass Trnk Conversion FG.ISP70001 [OPT] FGN.ISP7 Base ISUP H/W: NT9X76AA, NT9X77AA, NTEX22BB 	<ul style="list-style-type: none"> • This functionality simplifies the procedures required to cut over Per Trunk Signaling (PTS) trunks to CCS7 trunks. PTS trunks are mapped to CCS7 trunks using the pre datafill operations provided by this package.
<ul style="list-style-type: none"> • ISP7 CCS7 Trnk Signlng FG.ISP70001 [OPT] FGN.ISP + Base ISUP H/W: NT9X76AA, NT9X77AA, NTEX22BB 	<ul style="list-style-type: none"> • This functionality provides many features including ISUP Release Cause to Treatment Mapping which enables the customer to decide if either local treatment or an ISDN user part (release-with-cause) message should be sent from the far-end switch when a call encounters treatment and Circuit Group Blocking which enhances the ISDN user part trunk maintenance system by generating circuit group blocking and circuit group unblocking messages to a far-end switch.

246 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 27 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • ISP7 SS7 ISUP Option Controls FG.ISP70001 [OPT] FGN.ISP7 Base ISUP H/W: NT9X76AA, NT9X77AA, NTEX22BB 	<ul style="list-style-type: none"> • This software provides the ISDN ISUP trunk options for the interaction of switches, the ISUP timer control and the optional redirecting number parameter.
<ul style="list-style-type: none"> • LEA Interchg NPAS LEAS FG.LEA00001 FGN.LEAS Toll 	<ul style="list-style-type: none"> • LEA Interchg NPAS LEAS provides for FCC/Bellcore North American Numbering Plan enhancements for LATA Equal Access to Non-Conforming End Switches through the Access Tandem.
<ul style="list-style-type: none"> • Line Music on Hold FG.MDC00001 FGN.MDC MDC Minimum 	<ul style="list-style-type: none"> • With this functionality, a single line or group of lines can be given a private music-on-hold audio source. A new line option, LMOH, will be provisionable on IBN, KSET, and ISDN lines and will be a set option for IBN, MBS and ISDN sets. Being in one customer group enables an organization to reap the benefits of a common dial plan and feature transparency within the organization. However, each business unit in a large organization may want to provide different music-on-hold sources to suit the preferences of different customers within the organization.
<ul style="list-style-type: none"> • LOC 15 Dgt Intl Dial FG.LOC00004 FGN.Intl 15-Dgt Dial 	<ul style="list-style-type: none"> • CCITT recommendations E.164 and E.165 require all public network switches to handle international telephone numbers up to 15 digits in length effective December 31, 1996. The 15-digit international number consists of a Country Code of 1 to 3 digits and a National (Significant) Number of up to 14 digits.
<ul style="list-style-type: none"> • M3900 Desktop Enhancements (Phase 2) FG.MSL00003 FGN. MSL IVD 	<p>This feature provides Icon Based Display Indication and Autodisplay Enhancements. With Icon-based Display Indication, M3904, M3905, Key-based Expansion Module, and Display-based Expansion Module display icons on the LCD displays located next to the DN (Directory Number) or feature keys:</p> <ul style="list-style-type: none"> • I-Ringing – This icon is displayed when the terminating Directory Number on an M3900 telephone set is being called. • I-Active – This icon is displayed after a call is established on an M3900 telephone set. • U-Active is displayed on secondary MADN M3900 series telephone sets when the Primary Directory Number has a call established on the MADN DN. • I-Hold is displayed when an M3900 user places a call on hold. • U-Hold is displayed on secondary MADN M3900 series telephones when the Primary Directory Number has answered and placed a call on hold. <p>With Autodisplay Enhancements, the number of keys on multi-line telephones and expansion modules that can be datafilled as DN's and provide the automatic display of Calling Line Identification is extended to include all keys. This capability is provided for the M3900, the M2000, and the M5000 series telephone sets.</p>

Table 112
SE07 Functionality listing (Sheet 28 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • M3900 Icon Based Display Indication FG.MSL00003 FGN.MSL IVD 	<ul style="list-style-type: none"> • Icon-based Display Indication on the M3900 Series display terminals and the Display-based Access Expansion Module is available with MSL12. The functions displayed are I-Ringing, I-Active, U-Active, I-Hold and U-Hold as described above.
<ul style="list-style-type: none"> • MDC Access Feature Grouping (AFG) and AFG Add Option FG.MDC00014 FGN.MDC MDC Tailored MDC 3 	<p>This functionality is included in the Service Order Simplification Feature Group and provides the capability of packaging both residential and business line features into logical groups which can be assigned to lines using a single Service Order prompt. It also provides the capability of defining feature key templates for business sets, eliminating the need to assign each key individually. In addition, it offers the following:</p> <ul style="list-style-type: none"> • Greater flexibility in formatting the calling party number for display on business sets. • Partitioning of various applications within the Power Features (PF) option, such as name programming and feature key definition. • Access to feature group definition tables for Customer Data Change using the Partitioned Table Editor. • Allows the administrator to add or delete features from a specific line by using simple SERVORD commands. <p>This feature supports MBS and IVD sets, except for Power Feature Options on IVD terminals.</p>
<ul style="list-style-type: none"> • MDC Access Feature Group (AFG) Enhancement FG.MDC00012 FGN.MDC Tailored MDC 1 	<ul style="list-style-type: none"> • This functionality provides enhancements to the Access Feature Group (AFG) feature. The new capabilities include the following: (1) additional line options supported by feature groups, (2) feature group support for business set options requiring assignment of dedicated key is provided, partitioning of various applications with Power Features (PF) option is provided, and access to feature group definition tables provided for CDC users using Partitioned Table Editor. <p>This feature supports both MBS and IVD sets, except for Power Feature options on IVD terminals.</p>
<ul style="list-style-type: none"> • MDC BNM Strn Admin FG.MDC00009 FGN.MDC MDC PRO 	<ul style="list-style-type: none"> • Business Network Management (BNM) allows a customer to monitor, control and administer their Meridian Digital Centrex and ISDN networks. BNM is currently implemented through appropriate software packages resident on the Meridian SL-100.
<ul style="list-style-type: none"> • MDC Line Capacity Increase FG.MDC00001 FGN.MDC MDC Minimum 	<ul style="list-style-type: none"> • This feature increases the maximum number of MDC lines to 100,000. The actual configuration can vary from switch to switch, subject to engineered capacities and feature limitations.
<ul style="list-style-type: none"> • MDC MBS Busy Indicator FG.MDC00007 FGN.MDC MBS Minimum 	<ul style="list-style-type: none"> • This functionality allows an Electronic Business Set (EBS) to monitor the busy/idle status of defined group of users, imitating a Busy Lamp Field.

248 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 29 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • MDC MBS-Call Name Disp FG.MDC00008 [OPT] FGN.MDC MBS Std. 	<ul style="list-style-type: none"> • This functionality enables the name of the calling or called party to be displayed on incoming and outgoing calls respectively. The customer can also assign names to MADN groups and to each secondary member of a MADN group. This allows every MADN member to be identified by a group name and a unique member name.
<ul style="list-style-type: none"> • MDC Copy Feature Set FG.MDC00014 FGN.MDC Copy Feature Set 	<ul style="list-style-type: none"> • Copy Feature Set is a Tailored Call Management feature that simplifies Service Orders. It provides the ability for the administrator to copy information from one LEN to another, such as line options, line class codes, Network Class of Service, customer group configurations, key assignments, etc. Copy Feature Set is available for MBS Terminals; however, it is not supported on IVD Terminals at this time.
<ul style="list-style-type: none"> • MDC MBS Inspect Key FG.MDC00012 FGN.MDC Tailored MDC 1 	<ul style="list-style-type: none"> • This software provides the capability for incoming call information, such as calling name and number, to be automatically displayed on Meridian Business Sets before the call is answered. It also provides the ability to display information about the feature keys and Directory Number (DN) keys on the set using the Inspect key. This feature supports both MBS and IVD sets; however, Power Feature interaction is not supported on the IVD sets. The features can be datafilled through SERVORD for IVD sets.
<ul style="list-style-type: none"> • MDC MBS-PIC Via SO FG.MDC00003 FGN.MDC-MDC Standard 	<ul style="list-style-type: none"> • Using SERVORD, allows PIC to be assigned on a per-line basis.
<ul style="list-style-type: none"> • MDC Call Hunting FG.MDC00009 FGN.MDC MDC PRO 	<ul style="list-style-type: none"> • This functionality automatically redirects a call from a busy Directory Number (DN) to another specified DN served by the same Meridian SL-100. This datafilled line option enables virtually any hunting-type pattern to be configured (compared with hunt-group options, which permit only sequential or circular patterns). Multiple lines can perform a series completion on the same DN.
<ul style="list-style-type: none"> • MDC CFB/D Split FG.MDC00003 FGN.MDC-MDC Standard 	<ul style="list-style-type: none"> • This software provides the capability for a user with Call Forward Busy Don't Answer to have calls forwarded to an independent forward Directory Number based on whether the incoming calls are in the same or different customer group.
<ul style="list-style-type: none"> • MDC CFD of CWT Calls FG.MDC00003 FGN.MDC-MDC Standard 	<ul style="list-style-type: none"> • This functionality gives users with Call Waiting and Call Forward Don't Answer assigned to their lines the added benefit of having calls that are enqueued against their busy station for a set period of time automatically overflow to a predetermined destination.

Table 112
SE07 Functionality listing (Sheet 30 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • MDC C Fwd Fraud Prevent FG.MDC00003 FGN.MDC Standard 	<ul style="list-style-type: none"> • This feature allows the Meridian SL-100 customer to define calling dial plans which cannot be assigned as forwarded-to DNs. The ability to override the restricted calling dial plans on a per-line basis will be provided. Also, the Meridian SL-100 customer will have the capability to set a limit to the number of times a forwarded-to DN in the list of overridden dial plans can be programmed (MDC00061).
<ul style="list-style-type: none"> • MDC CFX Enh Make Busy FG.MDC00003 FGN.MDC-MDC Standard 	<ul style="list-style-type: none"> • This functionality enhances the existing Call Forward Don't Answer station feature by providing new call treatment options when the forward-to destination is busy. In addition, this package modifies the operation of the Line-hunting Overflow to a Directory Number (LOD) option for hunt groups to interact with the Make Busy Key (MBK), Inhibit Line Busy (ILB) and Inhibit Make Busy (IMB) options. Thus, for hunt group members, the LOD option replaces the CFB and CFBL options which are used for lines that are not in hunt groups.
<ul style="list-style-type: none"> • MDC CLASS Name-MADN FG.MDC00004 [OPT] FGN.MDC CLASS on MDC H/W: NT6X78AB 	<ul style="list-style-type: none"> • This software allows for the delivery of the calling party's name and the current time and date to the Customer Premises Equipment (CPE) of members of a Multiple Appearance Directory Number (MADN) Single Call Arrangement (SCA) group using 500/2500 telephone sets. As is the case with Calling Name Delivery for residential users, the information is delivered between the first and second rings. This package assumes that name information is available and that the appropriate CLASS and Name Display software is present in the switch.
<ul style="list-style-type: none"> • MDC CLASS on MBS FG.MDC00004 [OPT] FGN.MDC CLASS on MDC H/W: NT6X78AB 	<p>This functionality enables CLASS Phase 1 and 2 features to be assigned to MBS users and to members of MADN Single Call Arrangement groups using either 2500 sets or MBS sets. CLASS 1 and 2 features include the following items:</p> <ul style="list-style-type: none"> • Automatic Recall (AR) • Distinctive Ringing/Call Waiting (DRCW) • Automatic Callback (ACB) • Selective Call Forwarding (SCF) • Calling Number Delivery (CND) • Selective Call Rejection (SCR) • Calling Number Delivery Blocking (CNDB) • Selective Call Acceptance (SCA) • Customer-Originated Trace (COT)

250 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 31 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • MDC CLASS on MDC FG.MDC00004 [OPT] FGN.MDC CLASS on MDC H/W: NT6X78AB 	<p>This functionality enables a wide range of CLASS features to be offered to MDC users with 2500 sets, including:</p> <ul style="list-style-type: none"> • Automatic Callback (ACB) • Automatic Recall (AR) • Calling Number Delivery (CND) • Calling Number Delivery Blocking (CNDB) • Dialable Number Delivery • Customer Originated Trace (COT) • Calling Name Delivery • Visual Message Waiting Indication
<ul style="list-style-type: none"> • MDC CLASS on MVP FG.MDC00004 [OPT] FGN.FGN. MDC CLASS on MDC H/W: NT6X78AB 	<ul style="list-style-type: none"> • This functionality enables CLASS features to be assigned to lines with an "IBN" Line CLASS Code. An MVP group consists of a set of business lines configured to use a public network dial plan and a subset of Meridian Digital Centrex features.
<ul style="list-style-type: none"> • MDC Cons Alarm Call Stat FG.MDC00002 FGN.MDC-MDC MSAC 	<ul style="list-style-type: none"> • This software modifies the Attendant Call Waiting feature by enabling two external signal distribution points to be activated on external alarm units or lamp panels.
<ul style="list-style-type: none"> • MDC Call Transfer Enh FG.MDC00003 FGN.MDC-MDC Standard 	<ul style="list-style-type: none"> • With this option programmed, an additional measure of security is added to the Call Transfer feature. This software prevents a situation where the controlling party can monitor a conversation without the knowledge of the other two parties. When a three-way call is established, if this functionality is properly assigned, a ring burst is given to the non-controlling parties to indicate that the controller is still connected to the call. From this point, the call is monitored for the controller's disconnect. When this occurs, a dial tone burst is given to the non-controlling parties to notify them of the controller's exit.
<ul style="list-style-type: none"> • MDC COT Feature Key Access (MBS Key) FG.MDC00004 FGN.MDC CLASS on MDC 	<ul style="list-style-type: none"> • This feature allows a subscriber to activate the CLASS feature COT by pressing a key even while the call is in talking state. It also allows an ACD agent the ability to activate COT by pressing a key while the agent is in talking state. The CLASS OPT (MSL00107) is a requirement of this feature (MDC00063).
<ul style="list-style-type: none"> • MDC Cut Thru-dial FG.MDC00003 FGN.MDC-MDC Standard 	<ul style="list-style-type: none"> • This functionality allows the switch to process calls in a cut through mode for the 500/2500 type sets, ACs, trunks, MBSs and DDU served by new peripherals. It also decreases the work load of attendants in customer groups where access to certain routes is restricted to the attendant.

Table 112
SE07 Functionality listing (Sheet 32 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • MDC Dir Call Prk2500/MBS FG.MDC00003 FGN.MDC-MDC Standard 	<ul style="list-style-type: none"> • This functionality allows 2500 and Electronic Business Sets the capability to park a call to any dialed Directory Number.
<ul style="list-style-type: none"> • MDC DISA 3rd Dial Tone FG.MDC00003 FGN.MDC-MDC Standard 	<ul style="list-style-type: none"> • This functionality allows the option of providing dial tone to DISA users after they dial an access code. Since directly connected stations receive dial tone at this point, this software provides a consistent dialing sequence for end users.
<ul style="list-style-type: none"> • MDC Display Features FG.MDC00007 FGN.MDC MBS Minimum 	<ul style="list-style-type: none"> • This functionality provides the display capabilities for the Electronic Business Sets. Although no tables are generated by this package, it is required to datafill display capabilities in the IBN tables.
<ul style="list-style-type: none"> • MDC Dist CWT Ringback FG.MDC00003 FGN.MDC-MDC Standard 	<ul style="list-style-type: none"> • This software provides a distinctive call waiting ringback tone when programmed on the terminating line.
<ul style="list-style-type: none"> • MDC Dist CWT Ringback FG.MDC00008 [OPT] FGN.MDC MBS Std. H/W: NT9X76AA, NT9X77AA, NTEX22BB 	<ul style="list-style-type: none"> • This functionality provides Multiple Appearance Directory Number (MADN) Single Call Arrangement (SCA) groups with two ringing options: Abbreviated, where the line appearance rings from call termination until the timer expires; and Delayed, where the line appearance rings after the timer expires. These ringing options enable MADN group members to ensure that if a member (with abbreviated option) whose set rings, but does not answer the call, that the ring will be forwarded to another member (with delayed option) after a datafillable amount of time. As a result, users are assured of thorough telephone-answering coverage.
<ul style="list-style-type: none"> • MDC Direct Station Select (DSS) / Busy Lamp Field (BLF) per line FG.MDC00013 FGN.MDC Tailored MDC 2 	<p>This functionality provides new Attendant Console style functions to the Meridian Business Set (MBS) and Integrated Voice Data (IVD) terminals by providing direct station selection and a busy lamp field.</p> <p>It provides an optional key feature to provide the Busy Lamp Field/ Direct Station Select capabilities for MBS and IVD Terminals. The following is a summary of the functionalities supported by the feature:</p> <ul style="list-style-type: none"> • Busy Lamp Field – To allow users to monitor station status of a Directory Number through the use of MBS or IVD lamp states. • Direct Station Select – To provide direct dialing to a monitored DN by means of the feature key. <p>This feature supports both MBS and IVD sets.</p>

252 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 33 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • MDC DSS/BLF-Set Based FG.MDC00015 FGN.MDC Tailored MDC 4 	<p>This software provides the set-based Busy Lamp Field/Direct Station Select (SBLF/DSS) capabilities for Meridian Business Sets (MBS) and Integrated Voice/Data (IVD) terminals. The following is a summary of the functionalities supported by the feature:</p> <ul style="list-style-type: none"> • Set Busy Lamp Field – To allow users to monitor the busy/idle state of a monitored set through the use of MBS or IVD lamp states. • Direct Station Select – To provide direct dialing to one of the monitored DN's (which will be referred to as the DSS DN) by means of the feature key. <p>This line feature is datafilled as SBLF in Service Order, and it can only be assigned to a key which has an associated lamp. It can also be assigned via Power Features on MBS sets. This feature supports both MBS and IVD sets only; however, Power Feature interaction is not supported on the IVD sets.</p>
<ul style="list-style-type: none"> • MDC Dyn Attendant Console OMs FG.MDC00002 FGN.MDC-MDC MSAC 	<ul style="list-style-type: none"> • This functionality provides a monitor level to the MAP to allow display of information about an individual Attendant Console. It also measures the Attendant Console activities and provides the capability to display the current measurements at a MAP.
<ul style="list-style-type: none"> • MDC EBO Enh-EBO on MADN FGN.MDC00009 FGN.MDC MDC PRO 	<ul style="list-style-type: none"> • This functionality enables a caller with the Executive Busy Override (EBO) feature to interrupt a busy MADN party.
<ul style="list-style-type: none"> • MDC EBS – Music On Hold FG.MDC00008 [OPT] FGN.MDC MBS Std. 	<ul style="list-style-type: none"> • MDC EBS – Music on Hold extends the music on hold capability to calls that terminate on MBSs. When a call is put on hold, the caller hears music, announcement, silence, or a combination of the three treatments.
<ul style="list-style-type: none"> • MDC End User Trunk Test FG.MDC00009 FGN.MDC MDC PRO 	<ul style="list-style-type: none"> • This functionality is for use by customers whose business networks use private trunks and are not available to customers using Virtual Facility Groups.
<ul style="list-style-type: none"> • MDC Eng CFX FG.MDC00003 FGN.MDC-MDC-Standard 	<ul style="list-style-type: none"> • This software allows a Meridian SL-100 user to activate Call Forwarding to their last "Forwarded To" Directory Number.
<ul style="list-style-type: none"> • MDC Enhanced Electronic Business Set (EBS) Svc FG.MDC00008 [OPT] FGN.MDC MBS Std. 	<ul style="list-style-type: none"> • This functionality enables a Multiple Appearance Directory Number (MADN) Single Call Arrangement (SCA) with bridging options to establish a three-way call during a bridged state. Previously, a MADN SCA with bridging options could not activate three-way calling during a bridged state.
<ul style="list-style-type: none"> • MDC Enhanced UCD FG.MDC00009 FGN.MDC MDC PRO 	<ul style="list-style-type: none"> • This software enhances the existing Uniform Call Distribution (UCD) feature to provide UCD for 2500 sets, Login Key for EBS sets, a distinctive ring for UCD calls and a monitoring key for sets.

Table 112
SE07 Functionality listing (Sheet 34 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> MDC Enhanced WATS FG.MDC00034 FGN.Enhanced WATS 	<ul style="list-style-type: none"> This functionality provides expanded capabilities to outward Wide Area Telecommunications Service (WATS) in the Meridian Digital Centrex environment. The enhancements introduced by this package are designed to allow the central office to provide better service to WATS subscribers and to the carriers that offer WATS.
<ul style="list-style-type: none"> MDC Enh Auto RTE Sel FG.MDC00009 FGN.MDC MDC PRO 	<ul style="list-style-type: none"> This functionality allows users to access IDDD by ARS through the Meridian SL-100 user's private network. Enhanced ARS also provides enhanced routing capabilities and allows the Meridian SL-100 user to regulate access to IDDD calls at any point within the private network.
<ul style="list-style-type: none"> MDC Enh Bus Svcs FG.MDC00001 FGN.MDC-MDC Minimum 	<ul style="list-style-type: none"> This functionality enhances the station, Attendant Console and Electronic Business Set features available on the Meridian SL-100.
<ul style="list-style-type: none"> MDC Enh Call Waiting FG.MDC00001 FGN.MDC-MDC Minimum 	<ul style="list-style-type: none"> This functionality provides call waiting for conference calls and the ability to disallow call waiting during a telephone call.
<ul style="list-style-type: none"> MDC Enh Dial Plan FG.MDC00001 FGN.MDC-MDC Minimum 	<ul style="list-style-type: none"> This software permits intercom dialing between 500/2500 stations.
<ul style="list-style-type: none"> MDC Enh Service Order FG.MDC00003 FGN.MDC-MDC Standard 	<ul style="list-style-type: none"> This functionality allows a group speed-call controller to be changed without removing and then reentering all the speed-call members. This feature also automates the process of deleting all feature data associated with the old Line Equipment Number (LEN) of an Electronic Telephone Set, M2000/M3000 Digital Telephone, or Data Unit and adding the data to the new LEN. Additional Service Order enhancements are also included.
<ul style="list-style-type: none"> MDC ESN Detail Record FG.MDC00009 FGN.MDC MDC PRO 	<ul style="list-style-type: none"> This functionality provides Bellcore AMA enhanced translations, CCSA line option, CCSA VFG option, customer dialed account recording and other features.
<ul style="list-style-type: none"> MDC ESN/MSN FG.MDC00009 FGN.MDC MDC PRO 	<ul style="list-style-type: none"> ESN Network Class of Service Feature, ESN Network Information Signals Feature and ESN Network Wide Automatic Route Feature are provided by this functionality. They enable an effective use of available network resources through the use of routing strategies. They provide proprietary signaling for compatibility between the Meridian SL-100 and a switch which functions as an ESN node, a Meridian 1 which functions as an ESN main, a Meridian 1 which functions as an ESN node and a conventional PBX.

254 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 35 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • MDC Exec Conference Meet Me Enhancement FG.MDC00009 FGN.MDC MDC PRO 	<ul style="list-style-type: none"> • This functionality expands the Meet Me Conference from 30 to 150 conferees.
<ul style="list-style-type: none"> • MDC IBN Basic FG.MDC00001 FGN.MDC-MDC Minimum 	<ul style="list-style-type: none"> • This functionality supports basic Attendant Console and station features. It also offers an NSS Propagate Answer Back feature.
<ul style="list-style-type: none"> • MDC IBN CDC FG.MDC00009 FGN.MDC MDC PRO 	<ul style="list-style-type: none"> • This functionality makes it even more convenient for end users to control and configure their stations by permitting multiple end users to schedule Service Orders, in the BNM expert mode, for future activation dates.
<ul style="list-style-type: none"> • MDC IBN – Hospital FG.MDC00002 FGN.MDC MDC MSAC 	<ul style="list-style-type: none"> • This software contains the Do Not Disturb feature.
<ul style="list-style-type: none"> • MDC IBN ISUP Netinfo FG.MDC00005 [OPT] FGN.MDC MBG Min H/W: NT9X76AA, NT9X77AA, NTEX22BB 	<ul style="list-style-type: none"> • This functionality allows IBN ISUP signaling between a DMS-250 switch and a Meridian SL-100 PBX or between two Meridian SL-100 PBXs.
<ul style="list-style-type: none"> • MDC IBN Preset Conference FG.MDC00003 FGN.MDC-MDC Standard 	<ul style="list-style-type: none"> • This functionality allows a station, a trunk, or an Attendant Console to establish a preset conference with up to 25 conferees by dialing a specific preset conference Directory Number.
<ul style="list-style-type: none"> • MDC Individual Console OMs FG.MDC00002 FGN.MDC-MDC MSAC 	<ul style="list-style-type: none"> • This functionality enhances the OM system by collecting and displaying OM data on individual ACs and gives the ACs separate peg counts for each Listed DN assigned in a console customer group.
<ul style="list-style-type: none"> • MDC HUNTGRP SERVORD SIMPLIFICATION FG.MDC00003 FGN.MDC-MDC Standard 	<ul style="list-style-type: none"> • This software simplifies Service Order procedures for hunt groups by allowing the changing and mixing of the Line Class Code (LCC) of a hunt group member. <p>This functionality also allows the automatic assignment of hunt group numbers from a range designated and reserved by the user to Directory Number hunt groups, even though the group numbering feature control is activated on a switch-wide basis.</p>

Table 112
SE07 Functionality listing (Sheet 36 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • MDC Large Meet-Me (30) Conference FG.MDC00003 FGN.MDC-MDC Standard 	<ul style="list-style-type: none"> • This functionality provides the capability to datafill a station with the capability to support conferences larger than three ports.
<ul style="list-style-type: none"> • MDC Loudspkr Page Answer FG.MDC00003 FGN.MDC-MDC Standard 	<ul style="list-style-type: none"> • This feature enhances and simplifies Loudspeaker Paging by allowing the paging party to confer with the paged party before connecting them to the calling party and by allowing the paged party to answer a call by entering only an answerback access code and one-digit index.
<ul style="list-style-type: none"> • MDC Multilocation Business Group (MBG)-GAP FG.MDC00005 [OPT] FGN.MDC MBG Min 	<ul style="list-style-type: none"> • This software allows a Multilocation Business Group to include stations that are not allowed to receive Direct Inward Dial (DID) calls.
<ul style="list-style-type: none"> • MDC MBS FG.MDC00007 FGN.MDC MBS Minimum 	<p>This functionality provides basic Business Set features for the Electronic Business Set and the M2000 and M3000 series of digital sets. Features provided include the following items:</p> <ul style="list-style-type: none"> • Auto Answer Back • Automatic Dial • Automatic Line • Automatic Line and Multiple Appearance Directory Number • Busy Override • Call-Back Queuing • Call Forward • Call Park • Call Pickup • Call Waiting • Call Waiting-Originating for Business Sets • End-to-End Signaling • Feature Code Access • Group Intercom • Intercom • Make Set Busy • Malicious-Call Hold • Multiple Appearance Directory Number • Ring Again • Six-Port Conference • Speed Calling • Three-Way Calling/Call Transfer

256 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 37 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • MDC 2500/MBS Security Code FG.MDC0001 FGN.MDC-MDC Minimum 	<ul style="list-style-type: none"> • This functionality allows a variable length code to be assigned to a valid Integrated Business Network (IBN) station Directory Number. This code can then be used to restrict feature activation associated with this DN.
<ul style="list-style-type: none"> • MDC MBS Camp-on FG.MDC0012 FGN.MDC Tailored MDC 1 	<ul style="list-style-type: none"> • This functionality improves the call handling functionality of the MBS by enabling a user, when transferring a call, to place the calling party on hold, until the called party is free. If the called party does not answer the waiting call, then the MBS that extended the call is automatically recalled by the calling party. <p>Auto Display for MBS (and IVD) sets provides the capability for incoming call information to be automatically presented on the display of MBS sets as calls are presented to the set. If the set is active with a call when a new call arrives, the new incoming call information overwrites the active call's display information.</p> <p>This functionality also provides the capability for incoming call information to be automatically presented on the display of MBS sets as calls are presented to the set. If the set is active with a call when a new call arrives, the new incoming call information overwrites the active call's display information.</p> <p>Station Camp-on from a Meridian Business Set (MBS) or an Integrated Voice Data set (IVD) allows a small business customer to use an MBS as an Attendant Console, with the ability to camp-on busy lines in the customer group. Camp-on from an MBS or IVD allows a line with the feature to extend a call to a busy line. If the party called does not answer the waiting call, a time out will occur and the call will return to the phone.</p> <p>This feature supports both MBS and IVD sets; however, Power Feature interaction is not supported on the IVD sets. The features can be datafilled through SERVORD for IVD sets.</p>
<ul style="list-style-type: none"> • MDC MBS Call Forward Universal (CFU) Per Key FG.MDC0008 [OPT] FGN.MDC MBS Std. 	<ul style="list-style-type: none"> • This functionality allows each DN on MBS or IVD sets to be forwarded to a different DN. Power Feature integration is not supported on the IVD set. The feature can be datafilled for IVD sets through SERVORD.
<ul style="list-style-type: none"> • MDC MBS/Emergency Service Bureau (ESB) Compat. FG.MDC0003 FGN.MDC-MDC Standard 	<ul style="list-style-type: none"> • This functionality provides the Emergency Service Bureau (ESB) with Automatic Number Identification (ANI) when a Meridian SL-100 user dials 911, 9911, or another number to report an emergency.

Table 112
SE07 Functionality listing (Sheet 38 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> MDC MBS Fast Transfer FG.MDC00013 FGN.MDC Tailored MDC2 	<ul style="list-style-type: none"> This software provides a “fast transfer” enhancement for the MBS. Fast transfer reduces the number of key strokes required for a user to transfer a call, and provides a capability for the Meridian Business Set to transfer a call without conferencing the parties. This requires fewer keystrokes than a call transfer performed using the Three-Way Calling feature. This feature is an enhancement to Transfer on Release, which decreases the time to transfer a call. This feature supports MBS sets. With Feature AD7658, this feature also supports IVD terminals.
<ul style="list-style-type: none"> MDC MBS Installer Tools FG.MDC00013 FGN.MDC Tailored MDC 2 	<ul style="list-style-type: none"> This feature extends the Query LEN software to installers and users of MBS sets. It allows the verification of the LEN and through Power Features the assignment of feature keys from the MBS. Installers can complete many station-based feature changes without having the administrator make the change. An identification and password must be entered in order to perform the following: (1) add, delete, modify any station feature available from the Power Features unrestricted menu, (2) perform on-site semi-automated MBS installation and testing, and (3) invoke the Inspect LENS function. Power Features require a display set, such as the M5000 terminals, or the MFT sets with softkeys. ISDN functional sets are excluded. This feature currently supports MBS sets with display only.

258 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 39 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> MDC MBS Interactive Display FG.MDC00013 FGN.MDC Tailored MDC-2 	<p>With this functionality, users of Meridian Business Sets with display can program their own sets so that their names are directly associated with their individual Directory Numbers. This capability was previously administrated only through the SERVORD system. This feature manages the various applications that can be accessed from an MBS Set. It provides the following enhancements to Power Features:</p> <ul style="list-style-type: none"> Partitioning of the various PF applications within PF so they are optionally accessible depending on the packaging information obtained from Feature Group Data. MMI Enhancements as follows: <ul style="list-style-type: none"> —Defining French. —Creation of a single feature/application list. —Extending the number of list elements available in a list. —Supplying better feedback when exiting PF through a DN key depression. —Extending the Dial-By-Feature-Name set. Feature group data packages feature data together for terminals which have similar feature sets. This allows for several phones to share the same common data, rather than each of them having their own characteristics defined. <p>This feature supports MBS sets only.</p> <p>The Terminal Management Environment (TME) key can be added to a business with display. Access to the TME can be through a key or code access. Terminal Management provides the end-user with an environment that integrates applications, providing new functionality in the areas of Set Operation and Set Control of available services. TME supports the Meridian Feature Transparency (MFT) terminal (M5317T).</p> <p>This new display environment is accessed using a single key on a Meridian Business Set, equipped with a 2x24 character display. This is a minimum requirement. The key has been labeled as the TME Key for the Terminal Management Environment. Once the TME key has been pressed, the user is provided with the first line of a MENU. At this point the user can choose to traverse the displayed menus using softkeys to a specific application of his choice.</p> <p>This feature supports MBS sets only.</p>
<ul style="list-style-type: none"> MDC MBS Msg Center FG.MDC00007 FGN.MDC MBS Minimum 	<ul style="list-style-type: none"> This functionality permits an EBS to operate as a message center.

Table 112
SE07 Functionality listing (Sheet 40 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • MDC MBS Power Feature Name Programming FG.MDC00013 FGN.MDC Tailored MDC 2 	<ul style="list-style-type: none"> • This functionality provides name programming capability for Power Features (PF). A user can change the network specific name associated with their DN from their set or a designated administrator set. It also provides code access for PF and a global command for enabling/disabling PF. Although PF has been developed for M5000 display sets, administrators can enter DNs not on their set; therefore, a user is allowed to enter DNs for sets other than the M5000 display set. <p>This functionality supports MBS or M5000 sets only.</p>
<ul style="list-style-type: none"> • MDC MDC Class FG.MDC00004 [OPT] FGN.MDC CLASS on MDC H/W: NT6X78AB 	<ul style="list-style-type: none"> • This software offers the following CLASS Phase 1 services to Meridian SL-100 customers with 2500 sets: Automatic Call Back (ACB), Automatic Recall (AR), Calling Number Delivery (CND), Calling Number Delivery Blocking (CNDB), Customer Originated Trace (COT) and Dialable Directory Number (DDN). End users can use these CLASS services in a CCS7 network while preserving their private Meridian SL-100 characteristics, such as a private dialing plan (n digits), private trunking between two locations and customer group features. This functionality also offers enhancements to both incoming and outgoing call memory. Call memory is used to retain data about the last incoming and last outgoing call from a particular subscriber's line.
<ul style="list-style-type: none"> • MDC Meridian Disp Com. FG.MDC00007 FGN.MDC MBS Minimum 	<ul style="list-style-type: none"> • This functionality modifies the existing MWT and CRR features by enabling a Meridian SL-100 user with an EBS display to examine and manipulate call requests that are queued at the user's set. It also enables queued messages on a user station to be maintained after a cold restart and enables queued messages on a user station to be maintained after a software upgrade.
<ul style="list-style-type: none"> • MDC MSAC Enhancements FG.MDC00002 FGN.MDC-MDC MSAC 	<ul style="list-style-type: none"> • This functionality speeds up the processing of incoming calls to Attendant Consoles (ACs). It allows calls to be answered without depressing a loop key when an AC has all loops idle and there are calls waiting in the queue. This package also allows Meridian SL-100 AC operators to log into and log out from a Meridian SL-100.
<ul style="list-style-type: none"> • MDC Msg Service Basic FG.MDC00003 FGN.MDC-MDC Standard 	<ul style="list-style-type: none"> • This software provides 500/2500, Electronic Business Sets, Digital Sets and Attendant Consoles the capability of message waiting services. The Message Center feature in this package allows an incoming trunk call, or an internal call, or both, to automatically route to a Message Center if the call is not answered at the original destination. The called station can be provided with an audible or visual indication that a message is waiting and can retrieve messages by directly accessing the Message Center. Another feature in this package provides a message indicator on Electronic Telephone Sets (ETs) in the form of a Message Waiting Lamp to indicate that a message is waiting at the Message Center. The Message Waiting ETS (Electronic Telephone Set) feature in this package allows users to dial a Message Center Directory Number (MCDN) to retrieve messages. Distinct message waiting light and call request retrieval/call forwarding interaction are other features also available in this package.

260 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 41 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> MDC Multi-Bilingual Console FG.MDC00002 FGN.MDC-MDC MSAC 	<ul style="list-style-type: none"> With this functionality the Attendant Console can be supplied with a display in a flexible format so that languages other than English can be provided.
<ul style="list-style-type: none"> MDC Name/Number Blocking FG.MDC00033 [OPT] FGN.MDC Name/DN Blkng. H/W: NT6X78AB 	<ul style="list-style-type: none"> This functionality allows users to control the display of their DN or their name and number at a terminating station on a per-call basis. CNNB is activated by dialing an access code and it is available to users whether their telephone has Calling Name Delivery or Calling Number Delivery assigned. This software supports name and number delivery blocking for MBS and IVD sets.
<ul style="list-style-type: none"> MDC Network Access Registers FG.MDC00016 FGN.MDC Tailored NARS 	<ul style="list-style-type: none"> This feature provides the ability for a peg count to be used to set the maximum volume of traffic between the Meridian SL-100 and an MDC group. It provides additional data fields within the common block translations tables with additional flagging and routing capabilities based on required and provisioned overflows. It offers reduction in translations efforts to provide NARS. <p>This feature supports both MBS and IVD sets.</p>
<ul style="list-style-type: none"> MDC Network Attendant Svc FG.MDC00006 [OPT] FGN.MDC MBG Std. H/W: NT9X76AA, NT9X77AA, NTEX22BB 	<ul style="list-style-type: none"> This functionality enhances the Attendant Console position by extending the attendant's ability to verify busy lines on any node within the attendant's network. It also enables the Attendant Console position to display the Directory Number and Network Class of Service of an incoming call from any node within the attendant's network. This feature does not include Release Line Trunk functionality.
<ul style="list-style-type: none"> MDC Network Msg Svc FG.MDC00006 [OPT] FGN.MDC MBG Std. H/W: NT6X50AB, NTBX01AB 	<ul style="list-style-type: none"> This functionality permits the calling party number information from both ISDN User Part (ISUP) and Primary Rate Interface to interwork with the SMDI interface. This capability allows users with extensive ISUP and/or Primary Rate Interface deployment to supply enhanced service providers with a network-wide reach for calling and called party identity for use in delivering a range of Intelligent Network services.
<ul style="list-style-type: none"> MDC Network Name Display FG.MDC00006 [OPT] FGN.MDC MBG Std. 	<ul style="list-style-type: none"> Network Name Display is an enhanced service that displays on a Meridian Business Set (MBS) with display the calling and called names sent between multiple nodes. This functionality requires that the originating and terminating parties be connected through CCS7 trunk circuits. In addition, MDC Net Name Disp enables the Attendant Console to display the name of a calling party served by any node within the attendant's network that is: equipped with the Network Attendant Services software package (MDC Net Number Disp), provisioned with the appropriate CCS7 hardware and software and connected to the CCS7 network.

Table 112
SE07 Functionality listing (Sheet 42 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • MDC Network Number Display FG.MDC00006 [OPT] FGN.MDC MBG Std. H/W: NT9X76AA, NT9X77AA, NTEX22BB 	<ul style="list-style-type: none"> • This functionality enhances the existing display capabilities to provide identical services across a CCS7 network as in single node call continuation. The Meridian Business Sets with Display feature is enhanced by providing the capability to format a calling party's number to be consistent with the customer's dial plan. It also enables the user to show the Directory Number of calling and called parties, even through redirection.
<ul style="list-style-type: none"> • MDC Network Speed Call FG.MDC00003 FGN.MDC MDC PRO 	<ul style="list-style-type: none"> • This functionality allows a customer to define a Network Speed Calling list by using the switch Table Editor through a MAP. The NSC list can be changed only from the MAP.
<ul style="list-style-type: none"> • MDC Non-data Link Console FG.MDC00003 FGN.MDC-MDC Standard 	<ul style="list-style-type: none"> • This functionality distributes calls evenly to a customer that employs multiple non-data link Attendant Consoles. Calls are presented to attendant positions in the same sequence in which they arrive at the Meridian SL-100 switch. Calls that are not completed immediately upon arrival at the switch are queued by the Meridian SL-100 up to a customer-specified maximum.
<ul style="list-style-type: none"> • MDC Network Ring Again (NRAG) FG.MDC00006 [OPT] FGN.MDC MBG Std. H/W: NT9X76AA, NT9X77AA, NTEX22BB 	<ul style="list-style-type: none"> • This functionality provides CCS7 services, which allow a customer who encounters a busy station anywhere in his customer group to automatically call that station again. Upon receiving busy tone, the caller can invoke the feature and hang up. Call setup is renewed when both stations become available.
<ul style="list-style-type: none"> • MDC Outgoing Restriction Ctrl FG.MDC00009 FGN.MDC MDC PRO 	<ul style="list-style-type: none"> • This software provides designated Attendant Consoles and stations with the ability to place origination restrictions on stations within their customer group.
<ul style="list-style-type: none"> • MDC Power Audit Trails FG.MDC00013 FGN.MDC Tailored MDC 2 	<ul style="list-style-type: none"> • This activity provides the ability to generate Journal File entries and log reports when an end-user uses the Power Feature to change the features or attributes associated with their set. It enables the Meridian SL-100 user to selectively record all ICO changes. The Journal File and Log File records identify ICO as the change originator, as well as the Directory Number effecting the changes. This provides a record for security or billing purposes. <p>Features supported by Power Features and enhanced Call Forward options include: Call Pickup, Message Waiting, Power Feature Key Assignment and Security Lock.</p> <p>This feature supports MBS sets only.</p>
<ul style="list-style-type: none"> • MDC Preset Conference Maximum FG.MDC00009 FGN.MDC MDC PRO 	<ul style="list-style-type: none"> • This software modifies the Preset Conference feature by enabling up to 30 conferees to be included in an IBN preset conference.

262 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 43 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> MDC Priority Attendant Console Alert FG.MDC00002 FGN.MDC-MDC MSAC 	<ul style="list-style-type: none"> This functionality allows an attendant to be alerted to an enqueued emergency call while the console is either idle, active on a call, set to position busy, or forwarded to Night Service.
<ul style="list-style-type: none"> MDC Secondary MADN CFW FG.MDC00008 [OPT] FGN.MDC MBS Std. 	<ul style="list-style-type: none"> This functionality provides the capability for secondary MADN members to activate and deactivate call forwarding from their sets, regardless of whether the secondary MADN member is served by an EBS or 500/2500 set.
<ul style="list-style-type: none"> MDC Service Analysis FG.MDC00009 FGN.MDC MDC PRO 	<ul style="list-style-type: none"> This functionality provides a service analysis observation system that is designed to appraise the quality of service provided by the Meridian SL-100 and its personnel. By random monitoring Meridian SL-100 user dialed, operator dialed and operator assisted calls to evaluate the service being provided by a particular switch and the surrounding switching network, service analysis can detect such problems as the mis-routing of a call due to internal problems, or poor quality of the talking connection due to problems in transmission facilities.
<ul style="list-style-type: none"> MDC Service Order Simplification FG.MDC00012 FGN.MDC Tailored MDC-1 	<ul style="list-style-type: none"> This software enables a customer to package individual business features into a logical group and then, with a single Service Order command, to assign that group of features to a line. Removing the need to assign each feature to each line not only simplifies the Service Order process, but also ensures uniform feature assignment over a group of lines.
<ul style="list-style-type: none"> MDC Single Line Queue for Mini-Console FG.MDC00015 FGN.MDC Tailored MDC 4 	<ul style="list-style-type: none"> The Single Line Queuing (SLQ) feature provides the users of the Meridian Business Set (MBS) and the Integrated Voice Data (IVD) set the ability to queue calls against a single Directory Number (DN). The intention is to provide a simple queue capability for the single Directory Number. Upon calling a line with SLQ active, the caller will hear audible ringing, audible announcement, or busy treatment if there are no available queue slots and there is no overflow route available. This feature will also provide functionality to allow camp-on, park and transfer interactions from the SLQ agent position. <p>This feature supports both MBS and IVD sets.</p>
<ul style="list-style-type: none"> MDC SMDR FG.MDC00003 FGN.MDC-MDC Standard 	<ul style="list-style-type: none"> An Electronic Switched Network (ESN) answer supervision generation feature is made available with this software. This allows a customer to use the Meridian SL-100 Audio Tone Detector (ATD) to detect a voice answer on trunks that do not return answer supervision. True answer (that is, detected answer) is then reflected in the SMDR. This feature provides a SMDR formatted record of chargeable calls for each customer group. Many call types and other message detail information can be specified for recording at the customer group level. In addition, this package allows the Meridian SL-100 customer group to record the incoming and outgoing trunk identifiers along with the usual billing information provided by the SMDR.

Table 112
SE07 Functionality listing (Sheet 44 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • MDC SMDR Data Access FG.MDC00009 FGN.MDC MDC PRO 	<ul style="list-style-type: none"> • This functionality provides a one-way data transfer of Station Message Detail Recording (SMDR) information from the Meridian SL-100 to any Downstream Processor which can support the necessary protocol. This package offers a more versatile way of obtaining call records information than on tape files of disks. The result is immediate and the process is unrestricted by any start or stop events that are currently applied to tapes and disks.
<ul style="list-style-type: none"> • MDC SMDR – Enhanced FG.MDC00003 FGN.MDC-MDC Standard 	<ul style="list-style-type: none"> • This functionality, in conjunction with SMDR, provides the basic requirements for SMDR. A recent enhancement made to this package is NC0301, SMDR Console Transfer Billing. This feature provides a separate record for each party involved on an incoming toll call from a trunk group, assuming that the Meridian SL-100 is an SMDR switch.
<ul style="list-style-type: none"> • MDC SMDR From BCR AMA FG.MDC00009 FGN.MDC MDC PRO 	<ul style="list-style-type: none"> • This functionality allows the Bellcore (BCR) Automatic Message Accounting (AMA) records that are applicable for groups to be derived when processing the AMA data.
<ul style="list-style-type: none"> • MDC SSP PVN FG.MDC00011 FGN.MDC PVN 	<ul style="list-style-type: none"> • In the current implementation of Private Virtual Network (PVN), the number of dialed digits included in the Transaction Capabilities Application Part (TCAP) query launched from an SSP is fixed to seven or ten digits in length. This functionality streamlines deployment by allowing the number of digits in the query to match the number of subscriber dialed digits.
<ul style="list-style-type: none"> • MDC Station Specific Authorization Codes FG.MDC00003 FGN.MDC-MDC Standard 	<ul style="list-style-type: none"> • This software provides the capability to limit an authorization code to specific stations. While the standard authorization code feature is considered a “system” feature, this entry is datafilled into the station feature tables.
<ul style="list-style-type: none"> • MDC Superset FG.MDC00001 FGN.MDC MDC Minimum 	<ul style="list-style-type: none"> • The IBN Superset features allows IBN lines and 2500 sets dial access to features.
<ul style="list-style-type: none"> • MDC Teen Service FG.MDC00035 FGN.Teen Service 	<ul style="list-style-type: none"> • This functionality provides Teen Service capability on lines equipped with the IBN line class code. Teen Service permits multiple Directory Numbers to be assigned to a single line without additional line equipment. Distinctive ringing patterns enable Meridian SL-100 users to screen calls terminating to the Primary Directory Number (PDN) and to the Secondary Directory Number(s) (SDN) on the same line.
<ul style="list-style-type: none"> • MDC Term Billing Option FG.MDC00009 FGN.MDC MDC PRO 	<ul style="list-style-type: none"> • The Terminating Billing Option feature (TBO) allows the user to make an Automatic Message Accounting (AMA) record when a call terminates to a line or through a Virtual Facility Group (VFG). Thus, the user can assess access charges per termination for these calls.

264 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 45 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> MDC Time of Day (TOD) NCOS FG.MDC00009 FGN.MDC MDC PRO 	<ul style="list-style-type: none"> This functionality allows normal Class of Service (COS) values to be mapped onto new values that are based on the time of day, the day of the week, or the day of the year.
<ul style="list-style-type: none"> MDC Time of Day (TOD) Routing FG.MDC00009 FGN.MDC MDC PRO 	<ul style="list-style-type: none"> This functionality enables cost-effective use of facilities by allowing or denying route choices based on the time of day.
<ul style="list-style-type: none"> MDC TRK Verif Desig STN FG.MDC00009 FGN.MDC MDC PRO 	<ul style="list-style-type: none"> This software allows a technician the capability to perform trunk testing from a 2500 set or Electronic Business Set with the proper NCOS.
<ul style="list-style-type: none"> MDC Trunk Queuing FG.MDC00003 FGN.MDC-MDC Standard 	<ul style="list-style-type: none"> With this functionality, trunk route lists are automatically searched for an idle outgoing trunk. The trunk route lists consists of one through eight elements (linked together) with each element usually containing the identity of a trunk group from which an idle outgoing trunk is selected. When an idle outgoing trunk is available, the call is processed in the normal manner. In addition, this software provides: a station user encountering an all trunks busy condition the option of being notified when a trunk becomes idle and being automatically connected to the called number, enhancements to Call Back Queuing (CBQ), an optional warning tone to indicate the selection of an expensive route, off-hook queuing enhancements and a new capability so when a call that cannot be completed because an idle outgoing trunk is not available among the least - cost route set can wait off-hook for an idle trunk and then when an outgoing trunk becomes available progresses the call in the normal manner.
<ul style="list-style-type: none"> MDC VAPN (FGD) FG.MDC00006 [OPT] FGN.MDC MBG Std. 	<ul style="list-style-type: none"> With this functionality, a Meridian SL-100 switch becomes a LATA-wide concentrator and single access point for network services. From any customer location with any type of telephone service (Centrex, POTS, or PBX), private network traffic routes to the Meridian SL-100 over public trunking.
<ul style="list-style-type: none"> MDC Variable Speed Call Access FG.MDC00001 FGN.MDC-MDC Minimum 	<ul style="list-style-type: none"> This functionality allows the user of a MBS or Unity 500/2500 type set to dial Speed Call access codes and Speed Call abbreviation codes without using the asterisk (*) prefix. It also allows the user of a dial pulse set to dial Speed Call access codes and Speed Call abbreviation codes without dialing "Y", the dial pulse equivalent of the asterisk.
<ul style="list-style-type: none"> MDC Virtual Facility Group (VFG) Look Ahead FG.MDC00003 FGN.MDC-MDC Standard 	<ul style="list-style-type: none"> To save users from unnecessary dialing, this functionality enables the switching system to check and see if a Virtual Facility Group (VFG) member is available when the user dials the VFG access code. If a member is available, that member is reserved and only then is a second dial tone returned to the user (if so datafilled). The user is assured of VFG access.

Table 112
SE07 Functionality listing (Sheet 46 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • MDC Virtual Facility Group (VFG) FG.MDC00003 FGN.MDC-MDC Standard 	<ul style="list-style-type: none"> • This functionality makes it possible to emulate trunk groups in software without requiring physical resources. These trunk groups are called Virtual Facility Groups (VFGs). They can be datafilled as one-way or two-way facilities.
<ul style="list-style-type: none"> • MDC Voice Msg Interface FG.MDC00009 FGN.MDC MDC PRO 	<ul style="list-style-type: none"> • This software provides an interface between the Meridian SL-100 and the Voice Message Exchange (VMX), which is physically connected to the Meridian SL-100 using four-wire E&M analog trunks with wink start signaling.
<ul style="list-style-type: none"> • MDC 3-Way Chaining FG.MDC00001 FGN.MDC-MDC Minimum 	<ul style="list-style-type: none"> • This functionality permits chaining of three-way calls.
<ul style="list-style-type: none"> • MDC 2500 Security Code FG.MDC00001 FGN.MDC-MDC Minimum 	<ul style="list-style-type: none"> • This software allows a variable length code to be assigned to a valid IBN station Directory Number. This code can then be used to restrict feature activation associated with this DN.
<ul style="list-style-type: none"> • MSL AAB Enhancement FG.MSL00007 FGN.MSL STATION FEATURES 	<ul style="list-style-type: none"> • This feature enhances the existing Auto Answerback (AAB) feature by allowing the assignment of the function to keys other than the primary Directory Number (DN). This includes secondary DN's and Group Intercom Keys (GIC). In addition, an alert tone is provided to both parties whenever a connection is established.
<ul style="list-style-type: none"> • MSL Att Con End/End Sig FG.MSL00007 FGN.MSL STATION FEATURES 	<ul style="list-style-type: none"> • This software provides the attendant with the ability to access, through RI facility applications that use DTMF signally (that is, multi-zone voice paging, voice mail, etc.), to control feature activation.
<ul style="list-style-type: none"> • MSL Authcode Enhancements FG.MSL00007 FGN.MSL STATION FEATURES 	<ul style="list-style-type: none"> • Authcode Enhancement provides an enforcement option to the existing Authorization Code (Authcode) functionality. Authcode Enhancement will not allow call completion without a valid authorization code. This feature is intended for users that must use an Authcode for certain calls, coupled with NCOS privileges. Authcode Enhancement is assigned as an option in SERVORD.

266 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 47 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> MSL AutoRecovery of DLM on IPE FG.MSL00003 FGN.MSL IVD 	<ul style="list-style-type: none"> This feature implements the conversion of the DLM/IPE peripherals to the use of the System Recovery Controller (SRC) for coordinating recovery activities. The SRC is a software entity which acts as a high-level intelligence to coordinate the work and optimize the system resources needed for automatic recovery following system restarts and degradations. The system degradations over which the SRC manages recovery range from partial outages (for example, power loss to a single peripheral/unit) to total outages (for example, power loss to the entire system). The resulting increase in efficiency aids in the reduction of outage time and decreases the amount of manual intervention necessary. The most visible new functionality gained by this feature is the ability to automatically broadcast-load groups of DLM/IPE peripherals. Broadcast-loading was previously only possible by use of manual commands (AD7674).
<ul style="list-style-type: none"> MSL Buzz Tone Length FG. MSL00001 FGN. BASEMSL 	<p>Buzz Tone Length allows the use of a preferred tone duration when the feature is invoked during an active call. One might wish to invoke the feature for such occurrences as incoming calls on a secondary Directory Number (DN) or repeated alerts (RPA). Prior to development of this feature, the standard buzz tone duration was 2 seconds.</p> <p>With this feature enabled, four buzz tone duration values are available to the administrator: 500ms, 750ms, 1 second, and the standard 2 seconds.</p> <p>Activation of the feature is controlled by the Software Optionality Control (SOC) utility. When the SOC is enabled, the administrator can choose among the durations stated above by using the new SETBUZZ command. At SOC activation, the default is 500ms; if the SOC is inactive, the buzz tone will be 2 seconds. The buzz tone duration selected serves the entire network. This feature allows the customer to choose the length of tone preferred. Following is a list of special requirements:</p> <ul style="list-style-type: none"> Buzz Tone Duration can be implemented only for Integrated Voice and Data (IVD) sets Buzz Tone Duration must be implemented switch wide, not by customer group

Table 112
SE07 Functionality listing (Sheet 48 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • MSL Call Forward Enhancements FG.MSL00001 FGN.MSL Base 	<p>This feature includes a series of Call Forward Enhancements for Meridian SL-100: CFX Query, CFD/CFB per key change, and Forwarding Reset Maintenance Tool. These maintenance tools reduce the time and level of expertise required of the switch technician in identifying and resolving call forwarding issues. These Command Line Interface enhancements are available for use in the following:</p> <ul style="list-style-type: none"> • Deactivating unsolicited/unwanted call forwarding to the end user's line. • Activating, deactivating, and/or changing CFB/CFD per key designations, as well as any option of call forwarding. <p><i>Feature enhancement descriptions</i></p> <p>CFX Query Command – This command enables customers to deactivate unsolicited/unwanted call forwarding to an end user's line on a real time basis. With the CFX Query Command, technicians can find all lines that forward to a given DN. In short, this command is structured to deliver all information located in Table CFX without using SERVORD. This command can be executed from the CI prompt.</p> <p>CFB/CFD Per Key Destination – This command allows technicians to use the products of the CFX Query Command (described above) to activate, deactivate, or change any CFB/CFD per key destinations. Again, this task can be executed from the CI prompt.</p> <p>Call Forwarding Maintenance Tool – The two enhancements above provide a call forwarding maintenance tool that will change both the target of any call forwarding option and the status of the forwarding from active to inactive or from inactive to active.</p>
<ul style="list-style-type: none"> • MSL Call Forward TOD FG.MSL00007 FGN.MSL Station Features 	<ul style="list-style-type: none"> • This functionality extends the current call forward functionality to allow forwarding of calls based upon a particular day of the week and time of day.
<ul style="list-style-type: none"> • MSL Call FWD Indication FG.MSL00007 FGN.MSL Station Features 	<ul style="list-style-type: none"> • This functionality provides for 500/2500 set types, when manually call forwarded, an audible notification or announcement that informs the user that their set is still forwarded. Once the announcement or tone notification has completed, the user hears dialtone.
<ul style="list-style-type: none"> • MSL Call Join FG.MSL00007 FGN.MSL Station Features 	<ul style="list-style-type: none"> • This feature provides the capability to add a previously held party on an IVD or MBS telephone to an existing call by using the CNF or 3WC key.
<ul style="list-style-type: none"> • MSL Calling Name Delivery FG.MSL00105 FGN.MSL ISDN PRI OPT 	<ul style="list-style-type: none"> • This functionality provides user-side trunk support for the NI-2 Calling Name Delivery feature. Specifically, this functionality enables the Meridian SL-100 to accept calling name information from a network-side trunk and present that information to a subtending PBX over NI-2 PRI.

268 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 49 of 87)

Name, group code/name	Description
<ul style="list-style-type: none">MSL Callpark Auto DN FG.MSL00007 FGN.MSL STATION FEATURES	<ul style="list-style-type: none">Call Park is used when the location of a called party is unknown. Currently, calls can be parked against a number that is defined by a customer who then pages the called party in order to have them retrieve the parked call. When the paged party gets to the telephone, that person dials the call park retrieval code, as well as the address of the parking lot space where the calling party is parked.The SYSPARK feature automatically provides the System Park DN for the customer when the location of the called party is unknown. Directed Call Park must be assigned to a specific key on a set. When this key is activated and the # key is depressed, the caller is parked against a specific SYSPARK DN which will be displayed. If the # key is not depressed first and the DN is entered on the keypad, normal Directed Call Park activity resumes.
<ul style="list-style-type: none">MSL Carrier ID Log FG.MSL00001 FGN.MSL BASE	<ul style="list-style-type: none">This feature provides the ability to append the DS-1 Carrier Circuit ID information to the associated carrier system log message(s), enabling the user to quickly identify failing circuit ID's affected when a carrier system fails and/or alarms occur. Datafillable carrier circuit ID information can be input into a table that is accessible at the maintenance Administration Position (MAP) level by the switch technician.

Table 112
SE07 Functionality listing (Sheet 50 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> MSL CLASS on IPE FG.MSL00107 [OPT] FGN.MSL MSL CLASS OPT H/W: NT6X78AB 	<p>This feature includes the capability for the Intelligent Peripheral Equipment (IPE) to display on CLASS, ADSI, and 2500 type sets with adjunct displays the incoming Calling Line Identification and calling party's name, if the information is available to the Meridian SL-100. It provides specific development to support Calling Name Delivery (CNAMD) and Calling Number Delivery (CND) for CLASS, ADSI, and 2500-type terminals with adjunct displays on the IPE. Additionally, it provides support for CLASS Message Waiting Indication (CMWI) on the IPE using either the NT8D09 or NT8D03 line cards and enables Spontaneous Call Waiting ID Display (SCWID), and Calling Number Delivery Blocking (CNDB), to operate normally on the IPE.</p> <p>With the introduction of this feature, the Meridian SL-100 can now offer customers the following CLASS features for CLASS, ADSI, and 2500-type terminals with adjunct displays which reside on the IPE:</p> <ul style="list-style-type: none"> Anonymous Caller Rejection (ACRJ) Automatic Recall (AR) Auto Recall Blocking of Private Calls (CABOP) Automatic Call Back (ACB) Calling Name Delivery (CNAMD) Calling Name/Number Delivery Blocking (CNNB) Calling Number Delivery (CND) Calling Number Delivery Blocking (CNDB) Callog CLASS Message Waiting Indication (CMWI) Customer Originated Trace (COT) Dialable Number Delivery (DDN) Selective Call Acceptance (SCA) Selective Call Forwarding (SCF) Selective Call Rejection (SCRJ) Spontaneous Call Waiting Identification (SCWID) Spontaneous Call Waiting Identification with Disposition (DSCWID) <p>Note: Distinctive Ringing/Call Waiting (DRCW) is not supported on the IPE.</p>

270 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 51 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> MSL COT and SCF on IVD Sets FG. MSL00107 [OPT] FGN. MSL CLASS OPT H/W Required: NT6X78AB 	<ul style="list-style-type: none"> This feature will allow the existing CLASS features, Customer Originated Trace (COT) and Selective Call Forwarding (SCF) to be activated on the M2000 Integrated Voice and Data (IVD) sets. COT allows users who have been receiving harassing or prank calls to activate an immediate trace of the last incoming call, without requiring prior approval and/or intervention by switch administration personnel. After receiving a harassing or prank call, the user goes off hook, receives dial tone, and dials the COT activation code. A log is dumped with information about the originating call. SCF allows users to forward up to 31 DN's to another location. This feature allows users to ensure that selected incoming calls can reach them when they are away from their telephone. Calls from DN's that are not on the SCF list receive whatever treatment the user has arranged, such as voice mail. Should the SCF forwarded destination be busy, the originator of the incoming call receives busy tone.
<ul style="list-style-type: none"> MSL CND Pub DISB FG. MSL00137 FGN. MSL Base 	<p>Calling Number Delivery for Public Network (CND) controls delivery functionality on Meridian SL-100 loads using public network calls that have fewer than 10 digits. (This feature already worked for public network calls having ten digits.) Software Optionality Control (SOC) is required to activate this feature; however, there is no additional cost to the customer.</p> <ul style="list-style-type: none"> When the SOC is enabled, calls with fewer than 10 digits will display. When the SOC is not enabled, the telephone display will read, "UNKNOWN NUMBER" When the CND Public Network Enhancement is enabled the subscriber can choose whether or not to answer the call. number recognition allows the subscriber to answer the call with a personalized greeting. the date and time of the incoming call are also displayed. the subscriber can see digits displayed from other phone switches. The Software Optionality Control (SOC) utility controls the use of this feature. When the STATE of SOC #MSL00137 is set to ON, CND will display the calling party's directory number (DN) on incoming public network calls from DN's that have fewer than 10 digits. When the STATE of SOC #MSL00137 is set to IDLE, CND will display UNKNOWN NUMBER on incoming public network calls from DN's that have fewer than 10 digits. <p>Note 1: Calling Number Delivery for Public Network only affects public network calls. If CND functionality is wanted on private calls that have fewer than 10 digits, please refer to office parameter CND_PRIV_LESS_THAN_10_DIGITS (NA DMS-100 Office Parameters Reference Manual, 297-8001-855).</p> <p>Note 2: This feature is only applicable for CLASS sets with displays.</p>

Table 112
SE07 Functionality listing (Sheet 52 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • MSL CWT Enhance FG.MSL00003 FGN.MSL IVD 	<ul style="list-style-type: none"> • This activity gives the ability to assign the option, CWTACT to any IBN line class code 500/2500 set. It also allows a switch administrator to assign feature access codes for activating or deactivating CWTACT in Table IBNXL. A line with CWTACT activated will be able to use the Call Waiting feature if its line is busy. If the user chooses to deactivate CWTACT, the user will not be interrupted by Call Waiting tone initiated by any other feature like Call Waiting Origination or Dial Call Waiting.
<ul style="list-style-type: none"> • MSL Digital Phones M2000-Basic FG.MSL00003 FGN.MSL IVD 	<ul style="list-style-type: none"> • This functionality provides the features necessary to support the administration, maintenance and diagnostics to the M2xxx series of digital telephones, including Meridian Modular. Integrated Voice and Data (IVD) is a service which provides simultaneous voice and data communications at speeds up to 19.2 kbps over a single, twisted-pair subscriber loop.
<ul style="list-style-type: none"> • MSL Digital Phones M2000-Display FG.MSL00003 FGN.MSL IVD 	<ul style="list-style-type: none"> • This functionality provides the capability for the M2317 display set to provide basic call processing and features, including the Terminal Diagnostics Test.
<ul style="list-style-type: none"> • MSL Digital Phones M3000 FG.MSL00003 FGN.MSL IVD 	<ul style="list-style-type: none"> • The Meridian M3000 Touchtone is supported by this digital phone set package. The M3000 Touchtone offers a private directory of over 200 names and Directory Numbers. The directory can be searched by scrolling up or down, until the desired name is found.
<ul style="list-style-type: none"> • MSL Dig 64 Kbps Synch FG.MSL00003 FGN.MSL IVD 	<ul style="list-style-type: none"> • This functionality provides 48K, 56K, and 64K Synchronous data support on the IPE to enable simultaneous voice, data and video communications on the same telephone outlet through the Meridian Communications Adapter (MCA) in the Meridian Digital Terminal to support Visual Interactive Technology (VISIT) and other advanced applications. It also defines the MCA as a valid Line Class Code, station, and IVD set type (AD7655).
<ul style="list-style-type: none"> • MSL Enhanced Tandem Services FG.MSL00004 FGN.MSL NSS 	<ul style="list-style-type: none"> • This functionality provides the following functions for the Meridian SL-100: a) private speed calling and hot-line dialing, b) the capability to collect Personal Identification Number (PIN) digits based on the authcode parameter, c) billing capability for PIN digits to be recorded in Station Message Detail Recording (SMDR), d) the capability to validate two- and three-digit account codes for calls originated over Network Services Software (NSS), e) Feature Group B (FGB), FG-C and direct access trunks. In addition, this feature also allows for mapping of Automatic Number Identification (ANI) information to various Network Services Software agencies and mapping of ANI information located on Feature Group D (FGD) trunks to terminating agents with calling party identification capabilities.

272 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 53 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • MSL Extended Peripheral Equipment FG.MSL00003 FGN.MSL IVD 	<ul style="list-style-type: none"> • This functionality provides modules which feature distributed processing capabilities, high density line cards and self-diagnostics for maintenance. A key feature of the IPE modules is the high-density Integrated Voice and Data (IVD) digital line card supporting up to 16 voice and 16 data ports. With these cards, the new peripheral equipment shelf provides a capacity of up to 512 IVD lines. In addition, a new high-density analog line card is available which supports up to 16 ports.
<ul style="list-style-type: none"> • MSL Fast Transfer – Digital Sets FG.MSL00007 FGN.MSL STATION FEATURES 	<ul style="list-style-type: none"> • This feature reduces the number of key strokes required to transfer a call and provides the capability for a user to transfer a call without having to conference all the agents beforehand (AD7658).
<ul style="list-style-type: none"> • MSL FCC DID Answer Supervision FG.MSL00001 FGN.MSL BASE 	<ul style="list-style-type: none"> • This software provides the FCC DID Answer Supervision compliance capabilities, in accordance with FCC Rules and Regulations 68.314.
<ul style="list-style-type: none"> • MSL Flex LEN on IPE FG.MSL00003 FGN.MSL IVD 	<ul style="list-style-type: none"> • The Flex LEN feature provides extended usage of the digital port. This feature allows the datafill of IVD sets on the odd LEN and data products on the even LEN. This feature supports the Communicator interface card to provide modem/fax (voice products) on the odd LEN. This feature also provides in SERVORD the DTMK (Data Mode Key) for use with video conferencing applications.
<ul style="list-style-type: none"> • MSL IP 802.11 FG.MSL00130 [OPT] FGN.MSL IP 802.11 	<ul style="list-style-type: none"> • This functionality provides Voice over IP on the Wireless LAN capability for the Meridian SL-100 through the IPE utilizing the Integrated Telephony Gateway Pentium dual-slot 24-port card with Symbol FH and DS handsets and access points. This development also includes introduction of an Integrated Gateway web tool for card configuration.
<ul style="list-style-type: none"> • MSL IP Client FG.MSL00126 [OPT] FGN.MSL IP Client 	<ul style="list-style-type: none"> • Meridian SL-100 IGW integrates seamlessly with existing corporate networks to unify the delivery of voice and data over IP connections. It allows voice and data traffic to travel over a variety of carrier grade, cost-efficient packet networks. With Meridian SL-100 IGW, the same feature-rich capabilities of the Meridian SL-100 can be deployed over an IP network, and still have the quality, security, and reliability of the Public Switched Telephone Network.
<ul style="list-style-type: none"> • MSL IP Line FG.MSL00127 [OPT] FGN.MSL IP Line 	<ul style="list-style-type: none"> • The Nortel Networks Meridian SL-100 IGW system enables Internet Protocol (IP)-based terminals to access Meridian SL-100 services using an IGW Card. The Meridian SL-100 IGW IP Server platform is a Compaq 19-inch, rack-mountable, high-availability personal computer (PC). The Meridian SL-100 IGW IP Server consists of a Nortel Networks-specified server PC workstation configuration loaded with a set of Nortel Networks-developed and other commercial networking/operating software to support Meridian SL-100 IGW service.

Table 112
SE07 Functionality listing (Sheet 54 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> MSL ISUP Broadcast Fan Out FG.MSL00005 FGN.MSL WBAND 	<ul style="list-style-type: none"> This functionality provides the table control modifications required to classmark a trunk group for potential use for secondary fan-out in a broadcast call and to create a new switch parameter to define requirements for internal resource allocation. Internal resource allocation is required, based on the maximum number of output ports actively involved in a broadcast call.
<ul style="list-style-type: none"> MSL ISUP NAS RLT FG.MSL00007 FGN.MSL STATION FEATURES 	<ul style="list-style-type: none"> This functionality provides Release Link Trunk (RLT) capability between Meridian SL-100 system in a Network Attendant Service (NAS) network. NAS RLT allows decreasing the number of required trunk facilities when the customer consolidates attendant services at one or more nodes in the network.
<ul style="list-style-type: none"> MSL Large Scale MWI FG.MSL00001 FGN.MSL Base 	<p>Large Scale MWI (Message Waiting Indicator) Reset provides a means for the technician to manipulate message-waiting lights and queues for more than one Directory Number (DN) at a time. It features a new CI tool, MWRESET, for large-scale resetting, de-queuing, and sanity checking of waiting messages. This need arises when a message queue gets corrupted. By using the DN as input to the tool, the tool will do the following:</p> <ul style="list-style-type: none"> Find the message-waiting queue attached to the DN De-allocate the attached message-waiting queue Reset the lamp status for message requestor DNs accordingly Here are some applications of this feature enhancement: RESET: Random, Range, and All. DEQUE: Nodal, Network, Random, Range, and All. SANITY: Random, Range, and All.
<ul style="list-style-type: none"> MSL LDAP Synching for Meridian SL-100 FG.MSL00001 FGN.MSL BASE 	<ul style="list-style-type: none"> LDAP Synching for Meridian SL-100 provides the capability to automatically update a corporate LDAP version 3 database with telephone number changes from the Meridian SL-100. In addition, it provides the ability to update the name associated with a Directory Number on the Meridian SL-100 from changes made in the corporate LDAP version 3 database. The Meridian SL-100 can synchronize with an LDAP version 3 authoritative database on three attributes: Directory Number, name, and unique identifier.
<ul style="list-style-type: none"> MSL Line Side T1 IPE Interface FG.MSL00003 FGN.MSL IVD 	<p>This feature performs two tasks as follows:</p> <ul style="list-style-type: none"> It allows the LTI circuit card (NT5D11AA) to be datafilled on an IPE. Accommodates updated Product Engineering Codes (PECs) for IPE Digital Line Cards (NT8D02EA/NT8D02CC). <p>The LTI emulates existing analog line cards (AD7656).</p>

274 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 55 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • MSL Mark Non-IVD LENS FG. MSL00001 FGN. MSL BASE 	<p>Marking Non IVD (Integrated Voice Data) LENS allows non-IVD LENS to be identified, marked, and placed in table, LENTRBL. This capability enables the craftsperson to identify faulty non-IVD LENS and avoid trying to use them to build phones, just as they are able to do with digital LENS. By providing the ability to comprehensively identify all “bad” non-IVD LENS and all “bad” digital LENS, the crafts person will avoid failures and duplication of work. This increases the productivity associated with assigning phones.</p> <p>Note: This feature offers a stop-gap measure to help crafts persons save time and increase productivity. Bad LENS must be fixed as soon as the crafts person finishes his/her urgent task at hand.</p>
<ul style="list-style-type: none"> • MSL Meridian Digital Desktop Directory Number Download FG. MSL00003 FGN.MSL IVD 	<ul style="list-style-type: none"> • The M3900 Series terminals have a display area next to each of the keys. This feature provides the capability to display the Directory Number (DN) associated with the Directory Number or feature assigned to a key, eliminating the need for paper labels. The Directory Number download will occur as new DNs and/or features are provisioned on the terminal.
<ul style="list-style-type: none"> • MSL Meridian Digital Desktop Display-Based Access Expansion Module FG. MSL00003 FGN.MSL IVD 	<ul style="list-style-type: none"> • This feature introduces the Display-Based Access Expansion Module for the M3904 and M3905 terminals. This module increases the number programmable feature keys on the terminal by 24 – providing for up to a total of 56 keys. The display shows eight self-labeled line/feature labels. Each label is next to a key. There are three pages – providing a total of 24 additional keys.
<ul style="list-style-type: none"> • MSL Meridian Digital Desktop Flash Download FG. MSL00003 FGN.MSL IVD 	<p>Flash Download provides the capability to download a new firmware version to the M3900 Series terminals in the following events:</p> <ul style="list-style-type: none"> • To support a new language. • To add new text prompts and self-labels for features and softkeys. • To add new firmware-based applications. • To support new signaling messages for server-based applications. • To fix customer report problems. <p>Flash Download commands are initiated by the Optivity Telephony Manager for Meridian SL-100 product.</p>
<ul style="list-style-type: none"> • MSL Meridian Digital Desktop Group Listening and Password Protection FG. MSL00003 FGN.MSL IVD 	<ul style="list-style-type: none"> • Group Listening allows users to turn on the terminal’s loudspeaker while the handset is in use. A group of people can then listen to the audio. The handset must be used to transmit the audio. Group Listening is supported on the M3902, M3903, and 3904 terminals. <p>Password Reset provides the capability to reset the password for directories and applications on the M3903, M3904, and M3905 terminals.</p>

Table 112
SE07 Functionality listing (Sheet 56 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • MSL Meridian Digital Desktop Key-Based Access Expansion Module FG.MSL00003 FGN.MSL IVD 	<ul style="list-style-type: none"> • This feature introduces the Key-Based Access Expansion Module for the M3904 and M3905 terminals. This module increases the number of line and feature keys on the terminal by 22. Up to two Key-Based Access Expansion Modules can be used with a M3904 or a M3905.
<ul style="list-style-type: none"> • MSL Meridian Digital Desktop Terminal Provisioning and Softkey Configuration FG.MSL00003 FGN.MSL IVD 	<ul style="list-style-type: none"> • This feature introduces the M3900 Series terminals and accessories to the Meridian SL-100. It provides datafill and key map download for the new terminals, allows the same feature functionalities that the M2000 terminals have, and provides context-sensitive keys.
<ul style="list-style-type: none"> • MSL Mon.-MAP Terminal Activity FG.MSL00001 FGN.MSL BASE 	<ul style="list-style-type: none"> • This functionality implements a new CI command called "MONITOR". It allows a Privileged User at an isolated MAP to conduct surveillance on the MAP session of an selected General User or Device.
<ul style="list-style-type: none"> • MSL M2008 Handsfree FG.MSL00003 FGN.MSL IVD 	<ul style="list-style-type: none"> • This functionality allows for the software activation of the M2008HF (Handsfree) Meridian Digital Modular Terminals. With this software, customers can enable or disable the handsfree feature through SERVORD on physical key 7 of the M2008HF set. If the feature is set to "N" other features can be programmed on key 7.

276 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 57 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> MSL M3900 Desktop Enhancements FG.MSL00003 FGN.MSL IVD 	<p>This feature provides the following enhancements for the M3900 series terminals:</p> <ul style="list-style-type: none"> Icon-based Display Indication on the M3900 Series display terminals, the Key-based Expansion Module, and the Display-based Access Expansion Module. The functions that are displayed include the following and appear on the displays located next to Directory Number or feature keys: <ul style="list-style-type: none"> — I-Ringing is displayed when the terminating Directory Number on a M3900 telephone set is being called. — I-Active is displayed after a call is established on an M3900 telephone set. — U-Active is displayed on secondary MADN M3900 Series telephones when the Primary Directory Number has a call established on the MADN DN. — I-Hold is displayed when an M3900 user places a call on hold. — U-Hold is displayed on secondary MADN M3900 Series telephones when the Primary Directory Number has answered and placed a call on hold Digit Suppression for Redial List allows users the flexibility to prevent passwords and authorization codes from being stored in their Redial List on their M3900 telephone. This feature allows the user to suppress any key presses so they are not displayed or stored in the Redial List. DN Auto Display of CLID Enhanced extends the number of keys on multi-line terminals and add-on modules that can be datafilled as Directory Numbers and provides the automatic display of Calling Line Identification. This capability available for the M3900 Series, M2000 Series, and M5000 series terminals.
<ul style="list-style-type: none"> MSL M3900 Release 3 Enhancements FG.MSL00003 FGN.MSL IVD 	<ul style="list-style-type: none"> This feature provides software enhancements to support one-button access to the Call Log and Redial Lists on the M3903, M3904, and M3905 Release 3 telephone sets. It allows Call Log and Redial to be datafilled as either a Context-sensitive softkey or a Programmable Line/Feature key.
<ul style="list-style-type: none"> MSL MSMWI for 2500 Sets FG.MSL00003 FGN.MSL IVD 	<ul style="list-style-type: none"> This feature is an enhancement to the Multiple Station Message Waiting Indication (MSLMWI). The MSMWI feature allows for a secondary terminal to provide an indication that messages are waiting on another terminal which is considered the primary. This enhancement extends the support of MSMWI to single-line analog IBN terminals which support CLASS messaging.

Table 112
SE07 Functionality listing (Sheet 58 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • MSL Mult Sta Msg. Indica FG.MSL00007 FGN.MSL STATION FEATURES 	<ul style="list-style-type: none"> • This functionality provides a visual indication of a message waiting for a primary terminal on one or more secondary terminals. A primary terminal must have either the Message Waiting (MWT) or Executive Message Waiting (EMW) feature assigned to it. The visual indication on the secondary terminals consists of lighting the LCD lamp associated with the MSMWI key. When Message Waiting Indication is turned on for the primary terminal, the LCD lamp associated with the corresponding MSMWI key on the secondary terminal is turned on in a steady state. When Message Waiting Indication is turned off for the primary terminal the LCD lamp associated with the corresponding MSMWI key on the secondary terminal is turned off. This feature is supported on the MBS and IVD terminals, except for the M3000.
<ul style="list-style-type: none"> • MSL Music on Transfer FG.MSL00007 FGN.MSL STATION FEATURES 	<ul style="list-style-type: none"> • Music on Transfer (MOT) provides audio to the held party of a Three-way call (3WC) or Call Transfer (CXR), as soon as the conference or transfer is initiated. This feature provides the caller with confidence that the transfer was successful by the immediate provision of an audio source. Music on Transfer is applicable for IBN, MBS and IVD sets.
<ul style="list-style-type: none"> • MSL MW LCD Activation FG.MSL00007 FGN.MSL STATION FEATURES 	<ul style="list-style-type: none"> • This feature activates the Message Waiting LCD in addition to the red Message Waiting Lamp for any waiting messages on M2000 series phones. This feature allows both the red LED, and the LCD associated with Message Waiting (MWT) to be activated on appropriate sets when a message is left against a phone.
<ul style="list-style-type: none"> • MSL Name Display Extension FG.MSL00007 FGN.MSL STATION FEATURES 	<ul style="list-style-type: none"> • Currently Name Display is limited to 16 characters. This feature extends the Name Display to 24 characters for intra-PBX calls. This feature is supported on both M5000 and M2000 terminals.
<ul style="list-style-type: none"> • MSL Network Modem Pooling FG.MSL00003 FGN.MSL IVD 	<ul style="list-style-type: none"> • This functionality provides the ability for a customer with multiple Meridian SL-100s to establish a "centralized modem pool" on one of the Meridian SL-100s such that data on any of the other switches can route to the serving switch over a digital trunk and invoke outbound modem pooling in order to terminate to a far-end modem facility.
<ul style="list-style-type: none"> • MSL NPA Freecall Expl NSS FG.MSL00001 FGN.MSL BASE 	<ul style="list-style-type: none"> • Network Services Software (NSS) has been enhanced to provide a datafillable table to identify which NPA's are to be treated as called party billed calls. Additionally, new North American dialing plan requirements for NPA, including the ability to datafill any digit in the second digit of the NPA number, are supported.
<ul style="list-style-type: none"> • MSL NSS Billing Platform FG.MSL00004 FGN.MSL NSS 	<ul style="list-style-type: none"> • Supports the functionality of AIN Release 0. Because of the complexity of the evolving AIN architecture and to ensure that future added functionality is available on the initial AIN SSPs, this package is only supported on the DMS SuperNode processors.

278 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 59 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • MSL NSS Database Ctrl Point FG.MSL00004 FGN.MSL NSS 	<ul style="list-style-type: none"> • This functionality provides the Network Services Software (NSS) the basic capability to route and tandem database query messages over Signaling System Number 7 (SS7) links.
<ul style="list-style-type: none"> • MSL NSS NOO DBCP Process FG.MSL00004 FGN.MSL NSS 	<ul style="list-style-type: none"> • This software provides for the Network Services System Replacement of Dialed Digits to allow a call to be routed to a number other than the actual dialed digits.
<ul style="list-style-type: none"> • MSL NSS Travel Card # Verification FG.MSL00004 FGN.MSL NSS 	<ul style="list-style-type: none"> • This functionality allows the user to choose the Travel Card Number (TCN) validation method. The TCN can be validated using either the table TCNDATA, or the Network Service Switch Database Control Point (NSS-DBCP), or both.
<ul style="list-style-type: none"> • MSL N*64 Wideband Flex Bandwidth FG.MSL00005 FGN.MSL WBAND 	<p>This software provides optionality for a group of features implementing Wideband calls on the Meridian SL-100. Following is a list of features implementing Wideband calls:</p> <ul style="list-style-type: none"> • Wideband Call Processing • Wideband Trunk Selection • Wideband Trunk Datafill and Maintenance • Wideband Call Machine • Wideband Connection Management • Wideband Integrity Management • Wideband ISUP and Maintenance in DTC7 • Wideband SWACT in DTC7
<ul style="list-style-type: none"> • MSL Pad Provisioning FG.MSL00001 FGN.MSL BASE 	<ul style="list-style-type: none"> • This functionality provides separate PAD group names and values for the Meridian SL-100.
<ul style="list-style-type: none"> • MSL PRI on RSC-S FG.MSL00105 FGN.MSL ISDN PRI OPT 	<ul style="list-style-type: none"> • This capability provides support for NTNA and NI-2 PRI on the RSC-S platform.

Table 112
SE07 Functionality listing (Sheet 60 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • MSL QHASU Enhancements FG. MSL00001 FGN. MSL BASE 	<ul style="list-style-type: none"> • Query Busy Lamp Field (QBLF) and Query Directory Number (QDN) is commonly called “Query Busy Lamp Field” or “Query BLF.” This feature provides a group query command that produces a list of all LENs (Line Equipment Numbers) that are BLF (Busy Lamp Field) or SBLF (Set-based Lamp Field), which are monitoring a particular Directory Number (DN). This new command takes a Directory Number as input and provides a list of LENs monitoring the DN. The output consists of the (LEN), the corresponding Key, and the type of monitoring (set monitor or group monitor). Query BLF provides added flexibility and improved productivity in maintaining lines with the Busy Lamp Field or Set-based Lamp Field options. Previously, this information could only be obtained by checking in table KSERFEAT.
<ul style="list-style-type: none"> • MSL Query BLF FG. MSL00001 FGN. MSL BASE 	<ul style="list-style-type: none"> • The Query Hardware Assigned Software Unassigned (QHASU) enhancement adds options to query commands. It speeds the process required when searching for HASU cards of one type when there are many two letter suffixes on the associated line card PECs (Product Engineering Codes). This provides the crafts person a simplified, yet comprehensive, way to find all HASU cards of one type. It allows the crafts person to query each card type and suffix to find all options of a given card type; yet, it retains all previous capabilities.
<ul style="list-style-type: none"> • MSL Remote DLM with ESA FG. MSL00003 FGN.MSL IVD 	<ul style="list-style-type: none"> • This functionality provides the Emergency Stand-Alone (ESA) capability for the Remote Digital Line Module (RDLM).
<ul style="list-style-type: none"> • MSL Secure Set Support FG. MSL00007 FGN.MSL STATION FEATURES 	<ul style="list-style-type: none"> • The Secure Set Feature capability provides users of a “secure” electronic set (MBS or IVD) with an audible tone for feature notification and audible ring notification on a secondary Directory Number. In an environment requiring secure communications, the internal buzzer is removed; consequently, feature that cause a “buzz” tone cannot produce that tone on a secure set. In instances where audible notification cannot be given, lamp notification is provided.
<ul style="list-style-type: none"> • MSL Sim Ring PRI FG. MSL00105 FGN.MSL ISDN PRI OPT 	<ul style="list-style-type: none"> • This feature provides support of Simultaneous Ring over outgoing PRI trunks.
<ul style="list-style-type: none"> • MSL SL-100 Cabinetized Software FG. MSL00001 FGN.MSL BASE 	<ul style="list-style-type: none"> • The MMI Software Interface for the Cabinetized Meridian SL-100 feature is made available with this functionality.
<ul style="list-style-type: none"> • MSL SMDI ID Override FG. MSL00108 [OPT] FGN.MSL SMDI 	<ul style="list-style-type: none"> • SMDI ID Override (IDOVR) when assigned to a line through SERVORD, acts as default solution that allows the user to designate what DN ID will be carried over an SMDI link in a calling sequence.

280 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 61 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • MSL SMDR Per Use FG.MSL00107 [OPT] FGN.MSL CLASS OPT 	<ul style="list-style-type: none"> • This feature allows the user the capability of delivering billing on a per-user basis for CLASS functionalities. It also enables MSL-CLASS service providers the ability to charge their end users a fee based on usage as opposed to a flat monthly rate.
<ul style="list-style-type: none"> • MSL Travel Card Services FG.MSL00004 FGN.MSL NSS 	<ul style="list-style-type: none"> • This functionality allows Meridian SL-100 users to charge calls to a 14-digit travel card number. The travel card number can be collected on FGA, FGB, FGD EAP and Interim Cut-through, 800 Universal Access Calls, Dedicated Access Trunk Cut-through calls. After accessing the MSN switch, the Meridian SL-100 user can enter 0 for domestic call or 01 for International call, plus the destination number then the travel card number. If the travel card number is valid, the call is routed.
<ul style="list-style-type: none"> • MSL Trunk Mem Display FG.MSL00001 FGN.MSL BASE 	<ul style="list-style-type: none"> • This functionality allows a user of an MBS or IVD set (with a display) involved on a trunk call to depress a predefined feature key and see on the display, the trunk group name and circuit number to which they are connected.
<ul style="list-style-type: none"> • MSL WB PRI IBN DWB FG.MSL00005 FGN.MSL Wideband 	<ul style="list-style-type: none"> • Origination on an IBN ISUP agent and termination on an IBN PRI agent is not currently available; a Cross Matrix Index (CMI) must be created to provide for the new call type, IBN ISUP-to-IBN PRI. By the creation of this CMI and addition of the correct processors, a wideband call between an IBN ISUP trunk and a IBN PRI trunk will be permitted (AD7654).
<ul style="list-style-type: none"> • MSL WB Stability Robust FG.MSL00005 FGN.MSL Wideband 	<ul style="list-style-type: none"> • This feature enhances error handling capabilities. This includes stopping TRAPS from occurring when a call attempt is out of the fixed range of a "fixed" wide band trunk group. The recovery also stops non-contiguous calls from the TRAPing when an error condition occurs. This feature allow erroneous (or invalid) wideband calls to be blocked and treated accordingly (AD7664 & AD7663).
<ul style="list-style-type: none"> • MSL YR2000 Support FG.MSL00001 FGN.MSL BASE 	<ul style="list-style-type: none"> • This feature prevents calendar ambiguity for all internal clocks after midnight, December 31, 1999.
<ul style="list-style-type: none"> • MSL 700/800/900 Services FG.MSL00004 FGN.MSL NSS 	<ul style="list-style-type: none"> • This functionality supports N00 dialing on a Meridian SL-100. N00 numbers include 800 Incoming Wide Area Telephone Service (INWATS), 800 Universal Access (UA) service and 700 and 900 services. The Meridian SL-100 accepts an N00 number originated on-net which was routed to the Local Exchange Carrier (LEC) and back to the MSN or an N00 number originated off-net and routed by the Equal Access End Office (EAEO) or Access Tandem (AT) to the MSN. The call will be received over a Feature Group D (FGD) interface, routed through the MSN network and terminated to an on-net or off-net destination.

Table 112
SE07 Functionality listing (Sheet 62 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> Network ACD/FIAUDIO Interworking FG.ACD00004 FGN.ACD Networking 	<ul style="list-style-type: none"> This software interworks the ACD Forced Incoming Audio (FIAUDIO) feature with Network ACD (NACD) so incoming calls to a Network ACD group can receive announcements, before being placed into an ACD queue. This feature enhances Network ACD operations where there needs to be a guarantee that callers receive special announcement (for example, that conversations may be recorded), before being placed into an ACD queue. The announcement can also enhance an organization's perceived quality of customer service.
<ul style="list-style-type: none"> NI0 ACB&AR FG.NI000051 [OPT] FGN.NI0 NI-2/3 BRI Svc Ph II 	<ul style="list-style-type: none"> Automatic Call Back allows the last DN an ISDN BRI subscriber called to be automatically redialed. Automatic Recall allows the DN of the last incoming call to an ISDN BRI subscriber to be automatically dialed.
<ul style="list-style-type: none"> NI0 Aub Msg Wtg Ind FG.NI000060 [OPT] FGN.NI0 NI 98 Enhmts Ph 1 	<ul style="list-style-type: none"> Audible Message Waiting Indicator provides an audible indication to the user, upon call originations, whenever a message is waiting. The feature also enhances the current visual message-waiting indication.
<ul style="list-style-type: none"> NI0 Automatic SPID FG.NI000060 [OPT] FGN.NI0 NI 98 Enhmts Ph 1 	<ul style="list-style-type: none"> This feature automates the terminal initialization procedures by having the switch send the SPID to the terminal, rather than have it entered by the user.
<ul style="list-style-type: none"> NI0 2 Simult nVoice Calls FG.NI000050 [OPT] FGN.NI0 NI 2/3 BRI Svc Ph 1 	<ul style="list-style-type: none"> Allows the ISDN User to establish and control two or more concurrent calls using one B-channel.
<ul style="list-style-type: none"> NI0 2B Ch Trfr NI-2 PRI FG.NI000043 [OPT] FGN.NI0 PRI NI-2 Base 	<ul style="list-style-type: none"> In a network of PBXs, when a forwarded or transferred call is set-up using two channels in a PRI trunk coming from a Meridian SL-100 to another PBX, the PRI trunk channels that were used to make the connections can be dropped and made available for future calls.
<ul style="list-style-type: none"> NI0 4ESS Interworking FG.NI000033 [OPT] FGN.NI0 PRI NI-1 Base H/W: NT6X50AB, NTBX01AB 	<ul style="list-style-type: none"> This functionality makes all the necessary changes to the signaling manager (SIGMAN), the connection manager (CONMAN) and the maintenance software to enable the Meridian SL-100 to interwork with the AT&T #4ESS switch over Primary Rate Interface (PRI) trunks.
<ul style="list-style-type: none"> NI0 5ESS Interworking FG.NI000033 [OPT] FGN.NI0 PRI NI-1 Base H/W: NT6X50AB, NTBX01AB 	<ul style="list-style-type: none"> This functionality enhances the signaling management (SIGMAN) functions to provide basic interworking between a Meridian SL-100 using Primary Rate Interface (PRI) and an AT&T #5ESS switch using PRI.

282 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 63 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • NI0 Back-up D-Channel FG. NI000033 [OPT] FGN. NI0 NI-1 PRI H/W: NT6X50AB, NTBX01AB 	<ul style="list-style-type: none"> • This functionality enhances the survivability of PRI links by providing a backup D-channel that automatically takes over for a failed primary D-channel.
<ul style="list-style-type: none"> • NI0 B Ch rest On TSP FG. NI000060 [OPT] FGN. NI0 NI 98 Enhmts Ph I 	<ul style="list-style-type: none"> • B-channel restrictions on a Terminal Service Profile (TSP) basis provides the ability to restrict a group of one or more TSPs to share a single B-channel, rather than allowing the TSP or group of TSPs to use both B-channels in a shared BRI environment. This prevents one user from using both B-channels simultaneously, which would prevent other users from making or receiving a call.
<ul style="list-style-type: none"> • NI0 BRIV OE FG. NI000060 [OPT] FGN. NI0 NI 98 Enhmts Ph I 	<ul style="list-style-type: none"> • BRI Verification-Office Equipment (BRIV-OE) enables normal call control procedures for retrieving the office equipment identifier of the line card associated with an ISDN BRI line. BRIV-OE can be used to verify that the access line is connected to the correct switch port. This feature applies to voice and circuit-mode-data type calls and supports access line installation and maintenance with line-side verification and testing.
<ul style="list-style-type: none"> • NI0 Call by Call NI-2 FG. NI000043 [OPT] FGN. NI0 NI-2 PRI Base 	<ul style="list-style-type: none"> • This service allows a PBX to use channels more efficiently by expanding or contracting the number of channels available to each of the different call types (for example INWATS, OUTWATS, Foreign Exchange and TIE lines).
<ul style="list-style-type: none"> • NI0 Calling Name FG. NI000051 [OPT] FGN. NI0 NI 2/3 BRI Svc Ph II 	<ul style="list-style-type: none"> • Offers name delivery to the called party from the ISDN set.
<ul style="list-style-type: none"> • NI0 Calling Name Delivery FG. NI000030 [OPT] FGN. NI0 Calling Name Delivery 	<ul style="list-style-type: none"> • This feature supports network-side Calling Name over NI-2. In addition, Calling Name will be built into the setup message of the Meridian SL-100, and sent to the next PBX in the customer network.
<ul style="list-style-type: none"> • NI0 Call Tpe Prov DN Bas FG. NI000050 [OPT] FGN. NI0 NI 2/3 BRI Svc Ph 1 	<ul style="list-style-type: none"> • Enables an integrated terminal (a terminal that supports both speech and circuit switched data call types) to have one Directory Number. The same number can be used for all circuit-switched call types.

Table 112
SE07 Functionality listing (Sheet 64 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • NIO CFW Uniformity FG. NI000051 [OPT] FGN. NIO NI-2/3 BRI Svcs Ph II 	<p>Call Forwarding Uniformity supports a variety of call forwarding types for incoming calls to an ISDN set. Additional enhancements include the following:</p> <ul style="list-style-type: none"> • Call Forward Keylist per Directory Number/call type – Universal • Feature Key Activation/Deactivation per DN/CT – Universal • Call Forward Activation/Deactivation Outside Call Context – Universal • Single or Double Feature Key Invocation per DN/CT – Universal • Call Forward Reminder Notification • Call Forward Courtesy Call • Remote DN Validation during Programming • Call Forward Dial Activation/Deactivation per DN/CT • Prevention of Redirection Information to Originating Party
<ul style="list-style-type: none"> • NIO D Ch Backup NI-2 FG. NI000043 [OPT] FGN. NIO NI-2 PRI Base 	<ul style="list-style-type: none"> • This feature supports a spare signaling channel on a second DS-1 for survivability purposes for the NI-2 variant.
<ul style="list-style-type: none"> • NIO CLASS on NION FG. NI000008 [OPT] FGN. NIO NI-1 BRI 	<ul style="list-style-type: none"> • This software provides selected CLASS features on ISDN BRI terminals. From a National ISDN-1 Line: Customer Originated Trace (COT), Selective Call Acceptance (SCA), Selective Call Rejection (SCR), Selective Call Forwarding (SCF) and Selective List Editing (SLE), per Bellcore TR-220.
<ul style="list-style-type: none"> • NIO Default TSP LTID on Lp FG. NI000050 [OPT] FGN. NIO NI 2/3 BRI Svcs Ph1 	<ul style="list-style-type: none"> • Provides for assignment of Feature keys to a Default Terminal Service Profile (TSP) for Non-Initializing Terminals.
<ul style="list-style-type: none"> • NIO DCH Supt 2 term+ FG. NIO000051 [OPT] FGN. NIO NI 2/3 BRI Svcs PhII 	<ul style="list-style-type: none"> • Allows eight non-initializing terminals (NITs) or seven NITs and one fully initializing terminal (FIT) to be supported, with one B-channel used for each type of terminal.
<ul style="list-style-type: none"> • NIO DWS Base FG. NI000073 [OPT] FGN. NIO PRI DWS Base H/W: NTAX78AA 	<ul style="list-style-type: none"> • This functionality provides the basic software used by higher level ISDN Primary Rate Interface (PRI) software and CCS7 trunking software for call processing and trunk selection.

284 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 65 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • NI0 DWS Flexible Acc FG. NI000073 [OPT] FGN. NI0 PRI DWS Base H/W: NTAX78AA 	<ul style="list-style-type: none"> • This functionality allows flexible channel assignment on the DWS PRI access loop.
<ul style="list-style-type: none"> • NI0 DWS PRI Base FG. NI000073 [OPT] FGN. NI0 PRI DWS Base H/W: NTAX78AA 	<ul style="list-style-type: none"> • This functionality offers user-controllable access to bandwidths ranging from 128 kbps through 1.536 Mbps – on demand in 64 kbps increments – over an ISDN PRI loop. Called parties are identified to the network by the North American Numbering Plan. Dialable Wideband Service can be used for video conferencing and other wideband data communications applications, such as order transaction, image transfer and private-line backup and augmentation.
<ul style="list-style-type: none"> • NI0 DWS PRI End Office FG. NI000073 [OPT] FGN. NI0 PRI DWS Base H/W: NTAX78AA 	<ul style="list-style-type: none"> • NI0 DWS PRI End Office provides PRI access to Dialable Wideband Services and allows PRI/Feature Group D interworking for wideband calls.
<ul style="list-style-type: none"> • NI0 DWS PRI Test Tool FG. NI000073 [OPT] FGN. NI0 PRI DWS Base H/W: NTAX78AA 	<ul style="list-style-type: none"> • This test tool software creates and sends PRI messages and allows for the display of certain call processing data areas. The functionality helps resolve protocol violations between the switch and Customer Premises Equipment.
<ul style="list-style-type: none"> • NI0 EDCH Ptchr CC Pa FG. NI000007 [OPT] FGN. NI0 ISDN BASE 	<ul style="list-style-type: none"> • This software reduces time to repair by providing Source Code Patching for the Enhanced D-channel Handler (EDCH) circuit card. Feature AL2572 integrates the EDCH into the ISDN LGC/LTC in BCS35/36. Requires functionality BAS00003 and the EDCH.
<ul style="list-style-type: none"> • NI0 EKTS CACH FG. NI000051 [OPT] FGN. NI0 NI 2/3 BRI Svcs Ph II 	<ul style="list-style-type: none"> • This functionality provides call handling flexibility for multiple appearances of the same Directory Number using Call Appearance Call Handling (CACH) so that calls can originate from and terminate to any combination of call appearances. In addition, the end-user can provision the call offering sequence.
<ul style="list-style-type: none"> • NI0 Enh Time SW FG. NI000073 [OPT] FGN. NI0 PRI DWS Base H/W: NTAX78AA 	<ul style="list-style-type: none"> • This functionality provides OAM&P for the Enhanced Time Switch (ETS) and will serve as the software package for all future ETS-dependent features. The ETS provides constant delay, thus ensuring channel order, for the peripherals involved in a wideband call.
<ul style="list-style-type: none"> • NI0 8 FITS On A Loop FG. NI000052 [OPT] FGN. NI0 NI-2 BRI Services 	<ul style="list-style-type: none"> • This feature supports up to eight terminals in any combination of fully initializing or non-initializing types. Each terminal can access both B-channels by using any combination of circuit-mode call types that simultaneously use a single Terminating Endpoint Identifier (TEI).

Table 112
SE07 Functionality listing (Sheet 66 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • NIO Flex Clg De conf fac FG. NI000060 [OPT] FGN. NIO NI 98 Enhmts Ph 1 	Flexible Calling: Deactivate Conference Facility When Only Two Parties Remain enables the deactivation of a conference resource when: <ul style="list-style-type: none"> • Only two parties remain on an established conference call. • A connection to the third conference party is unsuccessful, because of a no answer or busy condition.
<ul style="list-style-type: none"> • NIO Flex Expl Xfer N Con FG. NI000051 [OPT] FGN. NIO NI 2/3 BRI Svcs Ph II 	<ul style="list-style-type: none"> • This feature is similar to the existing Flexible Calling transfer option XFER which supports transfers involving conference calls, but introduces the additional functionality to transfer non-conference calls as well.
<ul style="list-style-type: none"> • NIO Flex 1 Call Transfer UCD FG. NI000051 [OPT] FGN. NIO NI 2/3 BRI Svcs Ph II 	<ul style="list-style-type: none"> • Parties who use Flexible Calls (three to 30 ways) to transfer or conference a call to a UCD group are able to transfer or conference the call in the UCD queue if all agents are busy. The call, once transferred or conferenced, advances through the queue until connected to an agent, or until otherwise released.
<ul style="list-style-type: none"> • NIO Flex 3 Interworking Attendant FG. NI000051 [OPT] FGN. NIO NI 2/3 BRI Svcs Ph II 	<ul style="list-style-type: none"> • Specifically, an ISDN set (initializing or non-initializing) using a Flexible Call (FC) conferencing feature should be able to bridge an attendant into a conference call, and/or transfer conferees to an attendant.
<ul style="list-style-type: none"> • NIO Flex 5 Simultaneous assign 3/6 FG. NI000051 [OPT] FGN. NIO NI 2/3 BRI Svcs Ph II 	<ul style="list-style-type: none"> • Allows the ISDN user to select the size of a given ISDN conference call (simultaneous three- and six-way calling).
<ul style="list-style-type: none"> • NIO Flow Thru Prov Enhancements FG. NI000051 [OPT] FGN. NIO NI 2/3 BRI Svcs Ph II 	<ul style="list-style-type: none"> • This functionality simplifies particular add, change, and delete Service Order procedures for NI-2/3 BRI services by adjusting the parameter naming discrepancy between Service Order, table control, query commands, and the NI-1 data dictionary.
<ul style="list-style-type: none"> • NIO Fre Frmt SPID Prov FG. NI000052 [OPT] FGN. NIO NI-2 BRI Services 	<ul style="list-style-type: none"> • Free Format Service Profile Identification (SPID) provisioning alleviates the requirement for a SPID to be associated to the Primary DN.
<ul style="list-style-type: none"> • NIO FR LEC Billing FG. NI000002 [OPT] FGN. NIO DataSPAN H/W: NTEX22BB, NTEX30AA, NTEX31AA 	<ul style="list-style-type: none"> • This functionality provides the ability to record and convert usage-based billing information in Bellcore AMA format.

286 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 67 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • NIO INFO+Enh Num Del FG. NI000008 [OPT] FGN. NIO NI-1 BRI 	<ul style="list-style-type: none"> • This software enables interworking between MF Feature Group D (FGD) and CAMA signaling to provide connections to enhanced service providers. It also provides the terminating billing for enhanced service providers and supports subscription parameters on BRI lines.
<ul style="list-style-type: none"> • NIO Integrated Tst Base FG. NI000009 [OPT] FGN. NIO NI-1 BRI Enhanced Mtc 	<ul style="list-style-type: none"> • This functionality is part of the ISDN-TL1 system used by Integrated Test System (ITS) Operations System (OS) to perform ISDN line testing in the switch. The Integrated Test System (ITS) uses Transaction Language 1 (TL1) to communicate with the ISDN-TL1 software. • This feature implements a process whose main function is to handle low level communication in the ISDN-TL1 system.
<ul style="list-style-type: none"> • NIO Interface Config Ph II FG. NI000051 [OPT] FGN. NIO NI 2/3 BRI Svc Ph II 	<ul style="list-style-type: none"> • This feature supports B-channel negotiation.
<ul style="list-style-type: none"> • NIO Intrm Interface Config Enhancement FG. NI000051 [OPT] FGN. NIO NI 2/3 BRI Svc Ph II 	<ul style="list-style-type: none"> • This feature allows up to two NI-2 LTIDs to be provisioned on an interface provided each LTID is throttled to use only one B-channel using the Associated Group capability.
<ul style="list-style-type: none"> • NIO Intertol ISUP & SS7 FG. NI000073 [OPT] FGN. NIO PRI DWS Base H/W: NTAX78AA 	<ul style="list-style-type: none"> • This functionality provides the basic CCS7 call control and messaging used by a variety of CCS7 trunk types. With dialable wideband access from a PRI loop, the package enables wideband calls ranging from 128 kbps through 1.536 Mbps to be transported over CCS7 trunks. This software also provides the CCS7 trunk type for wideband trunking between switches, enabling interoffice/intraLATA wideband connectivity.
<ul style="list-style-type: none"> • NIO ISDN Adv Signaling FG. NI000007 [OPT] FGN. NIO ISDN Base 	<ul style="list-style-type: none"> • This functionality introduces functional signaling features for BRI sets.
<ul style="list-style-type: none"> • NIO ISDN Base Robustness FG. NI000007 [OPT] FGN. NIO ISDN BASE H/W.: NTSX05AA, NTBX01AB, NTBX02BA 	<ul style="list-style-type: none"> • The Enhanced D-channel Handler (EDCH) integrates the EDCH into the ISDN Line Group Controllers and Line Trunk Controllers (LGC/LTC). The EDCH provides a 300% increase in memory. The additional memory, along with the 25% improvement in real-time provided by the EDCH, is essential for the continued rollout of ISDN features and enhancements. EDCH patching, introduced in MSL05, reduces time to repair by providing Source Code Patching for the EDCH circuit card.

Table 112
SE07 Functionality listing (Sheet 68 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • NI0 ISDN Display Svcs FG. NI000008 [OPT] FGN. NI0 NI-1 BRI 	<ul style="list-style-type: none"> • This functionality enhances the existing Name and Reason Display feature by using standard ANSI and Bellcore defined protocol for transmission of display information.
<ul style="list-style-type: none"> • NI0 ISDN EKTS FG. NI000008 [OPT] FGN. NI0 NI-1 BRI 	<ul style="list-style-type: none"> • This software permits shared DN service for ISDN functional signaling BRI sets.
<ul style="list-style-type: none"> • NI0 ISDN1 Inworking Std Ann FG. NI000051 [OPT] FGN. NI0 NI 2/3 BRI Svcs Ph II 	<ul style="list-style-type: none"> • Allows NI-1 and NI-2 terminals that send digits in band to work with features that typically expect out-of-band digits.
<ul style="list-style-type: none"> • NI0 ISDN/ISUP Interwkg FG. NI000008 [OPT] FGN. NI0 NI-1 BRI 	<ul style="list-style-type: none"> • This functionality provides compliance to Bellcore TR-444, which allows for the extension of ISDN beyond a single node for network-wide service by mapping ISDN loop signaling onto ISUP signaling. This feature also provides compliance to the TR-268 specified Information Elements that communicate calling and called party sub address information.
<ul style="list-style-type: none"> • NI0 Interworking NI-1 Services FG. NI000050 [OPT] FGN. NI0 NI 2/3 BRI Svcs Ph 1 	<ul style="list-style-type: none"> • Supports interworking to NI-1 Services.
<ul style="list-style-type: none"> • NI0.ISDN Basic Access FG. NI000007 [OPT] FGN. NI0 ISDN Base 	<ul style="list-style-type: none"> • This functionality provides the basic maintenance, administration and diagnostic features to support ISDN Basic Rate Access system features.
<ul style="list-style-type: none"> • NI0 ISDN/ISUP i/w FG. NI000014 [OPT] FGN. NI-0 NI-1 Tandem H/W: NT6X50AB, NTBX01AB 	<ul style="list-style-type: none"> • This functionality provides compliance to Bellcore TR-444, which allows for the extension of ISDN beyond a single node for network-wide service by mapping ISDN Q.931 loop signaling onto Integrated Services User Part (ISUP) signaling. One of the inherent advantages of ISDN over POTS is ISDNs ability to transport call-related information between ISDN terminals out-of-band over the D-channel. TR-444 provides for the end-to-end communication of this information such as Bearer Capability, High Layer Capability, Low Layer Capability, Call Progress Information, Cause and Signal Information and Calling Number over the CCS7 network between compliant central switches as if they were served by the same central switch.
<ul style="list-style-type: none"> • NI0 ISDN OAM Base; DPN FG. NI000007 [OPT] FGN. NI0 ISDN BASE H/W: NTZZ30NA 	<ul style="list-style-type: none"> • This functionality provides integrated service provisioning for ISDN circuit- and packet-switched devices. Integrated service provisioning means that adds, deletes and changes can be performed through SERVORD for B- and D-channel packet devices, just as for B-channel circuit-switched voice and data terminals.

288 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 69 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • NI0 ISDN OAM Proc FG. NI000007 [OPT] FGN. NI0 ISDN BASE H/W: NTZZ30NA 	<ul style="list-style-type: none"> • This functionality provides integrated service provisioning for ISDN circuit- and packet-switched devices. Integrated service provisioning means that adds, deletes and changes can be performed through SERVORD for B- and D-channel packet devices, just as for B-channel circuit-switched voice and data terminals.
<ul style="list-style-type: none"> • NI0 ISDN Provisioning FG. NI000007 [OPT] FGN. NI0 ISDN BASE H/W: NTZZ30NA 	<ul style="list-style-type: none"> • This software provides integrated service provisioning for ISDN circuit- and packet-switched devices. Integrated service provisioning means that adds, deletes and changes can be performed through SERVORD for B- and D-channel packet devices, just as for B-channel circuit-switched voice and data terminals.
<ul style="list-style-type: none"> • NI0 ISDN Routing FG. NI000008 [OPT] FGN. NI0 NI-1 BRI 	<ul style="list-style-type: none"> • This functionality provides the capability to translate and route calls not only on the called digits, but also on the various characteristics retrieved from the information elements.
<ul style="list-style-type: none"> • NI0 ISDN Routing Tandem FG. NI000014 [OPT] FGN. NI-0 NI-1 Tandem 	<ul style="list-style-type: none"> • This functionality completes TR-448 compliance by allowing a Bearer Capability to be datafilled against an incoming trunk group. For example, incoming switched 56 trunks could be designated as data trunks, allowing the interworking of switched 5 service with ISDN.
<ul style="list-style-type: none"> • NI0 ISDN Suppl Svcs FG. NI000008 [OPT] FGN. NI0 NI-1 BRI 	<ul style="list-style-type: none"> • This functionality enhances the ISDN Electronic Key Telephone Service features, mainly for processing of conference and held calls. This software adds the benefit of TR-860 Terminal Portability.
<ul style="list-style-type: none"> • NI0 ISDN Test Access FG. NI000007 [OPT] FGN. NI0 ISDN BASE H/W: NTZZ30NA 	<ul style="list-style-type: none"> • This functionality allows ISDN Basic Rate B- and D-channels to be monitored with a commercially available protocol analyzer. The digital connections between the line to be monitored and the protocol analyzer are set up through the MAP. The protocol analyzer can be located with the switch or remote access vehicle, or remotely over DS-1 facilities.
<ul style="list-style-type: none"> • NI0 IVDT Sim Acc 2 B Chs FG. NI000050 [OPT] FGN. NI0 NI 2/3 BRI Svcs Ph 1 	<ul style="list-style-type: none"> • This feature allows for access to both B-channels simultaneously from a single Directory Number.
<ul style="list-style-type: none"> • NI0 IVDT/NIT ISDN Platform FG. NI000050 [OPT] FGN. NI0 NI 2/3 BRI Svcs Ph 1 	<ul style="list-style-type: none"> • Provides support of non-initializing terminals for NI-2. Non-initializing terminals do not require a service provider identification for initialization.

Table 112
SE07 Functionality listing (Sheet 70 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • NI0 MTCE Mult Terms FG. NI000052 [OPT] FGN. NI0 NI-2 BRI Services 	<p>This feature provides valuable diagnostic information that streamlines BRI remote maintenance. This software displays the physical terminal on a Logical Terminal Identifier (LTID) and indicates if the physical terminal is up or down. This feature also provides a single command to display the following:</p> <ul style="list-style-type: none"> • The status of each terminal sharing the same DN and LTID. • The call types provisioned on each terminal.
<ul style="list-style-type: none"> • NI0 Music on Hold FG. NI000051 [OPT] FGN. NI0 NI-2/3 BRI Svc Ph II 	<ul style="list-style-type: none"> • Music on Hold provides access to a music source when incoming calls to the ISDN group subscribing to this feature have been placed on hold.
<ul style="list-style-type: none"> • NI0 Net Prvd Clng Pty No FG. NI000052 [OPT] FGN. NI0 NI-2 BRI Services 	<ul style="list-style-type: none"> • The Network Provided Calling Party Number feature enhances current Calling Party Number Screening to provide NI-2 compliance.
<ul style="list-style-type: none"> • NI0 NI-2 TR1268 D channel Back-up FG. NI000043 [OPT] FGN. NI0 NI-2 PRI Base 	<ul style="list-style-type: none"> • Provides D-channel back-up capabilities for NI-2 in accordance with TR1268.
<ul style="list-style-type: none"> • NI0 PRI CCS7 Interwk FG. NI000033 [OPT] FGN. NI0 PRI NI-1 Base H/W: NT6X50AB, NTB01AB 	<ul style="list-style-type: none"> • This functionality allows PRI to interwork with the CCS7 network to provide: call completion between PRI and CCS7, Calling Number Delivery between PRI and CCS7 transport to the Traveling Class Mark (which contains the caller's Network Class of Service information).
<ul style="list-style-type: none"> • NI0 PRI Enh Num Del FG. NI000033 [OPT] FGN. NI0 PRI NI-1 Base H/W Required: NT6X50AB, NTB01AB 	<ul style="list-style-type: none"> • This functionality enables interworking between MF Feature Group D (FGD) and CAMA signaling to provide connections to enhanced service providers. It also provides the terminating billing for ESPs and supports subscription parameters on PRI trunks.
<ul style="list-style-type: none"> • NI0 Non-Initial terms FG. NI000050 [OPT] FGN. NI0 NI 2/3 BRI Svcs Ph 1 	<ul style="list-style-type: none"> • Provides support for a non-initializing terminal on a BRI line after the interface is provisioned. A Non-initializing terminal is a class of ISDN terminal that does not require a Service Provider Identification (SPID) for initialization.
<ul style="list-style-type: none"> • NI0 arameter Downloading V1 FG. NI000051 [OPT] FGN. NI0 NI 2/3 BRI Svcs Ph II 	<ul style="list-style-type: none"> • Enables the customer's ISDN terminal to read certain parameters directly into memory, synchronizing terminal and switch databases. The downloading capability can only be invoked from an initializing terminal. This feature minimizes the number of parameters a customer is required to manually enter into an ISDN terminal.

290 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 71 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • NI0 PRI Base FG. NI000022 [OPT] FGN. NI0 ISDN PRI Base H/W: NT6X50AB, NTB01AB 	<ul style="list-style-type: none"> • This software provides the necessary table control to support the subscription parameters, DS-1 and DS-0 maintenance for ISDN, PRI static data downloading, table control for ISDN BRI calls, all direct PRI processing capability (layer 3 call control) for IBN Attendant Console and IVD sets on the Meridian SL-100, PRI interworking with Meridian SL-100 agencies II, basic ISDN PRI maintenance, signaling terminal control module 0 usage, B/D-channel correlation and maintenance tests. Includes several PRI enhancements such as: Per Link Pricing, Translation and Routing Using Called Party Number Information Element (IE) and Per Call Transit Network Selection For Public Calls.
<ul style="list-style-type: none"> • NI0 PRI ISA FG. NI000033 [OPT] FGN. NI0 PRI NI-1 Base H/W: NT6X50AB, NTB01AB 	<ul style="list-style-type: none"> • This functionality activates Integrated Services Access (ISA) for the network specific facilities information element, allowing call-by-call service selection for DID and DOD, Tie Trunks, Foreign Exchange Lines and WATS lines. It also provides table control necessary to allow PRI ISA. BCS 34 added the Service Identifier (SID) Routing For Incoming PRI ISA Calls feature.
<ul style="list-style-type: none"> • NI0 NI-2 PRI MTC Basic FG. NI000043 [OPT] FGN. NI0 NI-2 PRI Base Vrt 	<ul style="list-style-type: none"> • This functionality provides maintenance capabilities such as the support of multiple (up to five) DS-1s controlled by one D-channel, Calling Line Identification services and B-channel availability procedures. Availability procedures allow the CPE and the network to inform each other about the availability and status of B-channels for call processing.
<ul style="list-style-type: none"> • NI0 NI-2 PRI CC FG. NI000043 [OPT] FGN. NI0 NI-2 PRI Base 	<ul style="list-style-type: none"> • This functionality provides the ISDN Primary Rate Interface code to support National ISDN-2.
<ul style="list-style-type: none"> • NI0 NI-2 PRI Scrng FG. NI000043 [OPT] FGN. NI0 NI-2 PRI Base 	<ul style="list-style-type: none"> • Enables the Meridian SL-100 to verify the calling number before sending the number into the network.
<ul style="list-style-type: none"> • NI0 NI-2 PRI Variant FG. NI000043 [OPT] FGN. NI0 NI-2 PRI Base 	<ul style="list-style-type: none"> • This feature provides the Basic Call capability for the NI-2 variant of ISDN.
<ul style="list-style-type: none"> • NI0 NI-2 PRI B&D Ch Mtc FG. NI0000434 [OPT] FGN. NI0 NI-2 PRI Base 	<ul style="list-style-type: none"> • Supports B-channel availability procedures for NI-2. This capability allows the Meridian SL-100 to mark a channel as "out-of-service" and skip that channel in call processing operations.

Table 112
SE07 Functionality listing (Sheet 72 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • N10 PRI MWI FG. NI000033 [OPT] FGN. N10 NI-1 PRI H/W: NT6X50AB, NTB01AB 	<ul style="list-style-type: none"> • This functionality allows signals activating and canceling MWI to be passed over PRI links between a DMS switch and a Meridian 1 or a Meridian SL-100 switch. The passing of MWI messages in either direction is supported. The feature allows a hybrid network of MDC and Meridian 1 business locations over an entire city or LATA to be served by a central switch message service from a central DMS, or by a Meridian 1 Meridian Mail message service from a central Meridian 1. The associated Meridian 1 PBX requires a similar software package, introduced with Meridian 1 Release 19. When serving customers with hybrid MDC and Meridian 1 networks from a central message service, some network configuration restrictions may apply.
<ul style="list-style-type: none"> • N10 PRI Network Disp FG. NI000033 [OPT] FGN. N10 NI-1 PRI H/W: NT6X50AB, NTB01AB 	<ul style="list-style-type: none"> • This software provides name information about the calling party, the originally called party and the connected party across the ISDN PRI network and supports interworking with CCS7 ISDN ISUP network.
<ul style="list-style-type: none"> • N10 PRI Networking FG. NI000033 [OPT] FGN. N10 NI-1 PRI H/W: NT6X50AB, NTB01AB 	<ul style="list-style-type: none"> • This functionality provides name information about the calling party, the originally called party (if redirection occurs) and the connected party across the Integrated Services Digital Network Primary Rate Interface and supports interworking with a Common Channel Signaling 7 ISDN User Part (ISUP) network.
<ul style="list-style-type: none"> • N10 PRI NI-2 toISUP FG. NI000043 [OPT] FGN. N10 NI-2 PRI Base 	<ul style="list-style-type: none"> • Provides CCS7 interworking with NI-2 PRI in accordance with TR-444.
<ul style="list-style-type: none"> • N10 RLT on NTNAPRI FG. NI000024 [OPT] FGN. N10 RLT on NI-1 PRI 	<ul style="list-style-type: none"> • This feature provides Release Link Trunk (RLT) on PRI variant trunks for Meridian SL-100 (North American loads only). RLT optimizes the usage of PRI trunks when it is in effect. When a caller from one switch calls through to another switch over a NTNA PRI trunk and the call is routed back to the original switch over the same PRI network and D-channel path, the PRI ISDN trunk is then released and the call becomes internally connected in the origin switch. When the Meridian SL-100 initiates a call to the Meridian 1 and the call is returned to the Meridian SL-100 over PRI trunks, the “tromboned” trunks will be released by RLT. This feature is applicable only to calls originating from the Meridian SL-100. Calls originating from the Meridian 1 are not supported.

292 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 73 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • NIO TL1 Parsing I/F Base FG. NI000009 [OPT] FGN. NIO NI-1 BRI Enhanced Mtc 	<p>This functionality is part of the Operating Support System (OSS) which provides the Integrated Digital Cross Connect (IDCC) interface to OSS which communicate through the following:</p> <ul style="list-style-type: none"> • Transaction Language 1 (TL-1). • Program Documentation Standard (PDS). <p>The IDCC is a software application which resides on the SONET/ SuperNode and provides two basic capabilities:</p> <ul style="list-style-type: none"> • The ability to provision cross-connected circuits. • The ability to perform digital test access on those same circuits.
<ul style="list-style-type: none"> • NIO TL-1 Tsting I/F Base FG. NI000009 [OPT] FGN. NIO NI-1 BRI Enhanced Mtc 	<ul style="list-style-type: none"> • This functionality is part of the ISDN TL1 project which implements an I/O handler for communication between an ISDN TL1 Operation System and a OMS switch. ISDN TL1 is the first phase which offers ISDN line testing to the remote ISDN TL1 OS. The high-level protocol employed by ISDN TL1 is Transaction Language 1. • The purpose of an OS is to allow testing to be more generic to the users by providing a common interface for all switch manufacturers.
<ul style="list-style-type: none"> • NIO TR303 NI-2 Compl FG. NI000051 [OPT] FGN. NIO NI-2/3 BRI Svs Ph II 	<p>This feature supports the capabilities of NI000051 on the AccessNode including the following features:</p> <ul style="list-style-type: none"> • Use of a single Directory Number across multiple terminals, and more than two B-channel terminals interface configurations. • Parameter downloading. • Flexible Calling and Calling Name Delivery enhancements.
<ul style="list-style-type: none"> • NIO Tsting NIO N Services FG. NI000009 [OPT] FGN. NIO NI-1 BRI Enhanced Mtc 	<ul style="list-style-type: none"> • This software helps facilitate deployment of ISDN Basic Rate Interface (BRI) lines and services by delivering new testing capabilities. It adds a standalone NT1 test capability to the existing Meridian SL-100 testing system and provides table control to define the location of the test NT1. The feature also supplies utilities to establish a metallic connection between the test NT1 and a specific ISDN line card. This software allows local ISDN line card and loop testing. From a Maintenance and Administration Position (MAP), the technician can perform presubscription testing, service verification and trouble segregation on ISDN lines. The feature provides a link to the Integrated Test System Controller (TSC) from the MAP, enabling access to multimeter measurements, NT1 signature detection, sealing current measurement, cold start test results, 2B1Q loop level measurement, load coil detection and wideband and impulse noise measurements.
<ul style="list-style-type: none"> • NIO XPM+ for DTCI FG. NI000007 [OPT] FGN. NIO ISDN Base 	<ul style="list-style-type: none"> • This functionality upgrades the ISDN Digital Trunk Controller (DTCI) to XPM Plus.

Table 112
SE07 Functionality listing (Sheet 74 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> Nortel Networks Meridian SL-100 Corporate Directory Application FG.MSL0124 FGN.CORPDIRAP 	<ul style="list-style-type: none"> With Nortel Networks Meridian SL-100 Corporate Directory Application, M3903, M3904, and M3905 users have the ability to access and query corporate directory entries from their own terminal. Once the user finds the desired entry, the entry's name, department number (or other identifier), and DN is displayed. If the user so chooses, the entry can be dialed by pressing the "Dial" softkey, which is displayed when an entry is found. The Corporate Directory system architecture includes a centralized platform (Windows NT based system), a Meridian SL-100, a LDAP version 3 compliant corporate directory server, an Enhanced Intelligent Peripheral Equipment controller connected to a LAN, and finally, the M3903, M3904, or M3905 terminals.
<ul style="list-style-type: none"> PF Robustness FG.MDC00014 FGN.MDC Tailored MDC 3 	<p>Power Features give users the ability to add, delete and change certain MDC features on their own telephone set and the sets of other users from a MBS display terminal. Power Feature Robustness adds four Power Feature Key capabilities which enable MBS users to make the following changes in their service configurations:</p> <ul style="list-style-type: none"> Separate public and private name programming. Ability to enforce passwords. Compatibility with Call Forward separate key lists. Compatibility with Call Pickup separate keys. <p>This feature provides the Power Feature user the capability of programming only the Public Name or only the Private Name in a Name Programming session. The previous version of Name Programming allowed for changing the Public Name Only or both the Public and Private Name.</p> <p>PF Robustness provides the capability of password protecting access to Power Features. A password can be assigned, changed, or deleted by the administrator using SERVORD or direct table editing. Prior to this feature, the password requirement was optional. With this change, it is a requirement for all Power Features users (both General and Admin level) to establish and maintain a password.</p> <p>A change to this features supports Call Forward per Key (CFK) option and Call Pickup Separate Keylist in a Power Features environment. CFK allows each DN key on a business set to be programmed to its own remote locations. Call Pickup Separate Keylist allows end users to add their station to an existing pickup group or create a new pickup group.</p> <p>This feature supports MBS sets with display only.</p>
<ul style="list-style-type: none"> PUMA Upgrade Fmwk FG.PUMA0001 FGN.PUMA Product Upgrade Mgr 	<ul style="list-style-type: none"> The Product Upgrade Manager provides automation of PM loading for all Series II and Series III peripherals. This enhancement ensures that PMs load in the correct order.

294 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 75 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> Redundant Feature FG.SERV0001 FGN.SERV SERVORD Enhancements 	<p>This feature saves time and operating costs by reducing manual intervention in Service Order operation. With this feature, SERVORD accepts and commits changes under the following conditions:</p> <ul style="list-style-type: none"> The addition of line options even when they already exist. The deletion of line options even when they do not presently exist. <p>In both cases, an informative response from SERVORD indicates whether the command sequence was successful or not.</p> <p>This enhancement eliminates two major causes of SERVORD rejects at the provisioning system. The costly, time-consuming manual provisioning rework formerly needed to respond to "Feature Does Exist" and "Feature Does Not Exist" responses is eliminated.</p>
<ul style="list-style-type: none"> RES Anonymous Caller Rejection (ACRJ) FG.RES00003 [OPT] FGN.RES Disp Funct & prvcy H/W: NT6X78AB 	<ul style="list-style-type: none"> This package allows subscribers with or without CLASS Calling Number Display and/or Calling Name Display to reject calls for which Calling Name/Number Display information has been intentionally blocked. Only calls for which the information has been blocked are rejected.
<ul style="list-style-type: none"> RES Automatic Callback (ACB) FG.RES00005 [OPT] FGN.RES Non-Display Services H/W: NT6X78AB (Additional Drams) 	<ul style="list-style-type: none"> This functionality enables a user to enter a feature code that will automatically set up a call to the last Directory Number that was dialed, regardless of whether the call was answered, unanswered or busy.
<ul style="list-style-type: none"> RES Automatic Recall (AR) FG.RES00005 [OPT] FGN.RES Non-Display Services H/W: NT6X78AB 	<ul style="list-style-type: none"> This functionality enables a user to enter a feature code that will automatically set up a call to the Directory Number of the last incoming call. If the DN called is busy, the user is notified and instructed by an announcement. Automatic processing of the call continues, until both lines are idle.
<ul style="list-style-type: none"> RES Auto Recall Blocking of Private Calls FG.RES00005 [OPT] FGN.RES Non-Display Services H/W: DRAM or EDRAM 	<ul style="list-style-type: none"> Auto Recall Blocking of Private Calls allows users to prevent the disclosure of their "private" Directory Number when Automatic Recall is activated. A private call is a call originated from a station that disallows or blocks sending the calling number to another party. Automatic Recall enables users to enter a feature code that will automatically set up a call to the Directory Number of the last incoming call. Without Auto Recall Blocking of private Calls, when AR is activated to a long distance number that is a private number, the telephone number may appear on the billing record.
<ul style="list-style-type: none"> RES Call FWD Remote Act. FG.RES00002 FGN.RES Advncd Cstm Calling 	<ul style="list-style-type: none"> This feature allows Call Forward Remote Access (CFRA) Personal Identification Numbers (PINs) to be Non-Unique. The method of PIN storage, although transparent to the customer, is changed with this package. This simplifies Service Order methods, because the technician does not have to ensure uniqueness when assigning initial PIN values.

Table 112
SE07 Functionality listing (Sheet 76 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • RES Call Hold FG.RES00002 FGN.RES Advncd Cstrm Calling H/W: NT6X78AB 	<ul style="list-style-type: none"> • This functionality provides the capability for the residential subscriber to place a call on hold and resume the conversation either from the same set or from another extension.
<ul style="list-style-type: none"> • RES Calling Name Delivery (CNAMD) FG.RES00023 FGN.RES Disp Funct & prvcy H/W: NT6X78AB 	<ul style="list-style-type: none"> • This functionality displays the name associated with an incoming DN between the first and second ringing cycle. It requires a telephone set or a CLID adjunct which is capable of displaying an alphanumeric set of characters.
<ul style="list-style-type: none"> • RES Call Waiting and 3-Way Calling FG.RES00005 FGN.RES Non Display Services 	<ul style="list-style-type: none"> • This enhancement enables subscribers that have initiated a current three-way call the ability to still receive a Call Waiting call. This enhancement operates the same way a standard Call Waiting (CWT) operates: the called party receives the CWT tone (the other parties in the three-way call do not hear the tone), and the called party can flash the switchhook to alternate between the three-party conference and the new calling party. This feature is applicable for POTS and IBN/RES lines only.
<ul style="list-style-type: none"> • RES Call Waiting Conference FG.RES00005 FGN.RES Non Display Services 	<ul style="list-style-type: none"> • The Call Waiting Conference (CWTC) feature provides conference functionality to enable a CWT subscriber to easily add a new calling party to an existing two-party call by simply flashing the switchhook and pressing a predefined digit within a service provider-defined time frame. This feature brings together two high-demand features to enhance the Call Waiting feature.
<ul style="list-style-type: none"> • RES CLASS Name Display – TCAP FG.RES00003 [OPT] FGN.RES Disp Funct & prvcy H/W: NT6X78AB & CCS7 Hardware 	<ul style="list-style-type: none"> • This functionality allows the SSP to query an SCP database for the name of the calling party and allows users to view the caller's name before answering. It displays the name associated with the incoming DN party after the first ringing cycle. The date and time of an incoming call are also displayed. It requires a telephone set or an adjunct to the phone capable of displaying an alphanumeric set of characters. This is a CLASS CCS7 internode feature.
<ul style="list-style-type: none"> • RES CLASS Name/Number Delivery Blocking (CNNB) FG.RES00022 FGN.RES Disp Funct & Prvcy H/W: NT6X78AB 	<ul style="list-style-type: none"> • This functionality allows users to control the display of their DN at the terminating station on a per-call basis in three different ways: <ol style="list-style-type: none"> 1) Control suppression of their DN on a per-call basis, 2) Prevent display of their number at the terminating end on a per-call basis, and 3) Prevent display of their name and number at the terminating station on a per-call basis.

296 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 77 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> RES Calling Number Delivery Blocking (CNDB) FG.RES00003 [OPT] FGN.RES Disp Funct & Prvcy H/W: NT6X78AB 	<ul style="list-style-type: none"> This functionality allows users to prevent Calling Number Delivery on a per-call basis by dialing an access code. Individual lines can be set up either to send or suppress calling number information. When the line is set up to send calling number information, dialing the access code suppresses the calling number information for that call. If the line is set up to suppress calling number information, dialing the access code sends the calling number information for that call. Switch parameter CNDB_ON_POTS is provided by this functionality to allow switch-wide activation of Calling Number Delivery Blocking Administration for Residential Lines only.
<ul style="list-style-type: none"> RES Calling Number Delivery (CND) FG.RES00003 [OPT] FGN.RES Disp Funct & Prvcy H/W: NT6X78AB (Additional Dram) 	<ul style="list-style-type: none"> This software identifies the 10-digit DN of the calling party. The calling number is displayed on a telephone set or adjunct that is capable of displaying the incoming DN, after the first ringing cycle. Date and time of the incoming call are also displayed.
<ul style="list-style-type: none"> RES Call Waiting Deluxe (DSCWID) FG.RES00040 FGN.RES Disp Funct & Prvcy 	<p>This feature provides DSCWID as defined by Bellcore Technical Requirement TR-NWT-0416 and the Call Waiting Deluxe feature. This feature enhances Call Waiting display by allowing the user options on how to handle an incoming second call. The calling party is provided audible ringing, and the DSCWID called party is alerted that a call is "waiting". The called party can choose one of the following options for the incoming call:</p> <ul style="list-style-type: none"> Answer the new call and put the existing call on hold. Disconnect the existing call and answer the new call. Forward the new call. Connect the new call to a busy announcement. Put the new call on hold after connecting to a hold announcement. Conference the new call with the existing call. <p>DSCWID is available to customers with CLASS features. An ADSI-compatible telephone set simplifies the selection of a treatment; however, 2500 telephone sets with DTMF can be able to use a subset of the options available. Feature scripts for PowerTouch Terminals are accessed from an ACMS Server (RES00003 – Included in CLASS Option).</p>
<ul style="list-style-type: none"> RES Call Waiting Display (SCWID) FG.RES00003 [OPT] FGN.Res Disp Funct & Prvcy H/W: NT6X92BC, NT6X69AD, XPM+, NT6X78AB 	<ul style="list-style-type: none"> This feature displays the name and/or number of a waiting call immediately upon the call's arrival at the called party's line, thus allowing the called party to decide whether to continue their call in progress or to answer the incoming call. Display capability is required to receive and display the incoming call information. This SCWID feature complies with Bellcore TR-575.

Table 112
SE07 Functionality listing (Sheet 78 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> RES Call Wake Up Svc FG.RES000014 FGN.RES Advncd Cstm Calling 	<ul style="list-style-type: none"> This functionality provides wake-up call service for RES and MDC subscribers.
<ul style="list-style-type: none"> RES Customer Originated Tracing (COT) FG.RES00005 [OPT] FGN.RES Non-Display Services H/W: NT6X78AB (Additional Dram) 	<ul style="list-style-type: none"> This functionality allows users to activate an immediate trace of the last incoming call, without requiring prior approval and manual intervention by switch personnel. COT is activated on a per-call basis and the service is deactivated when the user goes on-hook. Two-level feature activation is available which provides recorded announcements that inform the subscriber of the state of the COT. The Meridian SL-100 prompts the user for a decision to proceed or not to proceed with the trace.
<ul style="list-style-type: none"> RES CLASS NPA Split FG.RES00007 [OPT] FGN.RES Signing, Routing, OAM. H/W: NT6X78AB 	<ul style="list-style-type: none"> This software creates the NPA Split Management Table (NPASPLIT) to allow CLASS features to operate successfully during the permissive dialing period of an NPA split.
<ul style="list-style-type: none"> RES CNAMD Interwork (TCAPNM) Local Lookup FG.RES00003 FGN.RES Disp Func & Prvcy 	<ul style="list-style-type: none"> Through the use of the new TCAPNM sub option, LOCAL, the Meridian SL-100 customer is given the flexibility of datafilling names locally on the Meridian SL-100 in order to avoid performing TCAP name queries. The customer can use this feature to avoid the time-consuming process of building and sending a TCAP name query through a Service Transfer Point to the TCAP name database located at a Service Control Point (RES00080).
<ul style="list-style-type: none"> RES Customer Tracing Enhancement FG.RES00005 [OPT] FGN.RES Non-Display Services H/W: NT6X78AB 	<ul style="list-style-type: none"> This functionality allows CLASS stations to direct the printing of a selected call record at a central switch maintenance location. This record can be used to trace obscene call originators.
<ul style="list-style-type: none"> RES Dialable Number Delivery (DDN) FG.RES00003 [OPT] FGN.RES Disp Funct & Prvcy H/W: NT6X78AB 	<ul style="list-style-type: none"> This functionality delivers the DN of the calling party after the first ringing cycle. The difference between Calling Number Delivery and Dialable Number Delivery is that CND delivers the 10-digital DN of the calling party; however DDN only delivers the digits required for the called party to return the call. For example, if the incoming call is local, a seven-digit DN is displayed; if it is an intra-LATA toll, 1+ seven-digit number is displayed.

298 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 79 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • RES Dist Ringing/Call Waiting (DRCW) FG.RES00005 [OPT] FGN.RES Non-Display Services H/W: NT3X68AB, NT6X78AB 	<ul style="list-style-type: none"> • With this software, incoming calls for up to 31 DNs can be automatically identified by distinctive ringing. If the user is engaged in conversation and a call from one of the designated DNs arrives, a distinctive call waiting tone accompanies the incoming call. Calls from other DNs ring normally. <p>DRCW is accessed by dialing a service-specific access code. Modifications to the DRCW list can be made by using the keypad.</p>
<ul style="list-style-type: none"> • RES DLCM FG.RES00002 FGN.RES Advd Cstm Calling 	<ul style="list-style-type: none"> • This feature allows two different lines the ability to answer a call on either other line. For example, if a call is placed to line B, the call can be retrieved by line A with this feature assigned (RES00087).
<ul style="list-style-type: none"> • RES Enablers-CLASS LIOD FG.RES00006 [OPT] FGN.RES Service Enablers H/W: NT6X78AB 	<ul style="list-style-type: none"> • This functionality is an interdependency for CLASS services and provides a number of features and capabilities needed to implement CLASS applications.
<ul style="list-style-type: none"> • RES Enablers-Enhanced Residential Services FG.RES00006 [OPT] FGN.RES Service Enablers H/W: NT6X78AB 	<ul style="list-style-type: none"> • This feature provides basic RES Operations, Administration and Maintenance (OA&M) functions. Additionally, it is the base platform for CLASS ADSI and Screen List editing features.
<ul style="list-style-type: none"> • RES Enablers – ADSI Services Protocol TR Compliance FG.RES00006 [OPT] FGN.RES Service Enablers H/W: NT6X92BC, NT6X69AD, XPM+, NT6X78AB 	<ul style="list-style-type: none"> • This functionality serves as base software for ADSI signaling to allow the Meridian SL-100 to deliver display-based services to users.
<ul style="list-style-type: none"> • RES Enablers-RES Base FG.RES00006 [OPT] FGN.RES Service Enablers H/W: NT6X78AB 	<ul style="list-style-type: none"> • This functionality is an interdependency for CLASS services and provides a number of features and capabilities needed to implement CLASS applications.

Table 112
SE07 Functionality listing (Sheet 80 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • RES Enablr-Screen List Editing FG.RES00006 [OPT] FGN.RES Service Enablers H/W: NT6X78AB (Additional Drams) 	<ul style="list-style-type: none"> • This software allows users to program a list of DN's for one or more programmable screening services, such as Selective Call Acceptance, Selective Call Rejection, Selective Call Forwarding and Distinctive Ringing/Call Waiting, and to activate or deactivate the service.
<ul style="list-style-type: none"> • RES Expansion Svcs FG.RES00002 FGN.RES Advncd Cstm Calling H/W: NT6X78AB 	<ul style="list-style-type: none"> • This functionality adds Call Transfer, Call Pickup, Make Set Busy and Group Intercom to the already available CLASS base features on residential lines only.
<ul style="list-style-type: none"> • RES Extension Bridged Svcs FG.RES00002 FGN.RES Advncd Cstm Calling 	<ul style="list-style-type: none"> • This functionality is a new variation of the Multiple Appearance Directory Number (MADN) feature. Extension Bridging is identical to the MADN Single-Bridged Arrangement that permits one Directory Number (DN) in multiple locations, except for the implementation of Call Forwarding and Speed Calling.
<ul style="list-style-type: none"> • RES Fraud Prevention Blocking FG.RES00002 FGN.RES Advncd Cstm Calling 	<ul style="list-style-type: none"> • Fraud Prevention Blocking (FPB) provides the network provider the ability to enhance customer service and lifeline protection by a offering a means to block all calls originated from a line by persons not knowing the subscriber's authorization code (PIN code). The network provider can select a small set of numbers for that particular office which can be called without the authorization code. This set of callable numbers can include 911, 611 (that is, repair) or any other number decided by the network provider.
<ul style="list-style-type: none"> • RES High Speed SMDI FG.RES00004 [OPT] FGN.RES I/F Functionality H/W: NT1X89BB (MSM & GP) 	<ul style="list-style-type: none"> • This functionality enhances the SMDI application to use MPC hardware and software for data communications with Voice Messaging systems.
<ul style="list-style-type: none"> • RES & MDC Warm Line FG.RES00002 FGN.RES Advncd Cstm Calling H/W: NT6X78AB 	<ul style="list-style-type: none"> • This functionality provides the Warm Line feature. An additional line entry is made in the corresponding table to support a time delayed automatic hot line. The Warm Line feature may be provided to lines with the Residential Enhanced Services (RES) and Meridian Digital Centrex feature capabilities.
<ul style="list-style-type: none"> • RES QCUST Command Enhancements FG.RES00006 FGN.RES Service Enablers 	<ul style="list-style-type: none"> • This software uses the Screening List Editing function to store up to 31 DN's from which a user wishes to receive calls. An incoming call from a DN that is not on the SCA list is routed to an announcement stating that the called party does not wish to receive the call. SCA is accessed by dialing an access code and modifications to the list are made with the telephone keypad.

300 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 81 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • RES Selective Call Acceptance (SCA) FG.RES00005 [OPT] FGN.RES Non-Display Services H/W: NT6X78AB 	<ul style="list-style-type: none"> • This software uses the Screening List Editing function to store up to 31 DNs from which a user wishes to receive calls. An incoming call from a DN that is not on the SCA list is routed to an announcement stating that the called party does not wish to receive the call. SCA is accessed by dialing an access code and modifications to the list are made with the telephone keypad.
<ul style="list-style-type: none"> • RES Selective Call Forwarding (SCF) FG.RES00005 [OPT] FGN.RES Non-Display Services H/W: NT6X78AB 	<ul style="list-style-type: none"> • This functionality allows users to ensure that selected calls reach them when they are away from their telephone. Incoming calls for up to 31 DNs can be forwarded to another telephone. Calls from DNs that are not on the Selected Call Forward (SCF) list will receive whatever treatment the user has arranged (that is, Voice Mail). SCF is accessed by dialing an access code and entries may be changed using the keypad.
<ul style="list-style-type: none"> • RES Selective Call Rejection (SCRJ) FG.RES00005 [OPT] FGN.RES Non-Display Services H/W: NT6X78AB 	<ul style="list-style-type: none"> • This functionality allows the user to selectively program a list of up to 31 DNs from which calls are rejected or blocked. Incoming calls that are on the SCR list are routed to an announcement informing the caller that the called party does not wish to receive the call. It is accessed by dialing an access code and modifications to the list are made using the keypad.
<ul style="list-style-type: none"> • RES Simplified Message Desk Interface FG.RES00004 [OPT] FGN.RES I/F Functionality H/W: NT1X89BB (MSM & GP) 	<ul style="list-style-type: none"> • This functionality provides a datalink between message desk terminal equipment and the Meridian SL-100, integrating three call features: Call Forwarding, Message Waiting and Uniform Call Distribution.
<ul style="list-style-type: none"> • RES Simultaneous Ring FG.RES00002 FGN.RES Advncd Cstm Calling 	<ul style="list-style-type: none"> • This feature allows the user to be alerted of a call at any of five locations identified through the pilot and member DNs by simultaneously ringing all five DNs. A busy tone is received only if all five DNs are busy. The four non-pilot member DNs can be any valid DN, except a member of a Multiple Appearance Directory Number (MADN) group off of the same Meridian SL-100 as the pilot DN. The non-pilot member DNs can be modified either locally or remotely using the SLE interface. The pilot DN must be on the Meridian SL-100. The out-going trunk from the Meridian SL-100 must be SS7.
<ul style="list-style-type: none"> • RES Single Line Variety FG.RES00002 FGN.RES Advncd Cstm Calling H/W: NT6X78AB 	<ul style="list-style-type: none"> • Single Line Variety offers customers served by a single line advanced features such as Intercom, Hold and Distinctive Ringing.

Table 112
SE07 Functionality listing (Sheet 82 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • RES Single USOC for DSCWID and CFDA FG.RES00003 FGN.RES Disp Func & Prvcy 	<ul style="list-style-type: none"> • Previously, Meridian SL-100 software utilized a dual USOC provisioning method to add DSCWID to lines with and without CFDA. This functionality allows for the use of a single Universal Service Order Code (USOC) to provision DSCWID both with and without CFDA. This functionality simplifies the Service Order processing for DSCWID.
<ul style="list-style-type: none"> • RES SLE/ACBAR NO TCAP FG.RES00002 FGN.RES Advd Cstm Calling 	<p>This feature disables the TCAP query functionality for Screen List Editing (SLE) and Automatic Call Back/Automatic Recall (ACB/AR) features on an optional, host-controlled basis. This allows for limited feature functionality to areas of the network that are non-TCAP compliant.</p> <p>Certain aspects of feature functionality are compromised in a non-TCAP environment, for example:</p> <ul style="list-style-type: none"> • Delayed processing feature of ACB/AR. • SLE number programming cannot discern if the user-programmed number is valid.
<ul style="list-style-type: none"> • RES SMDI CLID Suppression FG.RES00004 [OPT] FGN.RES I/F Functionality H/W: NT6X78AB 	<ul style="list-style-type: none"> • This software allows the network provider to override Simplified Message Desk Interface (SMDI) restrictions on Calling Line Identification Display (CLID) among members of a Uniform Call Distribution (UCD) group. • Using this functionality, the network provider can offer message services to business clients, regardless of state CLID regulatory requirements. The feature also allows for the blocking of group members' CLID for any calls made outside the group.
<ul style="list-style-type: none"> • RES Teen Service FG.RES00002 FGN.RES Advncd Cstm Calling 	<ul style="list-style-type: none"> • Teen Service allows multiple Directory Numbers (DN) to be assigned to one line without the need for additional line equipment. It is a terminating line option for single party lines that allows one Primary DN (PDN) and up to three Secondary DNs (SDN) to be defined. A call to an idle line having Teen Service results in the line being rung with a ringing cadence associated with one of the defined DNs. A call to a busy line having both Teen Service and Call Waiting causes that line to receive a distinctive tone associated with the called DN, if the Enhanced Call Waiting package (BAS Call Waiting [POTS]) is present on the switch. Otherwise, the normal Call Waiting tone is provided. This functionality allows simultaneous call forwarding of the Primary and the Secondary Directory Numbers to different locations.
<ul style="list-style-type: none"> • RES Universal Access to CLASS FG.RES00001 [OPT] FGN.RES Access Management H/W: NT6X78AB 	<ul style="list-style-type: none"> • This software allows a customer to make one or more non-display CLASS features available to all RES lines on a switch-wide basis.

302 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 83 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> RES Visual Message Waiting FG.RES00003 [OPT] FGN.RES Disp Funct & prvcy H/W: NT6X78AB, NT6X69AB and Additional Drams 	<p>This functionality provides a visual message indication at the user's station that messages are waiting. Compatible with existing voice messaging systems, this package provides the user the following message waiting options:</p> <ul style="list-style-type: none"> With display sets (or adjuncts) – message waiting indicator on the display with date and time that the messages were left (if voice messaging system provides this). Lights a visual indicator lamp. Audible indication (intermittent dial tone). Combination of audible and visual.
<ul style="list-style-type: none"> SAID Basics FG.BAS00008 FGN.BAS SAID 	<ul style="list-style-type: none"> This software enhances the functionality of the Network Facility Access (NFA) feature which was implemented in BCS34 by activity NC0418. The scope of this feature involves adding three new capabilities to NFA: the ability to access an NFA trunk from locations other than the subscriber's base telephone line; the ability to place a connection to an NFA trunk on hold whenever the subscriber flashes from their line; and the capability to extend DP to DTMF conversion to the entire life of a call dialed by an Intelligent Processor (IP).
<ul style="list-style-type: none"> SERV CFDA Provisioning Enhancement FG.SERV0001 FGN.SERV SERVORD 	<ul style="list-style-type: none"> With this feature a technician changing the variable timer associated with the Call Forwarding Don't Answer (CFDA) feature no longer needs to identify the "Forward to Directory Number" information.
<ul style="list-style-type: none"> SL-100 Optivity Telephony Manager for Meridian SL-100 FG.MSL00001 FGN.MSL BASE 	<ul style="list-style-type: none"> This feature provides the base development required to use the graphical system administration tool, Optivity Telephony Manager for Meridian SL-100.

Table 112
SE07 Functionality listing (Sheet 84 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • SMDR Per Use Billing for Features FG.MSL00107 [OPT] FGN.MSL CLASS OPT 	<p>This feature provides the capability to generate a SMDR Billing extension record based on usage as opposed to a flat monthly rate, thus providing billing services similar to those offered by some of the local telephone companies.</p> <p>With this feature, the ability to generate a usage based SMDR extension record is available for the following features:</p> <ul style="list-style-type: none"> • Automatic Call Back (ACB) • Automatic Recall (AR) • Bulk Calling Line Identification (BCLID) • Calling Name Delivery (CNAMD) • Calling Number Delivery (CND) • Calling Number Delivery Blocking (CNDB) • Customer Originated Trace (COT) • Deluxe Spontaneous Call Waiting Display (DSCWID) • Dialable Number Delivery (DDN) • Distinctive Ringing/Call Waiting (DRCW) • Selective Call Acceptance (SCA) • Selective Call Forwarding (SCF) • Selective Call Rejection (SCRJ)
<ul style="list-style-type: none"> • Table XLANAME Expansion FG.MDC00001 FGN.MDC MDC Minimum 	<ul style="list-style-type: none"> • This functionality increases Table XLANAME from 4095 to 8173 tuples increasing datafill capacity.
<ul style="list-style-type: none"> • TEL C7 Chan-lized Access FG.TEL00001 FGN.TEL Telecom Layer H/W: NT9X76AA, NT9X77AA, NTEX22BB 	<ul style="list-style-type: none"> • Link Peripheral Processor (LPP) access, formerly available over dedicated links to each Link Interface Unit (LIU7), is now enhanced to include an interface through the Dual Shelf Network (also known as the Junctored Network, or JNET) with future provisions for an Enhanced Network (ENET) interface. This access is accomplished by a parallel, 512-channel Time Division Multiplexed Channel Bus (CBUS), driven by a Channel Bus Controller (CBC) to the Application Specific Units (ASUs). The CBC performs network plane selection and supports the DS-30 protocol to allow access to the JNET. This may be evolved to include support for the DS-512 protocol for ENET access. Both the CBUS and CBC are duplicated for reliability. A Channel Bus Interface (CBI) is associated with each ASU to select the appropriate CBUS and channel.
<ul style="list-style-type: none"> • TEL C7 Link Felt. Locator FG.TEL00001 FGN.TEL Telecom Layer 	<ul style="list-style-type: none"> • Link fault sectionalization is a maintenance procedure that allows the technician to rapidly identify faulty segments of a CCS7 signaling link transmission path. This test procedure helps to reduce link downtime, and because faults at remote nodes can be isolated without dispatching a maintenance technician to the site, network provider maintenance costs are reduced.

304 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 85 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • TEL C7 Link Prot. Tester FG.TEL00001 FGN.TEL Telecom Layer 	<ul style="list-style-type: none"> • This functionality enables the technician to build up to: eight CCS7 messages from the MAP, display a built CCS7 message, alter individual bytes in a built CCS7 message, intercept incoming CCS7 messages on the screen, send up to two CCS7 messages to adjacent SP and to realize the benefits of password protection. These functionalities are provided by enabling the Meridian SL-100 MAP to monitor CCS7 protocol test capabilities without the need for external traffic simulation or monitoring equipment.
<ul style="list-style-type: none"> • TEL CCS7 Base FG.TEL00001 FGN.TEL Telecom Layer 	<ul style="list-style-type: none"> • This software provides the Transactions Capabilities Application Part (TCAP) feature. CCS7 supports transaction capabilities required for services such as database access. Signaling Connection Control Part (SCCP) provides one part of this support, while TCAP provides the other. This software (through TCAP) allows a set of procedures to be used to support a variety of services. This avoids the inefficiency of creating tailor-made procedures for each new application. • This functionality also provides support for V.35 (56 kbps) lines as Signaling links between Service Switching Point (SSP) and/or Signaling Transfer Point (STP) network nodes in an SS7 signaling environment. • Additionally, with this software equipped in a Meridian SL-100 Service Switching Point (SSP), a technician at the Maintenance and Administration Position (MAP) can monitor the Bit Error Rate Testing (BERT) of a CCS7 signaling link on the Link Peripheral Processor (LPP).
<ul style="list-style-type: none"> • TEL CCS7 Base FG.TEL00001 FGN.TEL Telecom Layer H/W: NT9X76AA, NT9X77AA, NTEX22BB 	<ul style="list-style-type: none"> • This functionality streamlines DMS-STP and Meridian SL-100 INODE CCS7 link maintenance and reduces overhead operating costs by enabling the STP MAP position to monitor and test key protocol areas of CCS7 messages without the need for external traffic simulation and monitoring equipment. • This functionality also enables the use of Link Peripheral Processors (LPPs) to terminate CCS7 signaling links on Meridian SL-100 switches. The LPP is an enhanced Meridian SL-100 Family peripheral that functions as a message switch and buffer (MSB7) for CCS7 messages. Because of its distributed processing power, the LPP offers expanded CCS7 messaging capacity and is therefore an alternative to introducing multiple MSB7 configurations. • CCS7 links running at 64 kbps require interfaces that can accommodate this rate. The 64 Kbit CCS7 Link Interface software contained in this functionality provides a 64-kbps access rate for LIU7s in an LPP. This allows the network provider selectively to run individual LIU7s at either 56-kbps or 64-kbps access rates. • Additionally, this software provides a base CCS7 protocol capability for handling the Message Transfer Part (MTP) and Signaling Connection Control Part (SCCP) by the LPP and LIS platforms.

Table 112
SE07 Functionality listing (Sheet 86 of 87)

Name, group code/name	Description
<ul style="list-style-type: none"> • TEL Gateway Screening FG.TEL00001 FGN.TEL Telecom Layer 	<ul style="list-style-type: none"> • Gateway Screening paves the way for the end-to-end delivery of CCS7-based advanced network services by allowing users to control access to their CCS7 databases and to protect against unauthorized use of other CCS7 facilities and services. This capability enables the secure interaction of CCS7 equipment owned by multiple users throughout the nation, permitting advanced features to be extended across local or regional boundaries. • This functionality streamlines the implementation of DMS-STP Gateway Screening by providing an integrated means of verifying screening and/or translation rules, before activation on a live network. Both the validity of all individual screening parameters and the progression or combination of individual test provide the ability to anticipate the consequences of a planned modification or deletion.
<ul style="list-style-type: none"> • TEL Telecom Layer func FG.TEL00001 FGN.TEL Telecom Layer H/W: NT9X76AA, NT9X77AA, NTEX22BB 	<ul style="list-style-type: none"> • This functionality contains features that modify Linkset management and allows for national and international variations of Point Codes. • This functionality also implements the local node maintenance system of the Network Interface Unit (NIU) and provides diagnostics to isolate hardware faults down to the single-board level. In addition, this package implements all aspects of central maintenance for the NIU. This includes: table control for NIU inventory, MAP commands interface, OMs, LOGs and alarms. • This software also provides a series of capabilities directly related to the LIU7 Application Interface Unit working on the LPP. This packaged is identified as it is used by other packages. The LIU7 is an Application Interface Unit provisioned in the LPP that is used to interface into a CCS7 PSTN network.
<ul style="list-style-type: none"> • Walkaway Code Enhancement FG.ACD00001 FGN.ACD ACD BASE 	<ul style="list-style-type: none"> • This functionality enables ACD agents to add or change walkaway codes without leaving the “not ready” state. Currently, if an agent has entered the walkaway code and then needs go to a meeting, the agent must log back in to enter a second walkaway code. If there are calls in queue, the agent is presented with a new call, before they can leave for the meeting. This feature provides agents with multiple walkaway codes for ACD agents and enables an agent to change walkaway codes without having to take a call. By making it more convenient to enter these codes, agents can make more productive use of their time, while providing more detailed walkaway tracking for reports.
<ul style="list-style-type: none"> • WLC Over Voltage Report FG.WLC00001 FGN.WLC Enhanced 	<ul style="list-style-type: none"> • This functionality provides identification of hazardous voltage on subscriber lines for types A and B World Line Cards (WLC). When a hazardous voltage is detected on a WLC, the card immediately operates its cutoff relay and alerts the system.

306 Appendix A: Functionality descriptions

Table 112
SE07 Functionality listing (Sheet 87 of 87)

Name, group code/name	Description
<ul style="list-style-type: none">• WLC Template-900+2-type B FG.WLC00001 FGN.WLC Enhanced	<ul style="list-style-type: none">• This functionality provides the software template WL902B for use in conjunction with the NT6X18 World Line Card (WLC) for North American applications.
<ul style="list-style-type: none">• WLC 900 +2 FG.WLC00001 FGN.WLC Enhanced	<ul style="list-style-type: none">• This feature provides a software template WL9002 (900 hims + 2uF) for use in conjunction with the NT6X17 World Line Card (WLC) for North American applications. After power up, the WLC can be programmed using software “templates”. A template is a set of WLC parameters contained in an optional CC module. Each template has a unique name which can be datafilled against any WLC line in LNINV.



List of terms

3WC	Three Way Call
AC	Attendant Consoles
AC	Automatic Callback
ACB	Automatic Call Back
ACD	Automatic Call Distribution
ACMS	Advanced Call Management Server
ACRJ	Anonymous Caller Rejection
ADSI	Analog Display Services Interface
AEMK	Answer Emergency Key
AILC	Asynchronous Interface Line Card
AIU	Application Interface Unit
ALI	Automatic Location Identification
AMA	Automatic Message Accounting
AMIS	Audio Messaging Interface Standard
ANI	Automatic Number Identification
ANSI	American National Standards Institute
AOSS	Auxiliary Operator Services System
AR	Action Request
AR	Automatic Recall
ARS	Automatic Route Selection
ASR	Automatic Set Relocation

308 List of terms

AT	Access Tandem
ATC	Access To Carrier
ATCP	Automatic Traffic Control Plan
ATT	Automatic Trunk Testing
AUI	Administration User Interface
AUI	Application Unit Interface
AUL	Automatic Line
AUTOVON	Automatic Voice Network
BABT	British Approvals Board for Telecommunications
BCD	Binary Coded Decimal
BCS	Batch Change Supplement
Bellcore	Bell Communications Research
BERT	Bit Error Rate Testing
BLF	Busy Lamp Field
BNM	Business Network Management
BRI	Basic Rate Interface
BUI	Browser User Interface
CACH	Call Appearance Call Handling
CAMA	Centralized Automatic Message Accounting
CC	Central Controller
CC MIS	Call Center Management Information System
CCC	Clear Coded Channel
CCF	Custom Calling Features
CCITT	Consultative Committee on International Telegraphy and Telephony
CCR	Call Control Routing
CCS	Common Channel Signaling
CCS7	Common Channel Signaling System 7

CDN	Controlled Directory Number
CED	Customer Entered Data
CFB	Call Forward Busy
CFBL	Call Forward Busy Line
CFCW	Call Forwarding of Call Waiting
CFD	Call Forward Don't Answer
CFK	Call Forward Per Key
CFRA	Call Forward Remote Access
CFU	Call Forward Universal
CGU	Circuit Group Blocking
CI	Command Interpreter
CLAN	Customer Local Area Network
CLASS	Custom Local Area Signaling
CLID	Calling Line Identification
CLLI	Common Language Location Identifier
CM	Computing Module
CMI	Cross Matrix Index
CMS	Call Management Service
CMVI	Cabinetized Multi Vendor Interface
CNAMD	Calling Name Delivery
CND	Calling Number Delivery
CNDB	Calling Number Delivery Blocking
CNNB	Calling Name/Number Delivery Blocking
CONMAN	Connection Manager
CONUS	Continental United States
COT	Customer Originated Trace
CP	Call Processing

310 List of terms

CPC	Common Peripheral Controller
CPE	Customer Premises Equipment
CPM	Common Peripheral Module
CPR	Call Path Restoration
CPU	Central Processing Unit
CRR	Call Request Retrieve
CS 2100	Communication Server 2100
CSDDS	Circuit Switched Digital Data Service
CTI	Computer Telephony Integration
CTM	Conference Trunk Module
CUG	Closed User Group
CUIF	Control Unit Interface
CVD	Coordinated Voice and Data
CWT	Call Waiting
DBM	Display-based Marketing
DCM-R	Digital Carrier Module-Remote
DDU	Disk Drive Unit
DFS	Dual Function Switch
DHCP	Dynamic Host Control Protocol
DIN	Denied Incoming
DIRP	Device Independent Recording Package
DISA	Direct Inward System Access
DLC	Digital Line Card
DLM	Digital Line Module
DMS	Digital Multiplex System
DMSF	DMS Family
DN	Directory Number

DND	Dialable Number Delivery
DNIS	Dialed Number Identification Service
DOC	Dynamic Overload Control
DPCC	Dual Plane Combined Core
DPLL	Digital Phase Lock Loop
DRAM	Digital Recording Announcement Machine
DRCW	Distinctive Ringing/Call Waiting
DRU	Design Release Unit
DS	Data Store
DSCWID	Deluxe Spontaneous Call Waiting Identification
DSL	Digital Subscriber Loop
DSN	Defense Switched Network
DSO	Development Support Overhead
DSPC	Key and Lamp Display
DTC	Digital Trunk Controller
DTC7	Digital Trunk Controller #7
DTC-I	Digital Trunk Controller - ISDN
DTH	Dynamic Transaction Handler
DTMF	Dual-tone Multifrequency
DTSR	Dial Tone Speed Recording
DU	Data Units
DWS	Dialable Wideband Services
E800	Enhanced 800 Service
E911	Emergency 911 (North American Emergency Services number)
EA	Equal Access
EABS	Exchange Alternate Billing Service
EAE0	Equal Access End Office

312 List of terms

EAIT	Equal Access Intermediate Tandem
EBS	Electronic Business Set
EDC	Extended Distance Capability
EDCH	Enhanced D-Channel Handler
EDRAM	Enhanced Digital Recording Announcement Machine
EIU	Ethernet Interface Unit
EKTS	Electronic Key Telephone System
ELAN	Embedded Local Area Network
ELCM	Enhanced Line Concentrating Module
ELN	Essential Lines
EMAP	Enhanced Maintenance and Administration Position
EMK	Emergency Key
ENET	Enhanced Network
ESA	Emergency Stand Alone
ESB	Emergency Service Bureau
ESMA	Expanded Subscriber Module Access
ESN	Electronic Switched Network
ETAS	Emergency Technical Assistance Service
ETX	Enhanced Time Switch
FAA	Forced Agent Availability
FCC	Federal Communications Commission
FGD	Feature Group D
FLIS	FiberLink Interface Shelf
FP	File Processor
FRAD	Frame Relay Access Devices
FS	Functional Signaling
FSM	Finite State Machines

FSP	Frame Supervisory Panel
FTFS	Fault Tolerance File System
FTS	Frame Transport System
FXR	Fast Transfer
GA	Generally Available
GIC	Group Intercom
GTT	Global Title Translation
GUI	Graphical User Interface
HDLC	High-Level Data Link Controller
HDX	Host Data Exchange
HIE	Host Equipment Interface
HMI	Human-Machine Interface (See MMI)
IBN	Integrated Business Network
IBNT2	IBN Two-Way Trunk Type
ICB	Integrated Conference Bridge
ICM	Intelligent Call Management
IDCC	Integrated Digital Cross Connect
IDDD	International Direct Digit Dialing
IDF	Isolation Detection Function
IDLC	Integrated Loop Digital Carrier
IE	Information Element
IEC	Inter Exchange Carrier
IEC	International Electrotechnical Commission
IEMS	Integrated Element Management System
ILB	Inhibit Line Busy
ILM	Integrated Link Maintenance
IMB	Inhibit Make Busy

314 List of terms

IOC	Input/Output Controller
IOD	Input/Output Device
IOM	Input/Output Module
IP	Internet Protocol
IPE	Intelligent Peripheral Equipment
IPEC	Intelligent Peripheral Equipment Column
IRR	Inhibit Ring Reminder
ISA	Integrated Services Access
ISDN	Integrated Services Digital Network
ISM	Integrated Services Module
ISN	Integrated Services Network
ISTB	In Service Trouble
ISUP	Integrated Service Digital Network User Port
ITG	IP Telephony Gateway
ITS	Integrated Test System
ITU	International Telecommunications Union
IVD	Integrated Voice and Data
IVR	Interactive Voice Response
JNET	Junctored Network
JSB	Java Services Bridge
kbps	kilobits per second
LAMA	Local Automatic Message Accounting
LAN	Local Area Network
LAPB	Link Access Procedure Balanced
LATA	Local Access and Transport Area
LBR	Large Business Remote
LCC	Line Class Code

LCD	Line Concentrating Devices
LCM	Line Concentrating Module
LCM-E	Line Concentrating Module-Enhanced
LCR	Load Content Record
LDAP	Lightweight Directory Access Protocol
LEN	Line Equipment Number
LFS	Logical File System
LGC	Line Group Controller
LGC-I	Line Group Controller - ISDN
LIS	Link Interface Shelf
LIU	Link Interface Unit
LIU7	Link Interface Unit – SS7
LLC	Line Load Control
LM	Line Module
LMS	Last Number Redial
LOB	Line of Business
LPA	Loudspeaker Paging Answerback
LPP	Link Peripheral Processor
LTC	Line Trunk Controller
LTC-I	Line Trunk Controller - ISDN
LTD	Local Test Desk
LTP	Line Test Position
MADN	Multiple Appearance Directory Number
MADO	Meridian SL-100 Asynchronous Data Options
MAP	Maintenance and Administration Position
MBG	Multilocation Business Group
Mbps	Megabits Per Second

316 List of terms

MBS	Meridian SL-100 Business Set
MC	Machine Congestion
MC7M	Meridian Cabinet CCS7 Module
MCA	Meridian Communications Adapter
MCAM	Meridian Cabinet Auxiliary Module
MCDM	Meridian Cabinet Digital Module
MCDN	Message Center Directory Number
MCDR	Meridian Cabinet Digital Remote
MCEX	Meridian Cabinet Expansion Module
MCGM	Meridian Cabinet General Module
MCGS	Meridian Cabinet Global Switch
MCIP	Meridian Cabinet Interface Power
MCLM	Meridian Cabinet Line Module
MCLM-E	Meridian Line Concentrating Module-Enhanced
MCNM	Meridian Cabinet Network Module
MCPM	Meridian Cabinet Power Module
MCRM	Meridian Cabinet Remote Module
MCRM-S	Meridian Cabinet Remote Module - SONET
MCRU	Meridian Cabinet Remote Unit
MCSM	Meridian Cabinet Service Module
MCSS	Meridian Cabinet Spares Storage
MCTM-I	Meridian Cabinet Trunk Module - ISDN
MDC	Meridian Digital Centrex
MDF	Main Distribution Frame
MER	Most Economical Routing
MF	Multi Frequency
MIB	Management Information Base

MICB	Meridian Integrated Conference Bridge
MIS	Management Information System
MLC	Message Waiting Line Card (analog)
MMI	Man-Machine Interface (See HMI)
MMT	Meridian SL-100 Modular Terminal
MPC	Multi-Protocol Controller
MPDA	Meridian SL-100 Programmable Data Adapters
MPDC	Meridian Power Distribution Center
MPS	Media Processing Server
MSL	Meridian Stored Logic
MSM	Message Services Module
MTC	Master Tracking Code
MTE	Metallic Test Equipment
MTP	Message Transfer Part
MVIE	Multi-Vendor Interface Equipment
MVP	Multi-Line Variety Package
MWI	Message Waiting Indication
NACD	Network Automatic Call Distribution
NAP	Network Access Partition
NAS	Network Attendant Service
NCOS	Network Class of Service
NIT	Non-Initiating Terminals
NIV	Network Interface Unit
NM	Network Module
NMC	Network Message Controller
NMS	Network Management System
NMS	Network Message Service

318 List of terms

NSS	Network and Switching Sub-system (wireless)
NSS	Network Services Software
NWN	Network Management
OAM	Operations, Administration and Maintenance
OAM&P	Operations, Administration, Maintenance and Provisioning
ODBC	Open Database Connectivity
ODM	Optional Disk Module
OM	Operational Measurements
ONP	One Night Process
OOS	Out Of Service
OPM	Outside Plant Module
OSI	Open Systems Interconnection
OSS	Operation Support System
OTM	Optivity Telephony Manager
PAD	Packet Assembler/Disassembler
PBX	Private Branch Exchange
PC	personal computer
PCL	Product Computing-module Load
PCM	Pulse Code Module
PCR	Preventative Cyclical Retransmission
PDAB	Partial Dial Abandon
PDN	Primary Directory Number
PDR	Precedence Deflection Route
PDTO	Partial Dial Time-Out
PEC	Product Engineering Code
PEPS	Peripheral Equipment Power Supply
PH	Packet Handler

PIN	Personal Identification Number
PLA	Physical Link Adapter
PM	Peripheral Module
PMT7	CCS7 Protocol Monitor Tool
PNID	Precedence Network Inward Dialing
PNNO	Prefix Network NRS Outbound
PNOD	Precedence Network Outward Dialing
POTS	Plain Old Telephone Service
PP	Peripheral Processor
PPSN	Public Packet-Switched Network
PRI	Primary Rate Interface
PS	Program Store
PSA	Product Specification Agreement
PSAP	Public Service Access Point
PSM	Power Supply Module
PSTN	Public Service Telephone/Telecommunications Network
PTM	Packaged Trunk Module
PTS	Public Telecommunications Systems
PVI	Platform Vendor Independence
PVN	Private Virtual Network
QCIF	Quarter Common Intermediate Format
QCK	Quick Conference Key
QHASU	Query Hardware Available Software Unavailable
QoS	Quality of Service
RAID	Redundant Array of Independent Disks
RCC	Remote Cluster Controller
RCF	Remote Call Forward

320 List of terms

RDLM	Remote Digital Line Module
RLC	Reach Line Card
RLCM	Remote Line Concentrating Module
RLM	Remote Line Module
RLT	Release Link Trunk
RMM	Remote Maintenance Module
RN	Remote Notification
ROH	Receiver Off Hook
ROM	Read Only Memory
ROTL	Remote Office Test Line
RSC	Remote Switching Center
RSM	Real-time Statistics Multicast
RSP	Remote Server Provider
RTS	Return To Service
RTU	Right-To-Use
SAS	Status Assembly System
SBR	Skills-based Routing
SBT	Software Based Telephony
SC	Speed Calling
SCA	Single Call Arrangement
SCA	Selective Call Acceptance
SCAI	Switch-Computer Application Interface
SCC	SuperNode Combined Core
SCCP	Signaling Connection Control Part
SCCS	Symposium Call Center Server
SCF	Selective Call Forwarding
SCM	Subscriber Carrier Module

SCP	Service Control Point
SCRJ	Selective Call Rejection
SCWID	Spontaneous Call Waiting Identification
SDN	Secondary Directory Number
SDPAL	SCOPEDIAL PBX Access Lines
SE	Size Enhanced (SuperNode)
SIGMAN	Signaling Manager
SIP	Session Initiation Protocol
SIP-T	Session Initiation Protocol for Telephony
SL-100	Stored Logic - 100
SLE	Screening List Editing
SLM	System Load Module
SMDI	Simplified Message Desk Interface
SMDR	Station Message Detail Recording
SMU	Subscriber Module Urban
SNMP	Simple Network Management Protocol
SNSE	SuperNode Space Enhanced
SOC	System Overload Control
SOC	Software Optionality Control
SP	Service Provider
SPC	Service Profile Configuration
SPID	Service Profile Identification
SQL	Structured Query Language
SRC	Software Recovery Controller
SRDB	Selective Routing Database
SSERVORD	Standard Service Order
SSP	Station Programmable PIN

322 List of terms

SSP	Service Switching Point
SST	Signaling System 7
STM	Service Trunk Module
STP	Signaling Transfer Point
TAPI	Telephony Application Programming Interface
TBO	Terminal Billing Option
TCAP	Transaction Capabilities Application Part
TCM	Time Compression Multiplexing
TCP/IP	Transmission Control Protocol / Internet Protocol
TDM	Time Division Multiplexing
TEI	Terminating Endpoint Identifier
TL1	Transaction Language 1
TME	Terminal Management Environment
TMTOPT	Treatment Option
TPT	Transaction Processing Task
TR	Technical Recommendation
TRID	Transaction ID
TSMS	Traffic Separation Measurement System
TSP	Terminal Service Profile
TTP	Trunk Test Position
TTS	Text-to-Speech
TUI	Telephone User Interface
UAS	Universal Audio Server
UC	Unified Communications
UCD	Uniform Call Distribution
UDP	User Datagram Protocol
UEM	Universal Equipment Module

UG	Upgrade (suffix change to product number)
UI	Up Issue (no suffix change to product number)
USOC	Universal Service Order Code
UTAM	Unlicensed PCS Ad hoc Committee for 2.0 Ghz Microwave Transition and Management
VAPN	Virtual Access to Private Networks
VFG	Virtual Facility Group
VISIT	Visual Interactive Technology
VMX	Voice Message Exchange
VoIP	Voice over Internet Protocol
VPIM	Voice Profile for Internet Messaging
VPN	Virtual Private Network
WAN	Wide Area Network
XA-Core	Extended Architecture - Core
XALC	Extended Analog Line Card
XDLC	Extended Digital Line Card
XML	Extensible Markup Language
XMLC	Extended Message Waiting Line Card
XMS	Experimental Multiprocessor System
XPM	Extended Peripheral Module
XSM	Extended System Monitor



Meridian SL-100/Nortel Networks Communication Server 2100

Application Planning Guide

Copyright © 2004 Nortel Networks,
All Rights Reserved

NORTEL NETWORKS CONFIDENTIAL: The information contained in this document is the property of Nortel Networks. Except as specifically authorized in writing by Nortel Networks, the holder of this document shall keep the information contained herein confidential and shall protect same in whole or in part from disclosure and dissemination to third parties and use same for evaluation, operation, and maintenance purposes only. Changes or modifications to the Meridian SL-100 without the express consent of Nortel Networks may void its warranty and void the user's authority to operate the equipment.

Information is subject to change without notice. Nortel Networks reserves the right to make changes in design or components as progress in engineering and manufacturing may warrant.

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules, and the radio interference regulations of the Canadian Department of Communications. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at the user's own expense. Allowing this equipment to be operated in such a manner as to not provide for proper answer supervision is a violation of Part 68 of the FCC Rules, Docket No. 89-114, 55FR46066.

*Nortel Networks, the Nortel Networks logo, the Globemark, Unified Networks, DMS, MAP, Meridian, MSL, Nortel, Northern Telecom, NT, OPTera, SL-100, and SuperNode are trademarks of Nortel Networks.

Publication number: 555-4001-108
Product release: SE07
Document release: Standard 02.04
Date: September 2004
Printed in the United States of America.

