System Administrator Manual

WirelessOffice Suite™

Version 3.0

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Introduction

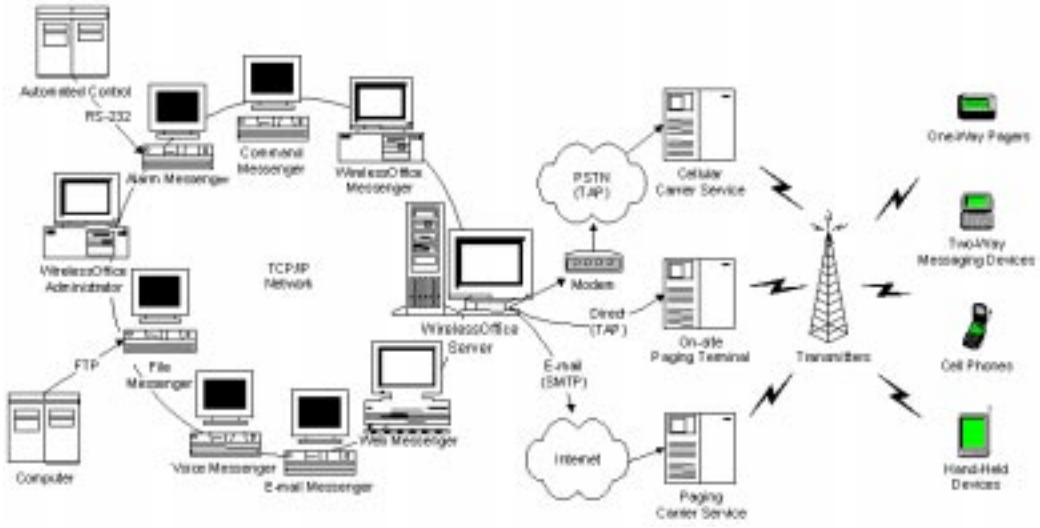
This chapter provides an overview of the WirelessOffice client/server system, system components, as well as new and standard features.

System Overview

The WirelessOffice system is a client/server application that provides effortless, wireless messaging capabilities to both one-way and two-way pagers, digital PCS phones and hand-held wireless devices. It can also accept two-way device message response via E-mail Messenger.

WirelessOffice is made up of software modules, called components, which reside on two separate computers: the client and the server. The client component runs on a personal computer or workstation and sends messaging requests to the server. The Server component runs on a Windows NT/2000 computer and services the messaging requests made by the components. Once you install and configure the server, users can compose and send alphanumeric messages to selected recipients within your system's database.

The following figure illustrates how a WirelessOffice system works:



WirelessOffice clients are connected to the WirelessOffice Server via a local area network (LAN) or wide area network (WAN) using the TCP/IP protocol. The Server connects to wireless infrastructures via direct connection (for customer-owned wireless terminals), modem connection (for wireless carrier providers) or SMTP (Simple Mail Transfer Protocol). When you send a message through your client workstation, the request is sent to the Server and then on to the embedded dispatcher. The dispatcher passes the request to the appropriate wireless infrastructure based on information stored in the server's database.

System Components

The WirelessOffice Server acts as a hub to the WirelessOffice client components that are linked with TCP/IP. The Server processes and dispatches all incoming messages via modem, SMTP or RS-232 connection to the wireless messaging terminals.

The following table briefly describes the WirelessOffice components:

Components	Former Name	Description
WirelessOffice Administrator	Administration Client	Provides remote administration of server-based users, security settings, groups, departments, and service providers, as well as direct messaging capabilities and logging status review.
WirelessOffice Messenger	Messaging Client	Creates, schedules and sends messages with personal address book as well as server address book access.
Command Messenger	SendPage	Implements command-line messaging that forwards alerts from third-party software.
File Messenger	FilePage	Monitors shared file directories for ASCII text files, composed in a message format. Message-enables other operating system files and third-party file-writing software.
Separately Sold WirelessOffice Components		
E-mail Messenger	EPage	Enables any SMTP-compliant e-mail software to send and forward page-enabled messages. Allows two-way devices to send responses back to WirelessOffice.
Web Messenger	JPage	Offers a Web-based Java application for direct messaging and real-time message status from any Internet browser.
Alarm Messenger	SitePage	Monitors RS-232 data stream and deciphers incoming ASCII characters against predetermined settings, immediately generating and sending alerts/notifications to designated recipients. Messages can be configured to escalate, ensuring prompt attention.
Voice Messenger		Provides escalated message acknowledgment from any cell phone or telephone using Interactive Voice Response (IVR).

New Features

- Security profiling for all WirelessOffice users with 100 possible security levels (page 28)
- User Name/Password authentication for server connections (page 13)
- Two-way message response via E-mail Messenger
- Escalation messaging using Command Messenger (page 97), File Messenger (page 113) and Alarm Messenger
- Escalated message cancellation/escalation using WirelessOffice Administrator (page 62), E-mail Messenger, Web Messenger, Voice Messenger and Alarm Messenger
- Department membership and access assignments for users (page 38 and 41)
- WirelessOffice Administrator ability to disconnect server users (page 55)
- Export views to a comma-delimited file (page 18)

- Enhanced import wizard (page 65)
- Increased user and group database capacity (21)
- Security level assignments for groups and departments (page 26)
- Enhanced sound event associations (page 54)
- Windows Me and Windows 2000 compatibility

Standard Features

- Automatic communication port detection
- On-site, dial-up or SMTP communication to virtually any wireless carrier
- Remote administration from Windows 95/98/NT/2000 computers
- Dynamic database updates
- Runs as a Windows NT/2000 service
- SMTP dispatch to wireless carriers
- Automatic activity and message log maintenance, as well as carrier and port logging capability
- Support for modem pools
- Scheduled and delayed messaging
- Device availability scheduling on a per user basis
- WirelessOffice Administrator, WirelessOffice Messenger, File Messenger, and Command Messenger components
- SQL Server database compatibility
- Message sending via TAP or SMTP protocol to on-site or off-site wireless terminals
- Sending capacity of up to 10,000 messages per hour
- Integrates with existing file-writing and command-line utility programs as well as other operating systems
- Extensive help documentation and user-friendly configuration wizards
- E-mail Messenger e-mail and two-way messaging component (sold separately)
- Web Messenger web-based Java component (sold separately)
- Alarm Messenger RS-232 monitoring and detailed alerting component (sold separately)

Getting Started

This chapter lists hardware and software requirements, discusses pre-installation considerations, describes how to install and remove the WirelessOffice Server, as well as the components.

System Requirements

Requirements (Minimum)	WirelessOffice Server	Input Component: Alarm Messenger (sold separately)	Input Components: File Messenger, Web Messenger (sold separately), E-mail Messenger (sold separately)	Input Components: WirelessOffice Administrator, WirelessOffice Messenger & Command Messenger	Input Component: Voice Messenger (sold separately)
Hardware	IBM-compatible PC with Pentium 200 MHz**	IBM-compatible PC with Pentium 200 MHz	IBM-compatible PC with Pentium 200 MHz	IBM-compatible PC with 486 DX	IBM-compatible PC with Pentium 200 MHz
	64 MB RAM	64 MB RAM	64 MB RAM	16 MB RAM	64 MB RAM
	At least 50 MB available hard disk space	At least 50 MB available hard disk space	At least 50 MB available hard disk space	At least 20 MB available hard disk space	At least 50 MB available hard disk space
	Mouse	Mouse	Mouse	Mouse	Mouse
	LAN interface	LAN interface	LAN interface	LAN interface	LAN interface
	Network card*	Network card*	Network card*	Network card*	Network card*
	Serial com. port(s)	Serial com. port(s)	N/A	N/A	Voice/Data Modem
	TAPI-compliant modem (dial-up connections)	N/A	N/A	N/A	Speakers, audio card & microphone (optional)
Software	Windows NT 4.0 Workstation or Server with Service Pack 6a or later Windows 2000 with latest S.P.	Windows NT 4.0 Workstation or Server with Service Pack 6a or later Windows 2000 with latest S.P.	Windows NT 4.0 Workstation or Server with Service Pack 6a or later Windows 2000 with latest S.P.	Windows 95/98/Me Windows NT 4.0 Workstation or Server with Service Pack 6a or later Windows 2000 with latest S.P.	Windows 2000 Professional or Server with latest S.P.
	TCP/IP protocol	TCP/IP protocol	TCP/IP protocol	TCP/IP protocol	TCP/IP protocol
	Latest MDAC Microsoft Access ODBC driver***	Latest MDAC Microsoft Access ODBC driver***	Latest MDAC Microsoft Access ODBC driver***	Latest MDAC Microsoft Access ODBC driver***	Latest MDAC Microsoft Access ODBC driver***

** A network card is only required for networked systems. An MS Loopback adapter may be used if the WirelessOffice system is a stand-alone. Instructions are listed on next page.*

***If sending more than 100 escalated messages at a time, increase system speed and RAM.*

****Go to www.microsoft.com. In the search field type "MDAC download". Use the Microsoft Universal Data Access Download Page with the latest build (do not need SDK version).*

Pre-Installation Considerations

Before you install the software, you should plan your system installation with certain considerations in mind. Review and plan your existing network or computer scheme before installation for a seamless WirelessOffice integration:

Networking Configuration: Does your network have subnets? If so, make sure systems that will be using WirelessOffice components can connect with the server.

Network Adapter Card: WirelessOffice requires a network card for networked systems. If your system is going to be networked, TCP/IP must be installed as a protocol. You are required to enter an IP Address. You should be able to ping the IP Address of the WirelessOffice machine.

For a stand-alone machine that will host both WirelessOffice Server and WirelessOffice Administrator, WirelessOffice Messenger and/or Alarm Messenger the network adapter card is not a requirement to run TCP/IP. Microsoft offers a network adapter card called MS Loopback Adapter, which will simulate the network card on a standalone PC. Although a network card is not a requirement, the TCP/IP protocol is required for the communication between applications. If you do not have a network card, please follow these instructions:

Step 1. To Install MS Loopback

1. Go to **Start | Settings | Control Panel | Network | Adapter** tab.
2. Delete all other adapters. Then click **Add**.
3. Select **MS Loopback Adapter**. During setup, **Specify an IP Address** with `127.0.0.1` as the IP Address. Type `1.1.1.1` as the **Subnet Mask**. The **Default Gateway** does not need to be changed. Click **OK**.

Step 2. To Install the TCP/IP protocol

1. Go to **Start | Settings | Control Panel | Network | Protocols** tab. Click **Add**.
2. Select **TCP/IP protocol**. Click **OK**.

Firewall: To use WirelessOffice through a firewall, the following ports must be opened:

To the Server	**Port**
Dynamic	1024+*
From the Server	
WirelessOffice Messenger	12396
WirelessOffice Administrator	12397
Alarm Messenger	12398
Internet Port	
Web Messenger	1515 Java

** The firewall output connect ports are currently dynamically chosen by the RPC run-time.*

System Hardware and Software Requirements: Make sure that the server and component systems meet the minimum requirements before loading the CD.

WirelessOffice Server and Client Components: Map out which system will become the WirelessOffice Server. Some WirelessOffice components need to be loaded only once and others require loading onto the system that will be implementing them.

Server Considerations: You must log on with Windows NT/2000 administrative privileges to install the server software. Only one WirelessOffice Server may be installed on a computer. All WirelessOffice client components can be installed on the same system as the server. Windows NT Server is preferred over NT Workstation for higher messaging volume systems.

WirelessOffice Administrator Considerations: Install WirelessOffice Administrator on the server system or any remote system running Windows 95, 98, Me, NT or 2000.

WirelessOffice Messenger Considerations: Install the WirelessOffice Messenger on any network system running Windows 95, 98, Me, NT or 2000. A special "Messenger only" installation is included on the CD-ROM for easy network distribution. Please see "Distributing WirelessOffice Messenger to Networked PCs" on page 10.

Command Messenger Considerations: Install Command Messenger on each target system that will be implementing it. The network system must be running Windows 95, 98, Me, NT or 2000. For instance, if you will be message-enabling Performance Monitor using command-line messaging, install Command Messenger onto the monitoring system.

File Messenger Considerations: You can install File Messenger on any network system running Windows NT/2000, but your third party applications must be able to share a directory on that system. File Messenger only needs to be loaded onto one computer that is networked with the server, but may be loaded on as many systems as needed.

Arrange to use **File Transfer Protocol (FTP)** of Microsoft Internet Information Server to share files across the directory from other operating system computers. IIS 3.0 or higher can be installed with the FTP protocol in order to receive text messages into the machine running File Messenger. FTP can be set up with an anonymous login, receiving files to the c:\inetpub\ftproot\ directory. File Messenger must have an entry in the Directories tab that matches your FTP setup.

Alarm Messenger Considerations: Install Alarm Messenger on any network system running Windows NT/2000, including the server.

E-mail Messenger Considerations: You can install E-mail Messenger on any network system running Windows NT/2000 (including the WirelessOffice Server) with one exception. Due to Internet Protocol (IP) port conflicts, you ***cannot install*** E-mail Messenger on your e-mail server. You must be able to ping your domain name before installing E-mail Messenger. If you decide that mobile.company.com will be your domain, you must be able to get a REPLY by going to the Command Prompt and pinging mobile.company.com.

Once E-mail Messenger is configured and a domain is established, any network system with e-mail software can send E-mail Messenger messages. To receive external requests and for two-way functionality, E-mail Messenger must be accessible from the Internet and not behind a firewall.

Web Messenger Considerations: Install Web Messenger on your networked Windows NT/2000 *Web server* system. After configuring your Web server, any system with an Internet browser networked to the Web server will be able to access Web Messenger. If you are using Internet Explorer version 5.0 to view the application, you must install Microsoft Virtual Machine.

Voice Messenger Considerations: Install Voice Messenger on any Windows 2000 network system, including the server. Connect the recommended voice modem to that system.

Other Considerations: The product CD contains the product manual in .pdf format, a royalty-free Adobe Acrobat Reader, and a woreadme.txt file that contains additional information.

Upgrading WirelessOffice

To upgrade from a previous version of WirelessOffice, the Installation Wizard will convert and integrate the past version database and settings information. You will be required to enter a new Authorization Code when upgrading to WirelessOffice 3.0. A default security setting will be applied globally to the database. There is no need to remove the previous version of WirelessOffice before upgrading.

Note: If upgrading from WirelessOffice version 2.0, you do not need to use the Administrator Tools to upgrade the database – the database conversion occurs automatically when you install WirelessOffice 3.0.

You cannot run both versions of WirelessOffice 2.0 and 3.0 on the same system.

Air Apparent or Site Alert products require that you use the Administrator Tools to update the database after installing WirelessOffice version 3.0. Database updating information is located in “Appendix A: Administrator Tools” on page 186.

The WirelessOffice Access database may be exported to SQL Server. For information on when to use SQL Server and how to upsize, please see “SQL Server Database Conversion” on page 191.

Installing WirelessOffice

The WirelessOffice CD contains an installation wizard program. This program allows you to install any combination of the following software components on the target install computer:

- WirelessOffice Server
- WirelessOffice Administrator
- WirelessOffice Messenger
- Command Messenger
- File Messenger
- E-mail Messenger - sold separately, but bundled on the WirelessOffice product CD
- Web Messenger - sold separately, but bundled on the WirelessOffice product CD
- Alarm Messenger - sold separately, but bundled on the WirelessOffice product CD
- Voice Messenger - sold separately, but bundled on the WirelessOffice product CD

To install WirelessOffice:

Before installing, make sure you have your assigned Authorization Code. The code is located on the back of the CD jewel case. If you are upgrading from a previous version of WirelessOffice or Air Apparent, you will be issued a new Authorization Code.

1. Insert the WirelessOffice 3.0 CD into the CD-ROM drive. If AutoPlay is enabled, the setup program will automatically start. If AutoPlay is not enabled, go to **Start**, then select **Run**. Type D:\setup.exe where D:\ represents the CD-ROM drive letter.
2. The **Welcome** window automatically displays. Click **Next**.
3. The **Software License Agreement** dialog will now display. Click **Yes** if you accept the terms.
4. The **User and Company Information** dialog box displays. Type your name in the **Name** box. Enter the name of your company in the **Company** box. Click **Next**. The system will then search for any previous software versions for upgrading information.
5. The **Enter Destination** dialog box displays. To install WirelessOffice in the *default directory* click **Next**. Or to specify an *existing folder*, click the **Browse** button, then select a folder from the **Existing Folders** list box. Click **Next**.
6. The **Select WirelessOffice Components** dialog displays. Choose the components you wish to install (or upgrade). All components can be installed on the same system if desired, assuming minimum hardware and software requirements are met.
7. Select **Administrator Tools** if you will need to upgrade an Air Apparent or Site Alert database, will be converting the database to SQL Server, or require Adobe Acrobat Reader to view the *System Administrator Manual* in .pdf format. Click **Details** to specify which Administrator Tools you would like to install. Click **Next**.
8. The **Enter Information** dialog will display. Type your Authorization Code, which is located on the back of the CD jewel case, into the space provided and click **Next**. If you are upgrading, your old Authorization Code will display. A new Authorization Code *is required*. Click **Next**.
9. In the **Select Program Folder** dialog click **Next** to accept the *default folder*. Or to specify a *new folder*, enter the folder name in the **Program Folders** box, then click **Next**. Or to specify an *existing folder*, select a folder from the **Existing Folders** list box, then click **Next**.
10. If you checked Web Messenger in the **Select WirelessOffice Components** dialog box, the **Enter Web Messenger Destination** dialog will appear next. Select the correct directory to install Web Messenger so your Web server can see it. Typically you should use the default c:\inetpub\wwwroot\webmsgr location. If you did not check Web Messenger or are upgrading it, this dialog will not appear.
11. The **Start Copying Files** dialog box displays. Verify the current settings, then click **Next**. You will see a progress indicator as the system copies the program files onto your computer.
12. The **Specify WirelessOffice Server** dialog box displays. Enter the **Server** name or Internet address of the computer running the server, so WirelessOffice Administrator can be opened. The server name is preferred, especially if IP addresses change frequently. Locate the server name by right-clicking on the **Network Neighborhood** desktop icon and select **Properties**. Find the **Computer Name** on the **Identification** tab. Click **Next**.
13. The **Specify Administrator Password** dialog box displays. To login to WirelessOffice Administrator you will be required to enter the Login Name of *'Administrator'* and this Password. Type a **Password** and then **Confirm Password**. The password should be 1-20 characters in length. It can be changed at any time in WirelessOffice Administrator. Please see "To modify the server Setup tab" on page 22.

Note: Do not lose this password. It is required to initially login to WirelessOffice Administrator using the '*Administrator'* Login Name.

14. The services, if selected, are then installed. The **Select Desktop Shortcuts** dialog displays. Select the appropriate check boxes to create desktop shortcuts for WirelessOffice Administrator, WirelessOffice Messenger, and Alarm Messenger (if selected to install). Click **Next**.
15. The **Setup Complete** dialog displays. Select **View WirelessOffice Release Notes** to auto-launch the release notes after finishing installation. Click **Finish**. Reboot only if instructed.
16. This concludes the WirelessOffice installation.

Distributing WirelessOffice Messenger to Networked PCs

The main installation program, which is launched when you run setup.exe from the CD-ROM, is the full installation program for all WirelessOffice components. When installing under Windows 95/98, certain components will not be visible because they are only meant to be run under Windows NT/2000. However, when running the full install under Windows 95/98/Me, the user is allowed to select WirelessOffice Administrator and/or WirelessOffice Messenger. WirelessOffice Administrator does run under Windows 95/98/Me, and this is provided for those administrators who wish to configure and monitor WirelessOffice Server from Windows 95/98/Me.

In order to distribute the WirelessOffice Messenger ONLY (to Windows 95/98/Me/ NT/2000 users), without risking end users inadvertently installing WirelessOffice Administrator, a 'Messenger only' installation is provided on the installation CD-ROM in a folder called 'sysadmin util' which is a straight install of WirelessOffice Messenger. This install can be placed on a network drive to which users can attach and run the installation.

The CD contains diskette images of the software in case you need to distribute WirelessOffice Messenger from 3.5-inch floppy diskettes.

Note: When installing WirelessOffice Messenger over the network using the **Messenger only** installation, the system administrator can set up the wonet.ini file in the root directory of this install program to pre-configure the network address of the WirelessOffice Server.

[Server]

HostName=<Internet Address>

Example:

[Server]

HostName=100.10.10.10

Removing WirelessOffice

Removing the software deletes only those files and directories that are initially installed. Log and database files remain on your system.

To remove WirelessOffice:

1. From the taskbar, click **Start**, point to **Settings**, and then click **Control Panel**. Double-click the **Add/Remove Programs** icon.

   The **Add/Remove Programs Properties** dialog box displays (as depicted on a Windows NT system, other operating systems may differ):

2. Select **Emergin WirelessOffice** from the list box, then click **Add/Remove**. The **Confirm File Deletion** dialog box displays. Click **Yes**.

Note: Close Control Panel after opening the **Add/Remove Programs Properties** dialog so the software removal is complete.

Using WirelessOffice Administrator

Starting the Software

WirelessOffice Administrator must initially be opened using the ‘A*dministrator’* User Name. This is the only account that may administer the Server Configuration settings and may only be used to login to one application at any given time.

To start the software:

1. Launch WirelessOffice Administrator by double-clicking the desktop icon.
2. To launch from the taskbar, click **Start**, point to **Programs**, select **Emergin WirelessOffice** then **WirelessOffice Administrator**.

   The **Welcome to WirelessOffice** dialog displays:

3. In the **User Name** text box type *`Administrator`* upon first entry to WirelessOffice Administrator. Type the **Password** that was established during installation. Select **Remember password** to allow future logins to that system’s WirelessOffice Administrator to be automatically surpassed. To force each user to login with their **User Name** and **Password**, do NOT check **Remember password**.
4. Type the **Server** name established during installation. Click **OK**. The **WirelessOffice Administrator** window displays.

Note: The WirelessOffice *‘Administrator’* account is not related to Windows NT/2000 administrative privileges.

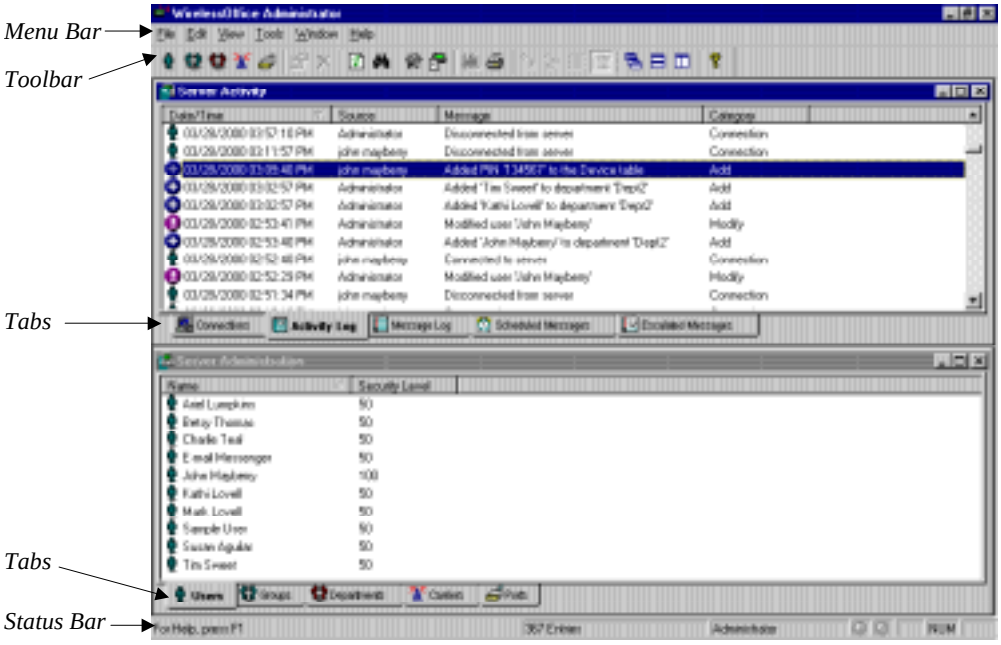
To add/start/stop server services, click **Tools** and select **Change Authentication Mode**. Select **Windows and WirelessOffice**. Exit and re-start WirelessOffice Administrator. Configure the server(s) as needed. Change the authentication mode back to **WirelessOffice**. Please see “Change Authentication Mode” on page 19 for more information.

Understanding System Basics

This section provides basic system information that you should know before you begin. The first time you start WirelessOffice Administrator you will notice that there are **two** main application windows. These are called: **Server Activity** and **Server Administration**. Each of these main windows has five sub-windows. You can switch between the sub-windows by clicking on the five tabs at the bottom of each main window. You can choose to lay out the windows to your liking. The default layout is horizontal – you are able to see the most information on your screen this way.

Main Application Window

Before you begin, it is important that you become familiar with the WirelessOffice Administrator main application window.



Menu Bar

The menu bar provides options that you can use to activate WirelessOffice and standard Windows functions. The step-by-step instructions detailed later in this manual refer to the menu bar functions.

File	Edit	View
Properties New > >User >Group >Department >Carrier >Port Save As Print Print Preview Print Setup Change Server Exit	Delete Delete All Select All Find	Toolbar Status Bar Activity View Administration View Large Icons Small Icons List Details Tabs Refresh
Tools	**Window**	**Help**
Server Configuration Compose Message Send Administrator Alert Resend Message(s) Message Log Statistics View Backup Activity Log Import Wizard Change Authentication Mode	Cascade Tile Horizontally Tile Vertically Server Administration Server Activity	Help Topics Tip Of The Day Emergin Knowledge Base About WirelessOffice Administrator

Toolbar

The toolbar provides an alternative method to accessing the menu bar options. Once you are familiar with the icons, you can directly select various functions from the toolbar.

Icons	Description
	New User
	New Group
	New Department
	New Carrier
	New Port
	Properties
	Delete

Icons	Description
	Refresh
	Find
	Server Configuration
	Compose Message
	Statistics
	Print
	Large Icons

Icons	Description
	Small Icons
	List
	Details
	Cascade Windows
	Tile Windows Horizontally
	Tile Windows Vertically
	Help Topics

Status Icons

There are four sets of status icons to become familiar with: Connections, Activity Log, Message Log and Scheduled Messages. There are no status icons for the Escalated Messages tab.

Connection Status Icons

The following table describes each icon depicted in the **Connections** window:

Icons	Description
	WirelessOffice Administrator
	WirelessOffice Messenger
	Command Messenger
	File Messenger

Icons	Description
	E-mail Messenger
	Web Messenger
	Alarm Messenger
	Any component developed by a third party

Activity Log Status Icons

The following table describes each icon that is depicted in the **Activity Log** window:

Icons	Description
	The server was started.
	System configuration data was added.
	System configuration data was modified.
	System configuration data was deleted.

Icons	Description
	A message was sent.
	Warning — a system limit was exceeded, e.g., too many characters.
	Error — a system error has occurred, e.g., user has no defined devices.
	Connection — a client has connected or disconnected from the server.

Message Log Status Icons

The following table describes each icon that is depicted in the **Message Log** window:

Icons	Status/Description
	Partial Success — the wireless carrier rejected at least one message from a multi-recipient message.
	Queued — the wireless carrier has not dispatched the message.
	Accepted — the wireless carrier acknowledged and accepted message.
	Rejected — the wireless carrier rejected the message.
	Failed — a critical system error occurred.
	Acknowledged — a two-way device responded to a message.

Icons	Status/Description
	Unknown — the system cannot determine the status of the message, generally caused by stopping the service when a message is queued.
	No Ports Configured — the port is not configured.
	No Direct Connection — a direct connect carrier is not configured.
	No Device Configured — the user has no device defined or currently enabled.
	No Modem Configured — a modem has not been configured.

Scheduled Message Status Icons

The following table provides a description of each **Scheduled Message** status icon.

Icons	Status/Description
	Delayed Message — the message is scheduled for later delivery (one time only).
	Daily Message — the message will be sent on a daily basis.
	Weekly Message — the message will be sent on a weekly basis.
	Monthly Message — the message will be sent on a monthly basis.

Status Bar

The status bar is found under the lower tab bar. The information it displays varies depending on which window is active. The status bar displays the total number of:

- User connections
- Activity Log entries
- Message Log entries
- Scheduled messages
- Escalated messages
- User records
- Group records
- Department records
- Configured carriers
- Configured ports

Additionally, as you move your mouse pointer over the various toolbar icons, the left side of the status bar explains the action associated with the icon.

Arranging Windows

WirelessOffice Administrator allows you to configure your window views. Arranging the window views can be done two ways:

- By selecting **Window** from the menu bar, click **Cascade**, **Tile Horizontally** or **Tile Vertically**.
- By clicking the layout icons from the toolbar. 

Printing, Saving Windows Contents

WirelessOffice Administrator allows you to print or save the contents of any window. Printing can be initiated in two ways: You can select **Print** from the **File** menu bar, or click the **Printer** icon on the toolbar. You can also save the tabbed views as comma-delimited, as well as text files.

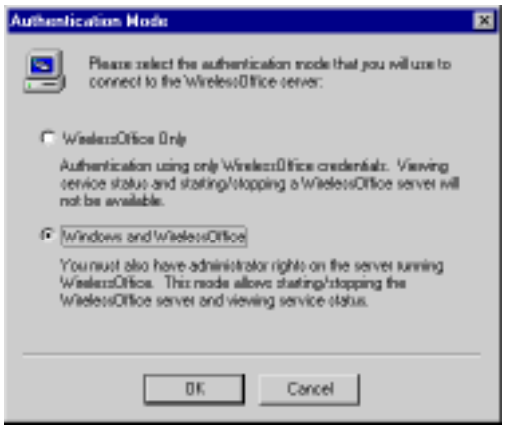
Change Authentication Mode

In order to stop, start or add servers you must first change the authentication mode to require both Windows and WirelessOffice authentication.

To change authentication mode:

1. Click **Tools** and select **Change Authentication Mode**.

   The **Authentication Mode** dialog displays:



2. Select **WirelessOffice Only** to display the **Welcome to WirelessOffice** dialog that does not require operating system authentication by the remote machine. WirelessOffice Administrator users simply login with their name and password and select a server to connect to. Users cannot start or stop servers. This is the default setting.
3. Select **Windows and WirelessOffice** to display the **WirelessOffice Login** dialog, which requires operating system authentication on the remote machine. WirelessOffice Administrator users login with their name and password and can view/add/start/stop servers.

   Note: If remote WirelessOffice Administrator systems will need to login to WirelessOffice Server and do not have operating system administrative privileges for the server system, use the **WirelessOffice Only** setting.

Starting and Stopping the Server

In order to stop, start or add servers you must first change the authentication mode to require both Windows and WirelessOffice authentication (see “Change Authentication Mode” on the previous page). Once that setting is configured, you must be logged into the Windows NT/2000 system with operating system administrative privileges.

To start the server:

1. Open WirelessOffice Administrator by double-clicking the desktop icon. Or if the application is already open, click **File** from the menu and select **Change Server**.

   The **WirelessOffice Login** dialog box displays:

2. Click the **Add** button. The **Add Service** dialog box displays.
3. **Enter host name or IP address** information and make sure the **WirelessOffice Server** is chosen as the service type. Click **Add**.
4. If the server is not already running, click the **Start Service** arrow icon. Type your **User Name** and **Password** if not already done. Click **Connect**.

Note: If WirelessOffice Administrator is loaded on the WirelessOffice Server system, locate the server name or address by right-clicking the **Network Neighborhood** desktop icon and select **Properties**. Find the **Computer Name** on the **Identification** tab.

To stop the server:

1. To stop the server, select **Change Server** from the **File** menu. The **WirelessOffice Login** dialog box displays.
2. Select the server and press the **Stop Service** button.

Configuring WirelessOffice Server

This chapter describes how to customize your system setup and details server capacity, server configuration, as well as port, carrier, department, user and group setup.

Server Capacity

The following table lists the *recommended maximum* software capacity for system configuration:

Parameter	Recommended Maximum
COM Ports per Server	20
Carriers	200
Groups	2,500
Departments	2,500
Messages in Message Log	1,500

The following table lists the software capacity for system configuration:

Parameter	Maximum Capacity
Users	50,000*
Devices per User	10
Members per Group	1,000
Members per Department	Reflects user licensing

*User maximum capacity will depend on your software license.
SQL Server database recommended for 3,000 users and above.

Modifying Server Configuration

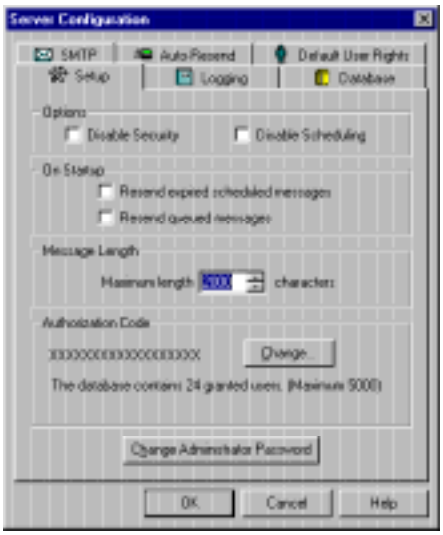
When you install WirelessOffice, the system provides default server settings. These include information about protocol, security, automatic purging of log entries, maximum message length, database type, authorization code, *'Administrator'* password, and auto resend.

Note: Only the '*Administrator*' User Name has access to these settings. Other WirelessOffice Administrator connections, logged in by different user names, will not have access. Also, only one *'Administrator'* User Name connection will be able to login at any given time. Create user login accounts for other applications, e.g. Command Messenger as the Login Name with appropriate security settings.

To modify the server Setup tab:

1. From the **Tools** menu bar, select **Server Configuration.**

   The **Server Configuration** dialog displays, open to the **Setup** tab.



2. Select **Disable Security** to remove the security level and access rights evaluation requirements. Users will still need to login with their User Name and Password. The only security measure left intact will be WirelessOffice Administrator **Server Configuration** settings, which is only available to the *'Administrator'* account. Please see "Security Settings" on page 28 for more information about security.

3. Select **Disable Scheduling** to globally remove the ability to schedule new messages and to stop the sending of currently scheduled messages. If a scheduled message exists, it will be deleted at the time and date it was scheduled to send at. If a scheduled message is set to recur indefinetely, the message will remain in place and become active if scheduling is re-enabled. Escalated messages are not affected.

4. **On Startup** controls what happens when the server starts up. Select **Resend expired scheduled messages** to send upon startup any messages that were scheduled while the server was not running.

5. Select **Resend queued messages** to send upon startup any queued messages not yet sent when the server was last stopped.

6. Enter the maximum number of characters allowed per message in the **Maximum Length** text box. Most carriers can break messages into fragments. For example, you can send a 2000 character length message to a carrier that accepts 256 character message blocks. The message will then be broken into 8 fragmented messages. This setting differs from the carrier Block Size setting.

7. To update the Authorization Code, click the **Change** button in the **Authorization Code** area.

The **Change Authorization Code** dialog displays:

8. After changing the Authorization Code, click **OK**. The **Server Configuration** dialog will redisplay.

9. Select **Change Administrator Password** to make a change to the password that grants access to the main *'Administrator'* user account (which has access to the Server Configuration settings). This password was initially established during installation.

Note: If the password is lost or forgotten, in order to reset this password you must re-install WirelessOffice on this system. Be sure to retain your database. The install will set a new password for this account.

Expired Authorization Access

If you did not purchase WirelessOffice, the product is running in DEMO mode and will only function for a limited period of time. At the end of this trial period, you will see the following type of message in the Event Viewer, Application section when you attempt to start the server to launch any WirelessOffice components:

```
WirelessOffice Administrator cannot start because it is not registered.
      Please contact Emergin at 1-888-922-7638 or 1-561-361-6990.
```

To re-enable WirelessOffice Server and the components you were using, you will be issued a valid Authorization Code upon purchase of the products. Please see "To modify the server Setup tab" on the previous page.

To modify the server Logging tab:

For more information about server logging, refer to “Appendix C: Server Logging” on page 205.

1. Click the **Logging** tab of the **Server Configuration** window.

   The **Logging** tab dialog will display:

2. The **Log file directory** displays the location of the message and activity log files on the Server system. If you wish to use a different directory, click the **Browse** button.
3. In the **Message Log** section, select your archiving options. As the number of sent messages increases, the size of the Message Log also increases. Adjust the number of days or messages to automatically archive at according to your messaging volume. In order to maintain optimum performance, the Message Log can be archived in one of three ways: daily, weekly, or monthly.

Note: The **Archive file name** will change corresponding to your choice of archiving frequency. Recommended archiving frequency is 5 days or 1500 messages.

4. Click the **Activity Log** tab to view Activity Log settings. Enter the **Maximum file size** (in kilobytes) of the Activity Log (default is 128). When the file becomes full it is renamed to .old and a new file is created. Click **OK**. You do not have to restart the server to realize the changes.

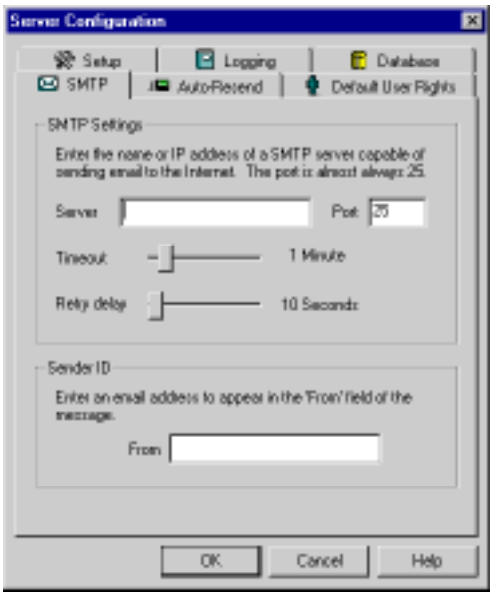
To set up the server Database tab:

The **Database** tab allows the system administrator to switch between data sources or upgrade to SQL Server. Each data source refers to a different database. All data sources on the server computer beginning with “WirelessOffice 3.0” appear in the list. **User ID** and **Password** are only active when you are using a Microsoft SQL Server data source.

To set up the server SMTP tab:

1. Click the **SMTP** tab of the **Server Configuration** window.

   The **SMTP** tab dialog displays:



2. The **SMTP** tab allows **SMTP Settings** to be configured for the use of e-mail to submit messages to carriers that support SMTP messaging to devices. Type the name or Internet address of an onsite SMTP gateway, e.g. mail.domain.com. The **Port** address is usually 25.
3. **Timeout** and **Retry delay** can be set, however we suggest using the default settings.
4. **Sender ID** indicates who the e-mail is coming from, e.g. reply@mail.domain.com. This text box *cannot* be left blank.

Note: If using two-way response via E-mail Messenger, the **Server** and the Sender ID **From** fields must be properly configured.

To set up the server Auto-Resend tab:

The **Auto-Resend** tab allows you to globally specify certain time intervals for the auto-resend feature. If the **Enabled** box is checked, global auto-resend settings will be applied to all devices that have **Global** rather than **Custom** checked in their auto-resend settings. For more information, see “Global Auto-Resend Settings” on page 54.

Security

The following table defines the terms you will need to know to configure security settings:

Term	Definition
User Security Level	Reflects a number in the range of 0 to 100, allowing messaging capabilities.
Administrator Security Level (for Users)	Reflects a number in the range of 0 to 100, allowing WirelessOffice Administrator editing, viewing, adding and deleting capabilities.
Same or Lower	Qualifier that is coupled with the Security Level to define access. Allows messaging or WirelessOffice Administrator access to the same level and all levels below the user's assigned security level.
Same	Qualifier that is coupled with the Security Level to define access. Allows messaging or WirelessOffice Administrator access to the same level as the user's assigned security level.
User Rights	Security rights affecting messaging and WirelessOffice Messenger capabilities.
Group Messaging	When selected, the user can send messages to groups according to their security level and same/same or lower qualifier.
Departmental Messaging	When selected, the user can send messages to departments that have been defined as accessible in their user profile. No security level is evaluated.
Message Scheduling	When selected, the user can schedule messages.
Personal Address Book	When selected, the user can configure their own Personal Address Book in WirelessOffice Messenger.
Device Editing	When selected, the user can add, delete and modify their device(s) in WirelessOffice Messenger.
Administrator Rights (for Users)	Security rights affecting WirelessOffice Administrator abilities to view, add, edit, and/or delete configurations or logs.
Users	When selected, the user can view, add, edit or delete user profiles according to their security level and same/same or lower qualifier.
Groups	When selected, the user can view, add, edit or delete group profiles according to their security level and same/same or lower qualifier.
Departments	When selected, the user can view, add, edit or delete department profiles according to their security level and same/same or lower qualifier.
Carriers	When selected, the user can view, add, edit or delete carrier profiles.
Ports	When selected, the user can view, add, edit or delete port profiles.
Connections	When selected, the user can view or disconnect client connections.
Activity Log	When selected, the user can view or delete activity log entries.
Message Log	When selected, the user can view or delete message log entries according to their security level and same/same or lower qualifier.
Scheduled Messages	When selected, the user can view, edit or delete scheduled message entries according to their security level and same/same or lower qualifier.
Escalated Messages	When selected, the user can view, escalate, or cancel escalated message entries according to their security level and same/same or lower qualifier.

Security Examples

The following table describes sample scenarios of security level and access rights:

User Name	General Messaging Capabilities	WirelessOffice Administrator Capabilities	WirelessOffice Messenger Capabilities
Administrator Cannot configure security settings. Granted all access and highest security level by default.	All users, groups, & depts. Msg scheduling allowed.	Access all views, with full editing/adding/deleting rights. Only account that can modify Server Configuration settings.	General msging, msg scheduling, personal addressbk and personal Message Log.
Jane Smith User Security Level – 50 same or lower Admin Security Level – 0 same User Rights: group msging, dept msging, schedule msgs Admin Rights: none Admin Activity Rights: none	Users/groups assigned 50 and lower. Dept msgs only to those defined in user profile. Msg scheduling allowed.	No access allowed.	General messaging, message scheduling, personal Message Log.
Bob Logan User Security Level – 100 same or lower Admin Security Level – 50 same or lower User Rights: all Admin Rights: all Admin Activity Rights: all	All users/groups. Depts must be defined in user profile. Message scheduling allowed.	Access allowed. Can only edit/add/delete users, groups and depts with 50 or below. Msg Log, Scheduled Msgs and Escalated Msgs only display msgs sent by users with 50 or below. Ports, carriers, connections, and activity log are available.	General msging, msg scheduling, personal addressbk availability, and ability to edit own device. Personal Message Log.
Enrique Lopez User Security Level – 0 same Admin Security Level – 0 same User Rights: none Admin Rights: none Admin Activity Rights: none	PIN/Carrier method or FastPIN	No access allowed.	Messaging with FastPIN, personal Message Log.
Beverly Tallow User Security Level – 50 same Admin Security Level – 50 same User Rights: all Admin Rights: all Admin Activity Rights: all	Users/groups with 50 security level. Depts must be defined in user profile. Msg scheduling allowed.	Access allowed. Can only edit/add/delete users, groups and depts with level 50. Msg Log, Scheduled Msgs and Escalated Msgs only display msgs sent by users with level 50. Ports, carriers, connections, & activity log avail.	General msging, msg scheduling, personal addressbk availability, and ability to edit own device. Personal Message Log.
Jonathan Brite User Security Level – 100 same or lower Admin Security Level – 0 User Rights: all Needs to be able to message all users and receive messages from people with lower security levels.	All users/groups. Depts must be defined in user profile. Message scheduling allowed.	No access allowed. To allow lower security level users to send msgs, add him to a department and give dept msging accessibility to those users who need to msg him. Or configure all users including Jonathan with same security level.	General msging, msg scheduling, personal addressbk availability, and ability to edit own device. Personal Message Log.

Security Settings

WirelessOffice requires each user to login when connecting a WirelessOffice component to the WirelessOffice Server. Security configuration entails a login password, security level (0-100), granting or denying access, and various user and administrator rights. Once the server default settings have been configured, individual security access assignments can be adjusted for each user in their User Properties. There is one account that is not configurable and that is the '*Administrator'* account, which is granted by default the highest security level and all access rights. It is also the only account that can access Server Configuration. Please see "To add new users or devices" on page 41.

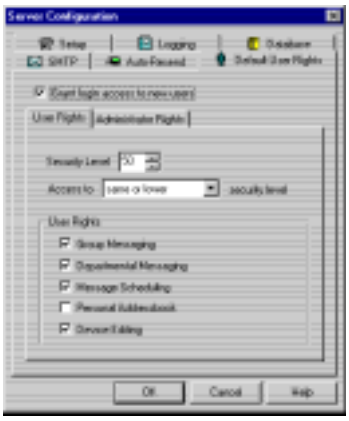
Note: The '*Administrator'* account can globally disable security on the **Setup** tab of Server Configuration. Please see "To modify the server Setup tab" on page 22.

To help configure and plan your security system on paper, please see "Appendix E: Security Worksheet" on page 210.

To set up the server Default User Rights tab:

1. Each time a new user is added or the Import Wizard is used, these default security settings are applied. Click the **Default User Rights** tab of the **Server Configuration** window. These settings affect all newly added users.

   The following dialog depicts the default system settings for the **Default User Rights** tab:



2. Select **Grant login access to new users** to give newly added users login access.
3. On the **User Rights** tab, set up default security rights for messaging access. **Security Level** reflects a number between 0 and 100. If a user is assigned Security Level 50 with **same or lower** access, that user will be able to view and send messages to all other users with the same security level and below.

Note: If the user rights security level is set to 0, WirelessOffice Server access will be granted but no global address book will be accessible for message sending. Message sending will be limited to PIN/carrier method (FastPIN) and in WirelessOffice Messenger, a personal address book if rights are granted.

4. In the **User Rights** section, select the appropriate rights that will be assigned by default to all newly added users.

5. Select **Group Messaging** to enable the ability to send to groups with the same security access level (same, same or lower) as the user. Individual member security levels will not be evaluated.

6. Select **Departmental Messaging** to enable the ability to send only to specified departments. Individual department member security levels will not be evaluated.

7. Select **Message Scheduling** to allow the user to send scheduled messages. Select **Personal Addressbook** to allow the user to configure their own WirelessOffice Messenger address book. Select **Device Editing** to allow the user the ability to access and configure their own devices in WirelessOffice Messenger.

8. Next, click the **Administrator Rights** tab of the **Default User Rights** window to configure default user access to WirelessOffice Administrator.

   The following dialog depicts initial default system settings for the **Administrator Rights** tab of the **Default User Rights** window:

9. **Security Level** reflects a number between 0 and 100 and is used for WirelessOffice Administrator access. If a user is assigned Security Level 50 with **same or lower** access, that user will be able to view and modify other users/groups/departments with the same security level and below.

   Note: If the Administrator Rights Security Level is set to 0, WirelessOffice Administrator access will NOT be granted.

10. In the **Administration** section, select the appropriate rights that will be assigned by default to all newly added users. Selection of any of these server administration properties gives a user access to viewing, adding, modifying and deletion rights.

11. In the **Activity** section, select the appropriate rights that will be assigned by default to all newly added users. Selection of any of these server activity properties gives a user access to a variety of viewing, resending, modifying, cancellation and deletion rights.

Managing COM Ports

Before you can use WirelessOffice to send messages, you must configure each serial communication (COM) port used for output. To send using SMTP, a port does not need to be defined, but a carrier does. For more information about configuring SMTP carriers, please see “To add a new carrier” on page 33.

Ports are configured as either *direct* (on-site) or *modem* (dial-up) connections. A *direct connection* links to an on-site wireless terminal with an RS-232 cable. A *modem connection* links to a remote wireless carrier through a modem. The recommended maximum number of ports per server that can be defined is 20. Port settings can be modified or deleted at any time.

Note: All modems must first be defined in Control Panel. The latest modem driver specific to your modem is recommended.

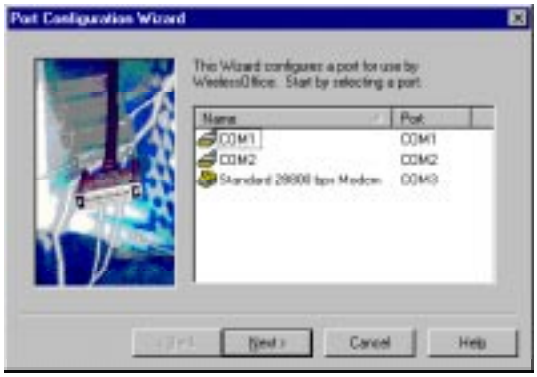
Defining Ports

The Port Configuration Wizard allows you to configure ports and can be accessed four ways:

- From the **File** menu, select **New** and then **Port**.
- Click the **Port** icon on the toolbar.
- Right-click within the **Ports** window and select **New Port**.
- Press **CTRL+T**.

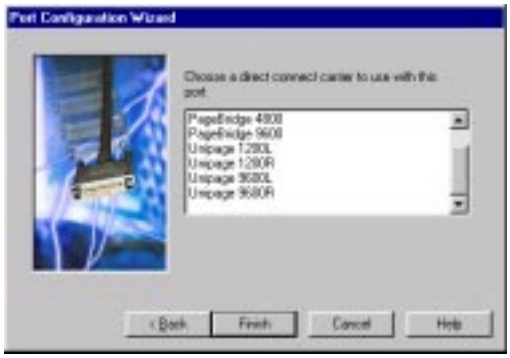
To define a port:

1. Start the **Port Configuration Wizard** (described above).



2. Select a modem or COM port from the displayed list. Ports are auto detected by WirelessOffice.
3. If you have selected a modem, the **Next** button becomes a **Finish** button. Click the appropriate button.

If **Next** was selected, the list of available direct connect carriers now displays:



4. Select a direct connect carrier, then click **Finish**.
5. If no direct carriers have been configured, the list will be empty. Please see "To add a new carrier" on page 33.

Deleting Ports

There are four ways to delete a port:

- Select the port you wish to delete in the **Port** window. Press the **DELETE** key and answer **Yes** in the confirmation dialog box.
- Select the port you wish to delete in the **Port** window. Click the **Delete** icon on the toolbar.
- Select the port you wish to delete in the **Port** window. From the **Edit** menu, choose **Delete**.
- Right-click on the port you wish to remove and select **Delete**.

Managing Carriers

Before you can add users to the database, you must define all wireless carriers responsible for message transmission. The recommended maximum number of carriers that can be defined is 200. Carriers and their connection settings can be modified or deleted at any time.

If your system has multiple communication ports and modems, you can take advantage of the *modem pooling* feature. For each defined carrier, you can specify when additional modems should be used and how many modems are allocated to that carrier.

Defining A New Carrier

The Carrier Wizard allows you to specify details about the wireless carriers and their connection settings. You can also configure the modem pooling settings for each carrier using this wizard.

There are four ways to access the Carrier Wizard:

- From the **File** menu, select **New,** then **Carrier**.
- Click the **Carrier** icon on the toolbar.
- Right-click within the **Carriers** window and select **New Carrier**.
- Press **CTRL+S**.

Carrier Settings

Before configuring a new carrier, it is recommended that you call your carrier's customer service contact and verify the following information. A fill-in table is provided in "Appendix D: Carrier Questionnaire" on page 209 for easy compilation of carrier information.

1. Modem access phone number or e-mail domain to the carrier's terminal
2. Preferred baud rate, parity, data bits, flow control for dial-up connections
3. Largest message block size allowed
4. Total messages per connection and volume of messages per minute allowed
5. PIN number for specific WirelessOffice users that subscribe to that carrier

To add a new carrier:

1. Start the **Carrier Wizard** (described on the previous page).

   The **Carrier Wizard – Step One** dialog displays:

2. Enter the name of the wireless carrier in the **Name** text box.
3. Choose the **Protocol**. Select **SMTP** if the messaging terminal will be contacted via Internet and has an e-mail address. For all other connections, select **TAP**.

   TAP — an acronym for Telecator Alphanumeric Protocol. TAP has become the messaging industry standard protocol for sending message requests from automated equipment.

   SMTP — an acronym for Simple Mail Transfer Protocol. SMTP is the TCP/IP protocol governing electronic mail transmissions and receptions.

   If you selected **TAP**, the following screen displays:

4. For the **Connect Type**, select **Direct** in cases where a cable links the server to an on-site wireless terminal. Choose **Modem** in all other cases. Enter the **Baud** rate (1200 or 2400 suggested) and the number of **Maximum Retries**, which reflects the number of times WirelessOffice will try to dispatch a message if it is unsuccessful on the first attempt. Click **Next**.

If you have selected **Modem**, the following screen displays:

5. Type the dial-up **Phone No.** for the carrier. Type **`9,`** as your dialing prefix if required to exit the PBX system. A comma adds a one second delay (multiple commas may be required). Optionally **Enable modem pooling**. Then click **Finish**.

   Modem pooling — enables multiple modems to dispatch messages at the same time to the same carrier, which decreases throughput time. If enabled, configure the settings on the carrier's **Modem Pooling** tab after completing the Carrier Wizard. Please see "Modifying a Carrier" on page 35.

6. If you have selected **Direct** instead of **Modem**, you will be shown a list of available COM ports. If you wish to connect this carrier to a COM port, select the port then click **Finish**.

7. If you chose the **SMTP** option, you will be asked to enter the carrier's e-mail domain. Contact your carrier for the correct **Destination Domain** address or visit their web site.

8. Type the **Destination Domain** such as `skytel.com` and click **Finish**.

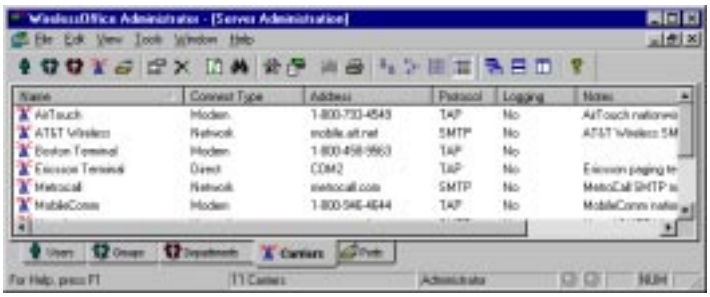
Note: After completing the Carrier Wizard, be sure to review Carrier Settings. Please see the next section, "Modifying a Carrier" on page 35.

Modifying a Carrier

To modify a carrier:

It is important to review the Carrier settings after completing the Wizard. There are four ways to access Carrier information:

- From the **Carriers** tab on the **Server Administration** screen, select the carrier you wish to modify. Double-click the specific carrier.
- Select the specific carrier and then click the **Properties** icon from the toolbar.
- Select the specific carrier and right-click. Select **Properties**.
- Select the specific carrier. Click **File** from the menu and select **Properties**.

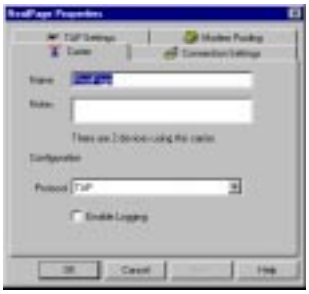


Carrier Properties

The following are descriptions of the various tabs listed in the carrier properties. Depending on the carrier protocol type (TAP or SMTP) and connection method (direct or modem), different properties tabs will be shown.

To modify the Carrier tab:

1. You may make changes to **Name** and **Notes**. The **Configuration** area allows you to change **Protocol**, and **Enable Logging**.
2. To diagnose carrier configuration problems, select **Enable Logging**. Do this only when problems occur in sending messages. Please see “Appendix C: Server Logging” on page 205.



To modify the Connection Settings tab:

The **Connection Settings** tab allows you to make changes to the **Connect Type**, **Phone number** and other serial port settings.

Note: The default **Parity**, **Data Bits**, and **Flow Control** settings are appropriate for most installations. These settings should correspond to the carrier's needs. **Maximum Retries** reflects the number of times WirelessOffice will try to dispatch a message if it is unsuccessful on the first attempt.

To modify the Modem Pooling tab:

1. The **Modem Pooling** tab allows you to enable and configure modem pooling.

2. In the **Pooling threshold** box, enter the number of messages to be queued for that carrier before the system will begin using another modem in the modem pool.
3. In the **Maximum Ports** box, enter the total number of modems you want to be available for the current carrier.

To modify the TAP Settings tab:

The **TAP Settings** tab allows you to configure advanced settings for the TAP protocol.

1. It is recommended that you call the carrier to confirm **Block Size** and **Maximum messages per connection**. The latter is essential information if sending high message volume. Please see “Appendix D: Carrier Questionnaire” on page 209.
2. If the wireless carrier requires a password, type it in the **Password** box.

Note: Block size is the number of characters allowed per message sent to the device before being broken into fragments. The default settings for block size and maximum messages per connection are appropriate for most installations. Change only if instructed by the carrier.

To modify the SMTP Settings tab:

The **SMTP Settings** tab allows you to configure the carrier’s e-mail **Destination Domain** of the wireless carrier. The **Destination Domain** for this dialog could be `mobile.att.net`. Contact your carrier for the correct destination domain setting or visit their web site.

Deleting Carriers

When you delete a carrier record, you delete all devices that are defined to that carrier. There are four ways to delete a carrier:

- Select the carrier you wish to delete in the **Carrier** window. Press the **DELETE** key.
- Select the carrier you wish to delete in the **Carrier** window. Click the toolbar **Delete** icon.
- Select the carrier you wish to delete in the **Carrier** window. Select **Edit** then **Delete**.
- Right-click the carrier you wish to remove and select **Delete**.

Note: When a carrier is deleted, all user devices assigned to this carrier are deleted.

Managing Departments and Members

To submit the same message at one time to department members, you can create company departments. Define your departments before adding users, as each new user setup dialog includes a departmental membership inclusion button. Departments may also be defined after adding users.

Note: To speed up dispatching to a large department that has many users on the same carrier, contact the carrier and request a PIN to represent those members.

Department security features include:

- Each department is given a security level in order to allow appropriate access to WirelessOffice Administrator users for adding, deleting and modifying departments.
- Users logging into WirelessOffice Server can selectively have access to departmental messaging. Access can be limited to only certain departments.

Adding Departments

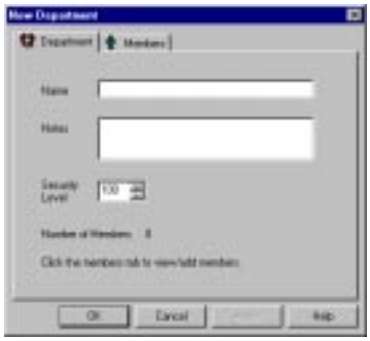
There are four ways to add departments:

- From the **File** menu, select **New,** then **Department**.
- Click the **Department** icon on the toolbar.
- Right-click within the **Departments** window and select **New Department**.
- Press **CTRL+D**.

To add new departments:

1. Add a new department by using one of the four methods listed above.

   The **New Department** dialog box displays:



2. Enter the name of the department in the **Name** box. Enter any descriptive data in the **Notes** box.

3. Set the **Security Level** (0-100) in order that WirelessOffice Administrator users with the *same* or *same or lower* security level can access those departments for administration purposes (adding, deleting and modifying). If the user has the same security level, they will not be able to edit the department security level. This security level setting does not reflect message sending abilities.

   For example: If a security level of 50 is given to the Sales Department, all WirelessOffice Administrator users with an Administrative Security Level of 50 and higher will be able to view and access this department. Users with a security level of 50 will not be able to modify the department's security level. Users with security level of 49 and lower will not see the Sales Department.

4. If no security is desired, enter the same security level that all users have been assigned and disable security in the Server Configuration Setup tab. Please see "To modify the server Setup tab" on page 22.

5. Click the **Members** tab. If no users have been defined yet, proceed to the next section "Managing Users and Devices" on page 41.

   The **New Department, Members** tab dialog displays:

6. To add department members, select the name from the **Available Users** list box, then click >>. Your selection displays in the **Members** list box. You can also double-click the name to move between boxes. Press the CTRL key to make multiple selections at one time.

7. To remove your selection, select the name from the **Members** list box, then click <<. Your selection redisplays in **Available Users**.

8. If desired, click the **Send Test Message** button under the **Members** list box to test the system's ability to send a departmental message.

Note: After Department names have been defined, you can assign user membership while configuring the User profile.

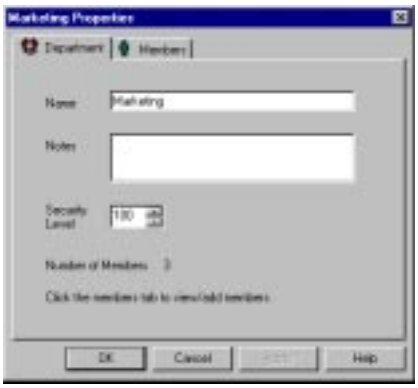
Modify An Existing Department

The department properties dialog box allows you to change the department name, add or delete members to an existing department, and change the security level.

To modify a department record:

1. Double-click the department you want to modify.

   The department's properties dialog displays:



2. On the **Department** tab, change information to the department's **Name, Notes**, or **Security Level**.
3. Click the **Members** tab. Use the >> and << buttons to place users in the correct fields. Names in the **Members** box will be part of the department.

Deleting Departments

When you delete a departmental record, you delete the members defined to that department not their individual user record. There are four ways to delete a department:

- Select the department you wish to delete in the **Departments** window. Press the **DELETE** key and answer **Yes** in the confirmation dialog box.
- Select the department you wish to delete in the **Departments** window. Click the **Delete** icon on the toolbar.
- Select the department you wish to delete in the **Departments** window. From the **Edit** menu, select **Delete**.
- Right-click on the department you wish to remove and select **Delete**.

Managing Users and Devices

A user is any person that will either be receiving WirelessOffice messages and/or will be connecting to the WirelessOffice Server via a WirelessOffice client application. You can import single or multiple .csv files with user information (each import can reflect different default security settings). Please see “Using the Import Wizard” on page 65.

Before adding users, make sure you have configured the following properties:

- System default security settings (page 28)
- Ports (page 30)
- Carriers (page 32)
- Departments (page 38)
- Your security system using the Security Worksheet (page 210)

Adding Users

There are four ways to add users:

- From the **File** menu, select **New,** then **User**.
- Click the **User** icon on the toolbar.
- Right-click within the **Users** window and select **New User**.
- Press **CTRL+U**.

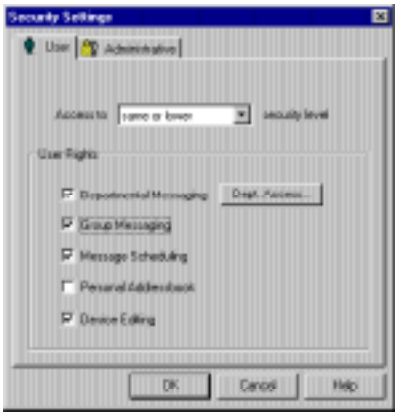
To add new users:

1. Add a new user by using one of the four methods described above.

   The **New User** dialog box displays:

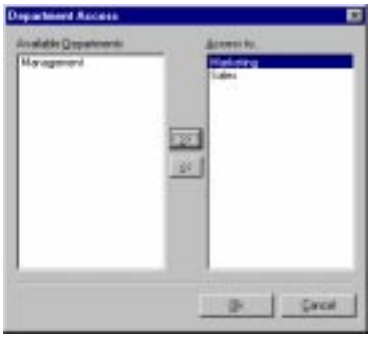
2. Type the user's **Full Name**. Set up WirelessOffice client application accounts to login with, e.g. "Command Messenger", with appropriate security rights and no defined devices. The **Login Name** can reflect the Full Name or can be different.
3. Type the user's **E-mail Address** (optional).
4. Enter any descriptive information in the **Description** text box. Information such as the person's title, specialty, company name, field route, etc. may be useful.
5. Click the **Department Membership** button to associate the user with one or more departments. If departments have not already been established, please see "To add new departments" on page 38 before continuing.
6. **Security Level** reflects a number between 0 and 100 and is used as a measure of accessibility to the server database for messaging. Default security level is defined in the Server Configuration Default User Rights tab. Please see "Security Settings" on page 28 for more information.
7. In the **Login** area, allow login access by selecting **Grant Access**. To disable login capabilities for this user, select **Deny Access**.
8. Type a **Login Name** that the user will implement when logging in via a WirelessOffice client application. Recommended format is the user's full first and last name.
9. Type a **Password** and then **Confirm Password**. Character length can range from 0 to 20. A password is not required, but suggested if you are enforcing security.
10. Click **Security Settings** to make any changes from the system default user settings. Please see "To set up the server Default User Rights tab" on page 28 for security level and rights configuration setting information.

    The **Security Settings** dialog displays:



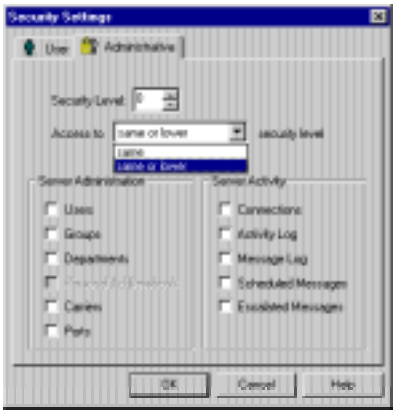
11. On the **User** tab of the **Security Settings** dialog, select **same or lower** or **same** as the security level access (this setting is only available to the *'Administrator'* account).
12. Select which **User Rights** should be granted for messaging capabilities. If you select **Departmental Messaging**, click the **Dept. Access** button to select which departments will be accessible to the user.

The **Department Access** dialog displays:



13. Select which departments will be accessible to the user by highlighting the department name in the **Available Departments** window and then clicking >> to add the department to the **Access to** window. Click **OK** when finished.
14. Click the **Administrative** tab on the **Security Settings** dialog to set the WirelessOffice Administrator security level and grant access to server administration and activity settings.

    The **Administrative** tab of the **Security Settings** dialog displays:



15. **Security Level** reflects a number between 0 and 100 and is used as a measure of accessibility to server settings and configuration in WirelessOffice Administrator. A security level of 0 denies access to WirelessOffice Administrator. A security level of 1 through 100 gains access. Please see “Security Settings” on page 28 for more information.
16. Select **same or lower** or **same** as the security level access (this setting is only available to the *‘Administrator’* account).
17. Select which **Server Administration** and **Server Activity** rights should be granted. When selected, a right enables the user to view, add, delete and modify records. Click **OK** when finished.

Adding User Devices

To add user devices:

1. Click the **Add Device** button on the **User** tab of the **New User** or user properties window to set up the user's mobile device.

   The **Device Wizard – Step One** window displays:

2. Select the **Device Type**. If you have a two-way cell phone, select **Two-Way**. You can send messages to a user's e-mail address, please see "To send messages to an e-mail address" on page 46. Click **Next**.

   The **Device Wizard – Step Two** dialog displays:

3. Type the user's Personal Identification Number in the **PIN** box. If the device is a two-way cell

   phone, pager or PDA, the address may be in e-mail format. Type the beginning of the address as the PIN, e.g. jane.doe if the full address is jane.doe@metrocall.com.

4. From the **Carrier** list box, select the wireless carrier. If the carrier is not listed, click **New** to configure a new carrier. Click **Finish**. The device is added and a tab is created for it. Click on the carrier name tab to further configure the device settings.

The properties dialog for the new user's device displays:

5. The **Enabled** check box, when selected, enables the device to be included when messages are sent to that user.
6. Edit the **Configuration** area as needed. Select **Enable message numbering** to number *fragmented* messages from 0 to 99. Once 99 is reached, the count is re-started from 0.
7. Select **Enable responses** to include the message identification number assigned by WirelessOffice. This allows a user's two-way device response message to be linked to the original message. This field is grayed out if a One-Way Pager or Cell Phone were selected as the device type. This field must be selected for two-way device responses to reach WirelessOffice. For more information on two-way messaging, please see "Two-Way Messaging" in the *E-mail Messenger Administrator Manual*.
8. Click **Availability** to customize device availability, implementing an **Always On** or a **Custom** message receipt time schedule. Please see "Device Availability" on page 52 for further information.
9. Click **Auto-Resend** to specify time intervals for the auto-resend feature per individual device. Select **Global** to implement the server-defined global auto-resend settings or select **Custom** to override the global settings. Configure the schedule as appropriate. Please see "Device Specific Auto-Resend Settings" on page 53 for further information.
10. Enter the maximum number of characters allowed per message in the **Maximum message length** box. Enter the maximum number of fragmented messages allowed for this device in the **Maximum number of fragments** box. Messages that exceed the **Maximum message length** value are split into multiple messages (*fragments*) so that the entire message can be delivered. Call the carrier to receive maximum message length requirements.
11. Click the **Send Test Message** button to test the system's ability to send messages to the new device. Check the status of the test message in the Message Log. The test message does not reflect configuration options such as message numbering, enable responses, availability, etc.
12. Click **Delete Device** to remove the device if so desired.
13. Click **OK** if you're finished adding users/devices. To add another device click the **User** tab and repeat this process. Ten devices may be associated with each user.

To send messages to an e-mail address:

1. In the **Device Wizard – Step One** window select **Two-Way** as the **Device Type**. Click **Next**.
2. Type the **PIN** as the e-mail address that goes before the @ symbol and domain (e.g. jane.doe). An SMTP carrier must be pre-defined using your corporate e-mail domain (e.g. companyname.com) as the **Destination Domain**. Please see "To add a new carrier" on page 33. Click **Finish**.

Note: E-mail Messenger is not required to send e-mail to a user's device. In order to send SMTP carrier messages you must define the SMTP **Server** and **From** fields in Server Configuration (page 25).

Adding a Device to an Existing User

To add a device to an existing user, select then double-click a user's name, and follow steps 1 through 13 in the previous section, "To add user devices", on page 44.

Note: When a message is sent to a user with several configured devices, a message is sent to each device that is enabled and available according to its availability schedule.

Modifying Users or Devices

The user properties dialog box allows you to modify users or their devices, add more devices, add new users, and view message statistics for that user.

To modify users or devices:

1. Double-click the specific user from the **User** tab of the **Server Administration** window. The user's properties dialog displays.
2. From this screen you can modify all the user's properties, including user's name, description, department membership, device configuration, security levels and rights, and login name and password.
3. A **Statistics** tab shows message information for that user. For more information, see "To view user statistics" on page 63.

Deleting Users

When you delete a user record, you delete all devices that are defined for that user. If the user is part of a group or department, the membership is automatically updated. There are four ways to delete a user:

- Select the user you wish to delete in the **Users** window. Press the **DELETE** key and answer **Yes** in the confirmation dialog box.
- Select the user you wish to delete in the **Users** window. Click the toolbar **Delete** icon.
- Select the user you wish to delete in the **Users** window. On the **Edit** menu, select **Delete**.
- Right-click on the user you wish to remove and select **Delete**.

Managing Groups and Members

To submit the same message to multiple users, you can create a group and define its members. Each group is given a security level in order to allow appropriate access to WirelessOffice Administrator users for adding, deleting and modifying departments and for messaging access evaluation. Groups differ from departments in that message access is evaluated by security level rather than user access definitions.

Note: To speed up dispatching to a large group that has many users on the same carrier, contact the carrier and request a PIN to represent those group members.

Adding New Groups and Members

The **New Group** dialog box allows you to specify details about new groups and their members.

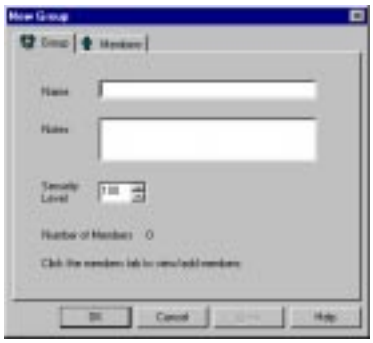
There are four ways to add groups:

- From the **File** menu, select **New,** then **Group**.
- Click the **Group** icon on the toolbar.
- Right-click within the **Groups** window and select **New Group**.
- Press **CTRL+G**.

To add new groups and members:

1. Add a new group by using one of the four methods listed above.

   The **New Group** dialog box displays:



2. Enter the name of the group in the **Name** box. Enter any additional notes in the **Notes** box. Select the appropriate **Security Level**. Security level for groups reflects both the ability to send messages to groups (compares against the User Security Level) and the ability to administer groups (compares against the Administrative Security Level).

3. Click the **Members** tab. To add group members, select the name from the **Available Users** list box, then click >>. Your selection displays in the **Members** list box. You can also double-click the name to move between boxes. Press the **CTRL** key to make multiple selections at one time.
4. To remove your selection, select the name from the **Members** list box, then click <<. Your selection redisplays in **Available Users**.
5. If desired, click the **Send Test Message** button under the **Members** list box to test the system's ability to send a group message.

Modify An Existing Group

The group properties dialog box allows you to change the group name and add or delete members to an existing group.

To modify a group record:

1. Double-click the group record you want to modify. The group's properties dialog displays.
2. On the **Group** tab, change information to the group's **Name** and/or **Notes**.
3. Click the **Members** tab. Use the >> and << buttons to place users in the correct fields. Names in the **Members** box will be part of the group.

Deleting Groups

When you delete a group record, you delete the members defined to that group not their individual user record. There are four ways to delete a group:

- Select the group you wish to delete in the **Groups** window.
  Press the **DELETE** key and answer **Yes** in the confirmation dialog box.
- Select the group you wish to delete in the **Groups** window.
  Click the **Delete** icon on the toolbar.
- Select the group you wish to delete in the **Groups** window.
  From the **Edit** menu, select **Delete**.
- Right-click on the group you wish to remove and select **Delete**.

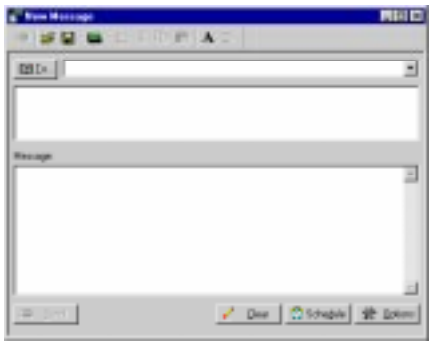
Sending Messages

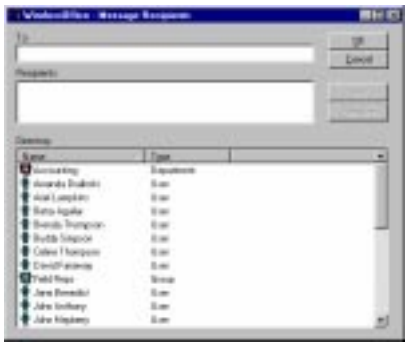
There are three ways to start a new message:

- From the **Tools** pull-down menu, select **Compose Message**.
- Click the **Compose Message** icon on the toolbar.
- Press **CTRL+M**.

To send a message:

1. Start a new message (see above). The **New Message** dialog displays.





2. Click the **To:** button. The **WirelessOffice - Message Recipients** dialog box displays.
3. To choose a message recipient, select the name from the **Directory** list box and click **Add**. You can also double-click the recipient name.
4. Your selection displays in the **Recipients** list box. To remove your selection, select the name from the **Recipients** list box and click **Remove** (or double-click it).
5. When you have finished selecting the recipient(s) for your message, click **OK**.
6. Type your message in the **Message** text box (4,096 character maximum). Overall maximum server message length is set in Server Configuration. Please see “To modify the server Setup tab” on page 22.
7. Click the **Send** button. Review the Message Log to view the status of the message and verify that it was successfully sent.

Note: You can also type the recipient name in the **To:** text box and the software will automatically complete their name. Press **ENTER** to add the name to the recipient list.

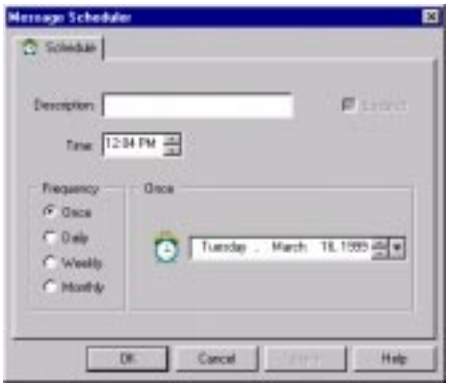
Scheduling Messages

Messages can be scheduled to be sent at a future time/date or at regularly scheduled intervals. Once a scheduled message is defined, it is stored in the **Scheduled Messages** tab of the **Server Activity** window. Appropriate user access rights for the user login account must be assigned in order to schedule messages.

To schedule a message:

1. Click the **Schedule** button in the **New Message** dialog.

   The **Message Scheduler** dialog box displays:



2. Type a **Description**. Select the time, frequency and date if required for the message to be sent.
3. You can use the spin controls to independently increment or decrement any part of the time and date (i.e. month, day, year, hour, minute, or AM/PM).

Note: This feature will delay delivery of the message to all recipients. Once the scheduled message is configured you can later modify the record and deselect the **Enabled** field if necessary.

Message Options

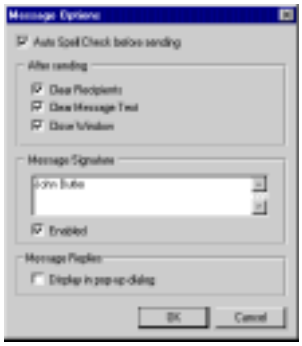
WirelessOffice allows you to specify certain options, including an automatic spell check. A custom signature can be appended to all of your messages. Two-way message replies can be displayed as pop-up dialogs so you see a user's response immediately.

The **Message Options** dialog allows you to:

- Automatically spell check your message before sending
- Clear recipients from the **To:** box after sending
- Clear message text after sending and/or close window
- Send your signature at the end of your message
- Display two-way message replies in pop-up dialogs

To set message options:

1. Click the **Options** button in the **New Message** dialog to open the **Message Options** dialog.



2. Enable **Auto Spell Check before sending** if desired. Select any **After sending** options, such as **Clear Recipients**, **Clear Message Text** or **Close Window**.
3. Enter you custom signature in the **Message Signature** text box. Click the **Enabled** check box to enable the message signature.
4. In the **Message Replies** section, select **Display in pop-up dialog** for two-way message responses to be displayed in a special dialog. Escalated message responses will not display as a pop-up. All message replies, included escalated responses, also display in the Message Log. Click **OK** when done.

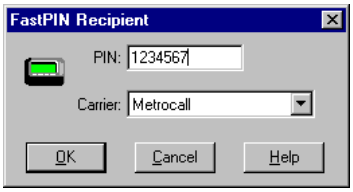
FastPIN Feature

Use this feature to send a message to a recipient when only their PIN (Personal Identification Number) and the name of their carrier is known or their user information has not been added to the Users list. It may also be implemented when users do not have access to the server database.

To use the FastPIN feature:

1. Start a new message. Select the **FastPIN** icon from the toolbar.

   The **FastPIN Recipient** dialog displays:

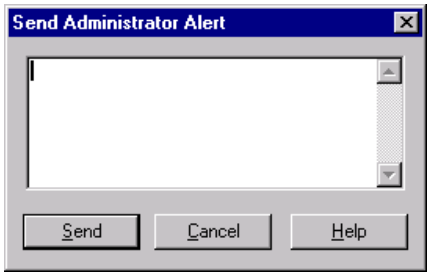


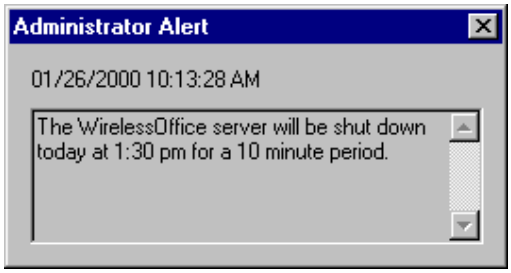
2. Type the **PIN**. Select the **Carrier** from the drop-down list. Click **OK**. Multiple FastPIN recipients may be configured. Repeat steps 1-2 to add recipients.
3. Type your message. Click the **Send** button. To set up a delayed message, refer to “Scheduling Messages” on page 50.

Sending an Administrator Alert

To send an Administrator Alert:

1. From the **Tools** pull-down menu, select **Send Administrator Alert**. The **Send Administrator Alert** dialog displays.





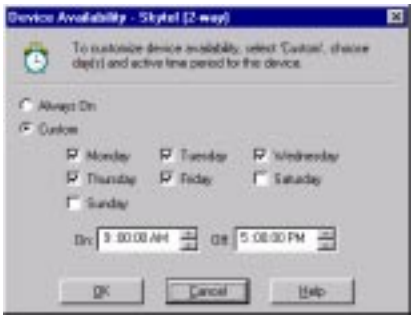
2. Type your message, then click **Send**.
3. The Administrator Alert will instantly send to all WirelessOffice Administrator and WirelessOffice Messenger connections as a pop-up message, as shown above. In Alarm Messenger, the message will appear as an entry in the Activity Log.

Device Availability

To set or change device availability:

1. In the user's profile, select the device tab you wish to edit availability for.
2. Click the **Availability** button to set or change the schedule.

   The **Device Availability** dialog displays:



3. This screen allows you to customize device activation. You can select the days and time period for the mobile device to be active. For example, the screen above shows that the device is active Monday through Friday, 9 AM to 5 PM.

Auto-Resend Message Options

If you are sending messages to a carrier that supports TAP protocol version 1.6 or later, you can take advantage of the auto-resend feature. When auto-resend is enabled, WirelessOffice automatically schedules failed messages for dispatch at a later time interval configured by the system administrator. This feature only works with terminals that can report a TAP response code of 512 or "wireless device temporarily out of range".

For example: Jane Benedict was sent a message while her digital phone was out of range. WirelessOffice reports a failure (512), and reschedules the message for 6 minutes later (as shown in the Scheduled Messages tab). Auto-resend messages in the scheduled log will have "AutoResend1" as their description, where 1 represents the retry number that WirelessOffice is attempting.

Note: You can select **Resend Failures** in the **Message Properties** window to manually resend any failed message, no matter what error message was returned. Please see "To resend failures" on page 58.

Device Specific Auto-Resend Settings

WirelessOffice allows you to specify certain time intervals for the auto-resend feature per individual devices. Auto-resend only activates for unsuccessful messages that receive error message 512, "wireless device temporarily out of range", in the **Status Description** text box of the **Message Properties** window.

To set up device specific auto-resend:

1. Double-click the specific user. Click the appropriate device's tab. Select the **Auto-Resend** button.

   The **Auto-Resend Properties for PIN xxxxxxx** dialog displays:

2. If **Custom** is selected, the local settings for the wireless device will take precedence over the global settings.
3. Select **Enabled** and enter the appropriate retry schedule in up to five retry time fields.

Global Auto-Resend Settings

WirelessOffice allows you to specify certain time intervals for the global auto-resend feature.

Note: Auto-resend only activates for unsuccessful messages that receive error message 512, "wireless device temporarily out of range", in the **Status Description** text box of the **Message Properties** window.

To set up global auto-resend:

1. Select **Tools** from the menu, and click **Server Configuration**. Select the **Auto-Resend** tab.

   The **Server Configuration** dialog displays:

2. Select **Enabled** and set up a retry time schedule.
3. If **Enabled** is checked, global auto-resend settings will be applied to all user devices that have global checked in their auto-resend setup.
4. If a user has **Custom** auto-resend selected for their device(s), those retry times will take precedence.

Sound Events

You can receive audio notification of certain events that occur in WirelessOffice.

To activate sound events:

1. Click **Start** from the taskbar, select **Settings** then **Control Panel**. Click the **Sounds** icon. The **Sounds Properties** dialog displays.
2. Highlight the WirelessOffice event(s) to associate with audio notification. Events include message cancelled, message escalated, message response, message scheduled, message sent, new escalated message, user connect, and user disconnect.
3. In the **Sound** area, click the **Browse** button to select your sound choice. Click **OK**.

Managing WirelessOffice Server

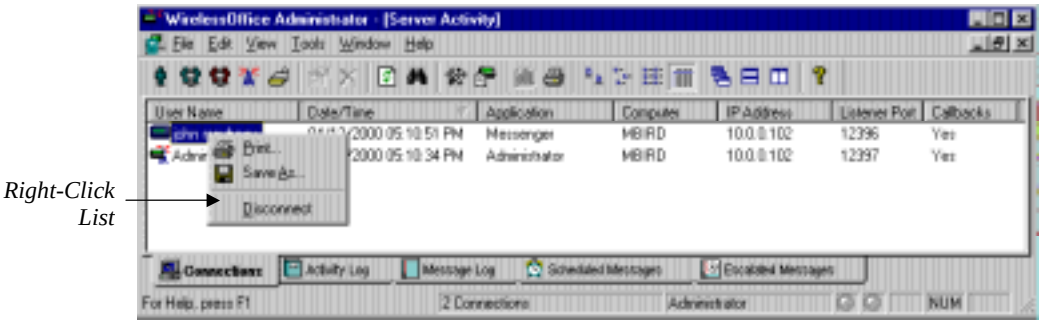
This chapter describes the functions available to help you manage the WirelessOffice Server. You will manage the server by monitoring or viewing Server Connections, Activity and Message Log entries, Scheduled Messages, Escalated Messages, User and Device data, Group Membership, Department Membership, Carriers, and Port Settings. All views can be saved as a comma-delimited CSV file for report producing, analysis and troubleshooting. Each view may be printed as well.

Viewing and Disconnecting Server Connections

The Server Connections tab displays all WirelessOffice client applications that are currently connected to the server. Server connections may be disconnected from within this view. Each user account is only allowed one server connection.

To view or disconnect Server connections:

1. Click the **Connections** tab. A list of server connections is displayed.
2. To disconnect a connection, select the desired connection and right-click. From the list, select **Disconnect**.



Right-Click List

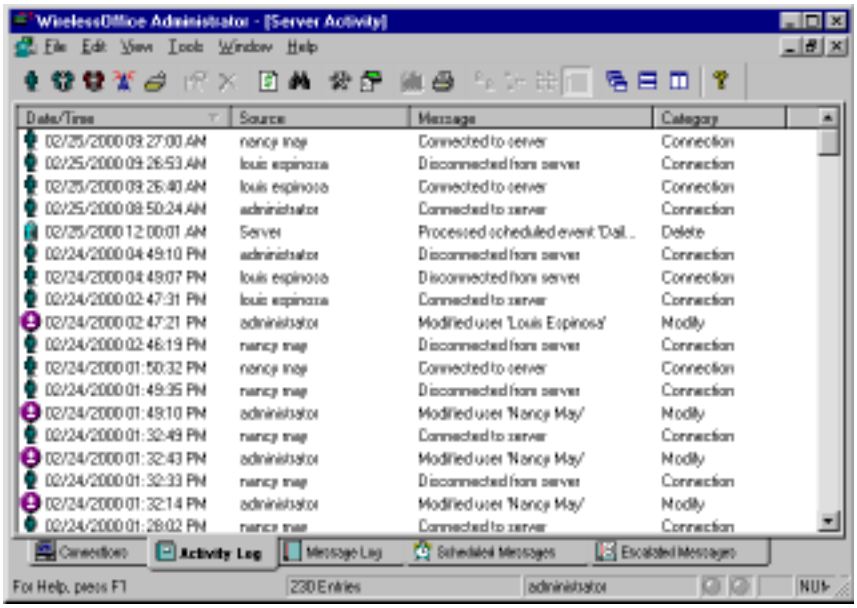
3. A message confirming the disconnect will display. Once disconnected, an Administrator Alert message will automatically be sent to that user's desktop. It states that the connection was disconnected by the User Name of the disconnecting WirelessOffice Administrator.
4. The disconnected client application will remain open, but will lose the capability to access or interact with the server.

Managing Activity Log Entries

The **Activity Log** displays server-client events including server startup, configuration additions, modifications, and deletions, message transmissions, message deletions, warnings, and errors.

To view Activity Log entries:

Click the **Activity Log** tab. A list of Activity Log entries is displayed:



To delete all log entries:

1. Click the **Activity Log** tab. The Activity Log entries are displayed.
2. Right-click the Activity Log entry (in the list view portion of the window) and select **Delete All**. Or, from the **Edit** pull-down menu, choose **Delete All**. A confirmation message displays. Click **Yes**.

To view the Backup Activity Log:

1. To view the Backup Log, select **View Backup Activity Log** from the **Tools** menu.
2. The Backup Log file contains activity log information that has been moved from the current activity log, based on the file size specified in **Server Settings**. Refer to section, “To set up the server Logging tab” on page 24.

   Example: If you have set the maximum file size of the activity log to 100 kilobytes, when the log reaches that limit, it is copied into the backup file.

Managing Message Log Entries

The Message Log displays messaging events including the date and time a message was originated, the name of the message recipient, the message status and the message text. You can also resend one or more messages from the Message Log. **Acknowledged** messages received from a two-way device can be configured to display as a pop-up dialog upon receipt. Please see "Message Options" on page 51.

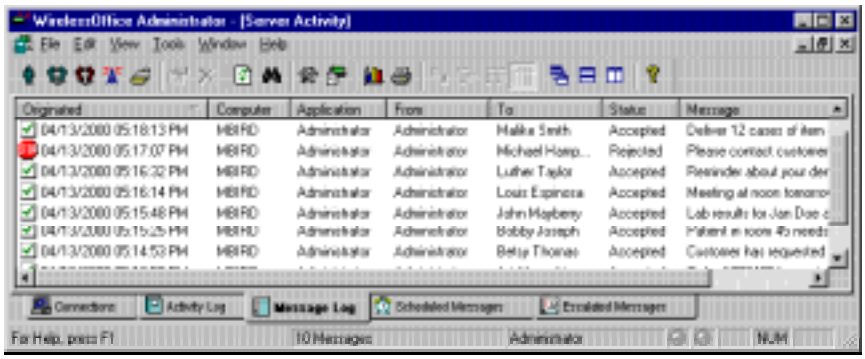
Message status includes:

- Failed
- Queued
- Rejected
- Unknown
- Partial Success
- Accepted
- Acknowledged
- No Direct Connection
- No Device
- No Modem
- No Port

To view Message Log entries:

1. Click the **Message Log** tab.

   A list of Message Log entries displays:



2. Detailed status can be obtained by double-clicking on a message or from the **File** menu select **Properties** for the highlighted message.
3. After viewing the entries, you should delete entries if they are no longer useful.

To delete individual log entries:

1. Click the **Message Log** tab. The Message Log entries display.
2. Select the entry or entries that you want to delete. You can select multiple entries by holding down the **CTRL** key while making your selections.
3. Right-click on a selected entry and select **Delete**. Or, from the **Edit** pull-down menu, select **Delete**. You can also press **DEL** on the keyboard. A confirmation message displays. Click **Yes**.

To delete all log entries:

1. Click the **Message Log** tab. The Message Log entries display.
2. Right-click inside the Message Log window and select **Delete All**. Or, from the **Edit** pull-down menu, choose **Delete All**.
3. A confirmation message displays. Click **Yes**.

To resend one or more messages:

1. Click the **Message Log** tab. The Message Log entries display.
2. Select the message or messages you want to resend. You can select multiple entries by holding down the **CTRL** key while making your selections.
3. Right-click a specific message and select **Resend**. Or, select the **Resend Messages** from the **Tools** pull-down menu. The message(s) will be immediately resent.

To resend failures:

The resend failures feature allows you to resend messages that were not received by *all* recipients. Using this, you can resend your message to *only* the recipients who did not receive it.

Note: Resending failures is different than the Auto-Resend feature. Please see "Auto-Resend Message Options" on page 53 for more information.

1. Select the failed message. Double-click the chosen message.
2. Alternatively, you can select the **Properties** icon on the toolbar.
3. Click the **Resend Failures** button.

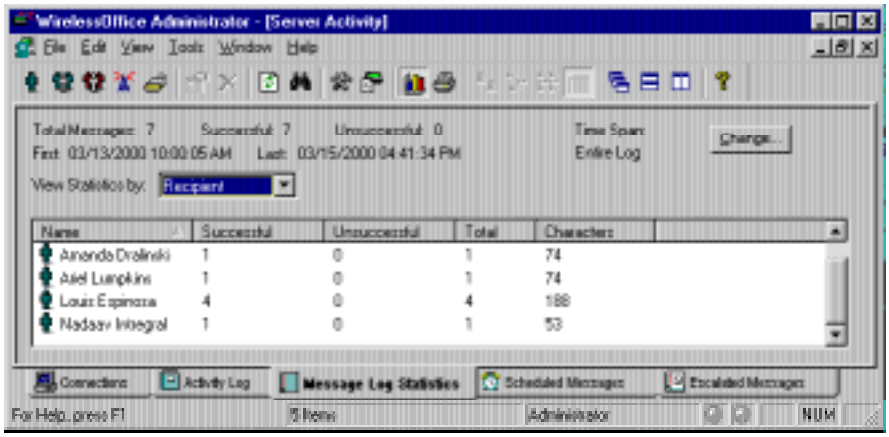
Viewing Message Log Statistics

Using the Statistics feature, you can display statistical information about messages that the server has processed by recipient, sender or carrier.

To view statistics:

1. Select the **Message Log** window. To access the Statistics window, you must first open the Message Log.
2. From the **Tools** menu, select **Message Log Statistics**. Or click the **Statistics** icon on the toolbar.

   The **Message Log Statistics** dialog displays in place of the **Message Log**:



3. Use the **View Statistics by:** drop-down list to view statistics by **Recipient**, **Sender** or **Carrier**.
4. If you wish to change the **Time Span** for logging statistics, click the **Change** button. Select the parameters that you require. Click **OK**.
5. To return to the **Message Log** window, click the **Statistics** icon on the toolbar or select **Message Log Statistics** from the **Tools** menu.

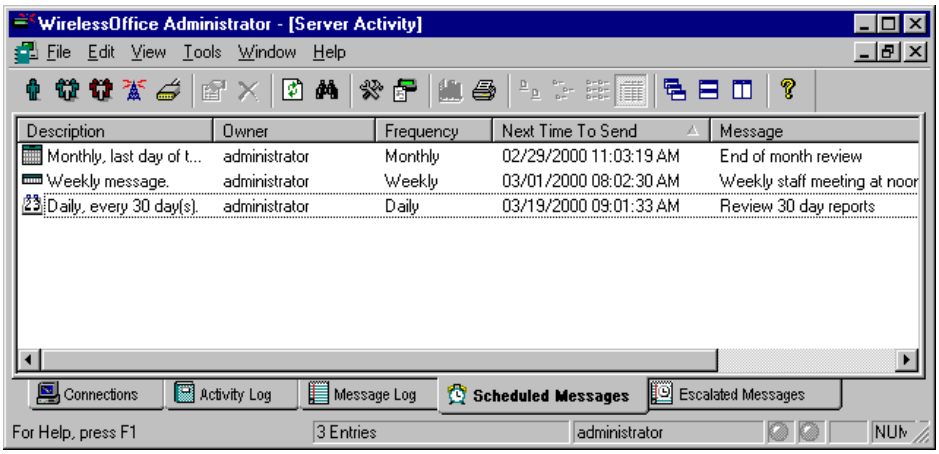
Note: Statistical information is also available on the User Properties dialog. Please see “To view user statistics” on page 63.

Viewing Scheduled Messages

All scheduled messages on the server are displayed in the Scheduled Messages window.

To view scheduled messages:

1. Click the **Scheduled Messages** tab.
2. Select the message, then select **Properties** from the toolbar. You can enable and disable scheduled messages, change the schedule, add or delete recipients and alter the message.



To delete a scheduled message:

There are four ways to delete a Scheduled Message:

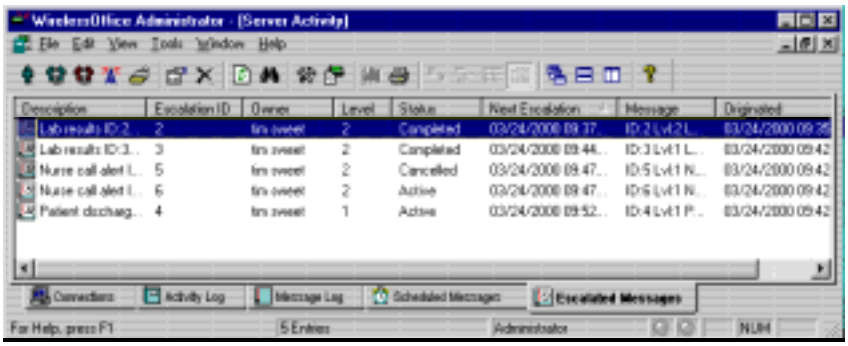
- Select the Scheduled Message. Click the **Delete** icon on the toolbar.
- Select the Scheduled Message. From the **Edit** menu, select **Delete**.
- Select the Scheduled Message. Right-click, then choose **Delete**.
- Select the Scheduled Message. Press the **DELETE** key.

Viewing Escalated Messages

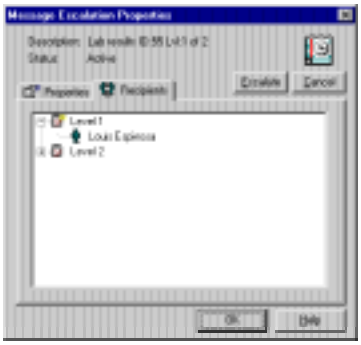
All escalated messages on the server are displayed in the Escalated Messages window. They are sent exclusively from Alarm Messenger, File Messenger and Command Messenger. You can configure sounds to be associated with escalated message events. Please see “Sound Events” on page 54.

To view escalated messages:

1. Click the **Escalated Messages** tab. Detailed information is displayed.



2. Select the message and click the **Properties** icon from the toolbar or right-click and select **Properties**.
3. The **Message Escalation Properties** dialog displays. On the **Properties** tab, review information such as owner, Escalation ID, current level, number of levels, status, next escalation time, message origination time, and message text.
4. Click the **Recipients** tab to review recipients for each designated level. Active escalated messages will open to the current scheduled level’s recipients.
5. Click the **Escalate** button to immediately escalate the message to the next level. Click the **Cancel** button to cancel the escalation. See “Escalating and Canceling Escalated Messages” on the next page for more information.



Escalating and Canceling Escalated Messages

By escalating an escalated message, you manually accelerate the message to the next level before its scheduled occurrence. For example, if a message is currently on Level Two and the Next Escalation time is set for 20 minutes away, you can "escalate" it to Level Three for immediate message sending.

Escalated messages may be cancelled or escalated in either WirelessOffice Administrator, with a two-way wireless device via E-mail Messenger, with a cell or land phone via Voice Messenger, or in Web Messenger. Escalated messages originating from Alarm Messenger may be cancelled or escalated in Alarm Messenger as well.

Note: Only one user from a group or department escalated message need acknowledge an escalation for it to be cancelled or advanced to the next level.

To escalate or cancel an escalated message:

1. To escalate a message from within WirelessOffice Administrator, select the specific message in the **Escalated Messages** tab window. Right-click on the specific message and select **Escalate**. You can also double-click the message to view the **Message Escalation Properties** dialog and click the **Escalate** button.
2. The escalated message will be upgraded to the next level status and immediately sent to the predefined recipients. Any levels beyond the current one will be escalated as well. The next level is rescheduled for the current time plus the originally defined Time Interval.
3. To cancel an escalated message from within WirelessOffice Administrator, select the specific message. Right-click the message and select **Cancel**. You can also double-click the message to view the **Message Escalation Properties** dialog and click the **Cancel** button. The message will be cancelled and no further levels will be escalated to and sent messages for. Canceling a message signifies that the message has been appropriately responded to and does not need to alert any other recipients on the escalation level list.
4. After selecting **Cancel**, a message will ask if you would like to notify previous recipients. If 'Yes' is selected, a message will be sent to all current and previous level recipients stating that the message was cancelled and by whom.

Note: For information about escalating and canceling messages in Alarm Messenger, please see "Viewing and Canceling Escalated Messages" in the *Alarm Messenger Administrator Manual.* For information about canceling messages using E-mail Messenger or Web Messenger, please see "Cancellation and Escalation" in their respective manuals. Please see "Calling into Voice Messenger" in the Voice Messenger manual.

Viewing User and Device Data

User records display a list of all users defined in the database. By selecting a particular user record, you can view the user's login and user name, e-mail address, password information, security level, security settings, wireless carrier(s) information and user statistics.

To view user and device data:

1. Click the **Users** tab of the **Server Administration** window. Double-click the user record that you want to view.
2. The user's properties, devices and statistics display.

To view user statistics:

1. Select the **Statistics** tab to view the user's statistics.
2. If you wish to change the time span for logging statistics, click the **Change** button. Select the parameters that you require. Click **OK**.

Viewing Group Membership

Group records display a list of all groups defined in the database. By selecting a particular group record, you can display a list of members that are defined to the group and review the security level and number of members.

To view group membership:

1. Click the **Groups** tab. A list of group names displays.
2. Double-click the group record you want to view. The group's properties dialog displays.
3. Select the **Members** tab to view group membership.

Viewing Department Membership

Department records display a list of all departments defined in the database. By selecting a particular department record, you can display a list of members that are defined to the department and review the security level and number of members.

To view department membership:

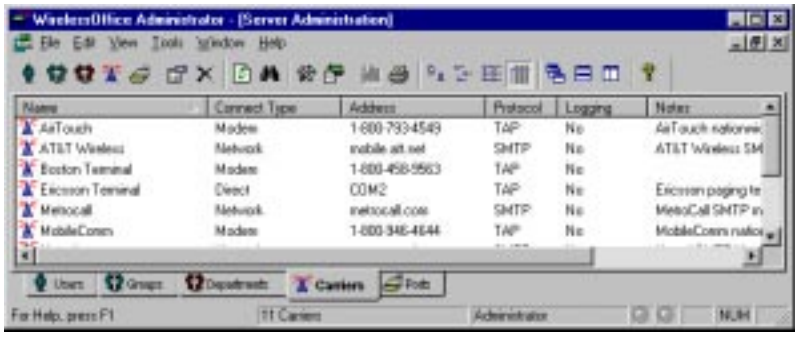
1. Click the **Departments** tab. A list of department names displays.
2. Double-click the department record you want to view. The department's properties dialog displays.
3. Select the **Members** tab to view department membership.

Viewing Available Carriers

Carrier records display a list of all wireless carriers and their connection settings.

To view available carriers:

1. Click the **Carriers** tab. A list of carrier records displays.
2. Double-click the carrier record you want to view. The carrier's properties dialog displays. Select any of the carrier tabs for review or editing.

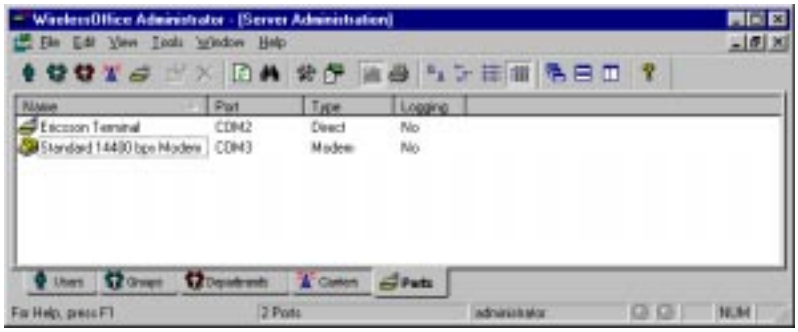


Viewing Port Settings

You can display port settings to view configured COM ports, their selected baud rate, detailed logging status, and connection type. For more information about port logging, refer to "Appendix C: Server Logging" on page 205.

To view port settings:

1. Click the **Ports** tab. A list of port names displays.
2. Right-click and select **Logging Enabled**. To edit information first delete the port and then add a new port with the correct information.



Using the Import Wizard

The Import Wizard allows you to import users from a pre-existing comma-delimited (.csv) file. The file should include the user's full name, login name, password, e-mail address, PIN, and carrier, in an Excel-type spreadsheet format. Each import adds users to the existing database.

Before importing, set the security **Default User Rights** in **Server Configuration**. These default security settings will automatically be applied to the imported users. You may choose to break your user list into several .csv spreadsheets, each designed to have different security level and right defaults. Please see "Security Settings" on page 28 for more information.

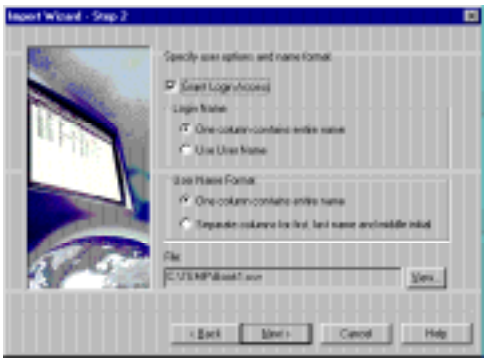
Note: When importing a file with carrier names that are already defined in the WirelessOffice Server, the .csv file carrier names must *exactly* match the carrier spellings in the server. If a carrier is imported that has not yet been defined, the Import Wizard will ask you to add that carrier. User names can be imported without a defined carrier, but will need to be revisited to add devices.

Importing a File

To import a file:

1. From the **Tools** pull-down menu, select **Import Wizard**. The **Import Wizard** dialog displays. Choose **Import a CSV File** and click **Next**. The **Import Wizard – Step 1** dialog displays.
2. Click the **Browse** button to select the CSV file. Click **Open**. The location of the database is now displayed in the **File** text box. Click **Next**.

   The **Import Wizard – Step 2** dialog displays:



3. Select **Grant Login Access** to allow users the ability to login as a client application user. Select the way the **Login Name** and the **User Name Format** appear in the file. If you are unsure how the name was entered in the CSV, click the **View** button.
4. In the **Login Name** area, you can select **Use User Name** so that no field needs to be defined in the import file and WirelessOffice will simply use the User Name. Click **Next**.

The **Import Wizard – Step 3** dialog displays:

5. Arrange the columns by choosing their order from the drop-down list. If you are unsure how the name was entered in the CSV, click the **View** button. Each field must be defined.
6. The **Carrier** drop-down list includes the choice to **specify** a server-defined carrier that all imported users will be associated with. If you select **specify**, the **Import Wizard – Choose Carrier** dialog will display. Select the carrier to associate with ALL imported users. Click **Next**.
7. In the **Import Wizard –Step 4** dialog, verify that the import information is correct and click **Next** to begin importing. The Import Wizard status screen displays the progress.
8. Import status is displayed, including any errors or warning. Click the **View Log** button for detailed information. Click **Finish**.

Note: During import processing, the number of users listed reflects your software license maximum.

You can import different spreadsheets. Each import only adds users to the database and does not overwrite existing profiles. Each import uses the default security settings defined in Server Configuration.

Undoing a Previous Import

To undo a previously imported CSV database:

1. From the **Tools** pull-down menu, select **Import Wizard**. The **Import Wizard** dialog displays.
2. Click **Undo a previous import** then click **Next**. Click the **Browse** button to locate the file and select the **UNDO** file. Click **Next**.
3. The **Import Wizard – Undo** screen displays the progress.
4. If any problems are indicated on-screen, click the **View Log** button. Click **Finish**.

Using WirelessOffice Messenger

WirelessOffice Messenger provides users with a simple messaging tool that creates, schedules and sends messages with a personal address book option, as well as server address book accessibility. The Message Log provides real-time message status.

New WirelessOffice Messenger Features

- User Name/Password authentication for server connections (page 68)
- Department message sending and membership viewing (page 86)
- Security profiling for all WirelessOffice Messenger users (page 41)
- Auto-display of message replies option (page 81)
- Windows Me and Windows 2000 compatibility

Standard WirelessOffice Messenger Features

- Personal Address Book option for each user
- Messaging using server-defined users and groups
- Automatic message resend
- Personal device editing option
- Message scheduling option
- Message signature
- Auto spell check
- FastPIN quick messaging using PIN and Carrier

Starting the Software

WirelessOffice Messenger allows message sending from Windows 95/98/Me/NT and 2000 systems.

To start the software:

1. From the taskbar, click **Start**, then **Programs**. Click the **Emergin WirelessOffice** folder, then **WirelessOffice Messenger**.
2. Or double-click the WirelessOffice Messenger desktop shortcut (if available).

Login to WirelessOffice Messenger

If you did not choose a server when installing the WirelessOffice software, you will need to configure the server connection. Please see “To start the server” on page 20, for instructions on how to start WirelessOffice.

To login to WirelessOffice Messenger:

1. Start the WirelessOffice Messenger application, see “Starting the Software” on the previous page for instructions.

   The **Welcome to WirelessOffice** dialog displays:

2. Enter your **User Name** assigned by the system administrator. Type your **Password** to login to the WirelessOffice Server. You can only be logged in once at any given time to the Server with your User Name. If you are using the *‘Administrator’* account, you will need to create a new user login account with the appropriate security settings and rights.
3. Type the name or Internet address of the WirelessOffice **Server** you wish to access. Use the drop-down arrow to choose a previously selected server. Use the **X** button to remove any unwanted servers from the list. Consult your system administrator for assistance.
4. Select **Remember password** if you wish to auto-login in the future. Click **OK**.

Change Your Password

After entering WirelessOffice Messenger, you can change your password.

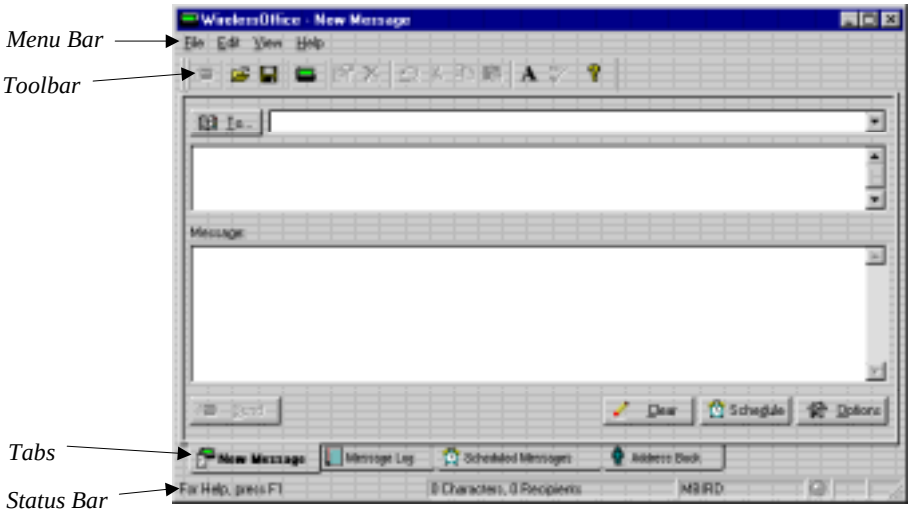
1. Click **File** then **Change Password**.
2. Type your **Old Password** and then type your **New Password**.
3. The next login will require use of your new password.

Understanding System Basics

This section provides basic system information that you should know prior to using your WirelessOffice Messenger software. There are *four* main application windows. These are called: **New Message, Message Log, Scheduled Messages** and **Address Book**. You can switch between the windows by selecting them from the view menu or by clicking the tabs at the bottom of each screen.

Before you begin, it is important that you become familiar with the four WirelessOffice Messenger application windows:

New Message Window



New Message Menu Bar

The menu bar provides options that you can use to activate WirelessOffice and standard Windows functions. The step-by-step instructions detailed throughout the WirelessOffice Messenger section refer to the menu bar functions:

File	Edit	View	Help
Open Save Properties Send Message Message Scheduler Change Password Change Server Exit	Undo Cut Copy Paste Remove Font Properties Check Spelling	Toolbar Status Bar Tabs Switch To Large Icons Small Icons List Details Arrange Recipients	Help Topics Tip of the Day Emergin Knowledge Base About WirelessOffice

New Message Toolbar

The toolbar provides an alternative method to accessing the menu bar options. Once you are familiar with the icons, you can directly select various functions from the toolbar.

The table below explains each icon in the WirelessOffice Messenger toolbar:

Icons	Description
	Send Message
	Open File
	FastPIN
	Save Text
	Properties

Icons	Description
	Delete
	Undo
	Cut
	Copy

Icons	Description
	Paste
	Font Properties
	Spell Check
	Help Topics

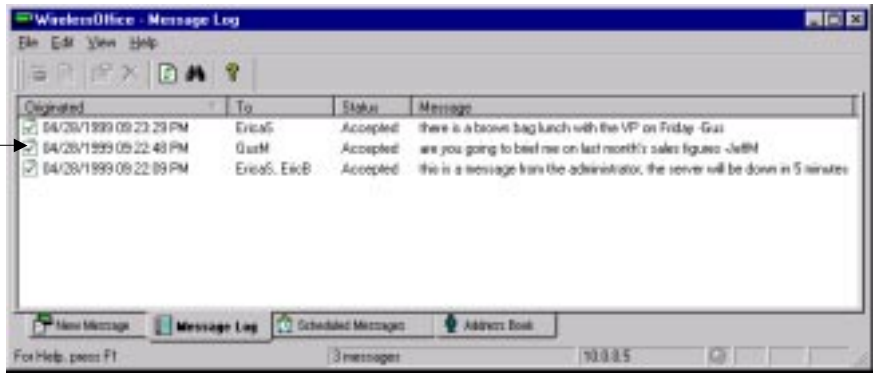
New Message Status Bar

The status bar is found at the bottom of all four main application windows below the tab bar. The information displayed varies with each window. In the **New Message** window, the Status Bar shows how many characters your message contains and how many recipients are selected. To the right of this information, the server name and the server activity indicator appear. This feature is common to all four main application windows. Additionally, as you move your mouse pointer over the various toolbar icons, the left side of the status bar explains the action associated with the icon. This feature also appears in all four main application windows. When the green light displays, that indicates a request is being made to the server.

Message Log Window

The Message Log window is used to view message status for messages sent from your WirelessOffice Messenger. Detailed message status can be viewed by clicking the **Properties** icon on the toolbar or by double-clicking the message.

Status Icons →



Message Log Menu Bar

The table below shows the choices available in the WirelessOffice Messenger Message Log menu bar:

File	Edit	View	Help
Properties Save As Print Print Preview Print Setup Change Password Change Server Exit	Delete Delete All Edit Message Resend Message Find	Toolbar Status Bar Tabs Switch To Refresh	Help Topics Tip of the Day Emergin Knowledge Base About WirelessOffice

Message Log Toolbar

The table below explains each icon in the WirelessOffice Messenger Message Log toolbar:

Icons	Description
	Resend Message
	Edit
	Properties
	Delete

Icons	Description
	Refresh
	Find
	Help Topics

Message Log Status Icons

The following table provides a description of each message status icon:

Icons	Status/Description
	Partial Success — the wireless carrier rejected at least one message from a multi-recipient message.
	Queued — the wireless carrier has not dispatched the message.
	Accepted — the wireless carrier acknowledged and accepted message.
	Rejected — the wireless carrier rejected the message.
	Failed — a critical system error occurred.
	Acknowledged — a two-way device responded to a message.

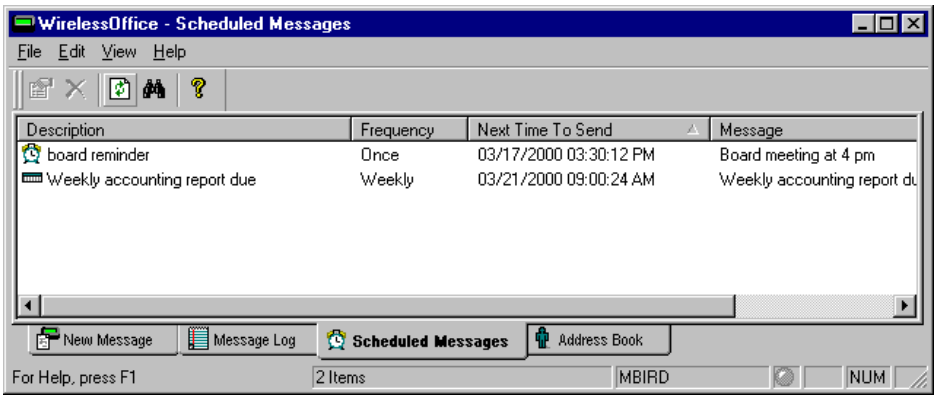
Icons	Status/Description
	Unknown — the system cannot determine the status of the message, generally caused by stopping the service when a message is queued.
	No Ports Configured — the port is not configured.
	No Direct Connection — a direct connect carrier is not configured.
	No Device Configured — the user has no device defined or currently enabled.
	No Modem Configured — a modem has not been configured.

Message Log Status Bar

This status bar displays the total number of messages sent to the server.

Scheduled Messages Window

The Scheduled Messages window is used to view scheduled message status. Messages detailed in this window originate from this system. Detailed message status can be viewed by clicking the **Properties** icon on the toolbar or by double-clicking the selected message.



Scheduled Messages Menu Bar

This table shows the choices available in the WirelessOffice Messenger **Scheduled Messages** menu bar:

File	Edit	View	Help
Properties Save As Print Print Preview Print Setup Change Password Change Server Exit	Delete Find	Toolbar Status Bar Tabs Switch To Refresh	Help Topics Tip of the Day Emergin Knowledge Base About WirelessOffice

Scheduled Messages Toolbar

This table explains each icon in the WirelessOffice Messenger **Scheduled Messages** toolbar:

Icons	Description
	Properties
	Delete
	Refresh

Icons	Description
	Find
	Help Topics

Scheduled Messages Icons

This table provides a description of each scheduled message status icon:

Icons	Status/Description
	Delayed Message — the message is scheduled for later delivery (one time only).
	Daily Message — the message will be sent on a daily basis.
	Weekly Message — the message will be sent on a weekly basis.
	Monthly Message — the message will be sent on a monthly basis.

Scheduled Messages Status Bar

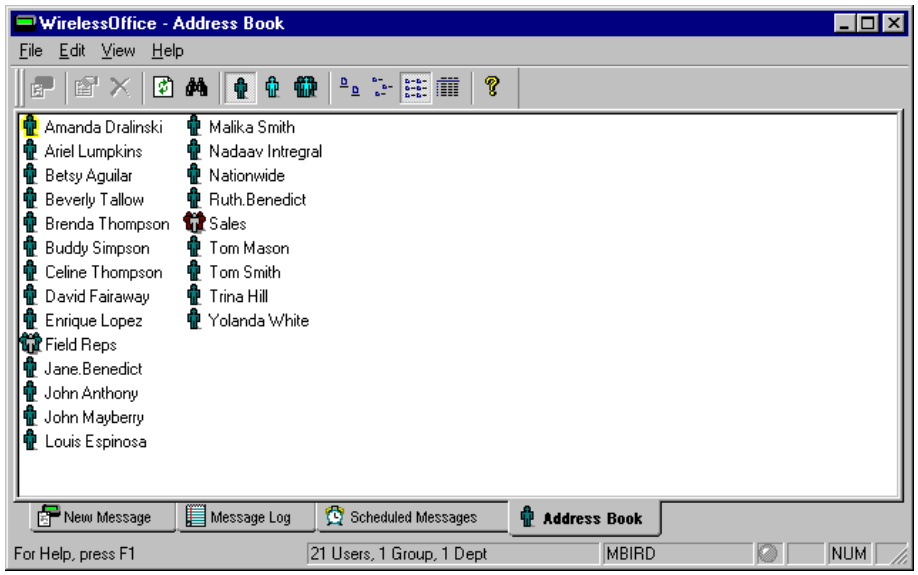
This status bar displays the total number of scheduled messages.

Address Book Window

The Address Book window is used to view information about users, groups and departments in three types of address books – server, personal and combined. In the combined address book, notice that there are six different types of icons that resemble people:

- Dark green icons — represent users stored in the server's directory.
- Dark green icon with a yellow glow — represents you.
- Green and tan group of three — represents server-based groups of individual users.
- Red and tan group of three — represents server-based departments comprised of individual users.
- Light blue icons — represent users in your Personal Address Book.
- Light blue and tan group of three — represents groups in your Personal Address Book.

Your user account may have security rights that affect the address book listings. Certain address book components may or may not be visible to you. Contact your system administrator for more information about access rights.



Address Book Menu Bar

This table shows the choices available in the WirelessOffice Messenger Address Book menu bar:

File	Edit	View	Help
New User New Group Properties Save As Print Print Preview Print Setup Change Password Change Server Exit	Delete Select All Find	Toolbar Status Bar Tabs Switch To Large Icons Small Icons List Details Arrange Users Address Book Refresh	Help Topics Tip of the Day Emergin Knowledge Base About WirelessOffice

Address Book Toolbar

This table explains each icon in the WirelessOffice Messenger Address Book toolbar:

Icons	Description
	Send Message
	Properties
	Delete
	Refresh
	Find

Icons	Description
	View Server Address Book
	View Personal Address Book
	View All Users
	Large Icons

Icons	Description
	Small Icons
	List
	Details
	Help Topics

Address Book Status Bar

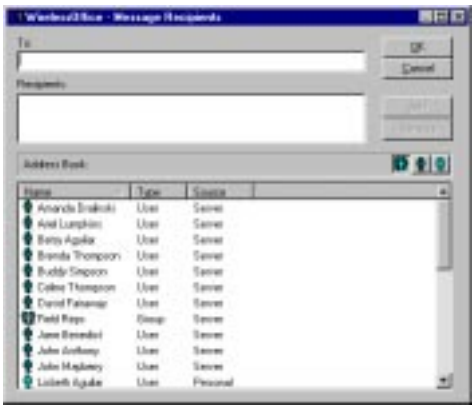
This status bar displays the total number of Users, Groups and Departments in the current window.

Sending a Message

To send a message:

1. From the **New Message** main window, click **To**.

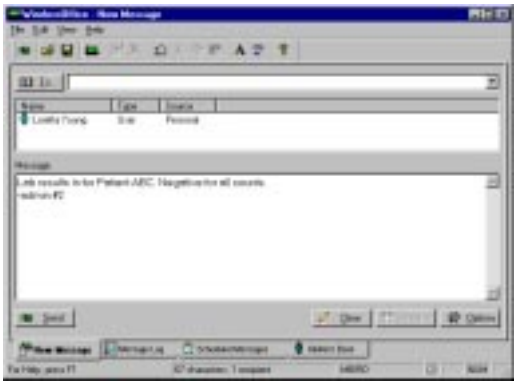
   The **WirelessOffice - Message Recipients** dialog box displays:



2. To select a message recipient, select the desired **Address Book** icon. Then select the name from the Address Book list box. Click **Add**. You can also double-click the recipient to have them added. Your selection displays in the **Recipients** list box. To remove your selection, select the name from the **Recipients** list box and click **Remove**.

3. When you have finished selecting the recipient(s) for your message, click **OK**.

   The **WirelessOffice – New Message** dialog box redisplays with the message addressed to the selected message recipient(s):



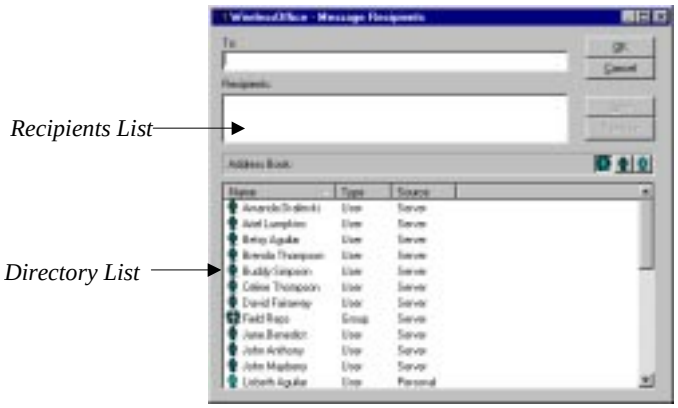
4. Type your message in the **Message** text box (4,096 character maximum). Click the **Send** button on the lower left-hand side of the window.

5. A status message in the **Message Log** tab displays, indicating that the request has been sent.

Using the Recipient Directory

The Recipient Directory contains recipients from the server's database and your Personal Address Book (if available). It allows you to address your messages by selecting recipients to whom you want to send the message.

The Recipient Directory is used to select single or multiple recipients to whom you want to send a message. To select a recipient, you can click on the user, group or department name in the Address Book list, then click **Add**, or double-click on the recipient name. You can select multiple entries at once by holding down the **CTRL** key while making your selections. These are then "copied" from the Directory List (from the bottom pane of the window) to the Recipients List (the middle pane of the window).



To help you find users as your list grows, column header buttons are provided. Click on the column header buttons to sort the list by **Name**, **Type** or **Source**. You can also use options on the context menu (accessed with a right-click) to change the view of the list.

- The **Type** column indicates whether the entry is an individual user, group or department.
- The **Source** column indicates whether the user came from the server's database or your own personal address book.
- To find a user by **Name**, type the name in the **To:** box. As you type, the names that match your entry display in the list with the first match selected.

Note: WirelessOffice allows you to start typing the name of a recipient and the software automatically completes their name.

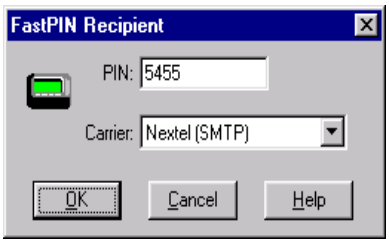
FastPIN Feature

Use this feature to send to a recipient when you only know their PIN (Personal Identification Number) and the name of their carrier. If your user account has limited message sending rights, use the FastPIN feature to send messages.

To use the FastPIN feature:

1. Select the **FastPIN** icon from the toolbar.

   The **FastPIN Recipient** dialog displays:



2. Type the **PIN** number. Select the **Carrier** from the drop-down list. Click **OK**.
3. Type your message in the **Message** text box.
4. From the **File** pull-down menu, select **Send Message**. Or click the **Send** button on the toolbar. (At this point, you also have the option to delay the message or schedule it for delivery at predefined intervals. Refer to "Scheduling Messages" on the next page.)
5. A status message in the **Message Log** tab displays, indicating that the request has been sent.

Scheduling Messages

To send a message at a future time or at regularly scheduled intervals, use the Scheduled Messages feature. The scheduled messages tab may not be accessible for your account. Contact your system administrator for further information.

To schedule a message:

1. Click the **Schedule** button on the **New Message** dialog.

   The **Message Scheduler** dialog box displays:

2. Enter the date and time that you want the message to be sent and click **OK**. You can use the spin controls to independently increment or decrement any part of the time and date (i.e. month, day, year, hour, minute, or AM/PM).

Note: This feature will delay delivery of the message to all recipients. If you opted to send a scheduled message, note that an alarm icon appears on the right hand side of the message window. Click it to cancel the scheduling before sending.

Message Options

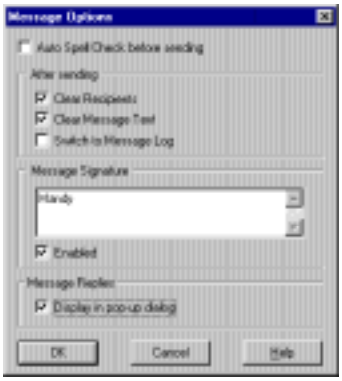
WirelessOffice allows you to specify certain options, including an automatic spell check. A custom signature can be appended to all of your messages. This feature can be useful for automatically adding your name, business phone, or any pertinent information to your messages.

The **Message Options** dialog allows you to:

- Automatically spell check your message before sending
- Clear recipients from the **To:** box after sending
- Clear message text after sending
- Switch to Message Log
- Send your signature at the end of your message
- Display a pop-up dialog when your two-way message responses arrive

To add message options:

1. Click the **Options** button in the **New Message** dialog to open the **Message Options** dialog.



2. Enable **Auto Spell Check before sending** if desired. Select any **After sending** options, such as **Clear Recipients**, **Clear Message Text** or **Switch to Message Log**.
3. Enter you custom signature in the **Message Signature** text box. Click the **Enabled** check box to enable the message signature.
4. In the **Message Replies** area, select **Display in pop-up dialog** for two-way message responses to be displayed in a special dialog. Escalated message responses will not display as a pop-up. All message replies, included escalated responses, also display in the Message Log. Click **OK** when done.

Sound Events

You can receive audio notification of certain events that occur in WirelessOffice.

To activate sound events:

1. Click **Start** from the taskbar, select **Settings**, then **Control Panel**. Click the **Sounds** icon. The **Sounds Properties** dialog displays.
2. Highlight the WirelessOffice event(s) to associate with audio notification. You can associate sounds with scheduled message, message response and message sent events.
3. In the **Sound** area, click the **Browse** button to select your sound choice. Click **OK**.

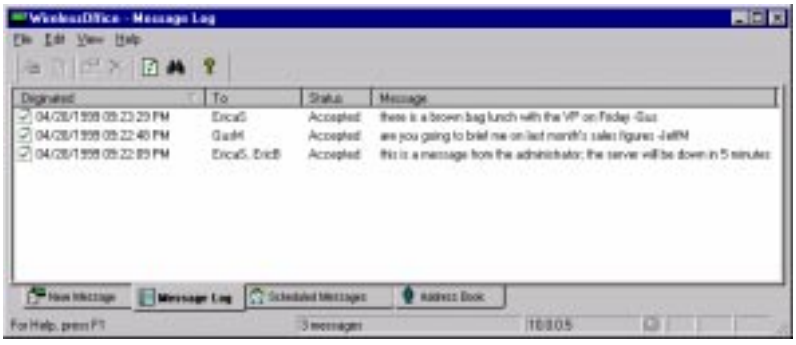
Viewing the Message Log

The **Message Log** displays messaging events including the date and time a message was originated, the name of the message recipient, the message status, and the message text. You can also resend a message from the Message Log. You can configure WirelessOffice Messenger to display pop-up dialogs whenever a new Acknowledged two-way message replies arrives. Please see “Message Options” on page 80.

Message status includes: Failed, Delayed, Rejected, Queued, No Device, No Modem, No Port, No Direct Connection, Unknown, Partial Success, Accepted, and Acknowledged.

To view Message Log entries:

1. Click the **Message Log** tab.
2. Or click **View** from the pull-down menu, select **Switch To** then choose **Message Log**.



To resend a message:

1. Click the message you want to resend.
2. There are three ways to resend a message:
   - Click the **Resend Message** icon on the toolbar.
   - From the **File** pull-down menu, select **Resend Message**.
   - Right-click and select **Resend**.

To edit a message:

You can edit an already sent message’s recipients or text if needed before resending.

1. Click the message you want to edit.
2. There are three ways to edit a message:
   - Click the **Edit** icon on the toolbar.
   - From the **Edit** pull-down menu, select **Edit Message**.
   - Right-click and select **Edit**.

To delete a message:

1. Click the message you want to delete.
2. There are four ways to delete a message:
   - Click the **Delete** icon on the toolbar.
   - From the **Edit** pull-down menu, select **Delete** or **Delete All**.
   - Right-click and select **Delete** or **Delete All**.
   - Press the **DELETE** key.

To resend failures:

The resend failures feature allows you to resend messages that were not received by *all* recipients in a group or department. Using this, you can resend your message to *only* the recipients who did not receive it.

1. Select the failed message.
2. Double-click the chosen message. Alternatively, you can choose the **Properties** icon on the toolbar. The **Message Properties** dialog displays, open to the **Recipient Status** tab.
3. Click the **Resend Failures** button.

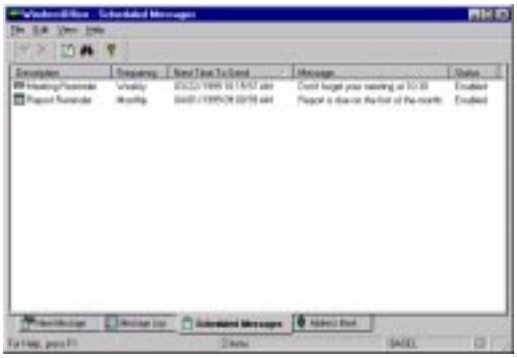
Viewing Scheduled Messages

This section details the features of the Scheduled Messages window. The scheduled messages feature may not be accessible for your account. Contact your system administrator for further information.

To view scheduled messages:

1. Click the **Scheduled Messages** tab.

   The **WirelessOffice – Scheduled Messages** dialog displays:



2. Scheduled messages awaiting transmission display. Change scheduling information by double-clicking on the message.

To delete a scheduled message:

1. Click on the Scheduled Message you want to delete.
2. There are four ways to delete a Scheduled Message:
   - Click the **Delete** icon on the toolbar.
   - From the **Edit** pull-down menu, choose **Cut**.
   - Right-click and select **Delete**.
   - Press the **DELETE** key.

Viewing the Address Book

This section details the features of the Address Book. If no entries have been made to the Personal Address Book, you will see users, groups and departments listed in the main WirelessOffice Server. The server-based and personal address book may have limited viewing or accessibility. Contact your system administrator for further information.

To view the Address Book:

1. Click the **Address Book** tab.
2. Or to access this screen via the **View** pull-down menu, select **Switch To**. Select **Address Book**.

   The **WirelessOffice – Address Book** dialog displays:

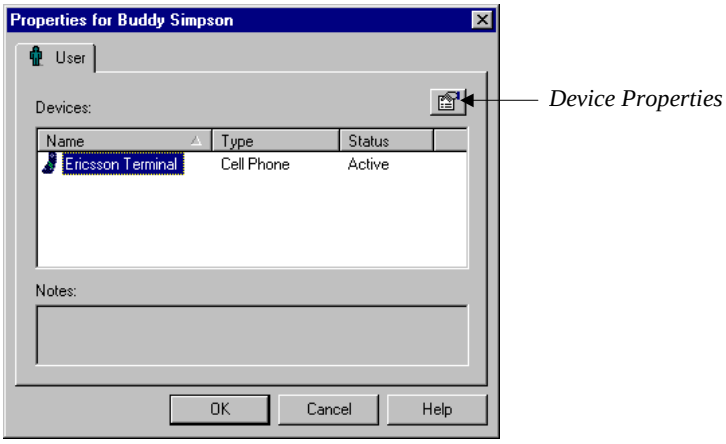
Viewing User and Device Data

The combined server and personal Address Book displays a list of available recipients in the server database, as well as in your personal address book database. By selecting a particular user, you can view the name of their wireless carrier, the device type and device status. Device status is either Active or Inactive.

To view user and device data:

1. In the combined address book, double-click the user record that you want to view. The properties screen will differ depending if it is a server-based or personal address book record. The **Personal Address Book – Edit User** dialog displays for a selected user in the personal address book.

   The user properties display for a server-based user:



2. For further details on a specific user's device, highlight the device name then click the **Device Properties** icon. The **Device Availability** window displays. These properties are read-only. Please see "To set or change your device availability" on page 91 for more information.
3. To edit your own device, select your user name from the address book. Your icon should be highlighted in yellow. Please see "Managing Your Mobile Devices" on page 89.

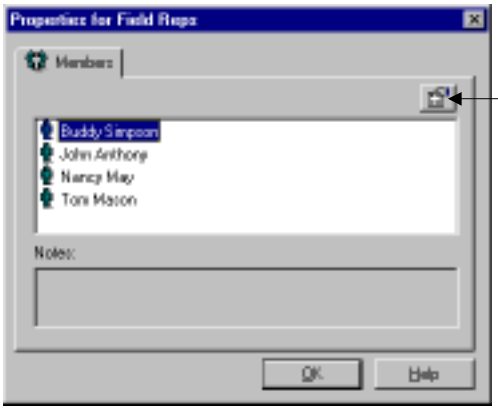
Viewing Group and Department Membership

Selecting a particular group or department record displays a list of its members. Server-based groups or departments may not be accessible to your user account.

To view group membership:

1. Click the group or department record that you want to view. The properties screen will differ depending if it is a server-based or personal address book record. The **Personal Address Book – Edit Group** dialog displays for a selected group in the personal address book (there are no departments in the personal address book).

   The group properties window displays for a server-based group:



2. Please note that this window is used only to display membership information.
3. For further information on a group or department member's devices, double-click the member's name or highlight it, then click the **User Properties** icon.

Managing Your Personal Address Book

This section describes how you can set up your own Personal Address Book. To manage your personal address book, you need to know how to add, modify, and delete entries. New users and groups may be configured. Your Personal Address Book can contain up to 100 recipient entries (depending on your licensing configuration) and each group can have up to 25 members. The personal address book may not be accessible according to your user account rights.

Adding Users

To add users:

1. Click the **Address Book** tab and select the **Personal Address Book** icon in the toolbar. From the **File** menu, select **New User** or right-click in the **Personal Address Book** screen and select **New User**.

   The **Personal Address Book - New User** dialog box will display:

2. Type the new user name in the **Name** text box.
3. Enter the user's Personal Identification Number (PIN) in the **PIN** box.
4. In the **Carrier** box, select the appropriate carrier from the drop-down list.
5. Add any descriptive information about the user, e.g. title, department, or company in the **Notes** text box. Click **OK**. The new user's icon displays in the **Address Book** window.

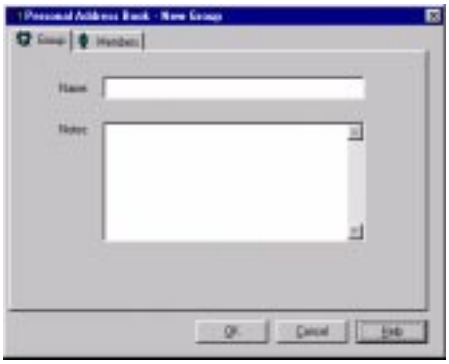
Adding Groups

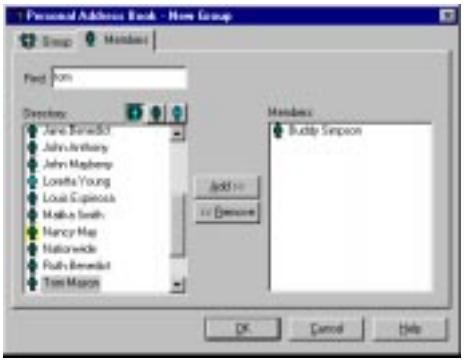
A group is the term used to describe a collection of individual users in your Personal Address Book. All users that will be in a group must exist in either the server or personal address book before you can create that group.

To add groups:

1. Click the **Address Book** tab and select the **Personal Address Book** icon in the toolbar. From the **File** menu, select **New Group** or right-click in the **Personal Address Book** screen and select **New Group**.

   The **Personal Address Book - New Group** dialog box displays:





2. Type the group's name in the **Name** box and any **Notes.**
3. Click the **Members** tab. Click on a specific user name in the **Directory** list and click **Add**. The user will be transferred to the group **Members** list. You can select multiple users at once by pressing the **CTRL** key while making selections. You can also double-click a name for member entry. Repeat these steps until all desired group members are selected.
4. Be sure to click on the appropriate address book icon to access the correct directory list. Also, use the **Find** feature to quickly locate a user.
5. To remove a user from the **Members** list, select their name and click **Remove** or double-click.

Modifying Users and Groups

If a user or group in your Personal Address Book was entered incorrectly or if a user's carrier or PIN information has changed, you can modify the user record.

To modify users and groups:

1. From the **Personal Address Book** screen of the **Address Book** window, select the user or group you want to modify and click **Properties**. Or double-click the entry or press **ENTER**.
2. Change the information as required and click **OK**.

Deleting Users and Groups

When you no longer require a particular user or group entry in your personal address book, you can remove it using the following procedure.

To delete users and groups:

1. From the **Personal Address Book** screen of the **Address Book** window, select the user or group you want to delete and click **Delete**.
2. A message will appear asking if you are sure that you want to delete the selected item. Click **Yes**.

Refreshing the Address Book

Each time you start WirelessOffice Messenger, the system builds a Directory List by looking at the server's database and your Personal Address Book. Use the **Refresh** button on the toolbar to refresh the Directory List when entries have been added to either the server's database or your Personal Address Book since you last started the WirelessOffice Messenger software.

Managing Your Mobile Devices

This section describes how you can control your devices that are defined in the server's address book. This feature allows you to edit the properties of your device(s) including PINs, carriers and scheduled availability. You may also add new devices and remove unused ones. Your message statistics are also enabled and viewable.

Note: This feature may not be enabled for your account, consult your administrator for further information.

To add a device to your user record:

1. Select your user name from the Address Book. Click  from the properties screen to add a new device.

   The **Device Wizard – Step One** dialog displays:

2. Choose the type of device and click **Next**.

The **Device Wizard – Step Two** dialog displays:

3. Type the **PIN** number. Select a carrier. Click **Finish**.

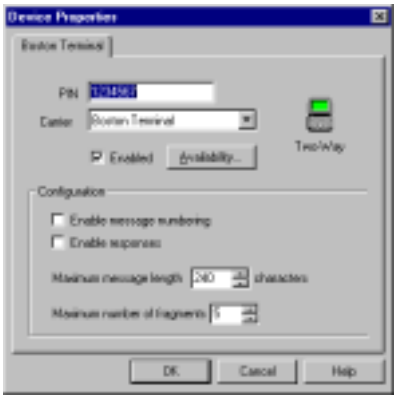
To delete a device:

Select a device and click  to delete.

To edit a device:

1. Select a device and click  to edit. Alternatively, you can double-click the device.

   The **Device Properties** dialog displays:



2. Edit the carrier provider and PIN. Enable or disable the device. You can schedule your mobile device **Availability**. Please see "To set or change your device availability" on the next page.
3. Select **Enable Message Numbering** if you receive longer messages and fragmenting occurs.
4. Select **Enable responses** to include the message identification number assigned by WirelessOffice. This allows a user's two-way device response message to be linked to the original message. This field is grayed out if a One-Way Pager or Cell Phone were selected as the device type. Two-way messaging only functions with E-mail Messenger configured.
5. Configure your **Maximum message length** or change the **Maximum number of fragments**. Be sure to consult your carrier before changing these settings.

To set or change your device availability:

1. Click the **Availability** button on the **Device Properties** screen to set or change the schedule.

   The **Device Availability** dialog displays:

2. This screen allows you to customize your device activation. You can select the days and time period your mobile device is active. For example, the screen above shows that the device is active Monday through Friday, 9 AM to 5 PM.

To view statistics:

1. Select the **Statistics** tab to view your statistics.
2. If you wish to change the time span for logging statistics, click the **Change** button. Select the parameters that you require. Click **OK**.

Saving Views to CSV Files

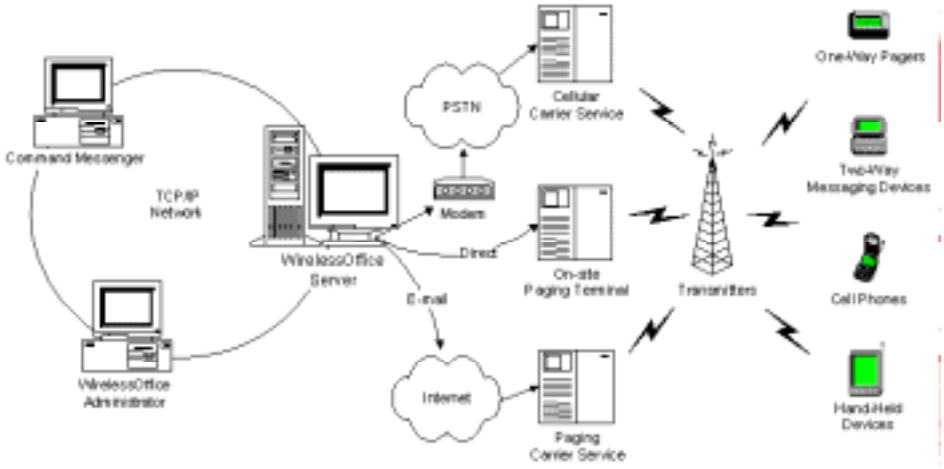
You can export the contents of tabbed view to a comma-delimited (.csv) file for troubleshooting analysis or report production. Text files may also be saved.

Select the desired tab, right-click and select **Save As**. In the **Save as type** field, select the .csv format. Choose the folder destination to save the log then click **Save**.

Using Command Messenger

This chapter describes Command Messenger, formerly named SendPage. Command Messenger will automatically install when chosen from the **Select Components to Install** dialog. This section provides you with configuration and operating considerations.

Command Messenger is a command-line utility that provides an interface to third-party applications such as firewalls, help desk, monitoring, and network management tools. Programs such as Microsoft Performance Monitor, Check Point FireWall-1, and Computer Associates Unicenter TNG amongst others are compatible. If the software has a command-line utility, then it can send messages to WirelessOffice. The following figure depicts the messaging flow from Command Messenger to wireless devices:



New Command Messenger Features

- User Name/Password authentication for server connections (page 94)
- Department messaging (page 96)
- Escalation messaging (page 97)
- User security profiling

Standard Command Messenger Features

- Routes alerts via command-line utility from firewall/help desk/monitoring/network management software and via desktop shortcut
- Command-prompt messaging
- Addresses messages by server-defined user or group name
- Addresses messages using PIN and server-defined carrier name

Command Messenger Capacities

Command Messenger has certain software messaging capacities:

Parameter	Capacity
Recipients* per message	1
Characters per message	4096

**A recipient can also be a server-defined group or department.*

Configuring Command Messenger

To configure Command Messenger:

1. Click **Start**, point to **Programs** and select **Command Prompt** or enter your third-party software. From the command line, you will configure Command Messenger. Once Command Messenger is connected to the Server, either via Command Prompt or your application, you will not have to repeat these steps.
2. In the command line type:

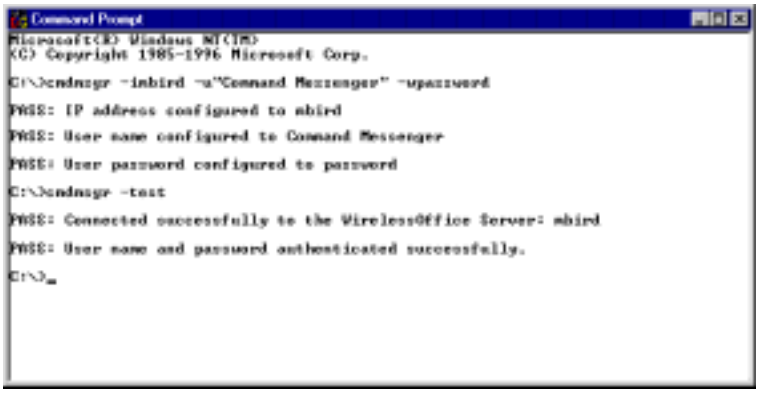
   `cmdmsgr –imbird –u”Command Messenger” -wpassword`

   where mbird is the Internet address of the system that WirelessOffice Server is running on, Command Messenger is the user Login Name and password is the Password.

Note: You can only login once at any given time using the *‘Administrator’* account. Create a new user name specific to Command Messenger with appropriate security settings.

User names, recipient names, carriers, passwords, and messages with spaces need to be enclosed with double quotes.

3. If you receive a `PASS:` for all three components, then Command Messenger is ready to send messages to WirelessOffice.
4. If the server was not located or there was a problem with the User Name or Password, a `FAIL:` message will display.



Command Messenger Commands

In the command line, the following commands will configure the WirelessOffice Server, display information or compose a message:

Command	Action
-?	Lists help information.
-c[Carrier]	Carrier name, included as part of message. Must be server defined.
-d	Indicates the recipient is a department.
-delay[Seconds]	Delay time for an escalated message level. Range is 60-86400 seconds, with default of 1800 if unspecified.
-g	Indicates a recipient is a group.
-i[IPaddress]	Sets the IP address or name of the WirelessOffice Server. Must be followed by UserName and Password commands.
-l[0|1]	Logging level setting. 0 is off and 1 is on. Log location is c:winnt\ cmdmsgr.log.
-level[x][Recipient]	Level and recipient for an escalated message. For x value, use 1 to 5 indicating the level number. Use server-defined recipient name (user, group or department). If a group or department name, follow with –g or –d command to specify. 50 characters maximum.
-m[Message]	Message text, included as part of message.
-p[PIN]	PIN number, included as part of message.
-rep[x]	Repeat last level of an escalated message, where x is the number of times to repeat. The x value can be 0 to 255, where 0 will not repeat the last level and 255 will repeat infinitely. If omitted, 0 is assumed.
–t[Recipient]	Recipient name defined in WirelessOffice Server, included as part of message. Must be predefined in server. If group or department name, follow with –g or –d command to specify. 50 characters maximum. Names with spaces require double quotes.
-test	Test connectivity to WirelessOffice Server. Enter this after setting the server Internet address/name and logging in.
-u[UserName]	Sets the User Name required for login. 50 characters maximum.
-v	Lists default settings.
-w[Password]	Sets the password associated with the User Name for login. 20 characters maximum.

Note: All information in brackets must be user defined. If using non-standard ASCII text, enclose with double quotes. Any parameters with a blank space must be enclosed with double quotes. Command options are case sensitive. Command options -c, -t, -u, and -w must be defined in the WirelessOffice Server.

Sending a Message

To send a message:

- If sending messages via a third-party application, Command Messenger must be loaded on that system (which must be networked to WirelessOffice Server). Before sending any messages, connect to the WirelessOffice Server by typing in the third-party application command line or using Command Prompt on that system:

  ```
  cmdmsgr -i[wirelessoffice server name or internet address] –
  u[User Name] –w[Password]
  ```

- User login name, password, recipient names and carriers must be defined in WirelessOffice Administrator. If a user is not configured, use the PIN and carrier method of sending a message.

- Parameters that have blank spaces must be enclosed with double quotes.

  ```
  cmdmsgr –t“Jane Benedict” –m”red alert in room 232”
  ```

  ```
  cmdmsgr –tTechnicians –d –m”failed system in switch room”
  ```

  ```
  cmdmsgr –t“Field Reps” –g –m”product demo Friday noon”
  ```

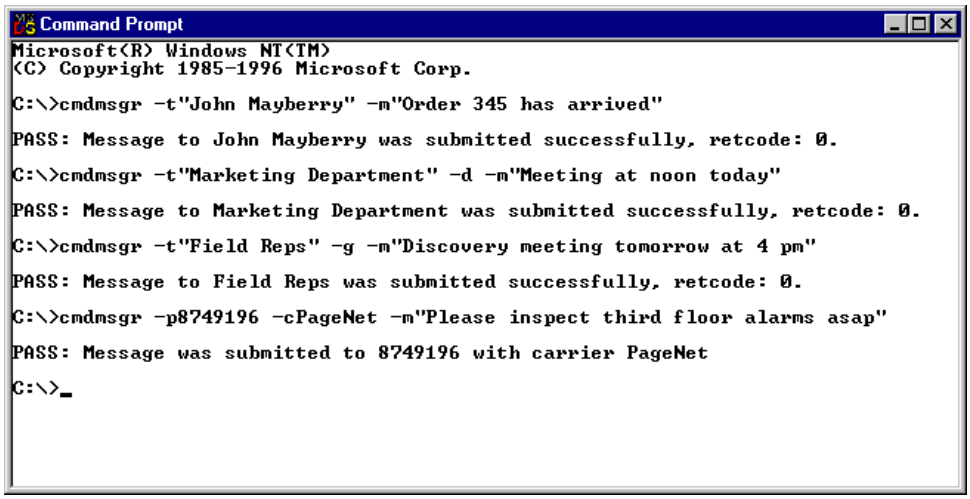
- PIN and carrier message format (carrier must be defined in the server): `cmdmsgr –p1234567 –cSkytel –m”alert circuit 178”`

- Command options are case sensitive.

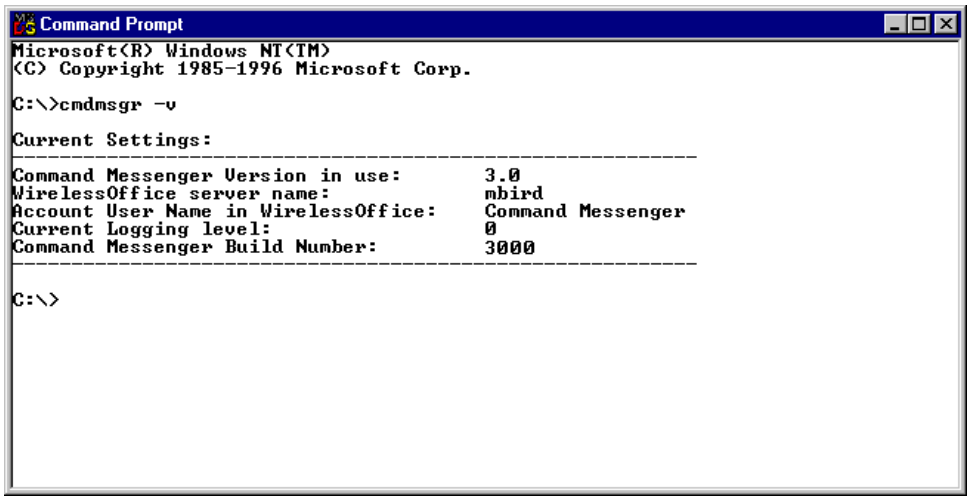
Command Messenger Examples

To send messages

The following examples depict messages sent to a user, department, group, and implementing the PIN/Carrier method.



To display the current settings:



Sending an Escalated Message

Optional commands are available to allow a message to escalate up to five levels of recipients. Escalated messages sent from Command Messenger reside in WirelessOffice Administrator's **Escalated Messages** tab until delivery time. Please see "Viewing Escalated Messages" on page 61.

Example: Send an escalated message to two levels, each with 5 minute delays. The first level recipient is John Smith and the second level is the "Management" department. The last level will be repeated 3 times or until the escalated message is cancelled. The rules stated in the previous section, "Sending a Message", apply. The following entry reflects the commands needed for Command Messenger to send this message and assumes the server connection has already been made:

```
cmdmsgr –rep3 –level1"John Smith" –delay300 –level2Management –d
delay300 –m"Red Alert, report immediately to front desk"
```

Note: Cancel or advance these messages in WirelessOffice Administrator's **Escalated Messages** tab, via E-mail Messenger's two-way device response, via cell or land phone using Voice Messenger or in Web Messenger.

Escalating and Canceling Escalated Messages

Escalated messages can be cancelled or manually escalated in WirelessOffice Administrator. Messages can also be cancelled using two-way messaging via E-mail Messenger or within Web Messenger. Please see "Viewing Escalated Messages", on page 61, for more information on using WirelessOffice Administrator to carry out these actions. Please see "Cancellation and Escalation" in the *E-mail Messenger Manual* for more information on two-way escalation cancellation and see "Cancellation and Escalation" in the *Web Messenger Manual*. Please see "Calling into Voice Messenger" in the *Voice Messenger Manual*.

Creating Desktop Shortcuts for Messaging

For quick and easy alerting, configure desktop shortcuts that when activated, send a specific message via Command Messenger.

To create desktop messaging shortcuts

1. Right-click on your desktop. Select **New** and then **Shortcut**. The **Create Shortcut** dialog displays.
2. In the **Command line**, type the "`cmdmsgr`" command message. Click **Next**.
3. Title the shortcut for easy recognition. Click **Finish**.

Performance Monitor Example

Windows-based Microsoft Performance Monitor is used to measure the performance of a computer or other computers on a network. System alerts, using Command Messenger as the messenger, can be configured for out-of-compliance conditions. Set up multiple alerts for everything from low disk space to when a certain process on a server stops.

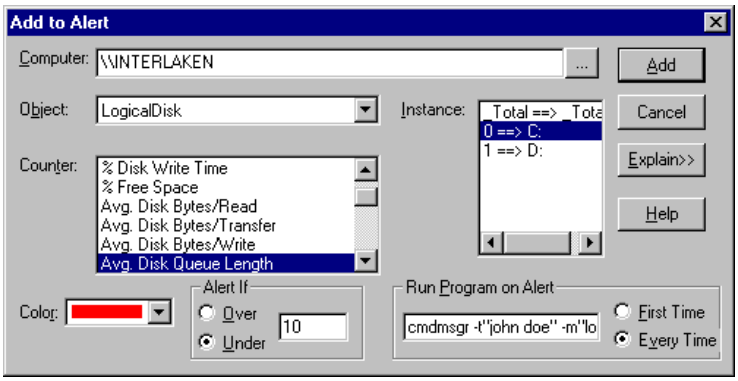
For example, if you want to monitor a server's running status, set up an alert condition so that the Command Messenger program will be run and a message generated when the processor time falls below x %. You can set up an alert like this for every server on the network and include in the message field such key details as server name, location and alert situation.

To use Command Messenger with Performance Monitor:

Please refer to Performance Monitor's on-line Help file for complete instructions and detailed information on setting up alerts. The following steps are only meant to show basic setup for Command Messenger alerting and reflect the third-party software on a Windows NT 4.0 system at time of publication. Performance Monitor is also available on Windows 2000.

1. Click **Start** from the taskbar then **Programs**. Point to **Administrator Tools (Common)** and select **Performance Monitor**.
2. Click **View** from the menu and choose **Alert**. Select **Add to Alert** from the **Edit** menu.

   The **Add to Alert** dialog displays:

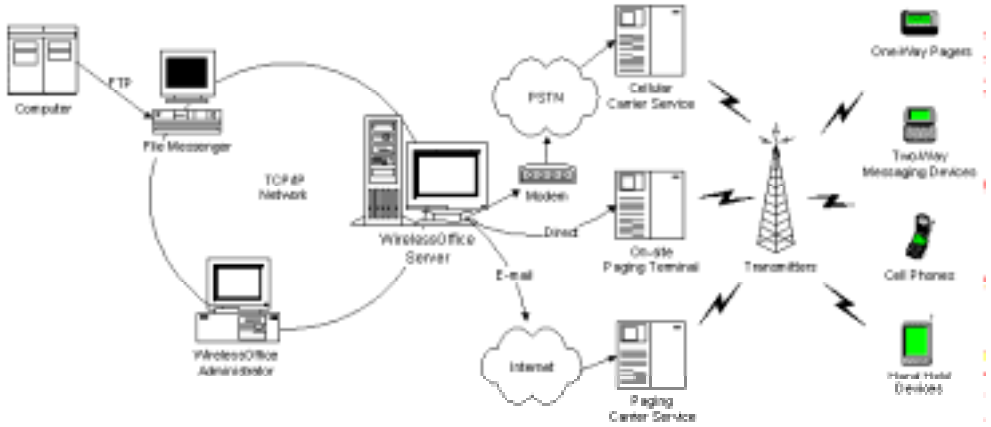


3. Select the **Computer** you wish to monitor for an alert. Select the **Object**, **Counter**, **Instance** and **Alert If** parameters as well. **Alert If** defines the out of tolerance range.
4. In the **Run Program on Alert** text box, type the Command Messenger message using the required message format:

   ```
   cmdmsgr –t"john doe" –m"logical disk space C: is under 10% free on \\Interlaken"
   ```

Using File Messenger

File Messenger, formerly named FilePage, provides a simple interface to the WirelessOffice Server. File Messenger will automatically install when you check File Messenger from the WirelessOffice installation. Using the File Messenger service, third-party applications and operating systems can send messages through the WirelessOffice Server by writing message files in a shared directory on the File Messenger system (see the following figure).



File Messenger can run on the WirelessOffice Server system or on any other Windows NT/2000 system that is connected to the network. File Messenger runs as a Windows NT/2000 service. Your third-party applications can run on any operating system that is capable of sharing a directory on the File Messenger system.

Arrange to use **File Transfer Protocol (FTP)** of Microsoft Internet Information Server to share files across the directory from other operating system computers. IIS 3.0 or higher can be installed with the FTP protocol in order to receive text messages into the machine running File Messenger. FTP can be set up with an anonymous login, receiving files to the c:\inetpub\ftproot\ directory. File Messenger must have an entry in the Directories tab that matches your FTP setup.

New File Messenger Features

- User Name/Password authentication for server connections (page 107)
- Escalation messaging (page 113)
- User security profiling (page 41)
- Department messaging (page 110)
- Scans for FAT32 file system extensions on Windows 2000 systems

Standard File Messenger Features

- Accepts ASCII files from other operating systems or any file-writing third party application
- Scans up to five directories on File Messenger local directory for FAT or NTFS file system extensions

- Pageable alerts for out-of-compliance file situations or formatting problems
- Simple file format addressing server-defined recipients
- Confidential file format addressing according to PIN and server-defined carrier
- Message scheduling and file deletion after message is successfully sent

File Messenger Capacities

File Messenger has certain software capacities:

Parameter	Capacity
Recipients* per message	1
Characters per message	2000
Scanned directories per system	5
Messages allowed per file	1

**A recipient can also be a server-defined group or department.*

Configuring File Messenger

You *must* configure File Messenger before you can use its services. At a minimum, File Messenger must know where to look for message files, where to maintain an error log, your user name and password to connect with the server and where on the network to find the WirelessOffice Server by its name or Internet address. There are other configurable options available as well.

To configure File Messenger:

1. You must be logged on as the Windows NT/2000 system administrator. Click **Start** from the taskbar, select **Settings** and click on **Control Panel**. Double-click the **File Messenger** icon.

   The **File Messenger 3.0** dialog displays:

2. Use the tabs along the top edge of the File Messenger control panel to access various configuration options. When the dialog first appears, it is open to the **Directories** tab.

The four tabs are briefly described below. To access options under these tabs, click the desired tab.

Tab	Description
Directories	This tab shows the current list of shared directories and lets you add or remove folders from the list. It also shows File Messenger's current status (running or stopped) and lets you specify where the error log is maintained.
Service	Use this tab to start or stop the File Messenger service and to specify File Messenger's startup behavior.
WirelessOffice	Use this tab to login, specify the Internet address or the name of the WirelessOffice Server, and to specify who should be alerted with a message when certain errors occur while File Messenger is processing messages.
About	This tab shows you the current version of File Messenger and provides access to general help about using the service.

Using the Directories Tab

Use this dialog to add or remove shared directories, specify the file type(s) of valid message files, and specify where the error log will be maintained. Shared directories are folders that File Messenger monitors for message files.

Note: File Messenger can support up to five shared directories using any Windows NT/2000 supported file systems. Windows NT currently supports the FAT and NTFS file systems. Windows 2000 supports FAT, FAT32, and NTFS file systems.

To add a shared directory:

1. Stop the File Messenger service by clicking the **Stop** button on the **Service** tab. Return to the **Directories** tab and click the **Add** button.

   The **Directory Properties** dialog box displays:

2. Select the folder to scan. For your reference, the file system (FAT, FAT32, or NTFS) being used by the selected folder appears at the bottom of the dialog box.
3. Type the desired three-letter file name extension (file type) in the **Extension** field. File Messenger will only look for files of this type as candidates for message files in the selected folder.
4. Click **OK**. The new folder and file type will display in the **Directories** tab. Restart the File Messenger service in the **Service** tab and click **OK**.

Note: File Messenger can only scan directories on local hard drives. You cannot add directories on network drives. FAT directories only support three-character file name extensions.

To remove a shared directory:

1. Stop the File Messenger service by clicking the **Stop** button on the **Service** tab.
2. Under the **Directories** tab, click the directory (folder) you want to delete.
3. Click the **Remove** button. The selected folder will disappear from the shared directory list and File Messenger will not monitor that folder for message files.
4. Restart the File Messenger service in the **Service** tab and click **OK**.

To change the error log file location:

1. Stop the File Messenger service by clicking the **Stop** button on the **Service** tab.
2. Under the **Directories** tab in the **Error Log File** area, click the  button. The **Choose Log File** dialog box displays. The default log name is filemsgr.log.
3. Locate and select the folder in which you want the Error Log file maintained. Type a file name in the **File Name** field and click **OK**. The new Error Log File and its path will appear in the **Directories** dialog box.
4. Restart the File Messenger service in the **Service** tab and click **OK**.

Note: Error and warning messages are logged to the NT/2000 Event Viewer as well as the selected text log file.

Using the Service Tab

Use the **Service** tab to start or stop the File Messenger service. You can also use this tab to specify File Messenger's startup behavior. For example, you can specify that File Messenger automatically starts when the computer it is loaded on starts (for unattended operation), or you can specify that starting and stopping File Messenger be controlled manually.

To start or stop File Messenger:

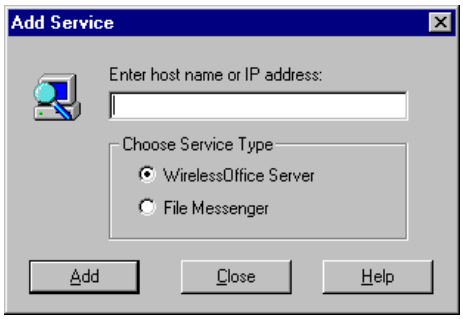
1. Click the appropriate button:  to start, or  to stop.
2. Click **OK** if you are finished configuring File Messenger. Otherwise click on the **Apply** button before going to another tab.

Note: File Messenger is a background service in Windows NT/2000. If you click **OK** while File Messenger is running, the configuration control panel is closed but the service remains loaded and running. When you stop File Messenger, the service stops running.

To start File Messenger from WirelessOffice Administrator:

1. In WirelessOffice Administrator, select **Change Server** from the **File** pull-down menu. Click the **Add** button on the **WirelessOffice Login** dialog box.

   The **Add Service** dialog displays:



2. Select the **File Messenger** service type and enter the server name or Internet address.
3. Click **Add**. The **WirelessOffice Login** dialog box re-displays with the File Messenger service listed in the **Server List.**
4. You can start and stop File Messenger from this dialog box by selecting it and clicking on either the Start or Stop button. Click **Close** to exit.

Note: To start File Messenger in WirelessOffice Administrator, the Authentication Mode must be set for **Windows and WirelessOffice**. Please see “Change Authentication Mode” on page 19 for more information.

To change the startup type:

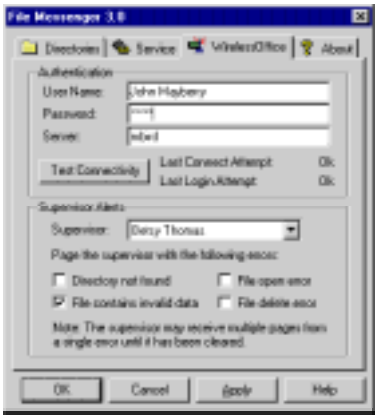
1. Click the desired startup type: **Automatic**, **Manual** or **Disabled**.
2. Click **Apply** if you are not finished configuring File Messenger. Otherwise, click **OK**. A change to the startup type will not take affect until the computer is next rebooted.

Using the WirelessOffice Tab

Use this tab to login, specify the name or Internet address of the WirelessOffice Server, test connectivity with the server, and specify who should be alerted with a message (if anyone) when certain errors occur while File Messenger is processing messages.

To login and specify the server address:

1. Click the **WirelessOffice** tab. Type your **User Name** and **Password** (1-20 characters in length) to login to the server. You can login to only one application at a time with any given login identity. If you are using the *'Administrator'* account, you will need to create a new user login account with the appropriate security settings and rights.



2. Type the name or Internet address of the WirelessOffice **Server**.
3. Click the **Test Connectivity** button to ensure that File Messenger can communicate with the WirelessOffice Server. If **Last Connect Attempt** and **Last Login Attempt** both display **OK**, then the test was successful.
4. Any errors will be displayed as a message. **Server Status** indicates whether the connection to the WirelessOffice Server was successful or not. To locate the correct Server name, open the WirelessOffice Administrator and click **File** and then **Change Server**. If the server connection is not made, Login Status will be blank. **Login Status** indicates any login connection errors, such as the User Name is already logged in (each User Name can only login to one client application at a time), the User Name is not specified in the Server, or the password is incorrect.
5. Click **OK** if you are finished configuring File Messenger. Otherwise click **Apply** before going to another tab.

Note: If the connectivity test is unsuccessful, verify that your computer has a network connection and double-check the name or Internet address of the WirelessOffice Server. The login portion will fail if the service is already running (only one login per account is allowed at any one time).

To set up Pageable Alerts:

1. Click the **Supervisor** pull-down list box and select the person that should receive an alert message. This list contains users in the WirelessOffice Server database.
2. Select the desired error condition(s) for which an alert should be sent.
3. Click **OK** if you are finished configuring File Messenger. Otherwise click **Apply** before going to another tab.

Using the About Tab

Use this tab to view the version number of File Messenger and to access general help for using File Messenger. Click the **Help** button in the lower-right corner to access the help file.

Using File Messenger

After configuring File Messenger, you can start using it. However, you need to understand two things:

- How to control File Messenger, and
- How to create message files.

Controlling File Messenger

File Messenger is a background service in Windows NT/2000. Its operation is simple; while File Messenger is running, it monitors shared directories for message files and sends corresponding message requests to the WirelessOffice Server. While File Messenger is stopped, it is removed from memory and performs no monitoring. You will use the File Messenger control panel to start and stop the service.

The File Messenger control panel operates independently of the File Messenger service. When you click the **OK** button, the configuration control panel will close and the File Messenger service will remain in its current state (running or stopped).

Automatic vs. Manual Startup

If File Messenger is configured for Automatic Startup, the service starts automatically when the computer on which it is installed is started. If File Messenger is configured for Manual Startup, you must use the File Messenger control panel to start it. Refer to the section "To change the startup type" on page 106 for more information about startup types. The WirelessOffice Server does not have to be running in order to start the File Messenger service.

Creating Message Files

WirelessOffice File Messenger allows proprietary or third party applications to send messages through the WirelessOffice Server. Messages can be submitted to the WirelessOffice Server by creating an ASCII file in one or more specific directories on the File Messenger system. These directories are specified during File Messenger configuration. See "Using the Directories Tab" on page 103 for instructions. Message files can be created in four different formats:

- Simple file format
- Confidential file format
- Scheduled message format
- Escalated message format

Regardless of the format, message files must be created using the following rules:

- All commands must be separated by a carriage return and line feed sequence.
- Commands can appear in any order, however, the **MESSAGE:** command must be the last command in the file.
- No spaces may be entered before or after the equal signs (=).

Note: If enough information exists to send both simple and confidential messages, only the confidential message will be sent.

Using the Simple File Format

The simple format is used to send a message to users, groups, or departments that are predefined in the WirelessOffice Server database and available to the User Name login account. It is called *simple* (or *unresolved*) because it is the easiest of the two formats to use. The simple format only requires that you specify the user's name (or group/department name if applicable) and the text of the message. The WirelessOffice Server resolves the rest of the message addressing using information in its database.

To use the Simple File Format:

ID=<*Recipient Name*> | **TO=**<*Recipient Name*>
[**ISGROUP=***yes*|*no*]
[**ISDEPT=**yes|no]
MESSAGE:
<*Text of the message*>

Where:
ID or **TO** — Specifies the unique name for the single server-defined user, group or department that should receive the message. The **TO** command is equivalent to the **ID** command.

ISGROUP — Indicates whether the **ID** or **TO** command contains an identifier for a group (**ISGROUP=YES**) or a single message recipient (**ISGROUP=NO**) that is defined in the server database. This command is optional; if you omit it, File Messenger assumes the **ID** or **TO** command contains a user name.

ISDEPT — Indicates whether the **ID** or **TO** command contains an identifier for a department (**ISDEPT=YES**) or a single message recipient (**ISDEPT=NO**) that is defined in the server database. This command is optional; if you omit it, File Messenger assumes the **ID** or **TO** command contains a user name.

MESSAGE: — Indicates that the characters to follow are the content of the message. The message content can contain a maximum of 2000 characters.

Examples:

1. Send the message "We're now using WirelessOffice!" to the user known as "Bob Jones".

```
ID=Bob Jones
MESSAGE:
We're now using WirelessOffice!
```

2. Send the message "Meet at noon" to the group known as "Lunch".

```
TO=Lunch
ISGROUP=yes
MESSAGE:
Meet at noon
```

Using the Confidential File Format

Use the confidential format when you want to send a message to a user who subscribes to a wireless carrier that is predefined in the system database. It is called *confidential* (or *partially resolved*) because it allows you to keep the user's name confidential. It requires that you specify the user's mobile device ID, carrier's name and the message. The Server's database resolves a portion of the message.

To use the Confidential File Format:

```
PAGERID=<PIN>
CARRIERID=<Carrier>
MESSAGE:
<Text of the message>
```

Where:

PAGERID — Specifies the unique identifier for the wireless device.

CARRIERID or **SERVICEID** — Specifies the unique identifier for the carrier provider.

MESSAGE: — Indicates that the line(s) to follow are the content of the message. The message content can contain a maximum of 2000 characters.

Example:

Send the message "This is WirelessOffice!" to PIN "1234567" using the "Metrocall" carrier.

```
PAGERID=1234567
CARRIERID=Metrocall
MESSAGE:
This is WirelessOffice!
```

Scheduling Messages

To use optional scheduling commands:

Optional commands are available to both file formats to allow delayed messaging. Scheduled messages sent from File Messenger reside in WirelessOffice Administrator's **Scheduled Messages** tab until delivery time and may be edited there if needed. Please see "Viewing Scheduled Messages" on page 60. Messages can only be scheduled if the appropriate access rights have been configured for the user login account.

Commands supported:

TIME – Specifies the time of the message, in 24-hour notation.

DATE - Specifies the date of the message.

Format:

```
TIME=<HHMMSS>
DATE=<YYYYMMDD>
```

Example:

Send a reminder message to user "Bob Jones" on April 22, 2000 at 10:45:00 AM.

```
ID=Bob Jones
TIME=104500
DATE=20000422
MESSAGE:
Board meeting at 11 AM in third floor conference room
```

Escalating Messages

To use optional escalation commands:

Optional commands allow a message to escalate up to five levels. Escalated messages sent from File Messenger reside in WirelessOffice Administrator's **Escalated Messages** tab until delivery time. You can cancel or manually accelerate an escalated message from within WirelessOffice Administrator, using E-mail Messenger's two-way device response, using a cell/land phone via Voice Messenger or in Web Messenger. Please see "Viewing Escalated Messages" on page 61.

Commands supported:

ESCALATED – Indicates an escalated message will be configured if (**ESCALATED=YES**). If (**ESCALATED=NO**) no escalated message will be configured. This field is required, with a **YES** value, to send an escalated message.

REPEAT – Indicates an escalated message will repeat the last level until cancellation or it has run its course. Range is 0 to 255, where 0 will not repeat the last level and 255 will repeat infinitely. This field is optional and if not included 0 is assumed.

LEVELx – Indicates the level number and recipient name. Level numbers (**x**) may range from 1 to 5. The recipient name must reflect a server-defined user, group or department and be accessible to that User Name login account. The PIN/Carrier method is not allowed. Maximum character length is 50. This field is required for escalation.

ISGROUP or **ISDEPT** – Include if the **LEVELx** recipient name is a group or department. Indicates whether the **LEVELx** command contains an identifier for a group or department (**ISGROUP=YES** or **ISDEPT=YES**) or a single message recipient (**ISGROUP=NO** or **ISDEPT=NO**) that is defined in the server database. This command is optional if **NO**. This field is not required for escalation.

DELAYx – Specifies the time delay in seconds for each level (x) defined with a recipient name. Range is 60 to 86400 seconds, with a default of 1800 (30 minutes) if no time delay is defined. This field is optional and not required for escalation.

MESSAGE: – Indicates that the line(s) to follow are the content of the message. The message content can contain a maximum of 2000 characters.

Example: Send a 2 level escalated alert, both with 5 minute delay times. First level recipient is John Smith. Second level recipient is the "Management" department. Last level repeats 3 times.

```
ESCALATED=YES
REPEAT=3
LEVEL1=John Smith
DELAY1=300
LEVEL2=Management
ISDEPT=YES
DELAY2=300
MESSAGE:
Red Alert – need immediate assistance in room 232
```

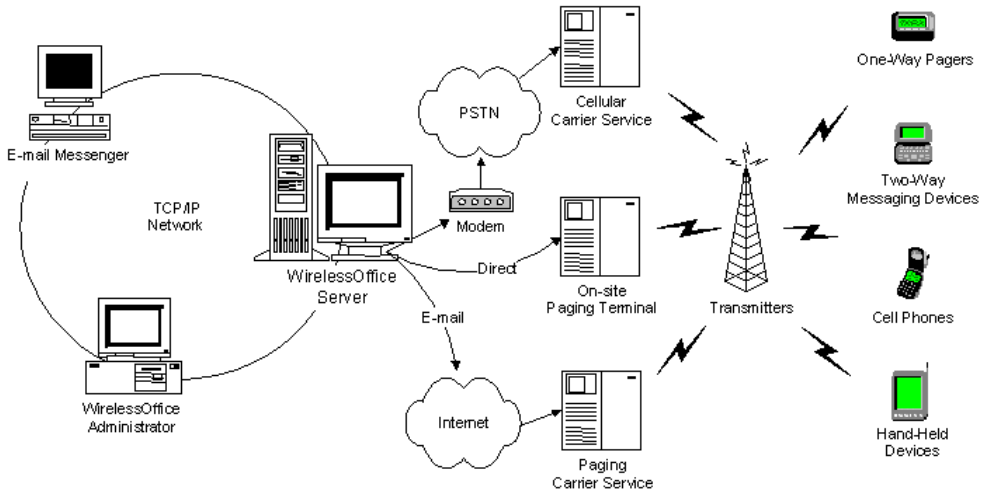
Using E-mail Messenger

E-mail Messenger, formerly named EPage, will automatically install when you select E-mail Messenger from the WirelessOffice installation. It will only function if your Authorization Code reflects an E-mail Messenger purchase or you are using the DEMO Authorization Code.

E-mail Messenger allows you to interface your SMTP-compatible e-mail system with WirelessOffice so that e-mail can be sent as alphanumeric messages to wireless devices. Compatible software packages include Novell GroupWise, Microsoft Exchange and Outlook, Eudora Pro, Lotus Notes and many others. If configurable in your e-mail software, you can also arrange to have messages sent to your E-mail Messenger address alerting you when important e-mails have arrived.

Two-way messaging is possible as well, with E-mail Messenger receiving the message response and delivering it to the server. Escalated message cancellation is also possible using E-mail Messenger's two-way messaging capabilities.

The following diagram depicts the messaging flow through WirelessOffice Server to wireless device(s):



Note: You can install E-mail Messenger on any network system running Windows NT/2000 (including the WirelessOffice Server), except for the system with your e-mail server due to Internet Protocol (IP) port conflicts. Once E-mail Messenger is configured and a domain is established, any network system with SMTP e-mail software is compatible.

How E-mail Messenger works:

E-mail Messenger is an SMTP gateway that receives SMTP mail messages and forwards them to the WirelessOffice Server. The following outlines the process more specifically:

1. The SMTP message originates from a proprietary e-mail package.
2. E-mail Messenger receives the entire SMTP message, whether it comes from the e-mail server or from a wireless carrier (two-way response).
3. E-mail Messenger extracts the recipient(s) and message data and passes the message on to the WirelessOffice Server, where the system either sends the message to the carrier or logs the two-way response.

New E-mail Messenger Features

- User Name/Password authentication for E-mail Messenger configuration (page 119)
- Two-way message acknowledgement via E-mail Messenger (page 124)
- Escalated message cancellation and escalation (page 125)
- Department message sending
- Security profiling
- Windows 2000 compatibility

Standard E-mail Messenger Features

- Runs as a Windows NT/2000 service
- Integrates with all SMTP-compatible e-mail software
- Message alerting, message sending and message forwarding capabilities
- Message logging
- Paging domain specification enables only E-mail Messenger addresses to be sent to server
- Failover domain specification enables troubled messages to be sent to backup domain address
- Auto-handling of blank spaces and lines
- Various addressing formats
- Option to include subject field, signature field and attachment notification

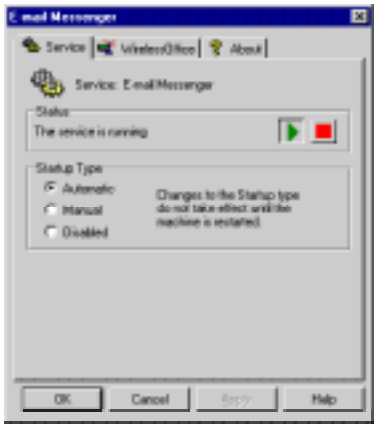
Configuring E-mail Messenger

You *must* configure E-mail Messenger before you can use its services. At a minimum, E-mail Messenger must know where on the network to find the WirelessOffice Server (by its Internet address or name). There are other configurable options available as well.

To configure E-mail Messenger:

1. Click **Start**, point to **Settings**, select **Control Panel** and then **E-mail Messenger**.
2. Or click **Start**, point to **Programs**, select **Emergin WirelessOffice** then **E-mail Messenger**.

The **E-mail Messenger** control panel **Service** tab displays:



3. Use the tabs along the top of the E-mail Messenger control panel to access various configuration options.

The E-mail Messenger control panel tabs are briefly described. To access these options, click on the desired tab.

Tab	Description
Service	Use this tab to start or stop the E-mail Messenger service or to specify E-mail Messenger's startup behavior.
WirelessOffice	Use this tab to login, specify the Internet address or name of the WirelessOffice Server, test connectivity, specify what options should be sent when E-mail Messenger is processing messages, enable/disable logging and specify failover and paging domains.
About	This tab shows you the current version of E-mail Messenger and provides access to general help about using the service.

Changing the Authorization Code

If you did not purchase E-mail Messenger with your initial copy of WirelessOffice, you will need to enter a new Authorization Code into WirelessOffice Administrator to enable E-mail Messenger. If the WirelessOffice system is currently running under the DEMO Authorization Code, the software will only function for a limited period of time. At the end of this trial period, you will see the following message when you attempt to connect to the Server through the E-mail Messenger control panel:

```
E-mail Messenger cannot start because it is not registered.
Please contact Emergin at 1-888-922-7638 or 1-561-361-6990.
```

To re-enable E-mail Messenger, you must have a valid Authorization Code. When you purchase the product, you will be given an Authorization Code that will fully enable the software. Enter this new Authorization Code into the WirelessOffice Server using the WirelessOffice Administrator. Please see "Modifying Server Configuration" in the *Configuring WirelessOffice Server* chapter.

Using the Service Tab

Use the **Service** tab to start or stop the E-mail Messenger service. You can also use this tab to specify E-mail Messenger's startup behavior. For example, you can specify that E-mail Messenger automatically starts when the computer it is loaded on starts (for unattended operation), or you can specify that starting and stopping E-mail Messenger be controlled manually.

To start or stop E-mail Messenger:

1. Click on the appropriate button:  to start, or  to stop.
2. Click **OK** if you are finished configuring E-mail Messenger. Otherwise click **Apply** before going to another tab.

Note: E-mail Messenger is a background service in Windows NT/2000. If you click **OK** while E-mail Messenger is running, the configuration control panel is closed, but the service remains loaded and running. When you stop E-mail Messenger, the service stops running.

To change the startup type:

1. Click on **Automatic**, **Manual** or **Disabled**.
2. Click **Apply** if you are not finished configuring E-mail Messenger. Otherwise, click **OK**. The change will take effect next time the computer is restarted.

Using the WirelessOffice Tab

Use this tab to login, specify the name or Internet address of the WirelessOffice Server, test connectivity with the server, specify what e-mail options should be sent while E-mail Messenger is processing messages, enable/disable logging, and specify the failover and paging domains.

To login and specify the server address:

1. Click the **WirelessOffice** tab. Type your **User Name** and **Password** (1-20 characters in length) to login to the server. You can login to only one client application at a time with your login identity. If you are using the *'Administrator'* account, you will need to create a new user login account with the appropriate security settings and rights for E-mail Messenger.

2. Type the name or Internet address of the WirelessOffice Server in the **Server** text box. The Server name is preferred as it is more static than an IP address.
3. Click the **Test Connectivity** button to ensure that E-mail Messenger can communicate with the WirelessOffice Server. If **Last Connect Attempt** and **Last Login Attempt** both display **OK**, then the test was successful.
4. Any errors will be displayed as a message. **Server Status** indicates whether the connection to the WirelessOffice Server was successful or not. To locate the correct Server name, open the WirelessOffice Administrator and click **File** and then **Change Server**. If the server connection is not made, Login Status will be blank. **Login Status** indicates any login connection errors, such as the User Name is already logged in to the Server (each User Name can only login to one client application at a time), the User Name is not specified in the Server, or the password is incorrect.

Note: If the connectivity test is unsuccessful, verify that your computer has a network connection and double-check the name or Internet address of the WirelessOffice Server. The login portion will fail if the service is already running (only one login per account is allowed at any one time).

To set up Message Options:

1. Select **Subject field should be included** if you want the recipient to see the subject of the e-mail (in the device message).
2. Select **Signature field should be included** if you want the recipient to see the signature of the person who sent the e-mail (in the device message).
3. Select **Attachment notification** if you want the recipient to be notified that the e-mail sent had an attachment (in the device message). The attachment itself will not be sent.

To enable logging:

1. In the **Logging** area, click **On** to create E-mail Messenger log files when troubleshooting is required for incoming e-mail messages. Enable logging only for diagnostic purposes.
2. Three files are generated for troubleshooting incoming e-mail. These files are located in the c:\winnt directory:
   - Emsgr.log – log file that details transactions with E-mail Messenger, for example, connections to the WirelessOffice Server, valid recipients, etc.
   - Emsgrxxx.log – log file that details incoming SMTP communication with E-mail Messenger, where xxx increments are 001, 002, etc.
   - Intmail.log – log file that details the transactions for e-mail failover.

To designate an e-mail failover domain:

The **E-mail failover domain** is an internal/external e-mail server running in a corporate intranet and is set up to auto-reply to messages that cannot connect to the WirelessOffice Server or cannot resolve a user/group/department in the server. This will notify the recipient that an error occurred.

To designate an e-mail paging domain:

When forwarding an e-mail to a recipient, it often includes multiple recipients from other domains. In order to prevent each member from receiving a message, it is possible to set up a filtering domain. For example, if the E-mail Messenger domain is set up as wireless.domain.com, then the system administrator should set up the **E-mail paging domain** as wireless.domain.com.

If e-mail contains multiple recipients, only those with destination domain wireless.domain.com will receive the forwarding e-mail to WirelessOffice Server. If the e-mail paging domain is blank, then all recipients from all domains will be passed through to the WirelessOffice Server. These recipients must be set up in WirelessOffice Administrator in order to receive a message to their mobile device.

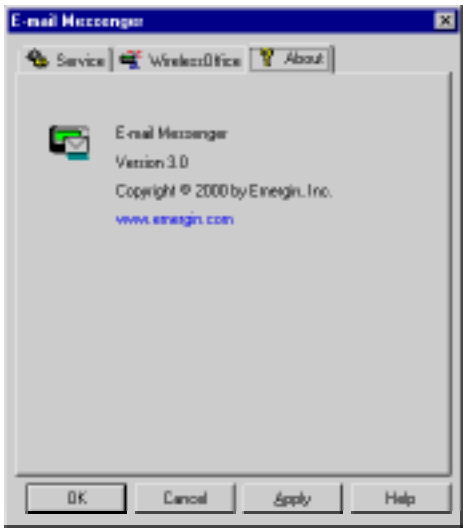
Example of an Addressee list:

john.doe@wireless.domain.com; sallie.johnson@domain.com; michelle.tenor@domain.com

If the e-mail paging domain is set up with wireless.domain.com, then only john.doe will be forwarded to the WirelessOffice Server. If the e-mail paging domain is blank, then E-mail Messenger will attempt to send a message to all recipients. This e-mail usually results from forwarding because it will contain the original recipients of the message e-mail failover domain.

Using the About Tab

Use the **About** tab to view the version number of E-mail Messenger. Click the **Help** button in the lower-right corner to access the help file.



Controlling E-mail Messenger

E-mail Messenger is a background service in Windows NT/2000. Its operation is simple; while it is running, it accepts SMTP e-mail and sends corresponding message requests to the WirelessOffice Server. While E-mail Messenger is stopped, it is removed from memory and performs no service. You will use the E-mail Messenger control panel to start and stop the service. See “To start or stop E-mail Messenger” on page 118 for instructions.

The E-mail Messenger control panel operates independently of the E-mail Messenger service. When you click **OK**, the configuration control panel will close and the E-mail Messenger service will remain in its current state (running or stopped).

Automatic vs. Manual Startup

If E-mail Messenger is configured for Automatic Startup, the service starts automatically when the computer on which it is installed is started. If E-mail Messenger is configured for **Manual Startup**, you must use the E-mail Messenger control panel to start it. See "To change the startup type" on page 118 for more information about Startup Types. The WirelessOffice Server need not be running in order to start the E-mail Messenger service.

Configuring Your E-mail Messaging Gateway

E-mail Messenger is designed to interface with any e-mail system that is capable of outputting SMTP-compatible messages.

To set up a domain:

1. A domain name for the messaging gateway (i.e. wireless.domain.com) must be mapped to the Internet address of the E-mail Messenger workstation.
2. Contact your IT Department to add the new domain record to your central DNS server.
3. Verify that the domain is connected. Click **Start** from the taskbar, select **Programs** then **Command Prompt** and type: `c:\ping wireless.domain.com,` where wireless.domain.com is the newly configured domain name.
4. The following reply (listed four times) should display, where 100.10.10.10 is the sample Internet address of the computer running E-mail Messenger (wireless.domain.com): `Reply from 100.10.10.10: bytes=32 time<10ms TTL=128.`
5. If a negative response of bad IP address returns, confirm that your IT Department has added the DNS record correctly.

Note: To receive external E-mail Messenger requests and for two-way functionality, E-mail Messenger must be accessible from the Internet and not behind a firewall.

Messages can be sent from wireless devices into WirelessOffice if sent as an e-mail, addressed to a server-defined recipient.

Sending a Test Message

To send a test message:

1. Send a message as you normally would from your e-mail software using the "Addressing Rules" listed on the next page.
2. The user name must be pre-configured in WirelessOffice Administrator. Refer to "Managing Users and Devices" in the *Configuring WirelessOffice Server* chapter.
3. Confirm that the e-mail message you sent is in the WirelessOffice Administrator's **Message Log** or is received by the recipient's wireless device.

Message Considerations

E-mail monitoring and alerting

If available, you can set up your e-mail software to send alerts to your E-mail Messenger address when important messages come in. For example, using the Rules Wizard in Microsoft Outlook it can search messages by sender, urgency or key words.

Maximum message size

E-mail Messenger supports messages up to 2048 characters (or 2K in byte size).

Handle blank spaces

Some e-mail packages pad messages with blank lines or prefix messages with blank spaces. Because airtime is costly, E-mail Messenger handles these conditions by extracting blank spaces.

Addressing Rules

- Host names do not include blanks. Recipients can be server-defined users, groups or departments (depending on security access of the login User Name account).
- For a server-defined user name such as Jane Benedict, type `Jane_Benedict` to conform to e-mail addressing standards.
- When the first address character is numeric, the system assumes “PIN.carrier”/“PIN” format. Carrier must be defined in the server.
- When the first character of the address is alpha, the system assumes that the user’s name will be resolved in the WirelessOffice database.
- If you have a carrier set up in WirelessOffice with the name “InHouse”, you can send e-mail to PIN@wireless.domain.com and the server will automatically use the “InHouse” carrier.

Sample Address Formats

Address Format	Description
1234567.Skytel@wireless.domain.com	Send message to PIN 1234567 on Skytel carrier
john.smith@wireless.domain.com	Send message to mobile device for John.Smith, who is resolved in WirelessOffice Server database
john_smith@wireless.domain.com	Send message to mobile device of server-defined user John Smith.
john.smith@domain.com	Send e-mail to john.smith’s corporate e-mail account
marketing@wireless.domain.com	Send message to marketing users’ wireless devices
2345678@wireless.domain.com	Send message to PIN 2345678 using “InHouse” carrier

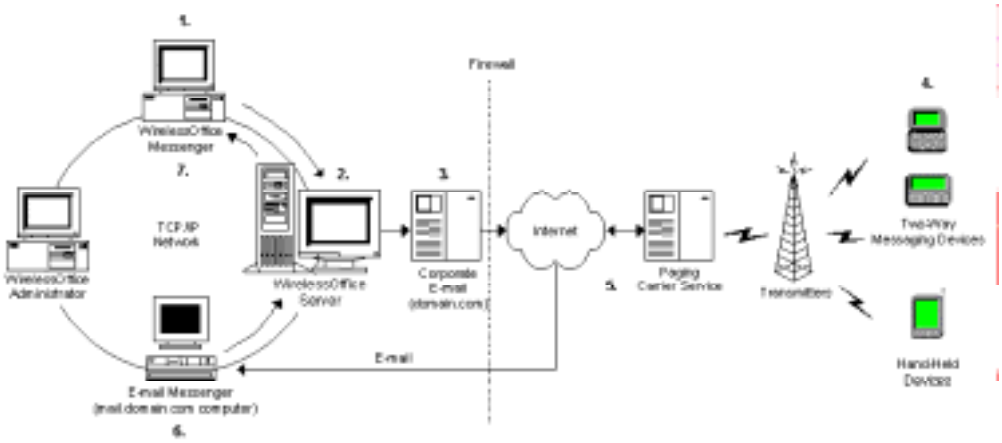
Two-Way Messaging

E-mail Messenger offers two-way messaging support via your two-way pager or wireless PDA device. For a user to respond to a WirelessOffice message, they must have their two-way device defined in their user's device properties dialog and have **Enable responses** selected. Please see "Adding User Devices" in the *Configuring WirelessOffice Server* chapter.

A message sent to a user's two-way capable device (that has **Enable responses** selected) will include a message identification number that is required when the user responds to the message. This enables WirelessOffice to correctly connect the response to the original message.

Two-way messaging can also acknowledge escalated messages and send commands for canceling or escalating a message. Message ID and Escalation ID are required. Please see "Cancellation and Escalation" on page 125.

The following diagram depicts the two-way flow of a message sent in WirelessOffice Messenger:



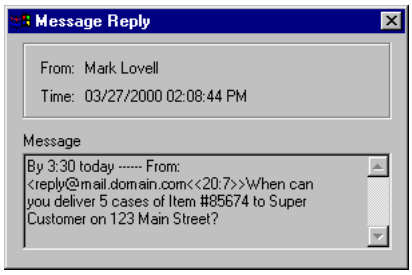
1. Create message in WirelessOffice Messenger addressed to Jane Doe, who has a two-way device configured with an SMTP carrier and "Enable Responses" selected.
2. WirelessOffice dispatches message. E-mail Messenger cannot be on same computer as corporate e-mail server. (SMTP tab in Server Configuration should have Server name: mail.domain.com, Sender ID: reply@mail.domain.com.)
3. Message sends through corporate e-mail system to carrier to a two-way device. Firewall port is open.
4. Message received. User replies with response or escalation command. Embedded Message ID <<1:5>> links response to original message.
5. Response message returns via carrier to Internet to E-mail Messenger. Firewall port is open.
6. Message is parsed by E-mail Messenger and sent to WirelessOffice Server.
7. Message is viewed in WirelessOffice Messenger's Message Log or can display as a pop-up dialog upon arrival. Message is also viewable in WirelessOffice Administrator's Message Log.

Note: For two-way messaging to occur, the wireless carrier implemented by the wireless device user must be able to handle e-mail responses. Two-way messaging responses need a WirelessOffice Message ID in order for the response to be correctly linked to the original message.

Viewing Two-Way Message Replies

Two-way message replies can be viewed in WirelessOffice Administrator's Message Log. You can also configure WirelessOffice Administrator or WirelessOffice Messenger to display a pop-up dialog whenever a two-way message response is received. Please see "Message Options" in the *Configuring WirelessOffice Server* chapter. For information about associating sounds to message responses in WirelessOffice Administrator, please see "Sound Events" in the same chapter.

The WirelessOffice Administrator **Message Reply** pop-up dialog displays for two-way message responses when enabled (depicting a RIM BlackBerry response):



Note: In the **Message Log** or **Message Reply** dialog, the response is listed first, followed by the original message. The message ID <<20:7>> allows WirelessOffice to match the response to the Message Log entry number (20) and the unique device number (7). On the device, the Message ID displays at the beginning or end of the message.

Cancellation and Escalation

E-mail Messenger can cancel and "escalate" escalated messages that were created in Alarm Messenger, File Messenger or Command Messenger using two-way messaging.

Command Format for Cancellation and Escalation

The e-mail message must contain the Message ID and the Escalation ID. The Message ID must be prefixed by `ID:`, e.g. `ID:109.` If you select Reply/Reply with text, the IDs will automatically be included in the message.

The following commands are supported and may be placed anywhere in the e-mail body:

Command	Action
*ACKY	Acknowledge and cancel escalated message. Notify previous recipients. Notify previous recipients will send a cancellation notification and details the user that cancelled the message.
*ACK or *ACKN	Acknowledge and cancel escalated message. Do not notify previous recipients.
*NAK	Escalate message to next recipient level. All following levels will be rescheduled for the current time plus the originally defined Time Interval.

Commands are NOT case sensitive.

Responding with Two-Way Devices

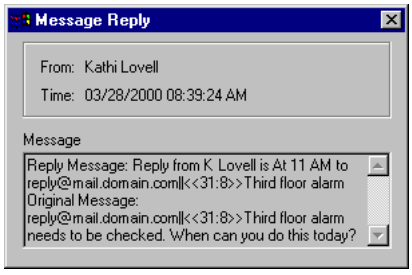
Two-way pagers and wireless hand-held devices, such as Motorola's Page Writer 2000™, Research In Motion's (RIM) BlackBerry™ and Palm Incorporated's Palm VII™ are able to send responses to E-mail Messenger messages sent through the WirelessOffice Server. Response requirements differ from device to device. The following instructions are for example purposes only and reflect the third-party devices at time of publication. Refer to the device's manual for further information if needed.

Motorola Page Writer 2000 response instructions:

Note: To reply to messages or use escalation commands, **Enable responses** must be selected in the user's device properties.

1. To respond to a WirelessOffice message, select **Reply**.
2. Select **Custom Message**. Type the response message or for an escalated message response, type one of the four message commands (*ACKY, *ACKN, *ACK, *NAK).
3. Select **Send**.
4. Responses will display in WirelessOffice Administrator's **Message Log**, as well as in the originating message application's **Message Log**.

   A WirelessOffice Administrator **Message Reply** pop-up dialog from a Motorola Page Writer 2000 device:



RIM BlackBerry response instructions:

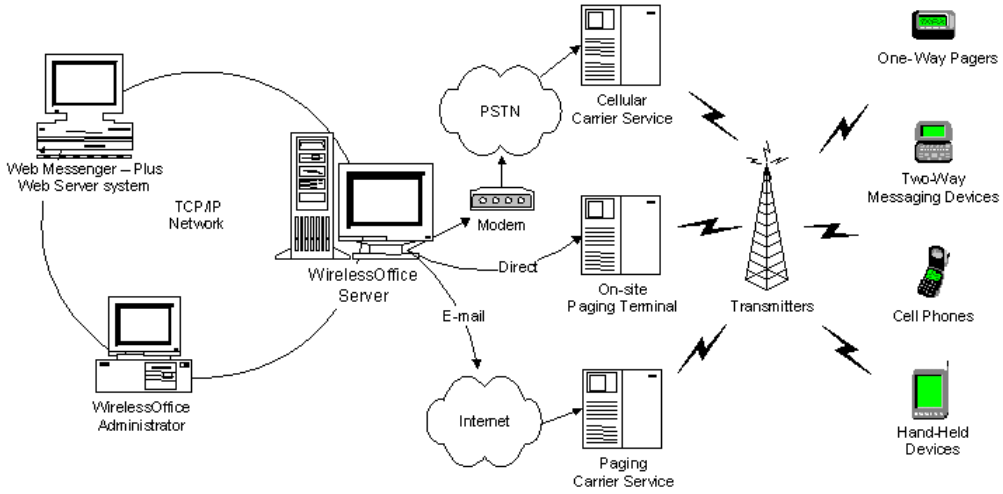
1. To respond to a WirelessOffice message, press the roller wheel and select **Reply with text**.
2. Type the response message or for an escalated message response, type one of the four message commands (*ACKY, *ACKN, *ACK, *NAK).
3. Press the roller wheel and select **Send message**.
4. The message reply will display in WirelessOffice Administrator's **Message Log**, as well as in the originating message application's **Message Log**

Using Web Messenger – Plus

Web Messenger – Plus, formerly called JPage, will automatically install when you select Web Messenger from the WirelessOffice installation. It will only function if your Authorization Code reflects a Web Messenger purchase or within the 45-day time trial period if using the DEMO Authorization Code. This section provides you with configuration and operating considerations.

Web Messenger provides effortless, messaging capabilities from any Java-capable Internet browser. Once you install and configure Web Messenger, your entire organization will benefit from the convenience of accessing a global address book of users, groups and departments via the Web. Web Messenger supports resolved and unresolved users, which allows your organization to send messages to personnel defined in the WirelessOffice Server, or send messages to undefined users by PIN and carrier. Web Messenger includes a real-time personal message log, as well as escalated message options to cancel or escalate.

The following figure illustrates how a Web Messenger system works:



Note: Install Web Messenger on your Web server computer, which can be any network system running Windows NT/2000 (including the WirelessOffice Server). All WirelessOffice components may be loaded on this system if desired. Then configure the Web Messenger control panel and review your Web server software ensuring that Web Messenger is properly integrated. After configuring your Web server as well as WirelessOffice Administrator, any system with an Internet browser will be able to access Web Messenger.

New Web Messenger – Plus Features

- User Name/Password authentication for server connection (page 135)
- Escalated message cancellation and escalation (page 137)
- Option to globally disable Escalation tab (page 131)
- Logging enable/disable (page 131)
- Send messages to departments
- Security profiling
- Windows 2000 compatibility

Standard Web Messenger – Plus Features

- Compatible with any Java-capable Internet browser
- Real-time personal Message Log
- Send messages to individual users and groups
- Send messages using PIN and server-defined carrier
- Option to globally disable public address book accessibility
- Runs as a Windows NT/2000 service

Configuring Web Messenger

You *must* configure Web Messenger before you can use its services. At a minimum, Web Messenger must know where on the network to find the WirelessOffice Server (by its name or Internet address) and the service must be started. There are other configurable options available as well. To configure Web Messenger, you must be logged on as the operating system administrator.

To configure Web Messenger:

1. Click **Start**, point to **Settings**, select **Control Panel** then **Web Messenger**. Or click **Start**, point to **Programs**, select **Emergin WirelessOffice** then **Web Messenger**.

   The Web Messenger **Service** tab displays:

2. Use the tabs along the top edge of the Web Messenger control panel to access various configuration options.

The Web Messenger tabs are briefly described below:

Tab	Description
Service	Use this tab to start or stop the Web Messenger service and to specify Web Messenger's startup behavior.
WirelessOffice	Use this tab to specify the name or Internet address of the WirelessOffice Server, to specify if the public address book is on/off to Web clients, to allow escalated message cancellation/escalation, and to enable/disable logging.
About	This tab shows you the current version of Web Messenger and provides access to general help about using the service.

Note: Certain configuration changes require that Web Messenger be restarted before your changes will take effect. When you make such a change, you will receive a warning message. If the message warns you that the *service* must be restarted, it means you must stop Web Messenger and restart it. Please see "To start or stop Web Messenger" on page 130. To simplify things, you should stop Web Messenger before making configuration changes.

Changing the Authorization Code

If you did not purchase Web Messenger – Plus with your initial copy of WirelessOffice, you will need to enter a new Authorization Code into WirelessOffice Administrator to enable Web Messenger. If the WirelessOffice system and Web Messenger are currently running under the DEMO Authorization Code, the software will only function for a limited period of time. At the end of this trial period, you will see the following message when you attempt to connect to the Server through the Web Messenger control panel:

```
Web Messenger cannot start because it is not registered.
Please contact Emergin at 1-888-922-7638 or 1-561-361-6990.
```

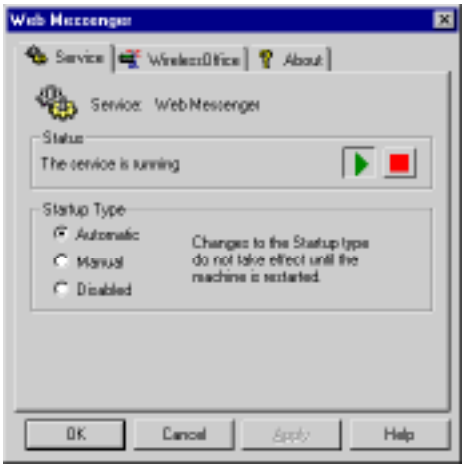
To re-enable Web Messenger, you must have a valid Authorization Code. When you purchase the product, you will be given an Authorization Code that will fully enable the software. Enter this new Authorization Code into the WirelessOffice Server using the WirelessOffice Administrator. Please see the "Modifying Server Configuration" chapter in the *WirelessOffice System Administrator Manual*.

Using the Service Tab

Use the **Service** tab to start or stop the Web Messenger service. You can also use this tab to specify Web Messenger's startup behavior. For example, you can specify that Web Messenger will automatically start when the computer it is loaded on starts (for unattended operation) or you can specify that starting and stopping Web Messenger be controlled manually.

To start or stop Web Messenger:

1. Click the appropriate button:  to start or  to stop.
2. Click **OK** if you are finished configuring Web Messenger. Otherwise click **Apply** before going to another tab.



Note: Web Messenger is a background service in Windows NT/2000. If you click **OK** while Web Messenger is running, the configuration control panel is closed, but the service remains loaded and running. When you stop Web Messenger, the service stops running.

To change the startup type:

1. Select **Automatic**, **Manual** or **Disabled**. **Manual** is the default setting, but **Automatic** is recommended.
2. Click **Apply** if you are not finished using the configuration control panel. Otherwise, click **OK**. The change will not take effect until the computer is restarted.

Using the WirelessOffice Tab

Use this tab to specify the name or Internet address of the WirelessOffice Server, test server connectivity, to specify public address book and escalation tab availability, and to control logging.

To specify the server address:

1. Click the **WirelessOffice** tab. Type the **Name or IP Address** of the WirelessOffice Server computer in the text box. The Server name is preferred as it is more static than an IP address.

2. Click the **Test Connectivity** button to ensure that Web Messenger can communicate with WirelessOffice Server.

Note: If the connectivity test is unsuccessful, verify that your computer has a network connection and double-check the name or Internet address of the WirelessOffice Server.

To display the public address book or escalation tab:

3. Select **Display public address book to web clients** if Web Messenger users should have access to the main address book. See “Public Address Book Availability” on page 135.
4. Select **Display escalation tab in web clients** if Web Messenger users should have access to the Escalation tab in order to cancel or “escalate” messages using an Escalation ID. See “Using the Escalation Tab” on page 137.
5. Click **OK** if you are finished using the Web Messenger control panel. Otherwise click **Apply** before going to another tab.

Note: The public address book will only display users, groups and departments that are accessible to the logged in user.

To enable logging:

1. Select **Enabled** to start Web Messenger logging. The log is located in c:\winnt\webmsgr.log.
2. Only enable logging for diagnostic purposes.

Using the About Tab

Use this tab to view the current version number of Web Messenger. Click the **Help** button in the lower-right corner to access the help file.

Using Web Messenger

After configuring Web Messenger, you can start using it. However, you need to understand two things:

- How to control Web Messenger, and
- How to setup Web Messenger.

Controlling Web Messenger

Web Messenger is a background service in Windows NT/2000. Its operation is simple; while it is running, it allows users to send messages to the WirelessOffice Server via an Internet browser. While Web Messenger is stopped, it is removed from memory and performs no service. You will use the Web Messenger control panel to start and stop the service. See “To start or stop Web Messenger” on page 130.

The application control panel operates independently of the Web Messenger service. When you click **OK**, the configuration control panel will close and the Web Messenger service will remain in its current state (running or stopped).

Automatic vs. Manual Startup

If Web Messenger is configured for **Automatic Startup**, the service starts automatically when the computer on which it is installed is started. If configured for **Manual Startup**, you must use the Web Messenger control panel to start it. The WirelessOffice Server does not need to be running in order to start the service.

Web Server Setup

Once Web Messenger is setup, your Web server will need to be properly configured for the application to run correctly. Loading and set up of a Web server (e.g. Microsoft Internet Information Server, Netscape Enterprise Server or Microsoft Personal Web Server) may be required if it is not already in place. If you are using Microsoft Internet Explorer V5.0 or greater, you are required to install Java Virtual Machine.

You can install Web Messenger in a virtual directory of your existing Web site or as a Web site home page.

Note: If you will be running Web Messenger through a firewall, be sure your company firewall supports Java before loading Java Virtual Machine.

To set up Microsoft Internet Information Server 4.0 (for Windows NT Server systems):

For more information about configuring the Web server software, refer to their on-line help. These steps reflect a Windows NT 4.0 configuration at the time of publication. Steps may vary for Windows 2000 configurations.

1. Load Windows NT 4.0 Option Pack (if not already installed). It can be downloaded at www.microsoft.com/ntserver/nts/downloads/recommended/NT4OptPk/default.asp.
2. Click **Start**, point to **Programs**, select **Windows NT 4.0 Option Pack**, then **Microsoft Internet Information Server**. Click **Internet Service Manager**.

To add a new virtual directory:

3. Navigate in the Tree View to your Web site, e.g. domain.com. Right-click and select **New** and then **Virtual Directory**. The **New Virtual Directory Wizard** dialog displays.
4. Type the alias name to access Web Messenger, e.g. webmsgr. Click **Next**.
5. Click **Browse** and select c:\inetpub\wwwroot\webmsgr. Click **Next**.
6. Select all permissions except write access. Click **Finish**.
7. In the Tree View, right-click the newly created virtual directory. Select **Properties**.
8. Click the **Documents** tab. Click **Add** to select the default document. Type `index.htm`. Click **OK** and exit the **Internet Service Manager**.

To set up as a home page:

9. Navigate in the Tree View to the Web site, e.g. domain.com or create a new Web site by right-clicking in the Tree View and selecting **New** and then **Site**.
10. Right-click the Web site name and select **Properties**.
11. Click the **Home Directory** tab and click **Browse**. Select c:\inetpub\wwwroot\webmsgr. Select read, directory browsing allowed and execute (listed in the **Application Settings** area).
12. Click the **Documents** tab. Click **Add** to select the default document. Type `index.htm`. Click **OK** and exit the **Internet Service Manager**.

To set up Microsoft Personal Web Server 4.0 (for Windows NT Workstation systems):

For more information about configuring the Web server software, refer to their on-line help. These steps reflect a Windows NT 4.0 configuration at the time of publication. Steps may vary for Windows 2000 configurations.

1. Load Windows NT 4.0 Option Pack (if not already installed). It can be downloaded at www.microsoft.com/ntserver/nts/downloads/recommended/NT4OptPk/default.asp.
2. Click **Start**, point to **Programs**, **Windows NT 4.0 Options Pack** then **Microsoft Personal Web Server**. Click **Personal Web Manager**.

To add a new virtual directory:

3. Click **Advanced** and select **Add**. Click **Browse** to select c:\inetpub\wwwroot\webmsgr as your **Home Directory**. Type `webmsgr` as the alias name. All **Access** options should be selected. Click **OK**.
4. Select **Enable Default Document**. In the **Default Document** text box, type `index.htm`. Select **Allow Directory Browsing**.

To set up as a home page:

5. Click **Advanced** and select **Add**. Set up your **Home Page**. Click **Browse** to select c:\inetpub\wwwroot\webmsgr as your **Home Directory**. All **Access** options should be selected. Click **OK**.
6. Select **Enable Default Document**. In the **Default Document** text box, type `index.htm`. Select **Allow Directory Browsing**. Exit the **Personal Web Server**.

Open and Login to Web Messenger

To open Web Messenger:

1. For virtual directory configurations, open your Web browser and access Web Messenger by typing your company Web site address with Web Messenger as a directory, e.g. www.domain.com/webmsgr.
2. For new home page configurations, open your Web browser and access Web Messenger by typing the newly configured Web page name. For example, http://webmessenger.
3. If the Web Messenger application does not come up, but a blank screen does, this indicates that Java Virtual Machine must be loaded as well. This application may be downloaded at www.microsoft.com/java.

To login to Web Messenger:

Each login account must be unique and users may only login to one client application at any given time. Create new user accounts with appropriate security settings as needed.

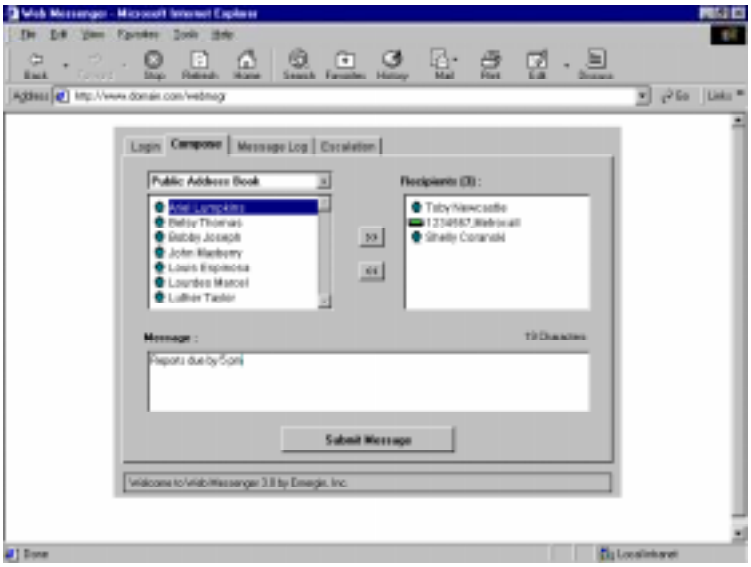
1. On the **Login** tab, type your **User Name** and **Password**. Click **Login**.
2. The **Compose** tab will then open for message sending.

Public Address Book Availability

To access the Public Address Book:

1. If **Display public address book to web clients** is checked in the Web Messenger control panel **WirelessOffice** tab, end users will have the ability to see recipients defined in the WirelessOffice database.

   The **Public Address Book** displays all users, groups and departments accessible to the User Name login account's security access and rights:



   Note: If you cannot see all address book recipients and it seems like the downward scroll arrow is not working, select a recipient name and press the Page Up or Page Down keys on your keyboard. Also use the DOWN ARROW key.

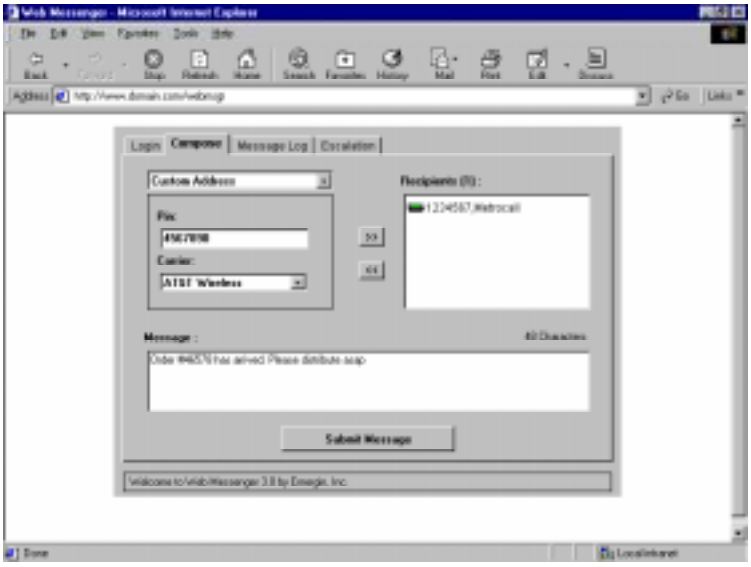
2. If **Display public address book to web clients** is not checked in the Web Messenger control panel, the Web Messenger end-user will not have the ability to see recipients in the WirelessOffice database. Rather, they will be required to use the **Custom Address** format, which uses a PIN number and a server-defined carrier in order to send a message.

Sending a Message

From the Web Messenger applet, you can send messages via the WirelessOffice Server.

To send a message:

1. With Public Address Book accessibility, click and highlight the desired recipients and select the **>>** button to include as a **Recipient**. You can also double-click a name to add it.
2. To address a message using PIN and carrier information, select **Custom Address** from the address book drop-down list.
3. Type the **PIN** number and select the server-defined **Carrier**. Click the **>>** button to include the PIN/Carrier address as a **Recipient**. Add more custom PIN numbers and carriers if desired.



4. Type your message in the **Message** text box (1024 character maximum). To send, click **Submit Message**. The message will be queued in WirelessOffice Server and shown in WirelessOffice Administrator's **Message Log** and the Web Messenger **Message Log** tab.
5. Click the **Message Log** tab. Click the **Refresh** button to update the view.

Using the Message Log Tab

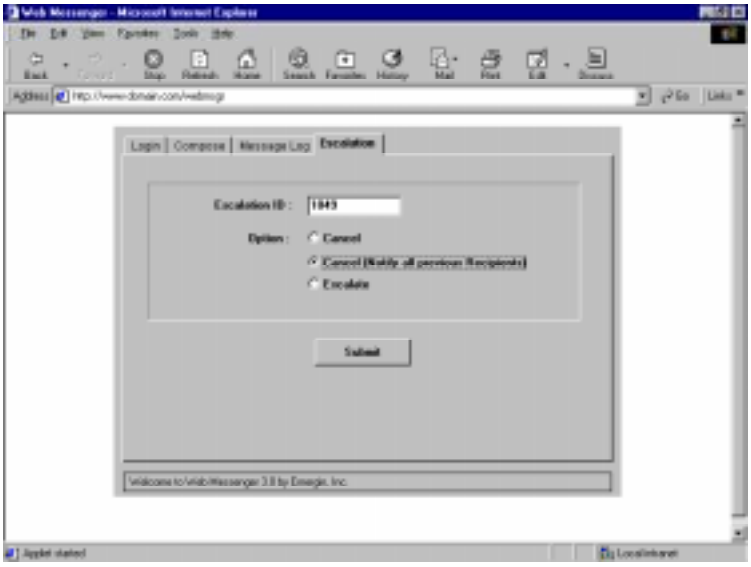
Select the Message Log tab to view all messages sent from Web Messenger using your User Name login account. Click **Refresh** to update the view. Each message entry details message status, submittal time and date, sender, recipient, message status description, and the message text.

Using the Escalation Tab

To use the Escalation tab, the Web Messenger configuration control panel must have **Display escalation tab in web clients** selected on the **WirelessOffice** tab. To cancel or "escalate" an escalated message, you must know the Escalation ID number. Escalated messages can be sent from Alarm Messenger, File Messenger and Command Messenger.

Cancelling and Escalating Messages

1. Click the **Escalation** tab.
2. Type the **Escalation ID** number. This numbers appears in your wireless device message as `ID: 1049`, for example.
3. Select **Cancel** to cancel the message. No previous escalated message recipients will be notified about the cancellation.
4. Select **Cancel (Notify all previous Recipients)** to cancel the escalated message as well as notify current and previous recipients. A cancellation notification message details the user that cancelled the message.
5. Select **Escalate** to immediately advance the message to the next recipient level. All following levels will be rescheduled for the current time plus the originally defined time interval.



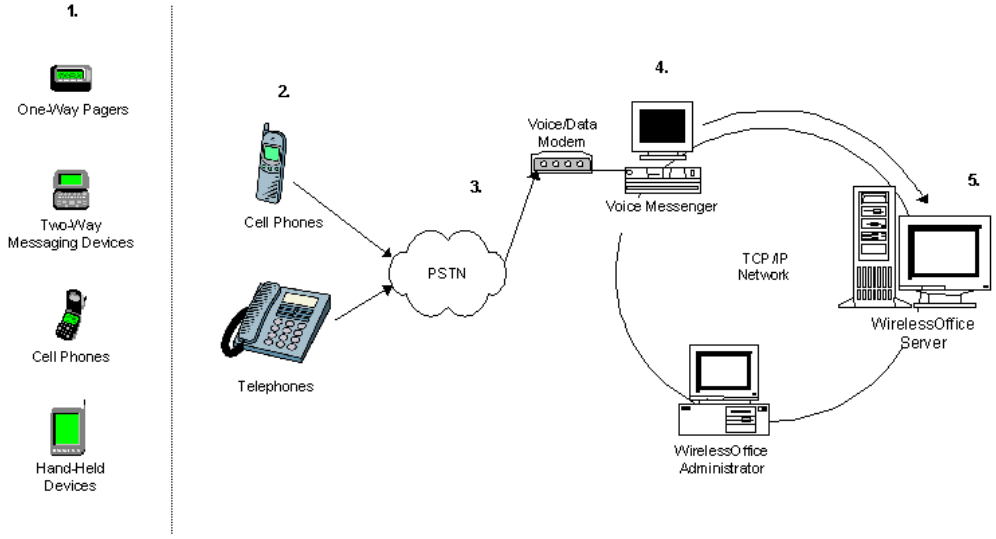
6. Click **Submit** to send the request. View the escalated message status in WirelessOffice Administrator's **Escalated Messages** tab.

Using Voice Messenger

Voice Messenger will automatically install when you select Voice Messenger from the WirelessOffice installation. It will only function if your Authorization Code reflects a Voice Messenger purchase or you are using the DEMO Authorization Code.

Voice Messenger provides escalated message acknowledgment from any cell phone or telephone using IVR (Interactive Voice Response) technology. Escalated messages originate in Command Messenger, Alarm Messenger and File Messenger. The caller simply dials the phone number to the Voice Messenger modem, logs in and can then cancel or advance as many escalated messages as required. To cancel or advance an escalated message, the user must enter the Escalation ID number, which is included in the escalated message received on their wireless device.

The following step-by-step figure illustrates how a Voice Messenger system works:



1. Escalated message is received on wireless device. Escalation ID is part of message, e.g. ID:1409.
2. Respond to escalation using a cell phone or telephone.
3. Dial the dedicated modem phone number that accesses the Voice Messenger computer.
4. Type your Full WirelessOffice Name, Password and the Escalation ID number. Then cancel or advance an escalated message. If cancelling a message, you can opt to notify previous escalation recipients.
5. Information is relayed to the WirelessOffice Server, where the desired action occurs. Escalated message status is viewed in WirelessOffice Administrator and Alarm Messenger.

Note: Install Voice Messenger on any networked computer running Windows 2000 Server or Professional (including the WirelessOffice Server or other WirelessOffice application systems).

Voice Messenger Features

- Escalated message acknowledgment (cancellation and immediate advancement)
- User Name/Password security authentication for call-in access (option to disable) and server connection
- Escalated message cancellation can optionally notify all previous recipients
- Multiple escalation functions allowed per single call
- Logging enable/disable
- Ability to use your own voice recordings
- Adjustable IVR timing settings
- Windows 2000 compatibility
- Runs as a Windows 2000 service
- Voice/data modem instead of expensive telephony hardware

Configuring Voice Messenger

You *must* configure Voice Messenger before you can use its services. At a minimum, Voice Messenger must know where on the network to find the WirelessOffice Server (by its name or TCP/IP address) and the modem must be properly installed and selected. To configure Voice Messenger, you must be logged on as the operating system administrator and have a WirelessOffice login account.

To configure Voice Messenger:

1. Click **Start**, point to **Settings**, select **Control Panel** and then **Voice Messenger**.
2. Or click **Start**, point to **Programs**, select **Emergin WirelessOffice** then **Voice Messenger**.

   The **Voice Messenger** control panel **Service** tab displays:

3. Use the tabs along the top of the Voice Messenger control panel to access various configuration options.

The Voice Messenger control panel tabs are briefly described. To access these options, click on the desired tab.

Tab	Description
Service	Use this tab to start or stop the Voice Messenger service or to specify Voice Messenger's startup behavior.
WirelessOffice	Use this tab to login, specify the name or TCP/IP address of the WirelessOffice Server, test connectivity to the server and disable/enable caller login requirements.
Settings	This tab selects which voice/data modem to use, disable/enable logging, set the logging directory path, and set inactivity and disconnect timers.
Voice Wave Files	Use this tab to select the .wav file directory location, and to play back all .wav files located in that directory.
About	This tab shows you the current version of Voice Messenger and provides access to general help about using the service.

Changing the Authorization Code

If you did not purchase Voice Messenger with your initial copy of WirelessOffice, you will need to enter a new Authorization Code into WirelessOffice Administrator to enable Voice Messenger. If the WirelessOffice system is currently running under the DEMO Authorization Code, the software will only function for a limited period of time. At the end of this trial period, you will see the following message when you attempt to connect to the Server through the Voice Messenger control panel:

```
Voice Messenger cannot start because it is not registered.
Please contact Emergin at 1-888-922-7638 or 1-561-361-6990.
```

To re-enable Voice Messenger, you must have a valid Authorization Code. When you purchase the product, you will be given an Authorization Code that will fully enable the software. Enter this new Authorization Code into the WirelessOffice Server using the WirelessOffice Administrator. Please see "Modifying Server Configuration" on page 21.

Using the Service Tab

Use the **Service** tab to start or stop the Voice Messenger service. You can also use this tab to specify Voice Messenger's startup behavior. For example, you can specify that Voice Messenger will automatically start when the computer it is loaded on starts (for unattended operation) or you can specify that starting and stopping Voice Messenger be controlled manually.

To start or stop Voice Messenger:

3. Click the appropriate button:  to start, or  to stop.
4. Click **OK** if you are finished configuring Voice Messenger. Otherwise click **Apply** before going to another tab.

Note: Voice Messenger is a background service in Windows 2000. If you click **OK** while Voice Messenger is running, the configuration control panel is closed, but the service remains loaded and running. When you stop Voice Messenger, the service stops running.

To change the startup type:

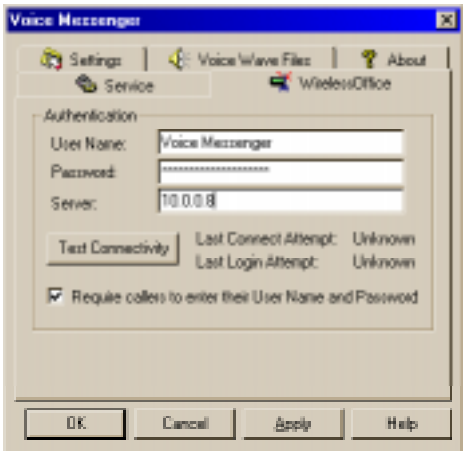
1. Select **Automatic**, **Manual** or **Disabled**. Startup type changes will not take effect until the computer is next rebooted. **Manual** is the default setting, but **Automatic** is recommended.
2. Click **Apply** if you are not finished using the configuration control panel. Otherwise, click **OK**.

Using the WirelessOffice Tab

Use this tab to login, specify the name or TCP/IP address of the WirelessOffice Server, test connectivity with the server and disable/enable caller login requirements.

To login and specify the server address:

1. Click the **WirelessOffice** tab. Type a **User Name** and **Password** (1-20 characters in length) to login to the server. Beforehand, set up a "Voice Messenger" User account in WirelessOffice Administrator with the following security settings: **100** for the user security level, **Grant access** and **Same or lower** for user access.



2. Type the name or TCP/IP address of the WirelessOffice Server computer in the **Server** text box. The computer name is recommended.
3. Click the **Test Connectivity** button to ensure that Voice Messenger can communicate with the WirelessOffice Server. If **Last Connect Attempt** and **Last Login Attempt** both display OK, then the test was successful.
4. Any errors will be displayed as a message. **Server Status** indicates whether the connection to the WirelessOffice Server was successful or not. To locate the correct Server name, open the WirelessOffice Administrator and click **File** and then **Change Server**. If the server connection is not made, **Login Status** will be blank. **Login Status** indicates any login connection errors, such as the User Name is already logged in (each User Name can only log into one client application at a time), the User Name is not specified in the Server, or the password is incorrect.
5. To disable the caller login name and password requirement, deselect **Require callers to enter their User Name and Password**. Callers will immediately be able to type the Escalation ID and desired action. Security will be removed and when a caller cancels an escalation and notifies previous recipients, that specific caller will not be able to be linked with that cancellation. Instead, the notification message will read that the Voice Messenger User Name cancelled the message.

Using the Settings Tab

Use this tab to select the appropriate voice/data modem, enable/disable logging and to adjust inactivity and disconnect timeout intervals.

To select a modem:

1. Using the drop-down combo box, select the voice/data modem you wish to use with Voice Messenger. Only available voice-capable modems are listed.
2. If no modems are auto-detected, refer to “Modem Configuration” on page 146 for information about adding a voice/data modem. Be sure to exit the Voice Messenger control panel before adding the modem.
3. When you re-open the application, the new modem should be listed.
4. Click **Apply** if you are not finished in the configuration control panel. Otherwise, click **OK**.

To enable logging:

1. Stop the Voice Messenger service by clicking the **Stop** button on the **Service** tab. Please see “To start or stop Voice Messenger” on page 141 for instructions.
2. Select **On** to start Voice Messenger logging. Only enable logging for diagnostic purposes.
3. The log is located by default in c:\winnt\vmsgr.log. Click the ellipsis button to change the log file location.
4. Click **Apply** if you are not finished in the configuration control panel. Otherwise, click **OK**.
5. Restart the Voice Messenger service in the **Service** tab and click **OK**.

Note: The log file rolls over to vmsgr.old when it reaches 512 kilobytes in size and a new .log file is created. Error and warning messages are logged to the 2000 Event Viewer as well as the selected text log file.

To adjust inactivity and disconnect timeout intervals:

An inactivity warning (moretime.wav) is played if x seconds pass with no activity. The warning instructs the caller that it is waiting and that any key press will return the caller to the previous function. If no action is taken after this warning, the disconnect message (goodbye.wav) will play after y seconds of further inactivity and will then disconnect the call if no key is pressed.

1. Set the **Inactivity warning after (seconds)** to a numeral in the range of 20 and 360 seconds (6 minutes). The default setting is 60 seconds.
2. Set the **Disconnect after warning (seconds)** to a numeral in the range of 10 and 60 seconds. The default setting is 10 seconds.
3. Click **Apply** if you are not finished using the configuration control panel. Otherwise, click **OK**.

Using the Voice Wave Files Tab

Use this tab to change the directory where the .wav (digital wave audio) files are stored and to play back .wav files. Voice Messenger provides default .wav recordings, but customized recordings can be made by the customer and placed in the appropriate directory. Please see “Recording Customized Messages” on page 148. For a complete list of the required .wav file names and the script, please see “Appendix F: Voice Messenger Prompts” on page 213.

Voice Messenger auto-detects for the required .wav files each time the configuration control panel is newly opened and the **Voice Wave Files** tab is selected. If any files are missing, the application will display an error message detailing which files are missing.

To change the directory path:

1. Stop the Voice Messenger service by clicking the **Stop** button on the **Service** tab. Please see “To start or stop Voice Messenger” on page 141 for instructions.
2. Click the **Voice Wave Files** tab then click the button with the ellipses. The **Select Voice Folder** dialog box displays. The default directory is C:\Program Files\Emergin WirelessOffice\Voice. It is highly recommended to save the .wav files on a local directory.
3. Locate and select the folder in which you want the .wav files maintained. Click **OK**. Click **Apply** if you are not finished using the configuration control panel. Otherwise, click **OK**.
4. Restart the Voice Messenger service in the **Service** tab and click **OK**.

To play message recordings:

Important: In order to play back recordings, the system must have a configured audio card and speakers. The service should be stopped while playing files.

1. In the **File Name** field, select the recording you wish to play. Each recording displays its associated purpose when selected.

2. Click the green arrow **Play** button. To stop the playback, click the red square **Stop** button.
3. Click **Apply** if you are not finished using the configuration control panel. Otherwise, click **OK**.

Using the About Tab

Use the **About** tab to view the version number of Voice Messenger. Click the **Help** button in the lower-right corner to access the help file.

Controlling Voice Messenger

Voice Messenger is a background service in Windows 2000. Its operation is simple; while it is running, it allows users to send escalation acknowledgment commands to WirelessOffice Server via a cell phone or telephone call to the modem line. While Voice Messenger is stopped, it is removed from memory and performs no service. You will use the Voice Messenger control panel to start and stop the service. See “To start or stop Voice Messenger” on page 118 for instructions.

The application control panel operates independently of the Voice Messenger service. When you click **OK**, the configuration control panel will close and the Voice Messenger service will remain in its current state (running or stopped).

Automatic vs. Manual Startup

If Voice Messenger is configured for **Automatic Startup**, the service starts automatically when the computer on which it is installed is started. If configured for **Manual Startup**, you must use the Voice Messenger control panel to start it. The WirelessOffice Server does not have to be running in order to start the service. See "To change the startup type" on page 118 for more information about Startup Types.

Modem Configuration

Voice Messenger automatically detects all compatible voice/data modems already installed on your computer system. If no voice/data modems are listed, install an appropriate modem driver.

Note: At this time, the only recommended voice/data modem is the 3COM U.S. Robotics 56K Voice Faxmodem Pro internal or external version. One line per system is supported. It is recommended to configure a dedicated outside line to Voice Messenger. View the Release Notes for a list of modems that have been tested after manual publication and are compatible (click **Start**, **Programs**, **Emergin WirelessOffice** and select **Release Notes**). A compatible voice/data modem must play PCM, 8 kHz sampling, 16 bit data, 1 channel (mono) .wav files.

To verify modem installation and COM port location:

1. Click **Start**, **Settings**, **Control Panel** and then **Voice Messenger**.
2. Click the **Settings** tab. All available voice capable modems are automatically detected and listed. [If no modems are listed, follow the instructions below.]
3. Select the modem you wish to use.

To add a modem:

1. Close the Voice Messenger control panel. Shut down the Voice Messenger computer and connect a voice-capable modem. Turn the modem's power on. Restart the computer.
2. The Windows 2000 Plug and Play feature should guide you through the modem installation. Follow the instructions provided by the modem manufacturer. Otherwise, go to Step 3.
3. Click **Start**, **Settings**, **Control Panel**, then **Phone and Modem Options**. Select **Modems** tab.
4. Click **Add**. The **Add/Remove Hardware Wizard** displays. Click **Next**, allowing the system to auto-detect your newly connected modem.
5. If your modem cannot be detected, you will be prompted to select from a list. Click **Next**.
6. Select the **Manufacturer** and **Model** of the modem. If using the recommended modem, select **3COM** as the **Manufacturer** and the appropriate **U.S. Robotics 56K Voice** selection.
7. Select the port that the new modem is attached to. Click **Next**.
8. After completing the modem driver installation process, re-open the Voice Messenger configuration panel and click the **Settings** tab. The new modem should now be listed.

Calling into Voice Messenger

When calling into Voice Messenger always remember to:

- Dial each response slowly and deliberately (speed dialing is not supported)
- Wait until each prompt finishes before typing your response

To call and login to Voice Messenger:

1. Dial the dedicated phone number for the line that is plugged into the voice/data modem.
2. Follow the voice prompts. If caller login requirements are enabled, type your WirelessOffice Full Name then the Pound (#) Key. The Full Name should be used as opposed to the Login User Name as defined in the user profile in WirelessOffice Administrator. Use the `1` key for any special characters, such as a space or punctuation.
3. The user must have a password. Type it and then press the # key.
4. The # key is required after each entry and the Star (*) key allows the user to go to the previous menu level or to exit.

Note: Callers do not need any special user security levels or settings to call in and cancel or advance escalated messages. **Grant access** is the only requirement.

To escalate or cancel a message

1. Type the escalation number only. The `ID:` is not required.

   Example: The following depicts what a WirelessOffice escalated message will look like on your wireless device: `ID:2200 Lvl:1 Message text`

   Where…`ID:2200` is the Escalation ID. When responding with Voice Messenger you will type `2200` as the Escalation ID number.

   `Lvl:1` is the escalated level. The range is 1 –5.

2. Messages may be cancelled or increased to the next level. If cancelled, the caller is given the option to notify previous recipients.

Command	Action
Cancel + Notify Previous Recipients	Cancel escalated message. Notify previous recipients will send a cancellation notification and details the user that cancelled the message.
Cancel + No Notification	Cancel escalated message. Do not notify previous recipients.
Increase the Escalation Level	Escalate message immediately to next recipient level. All following levels will be rescheduled for the current time plus the originally defined Time Interval.

Recording Customized Messages

Voice Messenger allows customers to use their own customized recordings. You may add or reword information but always keep the prompts brief and make sure to record the key steps that callers need to correctly implement the system. For example, you may want to include your company name in the greeting.

Messages must be recorded in the following .wav format: PCM, 8 kHz sampling, 16 bit data, 1 channel (mono). You can record messages using the Windows 2000 operating system recorder or using a third-party recording product.

To record messages using Microsoft Sound Recorder:

For more information about configuring the recording software, refer to their on-line help. These steps reflect a Windows 2000 Server configuration at the time of publication and are provided for basic instruction purposes only.

Note: These steps assume speakers, microphone and audio card are all properly configured. Before placing the new .wav files in the Voice Messenger directory, you may want to back up the default recordings in case you need to use them in the future.

1. Refer to “Appendix B: Voice Messenger Prompts” on page 213 for a recording script and file names.
2. Click **Start**, then **Programs**, **Accessories**, **Entertainment** and then **Sound Recorder**.
3. Click **File** and then **New**. Record a message by clicking the **Record** button. When finished speaking the message, click the **Stop** button.
4. Play back your recording to ensure sound quality.
5. Click **File** and then **Save As**. Select the file location and then **Name** the file *exactly* as it is spelled in the prompts script.
6. Click **Change** to adjust the recording format. In the **Attributes** drop-down list, select **8.000 kHz, 16 Bit, Mono** from the list. Make sure that the **Format** field is set to **PCM**. Click **OK**. Then click **Save**.
7. To record the next message, repeat Steps 3 to 6. Record all prompts to ensure consistency.

Escalated Messaging

Escalated messages are intended to ensure that important events are properly taken care of by continuing to escalate a message until it runs its course or is cancelled. Up to five levels of escalation can take place with the last level repeated as often as needed, sending to various recipients or groups/departments. The time interval between sending to each level is configured according to the urgency and importance of the message.

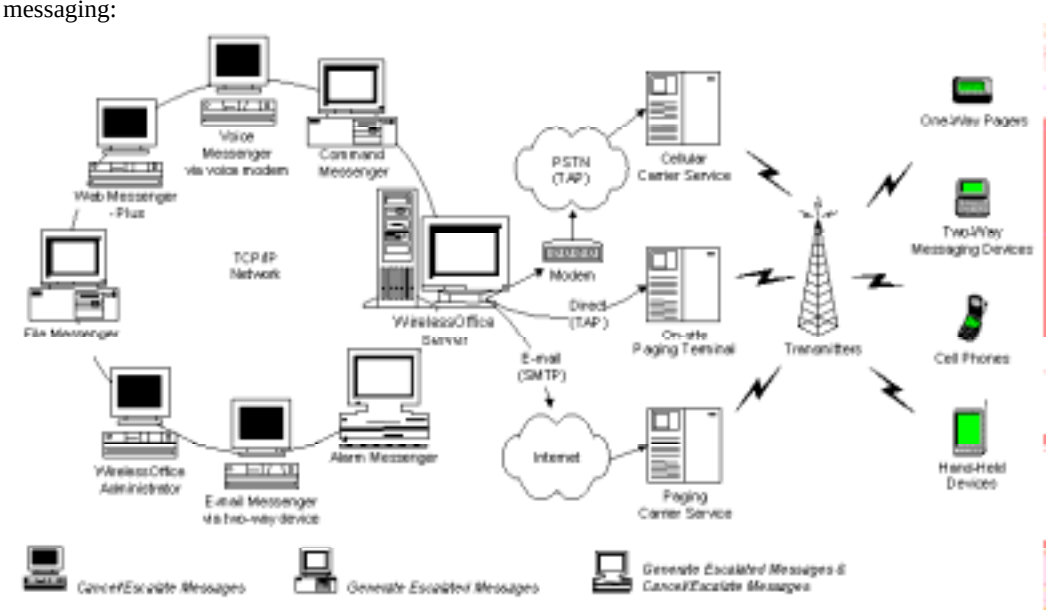
Escalated messages are configured in:

- Command Messenger
- Alarm Messenger
- File Messenger

Escalated messages can be cancelled and escalated using:

- Two-way wireless device via E-mail Messenger
- Internet via Web Messenger – Plus
- Cell phone or telephone via Voice Messenger
- Alarm Messenger
- WirelessOffice Administrator

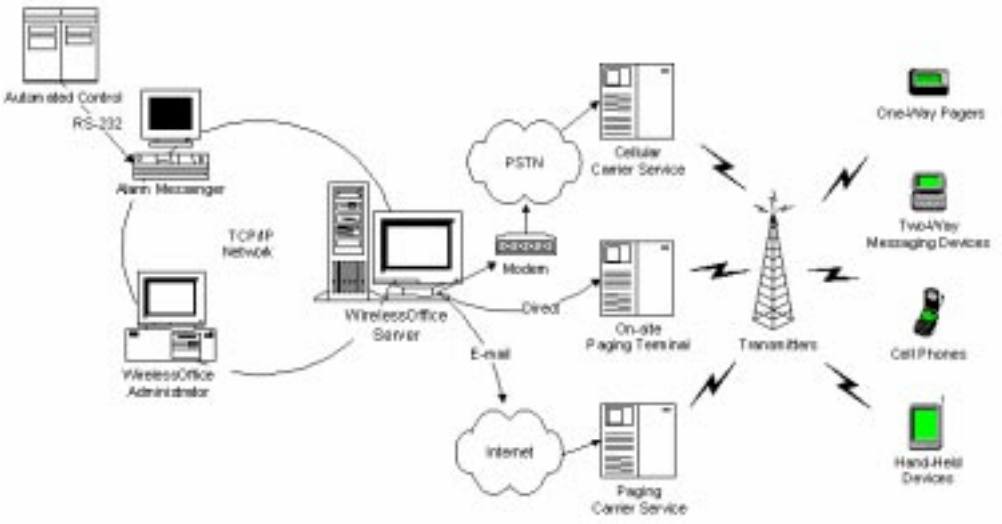
The following diagram depicts WirelessOffice components and their role in escalated messaging:



Using Alarm Messenger

Alarm Messenger, formerly named SitePage, will automatically install when you select Alarm Messenger from the WirelessOffice installation. It will only function if your Authorization Code reflects an Alarm Messenger purchase or you are using the DEMO Authorization Code.

Alarm Messenger uses wireless-messaging technology to communicate to the proper personnel that a critical condition exists in your automated monitoring system (see following diagram):



Input data from an automated monitoring system is received by Alarm Messenger through an RS-232 serial interface. Up to eight serial communications (COM) ports are supported per Alarm Messenger system.

1. Alarm Messenger searches the *data stream* for defined *keys*, and then compares the data to specific values to determine if an *alert* exists.
2. If an alert exists, Alarm Messenger addresses and composes an alphanumeric message and sends a messaging request to the WirelessOffice Server using the TCP/IP communications protocol.
3. Alert messages can be configured to escalate to a series of personnel. These escalated messages may also be cancelled when the alert has been satisfied or manually accelerated to the next level to speed up the process.
4. The WirelessOffice Server receives the message request and sends the alphanumeric message to the designated personnel using the appropriate wireless carrier.

Note: Alarm Messenger can be installed on any Windows NT/2000 system, including the WirelessOffice Server system, as well any other WirelessOffice component systems. The firewall input port is 12398.

Upgrading Alarm Messenger

To upgrade from a previous version of SitePage, the Installation Wizard will convert and integrate the past version database and settings information. There is no need to remove the previous version of Alarm Messenger before upgrading. If you are upgrading from Site Alert, back up your database, load the new software and then refer to "Launching the Alarm Messenger Upgrade Tool" on page **Error! Bookmark not defined.** for database updating information.

New Alarm Messenger Features

- Escalated messaging for Alarm Messenger alerts, up to five levels (page 172)
- Escalated message cancellation (page 182)
- Manually accelerate message escalation (page 182)
- Escalated message cancellation can notify previous recipients about cancellation (page 182)
- User Name/Password authentication for server connections (page 162)
- Send responses to satisfy monitoring equipment requirements (page 172)
- Department messaging capability (page 172)
- Export log views to comma-delimited file (page 185)
- Security profiling
- Windows 2000 compatibility

Standard Alarm Messenger Features

- RS-232 serial port interface
- Simultaneous monitoring of up to 8 ports
- Customer-defined alerts and keys
- Selective alert disabling
- Individual or group messaging notification
- Time shift sensitive, computer generated notification
- Send custom messages and extract input from specific fields in the data stream
- Define and send canned messages
- Send entire input as alert message
- Option to extract pager ID from input for message addressing
- Visually monitor data streams from each port
- Freeze and analyze data stream information to set up "key" character positions
- Error, message, rules and activity logging
- Database backup and restore
- Pageable alerts can be configured for specific software events

Alarm Messenger Terms

The following terms are used throughout this chapter. Their definitions are provided to help you understand the Alarm Messenger application.

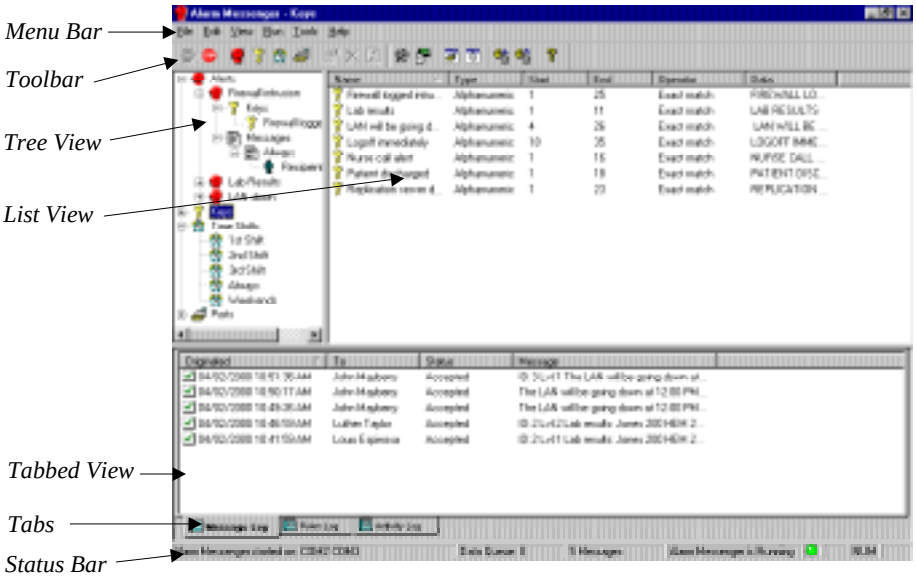
Term	Definition
alert	An *event* that requires human intervention. In Alarm Messenger you must define the parameters that constitute an alert (e.g., *input port*, *key*, *message*, *time shift*, and *recipient).*
data stream	The serial data that is sent by your monitoring system to Alarm Messenger through a serial communications (COM) port.
escalation	The ability to send a message to a series of up to five levels of recipients, ensuring that the message is properly responded to in a timely manner. The message continues to escalate until it is cancelled or all levels have been notified.
event	A single line of data sent by the monitoring system to indicate that something has occurred. Alarm Messenger considers an *event* to be an *alert* only when a defined *key* is found in the *data stream.*
input port	A serial communications (COM) port used to receive input from your monitoring system.
key	One or more words or numeric values contained in the *data stream* used to determine if an *event* is an *alert.*
message	The alphanumeric notification that is sent to designated personnel when an *alert* is detected.
monitoring system	The equipment being used to "watch" a process and send *event* information to Alarm Messenger.
recipient	A person, group or department to whom the appropriate *message* is sent when an *alert* is detected.
response	ASCII message sent from Alarm Messenger to the monitoring equipment when a specific *alert* is matched.
time shift	The period of time during which a *message* can be sent to a designated *recipient.*

Starting Alarm Messenger

1. Double-click the Alarm Messenger desktop icon or click **Start**, **Programs**, **Emergin WirelessOffice** and then **Alarm Messenger**.
2. The **WirelessOffice Login** dialog displays. Type your **User Name** and **Password** to login to the WirelessOffice Server. You can only be logged in once at any given time to the server with your User Name. If you are using the *'Administrator'* account, you will need to create a new user login account.
3. Type the name or Internet address of the WirelessOffice **Server** you wish to access. Use the drop-down arrow to choose a previously selected server. Select **Remember password** if you wish to auto-login in the future. Click **OK**.

Using the Alarm Messenger Window

For your reference, the Alarm Messenger window is shown below to identify and describe the elements of its user interface.



Menu Bar

The menu bar contains pull-down menus and commands that let you control, configure, and generally use Alarm Messenger.

File

New >
>Alert
>Key
>Time Shift
>Port
Database
>Backup
>Restore
Print
Print Preview
Print Setup
Exit

Edit

Properties
Delete
Delete All
Copy Alert
Paste Alert

View

Toolbar
Status Bar
Port Monitor
Escalation View
Tabs
>On Bottom
>On Top
>On Left
>On Right
Refresh

Run

Start
Stop
Demo

Tools

Configuration
Recipient Validation
Send Test Message

Help

Help Topics
Tip Of The Day
Emergin Knowledge Base
About Alarm Messenger

Toolbar

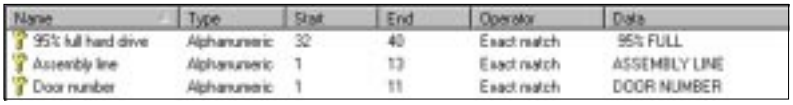
The toolbar contains buttons that let you quickly access many of the commands that are available in the menu bar. You can turn the toolbar on and off with the **View** menu bar option.

The following table describes each of the toolbar buttons:

Icons	Description	Icons	Description
	Start input processing, which enables alert notification		Refreshes the view
	Stop input processing, which disables alert notification		Configure setup, passwords, input, file logging and other parameters
	Define a new *alert*		Send a test message
	Define a new *key*		Open Port Monitor
	Define a new *time shift*		Open Escalation View
	Define a new communications (COM) *port*		Backup the database (which contains your alert properties, etc.)
	Modify the currently selected object (alert, key, message, etc.)		Restore the database from a backup
	Delete the currently selected object (alert, key, message, etc.)		Access the on-line Help for Alarm Messenger

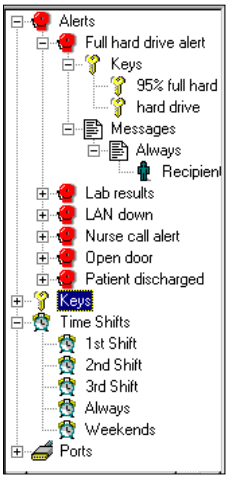
List View

This Alarm Messenger window displays the appropriate details for the object that is currently selected in the Tree View. For example, if you click on a key object, its properties appear in the List View.



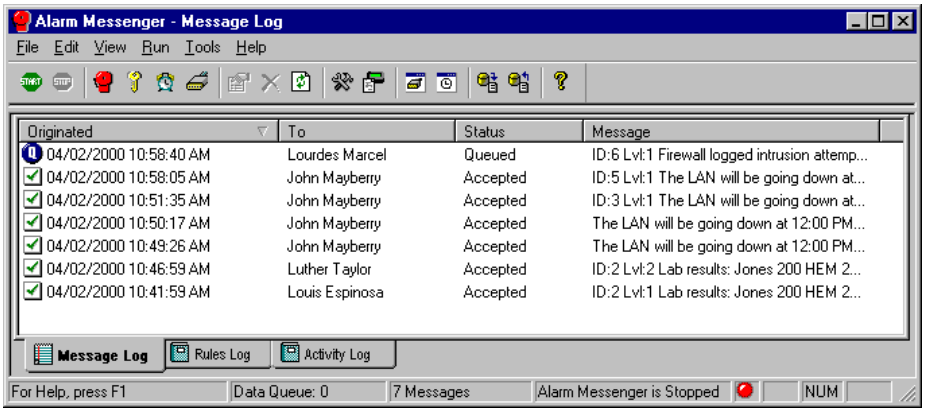
Tree View

This area of the Alarm Messenger window contains a hierarchical representation of the objects being used by Alarm Messenger. These objects are represented by icons, which include: alerts, keys, messages, time shifts, ports and recipients. The Tree View works much like the Tree View in Windows NT Explorer; you can expand or collapse portions of the tree to reveal or conceal subordinate objects by clicking on the plus (+) and minus (-) boxes. Use the Tree View to select specific objects for which you want to perform a task, such as: view, modify, delete, and print.



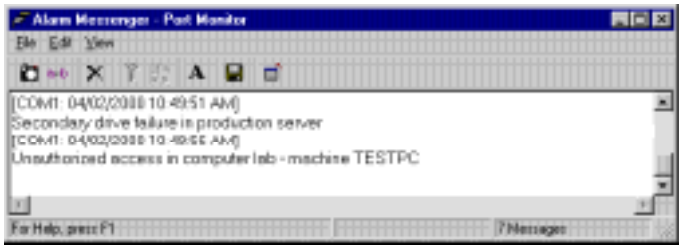
Tabbed View

This Alarm Messenger window displays three tabbed views, reflecting the Message Log, Rules Log and Activity Log tabs.



Port Monitor View

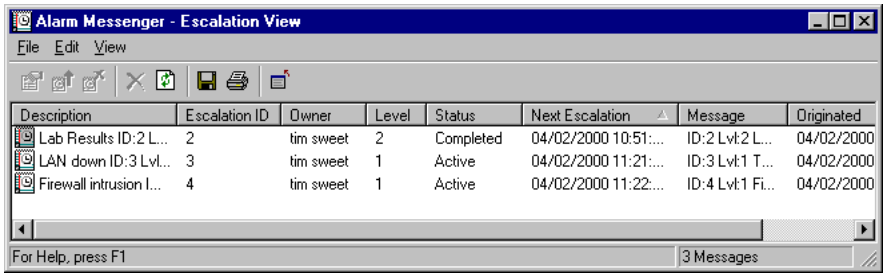
This Alarm Messenger window displays the real-time *data stream* being read from any of the COM ports. You can select which COM port to monitor by clicking **View** and selecting **Ports** and clicking on the appropriate COM ports.



Note: The Port Monitor should only be opened for diagnostic and configuration purposes. It should generally be closed during normal operation.

Escalation View

This window displays all messages that are set to escalate. Messages can be configured to escalate up to five levels and may be cancelled at any point during the escalation process. They may also be manually escalated to the next level. These actions take place in the **Escalation View**, as well as in the WirelessOffice Administrator's **Escalated Messages** tab. Cancellation may also be conducted in Web Messenger or via a recipient's two-way wireless device using E-mail Messenger. Please see "Escalation Cancellation" in the *Using E-mail Messenger* and *Using Web Messenger* chapters.



Status Bar

This area of the Alarm Messenger window displays informational messages that keep you informed about the current status of Alarm Messenger. You can turn the Status Bar on and off with the **View** menu bar option.

Planning Your System

After you have successfully installed Alarm Messenger, carefully plan your Alarm Messenger implementation by thoroughly analyzing all of the events processed by your automated monitoring system. Effective planning can simplify the configuration process and make your system easier to maintain.

Planning your system includes:

- Assessing your needs
- Understanding Alarm Messenger capacities
- Identifying your *alerts*
- Identifying the *keys* for your *alerts*

Assessing Your Needs

Begin by analyzing your current manual dispatching process. Determine how you can improve overall productivity with automated dispatching. Keep the features of Alarm Messenger in mind when doing your analysis. Your implementation can take advantage of Alarm Messenger's support for:

- *time shifts*
- *recipient groups and departments*
- *context-sensitive messages*
- *file logging*
- *escalation*

Understanding Alarm Messenger Capacities

Alarm Messenger has certain maximum capacities. You should consider these capacities while you are planning your alerts:

Parameter	Maximum Capacities
Input ports	8
Alerts	2500
Keys	2500
Keys per Alert	50
Messages per Alert	20
Recipients per Alert	25
Time Shifts	20
Escalation Levels	5
Recipients per Escalation Level	25
Input Length (in characters)	1024
Response length (in characters)	100

Identifying Your Alerts

To determine which alerts to define for your environment, consider the following questions:

- Which areas need to be monitored for critical events?
- What are the critical events you want to monitor for each area? Is action warranted for each critical event?
- What should the message contain? Who should be notified? When? Does the message need to be escalated?

Begin by making a list of the alerts you want Alarm Messenger to process, based on your answers to these questions. For each alert, answer the following:

- From which communication (COM) port will the *data stream* be read?
- What times of the day, days of the week, and months of the year should Alarm Messenger processing apply?
- Should Alarm Messenger include part of the *data stream* in the message text?
- Should the message be sent to a user, several users, a department or a group? Or should the PIN be extracted from the data stream?
- Does the monitoring equipment require a response?

Identifying the Keys for Your Alerts

Each alert must have at least one key associated with it for Alarm Messenger to be able to detect the critical event. An alert's *key* defines:

- Where in the data stream Alarm Messenger looks to see if the event is an alert,
- What Alarm Messenger compares the data with to determine if the event is an alert,
- How the comparison should be made (equal to, less than, etc.), and
- What type of data is being compared (numeric or alphanumeric).

To help Alarm Messenger accurately detect critical events, you should consider defining multiple keys for your alerts, if possible. Using your alert lists, begin compiling the information and recording it for each alert's key(s). When you have finished outlining your alert needs, review the information for common keys. You need only define a key once—even if it can be used by more than one alert.

Example Implementation

To demonstrate how to implement Alarm Messenger, we will use an example scenario. Assume we have an automated monitoring system for pressure vessels, and it is critical that their pressures remain above 120 pounds per square inch (PSI). The automated monitoring system sends its data stream over a serial cable that is connected to COM port 1 on the Alarm Messenger computer. WirelessOffice then issues a message to the maintenance staff, who share the responsibility of maintaining the pressure in these tanks.

To identify the alert:

We want to notify the current maintenance person with the following message when the pressure in any of these tanks falls below 120 (PSI).

Pressure reading for Tank <*tank #*> is below 120 PSI

We have just identified our first alert: when pressure in a tank is less than 120 PSI, send a specific message (with the tank number) to the maintenance department's wireless devices, no matter when the event occurs. An example is shown:

Alert Name	Port (COM)	Time Shift	Message	Recipient(s)
120 PSI	COM 1	ALWAYS	Pressure reading for Tank <tank#> is below 120 PSI	MAINT

Key-1 Name	Begin	End	A/N	Operator	Data for Comparison	And/Or

To identify the keys:

The automated monitoring system sends its data stream in the following format:

```
032797|11:12:36|TANK=05|PSI=215|AB9
```

Date (Chars 1 – 6)

Time (Chars 8 – 15)

Tank Number (Chars 17 – 23)

Pressure Level (Chars 25 – 31)

To ensure that Alarm Messenger will accurately detect the event, we will define two keys for the alert, as follows:

Alert Name	Port (COM)	Time Shift	Message	Recipient(s)
120 PSI	COM 1	ALWAYS	Pressure reading for Tank <22,23> is below 120 PSI	MAINT

Key-1 Name	Begin	End	A/N	Operator	Data for Comparison	And/Or	
PSI	25	27	A	=	PSI	And	
Key-2 Name	**Begin**	**End**	**A/N**	**Operator**	**Data for Comparison**	**And/Or**	
120	29	31	N	<	120		

If Alarm Messenger receives an input line that does not contain "PSI" in character positions 25 through 27, the first key is *not* satisfied, and the event is ignored. If Alarm Messenger receives an input line that contains "PSI" in character positions 25 through 27 *and* a numeric value less than "120" in character positions 29 through 31, both keys are true and the event is considered an alert. The defined message, which now contains the tank number from the data stream, is sent to the maintenance department's users' wireless device(s).

Configuring Alarm Messenger

Now that you have planned your implementation, it is time to configure Alarm Messenger. Configuring your system includes:

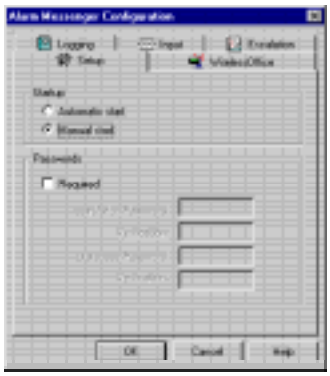
- Configuring general setup parameters
- Configuring pageable alerts and file logging parameters
- Configuring input, data queue and escalation view requirements
- Configuring the COM ports

To configure Alarm Messenger:

1. Launch Alarm Messenger by double-clicking the desktop Alarm Messenger icon or click **Start**, **Programs**, **Emergin WirelessOffice** and then **Alarm Messenger**. Login with your **User Name**, **Password** and select a **Server**. See "Starting Alarm Messenger" on page 152.

2. Click the  icon on the toolbar or click **Tools** from the menu and then **Configuration**.

   The **Alarm Messenger Configuration** dialog displays with the **Setup** tab open.



The **Alarm Messenger Configuration** dialog contains five tabs:

Tab	Description
Setup	This tab lets you configure the startup mode, as well as start/stop and database access passwords. These passwords are not related to the Authentication password required to establish a connection to the server.
WirelessOffice	This tab allows you to view the User Name and Server name (or Internet address). It also lets you specify who will receive notification for specific system events that are pageable alerts.
Logging	This tab lets you configure the Activity Log and Rules Log settings.
Input	This tab allows you to convert hexadecimal data stream input into ASCII characters and set data queue size.
Escalation	This tab allows you to auto-open the Escalation View whenever an escalated message is submitted.

Changing the Authorization Code

If you did not purchase Alarm Messenger with your initial copy of WirelessOffice, you will need to enter a new Authorization Code into WirelessOffice Administrator to enable it. If the WirelessOffice system and Alarm Messenger are currently running under the DEMO Authorization Code, the software will only function for a limited period of time. At the end of this trial period, you will see the following message when you attempt to connect to the Server:

```
Alarm Messenger cannot start because it is not registered.
Please contact Emergin at 1-888-922-7638 or 1-561-361-6990.
```

To re-enable Alarm Messenger, you must have a valid Authorization Code. When you purchase the product, you will be given an Authorization Code that will fully enable the software. Enter this new Authorization Code into the WirelessOffice Server using WirelessOffice Administrator. Please see "Modifying Server Configuration" in the *Configuring WirelessOffice Server* chapter.

Using the Setup Tab

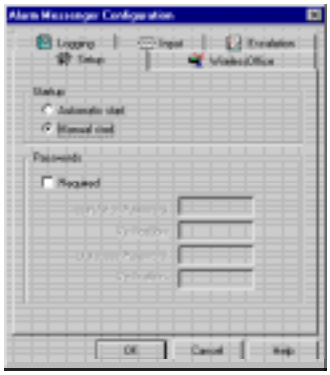
Use the Setup tab to configure or reconfigure the startup mode and Alarm Messenger passwords.

To configure the startup mode:

You can choose to have Alarm Messenger automatically begin processing data from the input ports when Alarm Messenger is launched (**Automatic start**). With **Manual start**, you must manually start the processing function.

1. Click the **Configuration** icon on the toolbar.

   The **Alarm Messenger Configuration** Setup dialog displays:



2. In the **Startup** area, select the desired startup action. Select either **Automatic start** or **Manual start**.
3. Click **OK** to exit and save your changes, or perform another configuration task while the **Configuration** dialog box is open.

To set Alarm Messenger passwords:

Alarm Messenger allows you to password-protect the start and stop processing of Alarm Messenger and/or the ability to modify the Alarm Messenger database.

1. In the **Passwords** area, click **Required** to enable password protection.
2. To protect the Start/Stop function (allowing users to start and stop Alarm Messenger's monitoring process), enter a maximum of eight characters for the password. Re-enter the password to verify your spelling.
3. To protect the Alarm Messenger database from unauthorized backup and restore operations, enter a maximum of eight characters for the password. This may be the same password used for the Start/Stop function. Re-enter the password to verify your spelling.
4. Click **OK** to exit and save your changes, or perform another configuration task while the **Configuration** dialog box is open.

Using the WirelessOffice Tab

Use the WirelessOffice tab to view the logged in User Name and Server, to unsave a password, and to set up Pageable Alerts.

To view user name and server address:

The specified User Name and Server are established during the Alarm Messenger login. To change User Name or Server, you must exit Alarm Messenger. Upon restarting, information can be changed in the WirelessOffice Login dialog.

1. Click the **Configuration** icon on the toolbar and then select the **WirelessOffice** tab.

   The **Alarm Messenger Configuration** WirelessOffice dialog displays:

2. In the **Authentication** area, view your **User Name** and **Server** name. Click **Unsave password** to undo the initial **Remember Password** selection in the **WirelessOffice Login** dialog.
3. Click **OK** to exit or perform another task while the **Configuration** dialog is open.

To configure Pageable Alerts:

Pageable Alerts are system conditions that the system supervisor will receive a message about.

1. If not already open, click the **WirelessOffice** tab in the **Configuration** dialog.
2. In the **Pageable Alerts** area, select the message recipient you want to identify as being the recipient from the **Supervisor** list box. This recipient will receive messages for any of the conditions you select in the next step.
3. Select all conditions for which you want the supervisor paged by selecting all appropriate check boxes.
4. Click **OK** to exit and save your changes, or perform another configuration task while the **Configuration** dialog box is open.

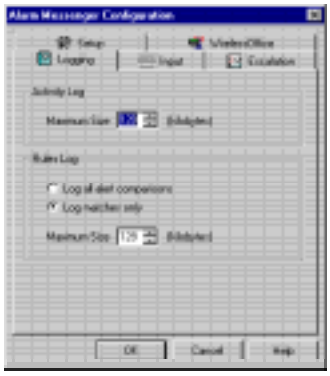
Using the Logging Tab

Alarm Messenger lets you limit the size of the Activity Log and Rules Log files. It also lets you dictate whether all alerts that come in from your automated monitoring system are posted or only those that match a defined condition.

To configure logging:

1. Start the **Configuration** dialog. Click the **Logging** tab.

   The **Alarm Messenger Configuration** Logging dialog displays (default settings):



2. In the **Activity Log** area, enter the **Maximum Size** (in kilobytes) of the Activity Log file. The log rolls over to .old when the maximum is reached and a new .log file is created. This file, alarmerr.log, is located in C:\Program Files\Emergin WirelessOffice, unless the WirelessOffice was installed to a different directory.
3. In the **Rules Log** area, select **Log all alert comparisons** if you want all alerts to be posted to the Rules Log. Select **Log matches only** if you want only those alerts that match an Alarm Messenger-defined condition to be posted.
4. In the **Rules Log** area, enter the **Maximum Size** (in kilobytes) of the Rules Log file. When the Rules Log file reaches this limit, the log rolls over to .old and a new .log file is created.

This file, alarmrul.log, is located in C:\Program Files\Emergin WirelessOffice, unless the WirelessOffice was installed to a different directory.

5. Click **OK** to exit and save your changes or perform another configuration task while the **Configuration** dialog box is open.

Note: If you select **Log all alert comparisons**, system performance will be affected. This should be used for diagnostic purposes only.

Using the Input Tab

Alarm Messenger lets you automatically convert hexadecimal data stream input into ASCII characters. It also lets you control the data queue size.

To configure input settings:

1. Start the **Configuration** dialog. Click the **Input** tab.

   The **Alarm Messenger Configuration** Input dialog displays:

2. Select **Convert hexadecimal input to ASCII** for automatic input data conversion. This setting is selected by default.
3. Select **No input character translation** if your input data requires no special ASCII translation.
4. **Data Queue size** reflects the maximum number of input lines allowed to be stored in the data queue to await processing. Default data queue size is 25,000 entries (range 0-25,000). Adjust this setting if you will be sending responses back to your monitoring equipment. Please see “Configuring Alerts” on page 172 for more information about alert responses.

   For example: If an alert is matched, a response can be sent to the equipment to let it know not to send any more messages of that type. In the meanwhile, by setting the Data Queue size to a lower number in the range of 0 to 2, you will eliminate possible outdated messages.
5. After making any changes to this dialog, exit and restart the application. Please see “To start and stop Alarm Messenger” on page 179.

Using the Escalation Tab

Alarm Messenger lets you configure the automatic opening of the Escalation View whenever an escalated message is submitted. The Escalation View lets you monitor the status of escalated messages, escalate messages or cancel messages when escalation is no longer needed. Please see “Viewing and Canceling Escalated Messages” on page 182 for more information.

To configure the Escalation View:

1. Start the **Configuration** dialog. Click the **Escalation** tab.

   The **Alarm Messenger Configuration** Escalation dialog displays:

2. Select this setting to allow the Escalation View to auto-open when escalated messages are submitted. Please see “To view escalated messages” on page 181 for more information about the Escalation View.
3. Click **OK** to exit when configuration is completed.

Configuring Input COM Ports

To add a new COM port:

You must configure each COM port that will be used to receive input from the automated monitoring equipment.

1. Click the  icon on the toolbar.

   The **Choose Input Port** dialog displays:

2. Select the port you want to configure and click **Next**.

   The **Port Parameters** screen displays:

3. Accept or modify the **Port Parameters** then click **Next**. Match these settings to the input device's parameters.
4. The **Input Delimiters** dialog displays. Select one or two input delimiters according to the needs of your input monitoring equipment. At least one choice is required. Click **Next**.
5. If you have selected flow control, the **Choose Flow Control** screen displays. Make the appropriate choice(s) then click **Next**. For more detailed information, please see the next page.
6. The **DSR Notification** screen displays. Make the appropriate choice then click **Finish**.

Note: Restart Alarm Messenger for input to take affect.

To modify COM ports:

After configuring a new port, review and modify changes in the **Port Properties – Modify** dialog.

1. From the Tree View window, double-click the port you wish to modify.
2. Or select the port you wish to modify from the Tree View window then right-click and select **Properties**.

   The **Port Properties - Modify** dialog box displays:

3. If not already selected, click the **Setup** tab. Select the port you want to configure from the **Port** list box.
4. Optionally enter a name for the port in the **Name** text box.
5. In the **Status** area, select **Enabled** if you want the port to accept input from a monitoring device. Select **Disabled** if you want to stop the port from accepting input.
6. In the **Log Mode** area, select **On** to enable logging for the current port. Click **Off** to suppress log transactions for the port.

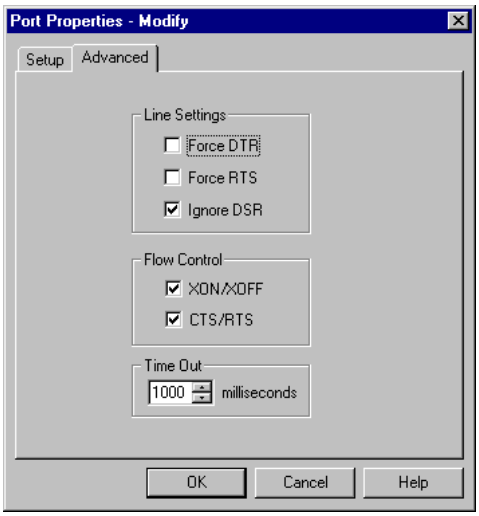
Note: When the log mode is on, COM logs are created in the install directory with the template amcomx.log (x signifies the COM port number). This information can be useful for diagnostic purposes.

7. In the **Communication Parameters** area, use the list boxes to select the baud rate, data bits, parity, and stop bits for the current port.
8. In the **Input Delimiters** area of the dialog box, use the slider controls to set the two-character, end-of-line (EOL) character sequence for the *data stream*. As you slide the bar, various delimiters display with their hexadecimal and ASCII representations. Stop at the appropriate delimiter for each character; or, if necessary, select **none**.

Note: Use the left and right arrow keys on your keyboard for the **Input Delimiters** to move the slider controls one value at a time.

9. To further configure the current port, click the **Advanced** tab.

   The advanced **Port Properties-Modify** Advanced dialog displays:



10. Select the **Line Settings**, **Flow Control**, and **Time Out** values that match the RS-232 settings used by the monitoring device.
11. Click **OK** to exit and save the changes. Repeat these steps for any remaining COM ports.

Creating Alerts and Defining Their Properties

For each *event* you want Alarm Messenger to consider an *alert*, you must create a unique alert and define its properties. You will use the information you gathered during the planning phase. See “Planning Your System” on page 157. Alert properties include:

- *Keys* — which define the criteria for an alert. You will create a pool of keys that can be used for any defined alert.
- *Messages* — which define the content of the alphanumeric message.
- *Time shifts* — which determine when an event should be considered an alert. Alarm Messenger comes with several predefined time shifts, but you can define your own, if necessary.
- *Recipients* — which determine to whom the message will be sent.

When creating alerts, you must associate existing keys (and time shifts, if necessary) with the alert. You should, therefore, define your keys and time shifts before creating your alerts.

Note: Recipients must be defined in WirelessOffice Administrator before you can define Alarm Messenger alerts.

Defining Keys

An *alert* will only be processed if one or more *keys* are defined and associated with it. Alarm Messenger searches the *data stream* for data that matches the criteria in any of an alert's defined keys. *Keys* are common resources and can be associated with multiple alerts.

To ensure that the application recognizes each alert accurately, you must enter detailed information about each key; including its data type, start and end of input location, type of comparison (operator), and the actual data for comparison. Alarm Messenger extracts an input string from the data stream to use for the comparison. When a match exists for all keys associated with an alert, Alarm Messenger initiates the appropriate message.

To define keys:

1. Click the  icon on the toolbar or click **File** and select **New** and then **Key**.

   The **Key Properties - Add** dialog box displays:

2. Type a unique identifier for the key in the **Key Name** box. To simplify administration of your system, we recommend that you make the **Key Name** the same as the data used for comparison.
3. In the **Key Type** list box, select the data type for the key: Alphanumeric or Numeric.
4. In the **Start** and **End** fields (in the **Location in Input** area) enter the starting and ending character positions within the *data stream* where the data associated with this key is located.

Note: In the Port Monitor you can highlight desired Key content and click the **Copy Range** button. To paste these values into the **Start** and **End** fields of the **Key Properties – Add** dialog select **Paste Range**.

Also, you can quickly designate keys from within the Port Monitor. Let your incoming data stream start, freeze the screens where you need to define keys. Copy the range for a new key and then click the **Create New Key** button to automatically create a key with the selected information and character range.

5. Select the appropriate **Operator** from the list box to reflect the type of comparison to be performed between the selected input string and the key. Alphanumeric keys are not case sensitive.

   The valid operators are described below:

Operator	Description
Exact match	The input string is equal to the key (alphanumeric and numeric).
No match	The input string is not equal to the key (alphanumeric and numeric).
Found in field	The key data is contained in the input string (alphanumeric and numeric).
Not found in field	The key data is not contained in the input string (alphanumeric only).
Less than	The input string is less than the key (numeric only).
Less than or equal	The input string is less than or equal to the key (numeric only).
Greater than	The input string is greater than the key (numeric only)
Greater than or equal	The input string is greater than or equal to the key (numeric only).

6. In the **Data for Comparison** area, type the actual data you want Alarm Messenger to compare the input string with in the **Entry** text box.
7. Click **Apply** to save your new key and repeat these steps for any additional keys you may define. Or click **OK** to save your new key and exit.

Defining Time Shifts

Like *keys*, time shifts are common resources that can be associated with multiple alerts. Their attributes consist of the name of the time shift, the month and day the shift is applicable, and the starting and ending times for the shift. Alarm Messenger provides predefined time shifts; however, you can define your own, if necessary. The predefined time shifts include:

Predefined Time Shifts	Description
1st Shift	Every month, weekdays, from 9:00 AM to 5:00 PM
2nd Shift	Every month, weekdays, from 5:00 PM to 1:00 AM
3rd Shift	Every month, weekdays, from 1:00 AM to 9:00 AM
Always	Every month, every day, all day
Weekend	Every month, weekends, all day

If you want an alert to be processed differently based on a time range other than those listed above, you must define a new time shift. A time shift starts at the indicated time, and is valid until (and including) the specified end time. If an alertable event occurs outside the time defined by the alert's time shift, no alert is sent. Time shifts are associated with messages, and an alert can have up to twenty messages. Therefore, if you want different messages to be sent during different time shifts (or if you want a message to be sent to a different recipient during different time shifts) you must create multiple messages for the same alert.

To define time shifts:

1. Click the  button on the toolbar or click **File**, select **New** and then **Time Shift**.

   The **Time Shift - Add** dialog box displays:

2. Enter a unique name in the **Shift Name** text box.
3. In the **Month** list box, select a month for which the time shift applies, or select **Every month**.
4. To indicate the active days, select **Day of Week** and select from the list box: **Every day**, **Weekdays**, **Weekends, Sunday, Monday, Tuesday, Wednesday, Thursday, Friday,** or **Saturday**.
5. To indicate that the time shift only applies for a specific day of the month, select **Specific Date** and enter the day of the month (1 through 31).
6. If the time shift you are defining is a 24-hour period, select **All Day**.
7. To select a range of hours, select **Specific Hours** and enter the **Start** and **End** times for the time shift.
8. Click **Apply** to save your new time shift and define another. Or click **OK** to exit and save your new time shift.

Configuring Alerts

Now that you have your COM ports, keys and time shifts defined, you can define your alerts. For each event you want a message sent, you must define a unique *alert*. In order to incorporate server-defined recipients into your alert, they must first be defined in WirelessOffice Administrator.

To create a new alert:

1. Click the  icon on the toolbar or click **File**, select **New**, and then **Alert**.

   The **Alert Wizard – Step One** dialog displays:

2. Type a unique **Name** for the alert, then select a COM port.
3. To allow Alarm Messenger to monitor ports for the alert, click **Enabled** in the **Status** area. To prevent Alarm Messenger from monitoring ports for the alert, click **Disabled**.
4. In the **Ports** area, edit the serial (COM) port that Alarm Messenger should monitor for the current alert. If the event is associated with more than one port, select **All Ports**.
5. **Response** area information is optional and is implemented if your monitoring equipment is either expecting or can respond to Alarm Messenger input. Use the **Entry** box to enter ASCII text and/or control characters in the form '\nn', where nn is a hexadecimal number 0-FF and view the hexadecimal conversion in the **Result** box. If you type \0D\0A in the **Entry** text box, the **Result** will depict ▮▮ . Click **Next**.

The **Alert Wizard – Step Two** dialog displays:

6. Find the desired key in the list of **Available Keys**, select it, and click the **Add** button (or double-click on the desired key). The selected key moves from the **Available Keys** list to the **Selected Keys** list.

Note: If you realize that you need a key that has not yet been defined, you can click on the **Create New Key** icon to access the **Key Properties - Add** dialog.

7. If you want to add more keys to this alert, select the operator **Or** or **And** to specify how subsequent keys are to be used for this alert. Then select the additional key. If required, repeat this step for additional keys.

8. To delete a key from the alert, select the key in the **Selected Keys** list and click **Remove**. The key will move from the **Selected Keys** list to the **Available Keys** list. Click **Next**.

   The **Alert Wizard – Step Three** dialog displays:

9. Select **Entire Input** if you want to send the data stream as it is to the message recipient(s).

10. Select **Custom Message** if you want to create your own message, with or without elements of the data stream. In the **Custom Message** text box, type the alert message. If you want the message to contain *data stream* (extracted data) information enclose the starting and ending character positions of the data in less-than and greater-than symbols.

    For example: If you wanted a security alert to indicate which door is open, you could create a custom message such as “Door #<10,15> is open. Please investigate”.

11. Select **Canned Message** if you want to use one of the canned messages. Select the message from the **Canned Message** list box.

12. To add a canned message to the list, click the **Add** button. The **Add Canned Message** dialog box displays. Enter your new canned message, then click **OK**. To remove a canned message, click the **Remove** button. The canned message removal will be confirmed.

13. In the **Time Shift** list box, select a pre-defined time shift by name. If you have no need to use time shifts, select **Always** to cover all times. If you need a time shift that does not exist, you can add one now by clicking the **New Time Shift** button. The **Time Shift - Add** dialog box will appear. Please see "To define time shifts" on page 171 for instructions. Click **Next**.

14. For the recipient type of the **Alert Wizard – Step Four** dialog, choose either **Select recipient(s) from WirelessOffice Server** or **Extract Pager ID from input**. If you choose to extract the pager ID, the next dialog will instruct you to type the **Start** and **End** positions of the pager ID and to select a pre-configured carrier.

    The **Alert Wizard – Step Five** dialog displays:

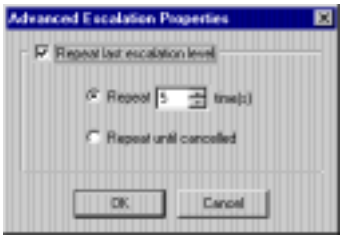
15. Select the desired server-defined recipients from the **Directory** list. To make your selection, click once on the entry and then click the >> button, or simply double-click the entry to move it into the **Recipients** list. Repeat this step for each recipient/group/department to receive the message. To remove a recipient, click the recipient name and then click the << button.

    Note: The Recipients list reflects the access and security rights of Alarm Messenger's login account.

16. Click **Use Escalation** if you would like the message to be sent to a series of recipients. An alert will be sent to all recipients defined for Level 1. After the designated time interval, the next level of recipients will be sent the message, etc. until the escalated message is cancelled or runs its course to the final level.

17. Select the **No. of Levels** (up to 5) for the alert to be sent to. Click **Advanced** to configure the escalated message to be repeatedly sent to the last level of recipient(s) until escalation is cancelled.

The **Advanced Escalation Properties** dialog displays:



18. Select **Repeat last escalation level**. Select **Repeat x time(s**), choosing a number between 1 and 254 representing the number of times to repeat the last escalation level. Or select **Repeat until cancelled** which will infinitely repeat the message until it is cancelled.
19. If you have selected **Use Escalation**, you will need to define recipients for all escalation levels. Select the **Level number** and **Time Interval** and then define your recipients for that level. Continue until all levels have been defined. **Time Interval** (23 hours, 59 minutes and 59 seconds) reflects the wait time until sending the message to the next level. Please see "Viewing and Canceling Escalated Messages" on page 182. Click **Finish**.

Modifying Alerts

You can modify any component of an alert after it has initially been configured, including the alert itself, the keys associated with it, time shifts, recipients, escalation levels, and time intervals.

To modify an alert:

1. Select the alert to modify and click the  icon on the toolbar or double-click the specific alert name from the Alert List View.

   The **Alert Properties - Modify** dialog box displays:

2. Click the **Alert** tab. Edit the alert name in the **Name** field. Click **Enabled** or **Disabled** in the **Status** area.

Note: You can stop Alarm Messenger from sending messages for a specific alert by setting its status to **Disabled**. For example, if a machine's temperature increases but the machine must continue to work until it is repaired later in the day, the alert can be disabled temporarily.

3. In the **Ports** area, edit the serial (COM) port that Alarm Messenger should monitor for the current alert. If the event is associated with more than one port, select **All Ports**.
4. Edit the **Response** entry if necessary. This field sends response information to the monitoring equipment. Use the **Entry** box to enter ASCII text and/or control characters in the form '\nn', where nn is a hexadecimal number 0-FF and view the hexadecimal conversion in the **Result** box. If you type \0D\0A in the **Entry** text box, the **Result** will depict ▮▮ .

To modify alert keys:

1. In the **Alert Properties - Modify** dialog box, click the **Keys** tab.
2. Edit the **Selected Keys** as needed. If a new key needs to be created, click the **Create New Key** icon above the **Available Keys** area. Please see "To define keys" on page 169.
3. Ensure that the correct **Or** or **And** operator is being used. Click **Apply** to incorporate your changes.

To modify an alert message:

1. In the **Alert Properties - Modify** dialog, click the **Messages** tab. Select the message you wish to edit and click **Properties**. You may also choose to **Add** or **Delete** messages.

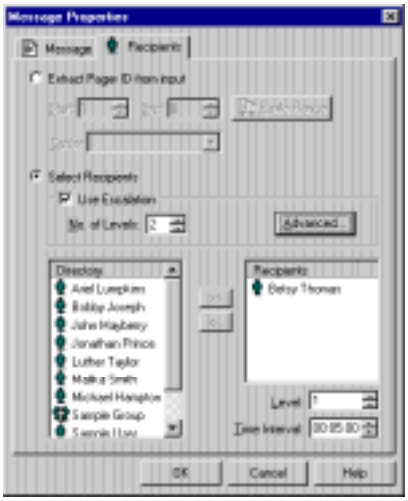
   The **Message Properties** dialog box displays:

2. Select either **Entire Input**, **Custom Message** or **Canned Message** to be sent. Type appropriate message content if a **Custom Message** is selected.
3. Select the appropriate **Time Shift** or click the **New Time Shift** button to create a custom shift. Please see "Configuring Alerts" on page 172 for more detailed instructions. Click **OK** to save your message assignment.

To modify alert recipients

1. In the **Message Properties** dialog box, click the **Recipients** tab.

   The **Recipients** tab dialog displays:



2. Select either **Extract Pager ID from input** or **Select Recipients**.
3. To extract pager ID information, type the **Start** and **End** character positions and then select the **Carrier** from the drop-down list.
4. Select or remove recipients to receive the alert message using the >> and << keys or by double-clicking the recipient name. If you need to update recipients for all alerts, use the Recipient Validation feature. Please see “Recipient Validation” on page 184.
5. Select **Use Escalation** to send messages to a series of different recipient levels. Adjust the **No. of Levels** to escalate (up to 5). If you wish to have the last level repeated for a configurable number of times, select the **Advanced** button. Select **Repeat last escalation level**. Select either **Repeat x time(s**), choosing a number between 1 and 254 representing the number of times to repeat the last escalation level. Or select **Repeat until cancelled** which will infinitely repeat the message until it is cancelled.
6. Detail recipient(s) for each **Level**. Set the **Time Interval** between each message level sending. For detailed information on how to configure recipients and escalation, please see “Configuring Alerts” on page 172.
7. Click **OK** to exit.

Operating and Maintaining Alarm Messenger

This section shows you how to send a test message; start and stop Alarm Messenger processing; monitor COM ports; run various Alarm Messenger simulations to learn more about its capabilities; view, cancel and escalate "escalated" messages, modify alerts, keys, messages, time shifts, and recipients; update invalid recipients; maintain log files; maintain the database; assign sound events and review performance considerations.

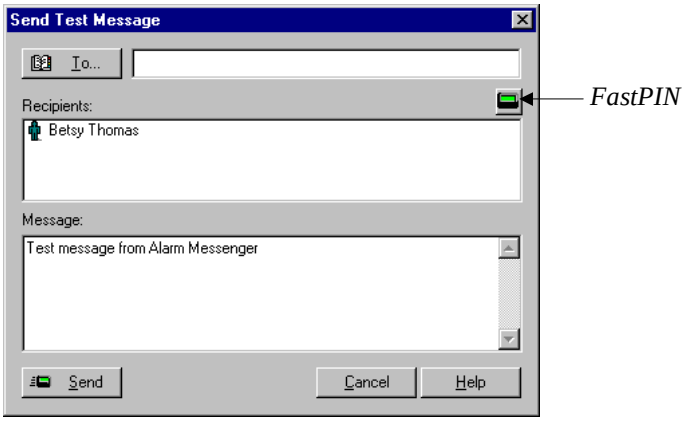
Sending a Test Message

To send a test message:

This task assumes that recipients have been defined in WirelessOffice Administrator.

1. Click the  icon on the toolbar or use the keyboard shortcut command by simultaneously pressing the **CTRL**+**S** keys or select **Tools** from the menu bar and then select **Send Test Message**.

   The **Send Test Message** dialog displays:



2. You may choose to use the default message, which requires no input from you, or you may enter a custom message in the **Message** text box.
3. To select the user from those stored in the server database, click **To** and select the recipient name from the list.
4. To select the recipient by PIN and carrier, click the  (**FastPIN**) button. Enter the recipient's PIN number in the **PIN** text box and select their carrier from the drop-down server-defined **Carrier** list.
5. Click the **Send** button to have the message transmitted, or click **Cancel** to close the dialog box without sending the message.

Starting and Stopping Input Processing

Depending on your startup mode, you may need to manually start Alarm Messenger.

To start or stop Alarm Messenger:

1. Click the appropriate button:  or  on the toolbar or select **Run** from the menu bar and choose either **Start** or **Stop**.
2. Alarm Messenger will start or stop processing incoming data from the COM port(s). When started, you should see the data stream in the Port Monitor. When alerts are detected, messages will be sent. When stopped, no incoming data will be processed and no messages will be sent.

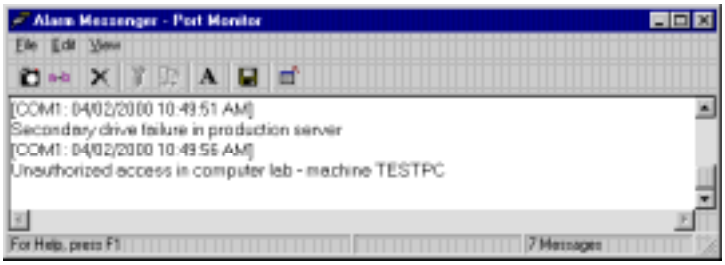
Monitoring COM Ports

Alarm Messenger provides a Port Monitor that lets you monitor the real-time data being read from any of the COM ports defined in your system. If you are running an Alarm Messenger demonstration, the Port Monitor displays the simulated data. Do not leave Port Monitor open.

To monitor COM ports:

1. Selelct **View** and then **Port Monitor** or click the  button on the toolbar.
2. Select **View** from the **Port Monitor** menu bar, select **Port**, and then select the COM port you wish to monitor.
3. The data being read from the selected COM port begins to display in the Port Monitor on the Alarm Messenger window.
4. This feature is especially useful when defining your alerts and their keys. You can use the **Create New Key** and **Copy Range** options in the Port Monitor to capture starting and ending character positions of the data elements in the data stream coming from your monitoring equipment. Please see “To define keys” on page 169 for more information.

The Port Monitor Window



The Port Monitor Toolbar

The following table depicts the Port Monitor toolbar and a description of each button:

Icons	Description	Icons	Description
	Freeze Mode		Copy selected text range
	Translate Mode changes invisible characters into numeric equivalent		Font Properties
	Clear the window		Save Port Monitor view to text or csv file
	Define New Key based on selection		Close Window

Running Demonstrations

Alarm Messenger provides a variety of demonstrations that you can use to create alerts and keys, test your data, conduct a training course, or demonstrate the software to show what happens when alerts are detected.

The following types of demos are included:

- Health,
- Manufacturing,
- Dispatch,
- Information Systems, and
- User Defined.

Note: The User Defined option lets you run your own demo. You can create your own sample data in a DEM file using any text editor. User Defined mode accesses your DEM file in C:\Program Files\Emergin WirelessOffice.

To run an Alarm Messenger demonstration:

1. Stop the Alarm Messenger service by clicking the **Stop** icon on the toolbar.
2. Select **Run** from the menu bar and select **Demo**. The **Demonstration Settings** dialog displays.
3. Select a **Demo Type** (industry types are listed above). You can adjust the **Data event interval**. One second adds a new entry every second.
4. Click the **Start** button. Notice the information reported in the Status Bar as well as the **Alarm Messenger - Port Monitor** dialog. To open it, click the **Port Monitor** toolbar icon or click **View** and select **Port Monitor**.
5. Click the **Stop** icon on the toolbar when you want to stop the demonstration.

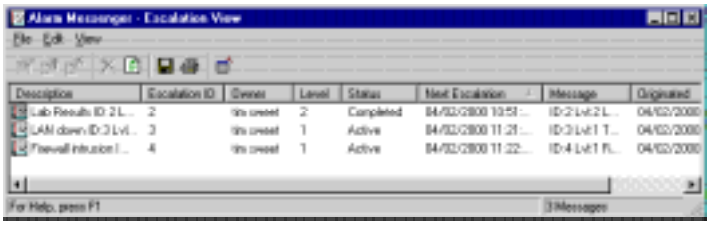
Viewing and Canceling Escalated Messages

Alarm Messenger allows you to send, cancel and "escalate" escalated messages. Escalated messages are set up in the recipient dialog of the Alert configuration. They are intended to ensure that important events are properly taken care of by continuing to escalate a message until it runs its course or is cancelled in Alarm Messenger, WirelessOffice Administrator, Web Messenger or via a two-way wireless device implementing E-mail Messenger.

To view escalated messages:

1. Select **View** and then **Escalation View,** or click the  button on the toolbar.

   The **Escalated View** dialog displays:



2. To review an escalated message's properties, double-click the specific message.

   The **Message Escalation Properties** dialog displays:

3. Click the **Properties** tab to review the owner, Escalation ID, current level, number of levels, status, next escalation time, message origination time, and message text.
4. Click the **Recipients** tab to view the recipients for each level. Double-click the level to open up and view the recipient list. If message is active, the current level of recipients will display.
5. Click the **Escalate** button to immediately escalate the message to the next level. Click the **Cancel** button to cancel the escalation. See "To cancel escalated messages" and "To escalate an escalated message" on the next page for more information.

Note: Alarm Messenger can auto-open the Escalation View whenever an escalated message is sent. Please see "To configure the Escalation View" on page 165. Alarm Messenger can also be configured to use sound notification for escalation events. Please see "Sound Events" on page 186.

To cancel escalated messages:

You can cancel a message before it has completed its series of messaging levels using four different methods:

- Select the specific message in the Alarm Messenger **Escalation View**, right-click and select **Cancel** or click the **Cancel** icon on the Escalation View toolbar. You can also double-click the message to view the **Message Escalation Properties** dialog and click the **Cancel** button. The message will be cancelled and no further levels will be escalated to and sent messages for. Canceling a message signifies that the message has been appropriately responded to and does not need to alert any other recipients on the escalation level list. After selecting **Cancel**, a message will ask if you would like to notify previous recipients. If 'Yes' is selected, a message will be sent to all previous level recipients stating that the message was cancelled and by whom.
- In WirelessOffice Administrator, click the **Escalated Messages** tab and select the specific message. Right-click and select **Cancel**. You can also double-click the message to view the **Message Escalation Properties** dialog. On the **Properties** tab, click **Cancel**.
- Two-way wireless device response implementing E-mail Messenger. Please see "Cancellation and Escalation" on page 125.
- In Web Messenger, if the escalation tab is enabled, web clients can use the Escalation ID number to cancel messages. Please see "Cancellation and Escalation" on page 137.

To escalate an escalated message:

You can escalate a message to send earlier than its scheduled time using four different methods:

- Select the specific message in the Alarm Messenger **Escalation View**, right-click and select **Escalate** or click the **Escalate** icon on the Escalation View toolbar. You can also double-click the message to view the **Message Escalation Properties** dialog and click the **Escalate** button. The escalated message will be upgraded to the next level status and the message will be immediately sent to the predefined recipients. Any levels beyond the current one will be escalated as well. The next level is rescheduled for the current time plus the originally defined Time Interval.
- In WirelessOffice Administrator, click the **Escalated Messages** tab and select the specific message. Right-click and select **Escalate**. You can also double-click the message to view the **Message Escalation Properties** dialog. On the **Properties** tab, click **Escalate**.
- Two-way wireless device response implementing E-mail Messenger. Please see "Cancellation and Escalation" on page 125.
- In Web Messenger, if the escalated message tab is enabled, web clients can use the Escalation ID number to escalate messages. Please see "Cancellation and Escalation" on page 137.

The Escalation View Toolbar

The following table depicts the Escalation View toolbar and a description of each button:

Icons	Description	Icons	Description
	Escalated message properties		Refreshes the view
	Manually escalates the message to the next level		Save Escalation View to text or csv file
	Cancels an escalated message from sending to further levels		Prints Escalation View
	Clear the window		Close Window

Modifying Objects in Alarm Messenger

You may need to change the properties of a defined alert when the data stream from your monitoring equipment changes, if a recipient or message must change, or if you want to add more functionality to an alert. You can modify alerts, keys, messages, time shifts, and COM ports directly from the Tree View of the Alarm Messenger window. To update Alarm Messenger recipients against the server, please see “Recipient Validation” on the next page.

1. To modify an alert, key, message, time shift, recipient, or port, select the desired object in the Tree View on the Alarm Messenger window.

2. Click the  icon on the toolbar, or double-click the object in the Tree View (or in the List View) or select **Edit** on the menu bar, then select **Properties**. The appropriate modify dialog box will appear.

Deleting Objects in Alarm Messenger

If you no longer need an alert, key, message, time shift, recipient, or COM port in your system, you can delete the object directly from the Tree View on the Alarm Messenger window.

1. To delete an alert, key, message, time shift, or port, select the desired object in the Tree View on the Alarm Messenger window. Recipients must be opened to their Properties dialog and deleted there.

2. Click the  icon on the toolbar or select **Edit** on the menu bar, then select **Delete** or press the **Delete** key. An Alarm Messenger message box appears asking you to confirm your request to delete the object. Click **Yes** to delete the object.

Recipient Validation

This feature performs a scan of all configured alerts and checks for invalid recipients. A recipient becomes invalid if it is deleted from the WirelessOffice Server, but is still in use by Alarm Messenger. The log results depict the alert name, time shift and recipient name involved.

To validate alert recipients:

1. Select **Tools** from the menu, then click **Recipient Validation**.
2. Press **Start** to begin. When the operation is complete, press **View Log** to view the results.

Maintaining Log Files

Alarm Messenger creates log files that you can view or print to help you monitor system performance, identify potential problem areas, and provide troubleshooting assistance. You can also export log views to a comma-delimited file for troubleshooting analysis.

Alarm Messenger allows you to display three types of log views:

- Message Log —records the outgoing messages sent to recipients when an alert was detected. It also shows message status (queued, successfully sent, etc.). Please see “Message Log status icons” in the *Using WirelessOffice Administrator* chapter for information on message status.
- Rules Log —records information about each event that matches a defined alert. It also records significant Alarm Messenger events such as starting and stopping operations and modifying ports and the database.
- Activity Log —lists the date, time, and a description of errors that occurred in the system.

Note: The maximum size of each log file defaults to 128 KB, which is usually more than a sufficient amount of data.

To view log files:

1. In the Tab View on the Alarm Messenger window, select the log you wish to view (Message Log, Rules Log, or Activity Log).
2. As you are viewing the log file, new entries may be appended. To make sure you are viewing the latest entries, select **View** on the menu bar and then choose **Refresh**.

To print log files:

You can print the contents of any log. You may want to print your log files before purging them.

1. Select the desired Log in the Tab View on the Alarm Messenger window.
2. Select **File** from the menu bar, then select **Print** or simultaneously press the **CTRL+P** keys. The **Print Setup** dialog box displays. Provide the appropriate printer requirements. Click **OK** to print.

To export log views to a file:

You can export the contents of any log to a comma-delimited (CSV) file. You may want to export and save your log files before purging them.

1. Select the desired Log in the Tab View on the Alarm Messenger window.
2. Right-click and select **Save As**. In the **Save as type** field, select the CSV format. Choose the folder destination to save the log then click **Save**.

To clear log files:

When your Activity Log or Rules Log becomes full, or any time you want to clear either log file, perform the following procedure:

1. Select the desired Log in the Tab View on the Alarm Messenger window.
2. Select **Edit** from the menu bar, then select **Delete All** or right-click any log entry in the Tab View on the Alarm Messenger window. A context menu will appear. Select the **Clear All** option to purge all entries from the log file.

Maintaining the Database

Alarm Messenger provides an easy method for maintaining the system database, which contains your defined alerts, keys, messages, etc. This includes performing routine backups and restoring the current database with a backup copy. Routine backups are recommended.

To back up the database:

Note: Always stop Alarm Messenger first, then stop WirelessOffice prior to performing the backup.

1. Click the  icon on the toolbar or enter the keyboard command by simultaneously pressing the **CTRL**+**B** keys or from the **File** menu, select **Database**, then **Backup**.
2. Select the name and location for the backup database to be stored.
3. The Alarm Messenger database parameters are stored at the specified location.

To restore the database:

Restore allows you to replace the current database with a backup copy. This should only be done when the current database has been corrupted, destroyed, or has become obsolete. Restore permanently overwrites the current database and cannot be undone.

Note: Always stop Alarm Messenger first, then stop WirelessOffice prior to performing the restoration.

1. Click the  icon on the toolbar or enter the keyboard command by simultaneously pressing the **CTRL**+**R** keys or from the **File** menu, select **Database**, then **Restore**.
2. Select the name and location where the Alarm Messenger parameters database can be retrieved.
3. The Alarm Messenger database parameters are restored and will be executed the next time Alarm Messenger is launched.

Sound Events

You can receive audio notification of certain events that occur in Alarm Messenger.

To activate sound events:

1. Click **Start** from the taskbar, select **Settings** then **Control Panel**. Click the **Sounds** icon. The **Sounds Properties** dialog displays.
2. Highlight the Alarm Messenger event(s) to associate with audio notification. Events include message cancelled, message escalated, message response, and new escalated message.
3. In the **Sound** area, click the **Browse** button to select your sound choice. Click **OK**.

Performance Considerations

Depending on your monitoring traffic, the system's performance may appear to diminish. If you believe your system is slow, consider the following ways to improve its performance:

- Increase RAM from 64 MB or 128 MB or greater.
- Run Alarm Messenger on its own computer.
- If you use the Port Monitor, remember that it is intended for diagnostic use, and can affect system performance if left open.
- Run multiple Alarm Messengers on different computers to balance the traffic load.
- If sending more than 100 escalated messages at one time, increase clock speed and system RAM.

Appendix A: Administrator Tools

The WirelessOffice suite of products includes Administrator Tools, which allow you to upgrade previous versions of Air Apparent, Site Alert, WirelessOffice and SitePage databases to a format compatible with WirelessOffice Server 3.0 and Alarm Messenger 3.0. A wizard for exporting a WirelessOffice Server Microsoft Access database to Microsoft SQL Server is also included. The upgrade and conversion tools are installed on your system when you choose to install them from the **Administrator Tools** option in the **Components** dialog box. Please see "Installing WirelessOffice" on page 8.

The Administrator Tools utility contains a variety of useful features:

- Acrobat Reader Installer
- Database Upgrade Tool
- Alarm Messenger Upgrade Tool
- SQL Server Upsizing Wizard
- SQL Support Notes

Note: The upgrade and conversion tools run within the Access 97 Runtime environment, which is installed along with the tools. There is no need for a separate installation of Microsoft (MS) Access. Moreover, the runtime environment installed with the upgrade tools does not interfere with any previous or later versions of MS Access on your system, and does not reassign the associations of your current Access databases to use the runtime version as opposed to the full version of MS Access. The runtime version of MS Access will only be invoked when you choose to launch the upgrade tools from the **Start | Programs | Emergin WirelessOffice | Administrator Tools** menu.

Note: WirelessOffice Server 2.0 and SitePage 2.0 do NOT require the use of the Administrator upgrade tools in order for WirelessOffice 3.0 to install and upgrade properly from version 2.0. If you upgrade your database using the Installation Wizard you will not have the option to convert the database again using these tools.

Using the Database Upgrade Tool

The WirelessOffice database upgrade can be launched by selecting **Database Upgrade Tool** from the **Administrator Tools** folder in the **Emergin WirelessOffice** program group. This will launch the Access runtime environment and load the Access form that governs the upgrade tool. Air Apparent NT, Air Apparent OS/2, and WirelessOffice 2.0 can be upgraded using this tool. When upgrading, first make a backup of your original database(s). Install the new software and then use the database upgrade tool. The upgrade tool will automatically place the newly converted database in the correct system folder.

Database Upgrade Information

- The conversion routine does not change the Access database version. For example, converting a Version 1.1 database does not convert its format from Access 95 to Access 97, it simply alters the table structure to allow the database to work with WirelessOffice.
- The WirelessOffice database tools are *not* copied into the converted database.
- The database must be *writeable* before converting.
- Make a backup copy of air.mdb or wirelessoffice20.mdb before converting.
- The database to be converted should be on a local or network drive, not a floppy drive.

Upgrading Air Apparent NT

This option upgrades a database from a previous version of Air Apparent NT to WirelessOffice 3.0. This procedure does not import data into the current database; it alters the structure of the previous database to match WirelessOffice. No data is lost, but the database will no longer work with versions of Air Apparent.

To upgrade Air Apparent NT:

1. Select the **Air Apparent NT** button. The **Air Apparent NT Upgrade** dialog displays. Click **Next**.
2. The **Select Air Apparent Database to Upgrade** dialog box displays. Select the file location of your Air Apparent database (air.mdb) and click **OK**.

3. The conversion tool will determine the version of the selected database and convert its structure to WirelessOffice version 3.0 format. Any errors or warnings will appear as message boxes.
4. You may then start WirelessOffice Administrator and see the converted database in place. If the old database displays or the database is unable to open, you will need to enter the ODBC to switch WirelessOffice databases. Exit WirelessOffice.
5. Click **Start**, then **Settings**, then **Control Panel**. Select **ODBC Data Sources**. You should see the old and new databases listed on the **System DSN** tab. Select the new database, WirelessOffice 3.0. Exit Control Panel.
6. Re-open WirelessOffice Administrator.

Upgrading Air Apparent OS/2

This option allows users of Air Apparent for OS/2 to upgrade their existing OS/2 database to a format compliant with WirelessOffice 3.0. The database to be converted should be on a local or network drive, not a floppy drive. Data from the OS/2 database will be added to the current WirelessOffice database.

To upgrade Air Apparent for OS/2:

1. Select the **Air Apparent OS/2** button.
2. In the **Air Apparent OS/2 Upgrade** dialog, click **Next** to upgrade. The **Browse for Folder** dialog displays.
3. Select the folder containing the Air Apparent OS/2 database files (it can be local or network). Click **OK** to start the database upgrade.
4. You will be notified of any database errors and warnings with popup dialogs.
5. You may then start WirelessOffice Administrator and see the converted database in place. If the old database displays or the database is unable to open, you will need to enter the ODBC to switch WirelessOffice databases. Please refer to Steps 4-6 in the preceding section above "To upgrade Air Apparent NT".

Upgrading WirelessOffice 2.0

This option allows users of WirelessOffice 2.0 to manually convert their existing database to a format compliant with WirelessOffice 3.0. This procedure does not import data into the current database; it alters the structure of the previous database to match WirelessOffice 3.0. No data is lost, but the database will no longer work with WirelessOffice 2.0.

Note: The WirelessOffice 3.0 Installation Wizard will automatically upgrade WirelessOffice 2.0 and SitePage 2.0 databases to a compatible format.

To upgrade WirelessOffice 2.0:

1. Select the **WirelessOffice** button. The **WirelessOffice Upgrade** dialog displays. Click **Next**.
2. The **Select WirelessOffice Database to Upgrade** dialog box displays. Select the file location of your database (wirelessoffice20.mdb) and click **OK**.
3. The conversion tool will determine the version of the selected database and convert its structure to WirelessOffice version 3.0 format. Any errors or warnings will appear as message boxes.
4. You may then start WirelessOffice Administrator and see the converted database in place. If the old database displays or the database is unable to open, you will need to enter the ODBC to switch WirelessOffice databases. Please refer to Steps 4-6 in the preceding section "To upgrade Air Apparent NT" on page 189.

Using the Alarm Messenger Upgrade Tool

The Alarm Messenger upgrade tools can be launched by selecting **Alarm Messenger Upgrade Tool** from the **Administrator Tools** folder in the **Emergin WirelessOffice** program group. This will launch the Access runtime environment and load the Access form that governs the Alarm Messenger upgrade tools. When upgrading, first make a backup of your original database(s). Install the new software and then use the database upgrade tool.

Alarm Messenger Upgrade Information:

- The conversion routine does not change the Access database version. For example, converting a Version 1.1 database does not convert its format from Access 95 to Access 97, it simply alters the table structure to allow the database to work with Alarm Messenger.
- The Alarm Messenger upgrade tools are *not* copied into the converted database.
- The database must be *writeable* before converting.
- Make a backup copy of sitealrt.mdb or sitepage20.mdb before converting.
- The database to be converted should be on a local or network drive, not a floppy drive.

Upgrading Site Alert NT

This option upgrades a database from a previous version of Site Alert NT to Alarm Messenger 3.0. This procedure does not import data into the current database; it alters the structure of the previous database to match Alarm Messenger.

To upgrade Site Alert NT:

1. Select the **Site Alert NT** button from the Alarm Messenger **Database Upgrade** window. The **Site Alert NT Upgrade** dialog box displays.
2. Click **Next** to bring up the standard file **Open** dialog. Select the location of your Site Alert NT database (sitealrt.mdb) and click **OK**.
3. The upgrade tool will determine the version of the selected database and convert your Site Alert NT database structure to Alarm Messenger format. Any errors or warnings will appear as message boxes.
4. You may then start Alarm Messenger and see the converted database in place.

Upgrading Site Alert OS/2

This option allows users of Site Alert for OS/2 to convert their existing OS/2 database to a format compliant with Alarm Messenger 3.0. The database to be converted should be on a local or network drive, not a floppy drive. Data from the OS/2 database will be added to the current Alarm Messenger database.

To upgrade Site Alert OS/2:

1. Select the **Site Alert OS/2** button from the Alarm Messenger **Database Upgrade** window.
2. The **Site Alert OS/2 Upgrade** window displays. Click **Next**. The **Browse for Folder** dialog displays.
3. Select the folder containing the Site Alert OS/2 database files (it can be a local or network folder). Click **OK** to continue. The **Select WirelessOffice Database** dialog displays.
4. Select the database location and click **Open**.
5. You will be notified of any database errors and warnings with popup dialogs.
6. You may then start Alarm Messenger and see the converted database in place.

Upgrading SitePage 2.0

This option allows users of SitePage 2.0 to manually convert their existing database to a format compliant with Alarm Messenger 3.0. The database to be converted should be on a local or network drive, not a floppy drive. Data from the SitePage 2.0 database will be added to the current Alarm Messenger database.

Note: The WirelessOffice 3.0 Installation Wizard will automatically upgrade WirelessOffice 2.0 and SitePage 2.0 databases to a compatible format.

To upgrade SitePage 2.0:

1. Select the SitePage button from the Alarm Messenger **Database Upgrade** window. The **SitePage Database Upgrade** dialog box displays.
2. Click **Next** to bring up the standard file open dialog. Select the location of your SitePage database (sitepage20.mdb) and click **OK**.
3. The upgrade tool will determine the version of the selected database and convert your SitePage database structure to Alarm Messenger 3.0 format. Any errors or warnings will appear as message boxes.
4. You may then start Alarm Messenger and see the converted database in place.

SQL Server Database Conversion

This describes how to convert the WirelessOffice Miscrosoft Access database to Microsoft SQL Server. There are two ways of setting up SQL Server for use with WirelessOffice. The easiest way is to use the **SQL Server Upsizing Wizard** to export the WirelessOffice Access database to SQL Server. The other way is to create an empty database using a script provided.

Note: These instructions assume familiarity with the SQL Enterprise Manager and configuring ODBC data sources.

When to Use SQL Server

The Access database for WirelessOffice 3.0 should offer sufficient performance for all but custom server installations.

SQL Server is recommended for any of the following conditions:

- The number of users exceeds 3000.
- The number of messages stored in the database exceeds 1500.
- More than 200 clients are routinely connected to the server.

Using the Upsizing Wizard

The Upsizing Wizard is a Microsoft tool to export Access 97 databases to SQL Server. With the tool, any Access database (including its data, indexes and relationships) can be transferred to SQL Server. The Wizard is an Add-In for Access 97.

Note: If you have Access 2000 and try to open the WirelessOffice30.mdb file, you will be prompted to convert its file format. This is OK. The database will still work with WirelessOffice. However, you will need to obtain the Upsizing Wizard for Access 2000 (it is not included on the WirelessOffice CD). The Upsizing Wizard for Access 2000 can be obtained from the Microsoft web site.

Requirements:

- Microsoft SQL Server 6.5 or 7.0
- Full version of Microsoft Access 97 and Upsizing Wizard for Access 97

Note: The SQL Server does not have to be installed on the same system as the WirelessOffice 3.0 Server.

If using SQL Server 7.0, do not use the DTS Wizard for importing data. The WirelessOffice table relationships are lost using the DTS import tool.

To export the Access database to SQL Server:

1. Install Access 97 full version (required). Install WirelessOffice 3.0 (make sure Administrator Tools | Upsizing Wizard is installed on the same machine as Access 97).
2. Launch Access 97. Open the WirelessOffice database you wish to export.

IMPORTANT: Hold down the **SHIFT** key while the database opens.

3. From the **Tools** menu select **Add-Ins** then **Upsize SQL Server**.
4. Follow the directions in the wizard to select the SQL Server. You may be required to first create a file DSN to gain access to the SQL Server. If so, do not confuse this file DSN with the WirelessOffice DSN, which will be created in Step 6.
    a. Create New Database. Select **Data Source Dialog**. Click **New**.
    b. Create New Data Source Dialog. Scroll down and select **SQL Server**. Type DSN Name (can be anything). Click **Next**. Click **Finish**.
    c. Create a New Data Source to SQL Server Dialog. “How do you want to describe the data source?” - leave blank. “Which SQL Server do you want to connect to?” - choose the SQL Server that WirelessOffice will connect to. “How should SQL Server verify authenticity of login?” – choose “WinNT using Network login” or “With SQL Server Authentication” (preferred because this is required when changing Data Source in WirelessOffice. Need to get the login/password from customer's SQL expert.)
    d. Leave defaults on the next screen. Click **Next**. Leave defaults on next screen. Click **Finish**.
    e. ODBC Microsoft SQL Server Setup. Verify settings. Click **Test Data Source**. You should receive "Tests Completed Successfully". If not, check SQL password or if SQL has been stopped since File DSN entry was created. Click **OK**. Click **OK**.
    f. Select Data Source Dialog. Should see DSN entry in list now. Highlight it and click **OK**.
    g. SQL Server Login Dialog. Enter login/password. Click **OK**.
    h. Upsizing Wizard Dialog. Name the new SQL Server Database: WirelessOffice30. Click Next. “Which Tables do you want to export to SQL Server?” - select all. Click **Next**. Leave defaults on next screen. Click **Next**. Create report if needed (not required). Click **Finish**.
    i. Upsizing Wizard creates new SQL Database. Upsizing complete.

Use the following options:

Device Creation (pre-SQL 7.0 only):

- Create a new data device called “WODATA”, 50 MB in size.

- Use the same device for logging.

5. When the Wizard has completed, close Access 97 and create an ODBC Data Source on the system running WirelessOffice 3.0. Click **Start**, then **Settings**, **Control Panel**, **ODBC Data Sources**. Using **ODBC Data Source Administrator**, create a System DSN using the following parameters:

   a. ODBC Data Source Admin Dialog. Click the **System DSN** tab, You should see WirelessOffice 3.0 already. Click **Add**.

   b. Create New Data Source Dialog. Scroll to **SQL Server** and click **Finish**.

   c. Create a New Data Source to SQL Server Dialog. “What name do you want to use to refer to...?” - type "WirelessOffice 3.0 SQL Server”. “Which SQL Server do you want to connect to?” - choose the SQL Server (local if SQL was installed on same machine).

   d. Create a New Data Source to SQL Server Dialog. Select either “WinNT authentication” or “SQL Server” (preferred). MUST CLICK CLIENT CONFIGURATION.

   e. Edit Network Library Configuration Dialog. Select **TCP/IP** and leave defaults. Click **OK**.

   f. Create a New Data Source to SQL Server dialog. Type SQL Server login/password. Click **Next**.

   g. Change default database to: WirelessOffice30. Deselect “Create temporary stored procedures for prepared SQL statements and drop the stored procedures”. Click **Next**. Leave defaults on the next screen. Click **Finish**.

   h. ODBC Microsoft SQL Server Setup Dialog. Click **Test Data Source**. Should get “Tests Completed Successfully”. Click **OK**. Click **OK**. ODBC Data Source Administrator Dialog. Click **OK**.

   Note: You may need to install the Client Utilities from your SQL Server CD if you need to change the network library used to communicate with SQL Server.

6. Change the WirelessOffice Server data source:

   a. Start the WirelessOffice Server.

   b. Start the WirelessOffice Administrator and connect to the server.

   c. Click **Tools** from the menu bar and select **Server Configuration**. Select the **Database** tab.

   d. Select the “WirelessOffice3.0 SQL Server” from the Data Source Name area and provide a valid SQL Server Authentication **User ID** and **Password**. Click **OK**.

   e. Restart the WirelessOffice Server to begin using the new database.

To create an empty database using the script provided:

Requirements:

- WO30.SQL script (should exist in this directory)
- Microsoft SQL Server 6.5 or 7.0

1. Open the Microsoft SQL Enterprise Manager.
2. Create a new Database Device (for pre-SQL 7.0 only):

   Name: WOData

   Size (MB): 50 (recommended)
3. Create a new Database:

   Name: WirelessOffice30

   For SQL 6.5: **Data Device:** WOData; **Log Device:** (none); **Size (MB):** 50

   For SQL 7.0: Select **Automatically grow file** and select the default settings.
4. Edit the "WirelessOffice30" database properties and set the following options in the **Options** dialog:
   - **Select Into / Bulk Copy**
   - **Truncate Log on Checkpoint**
5. Create Database Schema:
   a. Open the **SQL Query Tool** (for SQL 6.5) or the **Query Analyzer** (for SQL 7.0).
   b. Switch to the WirelessOffice30 database in the "DB:" combo box.
   c. Load and execute the "WO30.sql" file. In SQL 6.5 you should see several messages reporting "Default bound to column". When finished, a "Complete" message should appear.
   d. At this point the database has been created and populated with the required tables and initial data.
6. Create an ODBC Data Source on the system running WirelessOffice 3.0. Using **ODBC Data Source Administrator**, create a System DSN using the following parameters:

   Name: "WirelessOffice 3.0 SQL-Server"

   Server: <the name of your SQL Server>

   Network Address: default

   Network Library: default (TCP/IP is recommended)

   Database Name: "WirelessOffice30"

   Deselect **Generate Stored Procedure for Prepared Statement**

Note: You may need to install the Client Utilities from your SQL Server CD if you need to change the network library used to communicate with SQL Server.

7. Change the WirelessOffice Server data source:
   a. Start the WirelessOffice Server.
   b. Start the WirelessOffice Administrator and connect to the server.
   c. Click **Tools** from the menu bar and select **Server Configuration**. Select the **Database** tab.
   d. Select "WirelessOffice 3.0 SQL Server" from the Data Source Name area and provide a valid SQL Server Authentication **User ID** and **Password**, and click **OK**.
   e. Restart the WirelessOffice Server to begin using the SQL database.

Appendix B: Troubleshooting

This appendix lists some of the more common errors or problems that you may encounter when using WirelessOffice. For the most current and complete troubleshooting, please refer to our web site at www.emergin.com. The web site Knowledge Base includes Frequently Asked Questions (FAQs), Knowledge Base information, Resources and Troubleshooting.

This section is broken down by WirelessOffice Server and component name and includes knowledge base information in the format of Problem and Solution with step-by-step instructions where applicable.

WirelessOffice Administrator

Reported Problem	Solution
Access denied error: Network client error "access denied".	In Windows 95/98 you need to be logged into Microsoft networking.
Administrator not working: WirelessOffice Administrator is not able to run.	Administrative rights are not set correctly for the system. You must be logged on with Administrative rights on the NT/2000 domain, or locally to access WirelessOffice Administrator. Configure this on NT by going to **Start | Programs | Administrative Tools (Common) | User Manager**.
Firewall ports: What TCP/IP port do I connect to for a firewall to open?	The following ports are used with firewalls: To the Server: 1024+ - Dynamic port From the Server: Internet Java 1515 – Web Messenger 12397 – WirelessOffice Administrator 12398 – Alarm Messenger 12396 – WirelessOffice Messenger
Incorrect Authorization Code Entry:	The Authorization Code may not be valid for the current version. E-mail support@emergin.com for assistance.
No modem listed in Ports tab: Installed new modem driver in Control Panel, but modem does not show up when adding a new port.	The WirelessOffice Server must be stopped and re-started. In WirelessOffice Administrator, click **File | Change Server**. The modem should now be available when adding the new Port.
RPC Error Received: RPC Error Connecting (Error 1723, 1722, 1702 & 1825).	This is a service-specific error indicating that TCP/IP and a network card adapter may not be properly configured. If no network card is in place and the WirelessOffice system is a standalone, MS Loopback adapter can be set up in place of the network card adapter. 1. To set up TCP/IP, go to **Start | Settings | Control Panel | Network | Protocols** tab. 2. If TCP/IP is not listed as a protocol, click on **Add** and select **TCP/IP** from the Select Network Protocol screen. 3. To set up MS Loopback, go to **Start | Settings | Control Panel | Network | Adapters** tab. 4. Click on **Add** and select **MS Loopback Adapter** from the Select Network Adapter screen. 5. During setup, **Specify an IP Address**. Type in 127.0.0.1 as the **IP Address**. Type in 1.1.1.1 as the **Subnet Mask**. The **Default Gateway** does not need to be changed.
Server stopped error: Received error "Server is stopped".	Restart the server from within WirelessOffice Administrator by going to **File | Change Server**. Select the server you wish to start. Click the **Start Service** button.

Administrator Tools

Reported Problem	Solution
Received error message: "This database is not a recognized version. Exiting."	The file selected is not a WirelessOffice database.
No current record error message:	This can be caused by an empty Version table in 1.1 or 1.1.1 databases. (Version 1.0 databases do not have a Version table.) Solution: Open your 1.1 or 1.1.1 database in Access 97. **Important:** Hold down the **SHIFT** key while the database is opening. Open the Version table, this allows you to examine the tables. Double-click the Version table, if there are no records, type 1.1 to close the database. Try converting the database again. If you do not have Access 97, contact an Emergin representative.
No dbf file found: <filename>.dbf file not found	The dbf file was not found in the directory. All OS/2 dbf files are required before the import can take place.

WirelessOffice Server

Reported Problem	Solution
Server stopped error: Received error "Server is stopped".	Restart the server from within WirelessOffice Administrator by going to **File | Change Server**. Select the server you wish to start. Click on the **Start Service** button.
Unable to initialize variable error:	WirelessOffice Server must be loaded onto a Windows NT/2000 system.
WOSRV.exe Dr. Watson error: WOSRV.exe locks up or receives a Dr. Watson error.	Several things could cause this: 1. Customer's e-mail gateway is down. 2. Unipage hardware is locking up. 3. 56k line to the direct connect is overloaded. 4. If the direct connect plug (e.g. Unipager or Pagebridge) is unplugged while sending messages, the server will lock up. 5. The database may have grown too large due to temp file accumulation. You need to Repair and Compact ODBC. Go to **Start | Settings | Control Panel | ODBC Data Sources**. Click on the **System DSN** tab. Click **WirelessOffice 3.0** then click on **Configure**. In the Database field, click on **Repair**, then **OK**. After that finishes, click on **Compact** from the Database field, then **OK**. 6. If you have converted from OS/2, inputting more than 20 time shifts in Alarm Messenger causes this error. Streamline shifts down to 20.

Dispatcher (message sending)

Reported Problem	Solution
Adding Ports- No modem listed: Unable to see the configured modem when adding new Ports.	To see newly configured modems, you must restart the WirelessOffice service. Go to **File | Change Server**. Stop and re-start the service.
Auto Resend is not working: Message sending works fine.	Auto resend only works with carriers that support TAP version 1.6 or greater. TAP error code 512 (signifying device busy or out of range) must be returned to our system in order for the auto resend to function.
Error - Cannot process multi block pages: In the Message Log Status Description field, messages fail. In the Carrier log the following error is reported, "Error: Cannot process multi block pages".	Block size and message length settings are set incorrectly. Verify with carrier the correct block size, which is typically 256 with a message length of 240, but may vary. If the error is occurring for only one user, verify that individual's maximum message length, which may differ from the carrier's settings due to the user's paging plan.
Message fails - modem never dials: In the Message Log Status Description field, message becomes Fail status and the modem never dials.	1. Make sure the correct COM port is selected for the modem. Go to **Start | Settings | Control Panel | Modems** to see which port a particular modem is configured on. 2. Make sure modem is configured with appropriate driver. If new modem driver is installed, start and stop Administrator service and then enter Ports tab. 3. Enter COM port information for that modem in the WirelessOffice Administrator **Ports** tab. 4. Test modem with HyperTerminal.
Message fails - only one carrier: The Message Log status is fail, unable to send to just one carrier. All other carrier's messages report success in the Message Log.	**Solution 1:** Call the carrier and ask if they are having any problems on their side. Verify the following settings: Is the terminal you are dialing TAP protocol version 1.3 - 1.8 compliant? Are you dialing the correct terminal dial-up phone number? Are you using the correct User PIN? In User Properties in WirelessOffice Administrator verify: Maximum message length (our default is 240), Maximum number of fragments (our default is 5). In the Carrier's properties verify: Maximum block size (our default is 256), Maximum messages per connection (our default is 20), baud rate (our default is 2400), parity (our default is even), data bits (our default = 7), flow control (our default is on). **Solution 2:** Enable and review the COM port logs and look for a lack of login response (ID=), as some carriers require more time to go through the login and connection sequence than WirelessOffice provides. To adjust login and connection timeouts: 1. Enter the registry, by clicking **Start** from the taskbar, point to **Run**. Type regedit in the **Open** text box. Click **OK**. 2. Click **Registry | Export registry file**. Type in the file name for a backup of your registry (registry_backup). Press enter. You have now backed up your registry to c:registry_backup.reg. 3. Next find the following key HKEY_LOCAL_MACHINE\SOFTWARE \Emergin\WirelessOffice\Dispatcher. For the following settings, use the following values (in hex mode) and test message sending. When finished, close the registry editor. Changes are already saved. **redial_delay_sec 0** (but may be adjusted if needed, useful if the terminal goes through busy phases) – this must be

Reported Problem	Solution
	manually added. **timeout_connect_ms 2500** (which equals 2.5 seconds, use 500 to increment, default is 2000) **timeout_thresh_connect 5** (default is 3) **timeout_thresh_login 5** (default is 3)
Message fails - sending fine yesterday: In the Message Log Status Description field, all messages stay queued or fail. Messages were all sent successfully 1 day ago.	1. Make sure all cables are properly connected and connections are plugged in on WirelessOffice Server system. 2. Contact carrier. Ask them to check their RS-232 cable connections on their side. 3. Ask if carrier terminal is down. Ask them to reboot terminal. 4. Review modem driver information in Control Panel. Modem may have been changed or removed. Replace the modem driver.
Sent message not received on device: Pages are accepted in the logs but are never received on the devices.	Reception or terminal problem. Carrier may be busy at that time. Contact carrier if problem persists.
TAPI Errors - All	Go to www.emergin.com. Open the **Knowledge Base**, click the **Search** tab. Search for the **Error Message Codes** topic.
TAPI Error 1000 - No ID=: In the Message Log Status Description field, received TAPI error 1000: "No ID=". Message goes to Fail status.	For direct connections, check baud rate with carrier. Test different baud rates. If baud rate changes do not resolve issue, change modem driver from USR 56k to standard 28,800. For SMTP connections: 1. Verify that the SMTP carrier is correctly configured. Verify that the user is correctly linked to the carrier. 2. Click **Tools | Options** and select the SMTP tab. Review those settings. 3. Confirm a connection with the SMTP carrier. Go to the Command Prompt utility and type ping [IP address of the carrier]. For example, ping mail.MIA.bellsouth.net. Four reply lines indicate a positive connection. 4. If all settings are correct and no connection is available, check that your firewall is not blocking the connection and the computer you are working on is connected correctly to the network. 5. Contact the Internet Service Provider if no resolution is found.
TAPI Error 1001 - Error handshaking: All messages report Fail in the Message Log Status Description field with TAPI Error 1001-"error handshaking".	1. Call carrier for their preferred baud rate. 2. Test different baud rates. 3. If unresolved, review your modem driver in the Control Panel. Test with correct/most current driver in place. If necessary, change the driver to a Standard 28,800 Driver.
TAPI Error 1030 - Modem is in use: In the Message Log Status Description field, received TAPI error 1030 & 1042: "Modem is in use". Message becomes Fail status.	1. Close or uninstall RAS (Remote Access Service) program or stop RAS service. To stop the RAS service, go to **Start | Settings | Control Panel | Services**. Make sure all remote access and telephony services are stopped and set to manual. Re-boot system. 2. Close or uninstall Fax program.
TAPI Error 1064 - No ID=: In the Message Log Status Description field, received TAPI error 1064: "No ID=". Message goes to Fail status.	**Solution 1:** Incorrect carrier phone number. Test phone number by calling it. Call carrier for correct call in number. **Solution 2:** This solution applies to cases that are failing only to one carrier. Call the carrier to see if they are having any problems on their side. Review COM logs and look for a lack of login response (ID=), as some carriers require more time to go through the login and connection sequence than

Reported Problem	Solution
	WirelessOffice provides. Please see **Message fails - only one carrier, Solution 2.** **Solution 3:** In cases where a 56k direct connect line to the carrier has been installed, adjust the timing thresholds in the registry outlined in the "Message files- only one carrier" dispatcher problem. Experiment with different settings until a successful message is sent.

WirelessOffice Messenger

No reported problems.

Command Messenger

Reported Problem	Solution
RPC 1722 server is unavailable error: Received RPC 1722 error, "RPC Server is unavailable".	Before sending messages from your third-party software or at the Command Prompt, you must first type the internet address (or name) to configure Command Messenger. Type `cmdmsgr –i[internet address] –u[user name] –w[password]`. If you receive PASS messages for all three commands, Command Messenger is ready to send messages.

File Messenger

Reported Problem	Solution
Misspelled word not accepted: Misspelled word caused UNIX script to not be accepted.	Verify all spellings in scanned files.
Page-enabling UNIX:	You can ftp UNIX files to a shared directory on a File Messenger system. File Messenger is pre-configured to monitor that particular directory for certain file extensions. When a new file is placed into that directory with a specific extension, File Messenger reviews the data and if it composed in the correct file format the message is sent.

E-mail Messenger

Reported Problem	Solution
E-mail Messenger not accepting e-mail: Either e-mail messaging is not working and/or a test message does not work.	1. In Control Panel double-click the **E-mail Messenger** icon. Click the **Service** tab. If the service is running, click on the **WirelessOffice** tab and click **Test Connectivity.** 2. If you were able to confirm that the E-mail Messenger service is accepting connections, then verify that the domain of the computer is resolved in the DNS server. Otherwise, e-mail coming from any Internet mail server will not reach E-mail Messenger. You can verify this by going to the Command Prompt and typing: `ping wireless.domain.com` for example. If you receive four reply lines then the domain is configured. 3. If a negative response of bad IP address returns, confirm that your IT Department has added the DNS record correctly. A domain name for the messaging gateway (i.e. wireless.domain.com) must be mapped to the Internet address of the E-mail Messenger workstation.

Web Messenger

Reported Problem	Solution
Cannot see newly added user, group or department: Just added in WirelessOffice Administrator, but cannot see it in Web Messenger.	In Web Messenger, press **SHIFT** and **Refresh** at the same time for an updated screen. The new user/group/department will display in the Public Address Book (if available to the User Name login account's accessibility and security rights).
Gray box displays instead of Web Messenger during setup:	1) Verify that a Web server is installed and configured on the PC running the Web Messenger service. 2) Verify that your Internet browser has Java capabilities. If you are using Microsoft Internet Explorer V5.0 or greater, you are required to install the Java Virtual Machine. 3) Verify that your company firewall supports Java.
Server not started error: Error received "Server not started".	Go to **Start | Settings | Control Panel | Web Messenger**. The Web Messenger control screen appears. Start the service by clicking the green arrow on the Service tab.

Alarm Messenger

Reported Problem	Solution
Install COM port cable error: Error received after each successful send, "Please install COM port cable".	Replace COM cable with one that is not Null (reverse pin).
No data received: Not receiving data from RS-232 port.	1. Review settings, make sure they are the same as device. Use trial and error to find correct baud, parity, data bit and stop bit settings. 2. Check to see if RS-232 cable is unplugged or incorrectly cabled.
Port Monitor not receiving data:	1. If you can view data using HyperTerminal, you may just need to click **Start** to begin streaming. To start data, click **Run** from the Alarm Messenger menu, and select **Start**. Also make sure in the Port Monitor that you have the right ports selected for viewing (in the monitor click **View | Ports** and select the port(s) to monitor). 2. If data is not able to show, this could be caused by the input device settings not being in sync with the port settings in Alarm Messenger. Check your input device documentation for its specific settings (baud rate, parity, data bits, stop bits, flow control, etc.). You may need to use trial and error to find correct baud, parity, data bit and stop bit settings. Modify port information within Alarm Messenger by clicking **Ports** from menu tree. Click desired port. Right-click, select **Properties**. 3. Check to see if the RS-232 cable is unplugged or incorrectly cabled.

Voice Messenger

Reported Problem	Solution
When calling in, Voice Messenger will not accept my User Name: Have double-checked the spelling in WirelessOffice Administrator.	1. Make sure you are using the **Full Name** listed on the User Properties tab rather than the Login User Name. 2. You must use a 1 to indicate a space or any punctuation. Jane Doe would thus be typed into the phone as `52631363`. 3. A password is required and must be defined in the user's WirelessOffice Administrator profile.

When calling into Voice Messenger, I do not receive any prompts or directions.	1. Check to make sure Voice Messenger is started in the control panel application's **Service** tab. 2. On the **WirelessOffice** tab, ensure you have valid user name, password and server entries. Click **Test Connectivity**. The User Name here should reflect the Login User Name. 3. On the **Voice Wave Files** tab, make sure all .wav files are in the specified wave file folder. Play the greeting.wav file to make sure there is a message in place. 4. Check the dedicated line connection and the voice/data modem. If the modem is correctly installed it will display on the **Settings** tab. We recommend using a 3COM U.S. Robotics 56K Voice Faxmodem Pro internal or external. 5. Ensure that the wave sound device for the modem is properly installed. It will usually be visible as a "Half Duplex Serial Wave Device" in Start | Settings | Control Panel | Multimedia.

Appendix C: Server Logging

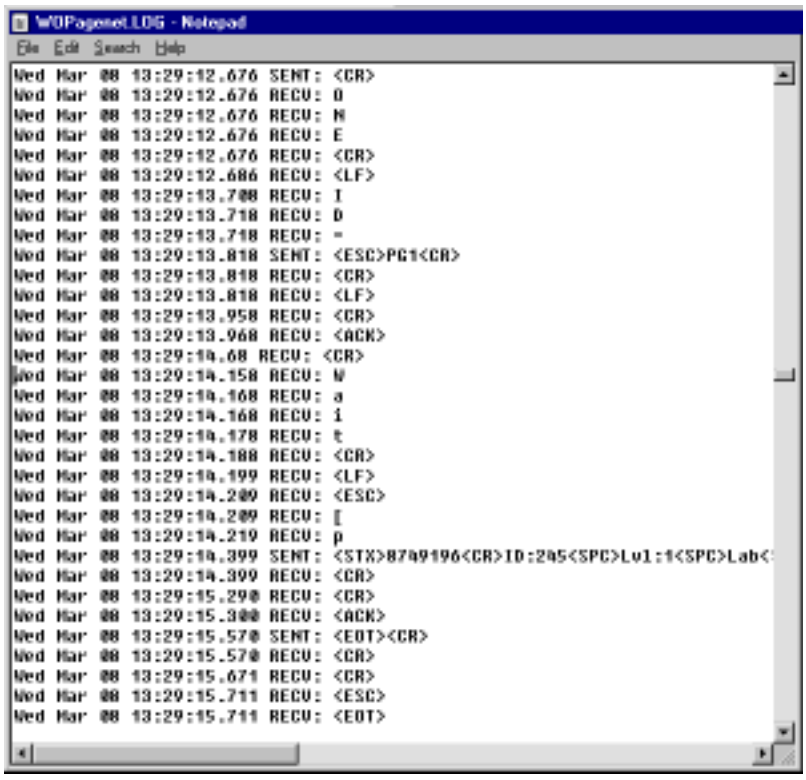
WirelessOffice offers a variety of server, carrier, port and archive logging. The following table depicts the logging description, the log file name, and configuration screen. All configuration takes place in WirelessOffice Administrator and log files are saved by default in C:\Program Files\Emergin WirelessOffice\Logs (you can select another location in Server Configuration).

Logging options are also available for E-mail Messenger, File Messenger, Command Messenger, Voice Messenger and Alarm Messenger.

Description	File Name	Configuration Screen
Carrier Log, where logging is enabled per carrier	Wocarriername.log	Click the **Carriers** tab of the **Server Administration** window. Select the carrier you wish to log for and double-click to display properties. On the **Carrier** tab, select **Enable Logging**.
Port Log, where logging is enabled per port	Wocom#.log (com# reflects the com port number)	Click the **Ports** tab of the **Server Administration** window. Select the port you wish to log for, right-click and select **Logging Enabled**.
Message Log – monthly archive	MLyymm.log	Click **Tools**, then **Server Configuration**. Select the **Logging** tab.
Message Log – weekly archive	MLyymmww.log	Click **Tools**, then **Server Configuration**. Select the **Logging** tab.
Message Log – daily archive	MLyymmdd.log	Click **Tools**, then **Server Configuration**. Select the **Logging** tab.
Activity Log archive	Activity.log	Click **Tools**, then **Server Configuration**. Select the **Logging** tab.
Backup Activity Log	Activity.old	Open this log by clicking **Tools** and selecting **View Backup Activity Log**.
Dispatch Log	Wodispatch.log	To disable Dispatch logging: 1. Open c:\winnt\wolog.ini. 2. Set `Logging=NO` under the [dispatch] section.

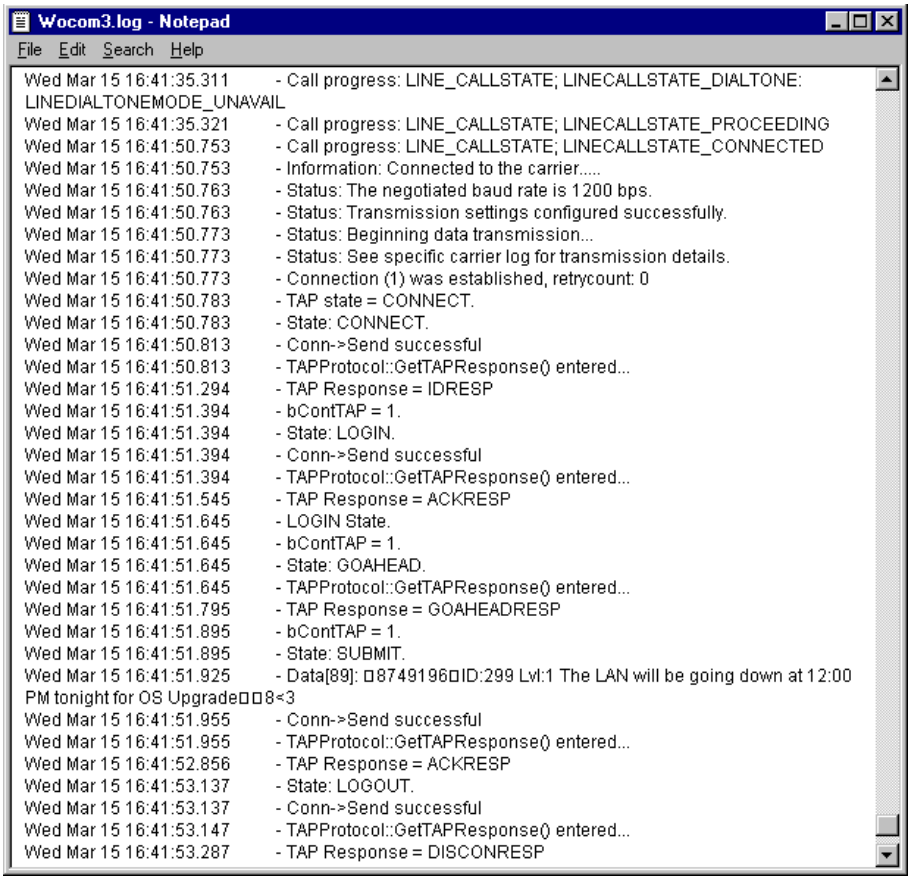
Carrier Log Example

The following carrier log depicts a successful conversation between WirelessOffice and the wireless carrier:



COM Port Log Example

The following log example depicts a successful transmission interaction:



Appendix D: Carrier Questionnaire

Carrier Questionnaire

When configuring new carriers, it is recommended that you contact each carrier's customer service representative and confirm the following information. Enter all information using the Carrier Wizard (please see page 33).

	Carrier #1	Carrier #2	Carrier #3	Carrier #4
Carrier Name				
Modem Connection Info				
Modem access phone number				
Baud Rate				
Parity				
Stop Bits				
Flow Control (on or off?)				
Maximum messages allowed per connection				
Largest block size allowed (message length)				
Volume of messages allowed per minute				
Modem Specific User Info				
PIN Number				
Maximum message length allowed for user (if different than carrier default)				
SMTP Connection Info				
Destination Domain (carrier's e-mail domain)				
SMTP Specific User Info				
PIN Number or Address				

Appendix E: Security Worksheet

Thinking ahead and planning your security implementation will ensure a secure WirelessOffice system. After reading through the security definitions and examples starting on page 26, configure your default user settings (see page 28). Then plan out your system using the following worksheet.

Security Setting Choices:

Security Level

- 0 to 100
- 0 allows FastPIN or PIN/Carrier messaging only

User Rights

- Same/Same or lower
- Departmental Msg (DM) Decide which depts. will be accessible to user
- Group Msg (GM)
- Message Scheduling (MS)
- Personal Addressbook (PA)
- Device Editing (DE)

Administrative Security Level

- 0 to 100
- 0 denies access to Administrator

Administrative Rights

Same/Same or lower

Server Admin:

- Users (U)
- Groups (G)
- Departments (D)
- Carriers (C)
- Ports (P)

Server Activity:

- Connections (C2)
- Activity Log (AL)
- Message Log (ML)
- Scheduled Msgs (SM)
- Escalated Msgs (EM)

Step 1: Define users who will send messages via WirelessOffice Messenger or Web Messenger (Administrative Security Level should be set to 0. To define departments first go to Step 4):

Full Name of User	User Security Level	User Rights
Bobby Simpson	50	Same, GM, PA

Full Name of User	User Security Level	User Rights

Step 2: Define users who will send messages and access WirelessOffice Administrator (note that the *'Administrator'* account is not adjustable):

Full Name of User	User Security Level	User Rights	Administrative Security Level	Administrative Rights
Jane Benedict (Sales Manager)	80	Same or lower, DM (all depts.), GM, MS, PA, DE	80	Same or lower, U, G, D, SM

Step 3: Define login accounts for applications (the *'Administrator'* account can only be used to login to one application at a time):

Full Name of User	User Security Level	User Rights	Administrative Security Level	Administrative Rights
Command Messenger	100	Same or lower, DM (technical and repair depts.), GM, MS	0	none

Step 4: Define departments and their security level: (Security level only evaluates WirelessOffice Administrator users' department editing ability. Message sending ability is dependent on department access definitions with **Departmental messaging** selected in each users' profile.)

Department name	Security Level	Department members	Message sending departmental access (enter in each users' profile)
Marketing Department	50	Melissa Anderson, Malika Smith, Tom Banks, Marvin Gladstone, Luis Espinosa, Henry Caldwell	All members, Steve Jackson, Melinda Baker, Bob Haskins, Enrique Gomez, Susie Teale, Lucy Calderon

Step 5: Define groups and their security level: (Security level evaluates both message sending and WirelessOffice Administrator access. A user must have **Group messaging** enabled in their profile.)

Group name	Security Level	Group members
Field Reps	80	Toby Danski, Alegria Marquez, Miles Thompson, Lourdes Marcel, Alysa Nandoori, Manny Neukarelli

Appendix F: Voice Messenger Prompts

The .wav files must be saved using the exact file name and the following format: PCM, 8 kHz sampling, 16 bit data, 1 channel (mono).

File Name	Message
greeting.wav	Welcome to WirelessOffice Voice Messenger. Please enter your name, followed by the Pound key.
enter_pw.wav	Please enter your password followed by the Pound key.
enter_id.wav	Please enter the ID number of the escalation to which you are responding, followed by the Pound key.
greet_id.wav	Welcome to WirelessOffice Voice Messenger. Please enter the ID number of the escalation to which you are responding, followed by the Pound key.
escl_mnu.wav	The escalation is currently active. Press 1 to cancel the escalation, press 2 to escalate to the next level, or press the Star key to exit.
notf_mnu.wav	Press 1 to cancel the escalation without notifying previous recipients, press 2 to cancel the escalation and notify previous recipients, or press the Star key to exit.
esc_cancel.wav	The escalation has been canceled. Please enter the next escalation ID number, or press Star to exit.
esc_level.wav	Message has been escalated. Please enter the next escalation ID number, or press the Star key to exit.
max_level.wav	The escalation you entered was already at its maximum level. Please enter the next escalation ID number, or press Star to exit.
bad_un.wav	I'm sorry, the name you entered is not recognized. Be sure to use the 1 key for any special characters and try again. Contact your WirelessOffice administrator for further assistance.
bad_pw.wav	The password you entered is invalid. Be sure to use the 1 key for any special characters and try again.
dup_login.wav	I'm sorry, you are already logged into WirelessOffice at another station. Please exit any other WirelessOffice applications and call back again. Good-bye.
log_fail.wav	You currently do not have access to the WirelessOffice Server. Please contact your administrator and call back again. Good-bye.
bad_id.wav	The ID you entered is not recognized by the system. Please check the number and try again.
inval_opt.wav	The key you pressed is invalid. Press Pound to hear your choices again.
bad_cancel.wav	I'm sorry, the escalation could not be canceled. Please double-check the escalation ID and try again.

bad_level.wav	I'm sorry, the escalation level could not be increased. Please double-check the escalation ID and try again.
moretime.wav	Press any key now to make the system wait. Otherwise this call will be disconnected momentarily.
waiting.wav	The system is waiting. Press any key to return to the previous function.
limit.wav	Login attempt limit exceeded. Please contact your WirelessOffice administrator, goodbye.
goodbye.wav	Thank you for using WirelessOffice Voice Messenger, goodbye.

Glossary

access rights ..... Types of messaging and administrative rights assigned to each user limiting and allowing full access.

activity log ..... A log that displays server activity, such as server additions, deletions and modifications, message sending, server connections, and system errors.

Address Book ..... A collection of users, departments and groups defined in the server's database.

auto resend ..... A feature that automatically resends failed messages to dispatch at later time intervals.

baud rate ..... A measurement of digital signaling speed, often used interchangeably with bits per second (bit/s) to specify the data-throughput rate of a modem.

carrier ..... Wireless carrier terminal that transmits messages to users.

client ..... Software that requests actions from a server program running on another computer.

COM port ..... Communication Port. See Port.

components ..... Software modules that make up WirelessOffice.

connect type ..... The type of connection to make with wireless carrier, such as *modem* dial-up or on-site *direct* connection.

connection ..... An active WirelessOffice client application currently running on the server.

data bits ..... Defines how many bits (7 or 8) represent a character when transmitting data. Always coupled with a parity setting.

data source ..... A database provider, being either Microsoft Access or SQL Server.

database ..... A collection of data defined and maintained by the system administrator on the server. It includes hardware connection settings; user and device data; group and department membership data; and wireless carrier details.

department record ..... A collection of data about a department defined in the server's database such as the name of the department, its members and security level.

device ..... In WirelessOffice, a device is the type of equipment that will receive the message (one-way pager, two-way pager, digital phone or PDA).

DNS ..... Domain Name System. The DNS translates the alphabetical domain name to a numeric IP address reflecting the E-mail Messenger system location.

domain ..... E-mail addressing domain, such as jane.doe@wireless.domain.com with wireless.domain.com being the domain name.

escalation ..... A type of messaging that ensures someone responds to an alert promptly. If a message is sent to one person and no response is returned, the message is escalated to the next level and another person is then alerted, ensuring that the message is received and addressed.

FastPIN ..... WirelessOffice feature that enables messages to be sent to someone that may not be in the user database. The PIN and carrier name are used to address and send the message.

firewall..... The main purpose of a firewall system is to control access to or from a protected network (i.e., a site). It implements a network access policy by forcing connections to pass through the firewall, where they can be examined and evaluated.

flow control ..... Used to control the transfer of messages or characters between two points and prevent the loss of data when the receiving device's buffer begins to reach its capacity.

fragments ..... A message is broken into pieces and sent in a series of fragments when it exceeds the maximum message length set by the carrier.

group record..... A collection of data about a group defined in the server's database such as the name of the group, its members and security level.

handshaking..... The exchange of predetermined signals between two data terminals at the beginning and end of a call, in order to establish and then shut down a communications path between them.

LAN..... Local Area Network. A network linking together computers, printers and related devices, usually over a short distance (less than 1 km) and normally within a single building or site. A LAN allows all users on the network to share resources, optimizing efficiency and avoiding unnecessary duplication of assets or effort.

message..... Alphanumeric text sent to a user's mobile device.

Message Log..... A log that displays messaging events.

modem pooling..... Ability for multiple modems to dispatch messages to the same carrier.

ODBC	An acronym for Open DataBase Connectivity. ODBC allows databases created by various database programs (e.g. Access) to be accessed by a common interface.
parity	A binary bit appended to the data bits that enables the bit sum to always be odd or even. Used for error detection.
PDA	A Personal Digital Assistant is a hand-held wireless device capable of receiving text messaging.
Personal Address Book	WirelessOffice Messenger feature that allows the user to configure and maintain their own address book.
PIN	An acronym for Personal Identification Number. Usually the phone number for the device.
pooling threshold	The number of messages to be queued for the carrier before the system will begin using another modem in the modem pool.
port	Serial communications port used for output. Provides either a direct (on-site) or modem (dial-up) connection. Also called a COM port.
protocol	A protocol sets standards and rules for two devices to communicate with each other relating to format and timing of data transmission. Carriers send messages using either the TAP or SMTP protocols.
Public Address Book	Another name for the server-based database of users, departments and group.
recipient	User, group or department who is receiving a text message.
RS-232	A cable interface used for communicating between computers, terminals and modems.
security	A way of insuring server-based data is protected from unauthorized use.
security level	A security level reflects a range from 0 to 100, allowing different degrees of access. Each user, group and department is assigned a security level.
server	Software that performs actions at the request of a client program running on another computer; a computer on which such software has been installed.
SMTP	An acronym for Simple Mail Transfer Protocol. SMTP is the TCP/IP protocol governing electronic mail transmissions and receptions.
TAP	An acronym for Telecator Alphanumeric Protocol. TAP has become the messaging industry standard protocol for sending message requests from automated equipment.

TAP response code ..... A numeric code sent from the carrier to WirelessOffice signifying the status of the message.

TAPI ..... Telephone Application Programming Interface or Windows Telephony API. TAPI is used by applications to manage telephony processes and allows several applications to share one port. TAPI error codes are reported to WirelessOffice as a troubleshooting aid.

TCP/IP ..... An acronym for Transmission Control Protocol/Internet Protocol. The suite of protocols used to define membership of the Internet. TCP/IP specifies how data is sent and received over a network and how it should be routed and addressed.

two-way messaging..... The ability for a wireless device to receive messages and send a response to the sender.

user ..... A person defined in the server's database who can receive messages and/or login to the server to send messages.

user record ..... A collection of data about a user defined in the server's database, such as the user's name and details about his/her mobile device.

WirelessOffice client ..... The software component of WirelessOffice that allows users to create and send messages to users defined in the server's database; and view log entries, user and device data, and group membership. Also referred to as the computer running the client software.

WirelessOffice Server..... The software component of WirelessOffice that allows the system administrator to create and maintain the server's database. Also referred to as the computer running the server software.

WirelessOffice ..... Client/server software developed by Emergin to provide advanced wireless messaging to users of mobile devices.

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