



AltiWare™ OE

Release 3.5

System Administration Manual

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# Preface

## *About This Guide*

This guide describes how to install, configure, and administer the AltiServ system.

## *Target Audience*

This guide is designed for dealers, administrators and technicians who are responsible for installation, configuration, and administration of an AltiServ system.

## *Using This Guide*

This guide contains the following chapters and appendixes:

- Chapter 1, “Overview” describes the AltiServ functions, features, and benefits.
- Chapter 2, “System Configuration” how to set up the AltiServ system.
- Chapter 3, “Board Configuration” describes how to configure boards and board attributes.
- Chapter 4, “Trunk Configuration” describes how to configure trunk attributes, including channels.
- Chapter 5, “Extension Configuration” describes how to set up and configure extensions.
- Chapter 6, “Auto Attendant Configuration” describes how to set up automated attendants.
- Chapter 7, “ACD and Workgroup Configuration” describes how to set up and configure Automatic Call Distribution and Workgroups.

## Preface

- Chapter 8, “System Data and Report Management” describes how to back up and restore data files from the system and describes the system management reports that contain information on summary, traffic, system log and call detail summary.
- Chapter 9, “Data and Internet Integration” describes how to setup e-mail, AltiReach, Exchange integration, TAPI and other data/Internet integration instructions.
- Appendix A, “User Reference Guide” contains user instructions on how to use the features of the AltiServ system.
- Appendix B, “Feature Codes” contains a list of all user feature codes on the AltiServ system.
- Appendix C, “Call Accounting Tables” contains information on AltiAdmin’s CDR account codes and SMDR reporting format.
- Appendix D, “Worksheets and Business Forms” contains forms and worksheets referenced in various chapters of this manual.
- Appendix E, “Auto Attendant Planning Worksheet” contains a sample and blank worksheet for planning the Auto Attendant configuration.
- Appendix F, “Technical Support” describes the procedures for technical support, customer service, repair and replacement policies of AltiGen Communications.

This guide also contains a glossary, an index and a readers’ comment form.

## ***Related Publications***

Related publications include:

- AltiWare OE Getting Started Manual
- AltiServ User Guide
- AltiConsole User Guide
- AltiView User Guide

# Chapter 1 Overview

## *AltiServ System*

AltiServ is a multi-application computer telephony platform that combines AltiGen's Quantum and Triton telephony boards with AltiWare software in a standard personal computer platform. AltiServ uses the Windows NT Server operating system to provide advanced features and functionality. These are:

- PBX
- Voice Mail
- Auto Attendant
- E-mail Server
- Automatic Call Distribution
- Internet Integration
- TAPI (Telephony API) 2.1 Service Provider
- Voice over IP
- Digital T1 Integration
- Digital PRI Integration

The AltiServ computer telephony platform is built by installing one or more AltiGen Quantum boards into **full-size** ISA slots of a Windows NT Server and then installing the associated AltiWare software. AltiGen Triton boards may also be added and must be installed into PCI slots. An overview of all the AltiWare features are listed below.

**Note:** **New features that are introduced with the AltiWare OE (Open Edition) Release 3.5 are indicated with an asterisk (\*) next to the feature description.**

### **Key AltiServ Characteristics**

- **Quantum Board** - a telephony card that uses DSP technology to provide trunks, lines, and voice processing resources.  
Quantum is an ISA compatible telephony card, which is designed around open software standards to facilitate implementation of third-

\* new or improved feature

party-provided applications in addition to the Altiserv-provided applications.

The Quantum telephony board has 12 analog ports. An average configuration of two boards per system will accommodate 16-20 telephone sets (based on the typical configurations of trunks and extensions).

Additional Quantum boards can be added to meet larger system requirements. The maximum number of Quantum boards in one system is up to 16 boards and depends on the number of ISA slots available and the selected computer platform performance characteristics.

**IMPORTANT!**

Altiserv OE Release 3.0 or higher does not support **Quantum Rev. C/ C+** boards. Upgrade Quantum boards to **Rev. D** prior to installing OE 3.0 software or higher.

• **Triton Boards:**

— **Triton VoIP Board** - a PCI bus telephony board that provides voice processing resources. DSP engines reside on the VoIP board to perform voice processing functions needed for H.323 devices. The **Triton VoIP board** supports 4 IP trunk ports.

- 5V PCI slot is required for each Triton board.
- Additional VoIP boards can be added to meet larger system requirements. The maximum number of VoIP boards in one system is up to six (6) boards (24 IP ports).
- The VoIP board can also be used individually as a third-party developer application platform.

— **\*Triton T1/PRI Board** - a PCI bus telephony board that supports either T1 or PRI digital trunks through software configuration. The **Triton T1/PRI board** supports 24 voice processing channels.

- 5V PCI slot is required for each Triton board.
- Additional T1/PRI boards can be added to meet larger system requirements. The maximum number of T1/PRI boards in one system is up to four (4) T1/PRI lines (96 digital trunks).

- **On-Board Telephony Power Supply** - with the Quantum D board (Rev D or later) or Triton board, the telephony power supply is built onto the board itself. There is no need to install a separate power supply.

\* new or improved feature

- **AltiWare System Software** - the AltiServ system telephony application software that provides easy to use graphical user interface. It allows you to configure, administer, and maintain the AltiServ system and can be used as a platform for third-party enhanced application development. AltiWare software components such as Switching Service, Messaging Agent, SMTP Server, POP3 Server, AltiBackup and Exchange integration are now NT services that are automatically launched when the AltiServ system starts. You do not have to login and start these applications manually. This provides better security and reliability for these services.
- **NT Services** - AltiWare components such as the switching, messaging agent, SMTP/POP3 server, AltiBackup and Exchange integration are NT services that are automatically launched when AltiWare OE is installed and the AltiServ system is restarted. See the “AltiWare as NT Service” section in the *Getting Started Manual* for more information on this feature.
- **TAPI Support** - AltiServ is an open platform that allows third party telephony developers to develop applications for the AltiServ system. The system supports Telephony Applications Programming Interface (TAPI) 2.1.  
  
AltiServ supports complete TAPI service provider that accepts first party call control and the third party client-server call control.  
  
See “TAPI” on page 9-28 for more information on using third party applications.
- **AltiSpan™** - (or Extended Caller ID) inexpensive caller ID display phones can be used to deliver functionality previously requiring the use of proprietary telephones.
- **Unique DSP design** - provides full availability, scalability and true linear resource expansion.

## PBX Features

The PBX features include telephone switching for making calls, answering calls, and transferring calls. For more sophisticated business applications, AltiWare provides advanced features such as workgroup call routing, multiple trunk access codes, scheduled call routing, and flexible call

\* new or improved feature

restrictions. For effective system management, AltiWare provides information about system traffic and statistics to help the system administrator understand the dynamics of business communications and adjust resources such as the number of outside lines, accordingly.

In addition to station-to-station dialing, the PBX features include:

- **Account Codes** - allows the user to assign an account code to each call to track telephone usage in order to bill back to clients or create a record of calls specific to a project and to budget and forecast expenses.
- **Business Hours** - allows for setting morning and afternoon business hours for each day of the week.
- **Busy or Ring-No-Answer Call Handling (enhanced)** - sends calls to voice mail, another extension, or **auto attendant** if the called extension or workgroup is busy or does not answer. See Figure 5-10, "Answering Page - Physical Extension," on page 5-20 for more information on these features.
- **Call Forwarding and Remote Call Forwarding** - sends all calls to another extension or to an external telephone number. This allows users to redirect their calls to another location such as home or a branch office. Call Forwarding can be set up either at the source extension or at the destination extension on the system (Remote Call Forwarding).
- **Caller ID** - fully supports the Bellcore Caller ID standard and displays alpha and numeric caller ID on a standard analog telephone with a display. Up to 64 characters are transmitted and displayed.  
**Note:** If your local exchange carrier provides enhanced caller ID, such as caller name, this information will also be displayed.
- **Feature Tips** - plays helpful tips and reminders for optimal use of AltiServ. See "Feature Tips" on page A-33 for more information.
- **Personal Call Park and Pick Up** - users can park calls at one station to be picked up at another station. Up to 50 calls may be parked at one station simultaneously.
- **System Call Park and Pick Up** - allows you to park and pick up a call at a public "location." The system allows you to park up to 100 calls at any given time. See "Answering Calls" on page A-1 for more information on this feature.
- **Individual and System Call Pick Up** - allows users to answer a ringing telephone from another station.

\* new or improved feature

- **Call Waiting** - allows users to put an existing call on soft hold and take a second call upon hearing a Call Waiting tone. The user can then alternate between the two calls.
- **Multiple Call Waiting with Personalized Greetings** - a personal queue that allows users to handle multiple incoming calls by letting callers wait in queue until the user answers the call. This allows users to transfer or park calls before answering the next call in queue. Users may also record and use personalized **Initial** and **Subsequent** greetings to be played for callers in queue. See “Multiple Call Waiting” on page A-5 for more information on this feature.
- **Centrex Transfer** - allows user to transfer a call to an external telephone number. Once the transfer is complete, the trunk lines are released.
- **Conference Calling** - the system supports conference calls with up to six (6) parties. You can speak privately to each person before adding the person to the conference.
- **Dial Last Caller** - allows user to dial the last caller. See “Making Calls” on page A-13 for more information on this feature.
- **Dial Tone Mute Mode** - allows third party application users to leave handset off-hook without having to hear the dial tone. See “Other Features” on page A-20 for more information on this feature.
- **Direct Inward Dial (DID)** - allows an incoming trunk call to directly access an extension without attendant intervention.  
**Note:** If your local exchange carrier provides DID service, DID calls will automatically be steered to the appropriate destination.
- **Distinctive Call Waiting Tone** - allows three different call waiting tone cadences to distinguish between internal, external, and operator calls. See “Distinctive Call Waiting Tone” on page A-5 for more information on this feature.
- **Distinctive Ringing** - allows three different ringing cadences to distinguish between internal, external, and operator calls.
- **Do Not Disturb** - blocks all calls coming into a specific extension and sends them to preprogrammed destinations such as voice mail or the operator.
- **FSK-based Message Waiting** - allows message waiting that is based on FSK (Frequency Shift Keying), a modulation technique for data transmission.

\* new or improved feature

**Note:** Tone or voltage-based message waiting options can also be selected. Phones with FSK-based message waiting indicator are highly recommended.

- **Hands Free Intercom Mode** - by pressing **#81** on their speaker phone, users can receive calls through the intercom without having to pickup the handset to answer. See “Hands Free Mode” on page A-16 for more information on this feature.
- **Least Cost Routing (LCR)** - an add-on module available from Call Manage, Inc., one of AltiGen’s authorized AltiPartners, LCR selects the least cost long distance or international carrier for each outgoing call. See Least Cost Routing on page 2-3 for more information.
- **Music or Message on Hold** - when the system is connected to an external audio source, this allows callers to hear music or pre-recorded messages while waiting on hold.
- **One Number Access** - is a feature that eliminates “telephone tag” by forwarding important callers to predetermined numbers, according to a pre-designated schedule. Setup is available through the **One Number Access** page of **Extension Configuration** and/or web-based AltiReach management.
- **Operator Off-line** - when this feature is enabled, all calls are directed to the Auto Attendant. When the caller dials 0 and the operator is not available, the call is routed to the operator mailbox.
- **Outside Call Blocking** - when this feature is enabled, access to outside lines is temporarily disallowed.
- **Overhead Paging** - allows the use of voice paging over an internal public address system.
- **\*Overhead Paging by Trunk** - allows the use of voice paging or broadcasting through a trunk without checking call progress.
- **Station Log In/Log Out** - enables system users to move an extension number from one station to another, or deactivate an extension on a long-term basis.
- **Power Failure Transfer** - upon loss of power, this feature allows the first trunk and first extension on each Quantum board to be automatically connected. Ensures emergency outside line access in case of power failure.

\* new or improved feature

- **Schedule-Based Call Routing** - allows administrators to determine call routing paths by use of Allow and Deny tables (based on cost and usage), on a specific predetermined schedule.
- **System and Station Speed Dial** - allows programming of frequently used telephone numbers for speed dialing. Up to 60 system speed numbers can be programmed. Up to 20 station speed numbers can be programmed for each extension. For easy programming, AltiWare uses friendly voice prompts to guide extension users to program their station speed dial numbers.
- **System Callback from Auto Attendant** - allows the user to instruct AltiServ to call the user at a remote location after the user logs in with extension and password. This is useful for traveling users who don't want to accrue expensive toll charges while traveling, especially from international locations where there is no access to toll-free numbers. See "Auto Attendants Setup" on page 6-1 for more information.
- **Toll Restrictions** - restricts users from dialing specific long distance area codes and phone numbers. Reduces the risk of toll fraud. Up to 20 digits are allowed to specify area codes and/or phone numbers that are restricted system-wide; up to 10 digits are allowed to specify area codes and/or phone numbers that are restricted on an extension by extension basis.
- **Transfer to AltiMail Voice Mail System** - allows anyone in the office to send an outside user into AltiMail by pressing **FLASH # 40** while connected to the user.
- **Transfer to Auto Attendant** - allows a user to transfer a call to an Auto Attendant by pressing **FLASH #15** and then the two-digit Auto Attendant number.
- **Trunk Interface:**
  - **Analog** - loop start, ground start, and wink start (DID)
  - **Digital** - E & M signaling, loop start and ground start
- **Virtual Extensions** - an extension that is not associated with a physical port, but allows access to AltiMail features and telephone sharing. An almost unlimited number of (up to 1,000) virtual extensions can be configured and used on a single system. Users of virtual extensions have to log in from a physical extension before accessing the system telephone features assigned to their virtual extension. Access to AltiMail features, however, is available through log in both internally and remotely.

\* new or improved feature

## Automatic Call Distribution Features

Customer Call Distribution features include:

- **Call Queuing** - places caller in a queue to wait until an ACD workgroup member becomes available.
- **Configurable Call Wrap-up Time** - allows a workgroup member some time in between calls to wrap-up on notes, prepare for the next call, or logout of the workgroup. This wrap-up time is configurable on a per member basis. See Figure 7-5, "Workgroup Page for Workgroup Member Extensions," on page 7-8 for more information.
- **Multiple Queue Announcements** - allows each workgroup to have its own set of unique audio announcements. Up to five announcements can be configured for each workgroup. The intervals between announcements can also be configured. See "Configuring Workgroups" on page 7-1 for more information on this feature.
- **Multiple Workgroup Membership**- allows each extension to belong to multiple workgroups. The system can be configured with a maximum of 32 workgroups and 64 members per workgroup. See "Workgroup Features" on page A-19 for more information on this feature.
- **Workgroup Call Pickup** - allows pickup of calls to a specific workgroup. See "Workgroup Features" on page A-19 for more information on this feature.
- **Workgroup Call Routing** - for special call handling applications, incoming calls can be routed to a workgroup. For automatic distribution, calls can be distributed to the first available workgroup member, or among workgroup members in a round robin fashion. When all the members in a workgroup are busy, calls can be overflowed to another workgroup or extension, directed to the workgroup voice mail or placed in the call queue for the next available member. When the first called member fails to answer the call within the number of rings configured, the system can direct the call to the next available workgroup member.
- **Workgroup Member (Agent) Login/Logout** - allows workgroup members to log in and out of a workgroup so that incoming calls bypass the workgroup member (agent) who has logged out and the call is automatically routed to other active workgroup members or ACD

\* new or improved feature

agents. This feature is available only to workgroup members and is disabled through workgroup configuration. Logout does not block direct calls to the workgroup member's extension. See "Workgroup Features" on page A-19 for more information on this feature.

## Automated Attendant Features

The Auto Attendant features provide quick and courteous processing of all incoming calls. An Auto Attendant can be configured to serve as a primary attendant or as a backup to a receptionist.

Auto Attendant features include:

- **Dial by Name** - allows a caller that does not know your extension number to spell your name using the telephone key pad. The system will search the Directory and make a match on the name to connect the caller to the intended party's extension.
- **Direct Station Transfer** - allows the Auto Attendant to handle all incoming calls in lieu of being answered by an operator. Callers can dial an extension number to reach a specific station or use the name directory to find an extension number.
- **Nine-level Programmable Menus** - allows multiple levels of recorded menu options for specific routing of calls.
- **Multiple Attendant Support** - allows up to sixteen (16) programmable Auto Attendants.
- **Name Directory Service** - allows callers to hear a list of employees and their extension numbers.
- **Programmable Time-Out Handling** - allows the administrator to select the action the system should take if there is no digit detected by the caller within specified seconds.
- **Schedule-Based Call Processing** - routes calls differently for different times of the day.

## AltiMail Voice Messaging Features

The AltiMail Voice Messaging System is a sophisticated message management system that provides the calling and the called parties with enhanced communication features. It allows greater accessibility, faster reply time between parties, and reduces the frustration of telephone tag.

Voice Messaging features include:

\* new or improved feature

- **AltMail Access from Voice Mail Greeting** - users can log into the AltMail Voice Messaging System by pressing \* during the voice mail greeting of any extension. See “Transfer to AltMail Feature” on page A-25 for more information.
- **AltMail Quick Features** - allows direct access to a specific AltMail menu without having to login to AltMail.
- **Zoomerang** - allows users to listen to messages in AltMail, prompt the system to automatically call the party who left the message, and then return to AltMail to continue checking messages, all in a single call into AltMail. If the caller ID information is not captured, the user may enter the “call back” number manually.
- **Call Forwarding from Voice Mail** - users can setup Call Forwarding from within AltMail. This allows users to setup Call Forwarding away from the office and without having to access AltReach. See “Call Forwarding” on page A-32 for more information on this feature.
- **Future Delivery** - allows users to record a message to be delivered at a specific time and date in the future, up to one year in advance.
- **Information Only Mailbox** - a mailbox can be configured to announce customized pre-recorded information when accessed. This mailbox does not allow callers to leave a message, but only to listen to the message announcement (personal greeting) from the mailbox. To repeat the message, callers are instructed to press the # key. See “Extension Configuration Screen - General Page” on page 5-2 for more information on this feature.
- **Making a Call from AltMail** - allows users to make a call from within AltMail by pressing # at the Main Menu and entering the external phone number. This is especially useful while traveling where users can respond to all messages and make *other* calls not associated with a message, all with *one* call into AltMail. Since businesses usually receive better rates and with the use of Least Cost Routing, this can result in significant savings. The use of this privilege is configurable on a per-user basis. See “Dynamic Messaging” on page A-34 for more information on this feature.
- **Message Management** - receives, sends, forwards, deletes, and replies to messages.

\* new or improved feature

- **Message Notification** - designed to alert you of new voice and/or e-mail messages in your mail box. (At this time, notification of e-mail messages can only be configured by the system administrator.) AltiMail will notify you by calling an extension, phone or pager number. A notification schedule can be set for business hours, after business hours, at any time or at a specified time. For voice messages, you have an option of being notified of all messages or only urgent messages. You may enter up to 80 digits for the destination (notification) phone number. Operator-assisted paging is also supported.
- **Personal Greeting** - allows users to record greetings in their own voice to be played when callers reach their voice mail.
- **Priority Delivery** - allows users to determine the priority of message delivery such as normal or urgent.
- **Private Messaging** - allows users to leave a private message in their voice mail for the expected caller.
- **Reminder Calls** - are used to remind yourself of important meetings, things to do or people to call.
- **Remote Access** - allows users to access AltiMail from any telephone by dialing into the main system number and pressing # to login.

## Internet Integration Features

Internet Integration features include:

- **Mail Forwarding** - allows you to forward all mail (e-mail and voice mail) to an SMTP-based mail server. The destination server address should be the address of the SMTP server to which all mails should be forwarded. This address can be an IP address such as *100.200.101.201*, a domain name such as *altigen.com*, a fully qualified domain name such as *symphony.altigen.com* or a machine name such as *symphony*. See “Managing Messages” on page 2-20 for more information on this feature.
- **Exchange Integration** - provides unified messaging between the AltiServ and a Microsoft Exchange server on the LAN. The state of both servers will be synchronized. This feature allows for dynamic synchronization of mail between the two servers so that deleted messages from one server get automatically deleted in the other server. Similarly, a new message sent to one server is transmitted to the other server. This way, the message can be accessed or deleted from either

\* new or improved feature

server. For example, when a voice mail is deleted from AltiServ, it is automatically deleted from the Exchange server too. The address of the Exchange server must be the name of the machine or the fully qualified domain name. See the “Integrating with Exchange” section (Initial Configuration chapter) of the *Getting Started Manual* for more information on this feature.

- **Mixed-Media Messaging** - allows users to combine multiple forms of communication (such as voice mail, e-mail, data file, etc.) into a single e-mail message. The user can record a voice message using a telephone handset or microphone on a multi-media PC and attach it to an AltiMail for delivery to an internal user (LAN) or an external user (internet) who can listen to it from the PC. The recipients of the AltiServ system also have the option of listening to annotated messages from the handset.
- **AltiReach™** - a Web-based management tool that provides a way for users to visually manage their call handling options such as One-Number-Access, CallView, Message Notification, Speed Dial Numbers and other personal phone settings using a standard Web browser. See “Setting Up AltiReach Call Management” on page 9-15 and “AltiReach” on page A-40 for more information on these features.
- **CallView™** - a Web-based Java application that allows for call control using a standard Web browser to manage multiple incoming calls and view information including Caller ID, calls in queue and extension status.
- **Remote Download of Messages via Internet** - allows users who are traveling and/or working at home to download all new voice and e-mail messages in their AltiMail Post Office Box via a local internet access line.
- **Support of Internet E-mail Standards** - allows the user to send and retrieve e-mail using any SMTP/POP3 e-mail client.
- **Built-in E-mail Server** - a complete SMTP/POP3 e-mail server is built into the AltiServ system so that all you need is an SMTP/POP3 e-mail client to send and retrieve Internet e-mail.

## System Administration Features

System Administration features include:

- **Access Restriction** - allows administrators control over system user access to features and trunks.

\* new or improved feature

- **Apply To Feature** - applies changes (only the field that was changed) to multiple extensions, trunks or channels instead of having to change them one at a time.
- **Automatic System Configuration** - this advanced feature automatically configures the system. Extension numbers are automatically assigned to physical ports. The system announces the extension number when the user attempts to use the phone for the first time.
- **Call Detail Summary/SMDR** - System Message Detail Recording. The system records the date, time, and duration of every call made in the system. It also records the extension number of the caller and the number that the caller dialed. This allows the company to monitor and manage the usage of the AltiServ system. This information can be used with third party software to prepare detailed call accounting reports.
- **Call Accounting Simple Rate Table** - allows you to specify a rate table for local, long distance, and international calls. Based on this rate table, the system calculates the cost of each call and provides you with the SMDR report. See “System Configuration Screen - Call Accounting Page” on page 2-19 for more information on this feature.

**Note:** **SMDR Disclaimer:**

Although AltiServ provides call detail data, AltiGen Communications, Inc. cannot be responsible for the accuracy of the call detail data and/or third party reports.

- **\*Collecting Caller ID/DID Digits for T1** - allows you to configure the format and sequence of caller ID and DID digits using DTMF for a T1 connection. See “Triton T1/PRI Trunk Configuration” on page 4-10 for more information on this feature.
- **AltiAdmin Remote Administration** - a version of the AltiWare Administrator GUI application that can be installed on a Windows NT 4.0 client computer with Service Pack 4 (or higher) installed and used on the LAN to remotely administer one or more AltiServ systems. If there is no firewall on the LAN where AltiServ resides, AltiAdmin can be installed and used to manage AltiServ over the Internet from a remote site as well. This also allows the AltiWare Administrator on the AltiServ to be closed without affecting the telephony functions which continue to run in the background on the server. Refer to the *Getting Started Manual* for more information.

\* new or improved feature

- **Split Area Code Support** - allows you to identify area codes and prefixes that are exceptions to the standards of how area codes and long distance prefixes are normally used. For example, this configuration allows the system to treat calls to certain areas as local calls. See “Area Code Configuration” on page 2-25 for more information.

## Voice over IP Features

- **Integrated VoIP Gateway** - because the VoIP gateway is built-in to the system, translation of PSTN calls to IP calls and IP to PSTN calls are smoother and more successful. Also, the dialing sequence is smoother for end users. There is a significant time and cost savings since cable configuration and the purchase of additional analog ports is not necessary.
- **AltiServ-to-AltiServ Networking Capability** - multiple AltiServ systems at the same or remote locations can be linked through an IP network. Also, this feature provides toll savings on long distance calls by allowing users to dial a remote AltiServ system via an IP trunk and then the destination phone number through PSTN. See ‘VoIP Hop Off Call Support’ feature on page 1-15.
- **AltiServ Feature Support** - many of the AltiServ features are also available when using IP trunks. See “Existing AltiServ Feature Support Over IP Sessions” on page 1-16 for more details.
- **Integrated Administration** - calls through both PSTN and IP networks can be managed using a single point of administration
- **H.323 Standard Support** - AltiWare IP is based on the H.323 protocol which is an emerging ITU standard for multimedia communications over IP.
- **G.711 Codec** - toll quality (64K) digital voice encoding which guarantees interoperability for better voice quality.
- **\*G.723.1 Codec** - a dual rate audio encoding standard which provides near toll quality performance under clean channel conditions. VAD (Voice Activity Detection) capability is also included to suppress silence packets.
- **\*Increased IP Port Support** - AltiWare IP port density is increased to 24 ports. The system supports up to six (6) Triton IP boards, with each board supporting four (4) IP ports.

\* new or improved feature

- **\*VoIP Hop Off Call Support** - allows an extension to access a T1 or CO trunk on the remote system and ‘hop off’ to dial an outside telephone number. This ‘hop off’ feature can be enabled or disabled on the remote system. Outcall restrictions for hop off calls are configurable. See ‘Hop Off Dialing’ on page A-8.
- **Echo Suppression** - due to bandwidth limitations and device loading, long delays may occur during packet delivery process which worsens the echo effect of recorded and live voice speech. Echo suppression is provided to maintain reasonable voice quality.
- **Ring-Back Tone Generation** - ring back tones can be generated to other analog trunk or extension lines on behalf of the IP trunk.
- **DTMF Remote Carriage** - DTMF tones and/or digits are detected and sent out-of-band, over a reliable TCP/IP channel to the remote AltiServ, to guarantee the delivery.
- **\*Silence Detection and Suppression** - A silence detection feature enables the following:
  - Silence Suppression - when silence suppression is enabled and silence is detected, AltiWare IP stops sending packets to the other side. The other side does not receive any packets and plays silence.
  - AltiWare IP disconnects the voice mail session when a silence period exceeds 70 seconds during voice mail recording over VoIP.
- **Jitter Removals** - due to various delays in the IP network, audio packet streams may be delivered late or out of order. AltiWare IP is able to buffer incoming packets and re-sequence them by maintaining a queue. This queue is adjustable to accommodate different network environment characteristics.
- **Dialing Prefix Filter** - users may select a PSTN or IP trunk when making outgoing calls by dialing a configurable trunk access code.
- **\*Board ID Support** - The board ID of the Triton IP board is displayed in the AltiAdmin board screen. This can be used to relate a Triton VoIP board to a hardware board.
- **AltiAdmin Remote Administration** - remote AltiServ locations running AltiWare IP can be managed using AltiAdmin.

\* new or improved feature

## **Existing AltiServ Feature Support Over IP Sessions**

The following trunk-related AltiServ features are supported during IP trunk call sessions. Refer to “AltiServ Features Support Over IP Trunk Calls” on page A-9 for more details on how these features work over IP trunks.

- Incoming and Outgoing Trunk Calls
- Call Transfer To and From IP Trunk (Blind & Supervised)
- One Number Access
- Message Notification
- Reminder Calls
- Multi-Location Conferencing
- Call Park
- Call Waiting
- Automatic Call Distribution
- Auto Attendant
- System CallBack
- Calling Out from Voice Mail
- Zoomerang
- Dial Last Caller
- Speed Dialing
- Call Accounting
- Caller ID
- Voice Mail
- Mixed Media Messaging
- MS Exchange Integration
- AltiConsole Client Support
- AltiReach Support
- AltiView

\* new or improved feature

## AltiServ Platforms

AltiServ platforms can be built using a standard personal computer or server hardware with sufficient number of full-size ISA and PCI expansion slots. In addition, the platform must be equipped with sufficient processing power, memory, hard drive storage capacity, and external power (to support Quantum boards) and telephony ringing voltage for the total number of cards and extensions ports installed. **This AltiServ platform must be equipped with Windows NT 4.0 (or higher) operating system with Service Pack 4 (or higher) installed.**

These minimum requirements for different system port sizes are explained in the *Getting Started Manual*.

## Optional Add-On Software

- **AltiConsole** - a personal, computer-based attendant console connected to the AltiServ over a network; emulates a standard, hardware-based attendant console through software; has the flexibility of adding new features through software without changing the hardware.
- **AltiView** - a Windows-based desktop call control and screen pop application that interacts with AltiServ through AltiLink and provides easy-to-use call control, monitoring and logging capability.

\* new or improved feature

AltiServ System

\* new or improved feature

**1-18 AltiWare OE System Administration Manual**

# Chapter 2 System Configuration

To access System Configuration, select the **Management** menu and then select **System Configuration** from the drop-down list, or select **System Configuration** icon from the Quick Access Toolbar.

Along the top of the System Configuration screen are extended tabs. Refer to Figure 2-1. Each tab represents pages of information on specific areas of System Configuration. Changes made to the System Configuration affect the whole system. The tabs representing each page of the System Configuration screen are listed below:

- General
- Number Plan
- Business Hours
- System Speed I
- System Speed II
- System Speed III
- Call Restriction
- Operator
- Call Accounting
- Messaging
- External Application Link
- Area Codes 1
- Area Codes 2
- IP Dialing Table

## *Establishing AltiServ ID and Location*

Figure 2-1 shows the General page of the System Configuration screen.

To access this page, select the **General** page in the **System Configuration** screen.

The screenshot shows the 'System Configuration' dialog box with the 'General' tab selected. The configuration fields are as follows:

Field	Value
System ID	
Country	U.S.A. & Canada
Manager Extension	100
Region	
System Home Area Code	510
Distinctive Ring	<input type="checkbox"/> Enable Distinctive Ring <input type="checkbox"/> Enable Operator Priority Ringing
System Main Number	
Conference Bridge Option	<input type="checkbox"/> End Conference If No Extensions Participating
Least Cost Routing Option	<input type="checkbox"/> Enable Least Cost Routing
System Call Predial String	<input type="checkbox"/> Enable System Predial

Figure 2-1. System Configuration Screen - General Page

The configuration data displayed in this screen are:

- **System ID** - reserved for future use. This field will allow the system administrator to enter a unique system ID number to identify the system for remote access, etc.
- **Country** - select one of the six (6) country options (U.S.A. & Canada, Peoples Republic of China, Taiwan, Japan, Singapore or Mexico) where the system is located.
- **Manager Extension** - enter the system manager's extension number (the system manager has access to system administrator functions such as phrase management.)

- **Region** - for future use. This will allow the system administrator to enter the appropriate region (information specific to the region's calling or dialing patterns, more commonly used in international calling).
- **System Home Area Code** - enter the area code of the location where the system resides.
- **Distinctive Ring** - this feature enables users to distinguish between internal, external and operator calls by the way the phone rings.
  - **Enable Distinctive Ring** - check this box to allow a different ringing cadence to distinguish internal calls from external calls. The ringing cadence for an internal call is a short double ring. The ringing cadence for an external call is a long single ring.
  - **Enable Operator Priority Ring** - check this box to allow a distinctive ringing cadence for all calls to the operator. When selected, the system will produce a long single ring between short pauses to distinguish calls to the operator.
- **System Main Number** - enter the main system telephone number. This is the number that will be sent to the pager's display when a user's messaging options are configured to call a pager. This is also the number subscribers call to access the AltiMail Voice Messaging System.
- **Conference Bridge Option** - check this box to end a conference call when all internal lines have disconnected from the conference bridge. If this option is not selected, the conference connection can continue between outside parties, even after all internal parties have disconnected.
- **Least Cost Routing Option** - check this box to activate Least Cost Routing (LCR).
  - The LCR feature is an add-on module available from Call Manage, Inc., one of AltiGen's authorized AltiPartners. The LCR server is implemented as a COM (Component Object Module) module, which can be installed on the AltiServ machine or any other machine on the local area network (LAN). To purchase this LCR add-on module, please contact your Authorized AltiGen Dealer.
  - The LCR server is responsible mainly for the following tasks:

#### Establishing Altiserv ID and Location

1. Register itself with a central database. (For details of the registration procedure, please refer to documentation provided by Call Manage)
  2. Download the updated version of the Least Cost Table from a central database periodically via RAS or the Internet.
  3. Select the least cost long distance or international carrier for each outgoing call.
  4. Generate call activities and savings report.
- Altiserv will attempt to contact the LCR server on the local system. If contact can be successfully established, all outgoing trunk calls will be forwarded to the LCR server. The LCR server, in return, will select the least cost carrier for the call and provide a dialing string to Altiserv for outdialing. If Altiserv is unable to establish contact with the LCR server, an error will be logged in the system error log and the LCR option will be turned off automatically.
- **System Call Predial String** - check this box to enable the system predial digit string to override the trunk predial digit string. This is used for adding an extra “9” to access an outside line from another PBX, for example.

## Setting Up System Numbering Plan

System Numbering Plan defines the extensions digit length. Figure 2-2 displays the **Number Plan** page to allow you to specify the extension length and define how the system responds to the first digit dialed.

2. System Configuration

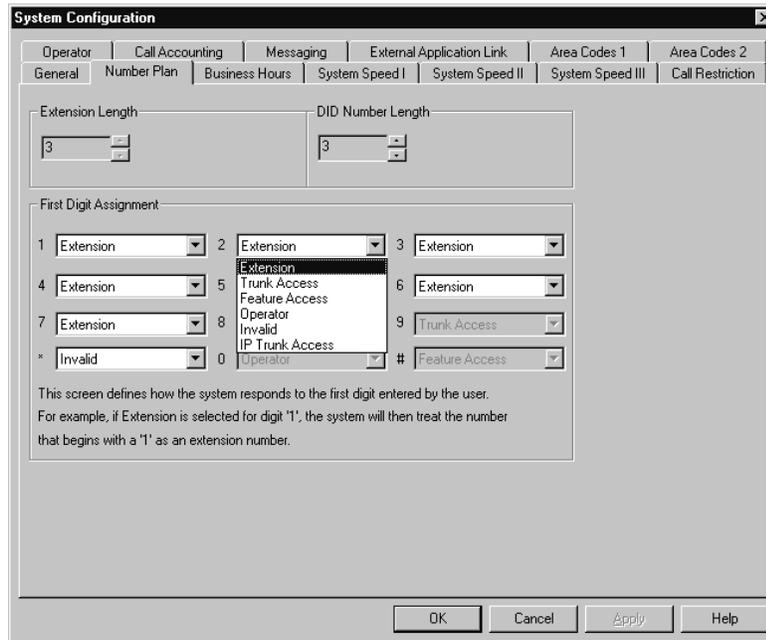


Figure 2-2. System Configuration Screen - Numbering Plan Page

This Number Plan screen allows you to specify:

- Extension Length
  - Enter the number of digits for your extension numbering system (**valid entries are 3 - 7 digits**).
  - For example: If the extension numbers are 2001 through 2020, you have 4 digit extension numbers. If the extension numbers are 202 through 220, you have 3 digit extension numbers.

### **IMPORTANT!**

**The length of the extension numbers is not adjustable once the first extension is configured. The length is determined in the**

## Setting Up System Numbering Plan

**system setup screens during installation and cannot be changed without totally reconfiguring the system or deleting all the extensions already configured.**

- DID Number Length
  - Enter the number of digits needed to match a DID number (range 2-16). Each extension can be assigned a DID number. A DID number does not have a fixed length.

**Example:** DID number length - 4; extension DID number - 2529299.

Depending on the service contract with the CO, the DID trunk can send all 7 digits (2529299) or just the last 4 digits (9299). So regardless of what is received, the system always tries to match the last 4 digits received to the last 4 digits of a DID number.

**Note:** To accommodate future growth, as well as to minimize disturbance, it is recommended that the length of the DID numbers assigned to an extension be greater than or equal to the “DID number length.”
- First Digit Assignment
  - This group box in the Number Plan screen defines how the system responds to the first digit dialed by the user. For example, if extensions are specified with the first digit **1**, the system will process any dialed number that begins with a **1** as an extension. Pressing **7**, **8**, or **9** (using the example below) will be processed by the system as a trunk access code and will give access to an outside line.
  - To specify a starting digit as an extension, in the First Digit Assignment group box, select from the available options in the window numbered “1”, select “Extensions” option, for example. This defines each dialed number starting with digit “1” as an extension number. Repeat this procedure for each numbered window from 1 through 8 and select from the options whether you want that number window to display “Extension” or “Trunk”. For illustration, refer to Figure 2-2.

**Example:**

- 1 = Extension
- 2 = Extension
- 3 = Extension
- 4 = Extension
- 5 = Extension
- 6 = Extension
- 7 = Trunk access
- 8 = Trunk access
- 9 = Trunk access
- 0 = Operator
- \* = Invalid
- # = Feature access (non-configurable)

— Note: If “U.S.A. & Canada” is selected as the country where the system is located, the numbers **9** and **0** are grayed out and cannot be configured. For all other countries, there are no restrictions for using the numbers **9** or **0** for first digit assignment.



## *Assigning the IP Trunk Access Code*

In order to distinguish between analog trunk and IP trunk calls, a unique trunk access code needs to be assigned for IP trunk calls. Usually, **9** is used as the analog trunk access code. You can keep that configuration and assign another digit such as **7** or **8** as the IP trunk access code. Please note the following:

- By default, the trunk access code **9** is assigned to analog or PSTN trunk calls. A default IP trunk access code, however, is not automatically assigned to IP trunk calls. It must be configured manually.
- Only one (1) IP trunk access code is allowed per AltiServ system. It is highly recommended that the same IP trunk access code (e.g. **8**) is used for all AltiServ systems within the network.
- Be sure to check for existing usage of a digit (e.g. feature access, operator, trunk access, extension) before assigning it as the IP trunk access code. You cannot assign a digit as the IP trunk access code if there are existing extensions that begin with that digit. If you try to change it, you will get an error message.

### **To setup an IP trunk access code, follow the steps below:**

1. Go to the **Number Plan** page of **System Configuration**, as shown in Figure 2-3, “System Configuration screen - Number Plan for IP,” on page 2-9.
2. Under the **First Digit Assignment** group box, Select **IP Trunk Access** from the drop-down list of the digit that is to be used as the IP trunk access code. Please note the following:
  - Do not select a digit if it is the first digit of any existing extensions on the system. For example, if there is an extension number of **701**, you will not be able to select **7** as the IP Trunk Access Code on the **First Digit Assignment**.
  - Also, you cannot assign a new IP trunk access code if one already exists, since only one IP trunk access code is allowed per system. To assign a new IP trunk access code, you must first assign the existing IP trunk access code to another function (e.g. **Extension** or **Operator**) digit.
3. Click on **OK**.

## Assigning the IP Trunk Access Code

# 2. System Configuration

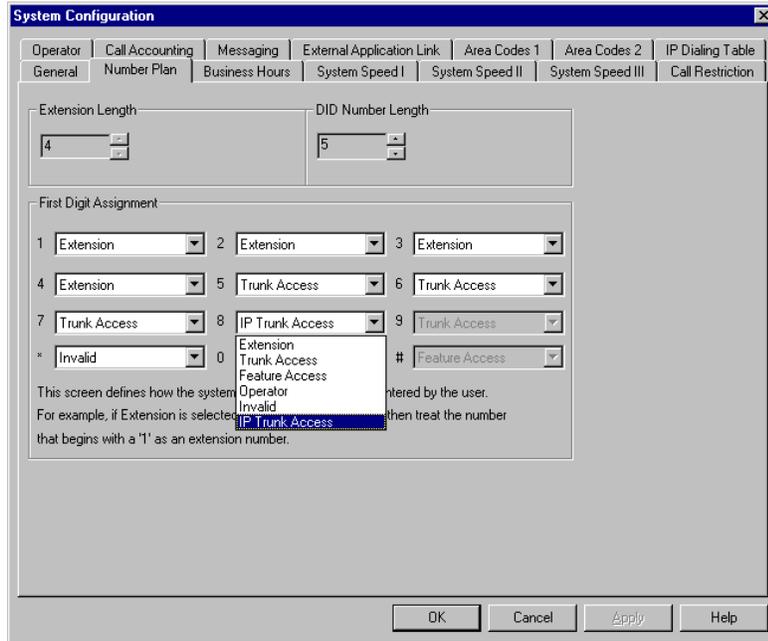


Figure 2-3. System Configuration screen - Number Plan for IP

## Setting Up Business Hours

The Business Hours page contains group boxes for setting the business hours and days of the week when a business or organization is in operation.

Work Day	AM Schedules	PM Schedules
<input checked="" type="checkbox"/> Monday	08:00 AM to 12:00 PM	01:00 PM to 06:00 PM
<input checked="" type="checkbox"/> Tuesday	08:00 AM to 12:00 PM	01:00 PM to 06:00 PM
<input checked="" type="checkbox"/> Wednesday	08:00 AM to 12:00 PM	01:00 PM to 06:00 PM
<input checked="" type="checkbox"/> Thursday	08:00 AM to 12:00 PM	01:00 PM to 06:00 PM
<input checked="" type="checkbox"/> Friday	08:00 AM to 12:00 PM	01:00 PM to 06:00 PM
<input type="checkbox"/> Saturday	08:00 AM to 12:00 PM	01:00 PM to 06:00 PM
<input type="checkbox"/> Sunday	08:00 AM to 12:00 PM	01:00 PM to 06:00 PM

Figure 2-4. System Configuration Screen - Business Hours Page

Use the **Business Hours** group boxes to specify work days and business hours:

- **Work Days** group box - select the days of the week when the company or organization is in operation.
- **Business Hours** group box - for each day of the week, enter the time in the “From” and “To” fields to indicate when the company or organization is open or available for business.
  - **AM Schedules** - set the hours that begin (From) and end (To) the morning hours. This would be from the time the company or organization opens in the morning to the lunch break.

— **PM Schedules** - set the hours that begin (From) and end (To) the afternoon hours. This would be from the time the company or organization re-opens after the lunch break to the end of the business day.

This group box allows for separate AM and PM settings. This allows for morning hours and afternoon hours for those businesses that close during the lunch hour or have split shifts.

**Note:** If you wish to specify 24 hours as standard business hours, select the following hours in the appropriate fields:

AM Schedules:  
From 08:00 AM  
To 12:00PM

PM Schedules:  
From 12:00 PM  
To 08:00 AM

### **WARNING!**

The system administrator must make sure that the system time has been set correctly. **The importance in accuracy of the time setting cannot be stressed strongly enough.** The system time and the time set on the Business Hours page will affect several functions of the AltiWare configuration. This reference of time is used to configure trunk usage hours, for recorded announcements, and for forwarding operator calls to the Auto Attendant to name a few. The system time can be changed using the Date/Time applet in the Control Panel of Windows NT.

## Configuring System Speed Dialing

The **System Configuration** screen has three **System Speed** pages. Each page allows the configuration of 20 numbers for a total of 60 system speed dialing numbers. To display a System Speed page, click on the appropriate page in the System Configuration screen, such as System Speed I, as shown in Figure 2-5.

Speed Dialing	Speed Dialing
00 92529712	10
01 82262780	11
02	12
03	13
04	14
05	15
06	16
07	17
08	18
09	19 93532040

When entering speed dial numbers, please include all necessary digits (such as trunk access code, long distance prefix and area code) that you would dial when manually dialing the number. e.g. 914155551212

Figure 2-5. System Configuration Screen - System Speed I Page

Type into each entry a full telephone number (e.g. 915102529712) or extension (a maximum of 20 digits per entry). To dial this full number, all you have to do is dial **#88** and then **01**.

Enter all telephone numbers you wish to make available to system users as speed dial numbers. Start from page I entry 00 through 19 and continue on pages II and III, as shown below:

- **Speed Dialing group box** - contains 20 entries on each page.
  - **System Speed I** page allows 20 entries, **00 through 19**.

— **System Speed II** page allows 20 entries, **20 through 39**.

— **System Speed III** page allows 20 entries, **40 through 59**.

Valid digits include **0** through **9**, **#**, **\***, and **(,)** comma. **The comma represents a one (1) second pause or delay.**

To enter an outside telephone number, enter all necessary digits (such as trunk access code, long distance prefix and area code) that you would dial when manually dialing the number.

For example, the phone number 914085551212 comprises of **9** (trunk access code), **1** (long distance prefix), followed by **408** (area code), and finally the seven digit telephone number. For local calls, the long distance prefix (**1**) and the area code (**408**) should not be entered if they are not required to dial the number.

## Defining System Call Restrictions

In the **System Configuration** screen, select the **Call Restriction** page to specify the class-of-service for extensions. Figure 2-6 displays group boxes on Toll Call Prefixes and System Prohibited Prefixes. Call restriction parameters specified here apply to calling privileges of all extensions on the system. If you wish to restrict calling privileges on an individual extension basis, you have to use the extension configuration screen, as illustrated in the Figure 5-1, “Extension Configuration Screen - General Page,” on page 5-2.

The screenshot shows the 'System Configuration' window with the 'Call Restriction' tab active. The 'System Prohibited Prefixes' section has a grid of 20 input boxes, with the first two containing '1900' and '1976'. The 'Toll Call Prefix' section has three input boxes: 'Domestic' with '1', 'International' with '011', and 'Other' which is empty. Below these is a 'Default' button and a note: 'Press the Default button to label toll call prefixes based on country setting'. At the bottom are 'OK', 'Cancel', 'Apply', and 'Help' buttons.

Figure 2-6. System Configuration Screen - Call Restriction Page

To specify system prohibited prefixes and toll call prefixes:

- **System Prohibited Prefixes** group box
  - Enter a **1** and the dialing prefix to be blocked (e.g. 900, 976) in order to restrict such calls from any extension, as shown in Figure 2-6 above. You may enter up to 20 digits maximum in each prefix entry box (up to 20 entry boxes).

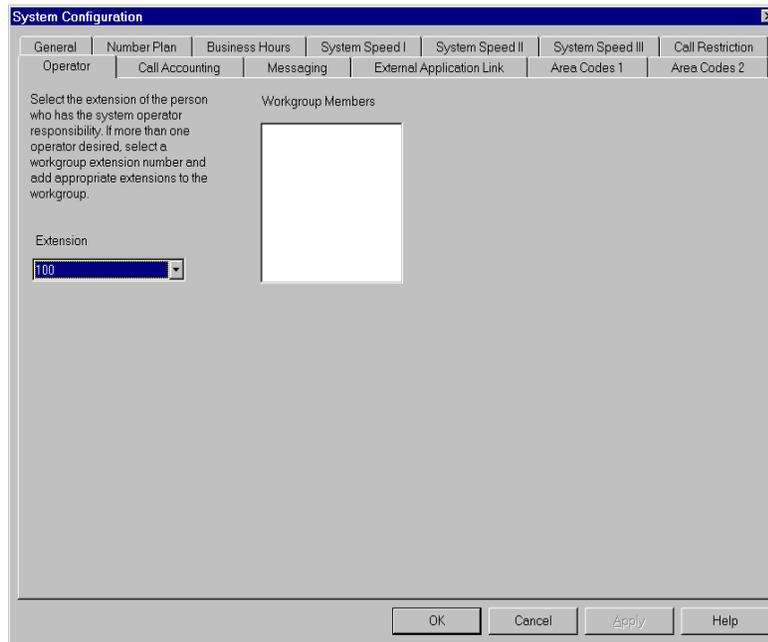
- **Toll Call Prefix** group box - use the following fields to define toll calls. AltiWare uses this information to determine the types of outside calls, and imposes restrictions when necessary. For example, if the international toll call prefix has been set up as **011** and a user attempts to make an international call from an extension without international toll call privileges, the call will be terminated as soon as the user dials **011** after the trunk access number and the caller will hear an error tone.
  - **Domestic** - enter a **1** for 1-plus dialing within the U.S. dialing plan (also known as the North American Numbering Plan).
  - **International** - enter **011** for international calls made in the USA. Enter the appropriate toll call prefix for international calls made from the country and region specified on the **General** page of the **System Configuration** screen.
  - **Other** - flexible and variable uses such as a string of digits to be considered non-local.
  - **Default** - press the default button to label toll call prefixes based on country and region specified on the **General** page.

## *Operator Configuration*

The **Operator** page confirms the system operator extension or operator pilot number and members of the operator workgroup extensions. To set up the operator, follow the steps below:

1. If the operator extension does not already exist, create one. Click on the **Extension Configuration** icon in the Quick Access Toolbar to display the Extension Configuration screen and then select **General** page, as shown in Figure 5-1, “Extension Configuration Screen - General Page,” on page 5-2.
  - Press the **Add** button to enter a new extension.
  - **Add New Extension** screen is displayed.
  - Enter a new extension number into the Extension Number box.
  - From the **Type** box, select **Physical extension** to make this operator extension a physical extension.
  - Press the **OK** button.

## Operator Configuration



## 2. System Configuration

Figure 2-7. System Configuration Screen - Operator Page

2. Go to the **System Configuration - Operator** page to specify the **operator extension**. Please refer to Figure 2-7 to see the Operator page.
  - From the **Extension** drop-down list of extension numbers, select the physical extension number you just entered in the New Extension screen. This becomes the **operator extension**.
  - See the **Workgroup Members** window. The window will be empty when you configure an operator extension that is not an operator workgroup pilot number.
  - Press the **OK** button to define the extension as an **operator extension**.

Operator Configuration

### **Operator Workgroup Configuration**

If more than one operator is needed, select an operator pilot workgroup extension number, and add the appropriate extensions to the operator workgroup. This allows you to have multiple operators in a workgroup that share the incoming calls workload. Refer to “ACD and Workgroup Configuration” on page 7-1 for instructions on setting up a workgroup.

## Setting up Call Accounting

Click on the **System Configuration** icon in the **Quick Access Toolbar** to display the System Configuration screen.

Select the **Call Accounting** page (Figure 2-8) in the System Configuration screen to display the call accounting parameters.

2. System Configuration

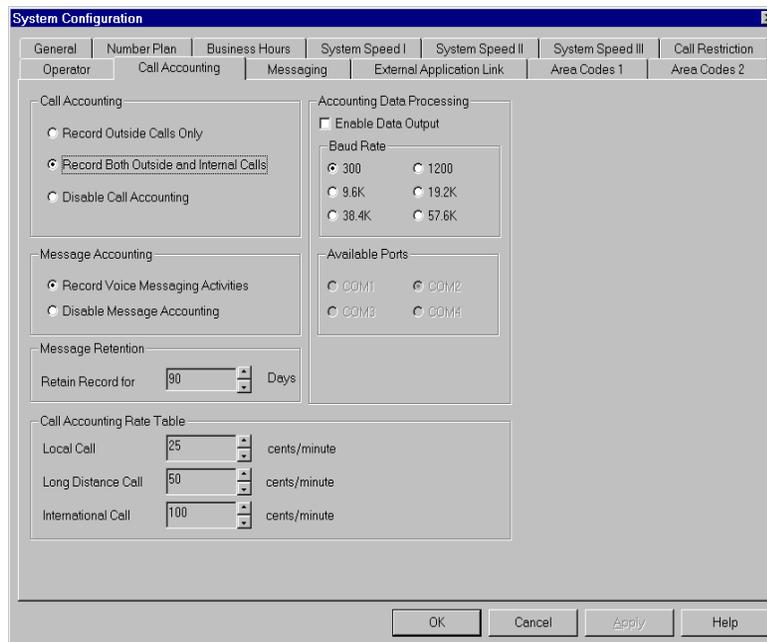


Figure 2-8. System Configuration Screen - Call Accounting Page

This page contains the group boxes for setting call reporting and accounting criteria. Data collected by the system based on the configuration on this page determines the information in the **Call Detail Summary Report**. The Call Accounting Rate Table allows you to specify local, long distance, and international call charges in cents per minute. Refer to Figure 8-10, “Call Detail Summary Report Screen,” on page 8-13 for the call accounting information displayed in this report.

Select the appropriate choice in each group box listed below:

- **Call Accounting** group box

## Setting up Call Accounting

- **Record Outside Calls Only** - select this option if data is to be collected for outside calls only. (This is the system default.)
- **Record Both Outside and Internal Calls** - select this option if data is to be collected for both external and internal calls. Please note that recording internal calls may result in greater use of the system storage and is not recommended for typical installations.
- **Disable Call Accounting** - select this option if no data is to be collected on any calls.
- **Message Accounting** group box
  - **Record Voice Messaging Activities** - select this option if data is to be collected on voice messaging activities.
  - **Disable Message Accounting** - select this option if no data is to be collected on voice messaging activities.
- **Message Retention** group box
  - **Retain Records for** - select an option between 1 and 365 days to indicate the number of days that saved messages are to be archived by the system.
- **Call Accounting Rate Table** group box
  - **Local Call**- specifies the call tariff in cents/minute for local calls
  - **Long Distance Call**- specifies the call tariff in cents/minute for long distance calls
  - **International Call**- specifies the call tariff in cents/minute for international calls

**Note:** The calling rates specified here will be used to calculate the cost of each call.
- **Accounting Data Processing** group box
  - **Enable Data Output** - check this box to enable call detail data output.
  - **Baud Rate** - select one of the available baud rates:
    - 300
    - 1.2 k
    - 9.6 k
    - 19.2 k

- 38.4 k
  - 57.6 k
  - **Available Ports** group box - select a communication port for call detail recording report output from one of the following options:
    - COM1
    - COM2
    - COM3
    - COM4
  - Press the **OK** button to save the specified parameter values.
- Note:** The format for call detail output (to serial port) is Mitel. For information on SMDR (Station Message Detail Reporting) format, refer to “SMDR Reporting Format” on page C-1.

## Call Detail Reporting Issues

The following conditions may be encountered when backing up CDR files.

### Backup CDR File Is Too Large

If a backed up CDR file exceeds 20MB, when AltiServ reboots, it will automatically copy the database to `\altiserv\db\cdrbackup` and create a new backup file.

**Note:** In order to prevent corruption of any database files, if the AltiGen **Messaging Service COM Server** is running at midnight, AltiServ will automatically back up the CDR database, as well as the Extension, Trunk and Auto Attendant settings to `\altiserv\db\backup01`, `\altiserv\db\backup02` or `\altiserv\backup03`.

### Backup CDR File Becomes Corrupted

If a backed up CDR file becomes corrupted, replace the corrupted file with the latest file copy in the same directory (`\altiserv\db\cdrbackup`). If AltiServ cannot find a recent file to copy over, or all other files are corrupted as well, you must create a new database.

#### **SMDR Disclaimer:**

AltiGen Communications, Inc. cannot be responsible for the accuracy of the call detail data and/or third party reports.

## *Managing Messages*

Click on the **System Configuration** icon in the **Quick Access Toolbar** to display the System Configuration screen.

Select the **Messaging** page in the **System Configuration** screen to display the system messaging parameters, as shown in Figure 2-9.

This page contains various messaging options including e-mail configuration, Message Notification, and message management options. It allows you to specify how many attempts the system should make to deliver a message notification to its destination. It also defines how long a message can be stored before it is deleted, what is the message minimum recording length, and whether or not the e-mail is activated.

### **WARNING!**

**Messages that are larger than 20 MB in size could seriously affect real time performance since Altiserv uses a built in e-mail server using a single system's resources.** Instruct users to keep messages relatively small or use a separate e-mail server with **Mail Forwarding** enabled to allow users to access voice mail and e-mail from one server. **Mixed-Media Messaging** (attaching voice messages to e-mail messages) is unavailable when using a separate e-mail server.

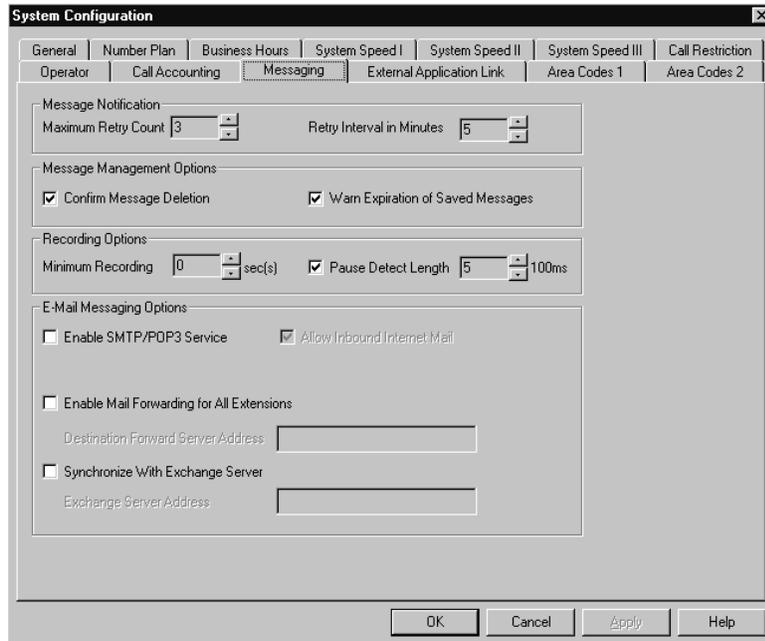


Figure 2-9. System Configuration Screen - Messaging Page

Select the data entry in each group box on the page as listed below:

- **Message Notification** group box
  - **Maximum Retry Count** - select a number between **1** and **16** to designate the number of times the system will try to deliver a message notification until it is successful:
    - 1** = try once after original attempt
    - 2** = try twice after original attempt
    - 3** = try three times after original attempt (system default)
    - :
    - 16** = try sixteen times after original attempt
  - **Retry Interval in Minutes** - enter the number of **minutes** between retry attempts. Five minutes is the minimum and 60 minutes is the maximum interval allowed. (The system default is 5 minutes.)
- **Message Management Options** group box

## Managing Messages

- **Confirm Message Deletion** - plays a voice message instructing user to confirm request for deletion by pressing the # key. This is a system safeguard feature to prevent users from accidentally deleting messages with a single key entry.
- **Warn Expiration of Saved Messages** - the system warns the user of saved messages that will be deleted due to their retention expiration the day before saved messages are automatically deleted. The user will then have the option to either keep or delete the message. (By default, this feature is enabled.)

### **CAUTION!**

**Please note that the saved messages will be deleted automatically when they expire without prompting the user if this feature is not enabled.**

- **Recording Options** group box
  - **Minimum Recording** - sets the minimum length of any recording (i.e. voice mail message, personal greeting, system prompts). All recordings that are shorter than the designated Minimum Recording length will be deleted. This feature is recommended only when users receive many empty voice mail messages on a regular basis and would like them automatically deleted.
  - **Pause Detect Length** - select this box to delete pauses in messages. The default pause detect length is **500 ms**. The pause detect length can be disabled or changed to a value between **200 ms** and **2 seconds**.
- **E-mail Messaging Options** group box
  - **Enable SMTP/POP3 Service** - select this box to enable Simple Mail Transfer Protocol (SMTP) and Post Office Protocol Version 3.0 (POP3) services on the Altiserv. These are e-mail sending and retrieving protocols.
  - **Enable Mail Forwarding for All Extensions** - select this box if you wish to forward all mail (e-mail and voice mail) to an SMTP-based server. If this box is checked, the **Destination Forward Server Address** should contain the address of the SMTP server to which all mail will be forwarded. This address can be an IP address or a domain name.

**CAUTION! After forwarding, original messages in the mailbox where Mail Forwarding is enabled will**

**be deleted immediately without warning.**

— **Synchronize with Exchange Server** - select this box if you have a Microsoft Exchange server on your LAN and would like to have access to your e-mails and voice mail from Exchange as well as from the Altiserv. The state of both servers will be synchronized. For example, when a voice mail is deleted from Altiserv, it would automatically disappear from the Exchange too.

**Note:** The name of the Exchange server **must be just the name of the machine or the fully qualified domain name**. The domain name and the IP address will not work.

— **Allow Inbound Internet Mail** - select this box to enable receiving mail from the Internet to the Altiserv. Uncheck this box if you have another e-mail server software (such as Exchange server) running on the Altiserv system.

- Press the **OK** button to save the selected information.

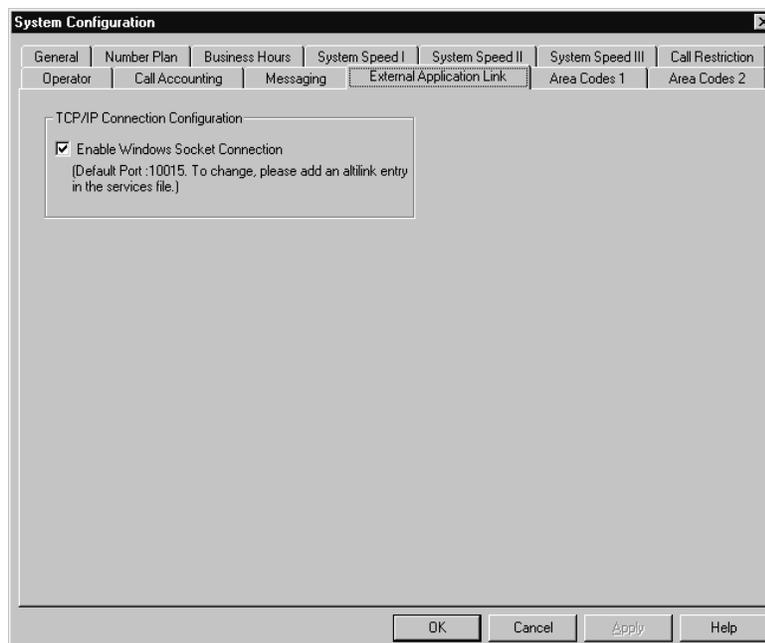
Configuring the External Application Link

## ***Configuring the External Application Link***

The **External Application Link** page is used to configure the AltLink protocol. The AltLink protocol is used by external applications to remotely control calls on the AltServ system. You need to configure these parameters only if you are using an AltLink-based application on your network.

Click on the **System Configuration** icon in the **Quick Access Toolbar** to display the **System Configuration** screen.

Select the **External Application Link** page in the System Configuration screen to define TCP/IP as the communication protocol.



*Figure 2-10. System Configuration Screen - External Application Link*

To configure the **External Application Link**, enter the appropriate information for the following option:

- **TCP/IP Connection Configuration** - select **Enable Windows Socket Connection** to make the link active and to define TCP/IP as the communication protocol.

## *Area Code Configuration*

AltiWare OE (Release 2.1 and higher) supports the new split area code/NXX guidelines that are coming into effect all over North America. The support consists of two areas:

- The number plan itself - ability to determine which numbers should be 7, 8, 10, or 11 digits long based on guidelines provided by the system administrator.
  - Note:** This capability applies only to those calls where all the digits are available to the system before making a call (e.g. Zoomerang, Message Notification, calling from within voice mail, etc.) and not when a user makes a call directly from an extension.
- Use of this information in Call Detail Reporting (CDR) and Call Restrictions - the information provided by the system administrator will be used by the system to determine if a caller is allowed to call a particular number. The system will also log numbers to the CDR database appropriately.

### **To Configure Area Codes**

Figure 2-11, "System Configuration Screen - Area Codes 1" shows the configuration screen used to identify area codes and prefixes that are exceptions to the standards of how area codes and long distance prefixes are normally used. This configuration enables the system to properly handle such numbers.

**Note:** The term NXX is used frequently in this section and refers to the first three digits of a seven digit phone number. The full numbering plan is NPA-NXX-XXXX. For example, the **NPA** of the phone number 213-696-5992 is **213**, the **NXX** is **696** and the **XXXX** is **5992**.

To access the **Area Codes 1** screen,

- Click on the **System Configuration** icon in the **Quick Access Toolbar** to display the System Configuration screen.

## Area Code Configuration

- Select the **Area Codes 1** tab on the **System Configuration** screen.

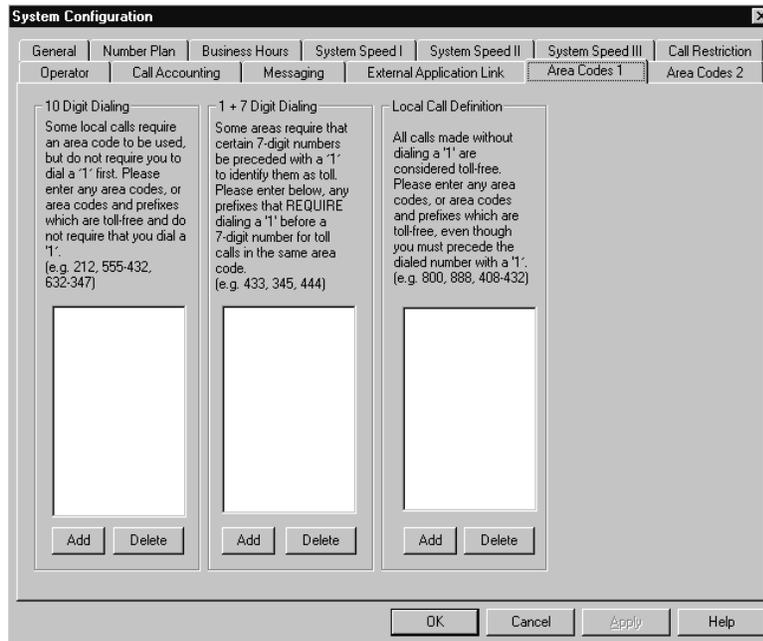


Figure 2-11. System Configuration Screen - Area Codes 1

The **Area Codes 1** page contains three tables:

- **10 Digit Dialing** - Some areas require area codes to be used, even when dialing a local number, but do not require dialing the long distance prefix **1**. Use this table to list **local toll free area codes and NXX prefixes** that are required when dialing **but do not require dialing 1** (thus, a 10 digit phone number).
- **1 + 7 Digit Dialing** - Some areas require that certain 7-digit numbers (local call with no area code) are preceded with the long distance prefix **1** to identify them as a toll call. Use this table to list **NXX prefixes** which require the user to dial the long distance prefix **1** before a local 7-digit number.

- **Local Call Definition** - All calls made without dialing a **1** are considered toll free. There are area codes and prefixes, however, that do require a **1** even though they are toll free. Use this table to list **area codes and NXX prefixes** that are toll free calls even though the long distance prefix **1** is required. (e.g. 800, 888)

To access the **Area Codes 2** screen,

- Select the **Area Codes 2** tab on the **System Configuration** screen.

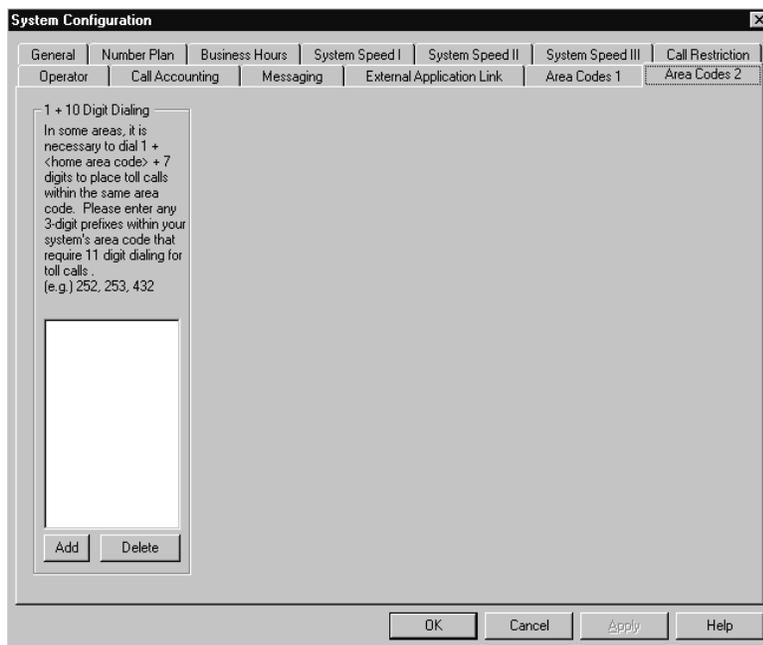


Figure 2-12. System Configuration Screen - Area Codes 2

The **Area Codes 2** page contains one table:

- **1 + 10 Digit Dialing** - Some areas require that the long distance prefix **1**, the area code and the seven digit phone number is dialed to place toll calls within the same area code. Use this table to list **NXX prefixes** within your system's area code that require the 1 + 10 digit dialing for toll calls.

### **Guidelines to Add, Delete or Modify Entries**

- To add entries to a table, click on **Add** below the respective table and a blank entry appears. Type the number you want to add to the table and then click on **Apply** or press the **Return** or **Enter** key.
- To modify an existing item, first select the number you want to modify by clicking on that number. Then click on the number again. The number turns into an edit box. You can modify the number as you would any text in a text box.
- To delete one or more entries, select the first item by clicking on it. Select more entries by pressing the **Control** key and clicking at the same time. After you have selected the entries, click on **Delete** to delete these entries from the table.
- To enter a specific NXX prefix in a particular area code, enter the area code **and** the NXX prefix (e.g. 510-252).
- The only valid characters allowed in these entries are the numeric digits **0** through **9**, space and the hyphen (-) character. A non-numeric character has to be followed by a numeric character (e.g. 510--252 is invalid, but 510-252 is valid). A hyphen (-) is not required but allowed for readability (e.g. 510-252 is the same as 510252).
- Click **Apply** or **OK** to save your changes. If you don't want to save your changes, click **Cancel**.

## IP Dialing Table

To set up the dialing plan for AltiServ-to-AltiServ connection at the same or remote location, the **IP Dialing Table** (Figure 2-13) must be configured for each AltiServ system. The **IP Dialing Table** is disabled unless there is at least one (1) Triton VoIP board installed.

**Note:** Make sure the IP trunk access code (for making IP trunk calls) has been assigned. (See “Assigning the IP Trunk Access Code” on page 2-8.)

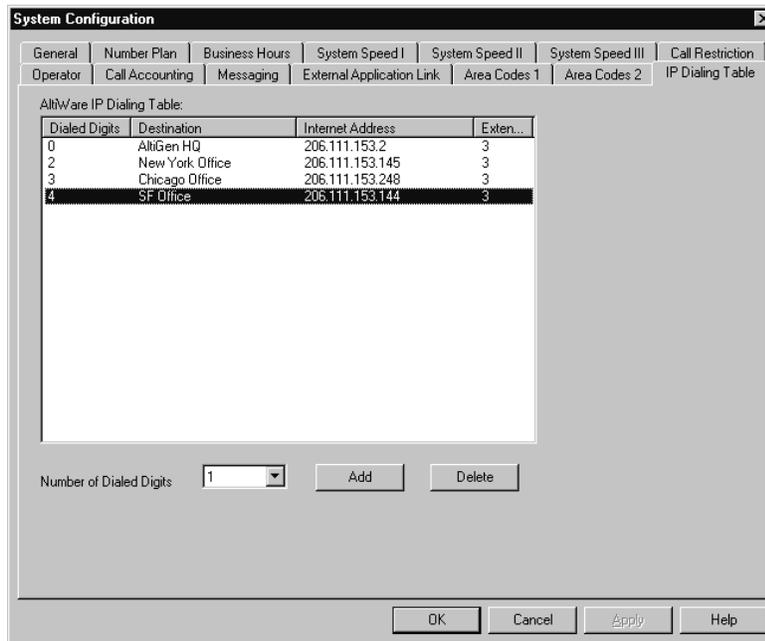


Figure 2-13. IP Dialing Table screen

### To configure the IP Dialing Table, follow the steps below:

1. Configure the **Number of Dialed Digits** at the bottom of the screen by selecting the number of digits between **None** and **3**. This is a system-wide number that sets the length of digits for the numbers used to identify each remote AltiServ location, or **Dialed Digits**. The **Dialed Digits** (e.g. **2**) is dialed by the user after the **IP trunk access code** (e.g.

## IP Dialing Table

**8)** to identify which AltiServ destination to connect to. Refer to Table 2-1, “Dialed Digits Length and Corresponding Number of Locations to determine what the **Dialed Digits** length should be. It is highly recommended to use the same length of Dialed Digits for all AltiServes that are networked. It may also be easier to use the same Dialed Digits at all locations (e.g. the Dialed Digits for the New York office is **2**, regardless of which system a user dials from), which would make it easier for users to remember when working at multiple locations.

### **CAUTION!!**

The **Number of Dialed Digits** may be changed without having to re-install or re-start AltiWare. If this number is changed in the future, however, it will alter the **Dialed Digits** for every location. If the number of digits increases, the digit **0** is added to the front of the number (e.g. the Dialed Digits **20** becomes **020**). **If the number of digits decreases, all Dialed Digits longer than the number of digits allowed will be deleted.** The only exception is if the leading digit is **0** (e.g. **048** becomes **48**). If possible, it is best **not** to change this number once it is entered.

Table 2-1. *Dialed Digits Length and Corresponding Number of Locations*

<b>Dialed Digits Length</b>	<b># of Locations</b>	<b>Sample Dialing String</b>
None	1 default location	8 101
1	up to 10 (0 - 9)	8 1 101
2	up to 100 (00 - 99)	8 20 101
3	up to 1,000 (000 - 999)	8 408 101

**Note:** In the examples shown above, **8** is the IP trunk access code, **1**, **20** and **408** are the Dialed Digits and **101** is the remote extension number.

2. Click on **Apply** at the bottom of the screen to save changes.
3. Click on **Add** to create and configure the entry settings for a new AltiServ location. (Click on **Delete** to remove an existing location. Double-click on an existing location to change its settings.)
4. When the **AltiWare IP Dialing Table Entry** screen appears (see Figure 2-14, “AltiWare IP Dialing Table Entry screen,” on page 2-34), enter the following information:

- **Dialed Digits** - enter a unique number that will be dialed to connect to the remote location.

**Note:** Plan and assign the **Dialed Digits** carefully. Once the **Dialed Digits** is entered, you cannot change it unless you completely delete the location entry from the IP Dialing Table and recreate a new one for the same location. This is required to minimize careless mistakes.

- **Destination** - enter a user-friendly location name (e.g. New York). This field is used for caller ID purposes if a location name is entered. You may enter up to a maximum of 15 characters.
- **Internet Address** - enter the Internet address of the remote location in one of the following formats:
  - a. RFC assigned IP address (e.g. **100.100.100.100**). IP addresses with prefixes of 10.0.0.0/8, 172.16.0.0/12 or 192.168.0.0/16 can only be used within private networks (Intranets).

**Note:** To obtain an IP address, ask your IT administrator. Or, follow these steps:

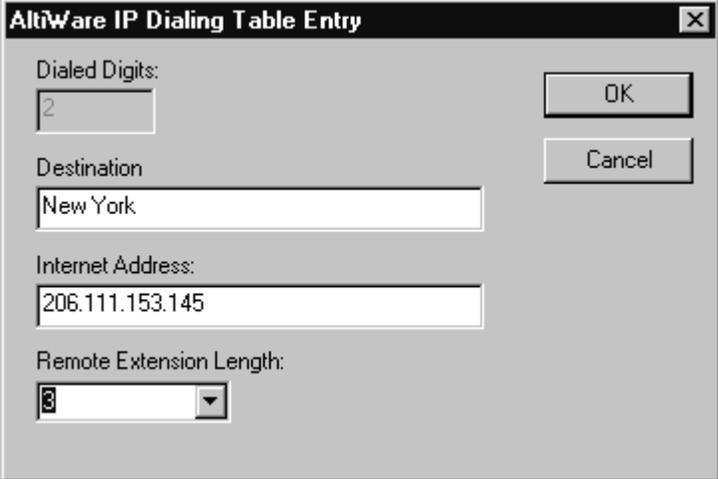
1. Open the **Control Panel** and select the **Network** icon.
  2. When the **Network** setting screen is displayed, select **TCP/IP** entry OR highlight **TCP/IP** entry and click the Properties button.
  3. Go to the **IP Address** tab to view the IP address for your computer.
- b. fully qualified DNS name (e.g. **NewYork.AltiGen.com**). If a DNS name is used, make sure the DNS server is configured properly.

**Note:** You may enter up to a maximum of 64 characters.

- **Remote Extension Length** - enter the length of extension digits at the remote location. The default is **None** which indicates that the length of extension digits at the remote location is unspecified. Valid entries are **None - 7**. This field is optional but entering the length of the remote location is **highly recommended**. This information tells the system how long to wait before outpulsing (sending digits).

**Note:** For hop off dialing, this field must be set to 'None.'

## IP Dialing Table



The screenshot shows a dialog box titled "AltWare IP Dialing Table Entry" with a close button (X) in the top right corner. The dialog contains the following fields and controls:

- Dialed Digits:** A text input field containing the number "2".
- Destination:** A text input field containing "New York".
- Internet Address:** A text input field containing "206.111.153.145".
- Remote Extension Length:** A spinner control with a dropdown arrow, currently set to "3".
- Buttons:** "OK" and "Cancel" buttons are located on the right side of the dialog.

*Figure 2-14. AltWare IP Dialing Table Entry screen*

5. Click on **OK**.

Repeat steps 3 through 4 for each local or remote Altiserv system that is to be networked.

## Additional Configuration Steps

The following areas are additional system features that need to be configured through the Management Menu.

### Audio Peripheral Configuration

The Audio Peripheral Configuration screen, shown in Figure 2-15, is used to set up

- Music-On-Hold
- System Default Beginning and Update Prompts for Callers in Queue
- Overhead Paging

You can access **Audio Peripheral Configuration** by selecting it from the **Management** menu.

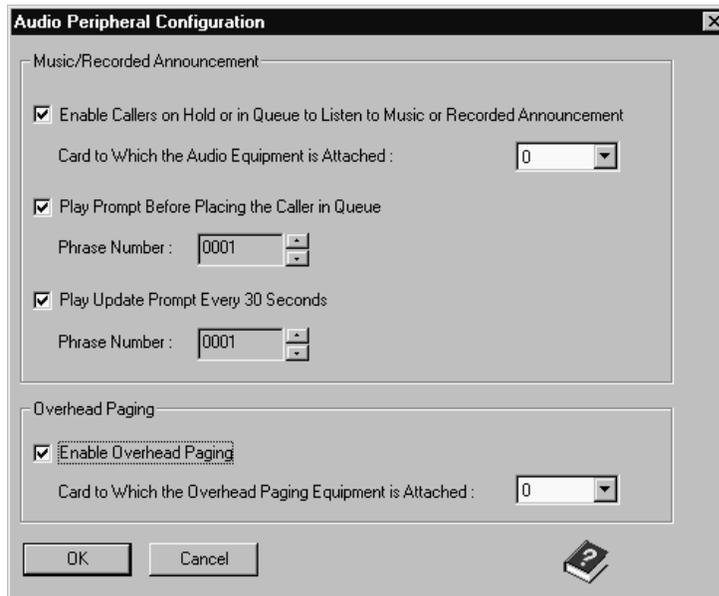


Figure 2-15. Audio Peripheral Configuration Screen

You can connect an external source to the audio input on the Quantum board. If you have multiple Quantum boards, you must specify the board ID of the board where the external music source is connected.

## Additional Configuration Steps

**Note:** Callers will hear the music or recorded announcement configured in Audio Peripheral Configuration **only** if the user places the caller on hold by pressing the **FLASH** or **LINK** button. If the user presses the **HOLD** button, the caller hears nothing.

## Configuring Music On Hold

To configure music on hold, access the Audio Peripheral Configuration screen shown in Figure 2-15 and follow these steps:

Select the appropriate options in the following group boxes shown in Figure 2-15:

- Music/Recorded Announcements group box
  - **Enable Callers on Hold or in Queue to Listen to Music or Recorded Announcement** - select this option to enable music-on-hold which allows callers to hear music or a recorded announcement while on hold or in queue. Select the Quantum board number to which the audio equipment is attached from the drop-down list.

## Configuring Overhead Paging

To configure overhead paging, follow these steps:

1. Connect overhead paging equipment to a Quantum board audio out jack.
2. Access the Audio Peripheral Configuration screen shown in Figure 2-15 and select the appropriate overhead paging option:
  - **Overhead Paging**
    - **Enable Overhead Paging** - select this option if you want overhead paging. Select the Quantum board number to which the overhead paging equipment is attached from the drop-down list.

## MVIP Clock Configuration

The **MVIP Clock Configuration** option in the **Management Menu** allows the system administrator to manually set the master clock for the system. By default, the system is set on “**Auto**”, which means that the board provides the most stable clock reference (by the system’s own parameters) is automatically designated as the master clock by which all other boards set their clock to.

Figure 2-16 shows the **Clock Configuration** screen which allows the system administrator to automatically or manually choose the master board.

### **CAUTION!**

**It is highly recommended that you use the Auto setting. Do not select Manual unless one of your digital spans is connected to equipment other than the PSTN (your regular phone network).**

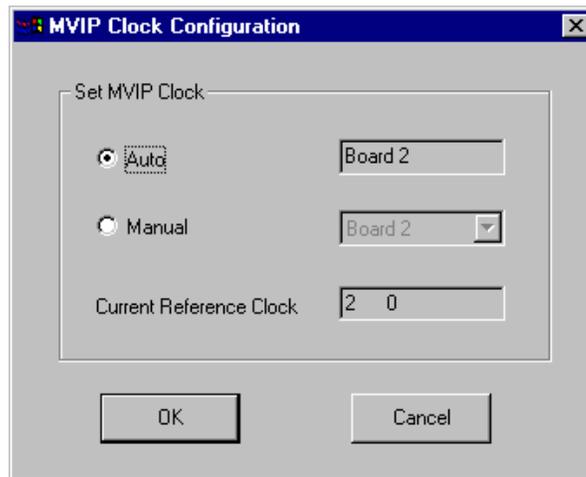


Figure 2-16. Clock Configuration screen

#### **Set MVIP Clock** group box:

- **Auto** - by default, the setting of the clock configuration is set to **Auto**. This means that the system automatically checks all the boards for the most stable clock and designates that board as the master reference clock by which all other boards reference their clocks.

## Feature Tips

- **Manual** - the system administrator has the option to choose the board to serve as the master clock for the other boards in the system. Click on the arrow to scroll down through the list of boards.
- **Current Reference Clock** - displays the location of the board that is currently being used as the reference clock.

## *Feature Tips*

Each time a user logs into AltiMail, the user will hear a **Feature Tip**, helpful tips and reminders of the most useful features for optimal use of AltiServ. There are a total of eleven tips and a different tip is played each time AltiMail is accessed. Another way to listen to Feature Tips is by pressing **#55** on the telephone. You can listen to just one tip at a time or listen to all the tips at once.

Individual users may turn this feature off (stop AltiServ from playing Feature Tips at the beginning of AltiMail login) by pressing **6** at the Personal Options menu. This is a toggle feature so pressing **6** at the Personal Options menu will turn it back on if it is off.

You may, however, want to completely disable this feature for all users. To disable Feature Tips system-wide, follow the steps below:

1. Select **Run** from the **Start** menu and enter **regedit** to open the **Registry Editor**.

**WARNING! Changing the registry can affect the configuration of your system. AltiGen recommends making a backup copy of the registry before making any changes.**

2. Go to the following location:

```
\HKEY_LOCAL_MACHINE\SOFTWARE\AltiGen  
Communications, Inc.\AltiWare\
```

3. Create a new **DWORD Value** (select **DWORD Value** from the **New** option under the **Edit** menu) called **FeatureTipEnabled**.
4. Set the **Value data** to **0** to disable Features Tips. (Set the **Value data** back to **1** to enable Feature Tips again.)
5. Open the **System Configuration** screen of AltiWare and click **OK** without making any changes in the data fields. It is not necessary to restart AltiWare.

You have completed disabling **Feature Tips**.

# Chapter 3 Board Configuration

Board attributes and functions are accessible through the **Board Configuration** screen.

Double click on the board's icon, which is displayed in the **Boards** window (Figure 3-1) to access the **Board Configuration** screen for the board you wish to configure.

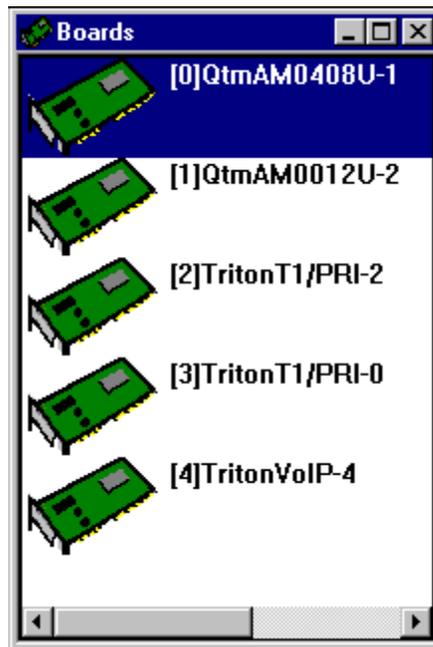


Figure 3-1. Board Window

Configuring the Quantum Board

## Configuring the Quantum Board

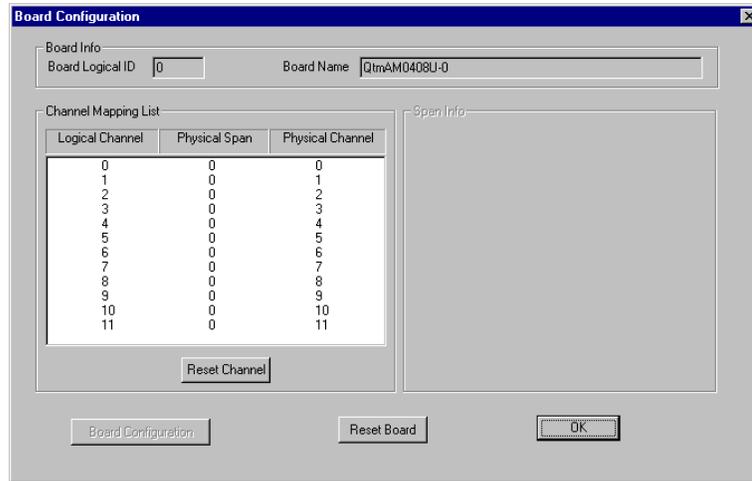


Figure 3-2. Board Configuration screen (Quantum Board)

The Board Configuration screen for the Quantum board (Figure 3-2) displays the following group boxes:

- **Board Info** group box: shows the **Board Logical ID** (assigned by Altiserv) and **Board Name** (the type of board installed in the system and board ID).
- **Channel Mapping List** group box: shows the **Logical Channel**, **Physical Span** and **Physical Channel** for the entire board. To reset the channel, select the channel to reset and click on the **Reset Channel** button, then click on **OK**.

**Note:** Double clicking on a channel in this window will invoke a channel configuration screen. Refer to the **Trunk Configuration** button description in Chapter 4 for more information.

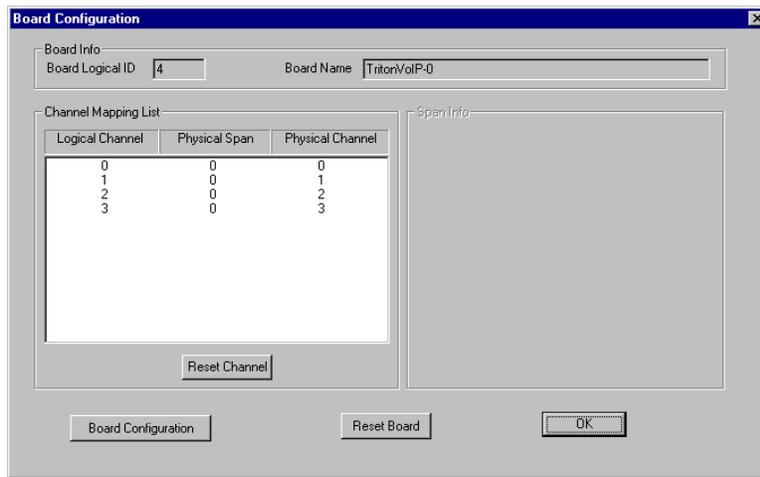
- **Span Info** group box: not available for Quantum boards.
- **Board Configuration** button: not available for Quantum or Triton boards.

- **Reset Board** button - to reset the board, click on the **Reset Board** button. A warning dialog box appears (“Reset Board”), followed by **OK** and **Cancel** buttons, are displayed. Select the appropriate button.

**CAUTION!**

**Resetting a board will disconnect all calls in progress on that board. Be sure to inform all relevant users before resetting.**

## *Configuring the Triton VoIP Board*



*Figure 3-3. Board Configuration screen (VoIP Board)*

The **Board Configuration** screen for the Triton VoIP board (Figure 3-3) displays the same group boxes as the Quantum board, but includes the following options:

- **Board Configuration** button - this invokes the **Triton VoIP Trunk Configuration** screen. Refer to “Triton VoIP Trunk Configuration” on page 4-8 for more detail.

Configuring the Triton T1/PRI Board

## Configuring the Triton T1/PRI Board

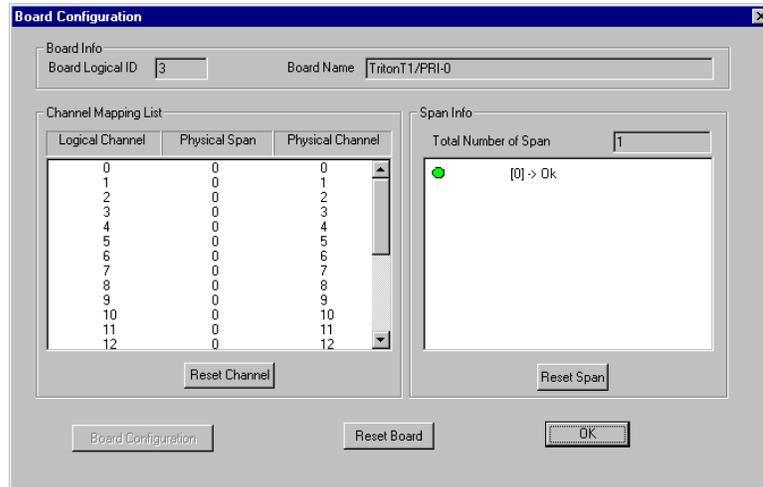


Figure 3-4. Board Configuration screen (Triton T1/PRI Board)

The **Board Configuration** screen for the Triton T1/PRI board (Figure 3-4) displays the same group boxes as the Quantum or VoIP board, but includes the following options:

- **Span Info** group box: displays the **Total Number of Spans** on the board and the status of the span in the Span Info window. Double clicking on a span in this window will invoke a configuration screen. (Refer to Figure 3-5, “Triton T1 Configuration - Triton T1/PRI sub-screen”.) To reset the span, click on the **Reset Span** button.

### Triton T1 Configuration - Triton T1/PRI Sub-screen

Double clicking on the span line associated with a Triton T1 board in the **Span Info** window will invoke a **Triton T1 Configuration - Triton T1/PRI** sub-screen (Figure 3-5).

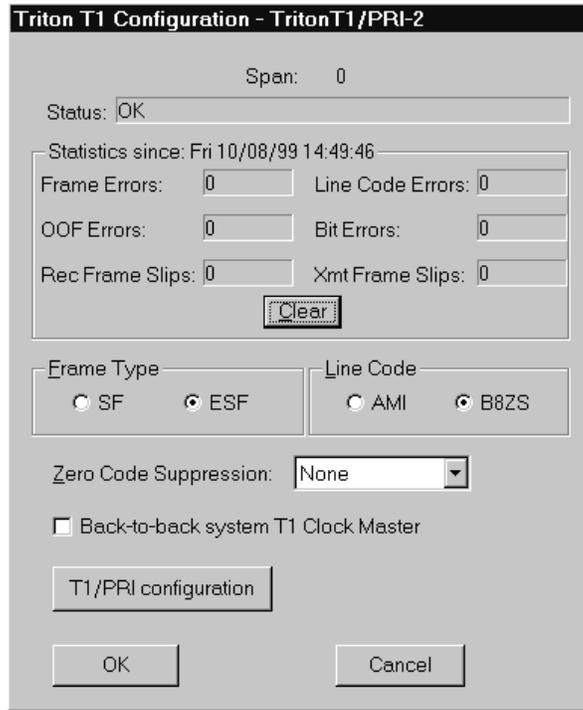


Figure 3-5. Triton T1 Configuration - Triton T1/PRI sub-screen

The following options are displayed:

- **Status** line: If the span is working, the status line displays 'OK.' This status line is updated every 3 seconds. If there is an error, a message describing the type of error is displayed. Refer to Table 1 for the types of error messages and the appropriate actions.

**Table 1: Error Messages**

Error Message	Meaning	Action
'Hardware Failure - NO ANSWER'	Major hardware problem. Board is not responding to commands.	Set board as MVIP master. Reset Board.

**Table 1: Error Messages**

<b>Error Message</b>	<b>Meaning</b>	<b>Action</b>
'Hardware Failure - NO CLOCKS'	No clock signal is detected on T1 interface drop.	Reset Board. If this does not work, board must be replaced.
'HDLC Failure - NO HDLC FRAMES'	HDLC = High level Data Link Control. No HDLC framing is detected on the selected D Channel. This is a PRI-specific issue.	Check with CO on D Channel usage for possible mismatch between your selection of D channel and CO's selection. OR CO may have locked D Channel. Contact CO to unlock.
'Line Failure - NO SIGNAL (ALOS)'	ALOS = Analog Loss of Signal	Check PRI cable and change if necessary. If cable is okay, CO is not sending any signal. Contact CO.
'Line Failure - BLUE ALARM (AIS)'	AIS = Alarm Indicator Signal	CO is sending Blue Alarm. Contact CO.
'Line Failure - YELLOW ALARM (RAI)'	RAI = Remote Alarm Indicator	Cable is broken. If there are no frame slips, contact CO. If frame slips exist, set this board as the master.
'Setup Failure - NO VALID FRAME'	No valid framing is detected.	Possible span mis-configuration (i.e., ESF is selected but the actual framing is SF, or vice versa). Check span configuration.
'Setup Failure - RED ALARM (BPV)'	BPV = Bi-Polar Violation	Location condition, equipment problem. For excessive BPV, check AMI/B8ZS setting.

**Table 1: Error Messages**

Error Message	Meaning	Action
'Setup Failure - RED ALARM (LCV)	LCV = Line Code Violation	Check the MVIP bus master setting. OR Have CO perform a line test to check for a faulty cable or line.
'Setup Failure - RED ALARM (OOF)	OOF = Out of Frame. Excessive frame errors.	Check the MVIP bus master setting. OR Have CO perform a line test to check for a faulty cable or line.
'Clock Sync Failure - FRAME SLIPS'	Conflict between transmit and receive clocks. The MVIP bus master-ship is set improperly.	Check MVIP bus master setting.

- **Statistics** group box (information-only displays): shows accumulated statistics (counters) for the following errors that have occurred since the last system reboot or statistics clearing.

**Note:** You may see some non-zero values when configuring the T1 span for the first time. You may clear these fields with the **Clear** button.

- **Frame Errors** - number of framing bit errors. In T1 mode, a framing bit error is defined as an incorrect FS-bit value. The counter is suppressed when framer loses frame alignment.
- **OOF Errors** - the Out Of Frame counter registers every time the T1 chip is forced to re-frame when receiving a frame with severe errors.
- **Rec Frame Slips** - the Receiver Frame Slips counter shows the number of frame slips for the receiver.
- **Line Code Errors** - Line Code Error is defined as an occurrence of a bi-polar variation or excessive zeroes.
- **Bit Errors** - Bit Errors are defined as a CRC-6 error in ESF, FT-bit error in SLC-96 and F-bit or sync bit error in SF.

## Configuring the Triton T1/PRI Board

- **Xmt Frame Slips** - Transmit Frame Slips counter shows the number of frame slips for the transmitter.
- **Clear** button - use the **Clear** button to reset the statistics counters.

**Note:** For ideally synchronized systems, **Transmit** and **Receive Frame Slips** counters should be '0.' Continuous update of the frame slips counters means that transmit and receive frequencies are not equal. In this case, you should check the system and MVIP clock setup.

The following options are configurable:

- **Frame Type** - select either **SF** or **ESF**  
**SF** (Superframe Format) consists of twelve (12) consecutive frames. **ESF** (Extended Superframe Format) consists of twenty-four (24) consecutive frames.
- **Line Code** - select either **AMI** or **B8ZS**  
**AMI** (Alternate Mark Inversion) is the line coding format in T1 transmission systems whereby successive ones (marks) are alternately inverted and sent with opposite polarity of the preceding mark. **B8ZS** (Binary 8 Zero Substitution) sends two violations of the bipolar line encoding technique, rather than inserting a one for every seven consecutive zeros.
- **Zero Code Suppression** - select **None** (default setting), **Jam Bit 8**, **GTE** or **Bell**  
**Zero Code Suppression** inserts a "one" bit to prevent the transmission of eight or more consecutive "zero" bits; **Jam Bit 8** forces every bit 8 to a one; **GTE Zero Code Suppression** replaces bit 8 of an all zero channel byte to a one, except in signaling frames where bit 7 is forced to a one. **Bell Zero Code Suppression** replaces bit 7 of an all zero channel byte with a one.
- **Back-to-back T1 Clock Master** - select this box only if you have a back-to-back configuration and you want this span to be the master clock to the system. (Only one clock master should be selected in a back-to-back system.) For information on this option, refer to "T1 Clocking" on page 3-9.
- **T1/PRI Configuration** button - this option allows you to set channels to either T1 or PRI. Clicking on this button invokes a **T1/PRI Configuration** screen (Figure 3-6). Refer to "Setting up T1 or PRI on the Triton T1/PRI Board" on page 3-10 for more information.

## T1 Clocking

Depending on the configuration of the T1 boards and span for your AltiServ system(s), the **Back-to-back T1 Clock Master** setup should be set according to the follow conditions:

- If all of the T1 boards are connected to an FXO (Foreign Exchange Office) or CO:
  1. The **Back-to-back T1 Clock Master** check box must NOT be checked for *any* of the T1 boards.
- If there are two (2) AltiServ systems connected back-to-back with a T1 span:
  1. The **Back-to-back T1 Clock Master** check box must be checked for only *one* of the T1 boards.
- If there are two (2) T1 boards in the same AltiServ system connected back-to-back with a T1 span:
  1. The **Back-to-back T1 Clock Master** check box must be checked for the T1 board that *has not been designated by the MVIP setting as the system's master clock to drive the MVIP bus*.
- If there are four (4) T1 boards in the same AltiServ system, where each pair is connected back-to-back with a T1 span:
  1. The **Back-to-back T1 Clock Master** check box must be checked for one of the T1 boards from the first pair, that has *not been designated by the MVIP setting as the system's master clock to drive the MVIP bus*.
  2. The other two T1 boards of the second pair must have its **Back-to-back Clock Master** check box unchecked.

**Note: IMPORTANT!** In all cases, the **MVIP Clock Configuration** should be set to '**Manual**' and the board *connected to* the board configured as the back-to-back clock master **MUST** be designated at the MVIP bus master.

Configuring the Triton T1/PRI Board

## Setting up T1 or PRI on the Triton T1/PRI Board

Use the **T1/PRI Configuration** button to invoke the **T1/PRI Configuration** screen, as shown in Figure 3-6. The Triton T1/PRI Board can be configured to either T1 or PRI through the configuration options within the **Channel Configuration** screen.

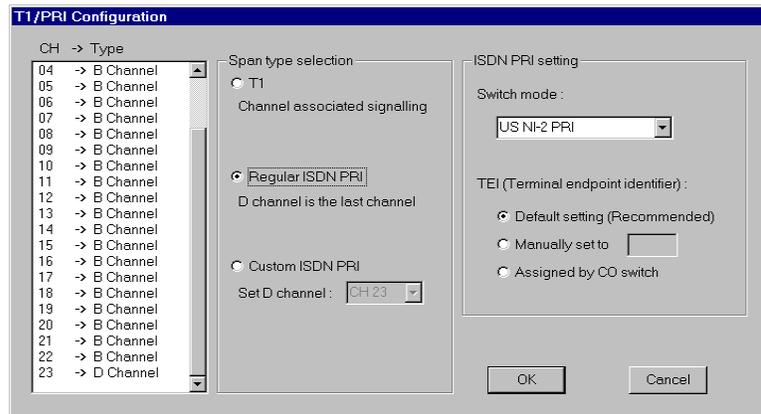


Figure 3-6. T1/PRI Configuration screen

The T1/PRI Configuration screen is composed of:

- **CH -> Type** window - this window displays the channel types associated with each T1/PRI channel. The channel types are:
  - **CAS** - channel associated signal, for all T1 channels
  - **B Channel** - 64 kbps clear voice channel
  - **D Channel** - call setup channel for all voice channels
- **Span Type Selection** group box:
  - **T1** - select this option to associate all channels on the span to a T1 Robbed-bit signal.
  - **Regular ISDN PRI** - select this option to indicate 23B+D ISDN PRI span and to designate the last channel as the D channel.
  - **Custom ISDN PRI** - select this option to set the D channel to the desired location. Use the drop-down list to select the desired D channel.

## Configuring the Triton T1/PRI Board

- **Set D channel** - in the drop-down list, select the channel you wish to set as the D channel.

— **ISDN PRI Setting** group box:

- **Switch mode** - select the appropriate ISDN switch mode from the drop-down list:
  - AT&T 4ESS PRI
  - AT&T 5ESS PRI (default)
  - NT DMS-100 PRI
  - US N12-PRI
- **TEI (Termination Endpoint Identifier)** - defines values that are used in point-to-point data network.
  - **Default setting** - this is the recommended setting
  - **Manually set to** - should always be set to 0.
  - **Assigned by CO switch** - do not use this setting unless advised by your CO.

**Note:** You must shut down and restart AltiServ for new configuration settings to take effect.

Configuring the Triton T1/PRI Board

# Chapter 4 Trunk Configuration

Trunk functions, such as signaling, impedance and volume, are accessible through the **Trunk Configuration** screen. To access **Trunk Configuration** screen, select the **Management** menu and then select **Trunk Configuration** from the drop-down list, or select the **Trunk Configuration** icon from the **Quick Access Toolbar**.

**Note:** To customize trunk characteristics, each trunk must be configured individually. To apply the same configuration to multiple trunks, use the **Apply To** button at the bottom of each screen. This applies changes, **only the field that was changed**, to multiple trunks, instead of having to change each trunk, one at a time.

Trunks that are out of service are automatically tested by the system every 15 seconds. Once the situation is corrected, the trunk will be brought back to service automatically. If none of the trunks are available when an outside call is placed, the caller will hear the system prompt: “All outside lines are busy, please try again later”.



Setting up Trunk Attributes

## Setting up Trunk Attributes

To access the **General** page of the **Trunk Configuration** screen, click on the **Trunk Configuration** icon on the **Quick Access Toolbar**.

This page contains group boxes for setting up general attributes of a trunk.

Note that in the title bar of the Trunk Configuration screen (Figure 4-1), the system displays the card and the channel of the selected trunk.

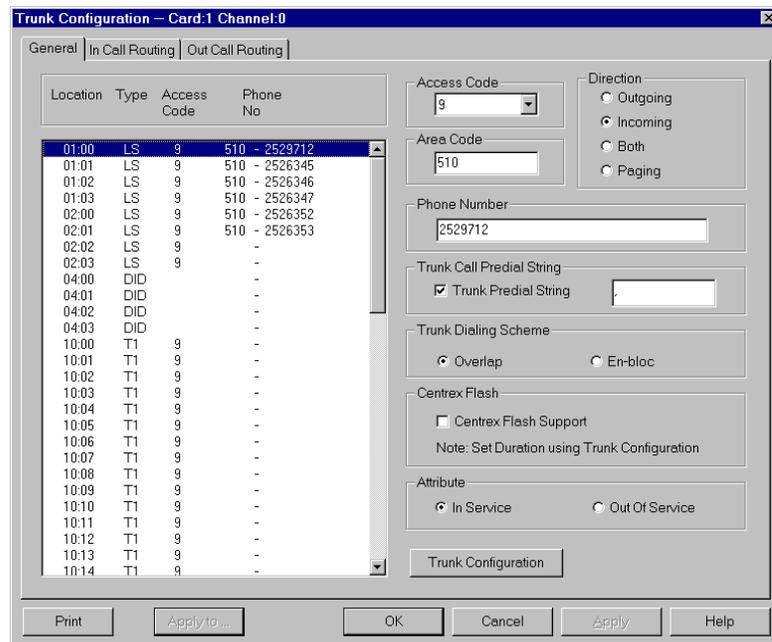


Figure 4-1. Trunk Configuration Screen - General Page

The first group box on the left-hand side of the screen lists all the trunk cards configured in the system. You must first select the trunk channel of a specific trunk card from this list (for example, trunk channel 00 of trunk card 00, as shown in Figure 4-1) to define trunk attributes for each trunk channel configured in the system. You must select each channel individually in the **General** page of the **Trunk Configuration** screen and configure its attributes:

The trunk card and channel you wish to configure is selected in the window that lists all the trunks installed in the system.

Select the appropriate options from the following group boxes for that selected trunk card and channel:

- **Access Code** - use this group box to assign access codes to the selected trunk. If you need to use access codes other than 9, you must first set this up on the **Number Plan** page of **System Configuration**. This field is not applicable for a DID trunk.
- **Area Code** - use this group box to designate the local area code for each trunk. Enter a three-digit area code. **This configuration is for each trunk in the system and will affect features such as Zoomerang if the area code is not configured properly.** Not applicable for a DID trunk.

**Note:** If left blank, the trunk assumes the home area code defined in the **General** page of the System Configuration screen.

- **Direction** - use the following options to set up the direction of the trunks:
  - **Outgoing** - select this option if only outgoing calls are allowed over this trunk. Not applicable for an analog Quantum DID trunk.

**WARNING!**

When an incoming call is received on an outgoing only trunk, it will be disconnected immediately.

- **Incoming** - select this option if only incoming calls are allowed over this trunk. Trunks with this attribute will not be used by the system for placing outgoing calls. An analog Quantum DID trunk is an incoming only trunk, for example.
- **Both** - select this option if the direction of calls placed on this trunk are both incoming and outside calls. (System default). Not applicable for an analog Quantum DID trunk.
- **Paging** - select this option if you wish to assign the trunk for paging or broadcasting purposes. This option enables a third party paging device directly to the trunk port.

**Note:** Paging is only available for analog (CO) trunks.

When this setting is selected, the system will assign a default unused paging ID. The user can select a different ID from the drop-down list. The range of paging IDs are from **00** to **99**, which allows AltiServ to be connected to up to 100 paging systems through trunks for multi-zone paging applications. If the manually selected



## Setting up Trunk Attributes

paging ID is used by another trunk, the current paging ID will not be changed.

- **Overhead Paging by Trunk (# 45 Feature Code)** - use the feature code **#45** to use the paging by trunk function. For example, a user can dial **'#4500'** to connect to a paging system through the trunk with paging ID of **00**.

**Note:** The **Paging** option and the **Overhead Paging** option (in **Audio Peripheral Configuration**, on page 2-35) are independent of each other. The Overhead Paging option is to set up the audio out port of the Quantum board for use with the #44 overhead option built into the system.

- **Phone Number** - enter the phone number assigned to the location. (If the wiring changes and a new phone number is assigned to the location, you must update the information in this field. Do not include the area code.)
- **Trunk Call Predial String** - select this option to have the system automatically dial specified digits whenever the selected trunk is used for outgoing calls. This feature is used to prevent having to dial "9" twice for trunk access when the system is used behind another PBX system. When this option is selected, a data entry field appears next to the option; enter the predial digit in the field provided. This field is not applicable for an analog Quantum DID trunk.
- **Trunk Dialing Scheme** - select either Overlap or En-bloc dialing.
  - **Overlap** - allows the terminal to omit part of the digits required to complete a call, while the remaining digits are buffered. Use **Overlap Dialing** for analog trunks for best results.
  - **En-bloc** - allows the terminal to include all of the digits required to complete a call. Use **En-bloc Dialing** for digital (ISDN) trunks.
- **Centrex Flash** - select this option if the trunk is supported by Centrex. (This option only applies to analog trunks and is not available for ISDN trunks.)

**Note:** To set the duration, configure this option through the **Trunk Configuration** button.
- **Attribute** - select **In Service** to make a trunk available for use; select **Out of Service** to prevent the trunk from being used (i.e. while performing maintenance).

## Setting up Trunk Attributes

- **Trunk Configuration** button - allows the user to configure low-level, hardware-specific properties for each Quantum or Triton trunk.



Setting up Trunk Attributes

## Quantum Trunk Configuration

To configure a Quantum channel, select a Quantum channel from the trunk channels list. Click on the **Trunk Configuration** button or double-click the selected Quantum channel to view the **Quantum Trunk Line Configuration** screen, shown in Figure 4-2.

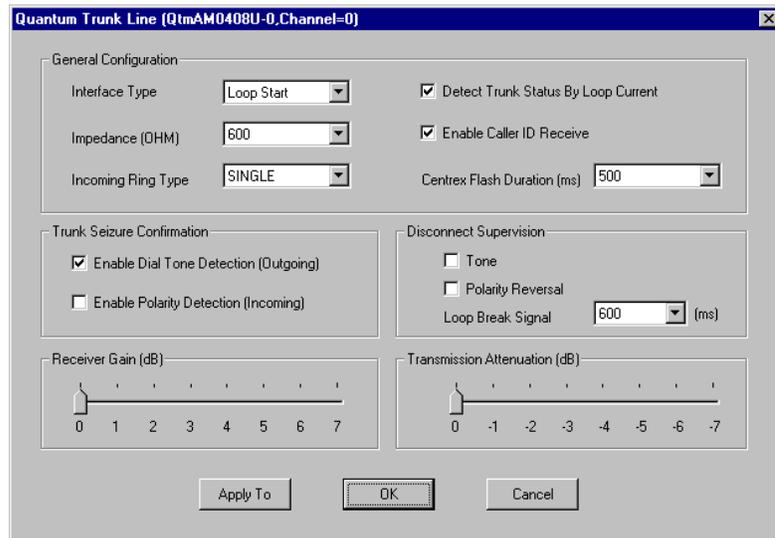


Figure 4-2. Quantum Trunk Line configuration screen

The system administrator can configure the following trunk-specific features for the Quantum board:

- **General Configuration** group box
  - **Interface Type**
    - **Loop Start** - select this option if the user subscribes to the loop start trunks.
    - **Ground Start** - select this option if the user subscribes to the ground start trunks.
    - **DID (Wink Start)** - appears only if the selected trunk is a DID trunk.
  - **Impedance (OHM)** - this group box contains information on the impedance setting. Impedance occurs when power or signal is

transferred from one circuit to another. This is known as the resistance of electrical current to alternating current, measured in OHMs. The setting options are:

- 600 OHMs (domestic setting)
- 900 OHMs (international setting, depending on the country)
- **Incoming Ring Type** - select type of ring (**single** or **double**) desired for incoming calls.
- **Detect Trunk Status By Loop Current** - select this option to detect the Quantum trunk status using a loop current.
- **Enable Caller ID Receive** - select this option to be able to receive caller ID digits.
- **Centrex Flash Duration (ms)** - select this box to be able to specify Flash Duration time in milliseconds. This option must be selected to forward calls to an outside number through a Centrex switch (such as a home number of someone who is telecommuting)
- **Trunk Seizure Confirmation** group box
  - **Enable Dial Tone Detection (Outgoing)** - select this option to enable detection of outgoing dial tone.
  - **Enable Polarity Detection (Incoming)** - select this option to enable detection of incoming polarity. Polarity detection is used when the CO or the connected PBX provides polarity reversal on the tip and ring.
- **Disconnect Supervision** group box - select the type of answering supervision desired:
  - **Tone** - busy tone (reorder tone, fast busy tone, error tone, etc.) or dial tone (continuous tone, etc.) (This should be used in conjunction with drop in loop current. For COs who cannot guarantee loop break, this may be the only option.)
  - **Polarity Reversal** - a reversed battery signal with duration between 400 ms to 600 ms.
  - **Polarity** - a drop in loop current; select either 200 or 600 ms.
- **Receiver Gain/Transmission Attenuation** - adjusts the incoming and outgoing volume for every Quantum trunk or extension. (Incoming and outgoing volume for Quantum trunks or extensions can also be configured through the **Quantum Board Channel Configuration** option in the **Management Menu**. See page 4-17.)

## Setting up Trunk Attributes

1. Select the trunk or extension you wish to adjust. You may adjust multiple trunks and extensions by clicking on the “Apply to...” button and selecting them using standard Windows selection (Ctrl or Shift) keys.
2. Adjust **Receiver Gain** - this is the gain control for the volume that is *received* by the system. The default setting is **0 dB** for a trunk and **0 dB** for a line/extension.
3. Adjust **Transmission Attenuation** - this is the gain control for the volume that is *transmitted* from the system. The default setting is **0 dB** for a trunk and **0 dB** for a line/extension.

### **CAUTION!**

**Setting the Receiver Gain or the Transmission Attenuation too high will cause a distortion in the voice quality.**

## Triton VoIP Trunk Configuration

To configure a Triton VoIP channel, select a VoIP channel from the trunk channels list. Click on the **Trunk Configuration** button or double-click the selected VoIP channel to view the **VoIP Trunk Configuration** screen, shown in Figure 4-3.

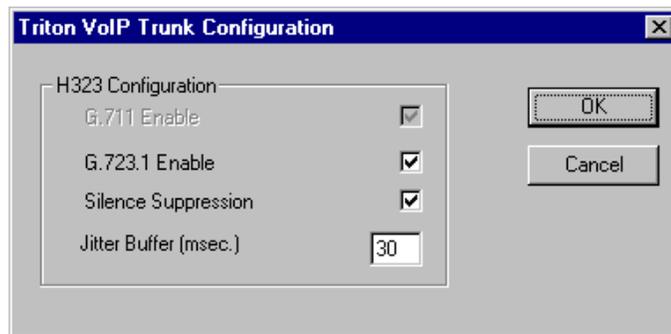


Figure 4-3. VoIP Trunk Configuration screen

The system administrator can configure the following trunk-specific features for the Triton VoIP board:

- **H.323 Configuration** group box:
  - **G.711 Enable** - provides toll quality digital voice encoding and is not configurable (i.e. you cannot de-select it). It is enabled by

default to guarantee interoperability when other voice compression (e.g. **G.723.1**) is not available or when better voice quality is desired.

- **G.723.1 Enable** - this option uses low rate audio encoding to provide near toll quality performance under clean channel conditions.
- **Silence Suppression** - this option suppresses silence packets during VoIP sessions. When silence is detected during a call, AltiWare IP stops sending packets to the other side. When silence is detected during voice mail, the silence period is not recorded.  
**Note:** AltiWare IP disconnects the voice mail session when a silence period exceeds 70 seconds during voice mail recording over VoIP.
- **Jitter Buffer (in msec.)** - this number indicates the delay buffer (in milliseconds) the system will use to buffer voice packets received from the IP network. Voice packets sent over the IP network may incur different delays due to network load or congestion. The Jitter Buffer helps to smooth out the delay variation in the arriving voice packets and maintains voice quality at the receiving end. The default setting is 30 milliseconds.

**Note:** The Jitter Buffer should be adjusted according to the WAN bandwidth allocated to data traffic. Refer to the Network Configuration Guidelines for VoIP section in the *Getting Started Manual* for more information.

## Triton T1/PRI Trunk Configuration

To configure a Triton T1 or PRI channel, select either channel from the trunk channels list. Click on the **Trunk Configuration** button or double-click the selected Triton T1 channel to view the **Triton T1 Configuration** screen, shown in Figure 4-4.

The screenshot shows a configuration window for a Triton T1 channel. The title bar reads "Triton T1 Configuration - TritonT1/PRI-0". Inside, it says "Channel: 7". The "T1 robbed-bit Signaling" section has a "Protocol" dropdown set to "E&M Wink Start" and a "Dialing Delay" spinner set to "250 ms". The "How to collect Caller ID and DID" section has "Max. seconds before the first digit" set to "3 seconds" and "Max. seconds between digits" set to "None". There are two checked checkboxes: "Incoming sequence" and "Or". The "Incoming sequence" row contains five dropdown menus: "# or \*", "Caller ID", "# or \*", "DID/DNIS", and "None". The "Or" row contains five dropdown menus: "DID/DNIS", "None", "None", "None", and "None". At the bottom are three buttons: "Apply to...", "OK", and "Cancel".

Figure 4-4. Triton T1 Configuration

The following options are displayed:

- **T1 robbed-bit signaling** group box:
  - **Protocol:** select the appropriate trunk signaling as **E&M Wink Start** (default), **E&M Immediate Start**, **Ground Start** or **Loop Start**.
  - Note:** For signaling from one board to another, only **FXS** (Foreign Exchange Subscriber) is supported. Loop Start and Ground Start protocols cannot be used for interfacing between two boards.

- **Dialing Delay:** this field specifies the delay (in milliseconds) after trunk seizure before digit dialing. Do not change this value unless advised.
- **How to collect Caller ID and DID** group box: allows the user to select the time-out delay (in seconds) and the appropriate sequence of symbols to be collected for Caller ID and DID. Consult your local carrier to obtain the proper format.
  - **Max. seconds before the first digit** - maximum wait time before time-out for the system to identify this digit after either the first *ring* in ground start or loop start or the *wink* in wink start. Default value is **3** seconds. Do not change this value unless advised.

**Note:** Selecting '**None**' means no Caller ID or DID information will be collected. All other fields will be grayed out. Use this option to disable Caller ID and DID collection.
  - **Max. seconds between digits** - maximum wait time before time-out between two digits. Default value is '**None.**' Do not change this value unless advised.

**Note:** Selecting '**None**' means the system will only wait for the sequence of digits that are collected within the length of time specified in the **Max. seconds before the first digit** field.

To set up the sequences of Caller ID and DID, select from the drop-down lists in each box as listed below:

- **Incoming sequence** check box: when this box is checked, you may select up to five incoming symbols to collect from the Caller ID or DID digits. The symbols that can be collected are:
  - None
  - #
  - \*
  - # or \*
  - Caller ID
  - DID/DNIS

**Note:** Selecting '**None**' in any field of the sequence will terminate the sequence and automatically gray out all following fields in that sequence.

## Setting up Trunk Attributes

The following default sequence is enabled, as shown in Figure 4-4:

(# or \*) (Caller ID) (# or \*) (DID/DNIS)

- **Or** check box - when this box is checked, you may select an additional sequence of up to five incoming symbols to collect from the Caller ID or DID digits.

Not checking any box is equivalent to checking 'None' in the first field.

- **Apply to** button - this button allows the administrator to make changes that can be applied to all trunk selections.

### Caller ID and DID Incoming Sequence Example

The following is an **example** of a Caller ID and DID/DNIS incoming sequence screen.

How to collect Caller ID and DID

Max. seconds before the first digit: 3 seconds

Max. seconds between digits: 1 second

Incoming sequence :

# Caller ID \* DID/DNIS None

Or :

DID/DNIS None None None None

Figure 4-5. Incoming Sequence example screen

When a call comes in, the system tries to match the incoming sequence to either the first Incoming Sequence Digit String or the second sequence. If no match is found, no Caller ID or DID digits will be collected.

- First Incoming Digit Sequence
  - AltiServ waits 3 seconds for the first digit to arrive, which must be a '#'.
  - After receiving the first matching digit (#), AltiServ waits 1 second between each digit to receive the next digit, until all digits are received. The '\*' symbol acts as a delimiter between Caller ID and DID digits.

- The incoming sequence of digits must match the T1 incoming sequence of digits selected above.

OR

if the incoming digits doesn't match the first digit sequence, the system moves to the second incoming digit sequence.

- Second Incoming Digit Sequence
  - AltiServ waits 3 seconds for the first digit to arrive.
  - After receiving the first digit (which is recognized as not being the '#' from the first sequence), AltiServ waits 1 second between each digit to receive the next digit, until all digits are received.
  - The incoming sequence of digits must match the T1 incoming sequence of digits selected above.

The example sequences selected in Figure 4-5 show that AltiServ is expecting either '#CID\*DID' or just 'DID' digits for all incoming calls. If no match is found for either sequence, no Caller ID or DID digits are collected.

## *Incoming Call Routing*

Click on the **In Call Routing** in the **Trunk Configuration** screen to display the **In Call Routing** page shown in Figure 4-6.

The screenshot shows a dialog box titled "Trunk Configuration - Card:1 Channel:0" with three tabs: "General", "In Call Routing", and "Out Call Routing". The "In Call Routing" tab is active. It contains three sections for configuring call routing based on time frames:

- Workdays During Business Hours:** Three radio button options are present: "Route Incoming Calls to Extension" (unselected), "Route Incoming Calls to Auto Attendant" (selected), and "Route Incoming Calls to Operator" (unselected). A dropdown menu next to the selected option shows the value "1".
- Workdays Outside Business Hours:** Three radio button options are present: "Route Incoming Calls to Extension" (unselected), "Route Incoming Calls to Auto Attendant" (selected), and "Route Incoming Calls to Operator" (unselected). A dropdown menu next to the selected option shows the value "1".
- Non Workdays:** Three radio button options are present: "Route Incoming Calls to Extension" (unselected), "Route Incoming Calls to Auto Attendant" (selected), and "Route Incoming Calls to Operator" (unselected). A dropdown menu next to the selected option shows the value "1".

At the bottom of the dialog, there are six buttons: "Print", "Apply to...", "OK", "Cancel", "Apply", and "Help".

Figure 4-6. Trunk Configuration Screen - In Call Routing Page

This page contains group boxes that configure the way incoming calls are handled during different time frames. The Business Hours are determined by the values entered on the **Business Hours** page of **System Configuration**.

To configure the incoming trunk call routing, select the appropriate options in the group boxes listed below:

- **Workdays During Business Hours** group box - select one of the following options to define the way the system will handle an incoming call during business hours on a workday:
  - **Route Incoming Calls to Extension** - select this option if incoming calls are to be routed to an extension and enter the extension number in the field provided.

- **Route Incoming Calls to Auto Attendant** - select this option if incoming calls are to be routed to the Auto Attendant and enter the Auto Attendant number in the field provided.
- **Route Incoming Calls to Operator** - select this option if incoming calls are to be routed to the operator.
- **Workdays Outside Business Hours** group box - select one of the following options to define the way the system will handle an incoming call during *non-business hours on a workday*:
  - **Route Incoming Calls to Extension** - select this option if incoming calls are to be routed to an extension and enter the extension number in the field provided.
  - **Route Incoming Calls to Auto Attendant** - select this option if incoming calls are to be routed to the Auto Attendant and enter the Auto Attendant number in the field provided.
  - **Route Incoming Calls to Operator** - select this option if incoming calls are to be routed to the operator.
- **Non-Workdays** group box - select one of the following options to define the way the system will handle an incoming call at all times during *non-workdays*:
  - **Route Incoming Calls to Extension** - select this option if incoming calls are to be routed to an extension and enter the extension number in the field provided.
  - **Route Incoming Calls to Auto Attendant** - select this option if incoming calls are to be routed to the Auto Attendant and enter the Auto Attendant number in the field provided.
  - **Route Incoming Calls to Operator** - select this option if incoming calls are to be routed to the operator.



## *Outgoing Call Routing*

Click on **Out Call Routing** in the **Trunk Configuration** screen to display the **Out Call Routing** page. Figure 4-7 on page 4-16 displays the **Out Call Routing** page showing in the title bar with the card and the channel number of the selected trunk. This is not applicable for DID and incoming-only trunks.

## Outgoing Call Routing

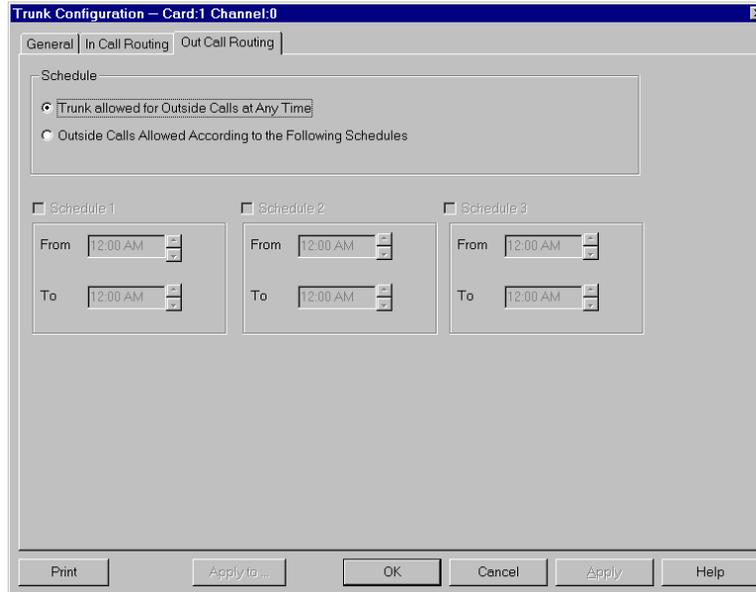


Figure 4-7. Trunk Configuration Screen - Out Call Routing Page

This page contains group boxes that define the way outgoing calls are handled for a specific trunk.

To configure the outgoing trunk call routing, select the appropriate options in the group boxes listed below:

- **Schedule** group box
  - **Trunk Allowed for Outside Calls at Anytime** - select this option if outgoing calls are allowed at all times. (This is the system default.)
  - **Outside Calls Allowed According to The Following Schedules** - select this option if outgoing calls are only allowed during specific time frames. There are three different schedule settings.
- **Schedule 1, 2, and 3** - check the schedule box to enable the use of the specified schedule and set the **From** and **To** time settings.

## Quantum Board Channel Gain Configuration

The incoming and outgoing volume can be quickly adjusted for Quantum trunks or extensions through the **Quantum Board Channel Gain Configuration** screen accessed from the Management Menu. (Or you may configure incoming and outgoing volume through the board configuration. See page 4-7)

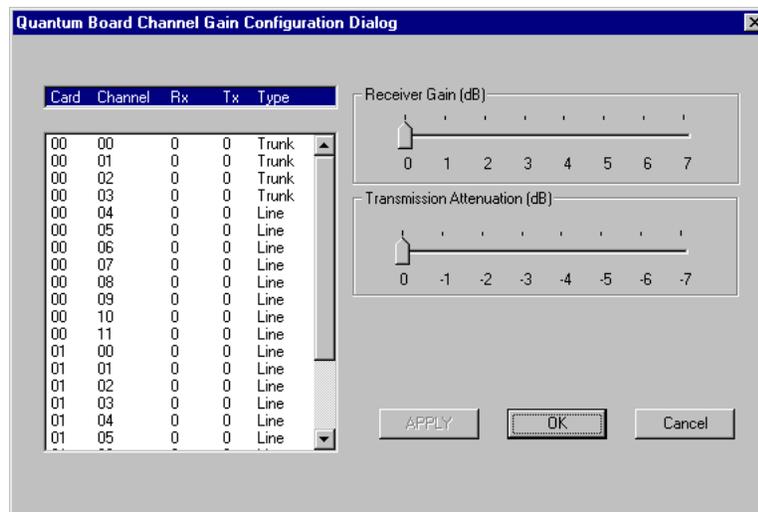


Figure 4-8. Quantum Board Channel Gain Configuration screen

1. From the **Management Menu**, select **Quantum Board Channel Configuration**.
2. Select the trunk or extension you wish to adjust. You may adjust multiple trunks and extensions by clicking on the “Apply to...” button and selecting them using standard Windows selection (Ctrl or Shift) keys.
3. Adjust **Receiver Gain** - this is the gain control in decibels (dB) for volume *received* by the system. The default setting is **0 dB** for a trunk and **0 dB** for a line/extension.

#### Quantum Board Channel Gain Configuration

4. Adjust **Transmission Attenuation** - this is the gain control in decibels (dB) for volume *transmitted* from the system. The default setting is **0 dB** for a trunk and **0 dB** for a line/extension.

**CAUTION!**

**Setting the Receiver Gain or the Transmission Attenuation too high will cause a distortion in voice quality.**

# Chapter 5 Extension Configuration

Extension configuration functions are accessible through the **Extension Configuration** screen. To access **Extension Configuration**, either select the **Management** menu and then select **Extension Configuration** from the drop-down list, or click on the **Extension Configuration** icon on the Quick Access Toolbar.

Extended tabs along the top of the screen represent different pages of extension information. This information is specific to each extension in the system. These pages are listed below:

- General
- Workgroup
- Station Speed
- Messaging 1
- Messaging 2
- Calling
- Answering
- One Number Access



## Setting up Extension Attributes

Select the **General** page of the **Extension Configuration** screen.

This page contains group boxes for setting up general attributes of an extension.

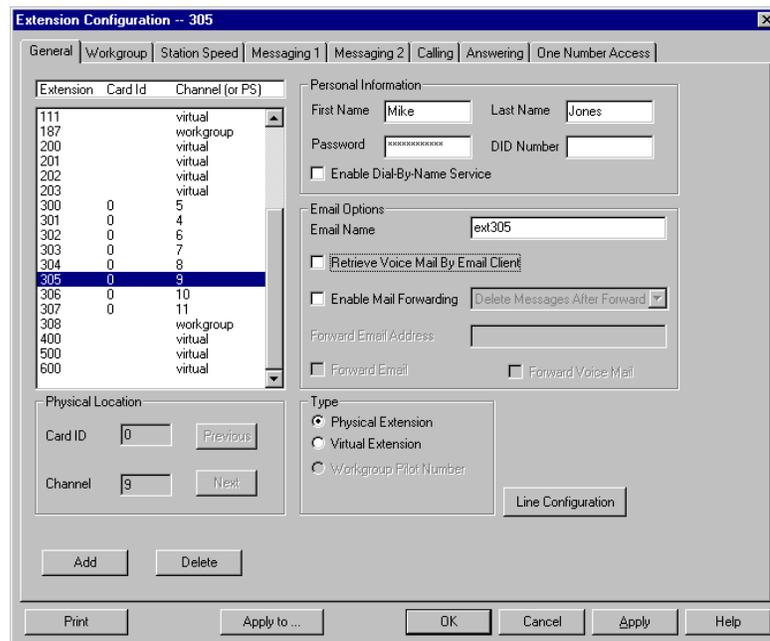


Figure 5-1. Extension Configuration Screen - General Page

The first group box in the upper left corner lists all extensions configured on the system. System administrators must first select the extension from this list (for example, extension 305). After selecting the extension, the extension number is displayed on the screen title bar (“Extension Configuration - 305”) so that you know which extension the configuration applies to, even if you view a different page. Each physical extension has an associated card and channel number, as shown in Figure 5-1.

- **Physical Location** group box
  - The **Physical Location** group box shows the card number and port (channel) number assigned to the selected extension. These fields are disabled (dimmed) if the selected extension is not a physical

extension. The **Previous** and **Next** buttons are used to relocate the selected physical extension from location to location. Clicking on the **Previous** or **Next** button moves the selected extension to the previous or next available physical port. These buttons are disabled (grayed out) if you do not have available physical ports.

- **Personal Information** group box
  - **First Name** - enter the first name of the extension user (32 maximum characters).
  - **Last Name** - enter the last name of the extension user (32 maximum characters).
  - **Password** - enter a password for the extension user (valid passwords are numeric entries only and must be at least 2 digits, but no more than 8 digits in length).
  - **DID Number** - enter the number of digits needed to match a DID number (range 2-16). Each extension can be assigned a DID number (0-10, letters cannot be used). A DID number does not have a fixed length.
 

**Note:** It is highly recommended for the user to enter the full 10 digit DID number into this field, instead of the last 3 or 4 digits. This will guarantee that the system will send the correct number as the Caller ID on PRI lines. If less than 10 digits are entered, the system will send the trunk's *configured phone number* as the Caller ID. (If the trunk number is not configured, the system *main number* is sent as the Caller ID.)
- **E-mail Options** group box
  - **E-mail Name** - enter the user's e-mail name and address (i.e. jsmith for John Smith).
  - **Do Not Retrieve Voice Mail By E-mail Client** - de-select this box to prevent the user's POP3 mail reader from retrieving voice mail.
  - **Enable Mail Forwarding**- select this box to allow mail forwarding to a specified e-mail address. You can specify what to do with the message after it is forwarded by selecting one of the available options from the selection box.
  - **Forward E-mail Address** - enter the e-mail address where you wish your e-mail to be forwarded.

## Setting up Extension Attributes

- **Forward E-mail/Forward Voice Mail** - select either of these boxes to forward e-mail messages or voice mail messages only. Select both to forward both type of messages.
- **Type** group box - this group box contains extension **type** information. The three extension types are listed below:
  - **Physical Extension** - defines an extension that is associated to a physical port and device, usually a telephone set. Select this button if you are configuring a telephone.  
An extension is created, by default, as a **physical extension** unless there are no more physical ports available.
  - **Virtual Extension** - defines an extension that is not associated with a physical port. It is mainly used as a message mailbox but can also be used in a telephone sharing environment. Users of a virtual extension can login as a physical extension on any available station to access all physical extension features (i.e. using Feature Codes).
  - **Workgroup Pilot Number** - defines an extension of a workgroup that represents a group of extension numbers. When this number is dialed, a hunt or search is done by the system to find an available extension in the workgroup. Workgroups are not associated with a physical port. AltiWare allows up to 32 workgroups to be configured. Each workgroup can have up to 64 members or extensions.  
  
**Note:** After an extension is created, it cannot be changed to a workgroup extension, and vice versa.
- **Line Configuration** button - allows you to configure hardware attributes for a selected extension. Figure 5-2 illustrates the **Quantum Line Configuration** screen for extensions.

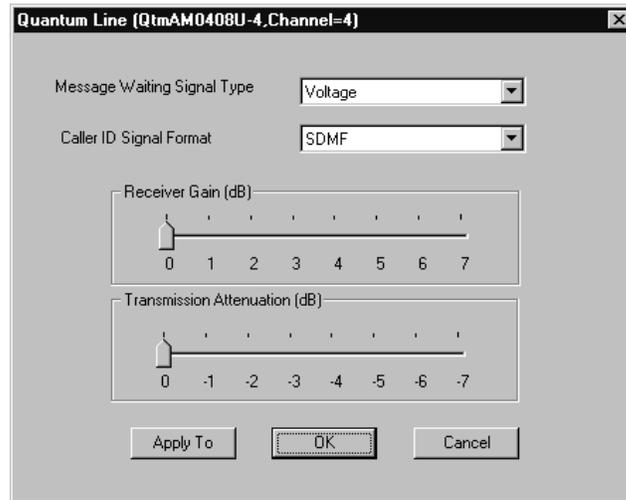


Figure 5-2. Quantum Line Configuration screen for extensions

Configure the following hardware extension-specific features:

- **Message Waiting Signal Type** - this group box contains information on the type of message waiting indicator for your phone. The options are:
  - **None**
  - **Voltage** - select this option for a voltage-based message waiting indicator.
  - **FSK** - select this option for FSK-based (Frequency Shift Keying) message waiting indicator.
  - **Tone** - select this option for a tone-based message waiting indicator.
- **Caller ID Signal Format** - this group box contains information on the message format with which to send Caller ID information. The options are:
  - **None**
  - **SDMF** - select SDMF (Single Data Message Format) for supporting and sending a single data type, such as phone numbers.

## Setting up Extension Attributes

- **MDMF** - select MDMF (Multiple Data Message Format) for supporting and sending multiple data types, such as name and number information.
- **Receiver Gain/Transmission Attenuation** - adjusts incoming and outgoing volume for every extension.
  1. Select the trunk or extension you wish to adjust. You may adjust multiple trunks and extensions by clicking on the “Apply to...” button and selecting them using standard Windows selection (Ctrl or Shift) keys.
  2. Adjust **Receiver Gain** - this is the gain control in decibels (dB) for volume *received* by the system. The default setting is **0 dB** for a trunk and **0 dB** for a line/extension.
  3. Adjust **Transmission Attenuation** - this is the gain control in decibels (dB) for volume *transmitted* from the system. The default setting is **0 dB** for a trunk and **0 dB** for a line/extension.

### **CAUTION!**

**Setting the Receiver Gain or the Transmission Attenuation too high will cause a distortion in voice quality.**

- **Add and Delete** buttons - allow you to add and delete an extension. When you click on the **Add** button, the **Add New Extension** screen appears. When you click on **Delete** button, a dialog box appears asking if you really want to delete the selected extension.

To add a new extension, follow the steps below:

1. Clicking on the **Add** button on the **General** page of **Extension Configuration** displays the **Add New Extension** screen (Figure 5-3). This screen contains group boxes that define the parameters of the new extension.

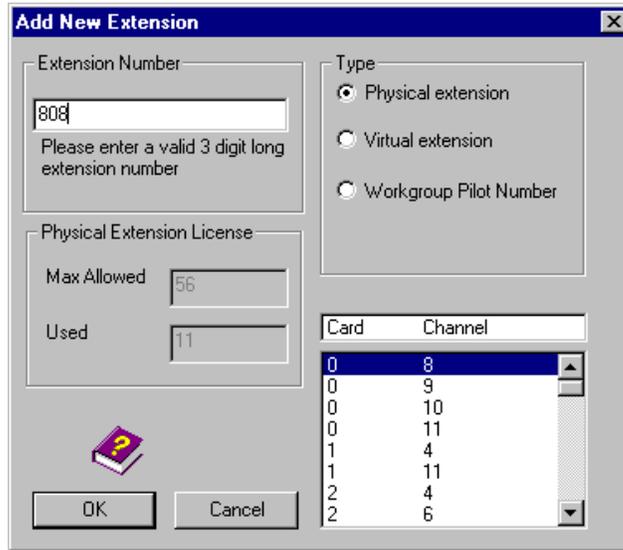


Figure 5-3. Extension Configuration Screen - Add New Extension

2. Enter the information requested in the group boxes listed below:
  - **Extension Number** - enter an extension number that is not currently being used. A valid extension number must begin with the first digits that were set as extensions in the “First Digit Assignment” fields.
  - **Type** - select one of the three types of extensions: physical, virtual, or workgroup pilot number. This option is limited by the installed hardware (available channels). If all channels are already assigned, a physical extension will not be accepted.
  - **Physical Extension License** group box - displays the maximum number of physical channels licensed to the user as well as the number of assigned, licensed physical channels. Refer to the Getting Started Manual for more information.
  - **Card/Channel** - displays the card and channel location of the new extension. If no physical locations are available, the selection box will be empty.

Setting up an Extension in a Workgroup

- **Apply to** button - to customize extension characteristics, each extension must be configured individually. To apply the same configuration to multiple extensions, use the **Apply to** button at the bottom of each Extension Configuration screen. This invokes an **Extension Selections** screen (Figure 5-4) that allows you to apply changes (**of only the field that was changed**) to multiple extensions, instead of having to change each extension individually.

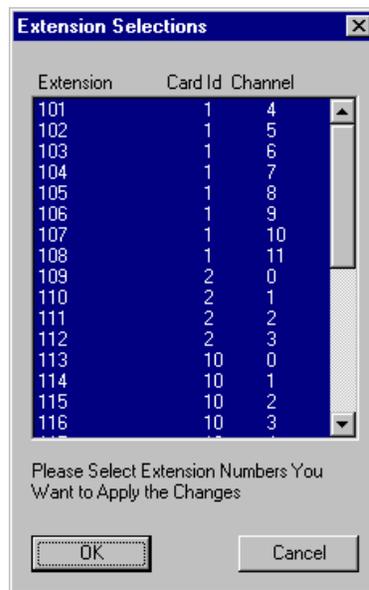


Figure 5-4. Extension Selections screen

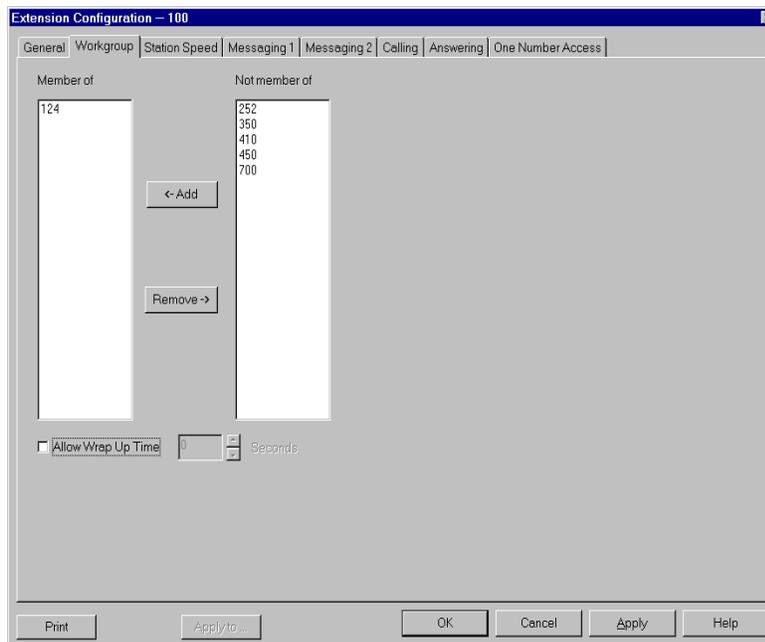
## *Setting up an Extension in a Workgroup*

To set up a workgroup, refer to **ACD and Workgroup Configuration** in Chapter 7. Once you have created a workgroup, you can then select the extensions you wish to add to this workgroup and configure these workgroup extensions accordingly.

## Setting up an Extension in a Workgroup

To set up an extension in the workgroup, access the **General** page of the **Extension Configuration** screen. To do this, click on the **Extension Configuration** icon on the **Quick Access Toolbar** and then click on the **General** page.

1. From the **General** page, select the extension you wish to add to the workgroup. For example, select extension 100. Note that the title bar now shows “Extension Configuration - 100”.



## 5. Extension Configuration

Figure 5-5. Workgroup Page for Workgroup Member Extension

2. Click on the **Workgroup** page in the **Extension Configuration** screen. The Workgroup screen, for the selected extension 100, appears as shown in Figure 5-5, “Workgroup Page for Workgroup Member Extension”.
3. Select and highlight a Workgroup Pilot Number (for example, Workgroup 124 from the **Not Member of** box), that you want to assign extension 100 to and click “**Add.**” “Workgroup 124” now appears in the **Member of** box. The remaining workgroups that Extension 100 does not belong to are listed in the **Not Member of** box.

## Setting up Station Speed Dialing

To remove extension 100 from a workgroup, highlight the Workgroup Pilot Number in the **Member of** box and click “**Remove.**” The Workgroup Pilot Number moves back to the **Not Member of** box.

4. Configure the **Wrap Up Time** for the extension in the workgroup. If this box is selected, the system delays the presentation of the next call in queue by the number of seconds configured. For example, if the number of seconds is set at 30, the system waits 30 seconds after a call has ended before sending the next call in queue. This delay is configurable on a per member basis and gives a workgroup member some time to wrap-up on notes, prepare for the next call or log out of the workgroup.

## *Setting up Station Speed Dialing*

To set up Station Speed Dialing, access the **General** page of the **Extension Configuration** screen. To do this, click on the **Extension Configuration** icon on the **Quick Access Toolbar** and then click on the **General** page.

1. From the **General** page, select the extension for which you wish to set up Station Speed Dialing. For example, select extension 100. Note that the title bar now shows “Extension Configuration - 100.”
2. Click on the **Station Speed** page in the **Extension Configuration** screen. The Station Speed screen, for the selected extension 100, appears as shown in Figure 5-6. This screen allows you to set up 20 speed dialing numbers for the selected extension.

Observe the following rules:

- Enter valid digits in the data entry fields provided. (A maximum of 20 digits per entry.) Valid digits are **0** through **9**, **#**, **\***, and **(,)** comma. **The comma represents a one (1) second pause or delay.**
- To enter an outside telephone number, enter all necessary digits (such as trunk access code, long distance prefix and area code) that you would dial when manually dialing the number. For example, the phone number 914085551212 comprises of **9** (trunk access code), **1** (long distance prefix), followed by **408** (area code), and finally the seven digit telephone number. For local calls, the long distance prefix (**1**) and the area code (**408**) should not be entered if they are not required to dial the number.

## Setting up Station Speed Dialing

Speed Dialing			
00	914155551212	10	
01	914089427700	11	
02		12	
03		13	
04		14	
05		15	
06		16	
07		17	
08		18	
09		19	

When entering speed dial numbers, please include all necessary digits (such as trunk access code, long distance prefix and area code) that you would dial when manually dialing the number. e.g. 914155551212

Print    Apply to ...    OK    Cancel    Apply    Help

## 5. Extension Configuration

Figure 5-6. Extension Configuration Screen - Station Speed Page

3. You can speed dial an extension, local, long distance, and international telephone numbers. To set up Speed Dial numbers:
  - Starting from the 00 field, enter a complete telephone number in the field. This number, 914085551212, for example, can then be dialed by simply dialing **#7700**.
  - Repeat the above step for the rest of the fields from 01 through 19, if you wish to set up all 20 Speed Dialing numbers.

## Setting up Station Messaging

Station Messaging defines how messages are handled for an extension based on the selected message handling options in the **Messaging 1** and **Messaging 2** pages of **Extension Configuration**.

To configure extension messaging parameters, follow the steps below:

1. To specify an extension for which you wish to set up messaging criteria, you must first select the extension in the **General** page of the **Extension Configuration** screen. For example, select extension 100.
2. From the **Extension Configuration** screen, click on the **Messaging 1** page, as shown in Figure 5-7.

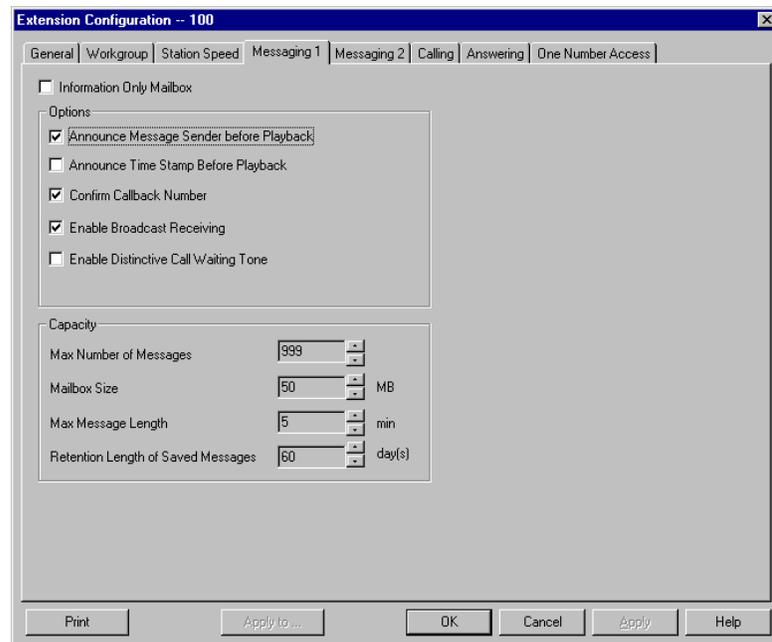


Figure 5-7. Extension Configuration Screen - Messaging 1 Page

3. Specify general messaging parameters for extension 100, as follows:

- **Information-Only Mailbox** - select this option to configure the extension as an information-only mailbox, which will announce customized pre-recorded information when accessed. When selected, this mailbox will not allow callers to leave a message but only to listen to the message announcement (personal greeting) from the mailbox. To repeat the message, callers are instructed to press the # key.
- **Options** group box - select one or more of the five options for listening to playback of recorded messages. These options apply to both new messages and saved messages. The options are listed below:
  - **Announce Message Sender Before Playback** - select this option to hear the name of the message sender (internal sender only) before listening to recorded AltMail messages.
  - **Announce Time Stamp Before Playback** - select this option to hear the timestamp (time and date) of each message before playback.
  - **Confirm Callback Number** - select this option to enable the system to confirm the accuracy of the caller's number.
  - **Enable Broadcast Receiving** - select this option to allow the extension to receive broadcast messages.
  - **Enable Distinctive Call Waiting Tone** - select this option to allow three different call waiting tone cadences to distinguish between internal, external, and operator calls.
- **Capacity** group box - this window contains boxes that define the capacity of messages stored for this extension. Options are listed below:
  - **Max Number of Messages** - enter the maximum number of messages that can be stored in the user's mailbox. Options are **1** through **999**. (System default is 100.)
  - **Mailbox Size** - enter the mailbox size in number of MBs of stored messages. (System default is 50 MB.)
  - **Max Message Length** - enter the maximum length of voice messages in minutes. Options are 1 to 30 minutes. (System default is 5 minutes.)

## Setting up Station Messaging

- **Retention Length of Saved Messages** - enter the number of days saved messages are to be archived by the system. Options are 1 through 90 days. (System default is 60 days.)
- 4. Click on **Messaging 2** page of the **Extension Configuration** screen (Figure 5-8) to define how the system handles message notification for the selected extension number. (In this example, the extension number is 100).

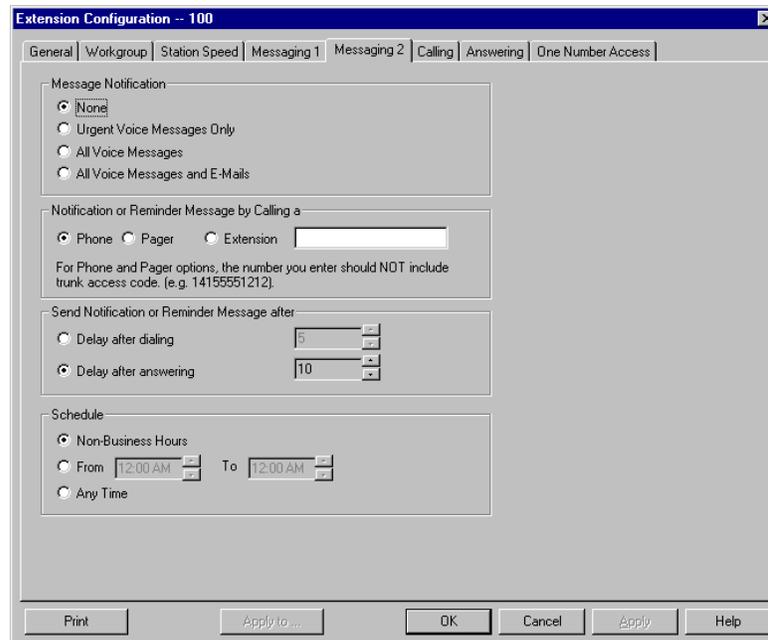


Figure 5-8. Extension Configuration Screen - Messaging 2 Page

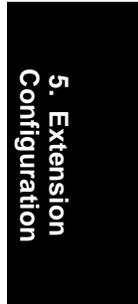
5. Specify **Message Notification** parameters for the selected extension. Individual users may also configure **Message Notification** within AltMail.
  - **Message Notification** group box - the system can be configured to notify the user of new messages by either calling a phone number, a pager number or an extension. Select one of the following options:
    - **None** - select this option if the user does *not* want to be notified with a call regarding new messages received. Selecting this

option does not prevent the user from getting message waiting indicators or stutter dial tone when new messages are received.

- **Urgent Voice Messages Only** - select this option if the user wants to be notified of *urgent* voice messages only.
- **All Voice Messages** - select this option if the user wants to be notified of *all* new voice messages.
- **All Voice Messages and E-mails** - select this option if the user wants to be notified of all new *voice and e-mail* messages.
- **Notification or Reminder Message By Calling a group box** - select one of the three options followed by the destination phone, pager, or extension number. All relevant dialing prefixes such as **1** (except for trunk access code) must precede the destination number, up to a maximum of **80** digits. Options are listed below:
  - **Phone** - select this option to notify the user of new messages by calling a phone number and enter the phone number in the field provided.
  - **Pager** - select this option to notify the user of new messages by calling a pager. Enter the pager number in the field provided. The system calls the specified pager number and then dials the system main number which will be displayed on the user's pager. (Refer to the **General** page on the **System Management** screen.)

For the operator-assisted paging function, the operator phone number **and** the pager number must be entered in the **<phone number>\*<pager number>** format. For example, if the phone number to call the pager operator is **7654321** and the pager number to page the user is **12345678**, the notification outcall number that needs to be entered is **7654321\*12345678**. When the pager operator answers the Message Notification call, AltiServ announces the pager number **and** the **System Main Number** (as configured on the **General** page of **System Configuration**) which will be displayed on the user's pager. The operator is also given the option to repeat these numbers by pressing '#'.

- **Extension** - select this option to notify the user of new messages by calling an extension number. Enter the extension number in the field provided.



## Configuring Calling Restrictions

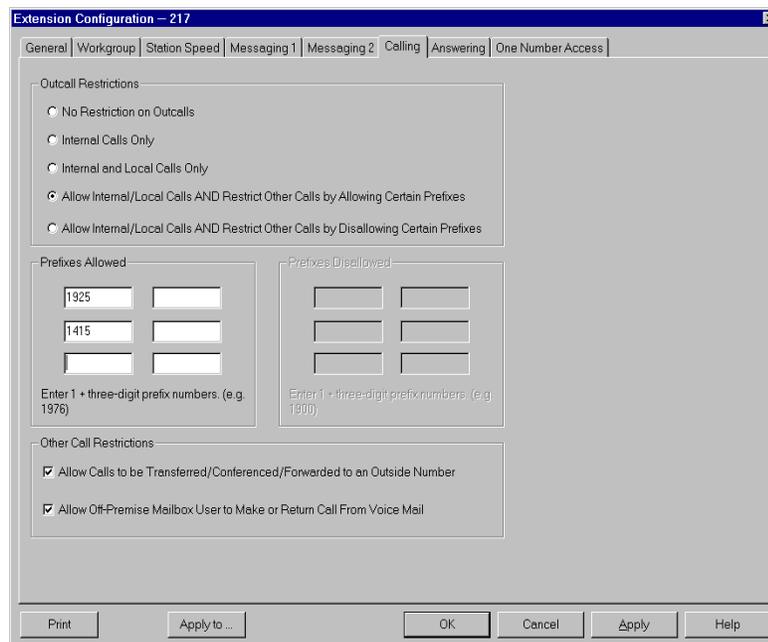
- **Send Notification** group box - select the type of delay detection and the duration (from 5 to 30 seconds) before the system sends the return phone number (the System Main Number as configured on the General page of System Configuration) after the system detects an answer. Select one of the following options:
  - **Delay after dialing**- enter the duration of delay (from 5 to 30 seconds) after *dialing* before the system sends the return phone number.
  - **Delay after answering** - enter the duration of delay (from 5 to 30 seconds) after *answering* before the system sends the return phone number.
- **Schedule** group box - select the schedule of when the user wants to be notified of new messages. Options are listed below:
  - **Non-Business Hours** - select this option if the user wants to be notified of new messages only during non-business hours. Business hours are set in the **Business Hours** page of **System Configuration**. Figure 2-3, “System Configuration Screen - Business Hours Page,” on page 2-8.
  - **From/To** - select this option if the user wants to be notified of new messages during a specified time of each day. Enter the hours in the fields provided.
  - **Any Time** - select this option if the user wants to be notified of new messages at all times (every day).

## *Configuring Calling Restrictions*

The **Calling** page in the **Extension Configuration** screen defines restrictions for outgoing calls initiated by the selected extension.

System calling restrictions, as configured in “Defining System Call Restrictions” on page 2-12, specify restrictions for all extensions. You can redefine calling restriction for individual extensions using the **Calling** page in the **Extension Configuration** screen. These restrictions, however, have to be within parameters of the system calling restrictions.

1. To specify an extension for which you wish to configure calling restrictions criteria, you must first select the extension in the **General** page of the **Extension Configuration** screen. For example, select extension 100.
2. Click on the **Calling** page in the **Extension Configuration** screen, shown in Figure 5-9, to specify the outgoing call restrictions for the extension.



5. Extension Configuration

Figure 5-9. Extension Configuration Screen - Calling Page

3. To configure the outgoing call restrictions, select the appropriate options in the group boxes:
  - **Outcall Restrictions** group box
    - **No Restrictions on Outcalls**- select this option if the user has no restrictions on outside calling.
    - **Internal Calls Only**- select this option if the user is restricted to extension-to-extension calling only.

## Configuring Calling Restrictions

- **Internal and Local Calls Only** - select this option if the user is restricted to extension-to-extension and local calls only.
- **Allow Internal/Local Calls AND Restrict Other Calls by Allowing Certain Prefixes** - select this option if the user is *allowed* to make internal calls, local calls and NPA/NNX codes as defined in the Prefixes Allowed group box. Enter the dialing prefixes in the **Prefixes Allowed** group box. (A maximum of six calling prefixes.)
- **Allow Internal/Local Calls AND Restrict Other Calls by Disallowing Certain Prefixes** - select this option if the user is *not allowed* to call outside numbers with certain dialing prefixes or area codes. Enter the dialing prefixes in the **Prefixes Disallowed** group box. (A maximum of six calling prefixes.)
- **Prefixes Allowed** group box - enter the prefixes of telephone numbers that the user is permitted to call. (Include the **1** + the prefix number.)
- **Prefixes Disallowed** group box - enter the prefixes of telephone numbers that the user is not permitted to call. (Include the **1** + the prefix number.)
- **Other Call Restrictions** group box
  - **Allow Calls to be Transferred/Conferenced/Forwarded to an Outside Number** - select this option to allow the user to transfer, conference or forward calls to an outside telephone number. This option must be checked to allow users to setup outside conference calls.  
**CAUTION! Be advised that allowing this option may increase the potential for toll fraud if it is not properly administered.**
  - **Allow Off-Premise Mailbox User to Make or Return Call From Voice Mail** - select this option to allow the user to make or return calls from within voice mail (i.e. Zoomerang).  
**CAUTION! Be advised that allowing this option may increase the potential for toll fraud if it is not properly administered.**

## *Answering Incoming Calls*

The **Answering** page in the **Extension Configuration** screen defines the incoming call handling for the selected extension.

This page contains group boxes that define how the system will handle an incoming call if the extension is busy or rings unanswered. Extension types are physical, virtual, and workgroup. The **Answering** page varies slightly for each type of extension. The **Answering** page for each type of extension and their group boxes are explained below.

### **Answering Calls for a Physical Extension**

This page displays three group boxes that define how the system handles calls for physical extensions. Refer to Figure 5-10 to see the Answering page for a physical extension.

## Answering Incoming Calls

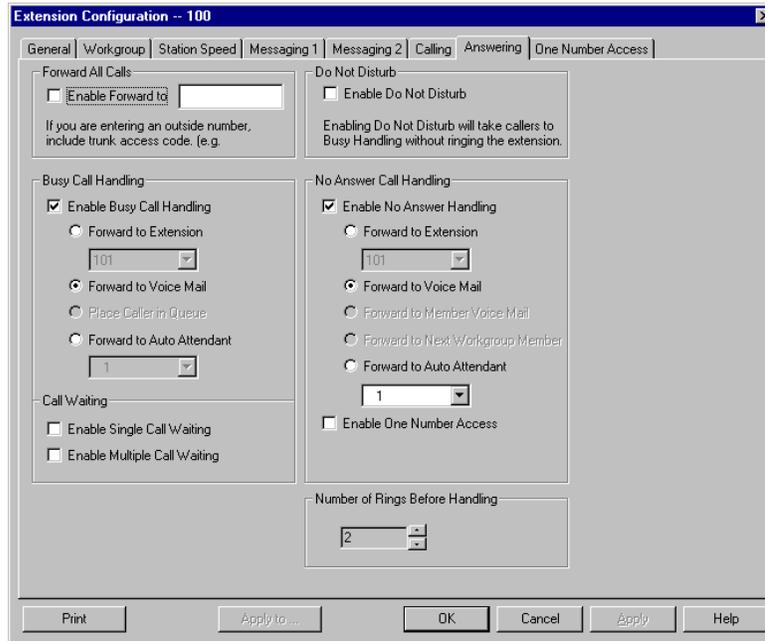


Figure 5-10. Answering Page - Physical Extension

To define how the system will handle an incoming call when the called physical extension is not available to accept the call, select the appropriate options in the group boxes below:

- **Forward All Calls** group box - select this option to forward all calls for the selected extension to another extension, phone number or pager. If this is an external number, begin with all relevant prefixes such as the outside trunk access digit, long distance prefix 1 and area code. Enter the number in the space provided. This is the same Call Forwarding feature that is also accessible by the user at the user's station by dialing #36. It is available here on the **Answering** page to allow the system administrator to adjust this feature without having to go to the user's station or enter a password.

**Note:** Please note the following:

- There is a “1-hop” limit to Call Forwarding. For example, Extension 101 has calls forwarded to Extension 102. Extension 102 has calls forwarded to Extension 103. A call to Extension 101 will ring Extension 102 and not Extension 103 because of the 1-hop limit. If Extension 102 does not answer, the call is sent to Extension 101’s voice mail.
- Forwarding calls to a pager is possible but **not recommended** since callers will only hear what is heard when calling a pager and will not know to enter a return phone number unless instructed.
- **Call Waiting** group box
  - **Enable Single Call Waiting** - select this option to enable only a single call waiting for this extension. This feature gives an (audio beep) alert tone to indicate that a call is waiting when the extension user is on the phone with another call.
  - **Enable Multiple Call Waiting** - select this option to enable a “personal queue” of multiple calls waiting for this extension. **You must also select the Place Caller In Queue option under Busy Call Handling in order for multiple calls to be placed in queue.** This allows the user to transfer or park the current call before picking up the next call in queue. See “Multiple Call Waiting” on page A-4 for more information on how to use this feature.
- **Busy Call Handling** group box
  - **Enable Busy Call Handling** - select this option to have the system handle the incoming call if the extension is busy. If this option is not selected, the system will not take further action on the call, if the extension is busy. (The caller would hear a busy tone.) Available options are listed below:
    - **Forward to Extension** - select this option if calls are to be forwarded to another extension when this extension is busy. Select the extension number in the drop-down list provided.

**Note:** There is a “1-hop” limit to Call Forwarding. For example, Extension 101 has calls forwarded to Extension 102. Extension 102 has calls forwarded to Extension 103. A call to Extension 101 will ring Extension 102 and not Extension 103 because of the 1-hop limit. If Extension 102 does not answer, the call is sent to Extension 101’s voice mail.

## Answering Incoming Calls

- **Forward to Voice Mail** - select this option if calls are to be forwarded to the extension's voice mail.
- **Place Caller in Queue** - this option is only available for workgroup extensions and extensions with Multiple Call Waiting.
- **Forward to Auto Attendant** - select this option to forward the call to an auto attendant where the auto attendant may present additional call routing options.
- **Do Not Disturb** group box - select this option to send all calls for the selected user into voice mail. This feature is also accessible by the user at the user's station by dialing **#33**.
- **No Answer Handling** group box
  - **Enable No Answer Handling** - select this option if you want the system to handle calls when this extension does not answer within the number of rings specified. Select the **Enable No Answer Handling** box, then select one of the options below:
    - **Forward to Extension** - select this option if calls are to be forwarded to another extension when this extension does not answer within the number of rings specified. Select the extension number in the drop-down list provided.

**Note:** There is a "1-hop" limit to Call Forwarding. For example, Extension 101 has calls forwarded to Extension 102. Extension 102 has calls forwarded to Extension 103. A call to Extension 101 will ring Extension 102 and not Extension 103 because of the 1-hop limit. If Extension 102 does not answer, the call is sent to Extension 101's voice mail.
    - **Forward to Voice Mail** - select this option if calls are to be forwarded to the extension's voice mail when this extension does not answer within the number of rings specified.
    - **Forward to Member Voice Mail** - this option is only available for workgroup extensions.
    - **Forward to Next Workgroup Member** - this option is only available for workgroup extensions.

- **Forward to Auto Attendant**- this option allows you to select a specific auto attendant that will receive an incoming call if No Answer status is encountered. The auto attendant will present new call routing options to the caller.
- **Enable One Number Access** - select this option to have the system forward important calls to pre-designated number(s). (Refer to page 5-24 for more information on setting up One Number Access directly through AltAdmin. Refer to page “Accessing AltReach” on page A-40 for more information on setting up One Number Access remotely through AltReach.)
- **Number of Rings Before Forwarding** group box
  - Select a number from 2 to 6 to indicate the number of times the telephone will ring before the call is handled by the system.

## Answering Calls for a Virtual Extension

The **Answering** page displays fewer options for a virtual extension because some options, such as **Number of Rings Before Forwarding**, do not apply for a virtual extension. (Refer to Figure 5-11 to see the Answering page for a virtual extension.)

## One Number Access

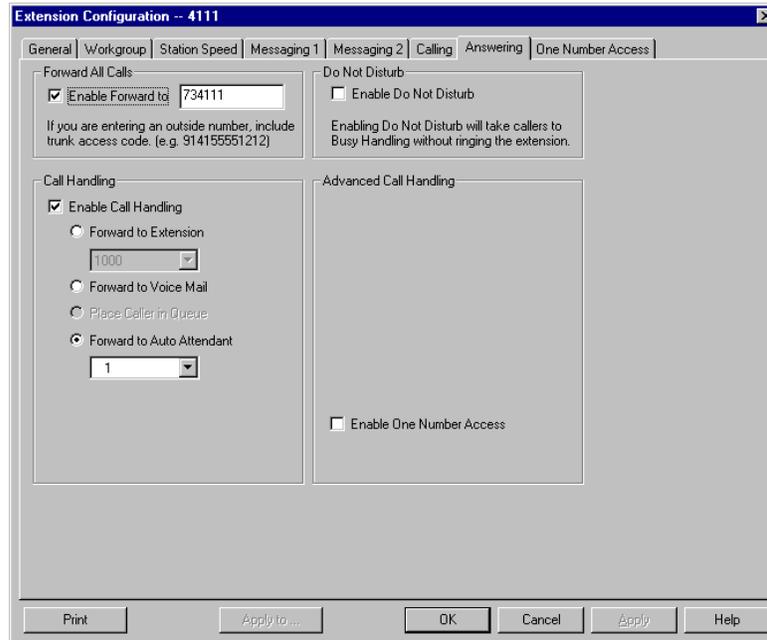
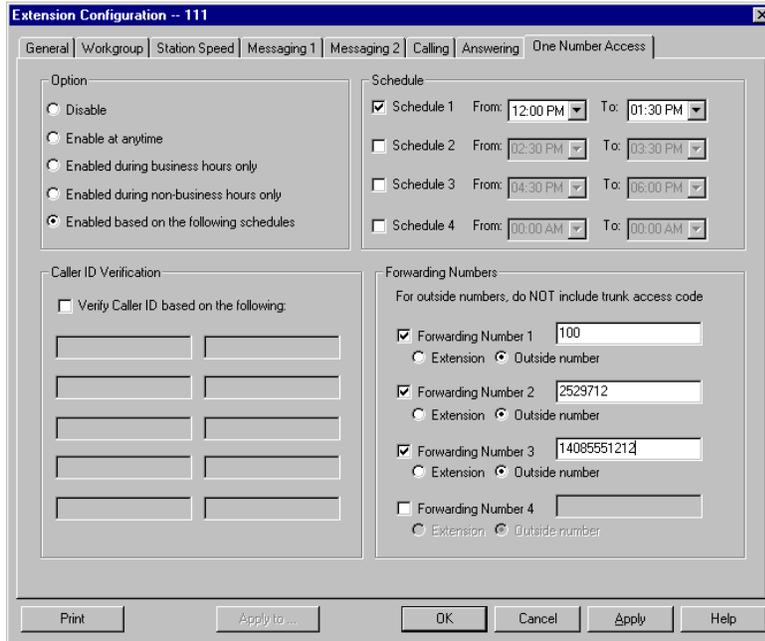


Figure 5-11. Answering Page - Virtual Extension

## One Number Access

One Number Access (ONA) allows important callers to be connected to the user without having to dial more than one number. The system searches for the caller and connects the caller when the user is found. If the system is unable to find the person to connect the call, the caller is sent into the user's voice mail.



5. Extension Configuration

Figure 5-12. Extension Configuration Screen - One Number Access

To use One Number Access, you must first enable it on the **One Number Access** page of the Extension Configuration screen (Figure 5-12). You can also enable and set up One Number Access remotely through AltReach. To set up and configure One Number Access, select the appropriate options in the group boxes below:

- **Option** group box - users can disable One Number Access or enable it:
  - At any time
  - During business hours only
  - During non-business hours only
  - Based on predetermined schedules
- **Caller ID Verification** group box - select the **Verify Caller ID based on the following** checkbox to specify which callers can access One Number Access.
  - You can enter up to ten (10) phone numbers in the **Caller ID Verification** fields. Whenever the system detects a call from one of

## One Number Access

the numbers entered here during any of the selected schedules, the system begins to search for you by dialing the numbers configured in the Forwarding Number fields.

### **CAUTION!**

**If no numbers are entered in the Caller ID Verification fields and ONA is enabled, it is made available to every caller.**

— Examples of international, domestic long distance and local telephone numbers are:

- **International** numbers (01181118192146) comprise of 011 (international code), 81 (country code) and finally the area code and telephone number.
- **Domestic long distance** numbers (15102522332) comprise of 1 (long distance prefix), followed by 510 (area code) and finally the seven digit telephone number.
- For **local** numbers, the long distance prefix (1) and the area code (510) should not be entered. Only the seven digit number is required.

**Note:** One Number Access is invoked by Altiserv only during a **Ring No Answer** situation because it assumes that you are out of the office or away from your desk. If the line is *busy*, the call will be handled according to the extension's **Busy Call Handling** configuration. If the extension has **Do Not Disturb** enabled, the call will go into voice mail. All system and extension call restrictions apply for One Number Access.

— You can also enter a random “password” number such as “5555” so that any caller who knows this password can use ONA to find you, regardless of where they are calling from. Once you’ve set this up, you need to instruct the caller to dial 1 during your personal greeting then enter the “password” to use ONA.

- **Schedule** group box - enter a customized schedule of four different time slots during which ONA is to be enabled. The **Enabled based on the following schedules** checkbox in the Options group box must be selected, as shown in Figure 5-12.

- **Forwarding Numbers** group box - in the **Forwarding Numbers** group box, configure four different numbers (extension or outside number) the system is to dial to search for you. If it is an outside number (i.e., cellular phone, car phone, home phone, etc.), be sure to enter all relevant prefixes such as the long distance prefix and the area code. Since you can select whether it is an extension or outside number, do not include the trunk access code.

**Note:** During any of the specified schedules above, the system dials the forwarding number(s) in the order from Forwarding Number 1 through Forwarding Number 4, rather than dialing a specific forwarding number for a specific Schedule number.

One Number Access

# Chapter 6 Auto Attendant Configuration

Auto Attendants can be used to automatically perform simple call processing tasks such as transferring calls to extensions (into AltMail or to the operator). It can also provide general information that is frequently asked such as company address.

Using an Auto Attendant allows multiple incoming calls to be answered simultaneously. In a heavy incoming traffic environment, this can greatly reduce the number of calls that need to be handled by the operator. Calls that do not require an operator's assistance can be quickly forwarded to the intended parties.

## Auto Attendants Setup

Follow the steps below to set up an Auto Attendant.

1. Before you can start to configure tasks for one or more Auto Attendants, you **must plan the entire setup**. Take a moment to decide how many options you will provide at each menu and how many menu levels you will use. Based on the action choices in each menu, write down the appropriate prompts or phrases that are to be played at each menu level.
2. Record phrases for each menu level or use the pre-recorded phrases that are available to you. See "Phrase Management" on page 6-6 for more details on how to record custom phrases, use pre-recorded phrases and use professionally recorded phrases.
3. Go to the Auto Attendant screen. To access this screen, select **Auto Attendant Select** from the **Management** menu, or select **Auto Attendant Select** from the Quick Access Toolbar.  
  
You can configure sixteen (16) different Auto Attendants where each Auto Attendant can have up to 9 menu levels.
4. Select the Auto Attendant (1-16) that you wish to configure.  
  
The Auto Attendant screen is the same for all 16 Auto Attendants. Refer to Figure 6-1, "Auto Attendant Configuration Screen - Auto Attendant 1," on page 6-2.

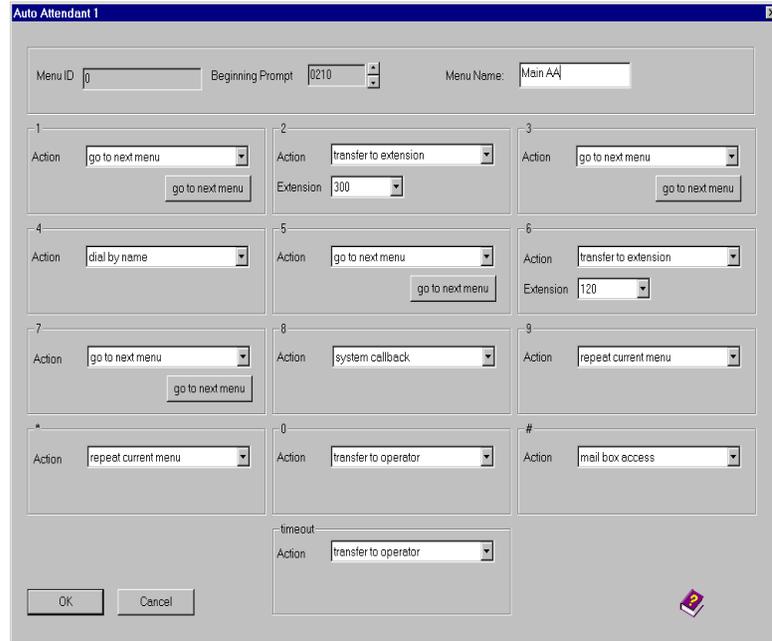


Figure 6-1. Auto Attendant Configuration Screen - Auto Attendant 1

Configure all fields and options listed below according to the written plan you made before you started this configuration:

- **Menu ID** - the menu ID identifies the menu that you are working with. “0” indicates that you are at the root menu (level 0) of the Auto Attendant “tree”.
- **Beginning Prompt** - select the prompt number that is to be played for incoming calls. This is the first prompt played to the caller at the root menu. Custom (recordable) prompts are numbered in the range of 0001 - 0999. For the next level, you would need a different prompt and so on. The default prompt is **0001** which is a pre-recorded generic greeting. See “Using Pre-Recorded Phrases” on page 6-6 to see the script of this prompt and other pre-recorded prompts that are available to use.
- **Menu Name** - type in the name you wish to assign to the Auto Attendant.

- **12 Data Entry Fields Labeled 0 through 9, \* and #** - below the beginning prompt field, there are 12 group boxes corresponding to the 12 keys of a touch-tone telephone set. In each group box, an action should be selected from the action drop-down list box to represent the action the system is to take when the caller presses the corresponding key on a touch-tone phone. For example:

*If the beginning prompt says:*

- Thank you for calling ABC Company
- Press 1 for sales
- Press 2 for technical support
- Press 3 for accounts payable
- Press 0 to reach the operator
- To repeat this menu, Press \*

*And*

John is the sales representative at extension 301.

Ann is the technical support representative at extension 401.

Bob is responsible for accounts payable at extension 501.

*At the root menu,*

Select the action: **transfer to extension** 301 for digit **1**.

Select the action: **transfer to extension** 401 for digit **2**.

Select the action: **transfer to extension** 501 for digit **3**.

Select the action: **repeat current menu** for digit **\***.

Select the action: **transfer to operator** for digit **0**.

- **Action Options** - the available **action** options for each of the 12 data entry fields are:
  - **no action** - when this action is selected, an “invalid” message is played and the menu is repeated.
  - **go to next menu** - when this action is selected, a “go to next menu” button is displayed. By selecting this button, a new menu (next menu level) is presented for you to configure. AltiWare supports up to eight levels of menus for each Auto Attendant.
  - **return to previous menu** - this action returns the caller to the previous menu.
  - **repeat current menu** - this action repeats the current menu to the caller.

- **return to top menu** - this action will return the caller to the root menu.
- **disconnect** - this action disconnects the call.
- **transfer to extension** - when this action is selected, a data entry field is displayed. Enter the extension number where the call is to be transferred. This action transfers the call to the specified extension.
- **transfer to operator** - this action transfers the call to the operator.
- **directory service** - this action lists the system users and their extensions to the caller. When selecting directory service, be sure that all users have recorded their directory name.
- **record message to extension** - when this action is selected, a data entry field is displayed. Enter the extension number where the caller is to leave a message (i.e. technical support voice mail).
- **mail box access** - this action transfers the call into AltMail after successful login. Assign this action to the # digit.
- **collect extension number** - this action asks the caller to enter the extension number of the person they wish to speak with and dials that extension.
- **dial by name** - this action asks the caller to enter the name (last, then first name) of the person they wish to speak with and dials the extension that matches the name. Callers may enter just the first letter of the last name to get a list of all users with last names that begin with the letter entered.
- **system callback** - this action tells the system to call the user at a remote location, *only after the user logs in with extension and password*. The user should enter a 1 and the area code if it is a long distance number or 011 and the country code if it is an international number. See “You must have a Centrex line to use this feature.” on page A-6 for more information on how it is used by the user.
- **Time-Out Action** - select the action the system should take if there is no digit detected by the caller within six (6) seconds. The same **action** options (listed above) are available to select here as the “time-out action”. The standard setting is **transfer to operator** so that callers who require assistance (i.e. rotary phone users) can reach someone to help them.

5. After you have completed configuring the root menu level, you can go to the next level by pressing the **go to next menu** button, which appears at the action field where you selected “go to next menu” action.
6. Repeat steps 3 and 4 for this and any other menu level.
7. After you have completed the configuration of all required menu levels for Auto Attendant 1, click on the **OK** button.
8. Go to **Trunk Configuration** screen, **General** page, to select a trunk card and channel. Refer to Figure 4-6, “Trunk Configuration Screen - In Call Routing Page,” on page 4-12.
9. Click on the **In Call Routing** page of the **Trunk Configuration** screen to enable each trunk incoming call to be routed to the Auto Attendant 1. Refer to Figure 4-6, “Trunk Configuration Screen - In Call Routing Page,” on page 4-12 for selecting “Route Incoming Calls to Auto Attendant”. The field following this statement shows “1” to indicate Auto Attendant 1.
10. Repeat steps 7 and 8 for every trunk card and channel that you want to be routed to an Auto Attendant.
11. Repeat this entire procedure for any additional Auto Attendant you wish to configure.

Auto Attendant setup is complete.

## *Phrase Management*

You may want to record unique phrases to customize an Auto Attendant or a workgroup. When the system is configured to answer incoming calls by the Auto Attendant, callers hear a customized greeting. This greeting might sound something like this:

Thank you for calling ABC Company.  
Enter the extension number of the person you wish to speak with.  
Press 1 for sales,  
Press 2 for technical support,  
Press 3 for accounts payable,  
Press 0 to reach the operator,  
To repeat this menu, press star (\*).

Or a workgroup (queue) greeting phrase may sound something like this:

Please hold; someone will be with you shortly.

Phrases may need to be recorded in a different language for a system that is installed in a non-English speaking country. This section covers information on how to use pre-recorded phrases, record custom phrases or have phrases professionally recorded.

### **Using Pre-Recorded Phrases**

AltiWare provides pre-recorded phrases that are ready to use right away. These phrases and their phrase numbers are listed below.

Phrase 0001 is the default Auto Attendant greeting at the root menu level. Phrases 0291 through 0297 are phrases used for workgroup queue prompts.

Phrase #	Phrase
0001 (default)	Thank you for calling. If you know the extension of the person you wish to speak with, please enter it now. To reach the operator, press <b>0</b> or simply stay on the line.
0291 (default)	Please hold; someone will be with you shortly. For your convenience, you may leave a message if you wish by pressing the # key on your telephone and we will get right back to you.
0292	Please hold; someone will be with you shortly.
0293	We appreciate your call and will be with you as quickly as possible.

Phrase #	Phrase
0294	Thank you for your patience. We should be with you soon.
0295	Thank you for your patience. We should be with you soon. For your convenience, you may leave a message if you wish by pressing the # key on your telephone and we will get right back to you.
0296	We apologize for the extended delay, but our current call load is abnormally high. Remember, you may leave a message by pressing the # key on your telephone and we will get right back to you.
0297	You may still wait if you prefer, but we suggest you leave a message by pressing the # key on your telephone and we will get right back to you.

## Recording a Custom Phrase

1. Login to any telephone on the system with the system manager's extension and password. (The manager's extension is configured on the **General** page of **System Configuration**. Refer to Figure 2-1, "System Configuration Screen - General Page," on page 2-2.)
2. Upon logging in, you will be at the AltiMail Main Menu.
3. Press **6** for the Phrase Management option.
4. Press **2** to record a phrase.
5. Enter a four-digit phrase number between 0001 and 0999.
 

**Note:** The system administrator should keep a record of phrase numbers and the corresponding phrases so that if a phrase needs to be changed, the correct phrase number is readily available.
6. Record the phrase after the tone. Press # at the end of the recording.
7. The system will replay the recorded phrase. Press # if the recording is acceptable.
8. At the Phrase Management menu, press **2** to record additional prompts or star (\*) to exit Phrase Management.

## Using Professionally Recorded Phrases

Recording studios such as Worldly Voices (see AltiGen's Support Page at <http://www.altigen.com/support/home.html> for more information) provide professionally recorded prompts as electronic files that can be installed and used on AltiServ.

AltiGen provides a utility to convert these files into the proper AltiServ format. Some recording studios provide the conversion service for an additional fee. The converted file can then be used for Auto Attendant or Workgroup setup.

### To get and install professionally recorded phrases or prompts,

1. Assign a prompt number (between 0001 to 0999) to each prompt you would like recorded.
2. Submit your prompt script and prompt number to the recording studio.
3. Instruct the recording studio to record prompts in either 8KHz or 11.025KHz mono in the WAVE format.
4. Ask the studio to convert the WAVE file(s) into the proper AltiWare format.
  - If using Worldly Voices, this conversion is done for you.
  - If you are using a studio other than Worldly Voices, the conversion utility is available on AltiGen's Support Web site at [http://www.altigen.com/support/html/download\\_area.html](http://www.altigen.com/support/html/download_area.html). This utility allows you to convert an audio file recorded at either 8KHz or 11.025KHz in the WAVE format to an AltiWare playable audio file.
5. The prompt should be saved in the following file name format:
  - **0001.wav** for phrase #0001
  - **0002.wav** for phrase #0002, etc.
6. Once you receive the prompts in the AltiWare format, place them in the **altiserv\phrases\LangCustom** directory on the AltiServ.

Your prompts are now ready to be used in Auto Attendant or Workgroup setup.

# Chapter 7 ACD and Workgroup Configuration

## *Automatic Call Distribution*

Automatic Call Distribution (ACD) is a special application of a workgroup configuration. It provides workgroup members with automatic incoming call distribution. The calls are automatically routed to active agents while the agents that are logged out are bypassed.

To configure a workgroup with ACD, follow the instructions in configuring a workgroup and select the ACD features in the **Answering** page of the **Extension Configuration** screen.

## *Configuring Workgroups*

A workgroup is a group of extensions that share a common task or service. A workgroup is identified by a workgroup pilot number. All workgroup members are associated with this pilot number.

The **Workgroup** page of the Extension Configuration screen contains two list boxes. The **Members extensions** list box lists all the members of a workgroup specified by the workgroup pilot number selected in the **General** page. The **Not Member** group box lists all available extensions that are not members of this workgroup but may be members of other workgroups.

If the selected extension is a *workgroup pilot number*, the associated **Workgroup** page displays the list of members that belong to this workgroup. An extension can be a member of more than one workgroup to a maximum of 32 workgroups.

## Configuring Workgroups

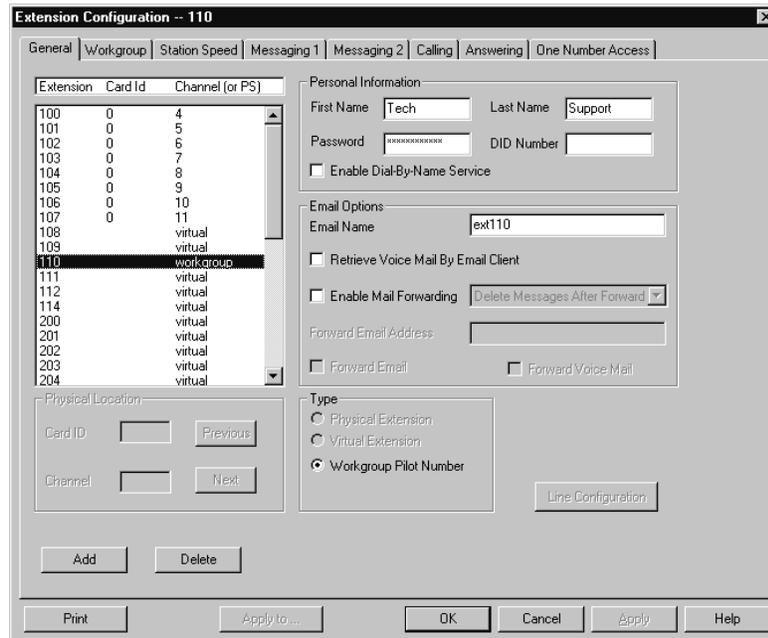


Figure 7-1. Extension Configuration Screen - General page

1. Click on the **Extension Configuration** icon in the Quick Access Toolbar to display the **Extension Configuration** screen and select the **General** page, as shown in Figure 7-1.
  - Press the **Add** button to enter the extension.
  - **Add New Extension** screen is displayed as shown in Figure 7-2.
  - Enter a new extension number into the Extension Number box. This extension will be the workgroup pilot number.
  - From the **Type** box, select **Workgroup Pilot Number** to make the new extension the pilot number of the new workgroup.
  - Press the **OK** button.

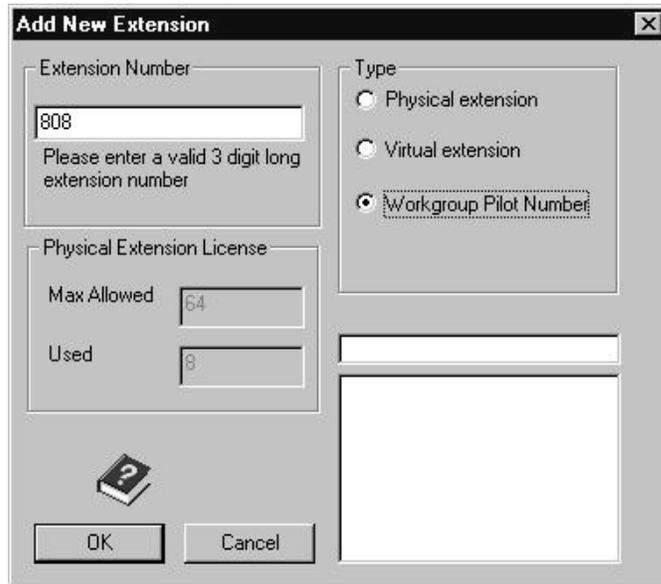


Figure 7-2. Extension Configuration Screen - Add New Extension Page

2. Go to the **Workgroup** page of **Extension Configuration** to select the workgroup member extensions.

Figure 7-3 illustrates how to add extensions to a workgroup or remove extensions from a workgroup.

An extension can be assigned to multiple workgroups at the same time.

- The **Member Extensions** box lists all the members of the workgroup. One or more members of the workgroup can be removed from the workgroup by simply selecting the extension and clicking on the **Remove** button.
- The **Not Member** box lists all the available extensions that are not members of this workgroup. One or more extensions in this list can be added to this workgroup by selecting one or more extensions and clicking on the **Add** button.

7. ACD and Workgroup Config.

## Configuring Workgroups

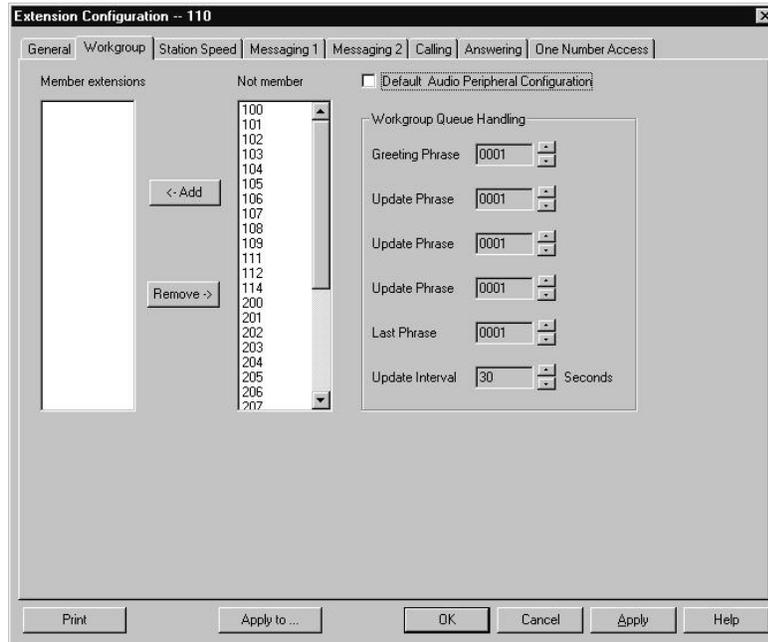


Figure 7-3. Extension Configuration Screen - Workgroup Page

- **Default Audio Peripheral Configuration** allows you to use the default system beginning and update prompts as configured in Audio Peripheral Configuration. Refer to “Additional Configuration Steps” on page 2-29 for detailed information.
- **Workgroup Queue Handling** group box allows you to select different phrases for different workgroups. You can select a Greeting Phrase, up to three different Update Phrases, a Last Phrase, and the Update Interval that allows you to specify how often a phrase will be repeated.

You may use custom phrases that you record or pre-recorded phrases that are provided. Refer to “Phrase Management” on page 6-6 for more details.

- Press the **Apply** button to save the workgroup configuration.

3. Select the **Answering** page of **Extension Configuration**.

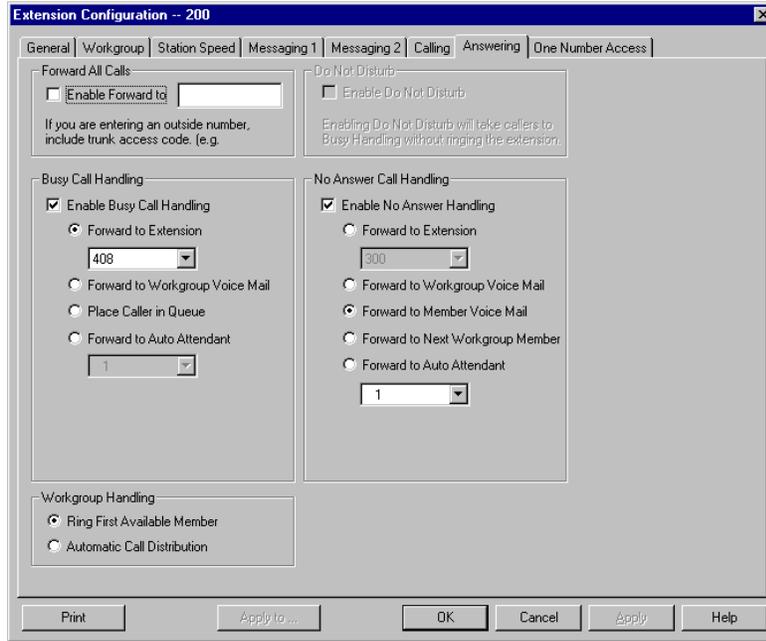


Figure 7-4. Answering Page - Workgroup Extension

To define how the system will handle an incoming call when the called workgroup extension is not available to accept the call, select the appropriate options in the group boxes below:

- **Forward All Calls** group box - select this option to forward all calls for the selected extension to another extension, phone number or pager. Enter the number in the space provided. This is the same Call Forwarding feature that is also accessible by the user at the user’s station by dialing #36. It is available here on the Answering page to allow the system administrator to adjust this feature without having to go to the user’s station or enter a password.
- There is a “1-hop” limit to Call Forwarding. For example, Extension 101 has calls forwarded to Extension 102. Extension 102 has calls forwarded to Extension 103. A call to Extension 101 will ring Extension 102 and not Extension 103 because of the 1-hop limit. If Extension 102 does not answer, the call is sent

7. ACD and Workgroup Config.

## Configuring Workgroups

to Extension 101's voice mail. Also, forwarding calls to a pager is possible but **not recommended** since callers will only hear what is heard when calling a pager and will not know to enter a return phone number unless instructed.

### — **Busy Call Handling**

- **Enable Busy Call Handling** - select this option to have the system handle the call if all workgroup members are busy. If this option is not selected, the system will not take further action on the call, if all workgroup members are busy. (The caller would hear a busy tone.) Options are listed below:
- **Forward to Extension** - select this option if calls are to be forwarded to another extension when all members of the workgroup are on the phone with another call. Select the extension number in the drop-down list provided.

**Note:** There is a "1-hop" limit to Call Forwarding. For example, Extension 101 has calls forwarded to Extension 102. Extension 102 has calls forwarded to Extension 103. A call to Extension 101 will ring Extension 102 and not Extension 103 because of the 1-hop limit. If Extension 102 does not answer, the call is sent to Extension 101's voice mail.

- **Forward to Workgroup Voice Mail** - select this option if calls are to be forwarded to the workgroup voice mail. Be sure to check the voice mail frequently for messages.
- **Place Caller in Queue** - select this option if you do not want the call forwarded to voice mail or to another extension, but want the call to wait in queue if all members of the workgroup are busy.
- **Forward to Auto Attendant** - select this option to forward the call to an auto attendant where the auto attendant may present additional call routing options to the caller.

### — **Workgroup Handling** group box

- **Ring First Available Member**- rings the first *available* extension in a workgroup. For example, if there are three member extensions in a workgroup, the call is always sent to the *first* member configured in the workgroup. If this member is busy, the call goes to the *second* member configured and so forth.

- **Automatic Call Distribution** - rings in a round-robin method. This method sends the call to the *next* member configured in the workgroup (regardless of whether the previous member is busy or not) so that calls are evenly distributed among the workgroup members.

— **No Answer Call Handling**

- **Enable No Answer Handling** - select this option if you want the system to handle calls when this workgroup does not answer within the number of rings specified. Select the **Enable No Answer Handling** box, then select one of the options below:
- **Forward to Extension** - select this option if calls are to be forwarded to another extension when this workgroup does not answer within the number of rings specified. Select the extension number in the drop-down list provided.

**Note:** There is a “1-hop” limit to Call Forwarding. For example, Extension 101 has calls forwarded to Extension 102. Extension 102 has calls forwarded to Extension 103. A call to Extension 101 will ring Extension 102 and not Extension 103 because of the 1-hop limit. If Extension 102 does not answer, the call is sent to Extension 101’s voice mail.

- **Forward to Workgroup Voice Mail** - select this option if calls are to be forwarded to the workgroup voice mail.
- **Forward to Member Voice Mail** - select this option to forward the call to the voice mail of the member that did not answer the ring.
- **Forward to Next Workgroup Member** - select this option to forward the call to the next member in a workgroup. If none of the workgroup members answer the call, the caller will be sent to the workgroup’s voice mail.
- **Forward to Auto Attendant** - select this option to forward the call to an auto attendant where the auto attendant may present additional call routing options to the caller.

4. Configure the **Wrap Up Time** on the **Workgroup** page (Figure 7-5) for each workgroup member extension.

— **Allow Wrap Up Time** - is available only for **physical** extensions that are members of a workgroup. If this box is selected, the system delays the presentation of the next call in queue by the number of



## Configuring Workgroups

seconds configured. For example if the number of seconds is set at **30**, the system waits 30 seconds after a call has ended before sending the next call in queue. This delay is configurable on a per member basis and gives a workgroup member some time to wrap-up on notes, prepare for the next call, or logout of the workgroup.

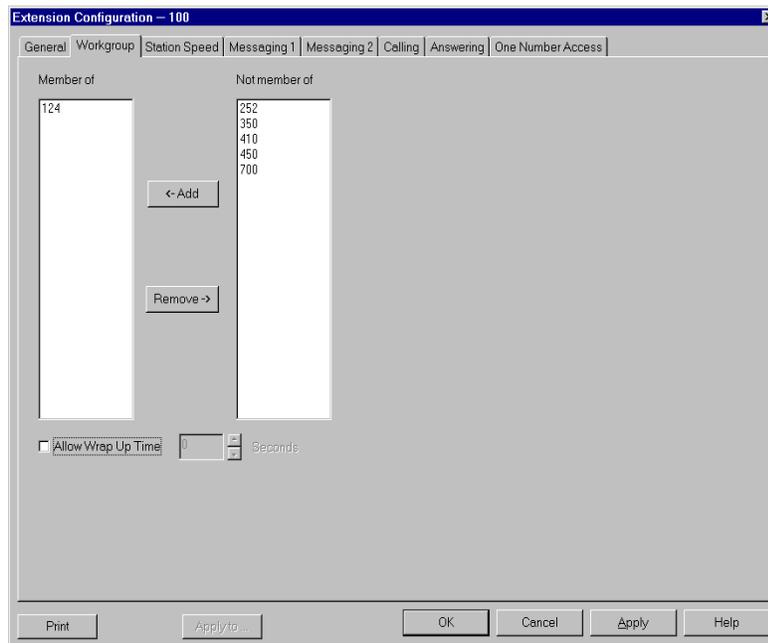


Figure 7-5. Workgroup Page for Workgroup Member Extensions

## ***Configuring Default Beginning and Update Prompts***

To configure system-default queue prompts, follow these steps:

1. Record phrases. The system allows you to record custom phrases or use pre-recorded phrases. Refer to “Phrase Management” on page 6-6 for instructions on how to record custom phrases. Also, see “Using Pre-Recorded Phrases” on page 6-6 for a list of pre-recorded prompts available to use. You can skip this step if the appropriate phrases are already available.
2. Select the appropriate options in the following group boxes shown in the Audio Peripheral Configuration screen (Figure 2-12 on page 2-30):
  - **Music/Recorded Announcements**
    - **Play Prompt Before Placing the Caller in Queue** - select this option to play a prompt before the caller is placed in the queue. Enter the phrase number in the field provided. The default, pre-recorded prompt is **0291**. See page 6-6 for the script of this prompt and other prompts that are available to use.
    - **Play Update Prompt Every 30 Seconds** - select this option to play a prompt every 30 seconds while the caller is in queue. Enter the phrase number in the field provided. The default, pre-recorded prompt is **0291**. See page 6-6 for the script of this prompt and other prompts that are available to use.

## Configuring Default Beginning and Update Prompts

# Chapter 8 System Data and Report Management

## *System Data Management*

The **System Data Management** option in the **Services** menu allows the system administrator to backup data onto 1) the system hard disk drive, or 2) a network drive so that the data can be restored to the system if necessary. You can also access this feature by selecting the **AltiWare OE Backup and Restore Utility** program from the AltiWare folder accessible from the Start menu.

**Note:** This option is **NOT** available from the remote AltiAdmin client. It can only be accessed at the AltiServ system.

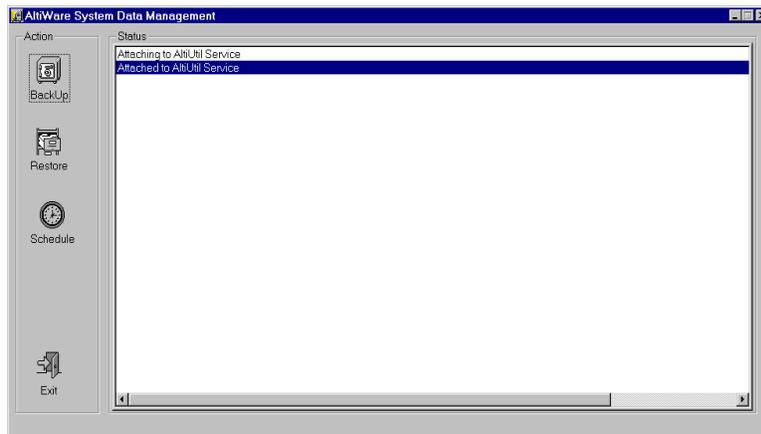


Figure 8-1. AltiWare System Data Management screen

The **AltiWare System Data Management** screen (Figure 8-1) allows you to select the type of files you wish to backup, the option of scheduled or immediate backup, and the option of restoring the backed up files.

## Backing up Files

### Immediate Backup

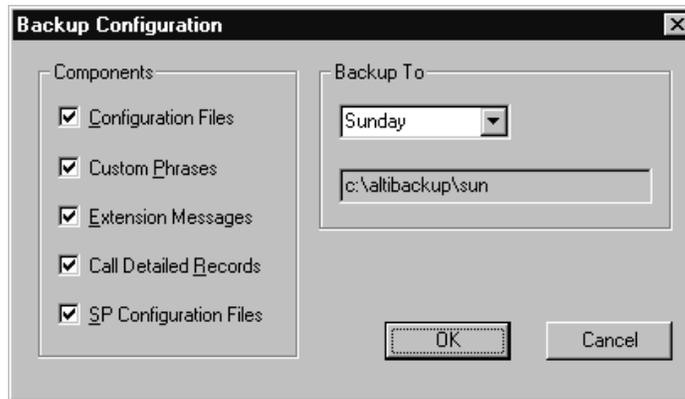


Figure 8-2. Backup Configuration screen

To backup files immediately:

1. Select the **Backup** button to view the **Backup Configuration** screen (Figure 8-2).
2. In the **Components** group box, select which files you wish to back up from the following choices:
  - Configuration Files
  - Custom Phrases
  - Extension Messages
  - Call Detailed Records
  - SP (Service Provider) Configuration Files.

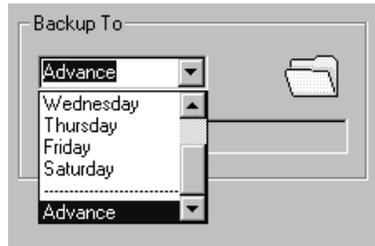


Figure 8-3. Backup To group box

3. In the **Backup To** group box (Figure 8-3), scroll to *the day of the week* you wish to begin backing up files from OR scroll to 'Advanced' (for advanced users).

**Note:** When 'Advanced' is selected, a small folder icon appears in the right hand corner of the box. Click on this folder to view the **Browse for Folder** screen (Figure 8-4), then select the folder you wish to backup in the **Browse for Folder** screen by clicking on that folder.

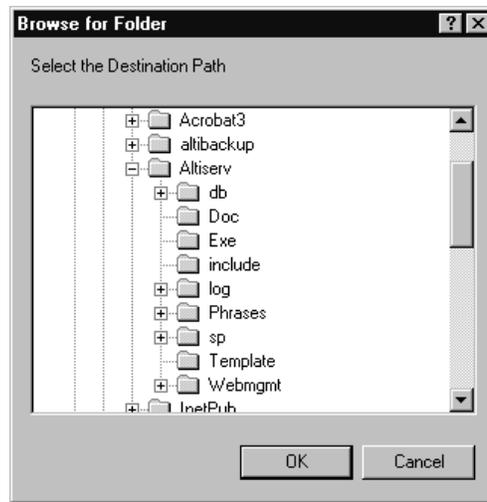


Figure 8-4. Browse for Folder screen

4. Press the **OK** button. The corresponding drive or directory will be displayed in the directory window for the day of the week selected.

## Scheduling Backup Files

To backup files according to a timed schedule:

1. Select the **Schedule** button to view the **Backup Schedules** screen (Figure 8-5).

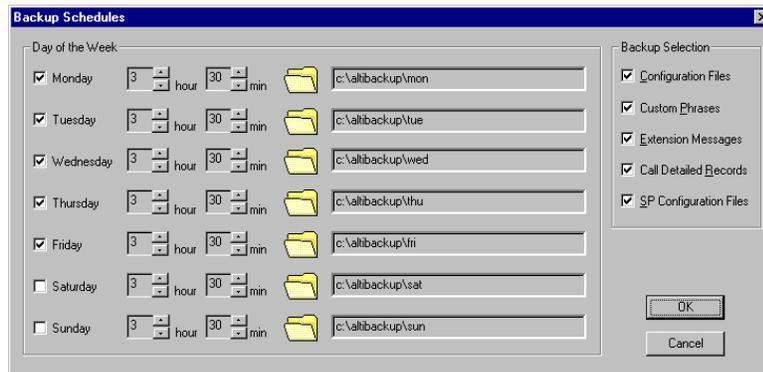


Figure 8-5. Backup Schedules screen

2. Specify when you wish to backup files:
  - **Day** of the week allows you to select when during the week you wish to backup files. You can select from one day to all days of the week.
  - **Time** of the day specifies the hour and minutes when the backup should start (the time is displayed as a 24-hour clock).
  - **Folder**, when clicked, displays the **Browse for Folder** screen to allow you to select the folder where the backed up files will reside. Refer to Figure 8-4 to see the directory structure.
3. In the **Browse for Folder** screen, select the folder for your backups.
4. Press the **OK** button. The selected drive or directory will be displayed in the directory window for the scheduled day of the week.
5. In the **Backup Selection** group box, select which files you wish to back up from the following choices:
  - Configuration Files
  - Custom Phrases
  - Extension Messages

- Call Detailed Records
  - SP (Service Provider) Configuration Files
6. Repeat the last three steps for each day of the week.

## Restoring Backed up Files

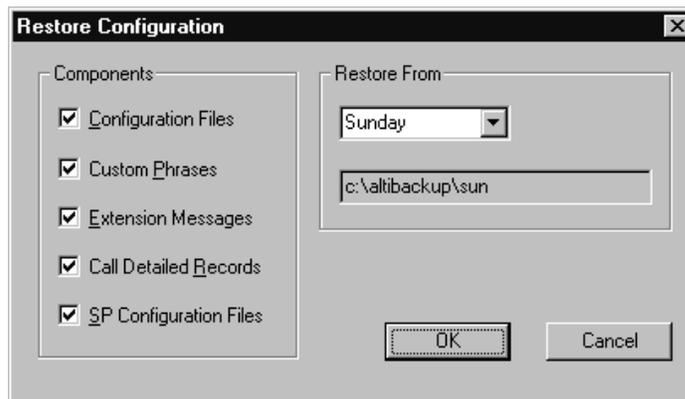


Figure 8-6. Restore Configuration screen

To restore the backed up files:

1. Press the **Restore** button to view the **Restore Configuration** screen (Figure 8-6).
2. In the **Components** group box, select which files you wish to back up from the following choices:
  - Configuration Files
  - Custom Phrases
  - Extension Messages
  - Call Detailed Records
  - SP (Service Provider) Configuration Files.

## System Data Management

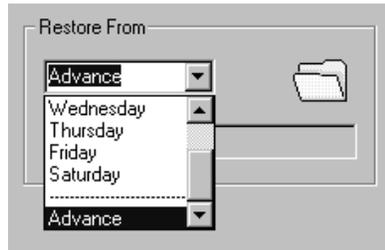


Figure 8-7. *Restore From* group box

3. In the **Restore From** group box (Figure 8-7), scroll to *the day of the week* you wish to begin restoring from OR scroll to '*Advanced*' (for advanced users).

**Note:** When '*Advanced*' is selected, a small folder icon appears in the right hand corner of the box. Click on this folder to view the **Browse for Folder** screen (Figure 8-4), then select the folder you wish to restore from in the **Browse for Folder** screen by clicking on that folder.

4. Press the **OK** button to start the restore process.

## ***Report Menu***

AltiServ provides system management reports that contain information on system configuration summary, traffic, system log, call detail summary and IP cumulative traffic statistics.

### **System Summary**

The System Summary report provides summary information on extensions, trunks, and workgroups configured in the system.

To view the System Summary report screen (Figure 8-8), select the **Report** menu from the Main Menu Bar and then select **System Summary** from the drop-down list, or select the **System Summary** icon from the Quick Access Toolbar.

## Report Menu

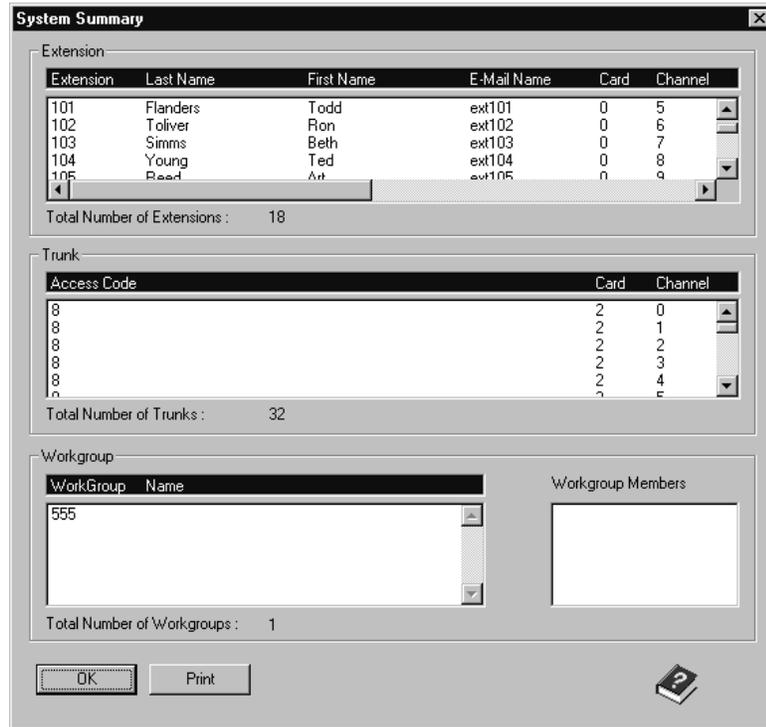


Figure 8-8. System Summary screen

The summary information on extensions, trunks, and workgroups are listed below:

- **Extension** group box - displays the extension number, user's last name, user's first name, e-mail name, card and channel of each extension number and the total number of extensions in the system.
- **Trunk** group box - displays the trunk access code, card and channel of each trunk and the total number of trunks in the system.
- **Workgroup** group box - displays the workgroup number, name and workgroup members and the total number of workgroups in the system.

These options are followed by **OK** and **Print** buttons. Select **OK** to close the screen or select **Print** to print the information on the screen. (The system must have access to a local or network printer in order to print the report.)

## System Traffic

System Traffic displays the number of calls transmitted and received by the Altiserv system. This traffic report displays a combination of incoming, outgoing, a station-to-station calls, and messages received by the system extensions.

To view the **System Traffic** screen (Figure 8-9), select **Report** from the Main Menu Bar, and then select **System Traffic** from the drop-down list, or select the **System Traffic** icon from the Quick Access Toolbar.

**Note:** This option is NOT available from the remote AltAdmin client. It can only be accessed at the Altiserv system.

## Report Menu

The screenshot shows a window titled "System Traffic" with three main sections: System Usage, Trunk Usage, and Messaging Usage. Each section has a radio button for "Today" and a radio button for "Last 7 Days".

**System Usage**

Date/Time	Call Attempt	Internal Call	OutCall	InCall
12:00 AM	0	0	0	0
1:00 AM	0	0	0	0
2:00 AM	0	0	0	0
3:00 AM	0	0	0	0
4:00 AM	0	0	0	0
5:00 AM	0	0	0	0
6:00 AM	0	0	0	0

**Trunk Usage**

Card	Channel	OutCall	Length	InCall	Length
------	---------	---------	--------	--------	--------

**Messaging Usage**

Extension	New Msg	Saved Msg	Private Msg	Reminder	Total Size(KB)
100	0	0	0	0	0
101	0	0	0	0	0
102	0	0	0	0	0
103	0	0	0	0	0
104	0	0	0	0	0
105	0	0	0	0	0
106	0	0	0	0	0

At the bottom of the window, there are buttons for "STOP" and "Print", and a help icon.

Figure 8-9. System Traffic Screen

The windows in the **System Traffic** screen show the following:

- **System Usage** - this group box displays system usage information in terms of attempted calls, internal calls, outgoing calls and incoming calls. Select one of the two viewing options: **Today** or the **Last 7 Days**. The following information is displayed.
  - **Date/Time** - displays the date and time of calls. If viewing the last 7 days of traffic, the date would be displayed. If you are viewing today's traffic statistics, the time would be displayed.
  - **Call Attempt** - displays the number of attempted calls per hour (for today), or per day (for the last 7 days).
  - **Internal call** - displays the number of internal extension-to-extension calls per hour (for today), or per day (for the last 7 days).
  - **Out Call** - displays the number of outgoing calls per hour (for today), or per day (for the last 7 days).

- **In Call** - displays the number of incoming calls per hour (for today), or per day (for the last 7 days).
- **Trunk Usage** - this group box displays usage information for each trunk card and channel. Select one of the two viewing options: **Today** or the **Last 7 Days**. The following information is displayed:
  - **Card** - displays the trunk card number.
  - **Channel** - displays the trunk channel (port) number.
  - **Out Call** - displays the number of outgoing calls.
  - **Length** - displays the total length (in minutes) of outgoing calls.
  - **In Call** - displays the number of incoming calls.
  - **Length** - displays the total length (in minutes) of incoming calls.
- **Messaging Usage** - this group box displays usage information on messaging for each extension. Select one of the two viewing options: **Today** or the **Last 7 Days**. The following information is displayed:
  - **Extension** - displays the extension number that messages are being collected for.
  - **New Messages** - displays the number of new messages received.
  - **Saved Messages** - displays the number of saved messages.
  - **Private Messages** - displays the number of private messages recorded for delivery.
  - **Reminder Messages** - displays the number of reminder messages recorded for delivery.
  - **Total Size KB** - displays the total size of messages in kilobytes.

At the bottom of the screen, select **OK** to close the screen or **Print** to print the information on the screen. (The system must be networked to a printer in order to print the report.)

## System Log

The System Log screen displays information on system maintenance. This screen is designed for use by system engineers and certified personnel only.

To view the System Log, select the **Report** menu from the Main Menu bar, and then select **System Log** from the drop-down list, or select the **System Log** icon from the Quick Access Toolbar. You can also view the system log by running the **LogViewer.exe** program in the **\altiserv\exe** folder.

## Report Menu

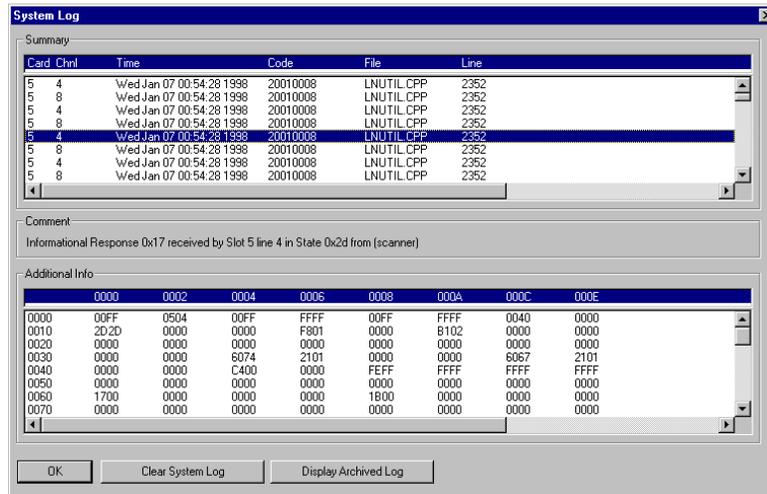


Figure 8-10. System Log Report

The System Log fields are listed below:

- **Summary** - this group box displays the card number, channel number, time, code, file name and line information.
- **Comment** - when a line is selected in the **Summary** display group box, this box contains comments for engineers and certified technical personnel for diagnostic purposes.
- **Additional Information** - this box contains technical references for engineers and certified technical personnel.
- At the bottom of the screen are three decision button options:
  - **OK** - select this button to close the System Log screen
  - **Clear System Log** - select this button if you want to clear the System Log (both screen and database file) of previously collected information.
  - **Display Archived Log** - select this button if you want to display the archived System Log. When the current log is full, all log entries are moved to the archive log.



## Report Menu

The fields and options are listed below:

- **Date** group box - allows the user to select the time frame of the call detail data search. Options are listed below:
  - **Today** - select this option if the call detail data search is for today only.
  - **Last 7 days** - select this option if the call detail data search is for the last 7 days.
  - **Last 30 days** - select this option if the call detail data search is for the last 30 days.
  - **All** - select this option if the call detail data search is for *all archived* information.
- **Type** group box - select the type of call data to be displayed or printed. The options are listed below:
  - **Call** - select this option if the call detail data search is for incoming, outgoing, and internal calls.
  - **Messaging** - select this option if the call detail data search is for messaging activity.
- **Account Code** group box - select this option if the call detail data search is for a specific account code. Enter the account code (up to eight (8) digits) in the field provided, or select “All” for a search on *all* the account codes.
- **Caller** group box - select this option to search for call detail data records for the specified caller. The options are listed below:
  - **Extension** - select this option to search for all calls made by an extension user. Enter the extension number in the space provided.
  - **Port** - select this option to search for all calls made from a specified port number (trunk or extension). Enter the port number in the space provided (i.e. 0201 for board I.D. 2, channel 1).
  - **Caller ID** - select this option to search for all calls made from a specific phone number. Enter the number in the field provided. If searching for all calls made to a particular area code, enter just the area code number (i.e. 510) in this field.
  - **Exact Match** - select this box if the system is to search for the exact number entered in the Caller ID field. This box is selected by default. If this box is not selected, the system will search for all numbers that contain the number in the Caller ID field.

- **All** - select this option if the system is to search for all outgoing calls made in the time frame selected in the Date group box.
- **Callee group box** - select the call detail records for the callee. Options are listed below:
  - **Extension** - select this option to search for all calls made to an extension user. Enter the extension number in the space provided.
  - **Port** - select this option to search for all calls made to a specified port number (trunk or extension). Enter the port number in the space provided (i.e. 0201 for board I.D. 2, channel 1).
  - **Callee ID** - select this option to search for all calls made to a specific phone number. Enter the number in the field provided. If searching for all calls made to a particular area code, enter just the area code number (i.e. 510) in this field.
  - **Exact Match** - select this box if the system is to search for the exact number entered in the Caller ID field. This box is selected by default. If this box is not selected, the system will search for all numbers that contain the number in the Caller ID field.
  - **All** - select this option if the system is to search for all incoming calls made in the time frame selected in the Date group box.
- **Sort by group box**- allows the user to select the way the system sorts the information in the Call Accounting Detailed Report. Select one of the four options listed below:
  - **Caller** - sorts report by caller.
  - **Callee** - sorts report by callee.
  - **Date** - sorts report by date.
  - **Duration** - sorts report by length of call.
- **Call Accounting Detailed Report group box** - the result of the search request is displayed in this group box. If the criteria specified in the search request is very general, it may take a long time to run a report.
  - **Search** - select this button to start the search according to the criteria set above the report.
  - **Clear** - select this button to clear the report and begin a new search.
  - **Print** - select this button to print the Call Accounting Detailed Report.

## Report Menu

- **Save to File** - select this button to save the Call Accounting Detailed Report as a text file. This file can then be opened in another application such as Microsoft Excel for further analysis.
- **Call Accounting Summary Report group box**- the summary of all call data is displayed in this group box. This report is automatically generated when the Call Detail Summary screen is opened and can be printed by selecting one of the button options at the bottom of the screen. Those options are:
  - **Print This Month Report** - select this button to print the current month's collected data.
  - **Print Last Month Report** - select this button to print last month's collected data.
  - **STOP/OK** - select this button to stop the system from running the report. If the summary data is large, it may take a long time to run the report. Once the report is finished running, the button changes to **OK**. Press **OK** to close the screen.

## Call Detail Reporting Issues

The following conditions may be encountered when backing up CDR files.

### Backup CDR File Is Too Large

If a backed up CDR file exceeds 20MB, when Altiserv reboots, it will automatically copy the database to `\altiserv\db\cdrbackup` and create a new backup file.

**Note:** In order to prevent corruption of any database files, if the **Altigen Messaging Service COM Server** is running at midnight, Altiserv will automatically back up the CDR database, as well as the Extension, Trunk and Auto Attendant settings to `\altiserv\db\backup01`, `\altiserv\db\backup02` or `\altiserv\backup03`.

### Backup CDR File Becomes Corrupted

If a backed up CDR file becomes corrupted, replace the corrupted file with the latest file copy in the same directory (`\altiserv\db\cdrbackup`). If Altiserv cannot find a recent file to copy over, or all other files are corrupted as well, you must create a new database.

**SMDR Disclaimer:**

Although AltiServ provides call detail data, AltiGen Communications cannot be responsible for the accuracy of the call detail data and/or third party reports.

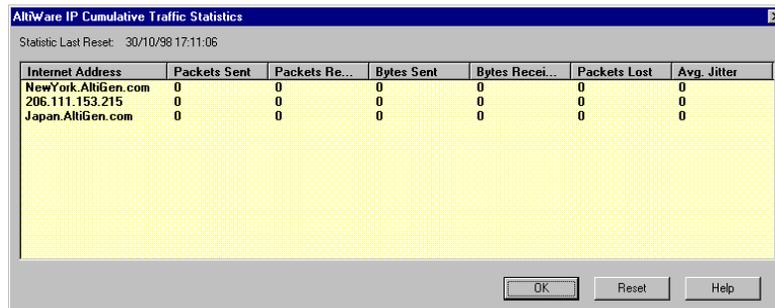
**AltiWare IP Cumulative Traffic Statistics**

To view a report of all cumulative IP traffic, click on **AltiWare IP Traffic Statistics** from the **Reports** menu. The **AltiWare IP Cumulative Traffic Statistics** screen displays the following IP trunk traffic information for all calls:

- **Internet Address** - displays the IP address or fully qualified DNS name of the remote location.
- **Packets Sent** - displays the number of voice packets sent to other AltiServ systems over the public or private IP network
- **Packets Received** - displays the number of voice packets received from other AltiServ systems over the public or private IP network
- **Bytes Sent** - displays the total size (in bytes) of all voice packets sent to other AltiServ systems over the public or private IP network
- **Bytes Received** - displays the total size (in bytes) of all voice packets received from other AltiServ systems over the public or private IP network.
- **Packets Lost** - displays the number of voice packets that have been lost due to prolonged delays, network congestion or routing failure.
- **Average Jitter** - displays the average length of delay per voice packet in milliseconds. This figure should stay under 100 milliseconds. A higher figure indicates a longer average delay. This number can be used to measure the quality of service on the network that connects the source and destination sites.

## Report Menu

The difference between the **IP Trunk Current Traffic Statistics** screen and the **AltiWare IP Cumulative Traffic Statistics** screen (referred to in Chapter 3 of the *Getting Started Manual*) is that one shows figures only for the *active* call (Current Traffic) on a particular IP trunk of the local AltiServ system while the other screen shows figures for *all* calls combined (Cumulative Traffic) to and from remote AltiServ locations.



Internet Address	Packets Sent	Packets Re...	Bytes Sent	Bytes Recei...	Packets Lost	Avg. Jitter
NewYork.AltiGen.com	0	0	0	0	0	0
206.111.153.215	0	0	0	0	0	0
Japan.AltiGen.com	0	0	0	0	0	0

Figure 8-12. AltiWare IP Cumulative Traffic Statistics screen

## Resetting Cumulative Statistics

You can reset the **AltiWare IP Cumulative Traffic Statistics** by clicking on the **Reset** button. Also, this screen automatically resets all fields to **0** when the AltiServ system is shut down and restarted.

**Note:** Statistics gathered previous to resetting are not saved.

# Chapter 9 Data and Internet Integration

This chapter describes how to integrate AltiServ with the Internet and data communications. It will cover the following areas:

- E-mail
- Mail Forwarding
- Exchange Integration
- AltiReach Call Management
- Microsoft NetMeeting
- TAPI Applications

## *Network Protocol and Addressing*

The AltiServ system integrates telephony functions with the LAN and Internet to provide a state-of-the art communication facility with local and remote access to E-mail Mixed-Media messaging and AltiReach.

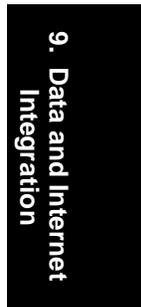
Before you begin, you should get familiar with the following LAN and Internet protocol and addressing information.

### **Network**

A network is a distributed interconnection of multiple voice and data communication devices utilizing network protocol software to communicate with each other and exchange information.

### **Protocol**

A protocol is a set of rules and conventions by which telephone equipment and computers pass messages across a network. Networking software generally implements multiple levels of protocols in the process of interconnecting two or more devices on the network and enabling them to exchange information.



## Transport Protocols

Among the various transport protocols available, AltiServ uses the **TCP/IP** transport protocol.

**TCP/IP** - Transmission Control Protocol/Internet Protocol (TCP/IP) is the protocol used by the Internet, and increasingly for Internet applications.

The collection of actual protocol layers used to establish a connection across the network and that allows dissimilar network devices to exchange information is called a *protocol stack*.

### SMTP/POP3

**SMTP** - Simple Mail Transfer Protocol. *As seen by the client side* of the network, is an Internet E-mail *sending* protocol software format.

**POP3** - Post Office Protocol Version 3. *As seen by the client side* of the network, POP3 is an Internet E-mail *retrieving* protocol software format that allows users to retrieve mail from its stored location.

**IMAP4** - Internet Message Protocol Version 4. An enhanced version of POP3 that, among other things, allows the user to view message headers of each message before retrieving the complete message.

## Network Address

A network address is an identifier for a node, station, or unit of equipment in a network. There are many methods of accessing the network, such as E-mail or Hyper Text Transport Protocol (HTTP), etc.

AltiServ uses the E-mail client/server access method.

A sample E-mail client/server network address might look something like the following example:

**jsmith@earth.science.berkeley.edu**

This address tells the routers and the Internet Service Provider (ISP) where to deliver this message. This is an extended address. The address is read from the right to the left:

**edu** = first level domain

**berkeley** = second level domain

**science** = third level domain

**earth** = fourth level domain

**@** = at

**jsmith** = user name

Or it might be as simple (and short) as:

**altigen.com**

**com** = first level domain name

**altigen** = second level domain name

## Local Address

When you are sending messages among users in a LAN, the local address is used in place of the extended network address. Local addressing is used in a peripheral node or station and is transformed to or from an extended address for delivery purposes. Very often within a LAN, only the user name is used, such as *jsmith* in the example above, to send messages or information.

## Mixed-Media Messaging

Messaging includes many options other than just text. Messages might include all of the following types of information or any combination thereof:

- Text - (includes word processing files, spreadsheets, database listing)
- Voice
- Fax
- Video

If you include more than one attachment or media type in your e-mail messages (such as graphics, video or sound), you must employ a method called **MIME** (Multipurpose Internet/Mail Extensions). **MIME** is a technique designed to bundle attachments within individual e-mail messages.

When a **MIME** file with attachments arrives at your workstation, additional processing begins immediately. As the various attachments arrive, the client or browser identifies these attachments by file type or by description information in the attachment tag (as specified by the **MIME** format). After the client or browser identifies a file, it can handle the file playback or display. Sometimes the client or browser itself handles playback or display (including .GIF and .JPEG files).

## Setting Up E-mail Service

However, when other kinds of files show up and need special handling capabilities (beyond the scope of most client/browsers), the client hands off the files to other applications for playback or display. These **Helper Applications** have the built-in intelligence to handle the formats and processing necessary to present the contents of specialized files on demand.

AltiWare provides users with the ability to record a voice annotation and attach it to an E-mail Mixed-Media Message. This voice recording must be done before the user sends the e-mail in order to send the voice annotation as an attachment to the e-mail. After the voice recording is complete, the user can send the e-mail. AltiWare then combines the voice message and the e-mail into a single MIME message and sends it to the recipient.

The ability to send and receive MIME messages is included as part of AltiWare E-mail capabilities.

## *Setting Up E-mail Service*

There are some basic requirements that must be met in order to access Mixed-Media Messaging using e-mail over the AltiServ system.

### **Before You Begin**

To set up AltiReach and E-mail for the AltiServ system, you need to have the following installed on the AltiServ:

- Windows NT network interface card installed and Windows NT network capability enabled
- Network TCP/IP installed and configured
- Internet connection
- Multi-media stations/PCs as clients

### **Setting Up LAN and Internet E-mail on the Server**

To set up the server side of the network, follow the steps below:

#### **Step 1: Selecting Your ISP and IP Addresses**

You will need to obtain the following to setup Internet E-mail:

1. Select your **Internet Service Provider (ISP)**. There are numerous ISPs to choose from. There is a fee associated with these services. Please contact an ISP that serves your area for details.
2. From your ISP:
  - Obtain **Domain Name Server (DNS) Address**. AltiServ address should be added to the DNS database by your ISP.
  - Select and give your ISP a unique **Domain Name** - each domain must have a unique name associated with it, such as the address for AltiGen, which is “altigen.com”.
  - Obtain a **Block of IP Addresses** - and assign a unique IP address to each client on the LAN.
  - Obtain the **Subnet Mask** - you will need to enter this address later in the TCP/IP configuration for both the server and client stations.

### Step 2: Setup the Router

Install the router on the LAN. The router is the gateway to another LAN or to the Internet.

1. Specify a router that is on the same LAN as the AltiServ server, such as ISDN or T1.
2. Assign an IP address (one of the block of IP addresses obtained from the ISP). This becomes the **gateway** router address.

### Step 3: Configure TCP/IP Properties

Configure the TCP/IP protocol parameters.

1. Select the TCP/IP Protocol from the Installed Network Software.

Open the **Control Panel** and select the **Network** icon. This will display the **Network Setting** screen, as illustrated in Figure 9-1. On the **Protocols** tab, double click on **TCP/IP Protocol** from the drop-down list box.

## Setting Up E-mail Service

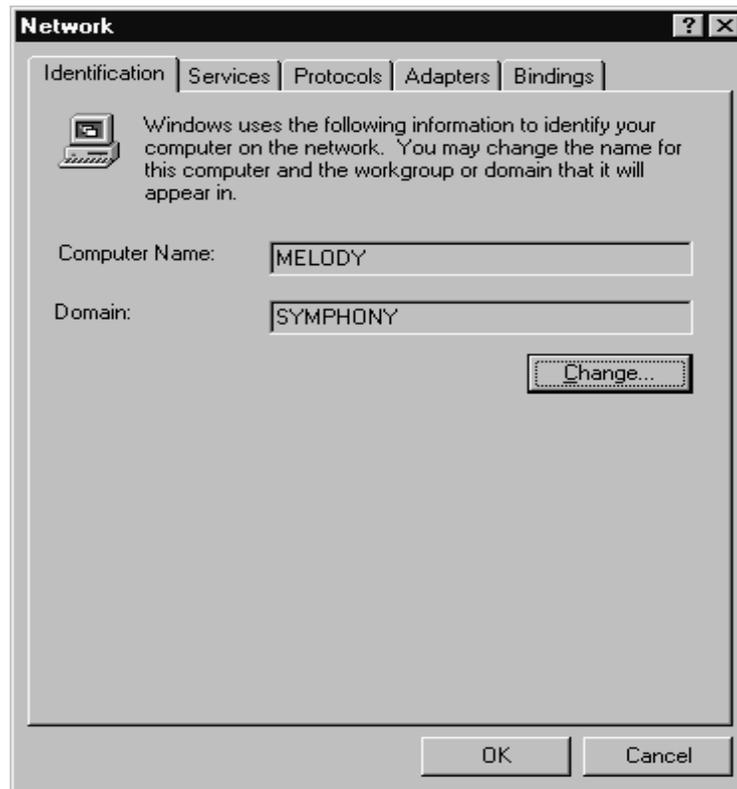


Figure 9-1. Network Setting Window

2. Display the TCP/IP Properties screen to define TCP/IP parameters.

By double-clicking on the **TCP/IP Protocol** selection, you will display the screen shown in Figure 9-2, where you configure the IP Address, Subnet Mask, and Default Gateway (router).

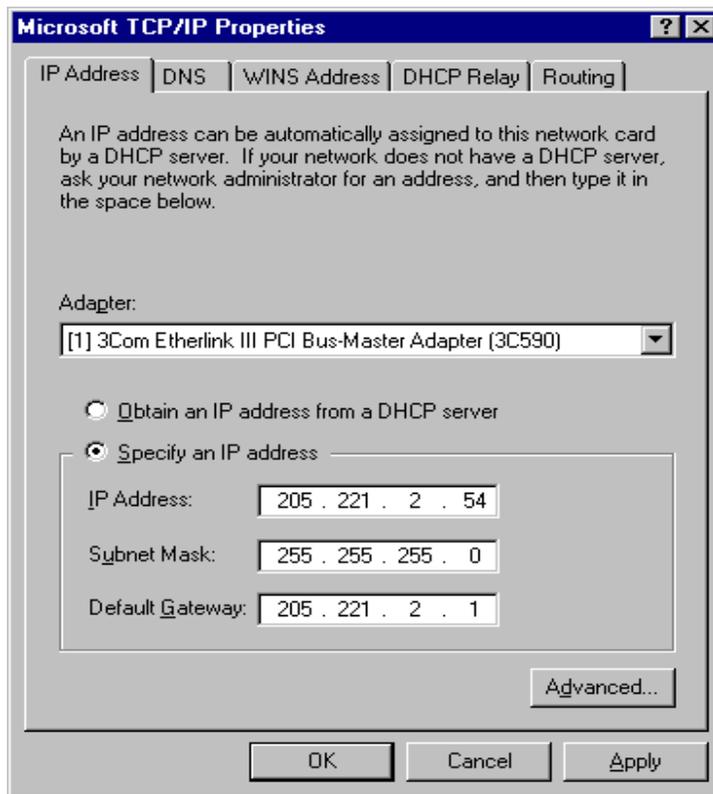


Figure 9-2. TCP/IP Configuration

- **IP address** - enter the assigned IP address (from the block of IP addresses obtained from your ISP) to the Altiserv.
- **Subnet Mask** - enter the Subnet Mask obtained from your ISP.
- **Default Gateway** - enter the E-mail Gateway (the router address).

## Setting Up E-mail Service

3. **Domain Name System** - select the **DNS** tab at the top of the TCP/IP Properties screen, as shown in Figure 9-3. **You must configure the DNS tab if you want to exchange e-mail through the Internet.** Configure the following:

- **Host Name** - enter the name of the server (example: melody)
- **Domain** - enter the domain name (example: altigen.com)
- **DNS Service Search Order** - enter the IP address of either your own or your ISP's Domain Name Server.
- Select the **OK** button.

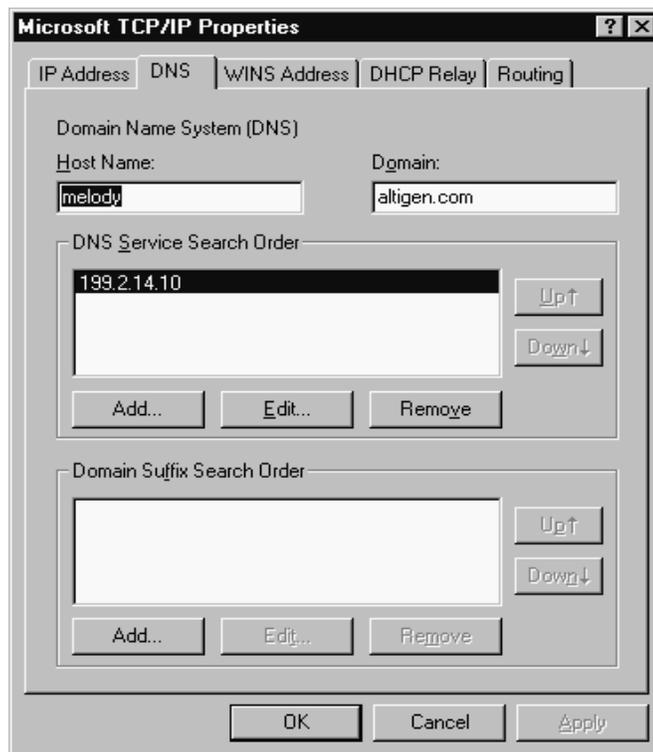


Figure 9-3. DNS Configuration Screen

4. Refer to Microsoft Windows NT configuration documentation to complete the TCP/IP network setup.

#### **Step 4: Notify Your ISP of the Following:**

1. Your AltiServ Host Name (host name of the server or server name) - your AltiServ is the server that actually receives the mail or messages. For example, AltiGen has named its server “global\_cti”. This tells the DNS to route all mail or messages for altigen.com to the global\_cti server.
2. Your AltiServ’s IP address - e.g. 200.133.204.2

#### **Step 5: Configure E-mail in AltiWare Administrator**

To configure the AltiServ for E-mail service:

1. Configure the **E-Mail Messaging Options** section on the **Messaging** page of **System Configuration**. Refer to Figure 9-4.
  - Select the **Enable SMTP/POP3 Service** box to enable E-mail and Mixed-Media Messaging on the AltiServ system.
  - Select the **Allow Inbound Internet Mail** box if AltiServ is the only mail server running on the system. If you are running another SMTP server on the same system (such as Exchange) and you do not want AltiServ to receive inbound Internet mail, you should leave this box unchecked.

## Setting Up E-mail Service

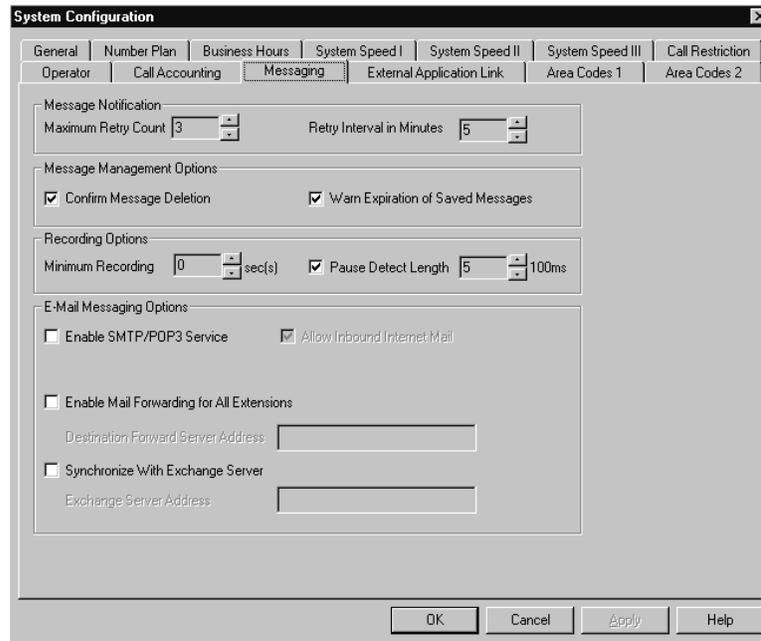


Figure 9-4. System Configuration Screen - Messaging Page

2. Assign a unique **E-mail Name** to extension users on the **General** page of **Extension Configuration**.

First, select the extension number (or select **Add Extension** and then enter the extension number in the field provided if this is a new extension). Then enter the E-mail name in the **E-mail Name** data entry field. Refer to Figure 5-1, “Extension Configuration Screen - General Page,” on page 5-2.

3. Allocate the system storage capacity for each user on the **Messaging 1** page of **Extension Configuration**.

Each user’s needs may be different. The default is 50 MB of storage, which on the average, will give each user room for 100 messages. Refer to “Setting up Station Messaging” on page 5-12 for more details.

## Setting Up LAN and Internet E-mail on the Client

To set up the client side of the LAN:

1. Configure the following client **TCP/IP Properties** (see Figure 9-2 on page 9-7):
  - IP Address
  - Subnet Mask
  - Default Gateway
2. On the **DNS** tab of TCP/IP Properties, enter the following (see Figure 9-3 on page 9-8):
  - Host Name
  - Domain
  - DNS Service Search Order
3. Configure the following mail server parameters of the E-mail client application:
  - Enter the **Mail Server (POP3) User Name**. (This is the same name entered as the E-mail name on the AltiServ **General** page of **Extension Configuration**).
  - Enter the **Incoming Mail (POP3) Server** address.
  - Enter the **Outgoing Mail (SMTP) Server** address.

## Setting Up E-mail Service

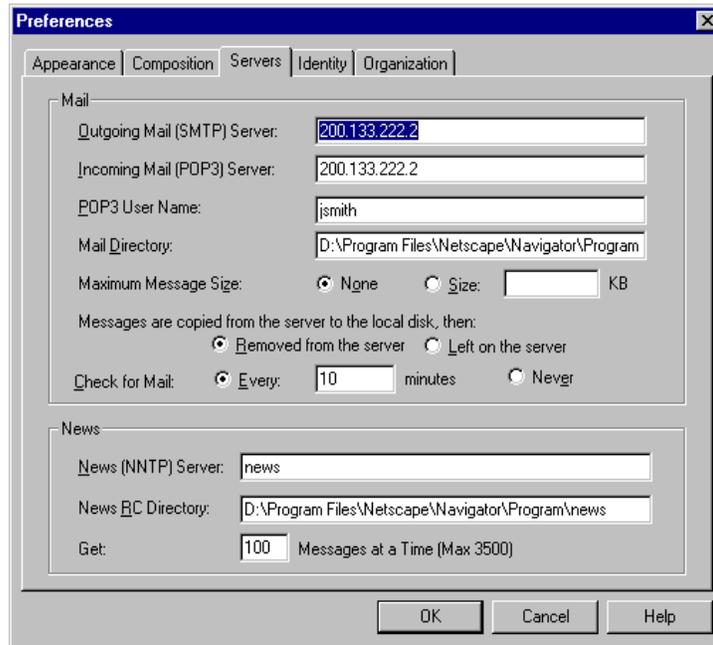


Figure 9-5. Netscape Mail Server Setup

4. Set up helper applications and general preferences for the E-mail client application (i.e. associates the .WAV files with sound recorder application).

LAN and Internet E-mail setup is complete.

## *Setting Up Exchange Integration*

Follow the steps below to set up Exchange Integration. Please note that these steps should be followed in the order given to ensure proper setup and functionality.

On the AltiServ System,

1. Install Exchange 5.x client software (that ships with the Exchange Server software) on the AltiServ system. If your Exchange Server did not ship with a separate client disc, and you use Outlook 98 as your client, you should install Outlook 98 with **Corporate/Workgroup** option. (To determine your installation type, on the Help menu, click **About Microsoft Outlook**.) Verify that you can access the Exchange server from the client software (Exchange client or Outlook).
2. Ensure that the user account which AltiGen services run as (<domainname>\ALTIGEN\_<servername> by default) has Exchange administrator privileges:
  - a. First, find the user account that the AltiGen Exchange Integration Service runs as. Go to **Control Panel**, and click on **Services**. Select **AltiGen Exchange Integration Service COM Server** and click on **Startup**. Make a note of the user name that appears in the **This Account** field.
  - b. Launch the **Exchange Administrator** software and select the **Organization** container (the top-most entry in the hierarchy). From the **File** menu, choose **Properties**. Click on the **Permissions** tab. Add an entry with the Admin privilege for the account name you made a note of in the previous step. Click **OK**.
  - c. Repeat step (b) for the **Site** container and the **Configuration** container.
3. For each extension you want to synchronize with a corresponding Exchange mailbox, ensure that the **First Name** and **Last Name** fields of the extension match the first name and last names entered for the corresponding mailbox in the Exchange server. For example, if the user's Exchange mailbox name is "John Doe", you would enter "John" in the **First Name** field and "Doe" in the **Last Name** field in the **Extension Configuration** screen for that user.

## Setting Up Exchange Integration

4. Now, we are ready to enable the Exchange Integration service. From the **System Configuration** screen, select the **Messaging** page. Select the **Synchronize With Exchange Server** option by clicking on it and in the **Exchange Server Address** field, enter the name of the Exchange server machine (e.g. "EXCHANGE"). Click **OK**.

**Note:** Do **NOT** select **Enable Mail Forwarding for All Extensions** on the **Messaging** page of **System Configuration**. Exchange Integration automatically forwards messages and selecting the **Enable Mail Forwarding for All Extensions** option will duplicate the mail forwarding process.

Exchange Integration setup is complete.

**Note:** Please take note of the following:

- Exchange integration will not work properly if a user has enabled any rules as part of the **Inbox Assistant** that will act on voice mail messages delivered to the Inbox. In other words, users should not set up any rules in the **Inbox Assistant** that will act on incoming voice mail messages. Messages should remain in the Inbox after they are delivered to the Exchange server.  
Also, Exchange integration is **NOT** necessary to use **Mixed-Media Messaging**. Please see "AltiMail Mixed-Media Messaging" on page A-37 for more information on Mixed-Media Messaging.
- The Exchange Integration service synchronizes the messages on the Exchange server with those on the AltiServ system by polling the two servers periodically. This polling interval can be adjusted by creating a **DWORD** value called **Polling Interval** under the key **HKEY\_LOCAL\_MACHINE\SOFTWARE\AltiGen Communications, Inc.\AltiWare\ExchIntg**. This **DWORD** value should contain the number of milliseconds between polling. If this value is not present in the registry, a default value of **60000** (1 minute) is used by the system. For performance reasons, you should not set this value to below **60000**.
- When you turn Exchange Integration **ON** for the first time, it will take a significant amount of time to get mailboxes on both systems in synch. The amount of time taken for synchronization depends on the number of messages on Exchange as well as on AltiServ. It is recommended that you enable Exchange Integration (the initial synchronization) **during off-hours** (evenings or weekends) to give the systems plenty of time to get mailboxes in synch. Also, when

you turn this feature on, all existing messages on AltiServ will be exported to the Exchange server and the time stamp on those messages will be the system time at the time of synchronization and not the actual time at which messages were received by AltiServ.

## *Setting Up AltiReach Call Management*

AltiServ provides remote and desktop call management to users utilizing the Intranet or Internet via a standard Web browser. This gives the user an extended reach beyond the capabilities of a telephone system. This is possible through the AltiReach Call Management system.

### **Setting up Internet Information Server (IIS) 2.0 & 3.0**

To access AltiReach Call Management, you must create a home directory that maps to the appropriate AltiReach directory.

Setting Up AltReach Call Management

1. To create a directory on the Internet Information Server, access the **Internet Service Manager** screen and double-click on **WWW(Running)**, as shown in Figure 9-6.



Figure 9-6. Internet Service Manager screen

2. The easiest way to set up the server is to set up the **c:\altiserv\webmgmt** directory as the **Home Directory**, shown in the **Directory Properties** screen in Figure 9-7. Also, make sure that both **Read** and **Execute** are selected in the **Access** group box.

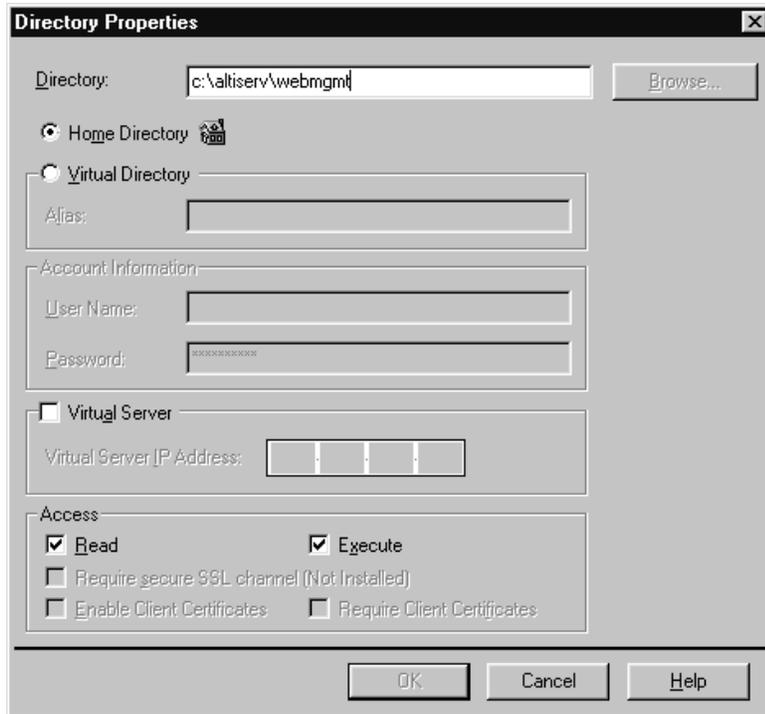


Figure 9-7. Directory Properties screen

## Setting up Internet Information Server (IIS) 4.0

After installing IIS 4.0,

1. Open **Internet Service Manager** from **Start>Programs>Windows NT 4.0 Option Pack>Microsoft IIS**.

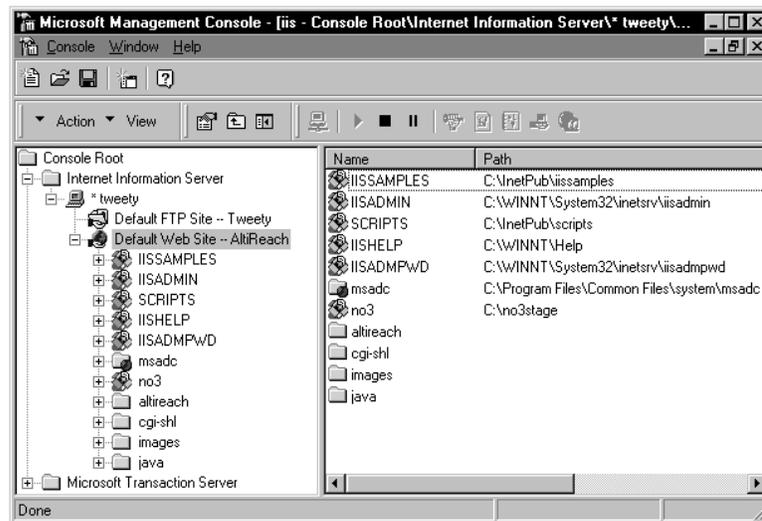


Figure 9-8. Microsoft Internet Service Manager screen

2. Click on the **Default Web Site** folder, as shown in Figure 9-8 on page 9-18, and right-mouse click to open **Properties**.

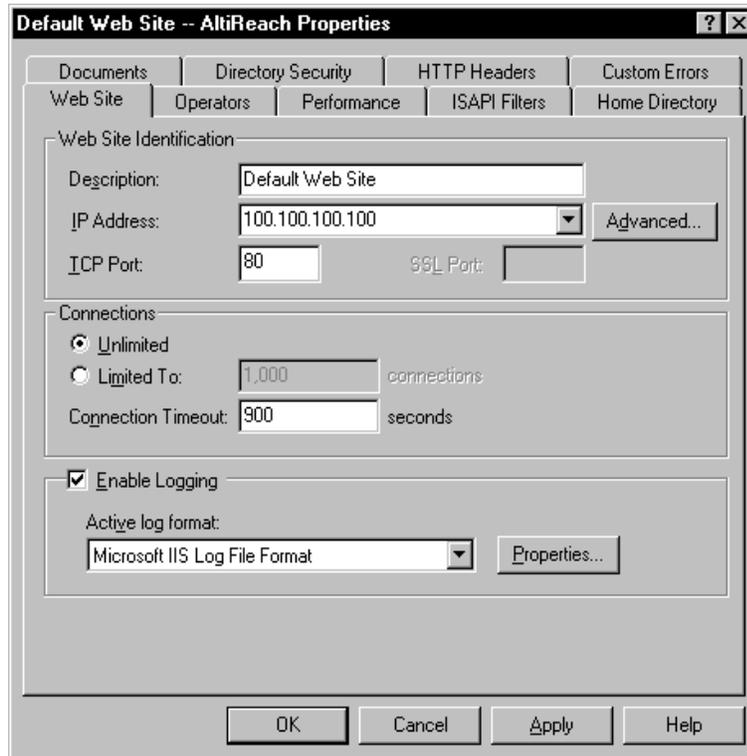


Figure 9-9. Web Site tab

3. Click on the **Web Site** tab and enter the **IP Address** (e.g. 100.100.100.100) of the AltiServ, as shown in Figure 9-9.
4. Click **Apply** at the bottom of the screen.
5. Click on the **Home Directory** tab, as shown in Figure 9-10. In the **Local Path** field, enter **c:\altiserv\webmgmt** (where **c:\** is the local drive where AltiWare OE is installed).

## Setting Up Altireach Call Management

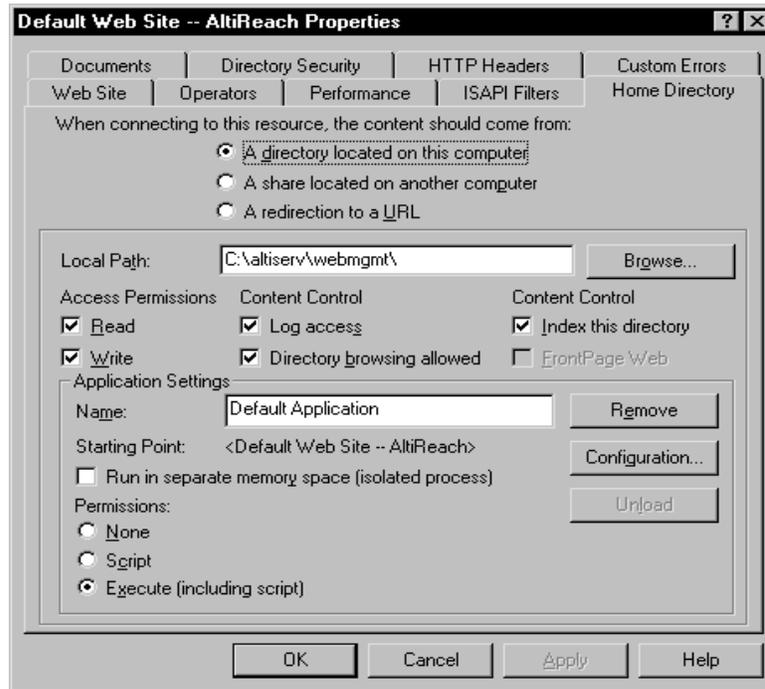


Figure 9-10. Home Directory tab

6. Under **Access Permissions**, select **Read** and under Content Control, select **Directory Browsing Allowed**.
7. In the **Application Settings** groupbox, select **Execute** under **Permissions**.
8. Click **OK** at the bottom of the screen.

IIS 4.0 configuration is complete.

## Accessing Altireach

For instructions on how to access Altireach and descriptions of all the functions within Altireach, please refer to the section titled "Altireach" on page A-40.

## *Using Microsoft NetMeeting*

**NetMeeting is supported only when used with an Internet Phone Jack.**

This section contains instructions on how to configure and use Microsoft's NetMeeting client application to make and receive the following types of calls:

- PC to Phone
- Phone to PC

AltiServ acts as the H.323 gateway which is required to make these types of calls. PC to PC calls are the most common types of calls made using NetMeeting. It does not require an H.323 gateway.

### **Before You Begin**

Please note the following:

- Using NetMeeting requires a multimedia PC with speakers and a microphone.
- DTMF digits cannot be generated using NetMeeting. Once you are connected, you will not be able to enter any additional digits. Therefore, you cannot perform tasks that require DTMF tone generation such as interfacing with voice mail or the Auto Attendant.
- NetMeeting is supported only when used with an Internet Phone Jack. For better voice quality, using a handset connected to an Internet Phone Jack is **recommended**. This gives you the option of using your phone as well as your PC to speak with the other party. Since the voice quality of computer speakers and microphones are not as good as the telephone, this is a valuable option to have.

### **How to Access NetMeeting**

NetMeeting is included in Windows 98 and is also accessible via download from Microsoft's Web site at <http://www.microsoft.com>.

## Using Microsoft NetMeeting

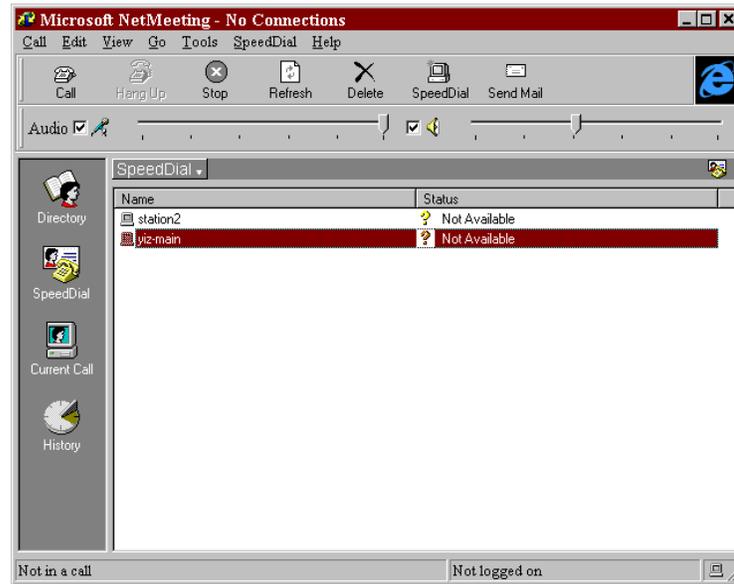


Figure I-11. Microsoft NetMeeting main window

Follow instructions provided by Microsoft to install and configure NetMeeting.

## Configuring NetMeeting to Work With Altiserv

Once NetMeeting is installed, follow the steps below to configure the H.323 Gateway:

1. Open NetMeeting
2. Select **Options** from the **Tools** menu.

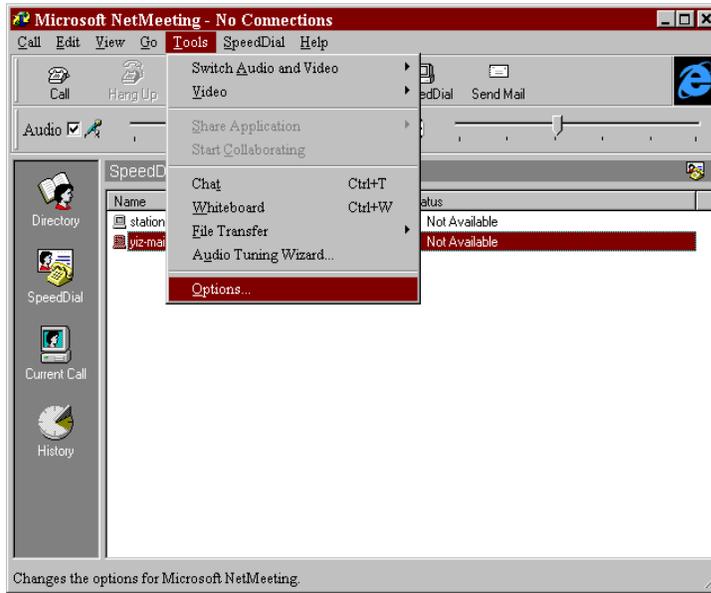


Figure I-12. Accessing the Options window

3. Click on the **Audio** tab of the **Options** window.
4. Under **Calling a Telephone Using NetMeeting**, select **Use H.323 Gateway** and enter the IP address of the remote Altiserv system in the field provided. Refer to Figure I-13, "Configuring the H.323 Gateway," on page 9-24.

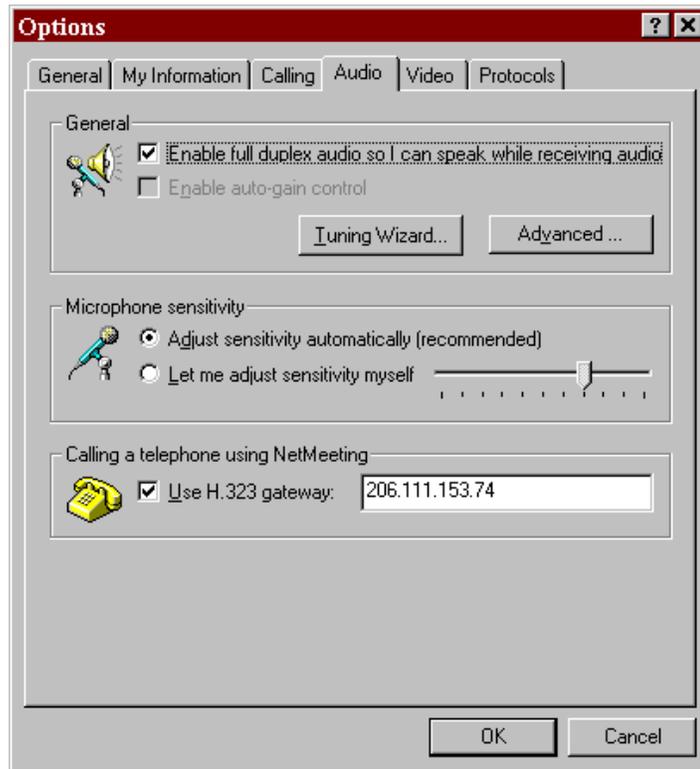


Figure I-13. Configuring the H.323 Gateway

5. Click on **OK**.

This completes the H.323 Gateway configuration for NetMeeting.

## Configuring AltiServ to Work With NetMeeting

Since AltiServ is an H.323 gateway, it enables NetMeeting users to accept calls from a telephone using a multimedia PC (phone to PC calls). However, only calls from within AltiServ's IP network can be accepted. For example, an external PSTN call must be transferred or forwarded from an internal extension (via Call Forwarding or transferred by a live user) to connect to a NetMeeting client PC.

Also, the NetMeeting client PC must be configured as one of the destinations on the **AltiWare IP Dialing Table** in AltiWare Administrator.

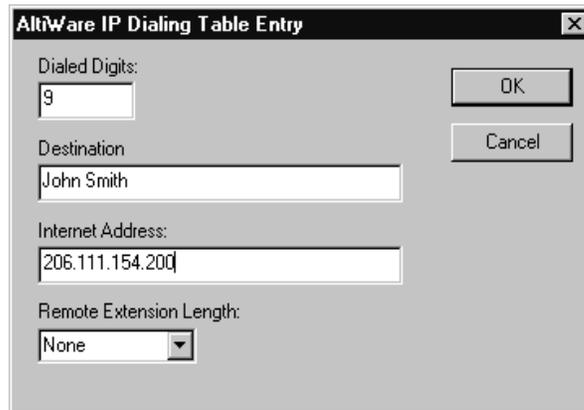


Figure I-14. AltiWare IP Dialing Table Entry

Please note the following:

- Since there is no physical extension associated with the NetMeeting client PC, the Remote Extension Length should be set to **None**.
- AltiServ users can call or transfer a call to a NetMeeting client PC simply by dialing the IP trunk access code and Dialed Digits (e.g. **89** or **Flash 89** to transfer a call).

Refer to “IP Dialing Table” on page 2-31 for instructions on how to enter a new destination.

## Making a Call

To make a call to an extension, Auto Attendant or Operator at a remote AltiServ, follow the steps below:

1. At the NetMeeting main window, click on the **Call** icon or select **New Call** from the **Call** menu.
2. When the **New Call** window appears,

## Using Microsoft NetMeeting

- a. To call an *extension directly*, enter the extension number in the **Address** field and select **H.323 Gateway** from the **Call Using** drop-down list. If the extension number entered is not valid, the call is sent to the operator or the Auto Attendant (whichever is configured to answer calls). So to call the operator or Auto Attendant using the **H.323 Gateway**, you can enter **0** for the extension number in the **Address** field.
- b. To always call the *Auto Attendant* or *operator* of the remote Altiserv, enter the IP address of the remote Altiserv in the **Address** field and select **Network (TCP/IP)** from the **Call Using** drop-down list.

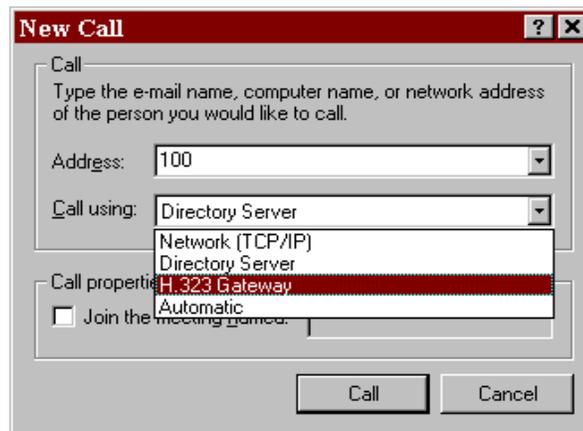


Figure I-15. Making a Call using H.323 Gateway

### 3. Click on **Call**.

You are now connected to the remote party.

## Answering a Call

A notification screen appears when there is an incoming call. It also identifies where the call is coming from. You can answer the call by clicking on **Accept**. See Figure , “Incoming Call Notification Screen,” on page 9-27.

Using Microsoft NetMeeting



*Incoming Call Notification Screen*

TAPI

## ***TAPI***

Since TAPI 2.1 works only in the NT domain environment, you must have an NT domain set up on your local network. The TAPI server machine and all the TAPI client machines **MUST** belong to the same NT domain.

- By default, TAPI 2.1 installation is included with the AltWare OE installation, unless you deselect it from the list of items to be installed during the installation setup.
- If you did not have TAPI 2.1 installed with AltWare OE and wish to use TAPI applications,
  - Follow the instructions below to install TAPI 2.1 (which is also available for free download at <http://backoffice.microsoft.com/downtrial/>).
  - You should complete installation of AltWare OE and TAPI 2.1 on the server before you install TAPI 2.1 on any client systems.
- Make sure TCP/IP is installed and configured correctly on both the client and server machines.
- Client TAPI 2.1 installation is usually included with TAPI client software installation. Contact your client software vendor for more details.

### **Server TAPI 2.1 Installation**

By default, TAPI 2.1 is installed with AltWare OE. If you de-selected TAPI 2.1 from the list of items during AltWare OE installation, you must install it before you can use any TAPI applications.

#### **CAUTION!**

- **TAPI 2.1 installation may fail giving no warning if the NT system directory is not on the C: drive.**
- **TCMSETUP will fail on an NT server machine configured as Backup Domain Controller. Please contact Microsoft technical support for information and status update for TCMSETUP.EXE.**
- **TAPI 2.1 does not work on a system with RAS (remote access services) server or RAS client installed.**

To install TAPI 2.1 on the Altiserv running AltWare OE, follow the steps below:

1. Make sure the TAPI server and TAPI client machines are members of the same NT domain, **NOT WORKGROUP**. This is a requirement of TAPI 2.1. Verify that TCP/IP is installed on TAPI server and all client machines.
2. Login to the server machine using a local administrator account.
3. Add a domain administrator account to the local administrator group.
4. Logout and re-login as the domain administrator (the account you added to the local administrator group in step 3).
5. Close all TAPI applications that are running.
6. Install AltWare OE R2.1 software. TAPI 2.1 will be installed along with AltWare OE. If AltWare OE is already installed, install **TAPI21.EXE** from the TAPI 2.1 folder on the AltWare OE R2.1 CD-ROM.
 

**Note:** During installation, if a dialog box appears asking you whether or not to replace newer TAPI files, you should select **YES**, **unless you have Service Pack 4 installed** which includes a more recent version of TAPI than TAPI 2.1.
7. Reboot the server machine.
8. In **Command Prompt**, go to **winnt\system32** directory and type the following command:
 

```
tcmsetup/s Domainname\administrator_account_name>
<administrator_password> tsec.dll
```
9. System should confirm setup with a pop-up dialog box.
10. Type the following command: `tcmapp`
11. Select **User** from the main window menu bar of the TCMAPP application.
12. Select **Add a User...** and specify a domain user account.
13. Select **Change Selected User...** and export phone lines to selected domain user.
14. Select **File** in the menu bar, and then **Exit** from the menu.
15. Repeat steps 13 and 14 for each user you want to grant TAPI access to.
16. Select **Yes** when prompted with **Save Changes?**.

TAPI

17. Reboot the server machine.
18. Login and double-click on **Services** under **Control Panel**. Make sure the **Telephony Services** is started.
19. Double-click the **Telephony** icon in **Control Panel**. Make sure the **AltiGen Communications Service Provider** is installed as one of the **Telephony Drivers**.

Server TAPI 2.1 installation is complete.

**Note:** Restarting AltiWare OE may cause TAPI to become out of synch with AltiServ. If you experience any problems, restart **Telephony Service** (from the **Services** applet in **Control Panel**) and all TAPI client applications **after** AltiWare is restarted.

## Frequently Asked TAPI Questions

**Question:** What do I do when TAPI client cannot see the devices/lines on TAPI server?

**Answer:**

- Make sure both machines are in the same domain and NOT a workgroup. This is a requirement for TAPI 2.1.
- Also make sure when you run TCMSETUP from the client that you specify the server MACHINE name, and when you run TCMSETUP from the server that you specify the DOMAIN name.
- Verify that TCP/IP is installed on both machines. Try ping from the client to the server to check.
- If you are running Windows 95, make sure you have file and printer sharing enabled, and you have user level security checked.
- Be sure to reboot the TAPI server machine after running TCMSETUP /S.
- These requirements are documented in the Microsoft TAPI 2.1 README.TXT.

**Question:** What do I do when TAPI client cannot access the line opened?

**Answer:** Run TCMAPP.EXE on the server and make sure that your client is listed. The client should have a + sign beside the name indicating there are lines available. If not, highlight the client name, select Change Selected User's Line Access, and highlight the extension that client should have access to before selecting OK. Your client only has access to the extensions that are highlighted.

**Question: What do I do if I can't run TCMSETUP on the TAPI server?**

**Answer:**

- You should log on as a domain user.
- The account you are logged on as must have local administrator privileges.
- The account you are specifying TCMSETUP to use must have local administrator privileges.
- TCMSETUP **will fail** on an NT server machine configured as Backup Domain Controller. Please contact Microsoft technical support for information and status update for TCMSETUP.EXE.

**Question: What do I do if I can't set User-Level Access Control in Win95?**

**Answer:** Reboot the client machine and re-logon as domain user.

**Question: Where can I find additional information on TAPI 2.1 installation?**

**Answer:** Installation and setup instructions are documented in the Microsoft TAPI 2.1 README.TXT.

TAPI

# Appendix A User Reference Guide

## *Telephone Functions*

AltiServ enables you to do much more than simply place and answer calls, regardless of what type of telephone your organization uses. Picking up calls ringing at another extension, overhead paging and establishing conference calls are but a few of the many features available to you as a user.

**Note:** In addition to the standard hook-flash, some telephones may provide a separate **LINK**, **TAP** or **FLASH** button.

### **Making Calls**

- To make an *internal* call to another extension, lift the handset off-hook, wait for dial tone and dial the extension number.
- To make an *external* call, lift the handset off-hook, wait for dial tone, dial the designated outside line access digit (provided by your administrator) and dial the phone number.

### **Answering Calls**

When the phone rings, lift the handset off-hook and speak into the receiver. When **Distinctive Ringing** is enabled (by the System Administrator), three different ringing cadences are used to distinguish between 1) internal calls, 2) external calls and 3) calls to the Operator.

- Internal Call = short double rings
- External Call = long single rings between long pauses
- Operator Call = long single rings between short pauses

### **Putting a Call on Hold**

While connected to a call, you may either:

1. Press the **FLASH** button to play music on hold (the system must be

## Telephone Functions

set up to play music on hold), and **DO NOT HANG UP** (hanging up will disconnect the call), or

2. Press the **HOLD** button (if your phone has one). Nothing is heard while placed on hold this way. Hanging up here will not disconnect the call. To reconnect to the call, press the **HOLD** button again.
3. Press the **FLASH** or **HOLD** button again to re-connect to the call.

## Transferring Calls

While connected to a call:

1. Press the **FLASH** button.
2. At the dial tone, dial the third party's extension number (or if permitted, a trunk-line access prefix and an external phone number).
3. Wait for the third party to answer and announce the call or simply hang up. (When hanging up, use the **Release** button if available or keep the hook-flash down for a couple of seconds to make sure the call is transferred. To abort the transfer and reconnect to the original caller, press **FLASH** again.)

## Transferring Calls into AltMail

Anyone in the office is able to send an outside user into the AltMail system by pressing **FLASH # 4 0**.

## Transferring Calls to an Auto Attendant

While connected to the call, press **FLASH # 1 5** and the two digit Auto Attendant number (i.e. **01** for Auto Attendant 1).

## Transferring Calls Directly Into a User's Voice Mail

Transfer a call directly into any user's voice mail without having to set the user's station on Do-Not-Disturb or wait for the phone to finish ringing. To transfer a call directly into a user's voice mail, press **FLASH # #** and the user's extension number.

## Conference Calls

Conference calling is supported for up to six (6) parties. Users can speak privately to each party before adding them to the conference call. Any internal user is able to add parties to the conference call. The quality of the conference call, however, depends on the quality of service available with the local telephone company.

To initiate a conference call, while connected to the first party:

1. Press **FLASH**.
2. At the dial tone, dial the next party's phone number.
3. Wait for the third party to answer and announce the conference call.
4. Press **#** to put all three parties on the conference bridge (user-initiated conference call).
5. During conferencing, any internal conference participant may press **FLASH**, dial the next party's number and press **#** to bring the next party into the conferencing session. Repeat to include up to six parties.

**Note:** The following restrictions apply for conference calls:

On every Quantum board, the extensions assigned to the board can be involved in a maximum of three (3) different conferences.

*For example, Station A and Station B are involved in Conference #1, Station C and Station D are involved in Conference #2 and Station E is involved in Conference #3.*

Of these three conferences, the system allows a total of four (4) extensions from any of other boards, in any combination, at any one time.

*For example, Conference #1 can include four (4) extensions from other boards, while Conference #2 and #3 cannot have any. Or Conference #2 can include two (2) extensions from other boards, while Conference #1 and #3 can include one (1) extension each from other boards.*

There are no restrictions for conferencing extensions from the *same* board. If these limits are reached, the system will reject attempts to conference additional parties to the call.

## Consultation

Use this feature to speak with someone at another extension while the caller is “on hold.” While connected to the call:

1. Press **FLASH** and dial the extension number of the person you wish to speak with.
2. When you are finished, press **FLASH** again to disconnect with the consulted party and return to the original caller.

## Call Park

Calls may be parked at a station to be picked up from another station. While connected to the call:

1. To park the call at the extension where the call was answered, press **FLASH # 3 1** and hang up. To park the call at another extension, press **FLASH # 3 1** and the extension number.
2. To pickup the parked call, press **# 3 1** and the extension number of the station where the call is parked.

Calls parked at an extension will ring that extension upon time-out at two (2) minutes. See “Answering Calls” on page A-15 for more information on the Call Park features.

## Call Waiting

During a call, you may hear a tone indicating that you have another call waiting. (The system will beep up to three times over a 24 second period before the call goes into voice mail.) To answer the call:

1. Press **FLASH**. This will put the first call on hold and simultaneously connect you to the waiting call.
2. When you are finished, press **FLASH** again to return to the first call. (Continue to press **FLASH** to go back and forth from call to call.)

**Note:** **Call Waiting** must be enabled before it can be used. It can be enabled by the system administrator **or** by the user on the **Call Managements Setup** screen of **AltiReach**. See “Call Management Setup” on page A-52 for more information.

## Distinctive Call Waiting Tone

This feature allows three different call waiting tone cadences to distinguish between internal, external, and operator calls. Distinctive Call Waiting Tone is very similar to Distinctive Ringing described under “Answering Calls” on page A-1. The tone cadences for Distinctive Call Waiting are as follows:

- Internal Call = two tones
- External Call = one tone
- Operator Call = three tones

**Note:** **Distinctive Call Waiting Tone** must be enabled by the system administrator before it can be used.

## Multiple Call Waiting

This feature enables a “personal” queue that allows you to handle multiple incoming calls by letting callers wait in queue until you answer the call. This allows you to transfer or park calls before answering the next call in queue.

**Note:** **Multiple Call Waiting** must be enabled for your extension by the system administrator before it can be used.

- During a call, you will hear an alert tone (audio beep) for each new call that is added to the queue.
- If **you** hang up, the phone will ring with the next caller in queue.
- If the **caller** hangs up, you will hear a fast busy dial tone which indicates that there is a call in queue. To pickup the call, press the **Link** or **Flash** key.
- To park or transfer a call before answering the next call:
  1. Press the **Link** or **Flash** key and
    - a) To **transfer** the call, enter the extension or phone number and hang up.
    - b) To **park** the call using **Personal Call Park**, press **# 3 1**, enter an extension number **only** if you want to park the call at an extension other than your own, and then hang up.
    - c) To **park** the call using **System Call Park**, press **# 4 1**, note the parked call “location” number, and then hang up.

## Telephone Functions

2. Answer the next call in queue which will ring after you disconnect with the previous call.
- The caller hears an **Initial Greeting** before being placed in queue.
  - While in queue, the caller hears a **Subsequent Greeting** every 30 seconds.
  - The **Initial** and **Subsequent Greetings** can be changed or customized in AltMail at the **Personal Options** menu. See “Recording Greetings” on page A-29 for more instructions on personalizing these greetings.
  - When recording your customized greetings, remind your callers that they may press pound (#) at any time to exit the queue and leave a voice mail message or (if your organization has an operator) press **0** for the operator.

## Centrex Transfer

Centrex Transfer is used to transfer an external call to an outside number without having to “tie up” two trunk lines. Once the transfer is complete, the external caller’s line is directly connected to the outside number and internal trunk lines are dropped since there are no longer any connections to internal users. This frees up system trunk line resources for other calls.

While connected to the first party,

1. Press **FLASH**, then \*.
2. Dial the second party’s phone number (no need to dial the prefix for trunk-line access such as **9**) and either hang up or announce the call.
3. Once you place the handset back on-hook, the trunk line also drops and Centrex completes the transfer.

**Note:** You must have a Centrex line to use this feature.

## System Callback

You can have Altiserv call you at a remote location. This is useful for mobile users who don’t want to accrue expensive toll charges while traveling, especially from international locations where there is no access to toll-free numbers.

**Note:** In order to access this feature, **System Callback** must be configured in the Auto Attendant by the system administrator.

To use the System Callback feature from a remote location,

1. Call the Altiserv system.
2. At the Auto Attendant, select the System Callback option.
3. When prompted, enter your extension number and password.
4. Enter the number where Altiserv should call you back and press # at the end of the number. Enter a **1** and the area code if it is a long distance number or **011** and the country code if it is an international number. You do not need to enter an outside line access digit (e.g. **9**).
5. Hang up. Altiserv will call you back at the number you've specified above.
6. When prompted, enter your password. At successful login, you are connected to the Auto Attendant.

## *Dialing a Remote Altiserv*

### **Calling a Remote Extension Directly over IP**

Follow the steps below to call a remote extension directly over IP:

1. Dial the IP trunk access code (e.g. **8**).
2. Dial the destination ID (e.g. **1**), if applicable.
3. Dial the destination extension number (e.g. **101**).

You are connected to the destination extension.

### **Calling Remote Auto Attendant or Operator**

Follow the steps below to call the auto attendant or operator of a remote Altiserv:

1. Dial the IP trunk access code (e.g. **8**).
2. Dial the destination ID (e.g. **1**), if applicable.

You are connected to the destination auto attendant or operator, depending on how the remote system is configured to answer incoming calls.

**Note:** If you do NOT get connected to an auto attendant or operator, the remote system may be configured to forward all incoming calls to an extension.

## Calling a Remote Number (Hop Off Dialing)

Follow the steps below to dial a remote phone number (not an extension) on the remote extension.

1. Dial IP trunk access code (e.g. **8**).
2. Dial the **remote system dialed digit** (e.g. **0**).
3. Dial \*. (Dialing '\*' selects the PSTN trunk with the lowest value in trunk access code.)
4. Dial the **phone number** (e.g. 14085551212).
5. Press # (# is optional and only used to speed up the call.)

If the dialing sequence is **8 0 \* 14085551212#**, this will call **14085551212** using a CO trunk on the remote system.

Follow the steps below to call a remote number using the remote system's trunk access code:

1. Dial IP trunk access code (e.g. **8**).
2. Dial the **remote system dialed digit** (e.g. **0**).
3. Dial the **remote trunk access code** (e.g. **9**).

**Note:** The specific trunk access code only works for '9.' You cannot select '8,' '7,' or '6,' etc., as the trunk access code using this dialing method unless the remote extension for this system is set to **'unknown.'**

4. Dial the **phone number** (e.g. 14085551212).
5. Press # (# is optional and only used to speed up the call.)

If the dialing sequence is **8 0 9 14085551212#**, this will call **14085551212** using a CO trunk on the remote system, where the remote trunk group is **9**.

**Note:** The remote **Extension Length** must be always be set to **None** for the remote system entry, if using Hop Off Dialing.

## Hop On Dialing to a Remote Extension

To hop onto a remote extension:

1. The incoming call must come in over T1 or the CO to an extension.
2. The extension is set up to forward over IP to the remote extension.

## *AltiServ Features Support Over IP Trunk Calls*

A majority of all AltiServ features in AltiWare OE are supported over IP trunk calls as well. The following is a partial list of features that are supported over an IP network, along with specific instructions on how they are used.

### Supported Features

The following features are supported while dialing through IP trunks:

- **Incoming and Outgoing Trunk Calls** - you must dial the IP trunk access code to make outgoing calls via an IP trunk.
- **Call Transfer To and From IP Trunk (Blind and Supervised)** - you must dial the IP trunk access code and all necessary prefixes to transfer calls via an IP trunk.
- **One Number Access** - when entering “outcall” numbers via AltiReach or AltiAdmin, you must add \* in front of the outcall number to call out through IP trunks. For example, if you want AltiServ to dial the extension **300** at a remote AltiServ where the location ID (Dialed Digits) is **1** and the IP trunk access code is **8**, you must enter **\*81300** as the outcall number.
- **Message Notification** - when using AltiReach or AltiAdmin, you must enter \* in front of the notification number (e.g. **\*81200**). Adding a \* is NOT necessary, however, if you enter the number over the phone via voice mail.
- **Reminder Calls**
- **Multi-Location Conferencing**
- **Call Park of IP Calls**
- **Call Waiting of IP Calls**
- **Automatic Call Distribution of IP Trunk Calls**
- **Auto Attendant**
- **System CallBack over IP Trunk**
- **Calling Out from Voice Mail**

## AltiServ Features Support Over IP Trunk Calls

- **Zoomerang** - allows the caller to leave a different extension number as the callback number. If the callback number of a call from another AltiServ is available and automatically captured, AltiServ only announces the extension number but connects to the correct remote AltiServ.
- **Dial Last Caller** - AltiServ will use an IP trunk to dial the last caller if that call was received via an IP trunk.
- **Call Restrictions**
- **Speed Dialing** - be sure to enter all appropriate prefixes such as IP trunk access code, Dialed Digits, etc.
- **Call Accounting**
- **Caller ID** - displays location and extension number. If an incoming call is from an unspecified IP host, the IP address is used instead of location name.
- **Voice Mail**
- **Mixed-media Messaging**
- **Microsoft Exchange Integration**
- **AltiConsole Client Support** - you can use AltiConsole to handle calls to and from IP trunks.
- **AltiReach Support** - all features accessible via AltiReach (One Number Access, Message Notification, etc.) can be used with IP trunks. CallView and WorkgroupView screens also show call activities over IP trunks.



## *Using Feature Codes*

The following sections describe additional telephone features used for call handling and management. To use any of these features,

1. Lift the handset off-hook and wait for the dial tone.
2. Dial the keys indicated in the “DIAL” column.
3. Follow the instructions in the “INSTRUCTIONS” column.

## **AltiMail Quick Features**

The following voice messaging features are accessible in the same way as telephone features, *without having to login to AltiMail*. Using these feature codes will take you directly to the feature menu.

FEATURE	DIAL	INSTRUCTION
<b>Greeting Menu</b>	<b># 1 1</b>	Enter password. Follow the system prompts to change your greeting.
<b>Password Menu</b>	<b># 2 8</b>	Follow the system prompts to change your password.

## Making Calls

FEATURE	DIAL	INSTRUCTION
<b>Dial by Name</b>	<b>#34</b>	Enter letters of the name beginning with last name followed by the first name and #. Use 1 for Q and Z. The system will search until a unique name is found and will call the extension associated with the name.
<b>Station Privilege Override</b>	<b>#35</b>	From any phone set, enter your extension and password. You now have your own calling privileges at that phone set <u>for the next call</u> . This feature is useful when you are at a phone set other than your own (i.e. in a conference room) that has limited calling privileges (toll restrictions), where you may be unable to make outside or long distance calls. Using Station Privilege Override will enable you to use your calling privileges at the local phone set for one call only. After your call, the phone set automatically returns to the original toll restrictions.
<b>Dial Last Caller</b>	<b>#69</b>	Allows user to dial the last caller by pressing <b>#69</b> .
<b>Station Speed Dial</b>	<b>#77</b>	Enter a 2-digit Station Speed Dial number and the system will dial the pre-programmed number for you. Refer to "Station Speed Dial Setup" on page A-20 to program speed dial numbers.
<b>System Speed Dial</b>	<b>#88</b>	Enter a 2-digit System Speed Dial number and the system will dial the preprogrammed number for you. System Speed Dial numbers are preprogrammed and provided by the System Administrator.
<b>Last Number Redial</b>	<b>#99</b>	The system saves and redials the last number dialed.

## Using Feature Codes

**Note:** If you are unable to make calls within certain area codes, check with your System Administrator for any toll restrictions placed on your extension which restricts your access to long distance area codes and dialing prefixes.

## Answering Calls

FEATURE	DIAL	INSTRUCTION
<b>Individual Call Pickup</b> (specific ringing phone)	<b>#29</b> <ext>	Enter extension number of the ringing phone. The call will be connected to the local set.
<b>System Call Pickup</b> (any ringing phone)	<b>#30</b>	System will connect the call of <i>any</i> ringing phone to the local set.
<b>Personal Call Park</b>	<b>FLASH</b> <b># 3 1</b>	Calls may be parked at a station to be picked up from another station. While connected to the call, press <b>FLASH #31</b> and hang up. You may also park the call at <i>another</i> station by pressing <b>FLASH #31</b> and the extension number of the other station. You may have up to 50 calls parked per station simultaneously. Calls parked at an extension will ring that extension upon time-out after two (2) minutes.
<b>Personal Call Park Pickup</b>	<b>#31</b> <ext>	A personal-parked call can be picked up at any station on the system by pressing <b>#31</b> and the extension number of the station where the call is parked.
<b>System Call Park</b>	<b>FLASH</b> <b>#41</b>	Allows user to park a call at a public “location” by entering <b>FLASH #41</b> . The system announces where the call is parked (a location number). Calls parked by a user will ring that user’s extension upon time-out after two (2) minutes.
<b>System Call Park Pickup</b>	<b>#41</b> <loc.>	A system-parked call can be picked up at another station by pressing <b>#41</b> and the “location” number where the call is parked.

## Using Feature Codes

<b>Hands Free Mode</b>	<b>#81</b>	<p>Allows user to receive <i>internal</i> calls through the intercom without having to pickup the handset to answer. Press <b>#81</b> to activate the Hands Free Mode. This is a toggle feature; press <b>#81</b> again to deactivate the feature. You must use a speaker phone which must be turned <b>on</b> to use this feature.</p> <p>If you receive a call from an outside caller, you will hear a ringing tone from the speaker. Press <b>FLASH</b> to answer the call.</p> <p>If the speaker phone is <b>not</b> turned on while this feature is activated, the phone will still ring on an incoming call but you must pickup the handset to answer the call.</p>
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## Call Management

FEATURE	DIAL	INSTRUCTION
<b>Station Log Out</b>	<b>#26</b>	<p>Enter your password. Your extension is now deactivated. This feature is useful when you want to “shut off” your extension while you are away for an extended period of time. All calls will be forwarded to voice mail. This feature is also used to physically and completely move your extension from your phone set to another phone set in the office.</p>
<b>Station Log In</b>	<b>#27</b>	<p>To reactivate your extension, at your original phone set or at a different phone set, enter your extension number and password. To activate your extension at a different phone set, that set must be deactivated of any other extension associated with it.</p> <p>This feature can also be used to hear the extension number that is currently activated at the phone set.</p>

<b>Account Code</b> (before calling)	<b>#32</b>	Enter account code (10 digits maximum) followed by #. Make the call when you hear the dial tone. This feature is used for client billing purposes. The System Administrator should assign all account codes in order to prevent duplication of codes by different users.
<b>Account Code</b> (during a call)	<b>#32</b>	While connected with the called party, press <b>FLASH</b> and wait for dial tone. Enter <b>#32</b> and the account code (10 digits maximum) followed by #. You will then be reconnected to the call. The System Administrator should assign all account codes in order to prevent duplication of codes by different users.
<b>Do Not Disturb</b>	<b>#33</b>	Pressing #33 turns the Do Not Disturb feature on. Dial <b>#33</b> again to deactivate. This is a toggle feature that activates when in deactivated mode and deactivates when in activated mode. While activated, all calls will be forwarded to voice mail.
<b>Call Forwarding</b>	<b>#36</b>	At your phone set, enter your password. Enter the forward destination number (internal extension or external phone number including trunk access code, long distance prefix and area code) followed by #. Your calls will now be forwarded to the destination number you have specified. This is a toggle feature; you may deactivate it by pressing <b>#36</b> again. You may also activate this feature from within AltMail. See “Call Forwarding” on page A-32 for more information.

## Using Feature Codes

<b>Call Forwarding</b> (continued)		Use this feature from your phone set to redirect calls to another phone (i.e. your home or cellular phone). Multiple users may route calls to the same destination number but there is a “1-hop” limit to forwarding. For example, Extension 101 has calls forwarded to Extension 102. Extension 102 has calls forwarded to Extension 103. A call to Extension 101 will ring Extension 102 and <u>not Extension 103</u> because of the 1-hop limit. If Extension 102 does not answer, the call is sent to Extension 101’s voice mail.
<b>Remote Call Forwarding</b>	#37	At a phone set other than your own, enter the extension number of the source phone set (your extension). Also enter your password when prompted. Your calls will now be forwarded to the local phone set where you are. Use this feature <i>from</i> the phone set you wish to redirect your calls to. Multiple users may route calls to the same extension. This is a toggle feature; you may deactivate it by pressing #37 again from the remote phone set.

## Workgroup Features

FEATURE	DIAL	INSTRUCTION
<b>Workgroup Call Pickup</b>	<b>#29</b> <b>&lt;wkgp</b> <b>ext&gt;</b>	Calls to a specific workgroup may be picked up by pressing <b>#29</b> and the workgroup pilot or extension number. This allows workgroup members to pickup calls coming into the specified workgroup only rather than all calls into the system.
<b>Workgroup Log In</b>	<b>#54</b> <b>&lt;wkgp</b> <b>ext&gt;</b>	Workgroup members can login to a workgroup by pressing <b>#54</b> and the workgroup pilot/extension number. You must be a member of the workgroup to login.
<b>Workgroup Log Out</b>	<b>#56</b> <b>&lt;wkgp</b> <b>ext&gt;</b>	Workgroup members can log out of a workgroup by pressing <b>#56</b> and the workgroup pilot/extension number. This allows workgroup members to block only workgroup calls but continue to receive other calls directly to their extension.

## Other Features

FEATURE	DIAL	INSTRUCTION
<b>Feature Status Check</b>	<b>#22</b>	System will announce any telephone features that are currently activated. In addition, the <i>dial tone</i> will change also when the following features are activated: Do Not Disturb, Call Forwarding, Remote Call Forwarding, Hands-Free Mode, Dial Tone Mute Mode, Outside Call Blocking (Operator only) and Operator Off-line (Operator only).
<b>Station Speed Dial Setup</b>	<b>#25</b>	You may program up to 20 speed dial numbers. Enter a 2-digit speed dial number (00-19). Enter the speed dial phone number up to 20 digits. Include all necessary digits such as outside line access digit, <b>1</b> for out of area numbers and the area code. When you have finished, press <b>#</b> . System will play "Speed dial number saved. To set up another speed dial number, press <b>#</b> ." Simply hang up when finished or press <b>#</b> to continue.
<b>Overhead Paging</b>	<b>#44</b>	The phone set will be connected to the overhead broadcast device. Speak into the handset and hang up when finished. <i>The internal public address system must be in place in order to use overhead paging.</i>
<b>Overhead Paging by Trunk</b>	<b>#45</b>	Allows an extension user to direct a call to a particular trunk with a paging ID broadcast. Allows broadcasting through a trunk without checking call progress.

<b>Feature Tips</b>	<b>#55</b>	Plays helpful tips and reminders for optimal use of AltiServ. You can listen to just one tip at a time or listen to all the tips at once. There are eleven tips total and a different one is played each time you access Feature Tips. See “Feature Tips” on page A-33 for more information.
<b>Silent System Call Park</b>	<b>#73</b>	This feature is used to <i>disable</i> the system from announcing the “location” of a call when using the System Call Park feature. This announcement is not necessary and sometimes confusing when using third party applications that allow you to park and pickup calls using the graphical user interface rather than using the telephone. It also eliminates having to wait for the location number to be announced before moving on to the next step.
<b>Dial Tone Mute Mode</b>	<b>#82</b>	Allows third party (e.g. TAPI) application users to leave the handset off-hook without having to listen to the dial tone. Press <b>#82</b> to enable Dial Tone Mute Mode. This is a toggle feature; to disable it, press <b>#82</b> again.  You must use a speakerphone which must be turned <b>on</b> to use this feature. If the speakerphone is <b>not</b> turned on while this feature is activated, the phone will still ring on an incoming call but you must pickup the handset to answer the call.

## ***Operator Features***

This section is provided specifically for the designated Operator. Depending on your organization, this may be a single person or a number of people. See your System Administrator to understand the customized call processing procedures for your organization.

### **Auto Attendant**

If your system is setup with Auto Attendant(s), the system will handle incoming calls much like a receptionist. After it answers a call and plays a greeting recorded by the System Administrator, it will give further instructions to the caller depending on the Auto Attendant configuration.

### **Call Handling with Auto Attendant**

Most of the incoming calls will never get to the Operator since the Auto Attendant can answer and transfer calls to extensions or to voice mail. The call will ring at the Operator's desk if the caller dials **0** while listening to options given by the Auto Attendant. Follow instructions in the *Basics* section of this Guide to answer, hold and transfer calls.

### **Call Handling without Auto Attendant**

If Auto Attendant is not configured to answer incoming calls, all calls will ring at the Operator's desk. Follow instructions in the *Basics* section of this Guide to answer, hold and transfer calls.

### **General Mailbox**

The System Administrator may set up a General Mailbox where callers may leave a message in case they do not know who to speak with or when the Operator is unavailable. This mailbox works like any other voice mailbox and has an extension number and password. Be sure to check this mailbox frequently and forward messages to the appropriate person as soon as possible.

## Calls on Hold

To place a call on hold, you may either

1. Press the **FLASH** button to play music on hold, or
2. Press the **HOLD** button. Nothing is heard while placed on hold this way.

If a call is placed on hold at the Operator's desk, all subsequent calls to the Operator will be routed to the next extension in queue (if a workgroup is setup) or sent into voice mail (the General Mailbox). Be sure to fully understand your organization's customized call processing procedures.

## Operator Off-line

When the Operator Off-line feature is activated, all calls are directed to the Auto Attendant. To activate this feature,

1. Press **# 3 9**.
2. To deactivate, press **# 3 9**.

When callers dial **0**, the system transfers the call to the next extension in the workgroup if one is configured or informs the caller that the Operator is not available and to leave a message in the Operator's mailbox.

## Outside Call Blocking

When activated, access to all outside lines is temporarily disallowed for all users.

1. Press **# 3 8**.
2. Press **# 3 8** to deactivate.  
(When deactivated, access to outside lines is restored.)

## ***AltiMail Voice Messaging***

This section covers the voice messaging functions of AltiServ, from a simple first time login to sophisticated Dynamic Messaging.

AltiMail voice prompts will guide you through step-by-step instructions for any function you want to use. From any menu, press **0** to repeat your options and **\*** to return to the previous menu. The following pages will also explain in detail how to use every feature and function available in AltiMail.

*The flowchart at the end of the AltiServ User Guide will help you better understand where you are at each step.*

### **Feature Tips**

Each time you login to AltiMail, you will hear a **Feature Tip**, helpful tips and reminders of the most useful features for optimal use of AltiServ. See “Feature Tips” on page A-33 for more information on this feature as well as instructions on how to enable/disable this feature.

### **Accessing AltiMail**

For **first time access** (from your station), press

- ##
- initial password (your extension number)

**Note:** Your default password is the same number as your extension number. To change your password, see “Changing Password” on page A-30. For maximum security, be sure to change your initial password as soon as possible.

For **station login** (from your station), press

- ##
- your 2-8 digit password

To login from another station and for virtual extensions, press

- ##
- # (to login as your extension)
- your extension

- your 2-8 digit password

## Remote Login

For remote login from outside of the office, dial your company phone number and during the Auto Attendant greeting, press

- #
- your 3 digit extension
- your 2-8 digit password

For standard remote login, Auto Attendant must be configured. If Auto Attendant is not used in your office, someone in the office (such as the operator) must transfer you into AltiMail. Please see “Transfer to AltiMail Feature” on page A-25.

## Transfer to AltiMail Feature

If the Auto Attendant is not activated when you call in from a remote location to login to AltiMail, you must have the operator (or any other internal user) transfer you into AltiMail. There are two ways to transfer users into AltiMail:

1. Anyone in the office is able to send an outside user into AltiMail by pressing **FLASH #40** while connected to the user.
2. You can also login to AltiMail by pressing \* during the voice mail greeting of any extension. (This method of logging into voice mail is necessary if the operator or user is using any TAPI application that does not support **FLASH** and therefore cannot use **FLASH #40** to transfer you into voice mail.) After pressing \*, you are prompted to enter your password or to press # to enter your extension (if you are at the voice mail greeting of an extension other than your own).

## Returning to Auto Attendant from AltiMail

After a remote login, AltiMail provides an extra option. Dialing **9** from the Main Menu will return you to the Auto Attendant, provided the Auto Attendant is configured and activated. This allows you to access voice mail and speak with co-workers in the office with just one phone call. (Use the *Transfer to AltiMail* feature above to return to voice mail after speaking with someone in the office.)

## AltiMail Voice Messaging

After you have successfully logged in, you will be at the Main Menu, the first menu in AltiMail.

### **AltiMail Main Menu Options**

Once you've successfully logged into AltiMail, you are presented with the following options at the **Main Menu**:

1. Listen to New Messages
2. Review Saved Messages
3. Send a Message
4. Access Personal Options
5. Access Private Messaging Options
6. Phrase Management (available for system manager extension only)
8. Review Mixed-Media Messages
9. Transfer Out of Voice Mail (available only when accessing AltiMail remotely)
- #. Make a Call

### **Listening to Messages**

If there are new messages in your voice mail box, the dial tone changes from a constant tone to a broken tone.

At the Main Menu, AltiMail will announce all new and saved messages.

To check voice mail messages, press

- **1** for new messages
- **2** for saved messages

To listen to Mixed-Media messages, press **8** and then

- **1** for new messages
- **2** for saved messages

**Note:** Options 1, 2 and 8 in the Main Menu will not be voiced if there are no new or saved messages.

After or while listening to a new or saved message, press

- **1** to delete
- **2** to replay
- **3** to save
- **4** to forward a copy of the message with an introduction
- **5** to call the sender. This is the **Zoomerang** feature. **Press \*\*\* to disconnect from the call and return to AltiMail.** (See page A-34 for more information on the Zoomerang feature.)

**Note:** The sender's caller ID information is automatically captured by the AltiServ if the caller is an internal user or an outside caller who has either a publicly listed number or has entered their callback number in the delivery options menu after leaving the message. In this case, AltiServ dials this number when you use Zoomerang. But even if the caller ID is not available, you can manually enter the number to dial so that you can still use the Zoomerang feature.

- **6** to reply to the message
- **7** to rewind (during message playback)
- **9** to fast forward (during message playback)
- **#** to skip
- (To listen to a skipped message, press **1** again at the Main Menu.)

**Note:** See your System Administrator to activate or deactivate the time stamp which records and states the time and date of each message before playback. The time stamp portion of the message may be skipped by pressing **9** during playback.

## Sending Messages

At the Main Menu, press

- **3**
- Record message and press **#** when finished.
- Enter destination extension or
  - **#** to enter destination by name  
(Enter last name followed by the first name and press **#** when finished. Use **1** for "Q" and "Z".)
  - **9** to broadcast the message to all users
  - **\*** to re-record the message

Then press

## AltiMail Voice Messaging

- # to send immediately
- 1 for delivery options
  - 1 for urgent delivery
  - 2 for future delivery
- 2 to re-enter destination extension.

**Note:** Be precise and brief when leaving messages, speaking clearly. Mark messages urgent only when necessary. Urgent messages are placed at the beginning in the queue of new messages to be heard, before other non-urgent messages.

## Making a Call from AltiMail

You can make a call, either to another user's extension number or to an external phone number, without having to leave AltiMail. This is especially useful while traveling where you can respond to messages and make *other* calls not associated with a message, all with *one* call into AltiMail. Since businesses usually receive better rates and with the use of Least Cost Routing, this can result in significant savings.

**Note:** The use of this privilege is configurable on a per-user basis so check with your AltiServ system administrator to ensure that you have this privilege before using this feature.

To make a call from within AltiMail:

1. Press # at the Main Menu
2. Dial the extension or external phone number to call. If it is an external number, be sure to dial the outside line access digit and any long distance prefix digits such as 1 and area code.
3. Press \*\*\* to disconnect from the call and *return* to AltiMail.

## *Personal Options*

Personalize your AltMail by creating unique greetings and customizing the system to notify you of important calls or remind you of meetings and action items.

At the Main Menu, press **4** for the following Personal Options:

- Personal Greetings
- Password
- Message Notification
- Reminder Call
- Call Forwarding
- Feature Tips

### **Recording Greetings**

At the **Personal Options** menu, press **1** to record greetings and then press:

- **1** to record your **Personal Greeting**.
  - Record your greeting and press # when finished. Example: “Hi, this is Mary Smith. I am unable to answer your call at this time. Please leave a detailed message and I will return your call promptly.”
- **2** to record your **Directory Name**.
  - Record your full name and press # when finished. Example: “Mary Smith”.
- **3** to **select which greeting to use** (personal or system greeting).
  - Even if you have recorded your personal greeting, the default system greeting is used until you select (and in effect *activate*) your personal greeting. This also applies to the **Initial** and **Subsequent** greetings described below.
- **4** to record the **Initial Greeting**
  - Callers will hear the **Initial Greeting** when placed in your personal queue. Example: “Hi, this is Mary Smith. I’m on the other line at the moment. If you would like to hold, please stay on the line. To leave a message, press pound (#) at any time. Press **0** for the operator.”

## Personal Options

- The system default **Initial Greeting** is “<directory name> is on the phone and will be with you as soon as possible. You may hold or press the # key to leave a message”.
  - **5** to record the **Subsequent Greeting**
    - Callers in your personal queue will hear the **Subsequent Greeting** every 30 seconds. Example: “Hi, I’m still on the other line. Please continue to hold or press pound (#) to leave a message. Press **0** for the operator.”
    - The system default **Subsequent Greeting** is “<directory name> is still on the phone. You may continue holding or press # to leave a message”.
- Note:** Options **4** and **5** are available **only** when **Multiple Call Waiting** is enabled for your extension. Also, the *default* Initial and Subsequent Greetings are used until you record **and activate** your customized greetings. See “Multiple Call Waiting” on page A-5 for more details on this feature.

## Changing Password

At the Personal Options Menu, press **2** and

- **1** to change the password  
(The password must be 2 to 8 digits long.)

**Note:** To maximize security, memorize your password. Do not write your password on this guide. Be sure to change your password if you suspect that someone else knows your password.

## Message Notification

Message Notification is designed to alert you of messages when you are away from your desk. When a caller leaves a message on your extension, AltMail will notify you by calling the extension, phone number or pager that you designate (delivery phone number). AltMail will prompt you for your password and place you at the Main Menu after a successful login.

At the Personal Options Menu, press **3** and

- **1** to enable notification for **urgent** messages only
- **2** to enable notification for **all** messages
- **3** to **disable** message notification

- **4** to change notification phone number, pager number or extension. When designating this delivery phone number, AltMail will ask you to enter the number (up to a maximum of 80 digits), using the long distance prefix **1** for out of area phone numbers. Then, you must identify the *type* of number by specifying whether it is an extension, a phone number or a pager number. Because you can specify the type of number, you do not need to enter the trunk access code as part of the number.

**Note:** Message Notification cannot be sent to virtual or workgroup pilot extensions. For example, you cannot configure Message Notification to notify you of new messages by calling a virtual extension or workgroup pilot extension, although you could configure it to call a workgroup member since it is a physical extension.

- **5** to set notification schedule. After pressing **5** to schedule notification, press
  - **1** to activate notification at all times
  - **2** to activate notification during off hours
  - **3** to setup your own notification schedule. When customizing the notification schedule, AltMail will prompt you for the activate and deactivate times. If the hour digit is “1” in the case of one o’clock for example, press # after the entry. Always enter two digits for minutes. AltMail will only accept 10 minute intervals such as 10:10 or 10:20 and not 10:15.

**Note:** If the system is unable to reach you for Message Notification or Reminder Calls, it will play “Attempts to reach you earlier were unsuccessful” the next time you login to AltMail. Also, the system will not be able to reach you at an outside location if there are no trunk lines available when the system attempts to make the call.

## Reminder Calls

Remind yourself of important meetings, things to do or people to call by setting up a Reminder Call. AltMail not only acts as an alarm clock, but can also play back your pre-recorded message at a specified time and date, to a specified delivery phone number. For example, you can have AltMail call you at home tonight to remind you to bring a file to work the next morning!

At the Personal Options menu, press **4** and

## Personal Options

- 2
- set the future time and date of the call  
(If the hour digit is "1", press # after the entry. Always enter two digits for minutes. AltiMail will only accept 10 minute intervals such as 10:10 or 10:20 and not 10:15.)
- record message followed by #

**Note:** Option 1 (not shown above) is voiced only if a scheduled reminder call has not been delivered. This option allows you to review scheduled reminder calls.

Then press

- 1 to deliver to your extension
- 2 to deliver to the outcall number (or delivery phone number designated in Message Notification)

Press # to confirm the message delivery.

**Note:** The delivery phone number (up to a maximum of 80 digits) for Reminder Calls is the same as the Message Notification delivery phone number. To change the delivery phone number, press 3 at the Personal Options Menu and press 4 to designate the new delivery phone number. This delivery phone number **cannot** be a virtual or workgroup pilot extension number.

## Call Forwarding

You can configure Call Forwarding remotely by just dialing into AltiMail and selecting option 5 from the **Personal Options** menu. To setup Call Forwarding in AltiMail:

At the Personal Options menu, press 5 and

1. Enter the destination number. If it is an external number, begin with the outside trunk access digit and any long distance prefix digits such as 1 and area code.

**Note:** Forwarding calls to a pager is possible but **not recommended** since callers will only hear what is heard when calling a pager and will not know to enter a return phone number unless instructed.

2. Press # at the end of the destination number.

All calls will now be forwarded to the destination number.

## Feature Tips

Each time you login to AltMail, you will hear a **Feature Tip**, helpful tips and reminders of the most useful features for optimal use of AltServ. There are a total of eleven tips and a different tip is played each time you access AltMail.

Another way to listen to Feature Tips is by pressing **#55** on your telephone. You can listen to just one tip at a time or listen to all the tips at once.

To turn this feature off, press **6** at the Personal Options menu. This is a toggle feature so pressing **6** at the Personal Options menu will turn it back on if it is off.

## *Dynamic Messaging*

AltiServ provides special Dynamic Messaging features to enhance voice communications for business travelers who are always on the go.

Because of the importance of voice messaging to this group of users, AltiServ provides extra features to offer advanced voice communications capability. The **Zoomerang** feature enables you to return a call with the push of one button, while you are still in AltiMail. **Private Messaging** provides a way to leave a private message for callers who are hard to get a hold of.

The following pages describe these Dynamic Messaging features in detail and provide instructions on how to use them.

### **Zoomerang**

The Zoomerang feature is designed to make the job of returning calls easier and faster. Much like an actual boomerang, this feature enables the user to listen to messages in AltiMail, make calls to the party who left the message and **return** to AltiMail to continue checking messages. This feature is particularly advantageous for the cellular or car phone user who, with just one call into AltiMail, is able to return a call for every message.

**Note:** The use of this privilege is configurable on a per-user basis so check with your AltiServ system administrator to ensure that you have this privilege before using this feature.

To use **Zoomerang**:

1. After or while listening to a new or saved message, press **5** to call the sender of the message.

**Note:** If the sender's caller ID information is available, AltiServ automatically makes the call once option **5** is selected. This caller ID information is automatically captured by the AltiServ if the caller is an internal user or is an external caller who has either a publicly listed number or has entered their callback number in the delivery options menu after leaving the message (see "The Caller's Options" on page A-35).

2. **If the caller ID was not captured, the user may manually enter the number to dial.** If it is an external number, be sure to dial the outside

line access digit and any long distance prefix digits such as 1 and area code.

3. Press \*\*\* to disconnect from the call and *return* to AltMail.

### The Caller's Options

After leaving a message, the *caller* may simply hang up or press # for special delivery options. If # is pressed, they have the option to press

- \* to re-record the message
- 1 to specify delivery options
- 2 to attach a call back number  
(If the callback number is outside of your outcall accessibility, the system cannot return the call. Please check with your System Administrator for your toll restrictions.)
- # to send the message

After pressing 2, they will be asked to leave a call back number beginning with the area code. To notify your callers of this option, you may want to mention the option to leave a call back number in your personal greeting. If the caller's number is a publicly listed number, there is no need to enter their callback number since Altiserv automatically captures their caller ID information.

### Private Messaging

To minimize telephone tag, you have the ability to leave a private, detailed message in AltMail for a caller in case you are not at your desk or in the office when he or she calls. This feature is perfect for those callers who do not have voice mail themselves or are difficult to reach. Private Messaging allows callers to access information intended for them when they try to contact you while you are unavailable. When you leave a Private Message, the system asks callers to enter the letters of their names (last name followed by first name) to check if they have a Private Message.

#### To Leave A Message

At the Main Menu, press 5 and

- 2 to record a new message
- At the tone, record message and press #

### Dynamic Messaging

- Using the number pad, enter recipient's last name followed by the first name. Use **1** for "Q" and "Z".
- When you have finished, press #.

### To Check Message Status

To check the status of private messages that have been recorded, press **1** at the Private Messaging Menu. AltMail will then

- Give the time and date of the message recorded
- Identify the recipient that the message is for
- Inform whether or not the message has been heard
- Replay the message
- Ask you to press **1** to keep the message or **2** to delete the message

**Note:** Delete messages that have been heard. Up to five private messages are allowed at one time.

## *AltiMail Mixed-Media Messaging*

Not only does AltiMail send and receive multiple forms of communication such as voice mail and e-mail, it is able to combine different forms of messages into a “package” called a Mixed-Media message. You can save time and money by sending Mixed-Media messages over the Internet to anyone throughout the world with an Internet address, toll free.

Since all messages (voice mail, e-mail or Mixed-Media messages) go into the same AltiMail Post Office box and into your mailbox, you need only to check one location for all messages with your multimedia computer.

When away from the office, access Mixed-Media messaging from anywhere (at home or while traveling) using an access line from an Internet provider to download all unretrieved Mixed-Media messages from the AltiMail Post Office box.

### **Accessing AltiMail Mixed-Media Messaging in the Office and Remotely**

In order to access your AltiMail either in the office or remotely via the Internet, you must configure your e-mail client application (e.g. Netscape Navigator 2.0 and beyond, Eudora, etc.) to properly recognize your AltiWare server. Please consult the configuration manual that comes with your e-mail client application.

1. Go to the mail server configuration section and enter your AltiWare server's name or IP address in both SMTP and POP3 server fields (in some cases, this may be the same field).
2. Go to the user configuration section and enter your name, user name, e-mail address, and the reply-to address (usually the same as your e-mail address). The e-mail address is usually your name appended with “@your.domain.name”. Please see your System Administrator for your organization's domain name.
3. Click or select the **Get Mail** option. Some e-mail client applications may provide a field to cache your e-mail password for the current session so that you don't have to enter your password every time you click **Get Mail**. Be sure to enter your e-mail password when prompted.

## Retrieving Messages

To retrieve messages using your multi-media computer,

1. Configure your e-mail application (see “Accessing AltiMail” above).
2. Click on the “Get Mail” icon.
3. All new messages, whether read or unread, are stored in the **Inbox** folder. Click on the **Inbox** folder.
4. Individual messages should appear on the right side of the window. Click on a message to read/listen to it.
5. To listen to an audio attachment in an e-mail, click on the attachment to hear the message through the computer speaker. If you do not want others around you to hear the message from your computer, you may listen to the audio portion of the message over the handset of your telephone by pressing **8** at the Main Menu of AltiWare. Refer to page 25 for more detailed instructions on listening to messages over the phone.

**Note:** Voice mail messages also appear as Mixed-Media messages in the “Inbox” folder. Open it and click on the audio attachment to listen to the message.

## Composing and Sending Messages

To compose a new message,

1. Click or select the “To: Mail” option and enter your recipient’s e-mail address.
2. Type the text portion of the message (optional).
3. Send an audio attachment with or without a text message by lifting the handset off-hook and dialing **# 0**.
4. As instructed by AltiMail, press **2** to record a new audio attachment.
5. After you have finished, press **#** and either hang up or press **1** to listen to, **2** to re-record or **3** to delete the audio attachment.
6. Click the “Send” icon when finished. AltiMail will attach the voice annotation to the e-mail when it is sent.

**Note:** An audio attachment is seen only at the receiving end and does not appear as an attachment on the e-mail message composed by the sender. You may carbon copy (CC:) the message to yourself to verify that the audio attachment has been attached and sent successfully.

AltiReach

## ***AltiReach***

AltiReach is a Web-based management tool that provides a way for users to manage their call handling options such as One Number Access, Call-View, Message Notification and other personal phone settings using a standard Web browser. It not only provides an easy to use GUI, AltiReach is accessible from any location that has an Internet connection.

### **Accessing AltiReach**

Users may access AltiReach Call Management by using any popular Web browser. To use the CallView part of AltiReach, the browser must be Java capable.

To access AltiReach,

1. Obtain your organization's AltiReach URL address from the system administrator, which looks something like

**http://servername/altireach** or  
**http://www.YourDomain.com/altireach**

2. Open a Web browser and enter the URL address, then press **Enter**.

The following describes each of the AltiReach Call Management screens:

### **Login**

The AltiReach login screen, shown in Figure A-2, prompts the user to login by entering the following:

- First name
- Last name
- Extension
- Password

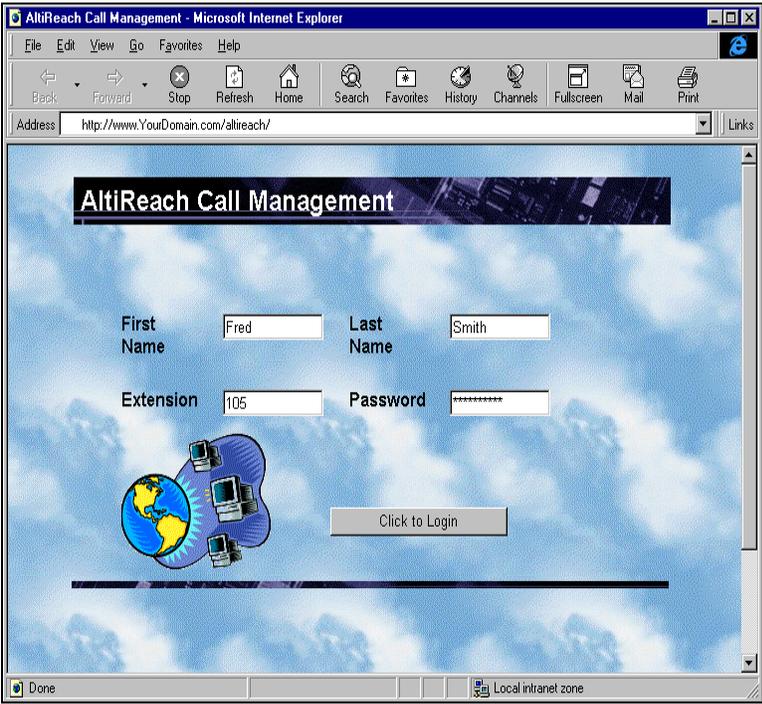


Figure A-2. AltiReach Login screen

After successful login, AltiReach displays the Main Menu, shown in Figure A-3.

AltiReach

## Main Menu

The first AltiReach screen after you login is the Main Menu that allows you to access any of the following screens:

- Call Management
- Station Speed
- CallView
- One Number Access
- Message Notification

These screens are described in detail in the following sections.

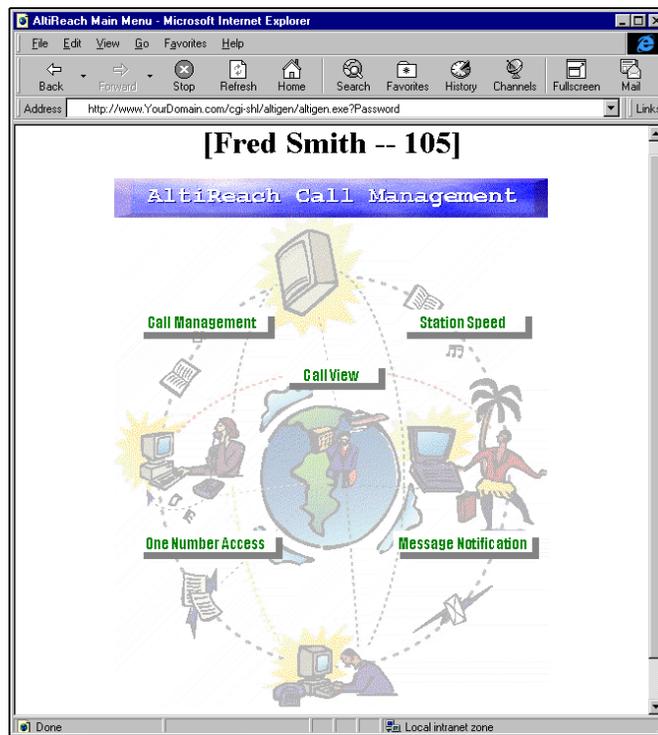
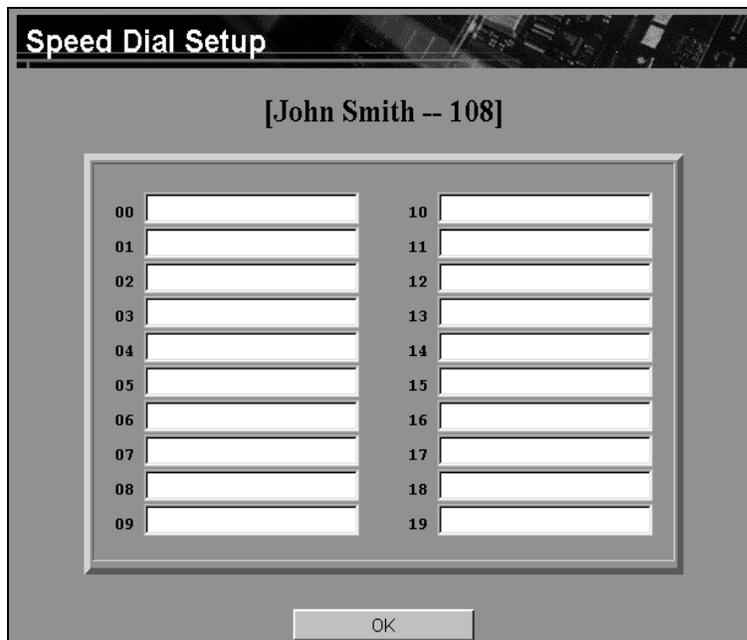


Figure A-3. AltiReach Main Menu

## Speed Dial Setup

The Speed Dial Setup screen, shown in Figure A-4, allows users to program up to 20 station speed dial numbers. All **relevant** prefix digits such as trunk access number (e.g. **9**), the long distance prefix **1** and area codes must precede an outside phone number. Station speed dial numbers are also set up by using the **#25** feature code on the user's telephone set. Refer to "Station Speed Dial Setup" on page A-20 for more information on setting up speed dial numbers using the telephone.



The image shows a graphical user interface for "Speed Dial Setup". At the top, the title "Speed Dial Setup" is displayed. Below the title, the user's name and extension are shown as "[John Smith -- 108]". The main area contains a grid of 20 input fields, arranged in two columns of ten. The left column is labeled 00 through 09, and the right column is labeled 10 through 19. Each input field is empty. At the bottom center of the screen, there is an "OK" button.

Figure A-4. Speed Dial Setup screen

## CallView

CallView is a graphical user interface (GUI) that displays the status of all AltiServ users' extensions and provides the functionality of a "personal console" without having to install or use TAPI.

## AltiReach

**Note:** You must use a Java-capable Web browser to use CallView. Also, you must have the system administrator enable **Multiple Call Waiting** for your extension to be able to handle more than one call at a time.

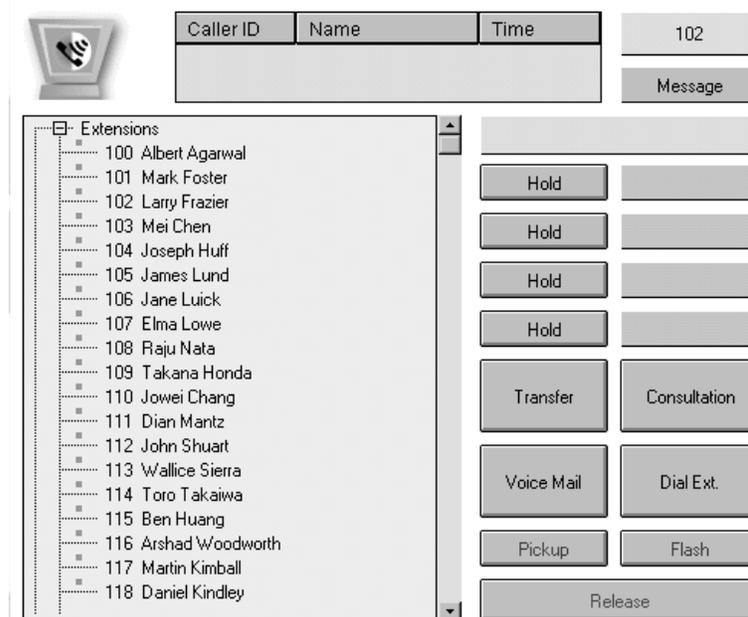


Figure A-5. AltiReach CallView screen

- The **Call Log** window (at the top of the screen) shows the extension or phone number (**Caller ID**) of incoming calls, their name (**Name**) if available, and the time and date (**Time**) of each call. Up to 30 call entries are displayed. This “call log” information is cleared when AltiReach is closed.
- The **Message** indicator turns red when there are messages in the user’s mailbox.

### Using CallView to Make or Receive Calls

- **Answering a Call** - simply pickup the handset **or** click on the **Flash** button if your phone is on **Dial Tone Mute Mode (#82)** with the speaker phone turned on.

- **Dialing an Extension** - with the handset off-hook, click on any extension number in the window and press the **Dial Ext.** button to automatically dial that extension.
- **Placing a Call on Hold** - while connected to a call,
  1. Click on one of the four **Hold** buttons to place the call on hold. The **Hold** button becomes the **Retrieve** button.
  2. Click on the **Retrieve** button to be reconnected with the call. The **Retrieve** button changes back to the **Hold** button again.
  3. Up to four calls can be placed on hold simultaneously.
- **Transferring a Call** - while connected to a call, select the extension where the call should be transferred to and click on **Transfer**.
- **Transferring a Call to Voice Mail** - while connected to a call, select the extension of the voice mail box where the call should be sent and then click on **Voice Mail**. The caller is sent directly to the voice mail box of the selected extension.
- **Setting up Consultation Transfer:**
  1. While connected to a call, select the extension of the person you wish to consult with.
  2. Click on **Consultation** to connect to the extension.
  3. Click on **Flash** to re-connect to the caller.
- **Call Pickup** - with the handset off-hook, click on an extension that has a ringing call. Then click on the **Pickup** button to pick up that ringing call at that extension. This is the same as dialing **#29 <extension>** on the handset to pick up a call.
- **Using the Release button** - click on the **Release** button to disconnect an active call.

## WorkgroupView

If you login to AltiReach as a workgroup pilot extension number, the CallView screen changes into a **WorkgroupView** which can be used to monitor a workgroup in ways that are not possible without AltiReach. Unlike the CallView screen, however, the WorkgroupView screen is not an interactive GUI that is used to control anything. It is simply used to *view* calls, *monitor* workgroup member activities and act as a message waiting indicator.

AltiReach

**Note:** You must use a Java-capable Web browser to use WorkgroupView. Users have reported that Netscape Communicator may have problems refreshing the workgroup member's status. If you experience any problems using Netscape Communicator to access WorkgroupView, clicking on **Reload** a few times should resolve this problem.

The WorkgroupView screen shown in Figure A-6 contains the following:

- **Message Waiting Indicators** - the first three rows below the screen heading are used to indicate the number and type of messages contained in the workgroup's mailbox. The first row shows two buttons that "light up in red" when there are **New** or **Archived** (saved) messages. The second and third lines show what type, **Voice** or **Mixed-Media** (E-mail), and how many messages there are under each category.

AltiReach Workgroup View: 300			
New		Archived	
voice	mixed-media	voice	mixed-media
8	6	1	5
Callers in Queue	Caller ID	Calls Abandoned	
5	117 5102526362 5102526360	2	
member	status	num of calls	avg. call length
130	in use	9	00:00:31
104	in use	4	00:00:35

Figure A-6. AltiReach WorkgroupView screen

- **Callers in Queue** - shows the number of calls in queue.

- **Caller ID** - shows the caller's phone number if available.
- **Calls Abandoned** - shows the number of calls that have left the queue.
- **Member Information** - shows a list of workgroup members and the following information about each member:
  - **Member** - shows the extension number of the workgroup member. If a member has logged out of the workgroup, it indicates this by showing “(out)” next to the member extension number.
  - **Status** - shows whether the member is on the phone (**in-use**) or not (**idle**).
  - **Num of Calls** - shows the number of calls the member has taken
  - **Ave Call Length** - shows the average length of calls that come in through the workgroup and are taken by a workgroup member.

**Note:** This screen is automatically reset (except for Message Waiting Indicators) every 24 hours, specifically at 3:00 AM.

## Message Notification Setup

Figure A-7 illustrates the Message Notification screen, which enables the system to alert users of new messages when they are away from their desk. Users can setup Message Notification through the AltiMail Voice Messaging System or through this Message Notification screen in AltiReach. See “Message Notification” on page A-30 for more information on this feature.

**Message Notification**

[John Smith -- Extension 108]

**Message Notification**

None
  Urgent messages only
  All messages

---

**Message Notification by Calling a**

Phone
  Pager
  Extension

---

**Answer Detection**

Wink
  Speech
  Delay in Seconds

Page Tone Duration in 10 ms

**Delay after the tone detection in 10 ms**

---

**Schedule**

Non-Business Hours
  From
 
 To

Any Time

Figure A-7. Message Notification Setup screen

## One Number Access

Voice mail is sufficient for most calls that are not answered by the user. For important or urgent calls, however, users may want to have the system send the call to them by dialing pre-determined numbers based on a pre-determined schedule. Refer to Figure A-8 for One Number Access setup.

One Number Access (ONA) allows important callers to be connected to the user *without having to dial more than one number*. The system does the search for the caller and connects the caller when the user is found. If the system is unable to connect the call, the caller is sent into the user's voice mail.

## To Setup One Number Access

1. To use One Number Access (ONA), you must first enable it on the **Call Management** screen of AltiReach by selecting the **Enable One Number Access** box.
2. Also select and configure the **No Answer Handling** on the **Call Management** screen of AltiReach. ONA is invoked by AltiServ only during a “ring no answer” situation because it assumes that you are out of the office or away from your desk. If the line is *busy*, the call will be handled according to the extension’s **Busy Call Handling** configuration. If the extension has **Do Not Disturb** enabled, the call will go into voice mail. All system and extension call restrictions apply for One Number Access.

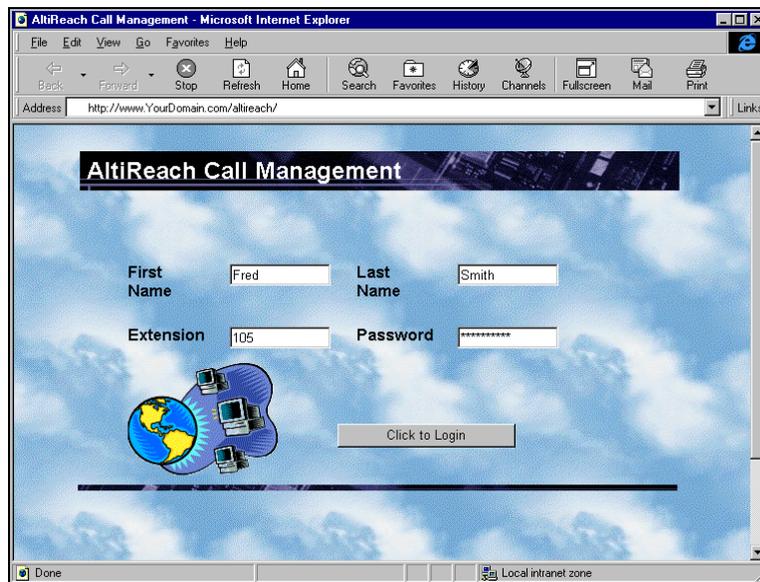


Figure A-8. One Number Access Setup Screen I

3. Determine the schedule when you want ONA available to callers. You can disable ONA or enable it:
  - At all times
  - During business hours
  - During non-business hours

AltiReach

- Based on the predetermined schedule
4. Select the **Caller ID Verification** checkbox to specify which callers can access ONA.
- You can enter up to ten (10) phone numbers in the **Caller ID Verification** fields. Whenever the system detects a call from one of the numbers entered here during any of the selected schedules, the system begins to search for you by dialing the numbers configured in the **Forwarding Number** fields.

**CAUTION!**

**If no numbers are entered in the Caller ID Verification fields and ONA is enabled, it is made available to every caller.**

- Examples of international, domestic long distance, and local telephone numbers are:
  - **International** numbers (01181118102146) comprise of, 011 (international code), 81 (country code), and finally the area code and telephone number.
  - **Domestic long distance** numbers (15102522332) comprises of 1 (long distance prefix), followed by 510 (area code), and finally the seven digit telephone number.
  - For **local** numbers, the long distance prefix (1) and the area code (510) should not be entered. Only the seven digit number is required.
- You can also enter a random “password” number such as “5555” so that *any caller who knows this password can use ONA to find you, regardless of where they are calling from*. Once you’ve set this up, you need to instruct the caller to dial **1** during your personal greeting and then to enter the “password” to use ONA.

<input checked="" type="checkbox"/> Schedule0 From: 08:00 AM To: 12:00 PM	<input checked="" type="checkbox"/> Schedule1 From: 12:00 PM To: 07:00 PM
<input type="checkbox"/> Schedule2 From: 12:00 PM To: 12:00 PM	<input type="checkbox"/> Schedule3 From: 12:00 PM To: 12:00 PM
<input checked="" type="checkbox"/> Forwarding Number 1 <input type="radio"/> extension <input checked="" type="radio"/> outside number 14082635662	
<input checked="" type="checkbox"/> Forwarding Number 2 <input type="radio"/> extension <input checked="" type="radio"/> outside number 14154536582	
<input type="checkbox"/> Forwarding Number 3 <input type="radio"/> extension <input checked="" type="radio"/> outside number	
<input type="checkbox"/> Forwarding Number 4 <input type="radio"/> extension <input checked="" type="radio"/> outside number	

Figure A-9. One Number Access Setup Screen II

- In the **Schedule** section, enter a customized schedule of four different time slots during which ONA is to be enabled. The **Enabled based on the following schedule** option at the top of the screen must be selected, as shown in Figure A-8.
- In the **Forwarding Number** section, configure four different numbers (extension or outside number) the system is to dial to search for you. If it is an outside number, be sure to enter all relevant prefixes such as the long distance prefix **1** and the area code. Since you can select whether it is an extension or an outside number, you do not need to include the trunk access code.

AltiReach

**Note:** During *any* of the specified schedules above, the system dials the Forwarding Number(s) in the order from Forwarding Number 1 to Forwarding Number 4, rather than dialing a specific Forwarding Number for a specific Schedule number.

## Call Management Setup

The Call Management Setup screen, shown in Figure A-10, allows you to manage how the system handles incoming calls. The content of this screen is similar to “Answering Incoming Calls” on page 5-19.

**Call Management**

[John Smith -- Extension 108]

**Forward All Calls**  
 Enable Forward to

**Do Not Disturb**  
 Enable Do Not Disturb

---

**Busy Call Handling**  
 Enable Busy Call Handling  
 Forward to Extension  
  
 Forward to Voice Mail

**No Answer Handling**  
 Enable No Answer Handling  
 Forward to Extension  
  
 Forward to Voice Mail

Enable Call Waiting

Enable one number access

---

**Number of Rings Before Forwarding**

Apply Cancel

Figure A-10. Call Management Setup Screen

## Forwarding All Calls

You can configure **Call Forwarding** here on the **Call Management** screen of AltiReach or via AltiMail under the **Personal Options** menu. If you wish to forward calls to an external number, begin with the outside trunk access digit and any long distance prefix digits such as **1** and area

code.

**Note:** Please note the following:

- There is a “1-hop” limit to Call Forwarding. For example, Extension 101 has calls forwarded to Extension 102. Extension 102 has calls forwarded to Extension 103. A call to Extension 101 will ring Extension 102 and not Extension 103 because of the 1-hop limit. If Extension 102 does not answer, the call is sent to Extension 101’s voice mail.
- Forwarding calls to a pager is possible but **not recommended** since callers will only hear what is heard when calling a pager and will not know to enter a return phone number unless instructed.

AltiReach

# Appendix B User Feature Codes

This appendix contains all feature codes available to users on the AltiServ system.

## AltiMail Quick Features

- #11 ..... Greeting Menu
- #28 ..... Password Menu

## Making Calls

- #34 ..... Dial By Name
- #35 ..... Station Privilege Override
- #69 ..... Dial Last Caller
- #77 ..... Station Speed Dial
- #88 ..... System Speed Dial
- #99 ..... Last Number Redial

## Answering Calls

- #29 <ext> ..... Individual Call Pickup (a specific station)
- #30 ..... System Call Pickup (any station ringing)
- FLASH #31 ..... Personal Call Park
- #31 <ext> ..... Personal Call Park Pickup
- FLASH #41 ..... System Call Park
- #41 <loc. #> ..... System Call Park Pickup
- #81 ..... Hands Free (Intercom) Mode

## Call Management

- #26 ..... Station Log Out
- #27 ..... Station Log In
- #32 <acct. #> ..... Account Code
- #33 ..... Do Not Disturb
- #36 ..... Call Forwarding
- #37 ..... Remote Call Forwarding

## Workgroup Features

- #29 <wkgp ext #> . . . Workgroup Call Pickup
- #54 <wkgp ext #> . . . Workgroup Log In
- #56 <wkgp ext #> . . . Workgroup Log Out

## Other Features

- #22 . . . . . Feature Status Check
- #25 . . . . . Station Speed Dial Setup
- #38 . . . . . Outside Call Blocking (operator only)
- #39 . . . . . Operator Off-Line (operator only)
- #44 . . . . . Overhead Paging
- #45 . . . . . Overhead Paging by Trunk
- #55 . . . . . Feature Tips
- #73 . . . . . Silent System Call Park
- #82 . . . . . Dial Tone Mute Mode
- FLASH <ext> . . . . . Transfer
- FLASH #40 . . . . . Transfer to AltMail
- FLASH # 1 5 <AA#> . Transfer to Auto Attendant
- FLASH # # <ext> . . . Transfer to a User's Voice Mail
- FLASH <ext> FLASHConsultation
- FLASH <no.> # . . . . . Conference Call
- FLASH . . . . . Call Waiting

# Appendix C Call Accounting Tables

This appendix contains tables for the following call accounting features within Altiserv:

- SMDR (Station Message Detail Reporting)
- CDR (Call Detail Reporting)

## *SMDR Reporting Format*

Altiserv reports telephone information in **Station Message Detail Reporting (SMDR) format** to application through the COM port. Currently, Altiserv OE supports the Mitel SMDR format. The system administrator can turn on SMDR reporting and select SMDR reporting format from AltiservAdmin. (Go to the **Accounting Data Processing** box in the **Call Accounting** page of **System Configuration**, refer to Figure 2-7, “System Configuration Screen - Call Accounting Page,” on page 2-17.) The application should read the char stream from the COM and parse the data depending on the format Altiserv is set to.

The SMDR format and sample entries for Mitel are defined below.

**Note:**

- For "One Number Access" searching through the IP trunk, the leading "\*" char will be recorded by SMDR too in the Outside Number field.
- Currently internal extension-to-extension calls are not logged.
- Any outbound call that is under 15 seconds is not logged.

SMDR Reporting Format

## Mitel SMDR Format

### Trunk Calls In Format:

09/01 07:04P 00:00:25 02005102526354 109 12345678:

(Start, Length)	Field	Format	Notes
(0, 1)	space		
(1, 5)	date	mm/dd	
(6, 1)	space		
(7, 6)	start time	hh:mmP	P = pm, A = am
(13, 1)	space		
(14, 8)	duration	hh:mm:ss	
(22, 1)	space		
(23, 4)	trunk PAD number	xyyy	x = board number, y = channel number
(27, 34)	calling party		
(61, 4)	called party		
(65, 7)	space		
(72, 8)	account code		1 to 8 digits
(80, 1)	delimiter	line feed	

### Extension Calls Out Format:

09/01 08:12P 00:00:33 109 2526352 0411 12345678:

(Start, Length)	Field	Format	Notes
(0, 1)	space		
(1, 5)	date	mm/dd	
(6, 1)	space		
(7, 6)	start time	hh:mmP	P = pm, A = am

SMDR Reporting Format

(Start, Length)	Field	Format	Notes
(13, 1)	space		
(14, 8)	duration	hh:mm:ss	
(22, 1)	space		
(23, 4)	calling party		
(27, 6)	space		
(33, 26)	called number		
(59, 2)	space		
(61, 4)	trunk PAD number	xxyy	x = board number, y = channel number
(72, 8)	account code		1 to 8 digits
(80, 1)	delimiter	line feed	

C. Call Accounting Tables

**Mitel Format: From Extension A**

Extension A: 100

Extension B: 111

Outside #: 3210002:

		Calls Initiated by Extension A (Column A)		
<b>1</b>	<b>Dial out</b>	11/18 05:53P 00:00:28 100	3210002	0100
<b>2</b>	<b>Ext B fwd to Trk Y</b>	11/18 05:55P 00:00:21 100	3210002	0001
<b>3</b>	<b>Ext B ONA to Trk Y</b>	11/18 05:57P 00:00:17 100	3210002	0100
<b>4</b>	<b>VM make call to Trk Y</b>	1/18 05:58P 00:00:15 100	3210002	0001
<b>5</b>	<b>### to Ext B (WG B, Virtual B) and VM make call</b>	11/18 05:59P 00:00:23 100	3210002	0100
<b>6</b>	<b>Ext B S-transfer to Trk Y* (see examples)</b>	11/18 06:00P 00:00:22 100	3210002	0001
<b>7</b>	<b>Ext B B-transfer to Trk Y* (see examples)</b>	11/18 06:01P 00:00:18 100 11/18 06:01P 00:00:05 0001100	3210002	0100 100

SMDR Reporting Format

		Calls Initiated by Extension A (Column A)		
8	To Trk Y then transfer to Ext B	11/18 06:02P 00:00:27 111	3210002	0001
9	Outcall	Log time only, no lines logged		
10	Zoomerang	11/18 06:06P 00:00:27 100	3210002	0100
11	System Speed Dial	11/18 06:07P 00:00:18 100	3210002	0001
12	Ext Speed Dial	11/18 06:08P 00:00:25 100	3210002	0100
13	#35 privilege over-write to Ext B (WG B, virtual B)	11/18 06:09P 00:00:31 100	3210002	0001
14	B is WG B	N/A		
15	Ext B transfer to WG C	N/A		
16	Conference with Trunk	11/18 06:10P 00:00:25 100	3210002	0100

**Mitel Format: From Trunk B**

Extension B: 100

Trunk X: 3210001

Trunk Y: 3210002:

		Calls Initiated by Trunk X to Extension B (Column B)		
1	Dial in	11/18 06:11P 00:00:07 0100	3210001	100
2	Ext B fwd to Trk Y	11/18 06:13P 00:00:35 0100 11/18 06:13P 00:00:25 TRK0	3210001 3210002	100 0001
3	Ext B ONA to Trk Y	11/18 06:15P 00:00:12 0100 11/18 06:16P 00:00:00 0100	3210001 3210001	100
4	VM make call to Trk Y	11/18 06:18P 00:00:29 100 11/18 06:18P 00:00:58 0100	3210001 3210001	100 100
5	### to Ext B (WG B, Virtual B) and VM make call	N/A		

SMDR Reporting Format

		Calls Initiated by Trunk X to Extension B (Column B)		
6	Ext B S-transfer to Trk Y* (see examples)	11/18 06:19P 00:00:21 0100	3210001	100
		11/18 06:20P 00:00:41 0100	3210001	TRK0
		11/18 06:20P 00:00:23 3210	3210002	0001
7	Ext B B-transfer to Trk Y* (see examples)	11/18 06:22P 00:00:24 3210	3210002	0001
		11/18 06:22P 00:00:40 0100	3210001	3210
8	To Trk Y then transfer to Ext B	N/A		
9	Outcall	Log time only, no lines logged		
10	Zoomerang	11/18 06:24P 00:00:38 100	3210002	0100
		11/18 06:24P 00:01:08 0001	3210001	100
11	System Speed Dial	N/A		
12	Ext Speed Dial	N/A		
13	#35 privilege overwrite to Ext B (WG B, virtual B)	N/A		
14	B is WG B	11/18 06:25P 00:00:09 0100	3210001	100
15	Ext B transfer to WG C	1/18 06:26P 00:00:17 100	100	0100
		11/18 06:26P 00:00:24 0100	3210001	111
16	Conference with Trunk	11/18 06:27P 00:00:15 0001	3210001	100

C. Call Accounting Tables

## Call Accounting Codes

### *Call Accounting Codes*

This section identifies the field codes for AltiGen's call accounting reports. Field code descriptions are listed in tables below for the following CDR (Call Detail Reporting) records:

- Switching
- Messaging
- Session

## Switching CDR Record Codes

Field Name	Size	Description
Day	11 digits	Record creation date in number of days since Jan. 1, 1970.
SessID	11 digits	A unique number which is used to identify the CDR records logged for the same session.
CallerID	41 characters	The calling party's identification number, which can either be the caller's telephone number or extension number.
DNISID	41 characters	ANI/DNIS number
CalleeID	17 characters	The called party's identification number which can only be the callee's extension number.
WorkGrpID	17 characters	Workgroup number
CallerPad	8 characters	Calling party's physical address in "system:slot:channel" format.
CalleePad	8 characters	Called party's physical address in "system:slot:channel" format.
StartTime	11 digits	The time logged as seconds that the call was made or accepted.
EndTime	11 digits	The time logged as seconds that the call was terminated or dropped.
WaitTime	11 digits	The time logged as seconds that the call stayed in the waiting list (queue).
Duration	11 digits	The time logged as seconds that the call stayed in connection
CallCategory	4 digits	Call Category: 10 = unknown 11 = local 12 = long distance 13 = international 14 = internal

## Call Accounting Codes

Field Name	Size	Description
SessType	4 digits	Session Type: 0 = unknown 1 = extension to extension 2 = trunk to extension 3 = extension to trunk 4 = trunk to trunk 5 = extension to control group 6 = trunk to control group 7 = extension to hunt group 8 = trunk to hunt group 9 = trunk conference 10=extension conference 11=outcall to extension 12=outcall to trunk 13=page extension 14=page trunk 15=future delivery voice mail 16=voice mail
CallType	4 digits	Call Type: 0 = direct call 1 = transfer to extension 2 = conference call 3 = transfer to trunk 4 = reminder call 5 = forwarded 6 = message waiting notification
AcctCode	11 characters	Account code
AAID	11 digits	Auto Attendant identification number
DestID	41 characters	The extension number of the final destination that the incoming call was connected to.
Cost	11 digits	Cost of the call in dollars

Call Accounting Codes

Field Name	Size	Description
CallTerminateResult	1 character	Result: 'B' = busy 'C' = connected 'D' = dropped from queue 'F' = outcall failed 'G' = listen to message 'M' = voice mail from queue 'N' = ring, no answer 'O' = operator 'Q' = waiting in queue 'R' = operator pick up from queue 'U' = unknown 'V' = voice mail
Status	4 digits	Call Status: 'B' = busy 'C' = connected 'D' = dropped from queue 'F' = outcall failed 'G' = listen to message 'M' = voice mail from queue 'N' = ring, no answer 'O' = operator 'Q' = waiting in queue 'R' = operator pick up from queue 'U' = unknown 'V' = voice mail
SWNum1	7 digits	Reserved 2-byte number
SWNum2	7 digits	Reserved 2-byte number
SWNum3	7 digits	Reserved 2-byte number
SWNum4	7 digits	Reserved 2-byte number
SWNum5	11 digits	Reserved 4-byte number
SWNum6	11 digits	Reserved 4-byte number
SWNum7	11 digits	Reserved 4-byte number
SWNum8	11 digits	Reserved 4-byte number
SWStr1	16 characters	Reserved 16-byte string
SWStr2	16 characters	Reserved 16-byte string

C. Call Accounting Tables

## Call Accounting Codes

Field Name	Size	Description
SWStr3	32 characters	Reserved 32-byte string
SWStr4	32 characters	Reserved 32-byte string

## Messaging CDR Record Codes

Field Name	Size	Description
Day	11 digits	Record creation date in number of days since Jan. 1, 1970.
SessID	11 digits	A unique number which is used to identify the CDR records logged for the same session.
Sender	41 characters	The sender's identification number, which can either be the sender's telephone number or e-mail address.
DNISID	41 characters	ANI/DNIS number
Receiver	17 characters	The receiver's identification number which can only be the receiver's extension number.
WorkGrpID	17 characters	Workgroup number
SenderPad	8 characters	Sender's physical address in "system:slot:channel" format.
RecverPad	8 characters	Receiver's physical address in "system:slot:channel" format.
RcrdTime	11 digits	The time logged as seconds that the message was recorded or created.
DvryTime	11 digits	The time logged as seconds that the message was delivered.
RetrTime	11 digits	The time logged as seconds that the message was retrieved by the receiver.
FutrTime	11 digits	The time of future delivery logged as seconds for the message.

Call Accounting Codes

Field Name	Size	Description
Length	11 digits	Message length in seconds.
MsgID	33 characters	The 32-byte unique message ID.
MailType	4 digits	Mail Type: 'v' = voice message 'm' = MIME message 'e' = text message 'w' = wav message '.' = unknown
SessType	4 digits	Session Type: 0 = unknown 1 = extension to extension 2 = trunk to extension 3 = extension to trunk 4 = trunk to trunk 5 = extension to control group 6 = trunk to control group 7 = extension to hunt group 8 = trunk to hunt group 9 = trunk conference 10=extension conference 11=outcall to extension 12=outcall to trunk 13=page extension 14=page trunk 15=future delivery voice mail 16=voice mail
AcctCode	11 characters	Account code
Attrib	11 digits	32-bit message attributes
SenderType	4 digits	Sender Type: 0 = extension 1 = trunk
Broadcast	4 digits	Broadcast flag
VMTerminateResult	1 character	Status: 'S' = success 'F' = failed 'U' = unknown
Status	4 digits	Messaging status
VMNum1	7 digits	Reserved 2-byte number

C. Call Accounting Tables

## Call Accounting Codes

Field Name	Size	Description
VMNum2	7 digits	Reserved 2-byte number
VMNum3	7 digits	Reserved 2-byte number
VMNum4	7 digits	Reserved 2-byte number
VMNum5	11 digits	Reserved 4-byte number
VMNum6	11 digits	Reserved 4-byte number
VMNum7	11 digits	Reserved 4-byte number
VMNum8	11 digits	Reserved 4-byte number
VMStr1	16 characters	Reserved 16-byte string
VMStr2	16 characters	Reserved 16-byte string
VMStr3	32 characters	Reserved 32-byte string
VMStr4	32 characters	Reserved 32-byte string

## Session CDR Record Codes

Field Name	Size	Description
Day	11 digits	Record creation date in number of days since Jan. 1, 1970.
SessID	11 digits	A unique number which is used to identify the CDR records logged for the same session.
ExtID	41 characters	The user's identification number, which can either be the user's extension number or e-mail address.
ActCode	4 digits	Type of activity
ActTime	11 digits	The time logged as seconds that the activity ended
MsgID	33 characters	The unique message ID
Status	1 byte	Termination status
SSNum1	7 digits	Reserved 2-byte number

Call Accounting Codes

Field Name	Size	Description
SSNum2	7 digits	Reserved 2-byte number
SSNum3	7 digits	Reserved 2-byte number
SSNum4	7 digits	Reserved 2-byte number
SSNum5	11 digits	Reserved 4-byte number
SSNum6	11 digits	Reserved 4-byte number
SSNum7	11 digits	Reserved 4-byte number
SSNum8	11 digits	Reserved 4-byte number
SSStr1	16 characters	Reserved 16-byte string
SSStr2	16 characters	Reserved 16-byte string
SSStr3	32 characters	Reserved 32-byte string
SSStr4	32 characters	Reserved 32-byte string

**C. Call Accounting  
Tables**

## Call Accounting Codes

# Appendix D Worksheets and Business Forms

This appendix contains the following worksheets to help the user in supporting the AltiServ system:

- Request for RMA Number
- Request for Technical Support
- Product Registration



RMA Fax Form

## ***RMA Fax Form***

### **Request For RMA Number**

DATE: \_\_\_\_\_

TO: AltiGen Communications Customer Support

FAX: 510-252-9738

FROM: \_\_\_\_\_

COMPANY: \_\_\_\_\_

PHONE NUMBER: \_\_\_\_\_

PRODUCT SERIAL NUMBER: \_\_\_\_\_

DESCRIPTION OF PROBLEM AND REASON FOR RETURN

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

<b>FOR ALTIGEN USE ONLY</b>	
<b>RMA # ISSUED:</b>	<b>DATE:</b>
<b>AUTHORIZED SIGNATURE:</b>	

# *Technical Support Fax Form*

## **Request for Technical Support**

DATE: \_\_\_\_\_

TO: AltiGen Technical Support

FAX: 510-252-9738

FROM: \_\_\_\_\_

COMPANY: \_\_\_\_\_

PHONE NUMBER: \_\_\_\_\_

PRODUCT SERIAL NUMBER: \_\_\_\_\_

DESCRIPTION OF PROBLEM

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**D. Worksheets and  
Business Forms**

<b>FOR ALTIGEN USE ONLY</b>	
<b>RECEIVED BY:</b>	<b>RECEIVED:</b>
	<b>RESOLVED:</b>

Registration Fax Form

## ***Registration Fax Form***

### **Product Registration Form**

DATE: \_\_\_\_\_

TO: AltiGen Customer Service

FAX: 510-252-9738

NAME: \_\_\_\_\_

COMPANY: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

PHONE NUMBER: \_\_\_\_\_

COMPANY TYPE/INDUSTRY: \_\_\_\_\_

PRODUCT SERIAL NUMBER: \_\_\_\_\_

DATE OF PURCHASE: \_\_\_\_\_

PURCHASED FROM: \_\_\_\_\_

<b>FOR ALTIGEN USE ONLY</b>	
<b>RECEIVED BY:</b>	<b>DATE:</b>

# Appendix E Auto Attendant Planning Worksheet

This appendix contains a sample and blank Auto Attendant Planning Worksheet to help you organize and plan the structure of your Auto Attendants before you actually configure them in AltiWare.



## Auto Attendant Planning Worksheet

• Available Action Options

<input type="radio"/> No action	<input type="radio"/> Repeat current menu	<input type="radio"/> Transfer to extension (#)	<input type="radio"/> Record message for ext. (#)	<input type="radio"/> Dial by name
<input type="radio"/> Go to next menu	<input type="radio"/> Return to top menu	<input type="radio"/> Transfer to operator	<input type="radio"/> Mail box access	<input type="radio"/> System Call Back
<input type="radio"/> Return to previous menu	<input type="radio"/> Disconnect	<input type="radio"/> Directory service	<input type="radio"/> Collect extension number	<input type="radio"/> Time-out action

Menu ID #	0																			
Beginning Prompt #																				
	Main Page																			
1 Action																				
2 Action																				
3 Action																				
4 Action																				
5 Action																				
6 Action																				
7 Action																				
8 Action																				
9 Action																				
* Action																				
0 Action																				
# Action																				
Time-out Action																				

## Auto Attendant Planning Worksheet - Sample

• Available Action Options

<input type="radio"/> No action	<input type="radio"/> Repeat current menu	<input type="radio"/> Transfer to extension (#)	<input type="radio"/> Record message for ext. (#)	<input type="radio"/> Dial by name
<input type="radio"/> Go to next menu	<input type="radio"/> Return to top menu	<input type="radio"/> Transfer to operator	<input type="radio"/> Mail box access	<input type="radio"/> System Call Back
<input type="radio"/> Return to previous menu	<input type="radio"/> Disconnect	<input type="radio"/> Directory service	<input type="radio"/> Collect extension number	<input type="radio"/> Time-out action

Menu ID #	0	02	05	06	061	061	063
<b>Beginning Prompt #</b>	0010	0032	0050	0060	0061	0062	0063
	<b>Main Page</b>	<b>Next Menu</b> 2 Action	<b>Next Menu</b> 5 Action	<b>Next Menu</b> 6-Action	<b>Next Menu</b> 61-Action	<b>Next Menu</b> 62-Action	<b>Next Menu</b> 63-Action
<b>1 Action</b>	To ext. 100	To ext. 102	To ext. 100	Next Menu	Repeat Menu	Repeat Menu	Repeat Menu
<b>2 Action</b>	Next Menu	Record for 100	To ext. 100	Next Menu	No action	No action	No action
<b>3 Action</b>	To ext. 201	No action	To ext. 102	Next Menu	No action	No action	No action
<b>4 Action</b>	Dial by Name	No action	To ext. 201	No action	No action	No action	No action
<b>5 Action</b>	Next Menu	No action	To ext. 201	No action	No action	No action	No action
<b>6 Action</b>	Next Menu	No action	To ext. 201	No action	No action	No action	No action
<b>7 Action</b>	No Action	No action	No action	No action	No action	No action	No action
<b>8 Action</b>	No Action	No action	No action	No action	No action	No action	No action
<b>9 Action</b>	Repeat Menu	Repeat Menu	Repeat Menu	Repeat Menu	Repeat Menu	Repeat Menu	Repeat Menu
<b>* Action</b>	Repeat Menu	Repeat Menu	Repeat Menu	Repeat Menu	Repeat Menu	Repeat Menu	Repeat Menu
<b>0 Action</b>	To Operator	To Operator	To Operator	To Operator	To Operator	To Operator	To Operator
<b># Action</b>	M-Box Access	M-Box Access	M-Box Access	M-Box Access	M-Box Access	M-Box Access	M-Box Access
<b>Time-out Action</b>	To Operator	To Operator	To Operator	To Operator	To Operator	To Operator	To Operator

**E. Auto Attendant  
Planning Worksheet**



# Appendix F Technical Support

This appendix describes AltiServ technical support policy and procedures. It also covers repair and replacement procedures that the user should follow when returning or replacing defective equipment.

## *Technical Support*

Before contacting Technical Support, always have the following information on hand:

- Your name
- Company name
- Product serial number
- AltiWare version number
- Number of boards in the system
- The telephone number where you can be reached
- A brief description of the problem and the procedure to reproduce the problem.

Having this information ready will allow us to better assist you.

## **Who is Eligible for Tech Support**

AltiGen provides technical support to Authorized AltiGen Dealers and Distributors only.

End User customers, please contact your Authorized AltiGen Dealer for technical support. **Direct AltiGen support is available to End User customers through E-mail only, when addressing problems that cannot be resolved by referring to the instruction manuals or by your Authorized AltiGen Dealer.**

Technical Support

## Technical Support Hours

During AltiGen's business hours (8:30 A.M. to 5:30 P.M., Pacific Standard Time, Monday through Friday except holidays), your call will be returned in the order it was received (on a first come, first serve basis), within two (2) hours under normal circumstances. Outside AltiGen business hours, only emergency calls will be returned within eight (8) hours. All other calls are returned on the next business day.

## How To Reach AltiGen Technical Support

Contact AltiGen technical support by any of the following methods:

- **CALL 510-252-9712 x 3. (Available to Authorized AltiGen Dealers and Distributors only.)** Your call will be answered by one of AltiGen's Technical Support Representatives or routed to the Technical Support Message Center if no one is available to answer your call. Your call will be returned promptly, within two (2) hours under normal circumstances. Please see "Tech Support on AltiGen's Web site."
- **SEND E-MAIL TO: [support@altigen.com](mailto:support@altigen.com).** Messages are checked on a daily basis.
- **SEND A FAX TO 510-252-9738, ATTENTION: Technical Support.** Use the Technical Support Request Fax Form (see "Request for Technical Support" on page C-3).

## Tech Support on AltiGen's Web Site

AltiGen's web site is located at <http://www.altigen.com>. It is a great resource that offers the latest information and is available 24 hours a day.

In-depth technical information is available under the **Support** section such as:

- Newsgroups
- Software Updates
- Service Notes
- Frequently Asked Questions
- Tech Corner

## **Unresolved Problems Escalation Procedure**

To report unresolved problems, the following escalation procedures should be followed. Please contact the following responsible parties in the order listed:

1. Local Authorized Dealers Service Department
2. Altigen's Technical Support Manager at support@altigen.com or call 510-252-9712 x 3.
3. TO REPORT ANY STILL UNRESOLVED PROBLEMS OR COMPLAINTS, SEND AN E-MAIL MESSAGE TO ALTIGEN'S PRESIDENT AT: ceo@altigen.com OR CALL 510-252-9712 x 390.

## ***Repair and Replacement***

### **Scope**

This policy addresses the procedure for return of any materials to Altigen from Authorized Altigen Dealers only. It covers materials returned for any and all reasons.

### **General**

All materials being returned to Altigen must have an associated RMA number. RMA numbers are issued by Altigen Customer Service and can be obtained by calling 1-888-ALTIGEN (258-4436) or faxing an RMA form (See Appendix C) to 510-252-9738, attention to Customer Service. Altigen reserves the right to refuse return of any material that does not have an RMA number. The RMA number should be clearly marked on the outside of the box in which the material is being returned. Please see the example below:

Attn.: RMA # 123  
Altigen Communications, Inc.  
47427 Fremont Blvd.  
Fremont, CA 94538

## Repair and Replacement

Upon authorization of return, AltiGen will decide whether the malfunctioning product will be repaired or replaced.

## Replacements

If the defective product is to be used until replaced, AltiGen will ship the replacement product with an invoice. When the defective product is received by AltiGen, the amount of the returned product will be credited to the account.

## Registration

Register your product to receive free software updates and new product announcements.

To register your AltiGen product, fill out the “Product Registration Form” on page C-4 and return the form to AltiGen Communications, Inc. by fax to 510-252-9738.

# Glossary

## A

**AC** - Alternating Current.

**ADPCM** - Adaptive Differential Pulse Code Modulation. A sophisticated compression algorithm for digitizing audio that stores the differences between successive samples rather than the absolute value of each sample. This method of digitization also reduces storage requirements from 64K bits/second to as low as 24K bits/second.

**AltiConsole** - a personal computer-based attendant console connected to the AltiServ over the network that emulates a standard hardware-based attendant console through software and has the flexibility of adding new features through software without changing the hardware.

**AltiSpan** - link from the AltiServ base to the system extension that allows for passing Caller ID.

**AltiWare** - the system software that is used by AltiGen's Quantum products.

**AltiServ** - an advanced, highly integrated business and computer telephony platform that consists of a Quantum card and AltiWare software working in a PC/Server running under Windows NT.

**analog** - a method of telephony transmission in which the information from the source (for example, speech in a human conversation) is converted into an electrical signal that varies continuously over a range of amplitude values.

**API** - Applications Programming Interface. A set of routines that an application program uses to request and carry out lower-level services performed by an operating system.

**ASCII** - American Standard Code for Information Interchange.

## B

**blocked calls** - calls that cannot be immediately connected to the number dialed. A call is defined as blocked when access paths to the called station are unavailable. This is not applicable to AltiServ.

**BPS** - Bits Per Second. The number of bits transmitted per second.

## C

**card** - printed circuit assembly.

## Glossary

**CCIS** - Common Channel Interoffice Signaling. A method of carrying telephone signalling information along a path different to the path used to carry voice.

**Central Office (CO)** - a switching system that connects lines to lines, lines to trunks, and trunks to trunks. These systems are operated by local telephone companies. The term sometimes refers to a telephone company building in which a switching system is located and sometimes includes other equipment (such as transmission system terminals).

**Centrex (CTX)** - a business telephone service offered by a local telephone company from a local central office. Centrex is a single line telephone service, delivered to individual desks or telephones with added features such as intercom, call forwarding, call transfer, toll restriction, least cost routing, and hold on single line telephones. These features are provided by the local phone company's central office. Centrex is a leased business service serving as an option to owning a PBX or key telephone system.

**channel** - the smallest subdivision of a circuit capable of carrying communication service.

**circuit** - the physical connection of channels, conductors and equipment between two given points. Includes both transmitting and receiving capabilities.

**client** - a process whose threads call services provided by either a local or remote server process. In Windows NT, communication between a client and server occurs through the local procedure call (LPC) or remote procedure call (RPC) facilities.

**CO** - Central Office.

**conference call** - a call in which two or more persons speak together. Stations may be internal or external.

**configure** - to determine and assign the equipment cabinet or chassis contents and location of each card, as well as software parameters.

**configuration databases** - those databases which represent unique customer specifications relating to system and station features.

**console phone** - emulates a standard Attendant Console through software. It provides all the call handling features provided by a standard hardware-based console and has the flexibility of adding new features through software without changing the hardware (i.e. AltConsole).

**conversation path** - the route from originating port to terminating port of a two-way communication. A conversation requires two such port-to-port paths. Transmit and receive.

**CTI** - Computer Telephone Integration. Or in the case of an Altiserv, Computer Telephony Internet.

## D

**database** - a collection of related data which can be immediately accessed and operated upon by a data processing system for a specific purpose.

**DC** - direct current. The flow of free electrons in one direction with an electrical conductor, such as wire.

**Default** - the preset value from the factory or the software writer that the program or equipment comes with. In the absence of any other command from the user - it will work with default values.

**DID** - Direct Inward Dialing

**digit** - a single whole number between 0 and 9.

**disk duplexing** - the procedure of copying data onto two hard drives, each using its *own* hard drive controller. If any component (hard drive controller card, cable, boot hard drive) on the first channel fails, then the second channel will boot and operate normally.

**disk mirroring** - the procedure of duplicating data written to two identical hard drives, where both hard drives are connected to *one* disk controller card. If one hard drive fails, then the data can be retrieved from the second hard drive.

**Do Not Disturb (DND)** - when this feature is selected, all incoming calls to the user's extension are denied. If the station has system forwarding instructions, the calls will be automatically redirected to another extension, attendant, or operator.

**DTMF** - Dual Tone Multi Frequency are the low and high frequency tones that comprise touch tone signals.

**drop-down menu** - a list of options that display below a menu option.

**DSP** - Digital Signal Processor. A microprocessor with an architecture that is particularly optimized to perform mathematical algorithms that manipulate digital signals.

**Dual Tone Multi Frequency** - see: DTMF.

## E

**en-bloc dialing** - dialing scheme that allows the terminal to include all the digits required to complete a call.

**environmental subsystem** - A protected subsystem (server) that provides an application programming interface (API) and environment - such as Win32, MS-DOS, POSIX, or OS/2 - on Windows NT.

**escalation** - to expand step-by-step from a limited or local issue to higher level.

## Glossary

**Ethernet** - a local area network, used for connecting computers and terminals, etc., located typically within the same building. Ethernet operates over twisted wire and over coaxial cable at speeds up to 10 megabits per second. Ethernet is the a physical link and data link protocol reflecting the two lowest layers of the DNA/OSI model.

**Exchange integration** - provides unified messaging by synchronizing the mailboxes in an Altiserv and Exchange Server, so that a user can access messages in either server. If a message is added to one server, it is automatically sent to the other server, similarly, if a message is deleted in one server it is automatically deleted from the other server.

**extension number** - an arbitrary number of two to five digits that matches a station to a particular user.

## F

**FCC** - Federal Communications Commission.

**feature** - a special or specific capability.

**field** - a unit of data in a record or message and designated for a particular purpose.

**file** - an organized collection of related information treated as a unit.

**file server** - an integral part of a multi-user computer network such as a local area network (LAN). It typically is a combination of a computer, data management software, and large capacity hard disk drive. A file server directs all movement of files and data on a multi-user communications network and gives each user on the network access to files stored on the file server. It allows the user to store information, leave electronic mail messages for other users on the system and access application software on the file server such as word processors or spreadsheets.

**FLASH** - a sudden brief signal. Activated by depressing the flash key on the telephone pad if one has been configured, or by a quick press and release of the receiver button (switch hook).

**FSK** - Frequency Shift Keying. A modulation technique for data transmission.

**function** - a specific purpose of an entity, or its characteristic action. In computer programming, a synonym for procedure.

**FXS** - Foreign Exchange Subscriber. An analog interface for direct connection of a telephone set to a digital multiplexer.

## G

**GMT** - Greenwich Mean Time. Mean solar time of the meridian at Greenwich, England, used as the basis for standard time throughout the world.

**ground start** - a type of start signaling on a subscriber's trunks in which the ring (minus side) is grounded (ground start) to get dial tone.

**GUI** - Graphical User Interface.

## H

**hard disk** - a sealed mass storage unit used for storing large amounts of data.

**hardware** - a term used to describe the physical components of a machine, particularly computer equipment, and devices containing logic elements used in data processing or communication equipment.

**Hertz** - cycles per second. Abbreviated as Hz.

**http or HTTP** - Hypertext Transfer Protocol. The Internet protocol used to manage communications between Web clients (browsers) and servers.

**Hunt group** - see Workgroups.

**Hz** - see definition for Hertz.

## I

**Impedance** - occurs when power or signal is transferred from one circuit to another. This is known as the resistance of electrical current to alternating current and it is measured in OHMs.

**IMAP4** - Internet Message Access Protocol - Version 4.

**interface** - the interconnections between two separate systems or pieces of equipment.

**ISA** - Industry Standard Architecture.

**ISO** - International Standards Organization.

**ISP** - Internet Service Provider.

## J

**jack** - the mate for a plug. Used to connect two pieces of equipment together.

## K

**keyboard** - system interface for communication. A group of numeric keys, alphabetic keys, or function keys used for entering information into a terminal and into the system. Usually patterned after the QWERTY keyboard layout. This term is derived from the sequence of the first six keys in the first row of alphabetic keys.

## Glossary

### L

**Language Server** - allows the ability to record and play phrases in different foreign languages without requiring any software changes.

**Local address** - an address used in a peripheral node or station in place of a network address and transformed to or from a network address for delivery purposes.

**Logoff** - the procedure by which a user disconnects from a program or session.

**Logon** - the procedure by which a user begins a program or terminal session and gains access to the AltiServ or Quantum system.

**Loop Start** - a type of start signaling. A closed path or circuit over which a signal can circulate. When used on a telephone line, it tests the line, the circuit is closed and reflects received signals to the sender.

### M

**maintenance** - any activity intended to retain a functional unit in, or to restore it to, a state in which it can perform its required function. Maintenance includes keeping a functional unit in a specified state by performing activities such as test, measurements, replacements, adjustments, and repairs.

**MAPI (Messaging API)** - a Component Object Model (COM)-based API that supports message-related components such as message stores, address book, and message transport.

**MDMF** - Multiple Data Message Format

**menu** - a display of a list of available machine functions for selection by the user.

**MHz** - Megahertz.

**MIME** - Multipurpose Internet Mail Extension. A technique designed to bundle attachments within individual e-mail files. Microsoft e-mail protocol software format.

**module** - a compact assembly that is a component of a larger unit in electronics. A detachable section, compartment or unit with a specific purpose or function.

**mounting panel** - the panel used to mount the connection panels to a wall.

**ms** - millisecond.

**MVIP** - Multi-Vendor Integration Protocol.

### N

**network** - A configuration of data processing and/or telecommunication devices and software connected for information exchange.

**network address** - An identifier for a node, station, or unit of equipment in a network.

**network domain** - a set of workstations and servers that share a security account manager database and can be administered as a group. A user with an account in a particular network domain can log onto and access his or her account from any system in the domain.

**network server** - networking software that responds to I/O or computes requests from a client machine. Windows NT network servers can be implemented either as server processes or as drivers.

**numbering plan** - the method of assigning NNX codes to provide a unique telephone address for each subscriber, special line, or trunk destination. In AltiWare the method of assigning extension numbers and trunk designations to local premises.

**North American Numbering Plan** - also known as **NPA**. Refers to the assignment and management of the area code system for North America. Administered by Bellcore, presently being expanded due to high demand for new numbers and services, requiring new area codes. Numbering sequence being changed from traditional N 1/0 X area code (center digit a 1 or a 0) to NNX, where N = numbers 1 to 9 and X = any number.

## O

**offhook** - refers to a telephone set when the receiver is not resting in the base. This usually initiates a dial tone from the receiver.

**One Number Access** - a feature of AltiWare that allows users to create a list of phone numbers that the system can use to track users and connect them with an incoming call if they are not at their extension desk.

**onhook** - the term used to describe a telephone in the idle state or with the receiver still resting in the base.

**option** - a selection from several possibilities.

**OSI** - Open Systems Interconnection. A software model defined by the International Standards Organization that standardizes levels of service and types of interaction for networked computers. The OSI reference model defines seven layers of computer communication and what each layer is responsible for.

**overlap dialing** - dialing scheme that allows the terminal to omit part of the digits required to complete a call, while the remaining digits are buffered.

## Glossary

### P

**PABX** - Private Automatic Branch Exchange. A private branch exchange (PBX) that provides access to and from the public telephone network without operator intervention.

**PBX** - Private Branch Exchange. A switching system providing telephone communications between internal stations and external networks.

**PCM** - Pulse Code Modulation.

**physical extension** - is associated with a physical port and device. An extension is created, by default, as a physical extension (as opposed to a virtual or workgroup extension) unless there are no more physical ports available.

**pilot number** - the extension number that identifies a workgroup or distribution group.

**POP3** - Post Office Protocol version 3. Protocol for retrieving e-mail by remote client.

**port** - a communication channel through which a client process communicates with a protected subsystem.

**POSIX** - an acronym defined as "a portable operating system interface based on UNIX", refers to a collection of international standards for UNIX-style operating system interfaces. In the mid-to-late 1980's, government agencies began specifying POSIX as a procurement standard for government computing contracts.

**Power Failure Backup** - If your AC power fails, your telephone system can still operate by switching to a backup battery power supply, often called an (Uninterrupted Power Supply) UPS.

**Power Failure Transfer** - A telephone system feature. When the commercial AC power fails and there is no backup power source such as a battery or a generator, this feature switches some of the trunks connected to the telephone system to several single line phones that do not need external power and can draw their power from the telephone lines.

**Power Supply** - the part of the telephone system or a computer that converts the normal 120 or 240 volts AC power to AC and DC at the various voltages and frequencies as needed by various components and circuits of the system.

**Private Network** - A series of offices connected together by leased and non-leased telephone lines, with switching facilities and transmission equipment owned and operated by the user or by the carrier and leased to the user.

**process** - a logical division of labor in an operating system. In Windows NT, it comprises a virtual address space, an executable program, one or more threads of execution, some portion of the user's resource quotas, and the systems resources that the operating system has allocated to the process threads. It is implemented as an object.

**Protected subsystems** - integral subsystems that perform important operating system functions, such as security subsystems among others.

**protocol** - A set of rules and conventions by which two computers pass messages across a network medium. Networking software generally implements multiple levels of protocols layered one on top of the other.

## Q

**Quantum** - an ISA standard computer telephony board of AltiGen's AltiServ product line. It is an all-in-one platform designed with open software standards to facilitate use of enhanced applications.

**queue** - a collection of calls waiting to be served. Queued calls in AltiWare are handled on a first-in, first-out basis.

## R

**RAM** - Random Access Memory. The primary memory in a computer that can be written over with new information. The contents of RAM memory are lost when the electrical power to the PC is switched off.

**RAS** - Remote Access Service.

**retry** - to resend data a prescribed number of times or until the data is finally delivered.

**RJ-11** - The "common" telephone jack. Usually wired with four wires, the red and green signify the tip and ring circuits.

**RJ-45** - The "common" telephone jack. Usually wired with eight wires, the red and green signify the tip and ring circuits.

**ROM** - Read Only Memory.

**root directory** - in an IBM or compatible PC, the directory that is created when the user formats a diskette which may contain subdirectories. Synonymous with system directory.

## S

**save** - to retain data by placing it in memory or by copying it from one storage device to another.

**SDMF** - Single Data Message Format

## Glossary

**server** - a process with one or more threads that accepts requests from client processes. It implements a set of services that it makes available to clients running either on the same computer or possibly on various computers in a distributed network.

**slot** - a numbered division of a computer in which a printed circuit card is located.

**SMTP** - Simple Mail Transfer Protocol. Protocol for sending Internet e-mail.

**station** - any location wired to accept a telephone, sometimes referred to as an extension. Also another name for a place where a call can be answered. It may be a telephone, an attendant console, a PC or any other device.

**subscriber** - a user or connection. The line from a telephone to a switch.

**System Speed Dialing** - this feature allows the user to access a system wide directory of commonly called numbers which have been "condensed" into a two- or three-digit code on the telephone dial pad.

## T

**TAPI** - Telephone Application Programming Interface. A call-processing software that allows developers to implement telephony applications that control switches from different vendors.

**TCP/IP** - Transfer Control Protocol/Internet Protocol. A full set of protocols used on the Internet.

**TDM** - Time Division Multiplexing.

**telecommunications** - any transmission, emission, or reception of signals, writing, images, or other information by wire, radio, or any other electromagnetic system.

**Tip and Ring** - the traditional telephony indication of plus and minus in electrical circuits. (See Ground start and Loop start)

**toll call** - a call to a point outside of the local service calling area. Identified by greater distance and increased rates or by 1 plus dialing requirements.

**toll restriction** - a feature that allows the user to restrict certain station users from placing toll calls, or other non-business related locations.

**traffic** - a measure of the demand or use of facilities, circuits, or trunks. Measured by converting seconds and minutes into CCSs (Centum Call Seconds) and Erlangs (hours of use per hour).

**transfer** - this feature redirects a call to another extension, AltMail, or operator.

**trunk** - one of the cables which contain numerous shared telephone circuits used to interconnect telephone switching centers.

**trunk access code** - the prefix digit (i.e. 9) dialed to access a trunk line and dial an external phone number.

**trunk group** - trunks of a common type, given an identity to distinguish between different types of connecting facilities.

## U

**UCA** - Universal Communication Architecture.

**UPS** - Uninterrupted Power Supply. A backup battery module attached to a computer that allows memory contents to remain in tact long enough for the operating system to perform an orderly system shutdown if a power outage occurs.

**USB** - Universal Serial Bus.

**user(s)** - identifies the person or persons accessing the features and functions of the AltiWare product.

## V

**virtual extension** - an extension not associated with a physical port that allows for guest access to AltiMail features and telephone sharing environments. Users of a virtual extension have to log in before accessing the system features assigned to it.

## W

**WATS** - Wide Area Telephone Service. A leased service for direct long distance dialing.

**Wink** - a single supervisory pulse.

**Windows NT (New Technology)** - the high-end Windows operating system in a family of Windows operating systems.

**workgroup** - telephones arranged in groups within a particular organizational function (for example, marketing, sales, service, etc.). Each workgroup is assigned a pilot number. When the pilot number is dialed, the system scans the list of extensions comprising the workgroup and connects the call to the first available idle extension number. If no extensions are available, the call is placed in that workgroup's queue.

**workgroup pilot number** - an extension designated to a workgroup that is not associated with a physical port and may consist of up to 64 members. When the pilot number is dialed, the call is distributed to the workgroup members.

**World Wide Web** - A network of Internet servers that can provide browser information in the form of "web pages" to web clients such as Netscape Navigator.

## Glossary

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