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UM8000

Unified Messaging System - Version 11.0
General Description Manual

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Introduction and Overview

SECTION 1 INTRODUCTION

Many companies are looking to Unified Communications and Unified Messaging to meet growing communications and productivity demands. This general description provides an overview of the UNIVERGE UM8000 Unified Messaging System features and specifications.

SECTION 2 PRODUCT OVERVIEW

At the core of UNIVERGE UM8000 is a full featured voice mail, unified messaging, and auto-attendant system; it provides users the ability to access and manage their voice, fax, and e-mail from a desktop PC, a touchtone phone, or the Internet. These advanced Unified Messaging features give users access to their voice, e-mail, and fax messages when and where they need it. The initial release of UM8000 is designed to support the new SV8100 and SV8300 IP PBXs and to meet your business requirements as a stand-alone Unified Messaging solution, or a multi-site network, UNIVERGE UM8000 is the solution for your business.

The UM8000 embedded design allows organizations to easily deploy messaging solutions designed to best fit their needs and create their own customized communication solution that is reliable and scalable. The UM8000 ranges from 2-port configurations to 16-port configurations per system. Some of the optional modules available for the UM8000 are: Text-to-Speech (TTS), ActiveFax, and Visual Messaging for Microsoft®, Lotus Notes, and Novell GroupWise Clients.

Its industry leading technology, flexible deployment options, and Unified Messaging capabilities make UNIVERGE UM8000 an ideal solution for addressing the communications requirements of business needs today and tomorrow. Development for voice and data convergence positions UNIVERGE UM8000 for expanding Unified Communications possibilities. This protects your initial investment and prepares your business for a smooth transition into the converged environments of the future.

SECTION 3 USER INTERFACE

The Web Administration Console and Web Mailbox Manager are Browser-based applications that are used to manage UM8000. This requires an Internet connection and Web browser for users who access either of these applications.

SECTION 4 ARCHITECTURAL OVERVIEW

UNIVERGE UM8000 is designed to take advantage of the SV8100 and SV8300 IP PBX chassis, enabling UM8000 use the PBX resources, power source, and battery backup in an integration that is superior to other comparable messaging systems. Included in the base-system are standard features such as: Live Record, Soft Key Support, and Constant Message Count.

While all configurations of UNIVERGE UM8000 enable you to add text-to-speech, Hospitality, PMS interface, additional languages, and fax. One of the key architectural elements of UM8000 is that it uses non-volatile media for message storage; this compact flash drive provides a long service life for the messaging system.

SECTION 1 UM8000 FEATURES

UNIVERGE UM8000 includes the following features.

E-mail Integration – General Description

The e-mail integration must be licensed and installed to provide subscribers with the benefits of using e-mail to read and listen to e-mail and voice messages.

- o Constant Message Count.
- o Use the Web Administration Console for streamlined and simplified configuration for administrators.
- o Use the Web Mailbox Manager for streamlined and simplified configuration and management of voice mail messages for subscribers.
- o SSL support (TLS).
- o SMTP with authentication.
- o Text-to-Speech using IMAPv4 or POP3 (with SSL and multiple authentication methods).¹
- o Multilingual text-to-speech with language auto-detection.²
- o Configurable e-mail notification template with multiple language support.
- o E-mail confirmation of successful fax delivery.
- o Ability to copy voice messages and faxes to e-mail and mark the original message, on the messaging system server, as an old message or new message.

1. Requires software version 11.1.1.28 or higher.
2. Requires text-to-speech.

Web Administration Console Configuration

- o Set e-mail configuration information on the System > Configuration > E-mail Settings page. Configuration the server type, outgoing mail server name, port number, SSL, authentication type, global e-mail address, and display name.
- o Use the E-mail Message Template to format e-mail messages for all subscribers.
- o Subscriber e-mail configuration is set on the Subscribers > Subscribers > E-mail page. Configure the subscriber's e-mail address, server type, authentication method, server name, user name, port number, and SSL settings.
- o Use the Subscribers > Account Policy page to mandate the length of a password (3~9 digits), or if a blank password is permitted. Subscribers can change their password using the Mailbox manager or a phone conversation.

Maintenance Menu

UM8000 has a command line user interface, the Maintenance Menu, that is accessed using an SSH tool such as PuTTY. Do not use the command line interface unless specifically directed to type specific commands, use the Maintenance Menu. The Maintenance Menu is used to:

- o Configure the network settings.
- o Use the Global tone detection utility.
- o Apply system updates and patches.
- o Change the administrator phone system console password.
- o Use the command prompt interface.
- o Restore the default database.
- o Stop and restart the messaging system software.
- o Shutdown the messaging system server.

Keyboard Shortcuts

The Maintenance Menu lets you use keyboard shortcuts instead of mouse clicks to access menus within the user interface.

Mailbox Manager

This Web-based application brings many voice mail features to a subscriber's desktop PC or mobile device if the system is enabled for mobile access. The Mailbox Manager graphical user interface (GUI) gives subscribers a way to configure and control their personal mailbox and telephone user interface (TUI) settings.

Mailbox Manager reduces the workload for system managers, giving subscribers additional flexibility to customize UM8000 to adapt to changing demands in their work environment.

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- o **Record/Edit, complete First Time Enrollment from a PC or a phone:** Subscribers can record their directory name, and record or edit the personal greetings that UM8000 plays to incoming callers.
 - o **Administer private distribution list:** Subscribers create and manage their own private distribution lists, adding or deleting recipients.
 - o **Change directory listing status:** Individual subscribers can control whether or not they are listed in the directory.
 - o **Change voice mail password:** Subscribers can change their voice mail password.
 - o **Change transfer options:** Subscribers can turn call transfer on or off, and change the extension or phone number to which incoming calls are transferred. When call transfer is turned off, incoming calls are sent directly to the subscriber's mailbox.

This feature is particularly useful for employees who have offices in multiple facilities, frequently work at home, or work as part of a team that requires them to spend a significant amount of time in a colleague's office. By using Mailbox Manager to change call transfer options, callers and subscribers are connected quickly to provide good customer service and efficient personal administration of phone traffic.
 - o **Set conversation options:** Subscribers can specify whether or not they want full or brief menus, whether they want to hear the day and time stamp before or after a message, and if they want the voice mail system to greet them by name when they call in to retrieve their messages.
 - o **Set message delivery options:** Subscribers can establish rules governing message delivery options for the type and urgency of message or frequency of delivery. For example, a subscriber can set the message delivery options so that, when he or she receives urgent voice messages on Wednesday, UM8000 will call the subscriber's home or cellular phone to deliver them.
 - o **Set call screening and holding options:** Subscribers can set call screening and holding options to handle incoming calls with ease.
 - o **Set message playback options:** Message playback using speakers, extension or mobile phone.
 - o **Manage messages:** Ability to sort and search messages. Add text annotation to messages (can be used when searching).
 - o **The Mailbox Manager Playback:** Subscribers can configure playback settings: announce message length, Yes/No conversation or menu conversation, announce date and timestamp before or after the message, set new message order (LIFO, FIFO), and set old message order (LIFO, FIFO). Export voice messages to .wav for use off-line (individually or all at once).

- o **Set personal profile preferences:** Record name, set automatic log on from a specific phone, select message playback device, list in directory, set tracking options, select recipients by name or extension, and change their password.

Subscribers use the Mailbox Manager E-mail page to change their e-mail address for message notification, forward voice messages to e-mail, forward faxes to e-mail, and receive e-mail notification for new voice messages.

Subscribers use the Mailbox Manager Greetings page to enable standard, busy, or alternate greetings and record their greetings.
- o **Transfer and Screening options:** Subscribers can transfer calls from the automated attendant to an extension, personal phone number, or voice mail. Subscribers can enable screening options to play a note before connecting a caller, play the caller name, ability to accept or reject a call, play the caller name in the message, announce the recipient's name, allow incoming callers to hold, copy messages to another extension and delete on copy.
- o **Notification preferences:** Subscribers can change notification preferences using the Mailbox Manager Notification page. Subscribers can enable up to five devices and set the phone number and schedule for each device.

Default notifications are configured using the Web Administration Console Subscribers > Subscribers > Notifications page or the Subscribers > Subscriber Template > Notifications page.
- o **Messaging Groups:** Subscribers can create and manage groups for sending messages.

Call Management

Using Call Management > Transaction Boxes > Profile, the system manager can add transaction boxes one at a time or a range of boxes at once. Specify the owner, box name, the start and ending system IDs, and optionally define a prefix or suffix for the IDs for the transaction boxes.

Only the owner of a transaction box can use a phone conversation to change the transaction box greeting.

Batch Import and Export

The UM8000 messaging system provides functionality to import data and export database information to text files. Information that can be imported and exported includes the following:

Entity Type	Data Exported/Imported
Subscribers	First name, last name, extension, personal ID, fax ID.
Transaction Boxes	Transaction box name, system ID, and Owner name.
Private Groups	Group name and owner.
Open Groups	Group name and owner.
Local Groups	Group name and owner.

Exported data is saved to a file, default.csv, or displayed on-screen. Make sure that you change the default.csv file name to something relevant to the data being exported. Specify the separator used to separate the files, selections include: comma, tabs, and semi-colon.

The header row, field names, is included or excluded in the export or import.

Mobile Web Interface (XHTML – Mobile compliant)

- o Message access/playback.³
- o Call return.⁴
- o Mailbox management (set transfer options, notifications, greetings, set e-mail options, etc.).
- o Compatible with Palm OS, RIM Blackberry, iPhone, Symbian, and Microsoft Mobile.

Telephony

- o Automatic login when calling from a pre-configured external number (e.g. Cellular phone).
- o Constant Message Count (CMC) displays the number of new messages a mailbox user has on that idle display phone. This indication is used in combination with the large Message Waiting LED to provide the user with a complete message indication.⁵
 -  *Constant Message Count currently not supported on SV8300.*
- o Live Record with phone user interface soft keys (NEC VMIP).

3. Playback using the Web mobile interface requires a mobile data plan and .wav capable mobile device.

4. Requires Caller ID service from carrier provider.

5. Requires UM8000 software version 11.2.0.83 or higher and SV8100 software version 3.00 or higher.

- o Enhanced auto-attendant (transfer to a pre-configured range of extensions without creating mailboxes).
- o Ability to cancel in-progress message notification to phone by pressing the pound (#) key.
- o Looped ports prevention (prevents UM8000 from calling itself).
- o XML - NEC interface.

Park and Page

A caller is able to use a one-touch menu on the auto attendant for a particular department. The voice mail system parks the caller, accesses the paging system, and then announces the parked call using a specific recording for the menu choice along with the call park location.

- o SV8100 v1.0 or higher with internal or external paging from the CPU or PGD(2)-U10 Adapter.
- o Configured on System > Switch > Park and Page in the Web Administration Console.

 *Park and Page currently not supported on SV8300.*

Voice Mail

Voice mail allows outside callers and called subscribers to leave detailed, private messages 24-hours a day, seven days a week. The recorded message is left in the caller's own voice which eliminates misunderstood or inaccurate written messages, and captures the tone of the caller's voice. Subscribers access and listen to their messages using any touchtone phone.

Research shows that only one-third of all business calls achieve direct contact, yet 40 percent of all messages are "one way" messages that do not require a dialog. Voice mail saves time by allowing a person to leave a message, even if the person he or she is trying to reach is away or on the phone. Voice mail allows a company to better manage its communications and its employees' time.

- o **All subscriber group:** As users are added to the system, they are automatically added to the all subscriber group.
- o **Announcement of number and length of messages:** UM8000 announces the number and length of messages.
- o **Archiving:** The message archive feature allows subscribers to save messages longer than the preset system parameter.
- o **Cut-through paging:** UM8000 transfers phone numbers entered by callers to paging devices, which enable subscribers to return important calls without checking voice mail. This feature is phone system dependent.

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- o **Date and time stamp:** Subscribers can choose to hear the date and time stamp before or at the end of every message. UM8000 indicates how long ago or the exact time and date that a message was received, providing subscribers with accurate information about their phone and fax activity.
 - o **Extension remapping:** Create “virtual extensions” so users can retrieve messages from multiple phones. A user with two phones can configure calls to each phone to be forwarded to one voice mailbox.
 - o **Guests:** A guest is a person who is hosted by a particular subscriber and given a “guest mailbox.” Guest privileges allow a person to communicate with their host subscriber through voice messages.
 - o **Language selectable for each subscriber or guest:** The System Manager or subscribers can use the Mailbox Manager voice mail management interface to set which language each subscriber or guest hears. The subscriber or guest hears prompts in the selected language.
 - o **Last In-First Out / First In-First Out (LIFO/FIFO):** System managers or subscribers can set LIFO/FIFO for entire categories of messages. For example, all messages from other subscribers can be played back in either LIFO or FIFO order; message playback is no longer grouped by subscriber name.
 - o **Message order:** Allows users to hear messages in the order that is most convenient.
 - o **Playback order:** System managers or subscribers can set playback order separately for new messages and old messages for maximum flexibility and convenience.
 - o **Live Record:** Conversations can be recorded and left as messages. The recorded message is left in the participants’ own voices, eliminating misunderstood and inaccurate written transcripts, and capturing the tone of the conversation. This feature is phone system dependent.
 - o **Using Soft Keys:** Please see PBX system and user guides for details.
 - o **Using ViewMail:** To record a conversation, subscribers simply press the Live Record button in their ViewMail window during a conversation. Users then have access to Live Record from their desktop PC also permits voice mail message management from a PC client.
 - o **Message editing by both inside and outside callers:** Message editing enables callers to edit all or part of the message recorded. The caller can listen to the message, add to it, delete it, or re-record it.
 - o **Message return receipts and receipt summaries:** Return receipts provide subscribers detailed information about each message sent, including when the recipient opened the message. For a group message, return receipts tell when everyone in the group opened the message, for dispatch groups, who heard the entire message and when. Receipt summaries tell the user whether or not a particular subscriber opened any or all of the messages sent and if a reply was sent to the sender.

- o **Message waiting notification:** The phone message-waiting indicator is activated when a subscriber has new messages.
- o **Outside caller group messaging:** Outside callers can leave a message for a group of subscribers.
- o **Personal mailbox:** Each subscriber within an organization can have a private voice mailbox.
- o **Receipt sent for messages saved as new:** Subscribers who get message receipts receive a receipt as soon as the recipient listens to any part of the message, even if the recipient saves the message as new. Once the recipient has opened a message, the sender cannot cancel the message or change its special delivery options.
- o **Redirect to Multiple Subscribers with one Introduction (RSI):** This feature gives UM8000 users the ability to redirect messages to several users without having to record an individual introduction for each recipient.
- o **Rewind, pause, and fast-forward:** While listening to a message, users can rewind, pause, or fast-forward the message. When recording a message, users can pause and restart the recording.
- o **Special delivery options:** Users can mark messages with one or more of the following special delivery options: urgent, private, future, and return receipt requested. Subscribers can also change or add to the special delivery settings of a message after it is sent.
- o **Urgent:** Messages marked with “urgent” are heard before regular messages. Urgent messages from other subscribers and guests are played before urgent messages from outside callers. The system tells subscribers how many new messages are marked urgent.
- o **Private:** The recipient of a “private” message cannot redirect the message to anyone else.
- o **Future:** The sender can mark the voice message for delivery at a later date and time, up to one year later.
- o **Return receipt requested:** The sender of the message is told when the recipient hears the message. Subscribers can request return receipts for messages sent to individual subscribers or to groups.
- o **Speed control during message playback:** Subscribers can slow down or increase the speed of each message during playback using the phone keypad.
- o **Subscriber-controlled groups:** Subscribers can create, name, add, and delete subscriber groups using a phone.

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- o **Subscriber-controlled message delivery:** Messages can be delivered to any phone. Each subscriber can have up to four separate phone numbers and dial-out schedules. The message delivery options can be sequential for each phone number and programmed by the subscriber. A subscriber can use any touchtone phone to turn message delivery on or off, or change the delivery times.
 - o **Subscriber self-enrollment:** Subscribers can personalize voice mailboxes, setting up their directory listing, recording a personal greeting, and specify security codes, using a phone conversation or the Mailbox Manager.
 - o **Directory listing:** Subscribers control whether they want to be listed in the automated attendant directory (see Automated Attendant features). Subscribers record and spell their name for the directory.
 - o **Personal greetings:** Subscribers record personal greetings using a phone or Mailbox Manager. Callers hear the greeting before they are given an opportunity to leave a message.
 - o **Personal ID:** This number, which is based a subscriber's extension number, identifies subscribers to the messaging system when they are calling to access their mailbox. UM8000 allows subscribers to use personal IDs of varying lengths—from one to ten digits.
 - o **Personal security code:** In addition to a personal ID, each subscriber can set a security code to safeguard the mailbox. The code, which can be any number of digits up to ten, can be changed at any time using a touchtone phone or the Web Mailbox Manager.
 - o **Subscriber-to-subscriber messaging:** UM8000 is a powerful and flexible tool that improves communications among co-workers. Subscribers can dial UM8000 to leave a message for another subscriber without ringing the extension. In this way, co-workers can exchange routine information and ask questions without disturbing one another. It is still possible to dial a co-worker. If a recipient is unavailable, the call is automatically forwarded to voice mail and the caller is automatically identified.
 - o **Address messages to multiple subscribers:** Subscribers can send a message to several subscribers at once without creating a group.
 - o **Immediate reply:** UM8000 enables subscribers to reply to a message from another subscriber immediately after hearing the message.
 - o **Message cancellation:** If the recipient has not listened to a message, the sender can delete the message and record a new message.
 - o **Multiple message action:** Subscribers can reply to or redirect one message several times. For example, subscribers can listen to part of a message, interrupt it and reply, then start listening again and forward a copy of the message to another subscriber.

- o **Message redirection:** UM8000 enables subscribers to forward a copy of a message to another subscriber. Subscribers can also record an introduction to the forwarded message.
- o **Multiple replies to one message:** Subscribers can respond to old or new messages multiple times.
- o **Voice-sampling rate:** The voice-sampling rate is 24Kbps @ 6KHz and provides a high standard of voice messaging.
- o **Volume control:** Subscribers can raise or lower the volume of a message during message playback.

Automated Attendant

The UM8000 Unified Messaging System acts as an electronic receptionist, answering and routing incoming calls. Callers hear an opening greeting that gives information, instructions, and options. Using the automated attendant, callers can reach a subscriber by dialing the extension number during the opening greeting.

The attendant answers several calls at the same time. The system places callers on hold, informs them of their position in the holding queue, and periodically updates this information. It screens calls, announces the name of the caller, and waits for confirmation from the subscriber before putting a call through.

Most phone systems do not allow an outside caller to directly dial an inside extension, this means that all incoming calls are answered by a receptionist, who routes the calls to the appropriate extension. This is a costly and time-consuming process. The automated attendant feature relieves a receptionist of these routine phone tasks, freeing the receptionist to provide better personal service to the callers who need it most. For organizations that use a receptionist during the day, the automated attendant can be programmed to handle only after hour calls.

The automated attendant can be set to answer a specific set of numbers so subscribers and outside callers who know the dedicated number can by-pass the receptionist.

- o **Answer call on first ring:** UM8000 can be programmed to answer calls on the first ring so incoming calls are handled as quickly as possible.
- o **Caller interviewing:** UM8000 can interview callers with a series of simple questions (up to 20 questions) using an interview box.
- o **Call screening:** UM8000 has the ability to screen calls that are transferred to a subscriber. The subscriber can then decide to take a call based on who is calling. Subscribers can turn call screening on and off using a phone.
- o **Changeable voice prompts:** All voice prompts can be re-recorded to meet the needs of an organization. Use the System > Voice Prompts page in the Web Administration Console to change prompts.

The prompts appear on the Voice Prompt page, the default language selected is listed, select the prompt set that is to be changed, then click the record button next to the prompt to re-record the prompt.

Prompts are .WAV files and must be in (AD) PCM audio format with 16-bit audio sample size, 96Kbps bit rate, 1 (mono) channel, and 8KHz audio sample rate. No other formats are supported.

- o **Directory listing:** A caller who does not know the extension can enter up to 30 letters of a subscriber's name (first or last, depending on how the system is configured) and the system routes the call. Callers are told the extension number for future reference. If the extension is not answered or is busy, UM8000 routes the caller to the subscriber's voice mailbox.
- o **Holiday greetings:** Up to 18 holiday greetings can be programmed one year in advance so the system automatically runs on night mode on holidays.
- o **Multilingual capability:** UM8000 can support up to 23 different language prompt sets. One system can handle several different languages at once. Language choice can be per port or per user. In addition a caller can select a language from a language selection box.
- o **Multiple personal greetings:** Subscribers can record three separate personal greetings—a standard greeting, busy greeting, and an alternate greeting. The three separate greetings enable users to record a new greeting for holidays, vacations, or other special purposes, without having to delete their standard greeting.
- o **Multiple user interfaces:** Individual users on the same system have a choice of using menu options or NEC's easy-to-use 1 for Yes, 2 for No[®] interface.
- o **Menu options:** UM8000 offers a menu interface as well as the yes-and-no interface. Menu options make it easy for experienced users to quickly access all functions.
- o **1 for Yes, 2 for No interface™:** Using the 1 for Yes, 2 for No option, users access all functions by responding to simple yes-or-no questions.
- o **Quick keys:** Yes-and-no interface users can utilize other keys to jump to specific options or features.
- o **Music or unique messages for callers holding in queue:** Up to ten different on-hold prompts can be recorded for callers waiting in a subscriber's queue. Prompts can be recorded to play information or music.
- o **Numeric directory assistance:** UM8000 provides directory assistance for outside callers without letters on their phone keypad. UM8000 can be set up to guide the outside caller through directory assistance using numbers.
- o **One-key dialing:** This feature enables callers to press a single touchtone digit instead of a series of touchtones to dial an extension. This makes dialing calls faster and more convenient.

- o **Opening greeting:** UM8000 plays a pre-recorded greeting to callers when it answers a call. The organization's system manager records the greeting. The greeting includes the organization's name, how to reach an extension, how to reach the operator, how to send a fax, how to reach the directory, and so on. During the greeting, callers can enter extension numbers, access the directory, or hold for assistance.
- o **Operator assistance:** Outside callers can press "0" for assistance at any time.
- o **Overhead paging:** UM8000 can be linked with an overhead paging system if the appropriate phone system integration is installed. This feature enables callers to page a subscriber if the subscriber's extension is not answered.
- o **Personal secretary:** The personal secretary feature provides individual users with the ability to have calls transferred to a specified extension when they are away from their desk or out of the office. The personal secretary or a knowledgeable person in the same department can handle important calls.
- o **Primary or secondary answering:** The automated attendant can be programmed to answer all incoming calls or calls that are not answered by an operator after a pre-set number of rings. UM8000 can answer all or selected incoming lines.
- o **Schedules:** To accommodate organizations with operating hours that vary from day-to-day, UM8000 can maintain up to three different schedules.
- o **Subscriber-controlled call holding:** Call holding gives a caller the option to hold and wait for a busy extension to become available. The system can place callers on hold, inform them of their position in the holding queue, and periodically updates this information. Subscribers can turn call holding on and off using the phone. Subscribers can be restricted from using this feature.
- o **Subscriber-controlled directory listing:** Individual subscribers can control whether they want to be listed in the directory using the phone or the Mailbox Manager.
- o **Transfer to attendant:** Callers with touchtone phones can press "0" to reach a live operator at any time. Callers using rotary phone can be transferred to the operator when no touchtones are entered.
- o **Voice detect:** This feature allows outside callers using rotary phones to access the voice mail system by speaking, instead of by pressing touchtones. Callers make choices or respond to prompts by saying "yes" or remaining silent for "no," rather than pressing touchtone keys on one-key dialing menus.
- o **Voice detect call holding:** Voice detect call holding enables callers without touchtone phones to hold by saying "yes" instead of pressing a touchtone key.

Audio Text

Many offices and organizations want to provide around-the-clock information to clients. The UM8000 audio text feature enables an organization to make information available to callers at all times. UM8000 can offer callers menu trees and messages that vary depending upon the phone number called or the time of day. Callers use touchtones to select an item or subject that they want to hear.

Multilingual services can be provided. The audio text recording can be of any length and there is no limit to the number of audio text boxes created within the system.

Fax Detect, Route, & Notify

If the UM8000 system hears a fax tone when it answers a call, it automatically transfers the call to the fax machine, eliminating the need for a separate fax phone number and dedicated outside line.

UM8000 can prompt fax callers to add a brief voice message to describe their fax and specify the recipient. The system notifies the receptionist that a fax has been received. The receptionist then redirects the notification to the recipient's inbox. Fax notification can be turned on or off using the system maintenance conversation.

SECTION 2 ADDITIONAL FEATURE PACKAGES

The following additional feature packages are available in this release.

AMIS/PlusNet®

This multi-site messaging package for UM8000 is ideal for companies that incur long distance toll charges while communicating with regional offices, vendors, or customers who have their own voice mail systems. Voice Mail Networking allows users to send, redirect, delete, skip, save, or reply to remote messages quickly from any touchtone phone.

Hospitality

The Hospitality Package has been designed specifically for use in hotels and resorts to provide guests with personal, accurate, and timely messages. Features include personal greetings, security codes, guest directory, welcome messages, wake-up calls, and auto-login when checking voice mail messages.

Property Management System

The Property Management System (PMS) integration is available to automate voice mail management. The two systems act as one and share critical information resulting in a transparent guest messaging system. All check-ins and check-outs are managed directly by the PMS, and front desk personnel can register guests without accessing the voice mail system. When new guests check in, their voice mailbox is automatically activated by the PMS. Upon check-out, any existing messages are saved for the guest, and the mailbox is automatically deleted from the system. The PMS integration offers many other features such as text message notification that vary depending upon the PMS version. With text message notification, guests are alerted when faxes or packages are waiting at the front desk. Guests know instantly when an important delivery arrives. With the PMS integration, hotels can offer additional guest services and expedite registration without increasing administrative costs or staff workload.

Text-to-Speech using Nuance® RealSpeak™

The UM8000 Text-to-Speech (TTS) package (requires UM8000 software **Version 11.2.0.83 or higher**) enables subscribers to have 24-hour, two-way access to Microsoft Exchange, Novell GroupWise, or Lotus Notes e-mail messages without a laptop or modem connection. Subscribers can manage e-mail messages using a phone. Subscribers can listen to any plain text e-mail message using TTS conversion, and record a reply that is sent as a voice mail message or an e-mail message with a WAV file attachment. Subscribers use touchtone keypads over a phone to reply, redirect, save, and delete e-mail messages, making subscribers more efficient and accessible when they are away from the office. These powerful mobility features enable subscribers to:

- o Access e-mail messages from any phone.
- o Access voice and fax mail messages in e-mail.
- o Manage messages using the phone interface.
- o Save an e-mail message as new or delete it using the phone.
- o Send e-mail to any fax machine.
- o Get information on attachments to e-mail.
- o Hear any text portion of an e-mail message on the phone.
- o Hear message length.
- o Hear sender's name, address, and subject of the message.
- o Hear text file and WAV file attachments on the phone.
- o Hear time and date the message was sent.
- o Send a voice reply to an e-mail message.

ActiveFax®

The ActiveFax feature offers voice processing and facsimile capabilities in one easy-to-use system, providing a powerful combination of voice mail, automated attendant, and audio messaging coupled with complete facsimile functions.

ActiveFax provides simple, direct facsimile transmission from outside callers to a fax mailbox. Using fax-store and forward capabilities, incoming faxes are sent directly to a fax mailbox. You can use a phone to deliver a fax to any fax machine or save it for future transmission.

Unified Messaging System

The Unified Messaging system enables Visual Messaging Applications on the UM8000 platform. The Visual Messaging suite of unified messaging and call management modules enhances the UM8000 messaging system by providing phone functionality to manage messages.

The Visual Messaging modules use an intuitive Microsoft Windows® interface to enable you to manage voice and e-mail messages on a computer. Instead of listening to calls and messages one-by-one using a phone, you can manage multiple calls or messages on-screen and work efficiently and effectively.

Once you have installed the Visual Messaging applications, you can add seats of the different Visual Messaging modules as your organization grows. Each module: ViewMail, ViewMail for Microsoft Messaging, ViewCall® Plus, ViewFax™, the message integrations for Novell® GroupWise®, and Lotus® Domino® — can be purchased separately or together to customize the UM8000 system.

ViewMail

ViewMail is a solution that simplifies the messaging process. ViewMail organizes messages on-screen, making them much easier to manage than using a phone. ViewMail displays a list of messages that displays who each message is from, the date and time it was sent, the message length, and a subject if one was included. When used with Automatic Number Identification (ANI) and Caller ID, or when entered manually through the UM8000 call-screening feature, the name and number of the message sender is included. You can sort messages and see details about them at a glance. You can play and review selected messages, send a message to another subscriber, send a copy of a message to another subscriber, and delete messages from your mailbox – all with a click of a mouse.

ViewMail includes an audio control center that enables you to play your audio messages using speakers attached to the PC. Record your responses using an attached microphone.

ViewMail makes many of the powerful features of UM8000 available on the desktop PC. It also provides additional capabilities that are possible only through the combination of the PC, the LAN, and a phone. ViewMail can be used with Windows 2000, XP™, and Vista (32-bit). Here's a quick review of some of these features:

- o Archiving messages
- o Call return on some phone systems
- o Copying or pasting messages
- o Future message delivery
- o Live Record
- o Message cancel
- o Message status
- o Multimedia playback and record
- o Password controlled access
- o Push button message control
- o Return receipt
- o Save as WAV files
- o Sorting messages
- o DVD-style playback controls
- o Visual and audio message notification
- o Volume control

ViewMail for Microsoft Messaging, ViewMail for GroupWise, and ViewMail for Lotus Notes®

UM8000 offers ViewMail for Microsoft Messaging (VMM), ViewMail for Lotus Notes (VML) and ViewMail for GroupWise (VMG) that provide the flexibility to send and receive different types of messages interchangeably from one universal mailbox. All messages—voice, fax, and e-mail—appear in the Microsoft Outlook, Lotus Notes, or GroupWise inbox. Prioritizing is easy. It only takes a quick glance to see what types of messages have appeared. Just like an e-mail message, you can select which voice message you want to listen to first. Reply, redirect, or archive your voice messages for later reference. In addition, all of the easy-to-use features of Outlook, Lotus Notes, and GroupWise, including drop down menus, toolbar buttons, context sensitive help, and tool tips, are still available for you to use.

With VMM, VML or VMG, you use intuitive VCR-style buttons for playing messages. You can use the mouse to click on the Rewind, Pause, or Fast Forward buttons to move quickly through messages. A position slider shows where you are in the message and lets you move immediately to any part of the message. Using the mouse you can redirect a message to any subscriber, including groups of subscribers. You can save voice messages as WAV files when you attach them to an e-mail message.

VMM supports Outlook 2003 and 2007. VML supports Lotus Notes versions 6.0, 6.5 and 7.0. VMG supports GroupWise 6.5 and 7.0. These applications can be used on Windows 2000 and XP™ platforms. VMM, VML and VMG give you some of the same features as the basic ViewMail application, including:

- o Archiving messages
- o Copying or pasting messages to other applications
- o Message status
- o Multimedia playback and record
- o Password controlled access
- o Push button message control
- o Return receipt
- o Rules-based message handling (with Microsoft Exchange Server, Lotus Domino and Novell GroupWise)
- o Save as WAV files
- o Sorting messages
- o VCR-style playback controls
- o Visual and audio message notification
- o Volume control
- o Sending messages to the Internet
- o Live Record (VMM and VMG only)

ViewCall® Plus

ViewCall Plus provides total control over all incoming, outgoing, external, and internal phone traffic by managing calls on a PC using a Windows graphical user interface (GUI). ViewCall Plus lets you manage live phone calls in the same way that Unified Messaging lets you control voice mail, and it gives you the ability to manage data about each caller with the applications, such as Microsoft Office.

With ViewCall Plus, you click a mouse to take calls, send calls to a voice mailbox, transfer calls to other extensions, ask callers to hold, or hear the caller's name. You can do all this from the desktop PC without picking up the phone, which means you can handle several callers at once without interrupting conversations.

Three completely integrated windows enable you control every aspect of your phone traffic. The **Telephone Control** window shows the flow of calls to and from your extension and allows you to interact with callers without interrupting conversations. The **Call Log** window records all call activity and lets you sort or print information in any order; and it lets you use the information to return calls or add contacts to your database by dragging with the mouse. The **Contact List** manages data about each caller, including multiple phone numbers, action items and notes, and lets you see on-screen information stored in your personal database before connecting with a caller.

ViewCall Plus can be configured to access and interact with databases, work with spreadsheets, direct calls according to a set of pre-established rules, handle predictive dialing functions, and more. For example, ViewCall Plus can make calls from within an application such as Microsoft Access[®] or Outlook. Here are just a few of the features available with ViewCall Plus:

- o Built-in Personal Information Manager (PIM)
- o Caller identification (when supported by the phone system)
- o Call log
- o Call screening
- o Call sorting
- o Call status
- o Conference calling (Enhanced Mode)
- o Drag-and-drop between windows (in Enhanced Mode)
- o Integrates with more than a dozen popular PIMs
- o Multiple call handling
- o Push-button call management
- o Request hold
- o Route call
- o Sort messages in any order and print
- o Three integrated windows

ViewFax

ViewFax provides control of fax communications within ViewMail and ViewMail for Microsoft Messaging, ViewMail for Novell GroupWise, and ViewMail for Lotus Notes. ViewFax displays faxes on-screen and lets you send them to any printer instead of a fax machine. When you receive a fax, an icon appears next to the message in ViewMail. Each fax is stored automatically until you want to see it.

To review a fax, simply click on the icon to open it, and then press the Play button to listen to any voice annotation sent with the fax. To actually view the document, just click on the ViewFax button. Each page of the fax is displayed separately, and you can use the Page Board to skip from one page to another.

With ViewFax Print-to-Fax capabilities, you can send faxes anywhere without leaving your desk. You simply load the Print-to-Fax driver on your PC. To fax a document, select the Print command from the application you are working in and select the Print-to-Fax driver. Print-to-Fax also integrates with many popular personal database applications, so you can deliver a fax to any contact in just a few seconds. Here is a quick summary of ViewFax Print-to-Fax features:

- o Broadcast fax
- o Custom covers
- o Default covers
- o Group faxing
- o Preview faxes before sending
- o Support for Personal Information Managers
- o Future fax delivery
- o Sent fax log

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Maintenance

SECTION 1 MAINTENANCE

The UM8000 system is designed to be easy to maintain. All system hardware requires minimal maintenance. Software maintenance, including backup and restore, is designed to be virtually foolproof.

- o **Web Administration Console:** By using the new HTML-based Web Administration Console, UM8000 can be managed from any Windows PC on the network. This new console is intuitively designed and is accessible using an IP connection.
- o **Disk full warning:** When the number of minutes of message storage left on the system is equal to or less than a value specified by the system manager, the system asks subscribers to delete unnecessary messages.

The disk full settings are configured on the System > Configuration > Recordings page in the Web Administration Console. Subscribers can also set a limit on the number of messages that can be left in their message boxes.

- o **General audio error notification:** Selected system errors are communicated to system managers using a message left verbally by the UM8000 system.

Messaging System Reports

UM8000 provides a great deal of information about incoming phone calls. The information, generated in reports, can be used to make decisions about the organization, such as staffing levels, productivity, and phone equipment needs. Reports can be viewed on the screen or printed to a printer connected to the messaging system PC client.

The reports can be displayed online or sent to a text file. The default file name for the report is default.txt. This file should be renamed when generating the report so that it has a meaningful name. Reports are not generated with comma-separated values.

There are six categories of on-line reports:

Report Category	Description
Usage Reports	<p>These reports give an indication of how much the voice messaging system is being used over time. These reports can be run for an individual guest, subscriber, extension number, or system ID. It is also possible to track usage of the entire UM8000 system.</p> <p>Usage Bar Graph Report shows the percentage of each hour that a person or box was using the voice mail system. The bar graph report for the entire system shows the percentage of each hour that the voice mail system ports were in use. This percentage equals the number of minutes the ports were busy, divided by the number of minutes they could have been busy. The number of minutes they could have been busy equals 60 minutes multiplied by the number of ports on the system.</p> <p>Usage Table Report. Run this report for an individual guest, subscriber, extension number ID, or system ID. The report totals the number of calls by system port and totals the number of minutes of call duration. A usage table for the entire system shows, for each hour of the day, the total number of calls answered by each system port and the total number of minutes of call duration. The report also includes grand totals for day, night, and entire 24-hour periods.</p> <p>Busy ports report: The busy ports report shows the total number of times all or selected ports were busy. It also shows the average percentage of time the ports were busy during a specific time period. It is possible to run the report for all ports on the system or for a selected group of ports.</p>

Directory Reports	<p>Directory reports show the structure of the system, its subscribers, system IDs, and message groups. It is possible to run the report for everyone enrolled in the system, for all extension IDs, or for message groups. Directory reports include a subscriber report, extension list, and group reports.</p> <p>Subscriber Report lists each subscriber and guest enrolled in the system. The report includes each personal ID, the number of new messages waiting, the total number of new and old messages, the date the person last called the voice mail system, the number of days the system saves the subscriber's old, and archived messages, and the subscriber's access code.</p> <p>Extension List Report shows every subscriber on the system, with his or her extension number ID and the system IDs for any transaction boxes and interview boxes the subscriber owns. This report does not include guests. For each subscriber, the report lists whether call transfer is currently on or off, the phone number that calls will be transferred to, the call transfer type, the number of times the extension rings, call transfer options, and whether call holding is on or off.</p> <p>Groups Reports provide information about message groups in the system. There are three different group reports:</p> <ul style="list-style-type: none"> ◆ List of Message Groups (lists groups), ◆ Group Membership (lists members of groups), and ◆ Groups Including Person (lists all the message groups of which a subscriber or guest is a member). <p>System Managers Report lists all subscribers who are system managers. Use this report to verify that the correct subscribers are assigned system manager status.</p>
Call Report Log	<p>The call log provides a record of every call UM8000 answers, dials, or transfers. The call log can be run for the entire system or an individual subscriber.</p>
Error log Report	<p>The error log lists system errors. The report lists each error code, the port on which the error occurred, and the date and time the error occurred. This report can be used to diagnose and solve system problems. The System Manager can look up the error code on line and follow the steps to correct the error.</p>
Network Reports	<p>Network reports show Messages, Subscribers, Groups, and Call Reports for each site in a multi-site network.</p>
Hospitality Reports	<p>These reports are for Hospitality installations: Hotel Guests, Pending Calls, Wake-up Call Log, and Wake-up Call Failures.</p>

Remote Access

UM8000 provides remote maintenance, support, and problem solving support. Technicians can access the UM8000 messaging system without an on-site visit.

Technical Support — Remote Maintenance

Remote maintenance allows the off-site computer to monitor or make changes.

For complete information on installing and using remote maintenance, please see the *UM8000 Installation Guide*.

System Management

System managers use a remote PC to access the UM8000 messaging system for routine maintenance functions. This requires Internet access and the appropriate credentials to access data.

Backup and Restore Data

The messaging system provides daily backups as well as manual backups. If selected, the messages are included in the backup. All backups are run while the messaging system is online, it is not necessary to shutdown the application.

Daily backups are run nightly at 02:00 hours (AM). The messaging system database is backed up to the local hard drive. The system manager can also manually backup UM8000 without shutting down the messaging system. This is beneficial for organizations that require constant voice messaging capabilities.

Restoring Backups

System managers can manually restore the messaging system data using the manual restore process. The messaging system software must be shut down, offline, before restoring backup data. For information about the process, refer to the *UM8000 Installation Guide*.

Touchtones

Touchtone sensitivity can be configured using the System > Switch > Touchtones page in the Web Administration Console. This enables system managers to set the touchtone sensitivity for prompts, messages, and recording messages. These settings specify the number of milliseconds (length) the three types of touchtone.

Specifications

SECTION 1 SPECIFICATIONS

UM8000 is an Inswitch messaging system for the SV8100 and SV8300 IP PBX platforms. It is a turnkey solution that is assembled and tested with all of the messaging system and operating system software installed before shipping.

SECTION 2 SOFTWARE SPECIFICATIONS

The following table lists the software specifications for the UM8000.

Feature Description	Specification	Notes
Voice Ports	2~16	
Fax Ports	Optional	Available per port. Port must be configured for fax. Maximum of 4 fax ports.
TTS Ports	Optional	Available per port, maximum 4 TTS ports.
UMS Sessions	Optional	Available in 1, 4, 8, 16, or 32 increments
System Languages	3 Included	Available in Per Additional Language
Hospitality/PMS	Optional	
AMIS/PlusNet	Optional	1 required per system
TTS Language	Optional	Required for each port and language. In a multi-site environment each networked system must be licensed for the same number of TTS languages.

SECTION 3 **HARDWARE SPECIFICATIONS**

The platform and voice channels are:

Platform name	Voice channels
NEC Univerge SV8100 New	(2~16)
NEC Univerge SV8300 New	(2~16)

SECTION 4 **SUPPORTED MIGRATIONS**

The migrations that are supported are:

Version
EliteMail LX 2.0.2.0
EliteMail DOS Q517
EliteMail OS/2 Q946
NeaxMail IM-16 LX

SECTION 5 **SUPPORTED LANGUAGES**

The following languages are supported:

Language	Country Code	TUI	GUI
Cantonese (Hong-Kong)	CT	YES*	NO
Catalan	CA	YES*	NO
Chinese (Mandarin)	MD	YES*	NO
Danish	DK	YES*	NO
Dutch (Netherlands)	NL	YES*	YES
English (Australian)	AU	YES*	NO
English (United Kingdom)	UK	YES	NO
English (United States)	US	YES	YES
French (Canadian)	FC	YES	NO
French (Parisian)	FR	YES*	YES
German	DE	YES*	YES
Hebrew	HE	YES*	NO
Italian	IT	YES*	YES

Language	Country Code	TUI	GUI
Japanese	JA	YES*	YES
New Zealand English	NZ	YES*	NO
Portuguese (Brazilian)	PT	YES*	NO
Portuguese (Iberian)	PI	YES*	NO
Russian	RU	YES*	NO
Spanish (Argentinean)	AR	YES*	NO
Spanish (Latin America)	LA	YES	NO
Spanish (Madrid)	ED	YES*	NO
Spanish (Mexican)	ES	YES*	YES
Swedish	SE	YES*	NO

-- NOTES --

Glossary of Terms / Standard Protocols and Applications

SECTION 1 GLOSSARY OF TERMS

This section provides a list of terms that are used within this document.

audiotext - a pre-recorded message heard by system users.

Automated Attendant - the function of Intelligent Voice Mail that allows UM8000 to answer and direct calls by playing greetings and responding to touchtones. Callers listen to prompts and direct themselves to the person, voice mailbox, or recorded information they need by pressing touchtones. The automated attendant functions are:

- o call handler
- o call holding
- o call screening
- o inter-digit timeouts
- o one-key connection from automated attendant subscriber list
- o opening greeting
- o operator assistance
- o outside caller message editing
- o primary or secondary answering
- o rules-based call routing
- o schedules

DTMF - Dual Tone Multi-Frequency, the technical name of the tones generated by a touchtone telephone.

event - all UM8000 system operations, including errors.

extension number - this number can represent a physical telephone and/or an electronic mailbox.

greeting - the call handlers to which all incoming calls are routed. The greeting gives the caller options and then routes the call appropriately.

groups - when sending a message to multiple recipients, the recipient list constitutes a group. The term applies both to distribution lists and when multiple messaging is employed.

PIM - Personal Information Manager, an address and telephone directory database.

prompt - a pre-recorded message or instruction heard by a caller when interacting with UM8000.

prompt set - a group of prompts that function together to provide information or instructions to callers. For example, "Dutch system prompt set" denotes all the prompts that are part of the system conversation allowing users to interact with UM8000 in Dutch.

subscriber - a person who accesses the UM8000 system using an ID number. In most cases, an employee will be assigned an extension number and ID number.

subscriber conversation - the prompts and/or transaction box heard when a caller is connected to a subscriber's extension or voice mailbox.

system administrator - an employee of the organization, usually a member of the IS department, who is responsible for administrating and maintaining UM8000.

system conversation - the prompts and/or transaction box heard when a caller is interacting with UM8000.

touchtone telephone - a telephone that dials by producing DTMF tones; some telephones have the option of tone dialing (through DTMF) or pulse dialing (mimicking rotary telephones).

touchtone(s) – the common name for the DTMF tones that can be produced by a touchtone telephone; the buttons on a touchtone telephone.

user - anyone accessing the UM8000 system; this includes both subscribers and callers.

SECTION 2 **STANDARD PROTOCOLS AND APPLICATIONS**

The following protocols are used with the UM8000.

ADSI - A set of open interfaces that abstracts the capabilities of directory services from different network providers to present a single view for accessing and managing network resources. Administrators and developers can use ADSI services to enumerate and manage resources in a directory service, no matter which network environment contains the resource.

ADSI enables single log on for client desktop to multiple directories. This makes it possible to write applications to an API but work with multiple directories, makes it easier for subscribers to find information with rich querying of directories, and makes it easier to manage multiple directories.

COM - Component Object Model. COM is the cornerstone of Microsoft's ActiveX platform. COM is a language-independent component architecture (not a programming language). It is meant to be a general purpose, object-oriented means to encapsulate commonly used functions and services. The COM architecture provides a platform independent and distributed platform for multi-threaded applications.

DCOM - Distributed Component Object Model. Microsoft's distributed version of its COM, a language-independent component architecture (not a programming language) meant to be a general purpose, object-oriented means to encapsulate commonly used functions and services.

HTTP - HyperText Transfer Protocol. HTTP is the protocol used by the Web server and the client browser for moving documents around the Internet.

IMAP - Internet Messaging Access Protocol is an e-mail protocol for Internet mail servers. IMAP allows users to create and manage mail folders over the WAN, as well as to scan message headers and then download only selected messages.

LDAP - The Lightweight Directory Access Protocol (LDAP) is a protocol for clients to query and manage information in a directory service over a TCP connection. The LDAP protocol was designed by the University of Michigan to provide access to the X.500 Directory while not incurring the resource requirements of the Directory Access Protocol (DAP). This makes it very suitable for use on the Internet.

Active Directory is a Directory Service integrated with the Microsoft Windows NT Server operating system that offers the hierarchical view, extensibility, scalability, and distributed security required by all customers. Microsoft has provided support for LDAP in Active Directory and enabled it to be integrated with the Internet. With this LDAP support, customers can deploy Active Directory in a corporate computing environment and interoperate with LDAP clients from multiple vendors.

By supporting the LDAP protocol in Active Directory, Microsoft provides the infrastructure within its operating systems to provide user-empowering interoperability within a heterogeneous computing environment.

MAPI - UNIVERGE UM8500 uses extended MAPI (sometimes called MAPI 2.0) to communicate with the message database application.

MAPI is a set of API functions, and an OLE interface that lets messaging clients, such as Microsoft Outlook, interact with various message service providers, such as Microsoft Exchange Server and various computer telephony servers running under Windows NT server.

MIME - Multipurpose Internet Mail Extension. This protocol is designed for transmitting mixed-media files across TCP/IP networks. The MIME protocol, which is actually an extension of SMTP, covers binary, audio, and video data.

MSDE – Microsoft SQL Server 2000 Desktop Edition. A data engine built on Microsoft SQL Server technology used as a relational database.

ODBC - Open Database Connectivity is a standard that allows databases created by various relational and non-relational database programs—such as dBASE, Microsoft Access, Microsoft FoxPro, and Oracle—to be accessed by a common interface.

OLE - Object Linking and Embedding. A software technology that allows Windows programs to exchange information and work together. For instance, a word processing document with OLE capabilities could contain a link to a chart created in a spreadsheet.

POP3 - Post Office Protocol. An e-mail server protocol used by the Internet. You use POP3 to get your mail and download it to your PC using SMTP.

RPC - Remote Procedure Call. A protocol governing the method with which an application activates processes on other nodes and retrieves the results.

SMTP - Simple Mail Transfer Protocol. An application-level protocol which runs over TCP/IP, supporting text-oriented e-mail between devices supporting Message Handling Service (MHS). MIME is an SMTP extension supporting compound mail, which is integrated mail, including perhaps e-mail, image, voice, and video mail.

SNMP - Simple Network Management Protocol. SNMP is the most common method by which network management applications can query a management agent using a supported MIB (Management Information Base).

SQL - Structured Query Language. The industry standard for access to relational databases.

Streaming - Transmission over a data network. The client side buffers a few seconds of audio data before sending it to the speakers, compensating momentary delays in packet delivery. Streaming audio also lessens the impact on an organization's LAN.

TAPI - UNIVERGE UM8500 uses Microsoft's Telephony API as its primary telephony signaling interface. With TAPI, Microsoft has defined function calls for features common to most telephone systems.

TAPI 3.0 - TAPI 3.0 is an evolutionary API providing convergence of both traditional PSTN telephony and IP Telephony. IP Telephony is an emerging set of technologies which enables voice, data, and video collaboration over existing LANs, WANs, and the Internet.

TCP/IP - Transmission Control Protocol/Internet Protocol is the Internet's networking protocol that provides communication across interconnected networks, between computers with diverse hardware architectures and various operating systems.

VPIM - Voice Profile for Internet Messaging, a proposed Internet messaging protocol to allow disparate voice messaging systems to automatically exchange voice mail over the Internet.

-- NOTES --

UM8000

Unified Messaging System - Version 11.0

General Description Manual