Messaging and Norstar

NORTEL NETWORKS

BUSINESS WITHOUT BOUNDARIES

Messaging

Highlights

- CallPilot 150 – is the main offering in the Norstar messaging portfolio and delivers scalable, advanced messaging to growing small and mid-sized businesses with 30 to 200 users

- CallPilot 100 – is a new messaging offering that targets price-sensitive small businesses and provides a feature-rich, cost-effective solution equipped with 10 mailboxes

- Centralized Voice Mail on CallPilot 150 – means that networked sites can use one centralized applications server for Voice Mail and Attendant; this capability translates into significant cost savings

- Centralized Auto Attendant on CallPilot 150 – means that the Norstar VM application in the NAM acts as a centralized Auto Attendant for Norstars or Meridian 1s connected over an MCDN CDP network

- Automated Attendant – works as the Norstar voice messaging receptionist and ensures that calls are answered 24 hours a day, 7 days a week, allowing callers to direct their calls to the right person

- Mailboxes – enable companies to order up to 300 mailboxes that can be used to provide callers with important information or allow callers to leave messages anytime

- Custom Call Routing (CCR) – enhances Voice Messaging call routing abilities by allowing incoming calls to be redirected along call paths created by the system administrator.

Chapter Overview

The voicemail industry has experienced explosive growth over the last few years as more and more decision makers have become aware of voicemail/auto attendant products and the benefits they provide for their businesses. In fact, most businesses and organizations today use some form of voicemail, whether it is equipment on their premises, or voice mailboxes that are provided by a service bureau or telephone company. Currently, businesses are more interested in voice processing platforms that provide a high level of integration and advanced applications such as Desktop Messaging. The market interest in "unified" messaging is driven by the fact that messaging in all forms – fax, voicemail and email – is increasing annually. Industry analysts estimate that, last year, an average of 2.5 billion voice and email messages were sent and received daily in North America. And, even though fax is a relatively "old" technology, fax usage is growing steadily by 40% per year.

Businesses are also looking for ways that technology can help them maximize their resources, whether through people or equipment or facilities. Moreover, they are increasingly requiring centralized applications. With the release of CallPilot (Release 2.0), and the development of Centralized Voice Mail (CVM) capabilities, networked sites can now use one centralized applications server for Voice Mail and Attendant. No applications server at branch sites translates into huge cost savings.

CallPilot 100, offers price-sensitive small businesses a cost-effective next-generation voice messaging solution. This option targets smaller businesses that have advanced application requirements but a fewer number of employees.

Norstar Messaging Portfolio

Norstar offers a messaging product portfolio designed to meet the needs of businesses of any size – those from 10 mailboxes up to 300 mailboxes.

• CallPilot 150

• CallPilot 100.

CallPilot 150 and CallPilot 100 Integration with Norstar

CMS/Class Integration

In addition to the standard telephone answering and auto attendant call routing benefits, Norstar offers some specific advantages because of the tight integration between the ICS and voicemail. When the Norstar ICS is equipped with CMS/Class network features, CallPilot 100 and CallPilot 150 provide some very powerful business tools, including:

• Auto Attendant – can route calls based on up to 100 Calling Line Identification (CLID) numbers to either a specific CCR tree, extension or mailbox. This routing can also be performed based on area code or prefix. Using this capability means that calling customers can not only be routed to their geographic customer service representative based on their calling number, it also means that when that representative is already on the phone, they can hear a special greeting that insures they know their call is important.

• CLID – and the caller's name, if available, is stored in the mailbox with each message, and users can call back those numbers using the "CALL" soft key, speeding up return calls and simplifying the call return process.

In addition to the primary greeting and the extended absence (alternate) greeting, users can record up to three personalized CLID greetings for specific callers like a special customer.

Intelligent Integration

Competitive voicemail systems, when interfaced with Norstar ICS systems, cannot compare to the capabilities provided by the superior integration of CallPilot. These integrated capabilities are demonstrated by a simple and easy-to-use interface displayed in visual prompts on the telephone set, which guide the user to activate messaging commands and functions by using the soft keys just below the telephone LCD window. Also, the user gets message notification through a "Message For You" prompt which appears on the display whenever there is a new voice or fax message in the mailbox.

Other integration advantages include:

• Double the efficiency in connecting voice channels to the ICS core. Since CallPilot uses both the B1 and B2 channels on the ICS, half the number of station ports are required than in any competitive voice messaging system. This is a significant competitive advantage, especially when the customer's system is close to maximum station capacity.

• Access to the name directory on the telephone LCD display.

• Ability to retrieve calls that have forwarded to voicemail using "Interrupt" with Feature 987. This feature can help avoid several messages a day by talking live with the caller.

• Ability to route calls and have specialized greetings using incoming CLID information

• Instant status information on any DN – competitive systems must first transfer the call to determine the DN status

• Ability to retrieve messages on intercom by only supplying a password – competitive systems require mailbox number and password entry

• Transfer to an extension or external number from a CCR tree

• Ability to integrate CMS/Class features directly from the ICS without adding additional hardware devices

• In addition to all the user benefits derived from the Norstar integration, perhaps the most significant benefit for the customer is that Norstar provides a single vendor solution with products that meet or exceed Nortel reliability and quality standards.

General Norstar Voice Messaging Overview

CallPilot 100 and CallPilot 150 work with the core Norstar ICS, offering a receptionist service that routes calls and provides voice message taking capability. When enabled, CallPilot's Automated Attendant answers incoming calls and routes the calls to extensions and mailboxes within the system.

Voice Messaging Components

CallPilot's messaging has three main components: Automated Attendant, Mailboxes (voice messaging) and Custom Call Routing (CCR).

- **The Automated Attendant** – works as a receptionist would when answering incoming calls. Using a voice prompt, it plays a list of options to a caller. If the caller knows which option they want, they can interrupt the Automated Attendant by pressing their selection on the dial pad of any tone dial telephone. When the caller has selected an option, the Automated Attendant responds to the command by either routing the call to an extension or mailbox within the company, or directing a caller to the Company Directory or Designated Operator.

- **Mailboxes** – are added by the system coordinator and then initialized by the mailbox owner. They store the callers' voice messages. Any caller can leave a message after a mailbox is initialized.

- **Custom Call Routing (CCR)** – is a single-digit access application that provides callers with a series of voice prompts and call transfer options.

About the Automated Attendant

The Automated Attendant is the CallPilot receptionist. When enabled, the Automated Attendant answers the company's incoming telephone lines according to the time of day. When the Automated Attendant is enabled, the Automated Attendant menu prompt provides a list of options so that a caller can:

- Reach a DN or a mailbox in the company

- Leave a message in a mailbox

- Select an alternate language

- Look for an extension or mailbox in the Company Directory

- Reach the company receptionist or designated operator

- Open a Personal Mailbox as a mailbox owner.

The Automated Attendant provides callers with commands to use each of these options. Callers must press the button associated with the option they want to activate. For example, the Auto Attendant might provide the following command: "To use the Company Directory, please press 1."

Figure 1   CallPilot Call Answering Overview
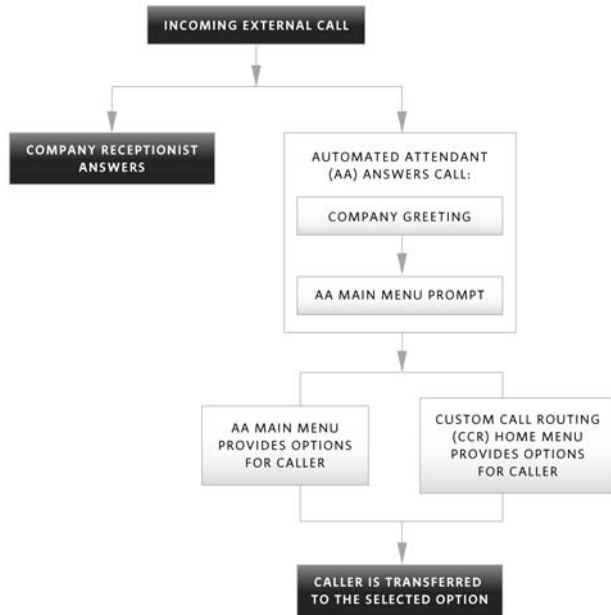
About the Company Directory

The Company Directory is a list of mailbox owners registered with Norstar voice messaging. Before mailbox owners can use their mailbox, they must record their names in the Company Directory. If mailbox owners do not want their names to appear in the Company Directory, they can see the system coordinator. Names included in the Company Directory can be changed at any time.

About the Mailboxes

A mailbox is a storage place for messages. CallPilot 150 can have a maximum of 300 mailboxes and CallPilot 100 can have a maximum of 40 mailboxes. There are four groups of Norstar voice messaging mailboxes, including:

•   Special or Guest

•   Personal

•   Information

•   Network Delivery.

The company's system coordinator administers Special Mailboxes.

The system coordinator uses the system coordinator mailbox as a Personal Mailbox in which employees can leave messages.

The system coordinator assigns Personal Mailboxes, which mailbox owners then maintain. Personal Mailboxes can be one of the following types:

- User Mailboxes – store messages for users who are unable to answer their telephone. These mailboxes can be assigned to users with operating Norstar extensions.
- Guest Mailboxes – provide temporary employees and guests with access to internal messaging and call routing features. Guest Mailboxes do not have an operating extension.

Information Mailboxes are designed to provide an informative message to a caller. This type of mailbox differs from the other mailboxes because it does not take messages; it plays a Personal Greeting to the caller, but does not prompt for, or allow, the caller to leave a message.

Network Delivery Mailboxes are used with the optional AMIS or Digital Networking applications to simplify addressing to remote locations.

How Custom Call Routing Works

Custom Call Routing (CCR) is an application that works with CallPilot voice messaging to provide a call routing path that directs incoming calls. CCR enhances the Norstar voice messaging call routing abilities by allowing incoming callers to route their own calls along call paths that the system coordinator has created. This application allows a company to customize the call routing capabilities to suit their needs. CCR does not replace CallPilot's messaging call routing function, but enhances it.

Designing and Building a CCR Tree

Designing a CCR Tree involves:

- Determining frequently requested departments
- Determining frequently called extensions
- Making a list of goods and services for promotion in Information Messages
- Selecting mailboxes assigned to Leave Message Points
- Determining call Destination Types
- Recording the prompts and messages.

About the Home Menu

The Home Menu is the introductory voice prompt that the system administrator records. It provides a list of single-digit options to a caller. After listening to the Home Menu, a caller selects an option by pressing a number on any tone dial telephone. Options in the Home Menu can route a caller to:

- An information message
- A mailbox to leave a message
- An extension
- Another menu.

CallPilot Feature Codes

When using CallPilot from a Norstar telephone, the user must enter a Feature Code. Feature Codes are used to access the different functions and options of CallPilot. Users can activate the following feature codes by pressing the numbers in parentheses below:

- **Leave Message Feature Code (F980)** – lets mailbox owners leave a message in a mailbox initialized with Norstar voice messaging.

- **Open Mailbox Feature Code (F981)** – lets mailbox owners open their Personal Mailboxes. All Personal Mailboxes are protected by a password that the mailbox owners establish.

- **Operator Status Feature Code (F982) –** allows the system coordinator, receptionist or Designated Operator to set the Operator Status. When an Operator is unavailable, the Operator Status must be set to NO. This status alerts the Automated Attendant that the receptionist or Designated Operator is unavailable. Users also deploy this feature code to establish whether a business is open or closed. This feature code is protected by a password.

- **Norstar Voice Messaging Directory Number (DN) Feature Code (F985)** – allows users to determine the CallPilot Directory Number (DN). This number lets users forward a Norstar telephone to their mailbox. Entering F985 will display the voice messaging DN on the telephone display.

- **Transfer Feature Code (F986)** – lets users transfer calls to a mailbox. While the call is active (the call is not put on Hold), the user presses the memory button where Feature 986 is programmed, then enters the mailbox number where he or she wants to direct the call. The system then transfers the call.

- **Interrupt Feature Code (F987**) – lets users interrupt a caller that is listening to the Personal Mailbox Greeting or is leaving a message. This allows a mailbox owner to speak with a caller who has reached their mailbox.

- **Record a Call Feature Code (F989)** – allows users to record the call they are presently on by pressing this feature code during the call. The conversation will be recorded in the mailbox corresponding to the DN of the telephone that activates Feature 989. The party who did not initiate the call may hear standard Norstar hold tones during the time it takes for the system to conference in voicemail. Then, both parties will hear the prompt, "this call is being recorded," followed by a recording beep tone. If the user targets more than one extension to one mailbox, he or she can press F989 from any of those telephones to converse in the assigned mailbox.
- **Single Button Call Forward to Voice Mail (F984)** – lets users program a single button to forward all calls automatically to voicemail.

User Interface

CallPilot 100 and CallPilot 150 allow users to select the type of interface they want to use when accessing their mailbox. This interface can be selected on a system-wide basis or on a per mailbox basis.

The Norstar user interface offers users the traditional Norstar interface using the set display and softkeys when accessing the capabilities of their mailbox.

The M1 user interface offers users the Meridian 1 interface using the M1 dial pad commands to access the features and capabilities of their mailbox.

CallPilot 100

CallPilot 100 addresses the price-sensitive business customer with minimal applications requirements. CallPilot 100 businesses should be those that require no more than four ports, nine hours of storage or 40 mailboxes. CallPilot 100 delivers a common user interface across multiple platforms, including Norstar, BCM and Meridian 1, thereby reducing training requirements. Businesses can purchase additional functionality. CallPilot 100 offers the following key features:

*   40 subscriber mailboxes (equipped with 10)
*   Basic Call Center (optional)
*   Call Center Reporting (optional)
*   Backup and Restore (included)
*   Web-based administration or set-based administration (included)
*   Auto Attendant/CCR (included)
*   Desktop Messaging (optional)
*   VPIM/AMIS Networking (optional)
*   four ports/nine hours (included).

CallPilot is a feature-rich, cost-effective messaging solution that offers benefits to end users, businesses and channel partners.

Note: CallPilot 100 requires a minimum 4.1 release on the Compact ICS or Modular ICS system. CallPilot 100 is also compatible with 3x8 DR5.1.

CallPilot 150

CallPilot 150 for Norstar is a small to medium-sized business voice messaging solution fully compatible with Compact ICS and Modular ICS Release 4.1 and greater. CallPilot 150 offers the following key features:

- Systemwide choice of either Norstar or CallPilot user interface
- IP enabled with 10/100 Ethernet port for system administration and maintenance
- 300 subscriber mailboxes (equipped with 32)
- Basic Call Center (included)
- Desktop Messaging (two seats included)
- Automated Attendant and Custom Call Routing (included)
- Eight ports /60 hours
- Web-based administration or set-based administration (included)
- VPIM/AMIS Networking (optional)
- Centralized Voice Mail (included).

CallPilot Positioning

Voice Mail Features

CallPilot provides a fully featured voice messaging solution, including Auto Attendant and Custom Call Routing (CCR). The following easy-to-use features provide flexibility to address the desired functionality for any level of user.

Table 1   Voice Mail Features

Standard Voice Mail	Automated Attendant
Auto answer with personal greeting	Call transfer – blind and screened
Broadcast Messages	Calling Name Display
Delivery Options (private, urgent, etc.)	Customer Call Routing (CCR)
Express Messaging	CCR Levels (10)
Guest Mailboxes	CCR Trees (4)
Informational Mailboxes	Dial Extension from CCR
Interrupt Caller Leaving a Message	External Transfer on Centrex
Message Waiting Notification	Flexible Business Hours
Never Full Mailboxes	Flexible Line Rings before answer
Outbound transfer from mailbox	Greeting Tables
Personal Mailboxes	Multiple Operators
Prerecorded greetings (4)	Remotely Record Greeting
Primary and Alternate Greetings	Remotely Set business open/closed
Record a Call	Reply based on CLID
Recovery of deleted message	Reports
Remote Call Forward to Voice Mail	Single -digit menus
Reports	Touchtone gate
Timed delivery of messages	Transfer to CCR Tree

IP-Ready Ethernet Port

CallPilot provides an IP-ready 10/100 Mbps Ethernet connection for simplification of system administration, Keycode retrieval and activation of advanced features such as Desktop Messaging and Digital Networking (VPIM).

A third-party Web server software resides on the CallPilot 100/150 platform, enabling simple and easy access to system administration through any Web browser. Access to system programming is as easy as making a dialup Internet connection and accessing the remote CallPilot system's IP address to perform all administrative changes with an easy graphical user interface (GUI). Manual telset-based administration capabilities are still available if the customer chooses this option.

Keycode Retrieval System (KRS)

Each CallPilot 100/150 ships with a unique system ID which is then matched to the authorization code of the purchased upgrade option. When the customer enters these two codes into the Keycode Retrieval System (KRS), the applicable keycode is generated to enable the purchased option. The ability to generate keycodes through the KRS ensures immediate access without the need to place calls to Nortel Networks support.

Keycode Retrieval System Implementation Details

CallPilot is enabled for base functionality out of the box with upgrade options that are enabled via keycodes. The upgrade option is in the form of a paper document with a unique authorization code that the installer enters, along with the unique CallPilot ID, into the KRS to obtain the keycode.

Try-and-Buy Keycodes

Try-and-buy keycodes are available at no charge for a 60-day period. This offering lets customers "test out" these applications and experience the value they will bring in addressing their business needs – all without any obligation to purchase. The keycodes are easily accessible by way of the Web through the KRS. Businesses may request any or all of the listed keycodes.

CallPilot Manager

CallPilot Manager is a Web-based application for the set up and administration of CallPilot. System administrators can also perform administration through a T7316E telephone set. Administrators can initialize CallPilot using either CallPilot Manager or a two-line display telephone.

CallPilot Manager comes enabled on the CallPilot platform. With built-in server software, CallPilot does not require business customers to load client software on to the PC. The PC Web browser software allows for CallPilot administration.

Computer Requirements

The computer used to run CallPilot Manager must have:

- Windows NT or Windows workstation running a Pentium 133 or later CPU
- 64 MB RAM
- 10 MB disk space
- Minimum screen resolution of 1024x768 pixels.

Browser Requirements

To run CallPilot Manager, users or businesses must have:

- Java Virtual Machine 5.0 (build 5.0.0.3188 or later)
- Netscape Communicator 4.0.5 or later (but not 6.0)
- Microsoft Internet Explorer 4.0 or later (but not 6.0)

With Netscape Communicator, users must set the following parameters:

- Enable Java: on
- Cached document comparison: every time.

With Microsoft Internet Explorer, users must set the following parameters:

- Check for newer versions: every visit to the page
- Java JIT compiler enabled: on

For more information about these settings, refer to the Web browser's Help.

Starting CallPilot Manager

1. Point the Web browser to http://<IP address>:6800/CallPilot Manager where <IP address> is the IP address of CallPilot.

2. The Administration Login screen appears. Enter the password in the **Password** box.

3. Click the **Submit** button. The CallPilot Manager Main Menu appears.

Figure 2   CallPilot Manager Main Menu
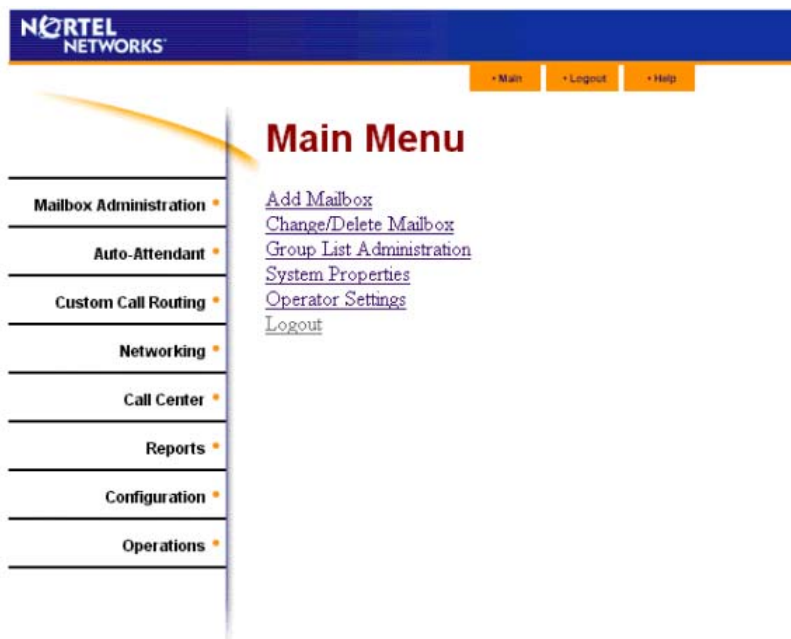
CallPilot Manager Benefits

CallPilot Manager provides the following benefits:

- Remote access to one or more CallPilot systems from a central point

- Can be accessed from any PC with a Web browser

- Online help with keyword search

- No dedicated dialup line.

CallPilot Customer Value Proposition

CallPilot for Norstar and small Meridian provides a feature-rich, cost-effective voice messaging solution to small to medium-sized businesses with the flexibility for businesses to purchase options in increments best suited to their needs.

User interface options provide choices to the user based on preference; these options minimize the need for retraining. Web-based administration capabilities ensure a quick, easy and cost-effective method for system administration changes, while also providing a telset-based option for those customers who prefer this method.

CallPilot Reporting

CallPilot includes a number of reports allowing system administrators to view CallPilot programming settings, mailbox information and status and available message time.

Generating a Report

To generate a report:

1. Click the **Report** heading.
2. Click the link for the report you want to generate. The report will appear in a new window.
3. Click **Print** to print the report.
4. Click **Close** to close the report window.

CallPilot Reports

CallPilot allows users to generate the following reports:

- Directory
- Mailbox Information
- Mailbox Activity
- Event Log
- CCR Tree Usage
- Port Usage/Call Handling
- Message Usage
- System Configuration

Directory Report

The Directory report shows information for mailbox owners listed in the Company Directory.

Table 2   Directory Report

Heading	Description
Subscriber	The mailbox owner's name.
MB	The mailbox number.
Type	The type of mailbox.
Ext	The extension number.
Name Recorded	Indicates whether the mailbox owner has recorded their name in the company directory.
Greeting Recorded	Indicates whether the mailbox owner has recorded a greeting.

If both Name Recorded and Greeting Recorded are N, the mailbox will not be initialized.

Mailbox Information Report

The Mailbox Information report shows information for each mailbox.

Table 3   Mailbox Information Report

Heading	Description
MB	The mailbox number.
Type	The mailbox type. Can be one of the following types: • SUB – Subscriber • ADM – Administrator • GDM – General Delivery Mailbox • FOD – Fax On Demand – BCM 2.5 only • FOV – Fax Overflow – BCM 2.5 only • NET – AMIS or Site • INFO – Information.
Directory Name	The name of the mailbox. An asterisk appears beside the name if the mailbox name is not in the Company Directory.
Ext	The mailbox extension.
COS	The Class of Service for the mailbox.
Total	The total volume of messages in the mailbox, not including space taken by mailbox greetings, shown as messages (Msg) and minutes (Min).
New	The total volume of new messages in the mailbox, shown as messages (Msg) and minutes (Min).
Outdial	The outdial parameters. This setting does not appear for CallPilot Mini.

The mailbox can have one or more information messages, which contain an alphanumeric tag and a descriptive string. To reduce the number of report output lines, a mailbox setting or condition is only reported if it differs from the default setting or normal condition.

Possible tags include:

Table 4   Mailbox Information Tags

Tag	Description
UNINIT	The mailbox is not initialized.
NONAMEREC	The mailbox is initialized, but a name is not recorded.
NOGREET	The mailbox is initialized, but a primary greeting is not recorded.
LOCKED	The mailbox is disabled because the number of incorrect password attempts is exceeded.
NOMWI	The mailbox has a primary extension, but Message Waiting is disabled.
FULL	The mailbox is full.
NOACCEPT	The subscriber has set the mailbox to not accept messages.
NOADDRESS	The address is not specified.
ALTDN1	Alternate extension 1 is defined.
ALTDN2	Alternate extension 2 is defined.
EXPRLINE	An Express Messaging line is defined. Only available on CallPilot 150.
ATDT	A Target Attendant is defined.
XFERS Screened	Transfers are screened. Blind transfers are normal and are not shown.
METHOD, LIMIT	The delivery method and maximum number of selections for a Fax On Demand mailbox.
RETRY, INT	The number of retries and interval in minutes for a Fax On Demand mailbox.
OPN/RNPHNOE	Off-Premise Notification to a telephone.
OPN/RNPAGER	Off-Premise Notification to a pager.
OPN/RNEXT	Off-Premise Notification to an extension.
OPN/RNSTATUS	Current status of Off-Premise Notification.
TRANSF	The telephone number used when Outbound Transfer is set to an external destination.
FAXPRE	Preset Fax destination – BCM 2.5 only.
SELECT, SIZE	For each document in a Fax On Demand mailbox, lists selection ID and size list in equivalent message minutes – BCM 2.5 only.
AMIS, MBOX	System access phone number and target mailbox number of a AMIS Network Delivery mailbox.
SITE, MBOX	Site address of a Network Delivery mailbox.

Mailbox Activity Report

The Mailbox Activity report shows seven-day usage information for all Subscriber mailboxes on the system. The last full day of activity represents the starting point of this report. For example, if the full day of activity is Tuesday, the report will begin on Tuesday and goes back seven days to the previous Wednesday.

The Mailbox Activity report shows:

• The number of messages recorded and their total length and average length

• The number of times the maximum message length is reached

• The number of messages received and their total and average length

• The number of times the mailbox is accessed for log or call answering (including total connect minutes and the resulting average)

• The average time before new messages are played

• The average time before messages are deleted

• The number of times logon authentication fails three times in succession

• The cumulative average for the above

• Whether Primary, Alternate and CLID-based greetings are recorded.

After a user generates a report, he or she can reset the statistics to set the counters to zero.

Event Log Report

The Event Log report lists events that can help users diagnose system problems. Events are shown with their date, time and error message.

CCR Tree Usage Report

The CCR Tree Usage report shows the following information for the previous seven days:

• The number of calls received by the CCR Tree

• The number of times each node was visited

• The Greeting Table from which the CCR Tree is referenced

• The last seven days for complete record collection (this does not include the day the report is generated)

• The most recent complete day in the left column

• Usage data as zeros for dates prior to the last change data.

The CCR Tree Usage report shows:

Table 5   CCR Tree Report

Heading	Description
Path	The selections a caller makes to reach a node. Usually the Home node is 0, although callers do not need to press a key to reach the Home node.
Calls for Each Day	Below each day is listed how many times callers accessed the node, not including any re-prompting. The calls for each day details: • Each call that arrives at the Tree • Calls that go from the Home node to sub-nodes • Calls that are sent to the node from CLID-based routing. • Calls that return to a Menu node by the previous menu operation (by pressing * at a sub-menu, or by the Next Action setting) The difference between the count for a menu and the sum of the counts for its sub-node is the number of times callers exit the menu by pressing * or hanging up.
Total Calls	Shows calls that go to the Home node from a Greeting Table and calls that go to any node in the CCR Tree from CLID-based routing. In the absence of CLID-based routing, the count of the Home node is usually the same as the Total Calls if the Home node is an Information node. The count can be higher if the Home node is a Menu node because the count of any Menu node is included if the caller returns to the menu.

Port Usage/Call Handling Report

The Port Usage/Call Handling report summarizes inbound and outbound call activity and port usage on a seven-day rolling basis. This report identifies volume and sources of call traffic, and it identifies whether the system requires additional ports.

The Port Usage section of the report lets users:

•   See the last seven days for which record collection is complete

•   Determine whether the system needs additional ports

•   Find time periods where there is an insufficient number of ports

•   See a summary of inbound and outbound call activity and port usage on a seven-day rolling basis.

The Port Usage section:

•   Shows the last seven days for which record collection is complete

•   Shows the most recent statistics in the left column

•   Does not include the current day.

Table 6   Port Usage/Call Handling Report

Information	Description
Allocation	Shows the minimum and maximum number of ports allocated to voicemail.
Port Status	Shows an asterisk beside the port number if the port is disabled when the report is generated.
Period Start	Shows the percentage of the time period when all ports were busy for each day of the week. A non-zero value is possible, but a value consistently higher that 1% or 2% during peak time periods indicates a need for additional ports. Periods in which at least one port is disabled are shown with an asterisk.

The Call Handling section of the report allows users to see the types of calls that create traffic for the voicemail server.

The Call Handling section shows:

•   Each class of call by number of calls, total duration and average duration

•   All outgoing calls in a single category (for example, a call is counted as Message Notification even if the called party logs on)

•   Outbound Transfer calls with the few seconds of additional connect time caused by the unsupervised transfer included in the connect time of the incoming call

•   Call Screening calls with the holding time of the call to the subscriber set counted under the total connect time for the incoming call

•   All days even if no data is collected for that day (these values are shown as zeros).

Message Usage Report

The Message Usage report shows the number of minutes of storage available on the voicemail server. If the value is too low, the user can:

•   Upgrade storage capacity

•   Encourage subscribers to delete unneeded messages

System Configuration Report

The System Configuration report shows how the system is configured.

Table 7   System Configuration Report

Heading	Description
System Options	Describes system-wide attributes and Auto Attendant properties such as Return to AA and Touchtone Gate.
Installed Voicemail Options	Lists the optional features enabled at your site.
AA Greetings	Lists system greetings, shows whether the greeting is recorded and lists the Greeting Tables that reference it. Greetings that are not recorded or used in any Greeting Table are not shown. The comment "TTG" appears for the prompt used as the custom Touchtone Greeting prompt.
Greeting Table	Shows the configuration of each Greeting Table.
Call Center Parameters	Appears if Call Center is installed. The Primary Alert, Secondary Alert, MIS Address and Refresh Channels are shown.
Call Center Agents	Appears if Call Center is installed. Shows the agents in the Call Center, their agent number, priority level and skillset status.
Call Center Skillsets	Appears if Call Center is installed. Shows skillset number and Day and Night status.
Call Center Routing Tables	Appears if Call Center is installed. Lists skillset name, number, Day service and Night Service configuration.
Call Center Overflow	For each skillset, shows if it is enabled, the Intelligent overflow rule that applies to it, its service mode, condition and action.
Call Center Greetings	Appears if Call Center is installed. Displays the status and skillset for each greeting.
Call Center Intelligent CLID/DNIS Routing	Shows the CLID/ANI or DNIS rule and action for each rule.
Line Answering	Shows the answering parameters for each line answered by CallPilot or Call Center. Lines that are not answered are not shown. This section does not appear if your switch does not require line administration. The skillset column appears only if Call Center is enabled. Skillset is blank for AA lines and Rings and Tables are blank for Call Center lines.
*General Networking Parameters	Appears if Message Networking is installed. It displays the General Networking properties.
*AMIS Networking Parameters	Appears if Message Networking is installed. It displays the AMIS-related parameters of the site that you set in Networking properties.
*Digital Networking Parameters	Appears if Message Networking is installed. It displays the digital-related parameters of the site that you set in Networking properties.
*Site Table	Appears if Message Networking is installed.
Note: * Some sections appear only if the option is installed. Call Center is not available for Call Pilot Mini.	

Advanced Voice Messaging Applications

AMIS Option

Audio Messaging Interchange Specification (AMIS) is the voice processing industry solution for networking remote voicemail systems provided by different vendors. The AMIS option allows the messaging community at one Norstar location to send and receive messages from other messaging communities that support the AMIS protocol. Each user can be reached via their AMIS address, which is a system access number (basically the telephone number of their local system), and their mailbox number. There are three methods whereby mailbox owners can send messages to mailboxes in other locations within the AMIS network. All of these methods can designate special time periods and lines on the Norstar voice messaging system to reduce long-distance costs when sending messages. The AMIS market targets the following customers:

- Businesses with multisite operations

- Businesses with voice messaging systems from multiple vendors

- Single-site businesses whose primary business associates have AMIS capabilities.

Benefits of AMIS

Time and cost savings are two of the most important benefits of AMIS. Hard dollar savings that would improve a company's bottom line include:

- Delay in sending of messages until lines are less busy

- Delay in sending of messages until long-distance rates are cheaper

- Easier access to all people within the network

- Networkwide group lists

- Networkwide broadcast messages

- Networkwide reply to messages.

There are three ways in which messages can be sent:

- Direct Addressing

- Network Delivery Mailbox

- Site-Based Addressing.

Direct Addressing

Direct Addressing allows a user to send a message to any mailbox in the network by entering the parameters required by the Norstar voice messaging system to reach the destination mailbox. These parameters include the telephone number of the destination site and the destination mailbox number.

Network Delivery Mailbox

The Network Delivery Mailbox stores the parameters required to reach the destination mailbox, including the telephone number of the destination site, which line or pool number is used to make the call and the destination mailbox number.

A person leaving a message simply records the message and sends it to the Network Delivery Mailbox. The Network Delivery Mailbox then automatically contacts the intended recipient's personal mailbox and delivers the message.

For this delivery method, a Network Delivery Mailbox must be set up for every person in the network to whom employees would want to send a message.

Rules for AMIS to Function

In order for AMIS to function:

*   AMIS software must be enabled at all locations
*   The Auto Attendant must answer the calls from other Voice Mail systems
*   A Network Delivery Mailbox must be set up for each person in the network that is to receive messages in order to send a message using Network Delivery Mailboxes.

Desktop Messaging Application

Desktop Messaging Application Overview

Information overload is a real problem in today's workplaces. Every day, workers wade through stacks of faxes and must review, respond to, or otherwise deal with innumerable voice and email messages – one at a time. Communications via fax in North America are increasing annually by 40% and there are an estimated one billion voicemail messages and 1.5 billion email messages received daily in the workplace. The need for an effective message management tool has never been greater.

Norstar Desktop Messaging allows users to manage all their voice, fax and email messages from the convenience of their multimedia-equipped PC or laptop. Norstar has created a message management tool that is feature-rich, easy to use and provides users the capability to view and listen to all of their messages on their desktop or to retrieve them from any remote location.

Desktop Messaging also provides improved organizational communication and increased levels of productivity. Because users can access all of their messages in one session, either locally or remotely, view fax messages prior to printing, and prioritize which messages they access, they will spend less time on message management and more time on the aspects of their job which drive contributions to their organization.

Another advantage of Desktop Messaging is that an organization can maximize the investment they have already made in desktop equipment and in their LAN. And since fax messages can be viewed before printing, many users will just read faxes and not print them at all. Fax messages can also be sent to any printer on the LAN directly from the PC, which will significantly reduce the need for individual fax modems and analog connections.

Desktop Messaging Description

The Desktop Messaging product has both a server and a client component and is supported on both CallPilot 100 and CallPilot 150. CallPilot is connected via the on-board Ethernet port to the local computer network, and the Desktop Messaging software runs on CallPilot and communicates with client software installed on each user's PC. Desktop Messaging on CallPilot integrates with Microsoft Exchange, Outlook, Lotus Notes, GroupWise and Eudora client email applications.

Desktop Messaging fully complies with the user interfaces for handling attachments, message reply and other functions. CallPilot 150 comes equipped with two free seats of Desktop Messaging.

Desktop Messaging User Interface

To access the voice mailbox, the user launches their email application and is presented with a login dialog box, and is prompted to enter their mailbox password. Upon installation of Desktop Messaging on a user's PC, a new mailbox called "Nortel (CallPilot) Message Store" will be added to the set of mailboxes. Once the user has logged on to their email the standard mailbox viewer will be presented, which gives access to the mailbox/folder screen. The user can then open and view the contents of mailboxes, folders and messages.

The Desktop Messaging user interface is modeled after a standard established by many existing email applications. A traveling user or telecommuter can access the desktop interface from a laptop computer through a dialup connection to the PC network and take advantage of Desktop Messaging functionality.

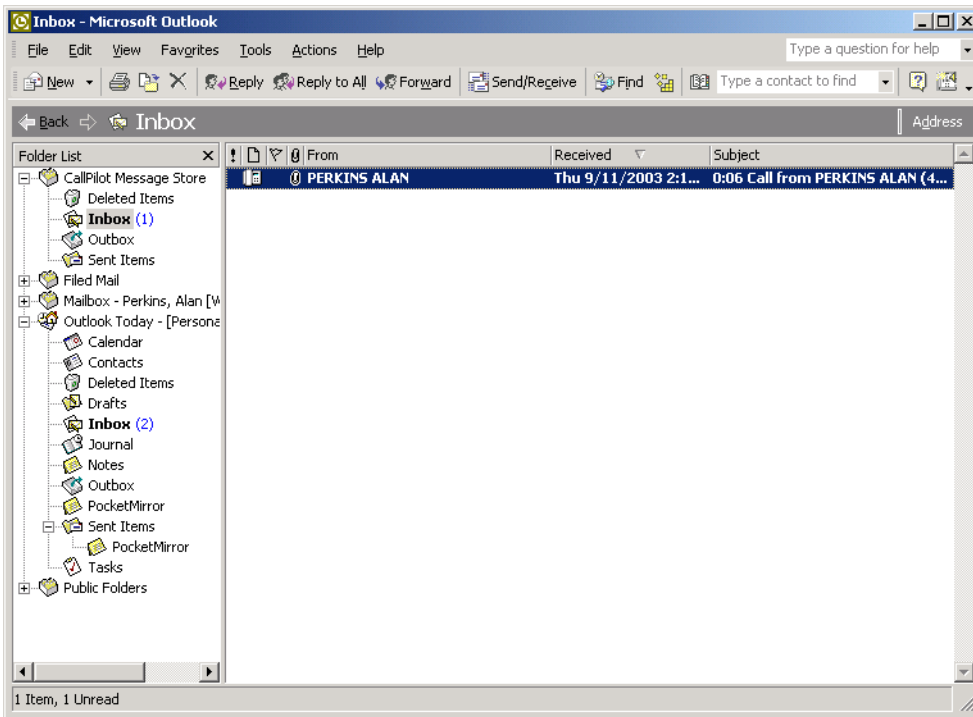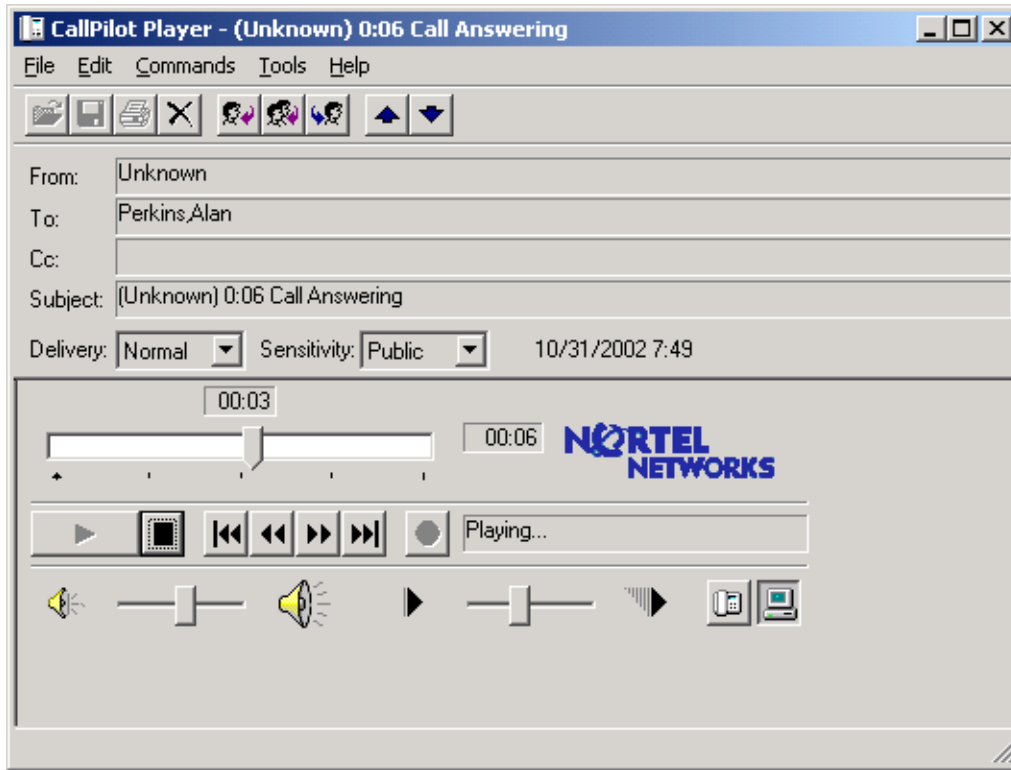*Figure 3   Standard Mailbox Viewer*

Figure 4   CallPilot Player

Desktop Messaging Features

From the desktop, the user can:

- Reply or reply to all messages

- Save any message

- View the message envelope information

- File messages

- Use the Help menu and access topics on Desktop Messaging

- Receive notification of new messages while logged on

- Print text messages

- Create new messages (either text or verbal) using the Compose Message command

- Create personal address book entries and lists

- Change mailbox password

- Prioritize and sort messages by:

    - Classification (i.e., urgent, certified, normal)

    - Date and time

    - Sender

    - Subject

- Play voice messages

- Record voice messages.

VPIM Option

Networking would not be important if everyone worked in one building and used one system for every kind of communication. But, people work within broad groups, both inside and outside their company; thus, networking is becoming an essential technology.

With digital networking technology, the sound quality of the sender's voice is not diminished by the quality or bandwidth of the transmitting circuit as it typically is with analog networking, like Audio Messaging Interchange Specification (AMIS). With digital networking, voice and fax messages are encoded, condensed and transmitted as data files, and sent from location to location using techniques that assure reliability. When the message arrives at the final destination, it is decoded and presented to the user as a normal voice message – with the clarity that the sender intended.

CallPilot with digital networking has the capability to send voice and text messages to other systems with Voice Profile for Internet Messaging (VPIM) enabled. In addition to providing efficient message exchange between CallPilot systems, Digital Networking can be used to network Meridian Mail systems equipped with Meridian Mail Net Gateway and Enterprise Networking software to digitally network voice messages.

The principal benefits of digital networking include:

• Cost-effective use of network resources for both voice and data transmission

• Reduced network usage by sending message one time to multiple remote recipients at one location

• Faster transmission that reduces transmission time and cost

• Norstar and Meridian Mail networking that enhances enterprise customer communications.

Figure 5   Digital Networking
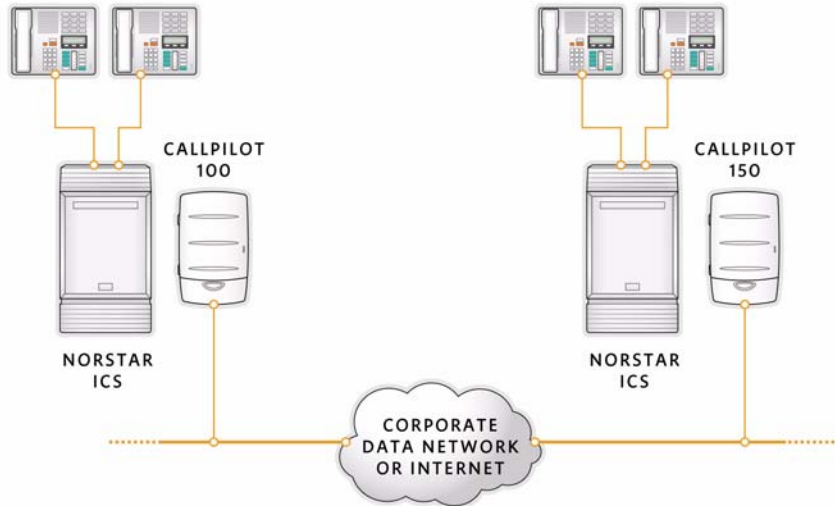
Digital Networking Benefits

Businesses do not want the expense of maintaining separate voice and data networks. Since voice and fax messages are sent as data files, Digital Networking will allow businesses to use their existing data networks as the transport for fax and voice messages, including their LAN/WAN environment, or even the Internet, to connect voice messaging systems.

Benefits of Digital Networking include:

- High message quality that improves communications
- Cost-effective use of network resources for both data and voice transmission
- Reduced network usage by sending messages one time to remote recipients at one location
- Faster transmission that improves communication and reduces transmission time
- Enhanced enterprise customer network messaging
- Timesaving by recording a message once and addressing it to multiple recipients
- Flexibility
- Transparency of communication
- Faster forwarding of messages, as messages can be forwarded to an individual by using only four digits, as if the recipient were down the hall
- Standardization of "look and feel" ensures that companies with several branches all appear to be the same (i.e., forwarding and replying to messages).

Digital Networking features include:

*   Forwarding Network Messages – allows users to forward network messages to other local users; however, the message envelope of the originator of the network message is not preserved and forwarded with the message. Only the body of the message will be forwarded.

*   Reply to Network Messages – lets a network message recipient reply and create an outgoing network message that is already addressed to the originator. The replier can also assign message delivery options before sending the message.

*   Delivery Options – let users specify network messages as certified, urgent and private and implement them in exactly the same way as local messages.

*   Non Delivery Notification (NDN) – means that when an error of some type occurs, preventing delivery of a network message, a network NDN is generated by the remote system (the system intended to receive the message). If a network message is addressed to multiple sites in a network and some sites cannot receive the message, other sites in the same network recipient lists can still receive the message successfully.

Digital Networking Description

To digitally network between Norstar Voice Mail Systems, each system on the network must use the on-board Ethernet port. CallPilot 100 and CallPilot 150 come equipped with a 10/100 Ethernet port.

CallPilot Features and Benefits

Administration

Table 8   Administration Features and Benefits

Feature	Description	Benefits
Backup and Restore	Applies to all system configuration attributes, except voicemail messages.	Ensures that data is saved in the event of system operational problems.
Create Mailbox Utility	When activated, seeks out all the Norstar ICS extensions that do not have mailboxes and creates mailboxes for these extensions with the following default characteristics: • The mailbox number which will be the same as the extension • The name, if available from the ICS • The directory listing, if available from the ICS • "Yes," for message waiting. The system administrator must designate other mailbox characteristics, but since the mailboxes are automatically configured, the system administrator can save time. The automatically set-up mailboxes will be uninitialized. The final display on the administering telephone set will show the number of mailboxes created. The administrator must acknowledge the display in order to complete this function. Create Mailbox Utility will not create mailboxes if any of the following conditions apply: • A mailbox with the same number already exists • The extension is used by some other mailbox or • The extension is identified as a voicemail channel or other "system" extension.	Speeds up mailbox configuration and makes administrator's job easier.
Custom directory	Lets users look up name matches in the directory by first name, last name or both names.	Users can change the directory search parameter without re-entering names.
Expedited Record Time-Out	Gives the caller a set of prompts (asking the caller to speak up, speak directly into the phone or press # for more options) when the system detects silence upon connecting the caller to a mailbox.	Reduces holding time and helps to maximize system channel usage.

AMIS Networking

Table 9   AMIS Networking Features and Benefits

Feature	Description	Benefits
Direct addressing	Allows a user to send a message to any mailbox in the network by entering the parameters required by Norstar Voice Mail	Saves time and improves efficiency.
Network delivery mailbox addressing	Means that the Network Delivery Mailbox stores the parameters required by Norstar Voice Mail to reach the destination mailbox.	Makes it faster and easier for the user.
Site-based addressing	Allows a subscriber to send voice messages to remote voicemail systems using the site address.	Maximizes the use of mailboxes on the system versus using the network delivery method, which requires a mailbox for every person at the remote site.

Automated Attendant Programming

Table 10   Automated Attendant Programming Features and Benefits

Feature	Description	Benefits
AA menu prompt	Can be turned on or off for each greeting table.	Allows flexibility.
Call Transfer – Blind	Lets users transfer a call directly to an extension with ringing starting immediately.	Speeds up call processing.
Call Transfer – Screened	Prompts callers to record their name, which is then played at the dialed extension. The called party then accepts or rejects the call without the caller's knowledge.	Called parties can avoid unnecessary interruptions.

Feature	Description	Benefits
Caller Display (Call Screening support on Call Forward)	When Call Forwarding is enabled, forwards all incoming calls immediately to voicemail. When the mailbox owner designates that they want to see caller information displayed at their telephone set, the display will show the name (or number) of the caller, as provided by the central office. This information is displayed and accompanied by an alert tone when the call is being forwarded to voicemail.	Users can work uninterrupted when required but still take certain essential calls.
Calling Name Display	Stores the calling name with the message if Norstar is equipped with CMS/CLASS and Name Display is delivered by the telco.	Users can see who called.
CLID Dialing Table Report	Lists all entries in the Call ID table. Each entry contains a telephone number, destination type and destination number.	Users can keep track of callers.
Dial Extension Number from CCR	Lets users dial any extension number from any menu point on a Custom Call Routing tree.	Improves efficiency.
Customize the AA menu prompt per greeting table	Customized for each greeting table to assign greetings to tables.	Allows flexibility.
Dual Language System Support	Lets callers and users switch between two languages at either the auto attendant or personal greeting level of system prompts.	Companies can use the language of their business. (English or French in Canada; English or Spanish in the United States.)
External Transfer on Centrex	Allows a multisite company to transfer callers between locations.	Saves time.
External Link Transfer, Single Trunk	(See Miscellaneous - Single Trunk External Link Transfer)	

Feature	Description	Benefits
Flexible Business Hours for Company Greetings	Lets users assign pre-recorded morning, afternoon and evening greetings to match a company's business hours. Users can assign these greetings to a specific greeting table for specific time of day and for each day of the week rather than on a systemwide basis.	Improves customer service by eliminating any confusion over hours of operation. Very efficient at routing internal communications.
Flexible Line Rings for Auto Answer	Transfers calls after a preset number of rings. Users can customize the system to meet their individual needs.	Improves customer service by eliminating wait time.
Greeting Tables	Let businesses customize the answering of their incoming lines.	Ensures that customers receive the appropriate time-of-day greeting. Also allows a company to customize greetings by department.
Multiple Operators	Once the dial "0" is assigned for a specific greeting table, it will override the designated operator defined in Feature 982.	Lets a business assign more than one operator.
Personal Greetings based on CLID	Plays a personal greeting to Calling Line ID callers only. A mailbox subscriber can program up to three specific telephone numbers, each with its own greeting.	Increased flexibility and customer service.
Remote Administration Menu	Lets users: • Remotely Record Company Greeting • Remotely Set Business Open or Closed From this menu, the administrator can change any company greeting or remotely set the business open or closed. Using Feature 983, the administrator identifies the greeting to be changed and can then play, record, rerecord and accept the changed greeting.	These functions are especially beneficial for severe weather or disaster conditions.

Feature	Description	Benefits
Reply based on CLID	Used for automatic replies to numbers collected from CMS/CLASS. Norstar Voice Mail will dial CLID with message by simply pressing the "call" soft key.	Saves time and improves efficiency.
Routing Calls based on CLID	Lets the system coordinator assign up to 100 unique telephone numbers to the Calling Line ID table. Each telephone number is given a destination type. The destination type determines where the call will be routed. This can be programmed by area code, exchanges or individual telephone number. Note: For the Calling Line ID table to operate, customers must subscribe to telco Call Display services: • Call Line Identification • Automatic Number Identification	Allows the AA to automatically route incoming calls to specific destinations such as a greeting table, mailbox, extension or CCR tree.
Single Digit Menus (CCR)	Is available with Custom Call Routing and lets a caller select a menu option by pressing a single digit.	Improves customer service and gives customers more detailed information very quickly.
Touchtone gate for Auto Attendant/CCR	Allows the system to quickly determine if the caller has DTMF capability and expedite the call if no DTMF is detected. In areas where rotary phones are common, or where reliable answer supervision is not provided by the public network, the long hold times previously experienced are eliminated.	Decreases hold times and frees up voice channels previously unnecessarily busied out.
Transfer Point to an External Number from CCR	Transfers callers to a number outside the Norstar system.	Saves time.
Transfer (via Feature 986) of an external caller to a specific CCR Tree	Directs callers to a specific CCR Tree.	Saves time.

Desktop Messaging

Table 11   Desktop Messaging Features and Benefits

Feature	Description	Benefits
Voice message manipulation (save, forward, etc.) on client PC	Allows users to save, forward, reply to, delete and archive voice messages using their PC.	Saves time and improves efficiency.
Voice message playback on client PC	Lets users play their voice messages using their PC.	Saves time and improves efficiency.
Voice message recording on client PC	Lets users record voice messages using their PC desktop.	Saves time and improves efficiency.
Voice message waiting indication on client PC	Notifies users when there is a voice message waiting.	Improves efficiency as users can return calls promptly.

Digital Networking

Table 12   Digital Networking Features and Benefits

Feature	Description	Benefits
Delivery options	Lets users highlight network messages as Certified, Urgent or Private.	Users can specify message importance.
Direct addressing	Allows users to send a message to any mailbox in the network by entering the parameters required by Norstar Voice Mail.	Saves time.
Forward Network Messages	Lets users forward the body of a network message to other local users.	Saves time.
Network delivery mailbox addressing	The Network Delivery Mailbox stores the parameters required by CallPilot to reach the destination mailbox.	Makes it faster and easier for the user.
Non Delivery Notification (NDN)	Is generated by the intended recipient system when an error preventing delivery occurs.	Users are notified when they need to send a message.
Reply to Network Messages	Lets a network message recipient reply and create an outgoing message that is already addressed to the originator.	Saves time, as users don't have to type in the recipient's address.

Feature	Description	Benefits
Site-based addressing	Allows the local subscriber to send voice messages to other company locations using the site address which is usually the same as, or similar to, the telephone number of the addressee.	Maximizes the use of the mailboxes on the system, compared to the network delivery mailbox method, which requires a mailbox for every person at the remote site.
VPIM (Voice Profile for Internet Mail) compatible	An emerging messaging standard that allows voice and fax messaging among unlike vendors' messaging systems over the Internet.	Allows for voice and fax messaging.

Group List programming

Table 13   Group List Programming Features and Benefits

Feature	Description	Benefits
Group Distribution Lists	Are created by the system coordinator and allow the same message to be delivered to a group of users by entering only one address destination or distribution list number.	Saves time in message preparation, production and, especially, delivery.

Mailbox programming

Table 14   Mailbox Programming Features and Benefits

Feature	Description	Benefits
Assigning Target Attendants	Lets each mailbox owner assign an extension as their dial-0 set.	Improves customer service, because transferred calls are answered by individuals more familiar with the mailbox owner's schedule.
Auto Answer with Personal Greeting	Answers calls after a preset number of rings with the personal greeting of the mailbox owner requesting the caller to leave a message.	Ensures callers receive detailed information of the mailbox owner's whereabouts and are provided with options (i.e., leave a message or transfer to a receptionist).
Automatic Reply to Internal Messages	Lets a mailbox owner automatically reply to a message with one keystroke.	Saves time because there is no need to look up extension numbers.

Feature	Description	Benefits
Broadcast Messages	Allows system coordinators to record a message and send it to every mailbox; it is played automatically, then erased as soon as the subscriber ends the session.	Improves internal communications by providing systemwide messaging capabilities. Every mailbox owner receives the same message.
Called party cancellation of Off-site notification	Lets the party receiving a remote notification call turn off notification to this destination. This is useful when a subscriber enters an incorrect destination telephone number. When the called party cancels notification the system removes the number from the subscriber message notification destination list and an NDN containing the incorrect telephone number is deposited in the subscriber's mailbox.	Ensures that if messages are delivered to the wrong person, the subscriber receives notification that the message was not delivered.
Cascading Off-Premise Message Notification	Lets users program five internal or external numbers that will notify a mailbox subscriber when a message is received in the mailbox. Each number is called in sequence if the number before does not answer. Numbers can be designated as a phone, pager or intercom. Depending on the Class of Service programming, each number can be called up to nine times at intervals of 5, 10, 15 or 30 minutes per attempt. If a pager is notified, the user must phone in to receive the message. If a phone is notified, the user can access their mailbox once they enter their password. Messages are immediately sent to users wherever they are located, therefore improving both external and internal communications.	Provides better customer service and quicker response time.
Enable or Disable General Delivery Mailbox	Can be disabled or enabled in System Administrator's Mailbox.	Improves convenience.
Envelope Information	Gives users the receipt time and date of a message, in addition to the sender's name. Users can receive this information by pressing "7" during or after a message.	Improves efficiency, as users know exactly when messages were left.
Express Internal Messaging	Lets users send internal messages without opening a person's own mailbox; the sender's name and extension are automatically included.	Improves communication.
Forward Copy with or without Comment	Allows users to forward mailbox messages to other mailboxes without rerecording the message.	Users can attach more comments to the original message.

Feature	Description	Benefits
General Delivery Mailboxes	Can collect messages after hours, from rotary dial telephones or for people who don't have a mailbox. The default status for the General Delivery Mailbox is enabled. The General Delivery Mailbox can be disabled or enabled as required by the company. When enabled, callers who reach the General Delivery Mailbox can leave a message. When disabled, callers will hear the Automated Attendant voice prompt. At any time, callers can press zero (0) to reach the operator. Note: If the operator is not available, the Automated Attendant voice prompts plays.	Improves customer service, as callers can leave messages after hours.
Guest mailboxes	Are useful for people who do not have a Norstar extension number, yet need voicemail access.	Helps improve communications internally.
General Delivery Mailbox	Is a "last stop" mailbox for unsuccessful call transfers returned to the operator who is, at that time, also unavailable.	Messages are stored in a centralized location.
Informational mailbox	Lets a business play frequently-requested information only, with no message-taking capabilities.	Eliminates users' need to repeat the same information to multiple callers, such as hours of business or the time of a performance.
Message Delivery Options: Normal, Certified, Private, Urgent	Are four options that increase the user's control over message delivery: • Normal: the message is delivered automatically (default). • Certified: the sender receives confirmation when the message is read. • Private: messages cannot be forwarded to another mailbox. • Urgent: a message can be queued to play after broadcast messages, but before "normal" messages.	Users can specify message type.
Message Waiting Notification	Notifies users when they receive new messages by displaying "message for you" on the user's display. When users open their mailbox, they can listen to their new and saved messages.	Improves communications, as it eliminates the need to log on to check for new messages.
Name Confirmation when Sending	Displays the name and number of the person or mailbox being contacted in the LCD display.	Eliminates delivery errors.

Feature	Description	Benefits
Name Directory or Extension Accessibility	Lets callers find any system mailbox extension by spelling the user's last name on the dial pad.	Increases a receptionist's productivity; faster processing of calls and improved customer service if the caller only knows the name of the person they are calling and not the extension number.
Never Full Mailboxes	Ensure that external callers will not be prevented from leaving a voice message in a personal mailbox, even if the mailbox is full. The only time an external caller cannot leave a message in a mailbox is when the system is full. To control misuse of the disk storage space, users with full mailboxes will not be able to retrieve new messages, or create, send, copy or reply to messages until at least one saved message has been deleted. In cases where all the messages in the mailbox are new, the user will be able to listen to at least one before they are prompted that some messages must be erased to retrieve new messages.	Allows for maximum storage capacity of the system and improves customer access to voicemail users.
Outbound Transfer from Mailbox	Lets callers, while listening to a personal greeting in a mailbox, press "7" to be transferred to an external number specified by the mailbox owner. The mailbox owner may choose to include this instruction as part of their greeting or keep it as a private arrangement for certain callers. When this feature is included in the mailbox class of service, the mailbox owner can turn this feature on and off.	Improves customer service by providing a means for urgent contact when necessary.
Playback Controls	Allow subscribers to move within or between messages, without listening to each message entirely.	Increases users' control while listening to their messages.
Personal mailbox	Is assigned to a particular person and extension number for his or her exclusive use.	Owners can receive detailed, confidential messages 24 hours a day.
Prerecorded Greetings Storage	Means that users can store up to 40 prerecorded greetings can be stored.	Saves time because a system coordinator does not have to rerecord new messages each day; messages remain consistent, thereby giving businesses a more professional image.

Feature	Description	Benefits
Primary and Alternate Greetings	Lets a mailbox subscriber switch between pre-recorded primary and alternate greetings.	Improves flexibility.
Recovering Deleted Messages	Lets a user revisit a previously deleted message during a mailbox session and save the message.	Users can move quickly through mailbox messages without the risk of accidentally deleting a message that they wish to retain.
Remote Call Forwarding to Voice Mail	Lets the mailbox owner turn Call Forwarding to Voice Mail on or off from a remote location.	If the user has forgotten to Call Forward or is unexpectedly away from the office, they can still forward to voicemail so that their customers do not have to wait through multiple rings.
Saved Message Queue and Retention Periods	Saves messages for a preset time period as determined by Class of Service; saved messages are stored in a queue and played after any new messages.	Users can save important messages in case they have forgotten some details.
System Coordinator Mailbox	Lets a system coordinator perform administration duties and send broadcast messages.	Ensures no calls are lost, while at the same time improving system management.
Urgent Message Notification	Notifies users of urgent messages. The prompt "This message is urgent" will precede playback and display an urgent message. Urgent messages will be moved to the front of the new message queue, ahead of non-urgent messages. When urgent messages are saved, the urgent indication is ignored and the message is queued in chronological order.	Improves user's time management by dealing with most important issues first.

Miscellaneous

Table 15   Miscellaneous Features and Benefits

Feature	Description	Benefits
Call Screening per set	Is particularly useful where Calling Line Identification (CLID) information is not available, or when the called party has a set without display capabilities.This feature is enabled on an individual mailbox basis from mailbox administration. Call Screening only applies to external calls dialed by callers using the extension dialing capabilities of Auto Attendant or Custom Call Routing. After an external caller enters the extension of the person they wish to speak to, the Automated Attendant asks the caller to record their name. The Automated Attendant then transfers the call to the extension, announces the name of the caller and offers the called party the option of accepting the call or letting the caller leave a Voice Mail message.	Improves productivity by allowing the user to choose whether to interrupt work to take a call.
Dynamic Voice Channel Allocation	Means that voice channels are not dedicated to an Automated Attendant or voice messaging.	Improves efficiency and speeds up call processing.
Enable or Disable the Company Directory	Lets the system coordinator enable or disable access to the company directory for internal and external users.	
Enable or Disable Voice Mail Feature	Lets the system manager globally enable/disable the Voice Mail feature. If Voice Mail is disabled, the calling party will not be answered by the subscriber's mailbox. Instead, the caller will be directed back to the Automated Attendant or CCR application for more options. When disabled, only Feature 980 and Feature 986 will be allowed to leave messages.	
External Volume Control	Allows users listening to messages from outside the company to increase the playback volume by pressing *.	Eliminates message distortion, and ensures users will hear details correctly.
Interrupt Feature	Allows mailbox users to retrieve calls that have been forwarded to voicemail. Call can be interrupted at any point during the mailbox session.	Provides users with the opportunity to retrieve calls if they are in the office.

Feature	Description	Benefits
Multiple recipients per message	Lets users send messages to multiple recipients with one set of delivery options applied to all recipients. When addressing the message, the subscriber can choose to add recipients or delivery options in any order prior to sending the message.	Saves time when sending messages to multiple recipients.
Record a Call	When activated by Feature Code 989 from the Norstar user's set, allows the user to have the mailbox act like a tape recorder and record the telephone conversation. The system prompts both parties "This call is being recorded." Once the conversation is recorded, it has the same appearance to Norstar Voice Mail as a voice message – so the user can forward it, delete it, or in conjunction with Desktop Messaging, can "archive" the call ("message") as a ".wave" file to a PC hard drive, floppy disc, or zip drive. Because of the sensitivity to local laws in different regions of North America, the feature is disabled for all Classes of Service and must be specifically enabled by the system administrator.	Users can record important conversations.
Semi-interruptible greetings (Extended Absence greetings)	Allows mailbox owners to let callers know about an extended absence. When the Extended Absence greeting is in use, callers who attempt to bypass it will be prompted that this is a special greeting and the system will give them the option to play the greeting again. A special tone precedes the greeting and alerts callers that it is in effect.	Improves customer satisfaction, as they can receive up-to-date information about absences.
Single Button Call Forward to Voice Mail	Lets users forward all calls automatically to voice mail by activating Feature 984.	Improves efficiency as users can work uninterrupted and can focus on projects that have critical deadlines.
Single Trunk External Link Transfer	Lets users transfer out of voicemail, externally, without tying up two trunks for the duration of the call.	Calls can be routed to the appropriate location for products and services, without tying up two trunks to complete the transaction. The business benefits by getting better trunk utilization on their system and being able to take and process more transactions.

Feature	Description	Benefits
Timed delivery of messages	Lets subscribers create a message and delay delivery of that message until after a specified date and time. The message can be delayed up to the number of days specified in the message retention class of service parameter for a given mailbox. If the Voice Mail system is using the AMIS protocol for networking messages, Timed Delivery messages will follow the standard AMIS rules with respect to call blocking (only urgent messages will be sent during call blocking periods).	Subscribers have more flexibility in recording and sending messages.
Trunk Answer On/Off	Permits system coordinators to turn on or off incoming trunk lines programmed for answering by the Auto Attendant.	Enhances voicemail system control.
Voice Mail Option	May be enabled or disabled at any time. The default status for the Voice Mail Option is enabled. When enabled, callers can access all mailboxes. Callers who try to reach an extension that is busy, or does not answer, will be transferred to the extension's mailbox. When the Voice Mail Option is disabled, callers cannot leave messages in any mailbox unless manually transferred to a mailbox. Callers can access Information Mailboxes.	When callers hear that the called party is not available, they get transferred to the Automated Attendant voice prompt. At any time, callers can press zero (0) to reach the operator.

Reports

Table 16   Reports Features and Benefits

Feature	Description	Benefits
Call Handling and Channel Usage Report	Provides traffic statistics on the types of calls handled, and the traffic against each port used by Norstar.	Lets businesses receive call traffic information.
CCR Usage Report	Provides the greeting table from which the CCR tree is currently referenced and a seven-day rolling count of the number of calls received by the tree and the number of times each path is visited.	Lets businesses keep track of calls.
Mailbox Activity Report	Shows seven day usage information for all subscriber mailboxes on the system.	Keeps track of mailbox activity.
Message Usage Report	Shows the number of minutes of storage available on the CallPilot system.	Keeps track of available minutes on CallPilot.
Numeric Mailbox Information Report	Includes more information about the mailbox.	Helps to identify potential usage problems and reports on all mailbox types, not just subscriber mailboxes.
System Configuration Report	Shows how the system is configured to include the number of ports, outdial channels, group lists and any options that may be installed on the system, such as AMIS or Digital Networking.	Convenience with one report that describes configuration.

Security

Table 17   Security Features and Benefits

Feature	Description	Benefits
Centrex Transfer Restrictions (Toll Fraud Protection)	Provides toll fraud protection for Centrex installations using the Centrex Transfer feature to transfer calls to other Centrex extensions. If the Centrex Transfer feature is enabled, the extension does not have to be located on the Norstar switch. If the requested extension is not a valid Norstar extension, and the Centrex Transfer feature is enabled, CallPilot will instruct the Norstar to perform a "hook-flash transfer" of the caller to the given extension number. This feature is valuable when the Norstar is used in a Centrex installation, but presents a possible security problem, in that a malicious caller or user could be "transferred" to an extension such as 9011, which has the effect of transferring the caller to the international operator, with resulting charges incurred by the owner of the Centrex line.	The Centrex Transfer Restrictions feature counters this security exposure by specifying a set of dialing sequences that will be denied in all cases when CallPilot requests a Centrex transfer.
Change of Operator Password	To improve security, a password can be changed from default "OPERATOR" (67372867) to any four to eight-digit sequence.	Personally chosen passwords are easier to remember and more secure.
Forced Password Change	Requires mailbox owners to periodically change their passwords. The intervals can be set for either 0, 30, 60 or 90 days (0 is interpreted as never changing the password). If the password has expired, it does not prevent access to the mailbox, but the user is prompted that the password has expired and the password must be changed.	Improves security.

Feature	Description	Benefits
Incorrect Password Detection and Lockout	Tracks the number of incorrect login attempts since the last successful login. When the number of unsuccessful attempts exceeds a threshold, the mailbox will be "locked out" and cannot be opened, even with the correct password, without administrator intervention. The maximum number of login attempts is controlled by the class of service.	Provides additional security.
Internal Norstar Set Initialization	Lets system administrators initialize mailboxes on the same system as CallPilot.	Provides additional security.
Outbound calls restricted to preset line/pool	Allows the Administrator to specify which line or pool is to be used for Norstar Voice Mail outgoing calls.	Helps control or prohibit toll fraud. Contributes to cost reduction.
Set-based restrictions for outbound calls	Means that outgoing calls initiated by Norstar Voice Mail are subject to the set-based restrictions, regardless of the line or pool selected as the outgoing facility.	Helps control or prohibit toll fraud. Contributes to cost reduction.