NORTEL NETWORKS™

Nortel Networks Communication Server 1000

IP Softphone 2050 and Mobile Voice Client 2050

User Guide

Revision history

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Standard 4.00. This document is up-issued for Communication Server 1000 Release 4.0.

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Contents

About this guide

This User Guide provides information about the Nortel Networks IP Softphone 2050 and the Nortel Networks Mobile Voice Client (MVC) 2050.

The IP Softphone 2050 is designed to work on a desktop PC. Information on the IP Softphone 2050 begins on page 10.

The Mobile Voice Client (MVC) 2050 is designed to add wireless voice communication to the Personal Digital Assistant (PDA). Information on the MVC 2050 begins on page 68.

IP Softphone 2050 overview

The IP Softphone 2050 turns your computer into a telephone. To make a call, you dial with your keyboard or mouse. To answer a call, you simply click a button. Instead of holding a telephone receiver to hear and speak to callers, you wear a headset.

Designed to work with IP-based phone systems, the IP Softphone 2050 provides Voice Over IP (VoIP) services using a telephony server and your company's Local Area Network (LAN).

The server that supports your IP Softphone 2050 determines what features you can receive. For example, your server might provide Call Conference, Call Transfer, and Call Forward.

IP Softphone 2050 features

The IP Softphone 2050 supports the following features:

- 12 programmable feature keys: 6 Programmable Line (DN)/Feature Keys (self-labeled) and six lines/features accessed by pressing the shift key

- 4 soft keys (self-labeled) that prove access to a maximum of 10 features

- multi-field display

- directory capabilities that are stored locally on your PC or linked to external directories such as LDAP, Microsoft Outlook, and ACT! contact management software

- Personal Directory, Redial List, Callers List, and Password Administration, stored on the application server for systems running CS 1000 Release 4.0 software

- one-click direct dialing from various windows and applications

- 6 specialized fixed keys:

  — DN/Feature Tray selection

  — Directory

- — Inbox (Message)
- — Shift
- — Services
- — Expand to PC
- dedicated call processing keys:
  - — Hold
  - — Goodbye
  - — Answer
  - — Volume
  - — Mute
  - — Navigation
  - — Message waiting
- end user-selectable ringer that enables the PC speakers or the headset to ring for incoming calls
- macro functions for programming lengthy dialing patterns

Main parts

The IP Softphone 2050 consists of four main parts: the IP Softphone 2050 Call Control window, the Local Directory window, the i2050srv application, and the System Tray icon and menu.

The IP Softphone 2050 Call Control window

This window displays the line keys, feature buttons, and call display. You use this window to make and manage your telephone calls. You also use this window to access your Network Directory (if one is available), the Personal Directory, Redial List, and Callers List features which include Application Server Administration and Password Administration, and your Local Directory.

The Local Directory window

This window enables you to create, manage, and use a telephone directory stored on your computer.

The i2050srv application

The i2050srv application is the software on your computer that enables the IP Softphone 2050 to communicate with the communication server you are connected to. This application is launched when you start your computer, but remains "hidden" in the background. You'll see it if you open the Windows Task Manager.

The System Tray icon and menu

You can right-click the Softphone icon to make and manage calls.

IP Softphone 2050 Call Control window

The IP Softphone 2050 has two Call Control windows: Standard and Enhanced. Both windows contain common elements that provide access to the IP Softphone 2050 features.

Note: The Enhanced Call Control window is the default when you start the IP Softphone 2050 for the first time. You can modify the settings so that the Standard Call Control window appears on startup instead.

To open the IP Softphone 2050 Call Control window:

1. From your Desktop PC, click **Start**.

2. Select **Programs**.

3. Select **Nortel Networks IP Softphone 2050**.

To open the IP Softphone 2050 Standard Call Control window from the Enhanced Call Control window:

1. Click **File**.

2. Click **Select Skin**.

3. Click **Standard**.

To access the Enhanced Call Control window from the Standard Call Control window:

1. Click **Application Menu**.

2. Click **Select Skin**.

3. Click **Enhanced**.

Standard Call Control window

The Standard Call Control window (shown on page 14) includes the standard features that enable you to make and manage telephone calls.

The elements of the Standard Call Control window are described in Table 1 on page 17.

Figure 1: Standard Call Control window
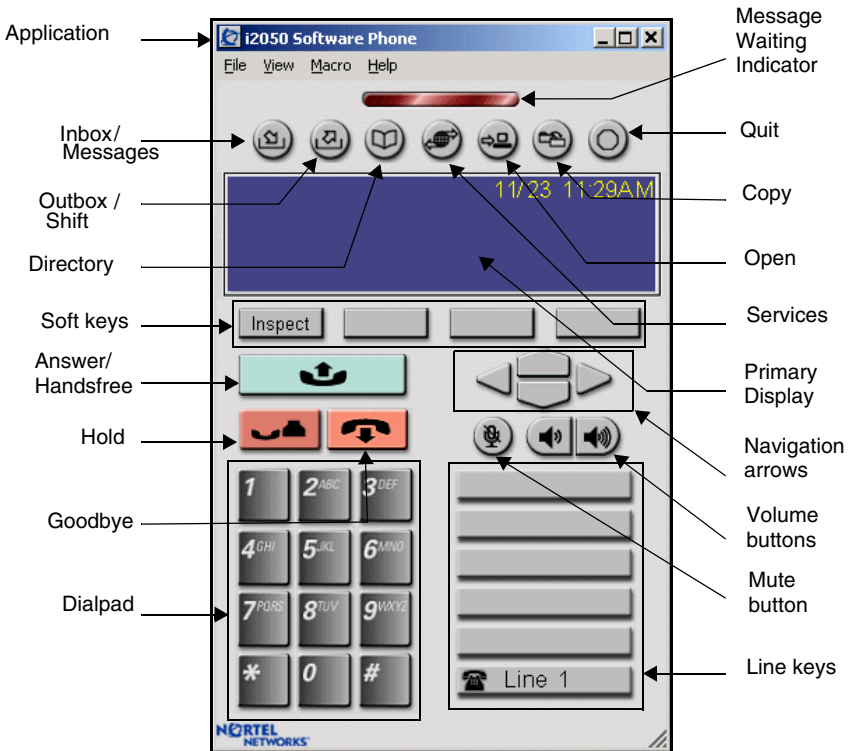
Enhanced Call Control window

The Enhanced IP Softphone 2050 Call Control window (shown Figure 2 on page 16) includes the enhanced features that enable you to make and manage telephone calls. The Enhanced Call Control window is also known as the Primary User Interface.

The elements of the Enhanced Call Control window are described in Table 1 on page 17.

To open the Enhanced Call Control window from the Standard Call Control window:

1. On the **Standard Call Control** Window click **Application**.

2. Click **Select Skin**.

3. Click **Enhanced**.

To change the information that appears on the window:

1. Click **Trays**.

2. Click one of the following:

— lines

— number

— combo

Figure 2: Enhanced Call Control window
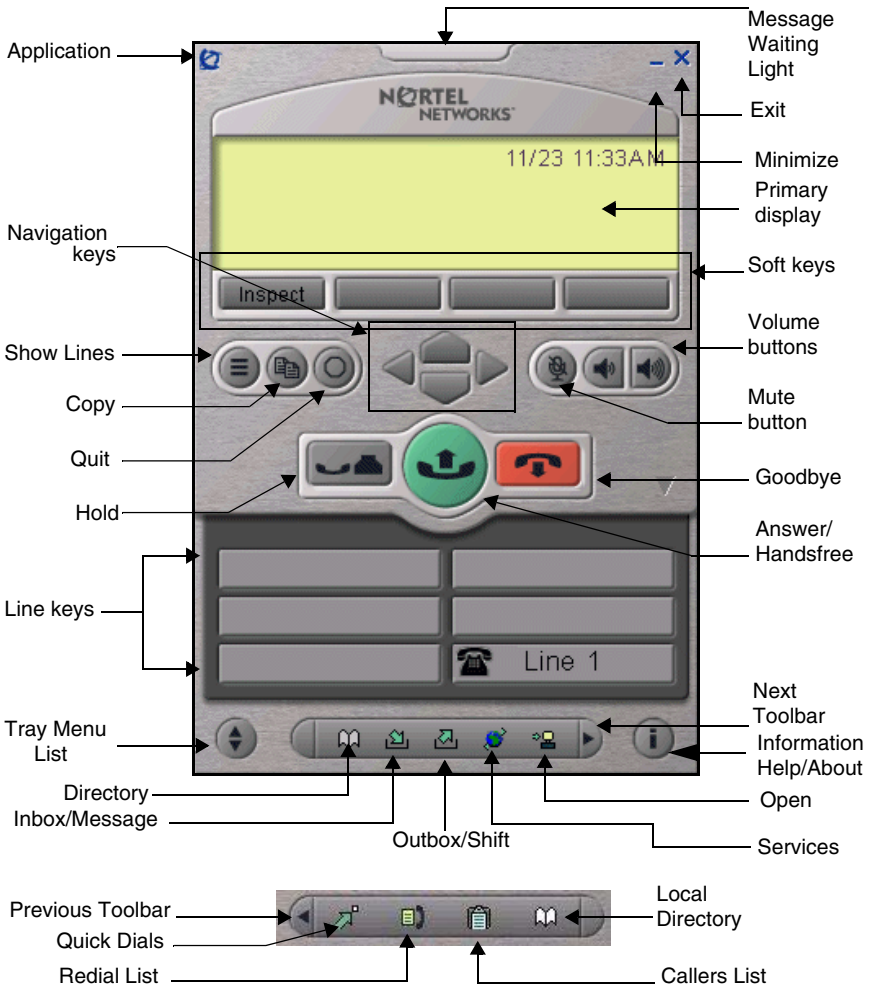
Call Control window elements and functions

The following table describes the elements and functions of both the Standard and Enhanced Call Control windows.

Table 1: IP Softphone 2050 components and functions (Part 1 of 4)

Element	Function
Application	Access the **Application** menu.
Message Waiting light	Flashes when a message is waiting.
Primary display	Provides call information (such as Caller ID) and instructions for using certain soft key features. When the telephone is idle, only the date and time display.
Soft keys	The four soft-labeled feature keys are: **Transfer** for connecting calls to other people, **Conference** for group calls, **Forward**, and **More...** for accessing additional features.
	To select a feature, click the appropriate soft key button, and then follow the instructions on the display.
	The soft key features you have to choose from depend on:
	• Your current task. The features available at any time depend on your current call activity.
	• The features that are available. Much of the functionality of the IP Softphone 2050 is dependent on the communication server configuration.
	Note: If more than four features are available, click the **More** soft key to see them.

**Table 1: IP Softphone 2050 components and functions
(Part 2 of 4)**

Element	Function
Show Lines	Button to change the tray on the Call Control window (show or hide the **Line** buttons).
Copy	Button to copy a network service, feature, or folder.
Quit	Button to quit a network service or feature.
Navigation arrows	Scroll through menus and lists in the display area.
Volume	Increase or decrease the headset volume.
Mute	Listen to the receiving party without transmitting. Click the **Mute** button again to return to a two-way conversation. The Mute button mutes the Headset microphone.
Answer/Handsfree	Answer and make calls.
Hold	Place an active call on hold.
	The feature key label for the held line displays a flashing icon to indicate the call is on hold. Return to the call by clicking the Line button of the call on hold.
Goodbye	Terminate active calls.
Line keys	The Softphone includes six programmable Line keys that can represent line appearances, DNs, or features. The communication server provides the labels that appear on these keys.
	To use the programmed feature, line, or DN, click its **Line** key.
Dialpad	Lets you dial a telephone number. Simply click the numbers you want to enter.

**Table 1: IP Softphone 2050 components and functions
(Part 3 of 4)**

Element	Function
The following Standard toolbar elements apply to the Standard Call Control window ONLY.	
Inbox/Messages	To access your messages or return a call.
Outbox/Shift	To toggle between feature key displays.
Directory	To access a Network Directory; depending on how your system administrator has set up this service, this button may access a Local Directory, the Personal Directory, Redial List, Callers List features, or some other server-based directory service. You can use the Directory to place a call. Generally, the call will be placed on your prime line unless you select a different line.
Services	To access a list of network services.
Open	To open a network service, feature, or folder.
Copy	To copy a network service, feature, or folder.
Quit	To quit a network service or feature.
The following Network Services toolbar elements apply to the Enhanced Call Control window ONLY.	
Tray Menu List	To scroll through an opened directory menu.
Directory	To access a directory such as the Personal Directory, with up to 100 entries, or Network Directory. Depending on how your system administrator has set up this service, this button may access a local directory, the Personal Directory, Redial List, Callers List features, or some other server-based directory service.
Inbox/Messages	To access your messages or return a call.

**Table 1: IP Softphone 2050 components and functions
(Part 4 of 4)**

Element	Function
Outbox/Shift	To toggle between feature key displays.
Services	To access a list of network services.
Open	To open a network service, feature, or folder.
Next Toolbar	To display the next toolbar.
The following Local Directory Quick Access toolbar elements apply to the Enhanced Call Control window ONLY.	
Previous Toolbar	To display the previous toolbar.
Quick Dials	To open the list of contacts stored in the Quick Dials section of the Local Directory.
Redial List	To open the list of up to 20 of the last calls you made.
Callers List	To open the list of up to 100 of the calls you have received.
Local Directory	To open the Local Directory.
Show Lines	To change the tray on the Call Control Window (show or hide the line buttons).
Copy	To copy a network service, feature, or folder.
Quit	To quit a network service or feature.

Hot keys

Within the Call Control window, the computer keyboard provides hot keys to access common features:

• Enter – Answer a call.

• F12 – Release or terminate a call.

• Esc – Release or terminate a call.

- F5 – Put call on hold.

- F1 to F4 correspond to the soft keys 1 to 4.

- Alphabetic keys map to numbers like dialpad mapping.

- Arrow keys are equivalent to the navigation keys.

- Alt-V can be used to paste data into the interface. (For example, you can copy a phone number from an application and paste it into the IP Softphone 2050 interface using the Alt-V key combination.)

Local Directory

The IP Softphone 2050 Local Directory enables you to store a phone directory on your computer and link to external directories. It also enables you to filter directories so they are easier to use.

Note: Do not confuse the IP Softphone 2050 Local Directory with the Network Directory that you can access by clicking the **Directory** toolbar button.

To open the Local Directory:

1. Click **Application Menu**.

2. Click **Local Directory**.

3. Click one of the following:

   — **Local Directory**

   — **View Local Directory**

   Note: You can also click the **Local Directory** icon on the **Enhanced Call Control** window toolbar.

The **Shortcut Bar** on the left side of the **Local Directory** lets you access groups and directories. **Groups** enable you to organize your directories. A group is represented by a button on the **Shortcut Bar**. Directories appear as icons inside groups.

To select a group, click its button. By default, the Local Directory has two groups: Main and Quick Dials.

Main Group

If you click the **Main Group** button, three items appear:

- Local Directory - A list of your Main Directory contacts

- Redial List - A list of the last telephone calls you made

- Callers List - A list of the calls you have received

Quick Dials Group

Click the **Quick Dials** button, to see the contacts stored in the Quick Dials group.

Personal Directory, Redial List, and Callers List

Personal Directory, Redial List, and Callers List are features supported on CS 1000 systems running CS 1000 Release 4.0 software. The contents of these directories are maintained in a remote, central database called the Application Server.

To open Personal Directory, Redial List, or Callers List:

1. Click the **Directory** button.

2. Scroll through the following list and click your selection:

    — **Personal Directory**

    — **Callers List**

    — **Redial List**

    — **Password Administration**

    Note: The Personal Directory, Redial List, and Callers List features have a one-minute time-out control period. If the application is idle for one minute during any of the operations, the application is closed and your IP Softphone 2050 goes back to the idle state.

The Personal Directory, Redial List, and Callers List features support:

- multiple languages

- access using the **Directory** key

- feature launch while in Call Transfer and Conference modes (your IP Softphone 2050 does not have to be idle)

- Branch Office in normal mode only

- Virtual Office

- menu-driven configuration of the Station Control Password (SCPW) from your IP Softphone

- database backup and restoration by your system administrator

- system administrator functions, like unlocking your SCPW

- system administrator restoration of profiles for single, multiple, or all users

User preferences for Personal Directory, Redial List, and Callers List

The following is a list of options you can change:

- language

- date/time display format

- call timer

- name display format

- call log options

  — log all/unanswered calls

  — area code setup

  — preferred name match

  — new call indication

To set user preferences:

1. Click the **Services** button.

2. Click **Telephone Options**.

3. Select one of the following:

   — **Language**

   — **Date/time**

4. Scroll down the list.

5. Click your selection.

6. Click **Select** or **Cancel**.

Call Log Options

The following is a list of Call Log Options:

• Log all/unanswered incoming calls

• New call indication

• Preferred name match

• Area code set-up

• Name display format

Table 2 describes the Call Log Options.

Table 2: Call Log Options

Call Log Option	Description	Default value
Log all/unanswered incoming calls	Callers List logs all of the incoming calls or only the unanswered incoming calls.	Log all calls
New call indication	Telephone displays a message indicating that a new incoming call was received.	On
Preferred name match	If set to Off, the CPND from the Call Server is displayed for an incoming call. If set to On, the name stored in the Personal Directory is displayed, if there is a match.	Off
Area code set-up	Incoming-call phone numbers display in the order you set, if the area code matches one of the three that you have set up. Example: area code first or area code last.	No area code specified
Name display format	You can define the format of the name displayed for incoming calls. The two choices are: first name/last name or last name/first name	First name/last name

To set Call Log Options:

1. Click the **Services** button.

2. Click **Telephone Options**.

3. Click **Call Log Options**.

4. Click one of the following:

    — **Incoming Calls**

    — **Preferred Name Match**

    — **Area Code Setup**

    — **Name display format**

5. Scroll through the selected list.

6. Click your selection.

7. Click **Select** or **Cancel**.

Personal Directory

You control your own Personal Directory. You can create up to 100 entries. You can edit, copy, or delete individual entries, or delete the entire list, and you can copy entries from other applications to Personal Directory or from Personal Directory to other applications.

The following list describes the contents of a Personal Directory entry:

• last name (up to 24 characters)

• first name (up to 24 characters

• DN at work (up to 31 characters)

• DN at home (up to 31 characters

• cell phone (up to 31 characters)

• pager (up to 31 characters)

Call Log features: Redial List and Callers List

Redial List and Callers List are Call Log features. The content of Redial List and Callers List is generated by the system during call processing. You can delete individual entries or the entire directory in Redial List and Callers List, but you cannot add an entry or permanently change the content of an entry.

Callers List

The Callers List can contain up to 100 entries. When the list is full, the system overwrites the oldest entry.

In Directory View mode, the caller's name displays along with the Callers List entry count. Entries in the Callers List are sorted by Call Log time. The first entry you see is the first new entry. If you press the down navigation key, more new items in the Callers List display. If you press the up navigation key, an older item in the list displays.

The following list describes the contents of a Callers List entry:

- last name (24 characters)
- first name (24 characters)
- DN (31 characters)
- time/date
- number of calls

Redial List

The Redial List can contain up to 20 entries. When the list is full, the system overwrites the oldest entry.

In Directory View mode, the number you dialed is displayed. Redial List content is updated when you dial out. Entries in the Redial List are sorted by Call Log time. The oldest entry is at the beginning of the list. Press the down navigation key to go to the newest entry and press the up navigation key to go to the oldest.

The following list describes the contents of a Redial List entry:

- user name (up to 24 characters)

- the DN (up to 31 characters)

- the time of the last call occurrence

- time/date

Password Administration

The Password Administration feature is available on the Directory list. The Station Control Password (SCPW) protects your private directory information. You can perform Password Administration from your IP Softphone 2050 once your SCPW is defined by your system administrator on the Call Server. This includes turning password protection on or off and changing your password.

When password protection is enabled, authentication is required before you can access Personal Directory, Redial List, or Callers List. You are prompted to enter your password in order to gain access to any of the password-protected features, like Personal Directory, Redial List, Callers List, or Virtual Office.

Note: The default setting for Password Protection is Off.

To turn Password Protection On/Off:

1. Click the **Directory** button.

2. Select **Change Protection** mode. If Password Protection is enabled, you are prompted to enter your password.

3. Click one of the following:

    — **Ent** to confirm

    — **Del** to delete your password

    — **Clr** to clear your password

    — **Can** to cancel and return to the Directory list

4. If you clicked **Ent**, select one of the following:

    — **Enable Pwd Protection**

    — **Disable Pwd Protection**

5. Click one of the following:

    — **Yes** to accept your selection

    — **No** to return to the Directory list

6. If you selected **Yes**, click **Done** to enable or disable Password Protection.

To change your password:

1. Click the **Services** button.

2. Select **Telephone Options** (you will be prompted to enter your password).

3. Enter your password.

4. Select **New Password**.

5. Click one of the following:

    — **Sel** to select New Password

    — **Del** to return to the previous menu

    — **Clr** to clear your password

    — **Can** to end

    If you clicked **Sel**, you are prompted to enter a new password.

6. Enter your new password and press **Sel**. You are prompted to confirm your new password.

7. Click one of the following:

    — **Sel** to select New Password

    — **Del** to return to the previous menu

    — **Clr** to clear your password

    — **Can** to end

    If you clicked **Sel**, your password is changed.

If you make three consecutive incorrect password attempts within an hour, you are locked out of the password-protected features for an hour. "Locked access" displays on your telephone. If Virtual Office is enabled, it is locked out. If you fail to access Virtual Office with incorrect password attempts, your access to other password-protected features is also locked out.

Your system administrator can reset and unlock your access at any time if you have been locked out or have forgotten your password.

Application Server Administration

This feature is available for your system administrator. The Personal Directory, Redial List, and Callers List features use a separate, central database, called the Application Server, to store directory data and user profile options. Backup and restoration of the database can be performed, and user profiles can be managed, by your system administrator using the Application Server Administration feature.

System Tray icon and menu

The IP Softphone 2050 **System Tray** enables you to manage your phone calls and messages without opening the main IP Softphone 2050 window.

If the IP Softphone 2050 window is minimized on the **Taskbar**, click either the **IP Softphone Taskbar** icon or the **System Tray** icon to view it.

Right-click the **System Tray** icon to open a pop-up menu that enables you to make, answer, or manage your calls.

Installing and setting up the IP Softphone 2050

System requirements

To use the Nortel Networks IP Softphone 2050, you need:

- Pentium-compatible CPU (200 MHz or higher)
- 128 Mbytes RAM (Microsoft Windows 2000)
- 64 Mbytes RAM (Microsoft Windows 98)
- 55 Mbytes free hard drive space (all languages)
- 800X600 resolution monitor (16-bit color)
- Universal Serial Bus (USB) port
- Nortel Networks USB Audio Kit

Supported operating systems

To use the IP Softphone 2050 you must have one of the following operating systems:

- Microsoft Windows XP
- Microsoft Windows 2000 Professional
- Microsoft Windows 2000 Professional Service Pack 1
- Microsoft Windows 2000 Professional Service Pack 2
- Microsoft Windows 98
- Microsoft Windows 98 Second Edition

USB Audio Kit

You must have a Nortel Networks USB Audio Kit to use the Softphone. The USB Audio Kit enables you to hear and speak with your callers.

The USB Audio Kit includes:

- USB Headset Adapter

- Installation Guide (English and French)
- USB cord
- Telephony-grade monaural headset
- Lower cordset with quick disconnect

Installing the IP Softphone 2050

Refer to *IP Phones: Description, Installation, and Operation* (553-3001-368) or consult your system administrator.

Installing the USB Headset Kit

Follow these steps to install the USB Headset Kit:

1. Ensure that you have the proper system requirements as listed "USB Audio Kit" on page 31.

2. Call your system administrator, who may need to change some settings before you can connect the IP Softphone 2050 to the communication server.

3. Connect the coiled lower cord to the headset cord with the Quick Disconnect connector. Ensure the Quick Disconnect is securely fastened.

4. Connect the headset cord to the RJ9 jack on the adapter.

5. Connect the USB cable to the headset adapter and to one of the USB jacks on the back of your computer or USB hub.

The first time the headset adapter is plugged in, a delay occurs while the Windows operating system configures the device and locates appropriate driver software. During the installation, you may be prompted to supply the original Windows CD-ROM so that the Windows operating system can locate drivers.

For more information on installing the IP Softphone 2050 software, contact your system administrator.

Managing contacts with the IP Softphone 2050

Adding contacts

You can add contacts to the Local Directory in the Main Group, or to any group on the Shortcut Bar.

To add a contact to the Local Directory:

1. Do one on the following:

    — Click the **Main Group** and click the **Local Directory**.

    — Click the **Group** in the Shortcut Bar you want to add contacts to. You can click **Main, Quick Dials**, or any custom group that you created.

2. Click **File > New Contact**... or click the **New Contact** toolbar button. The **Properties** dialog box appears.

3. On the **Business** tab (which is selected by default), enter the contact's name, address, telephone numbers, and other personal information.

4. Select the **e-mail address** tab and enter the contact's e-mail address.

5. Select the **Notes** tab and enter notes or miscellaneous information.

6. Select the **Settings** tab and select the contact's default telephone number and assign multimedia (sound and graphic) call announcements.

7. Click **Save**.

    Note 1: You cannot add contacts to external directories, such as an LDAP directory in Local Directory mode.

    Note 2: If the contents of an external directory has changed, you must update the directory before you can see the changes in the IP Softphone 2050 Local Directory. To update the directory, right-click the imported directory and then click **Refresh**.

You can add contacts to the Personal Directory, which is stored on the Application Server.

To add a contact to Personal Directory:

1. Click the **Directory** button.

2. Click **Personal Directory**.

3. Click the **Add** key to start a text editor.

4. Enter the contact information.

   TIP: you can click the **Pause** softkey any time during data entry to add a pause in the number.

5. Click **Done** to submit the entry.

You can also add contacts to the Personal Directory by copying entries from the Corporate Directory, the Redial List, the Callers List, or other available directory applications. If you are creating multiple entries in the Personal Directory, you can make and edit multiple copies in an existing entry.

Editing contacts

You can edit contacts in all of your directories.

To edit a contact in the Local Directory:

1. On the **Call Control** window click, **Application** menu.

2. Click **Local Directory**.

3. Click one of the following:

   — **Local Directory**

   — **View Local Directory**

4. Find and click the contact you want to edit.

5. Do one of the following:

   — Click **File > Properties**.

   — Click the **Properties** toolbar button.

6. Select each tab and edit the information.

7. Click **Save**.

To edit a contact in the Personal Directory:

1. Click the **Directory** button.

2. Select **Personal Directory** from the Directory list.

3. Search for the desired entry.

4. Highlight the entry.

5. Click the **Edit** soft key and make the changes.

6. Click the **Done** soft key.

You can temporarily edit contacts in the Redial List and the Callers List, then dial the edited entry. The changes are not retained.

To temporarily edit a contact and dial it using the Redial List or the Callers List:

1. Click the **Directory** button.

2. Select **Redial List** or **Callers List** from the Directory list.

3. Search for the desired entry.

4. Highlight the entry.

5. Click the **Edit** soft key and make the changes.

6. Click the **Dial** soft key to dial the edited entry.

Deleting contacts

You can delete contacts in your Local Directory.

To delete a contact in the Local Directory:

1. On the **Call Control** window, click **Application**.

2. Click **Local Directory**.

3. Click one of the following:

   — **Local Directory**

   — **View Local Directory**

4. Find and click the contact you want to delete.

   Note: To delete a range of contacts, click the first contact in the range and then shift-click the second contact in the range. You can also CTRL-click to select contacts.

5. Click **File**.

6. Click one of the following:

   — **Delete**

   — the **Delete** toolbar button.

7. Click **Yes** to confirm the deletion.

You can delete contacts or the contents of the entire directory for Personal Directory, Redial List, or Callers List.

To delete a contact in Personal Directory, Redial List, or Callers List:

1. Click the **Directory** button.

2. Select the **Personal Directory**, **Redial List**, or **Callers List**.

3. Search for the entry.

4. Highlight the entry.

5. Click the **Delete** soft key.

6. Click the **Confirm** or **Cancel** key.

To delete the Redial List or Callers List:

1. Click the **Directory** button.

2. Select **Redial List** or **Callers List**.

3. Click the **Del** soft key.

4. Click **Yes**.

Finding contacts

You can search for contacts in your Local Directory using any of the edit creation criteria.

To find a contact in one of your directories:

1. On the **Call Control** window, click **Application**.

2. Click **Local Directory**.

3. Click one of the following:

    — **Local Directory**

    — **View Local Directory**

4. Find and click the directory you want to search in.

5. Click **File**.

6. Click one of the following:

    — **Find Contact**...

    — **Find Contact** toolbar button.

7. Enter your search criteria.

    Note: You can enter the name, e-mail address, or phone number. Remember to enter it the way it appears in the directory. For example, the name should be in the format, "last name, first name."

8. Click **Find Now**. The dialog box expands to display a list of the contacts that fit your search criteria.

9. To stop a search, click **Stop**.

You can find contacts in Personal Directory, Redial List, or Callers List using the following methods.

To find contacts in Personal Directory, Redial List, or Callers List:

1. Click the **Directory** button.

2. Click the desired directory and do one of the following:

   — Scroll through the directory to the desired entry.

   — Enter the number of the entry to go directly to it.

   — Search by first name, last name, or number.

Filtering a directory

The IP Softphone 2050 directory enables you to filter directories. Filtering makes directories smaller and easier to manage and use. This feature is especially useful for dealing with large, cumbersome directories. For example, by filtering a directory you can greatly reduce the number of names you have to search through.

To filter a directory:

1. Select the directory you want to filter in the **Shortcut Bar**.

2. Click the **Filter** toolbar button. The **Filter** dialog box appears.

3. Add your filter criteria.

4. Click **OK**.

Dialing from the Local Directory

You can dial numbers from the Local Directory.

To call a contact stored in the Local Directory:

1. On the **Call Control** window, click **Application**.

2. Click **Local Directory**.

3. Click one of the following:

   a. **Local Directory**

   b. **View Local Directory**.

4. Locate the contact you want to call, then do one of the following:

   — Double-click the phone number you want to dial.

   — Double-click the contact's name.

   — Click the **Call Contact** toolbar button to dial the default telephone number.

   — Right-click the contact's entry and click the desired telephone number in the pop-up menu.

   — Click the arrow beside the **Call Contact** toolbar button and click the desired telephone number in the pop-up menu.

Dialing from the Personal Directory

To dial from the Personal Directory:

1. Click the **Directory** button.

2. Scroll to the **Personal Directory**.

3. Click to open the **Personal Directory**.

4. Find the contact by one of the following:

   — Scroll to the desired contact.

   — Search for the contact by name or number.

   — Enter the number of the contact to find it.

5. Double-click the contact to dial the selected entry.

Dialing from the Redial List

You can dial from the Redial List:

1. Do one of the following to open Redial List:

   — Click **Redial List** on the Toolbar in the **Enhanced Call Control**. window.

   — Click the **Directory** button, and click **Redial List**.

2. Find the contact by one doing of the following:

   — Scroll to the desired contact.

   — Search for the contact by name or number.

   — Enter the number of the contact to find it.

3. Double-click the contact to dial the selected entry.

Dialing from the Callers List

You can dial from the Callers List:

1. Do one of the following to open Callers List:

   — Click **Callers List** on the Toolbar in the **Enhanced Call Control** window.

   — Click the **Directory** button and click **Callers List**.

2. Find the contact by one doing of the following:

   — Scroll to the desired contact.

   — Search for the contact by name or number.

   — Enter the number of the contact to find it.

3. Double-click the contact to dial the selected entry.

Adding a group to the Shortcut Bar

You can add a group to the Shortcut Bar in your Local Directory.

To add a new group to the Local Directory:

1. Right-click a blank area on the **Shortcut Bar**.

2. Click **Add New Group**. A blank **Group** button appears with a blinking cursor at the bottom of the **Shortcut Bar**.

3. Enter the name you want for the group and press **Enter**.

To view the contents of a group click the group's button.

Customizing the Shortcut Bar

To change the size of the **Directory** icons:

1. Right-click a blank area of the **Shortcut Bar**.

2. Click one of the following:

   — **Large Icons**

   — **Small Icons**

To change appearance of Shortcut Bar:

1. Right-click a blank area in the **Shortcut Bar**.

2. Click **Properties**. The **Shortcut Bar** properties dialog box appears.

3. Enter your custom settings.

4. Click **OK**.

Properties dialog box

Use the Properties dialog box to enter or change contact information.

To open the Properties dialog box:

1. On the IP Softphone 2050 window, do one of the following:

   — Click **Application menu > Local Directory > Local Directory**.

   — Click **View > Local Directory**. The Directory opens.

2. In the Local Directory window do one of the following:

   — Click **File > New Contact**...

   — Click the **New Contact** toolbar button.

   — Click a contact and click **File > Properties**...

   — Click the **Properties** toolbar button.

This dialog box contains four tabs:

• Properties - Business

• Properties - E-mail address

• Properties - Notes

• Properties - Settings

Properties - Business tab

Use this tab to store a contact's name, address, company information, and telephone numbers. To create a contact record, enter the contact's name and at least one telephone number. All other information is optional.

   Note: Inserting a comma in the telephone number inserts a 0.5-second delay before dialing the numbers that follow the commas. Insert as many commas as required.

Export button

This button exports the contact information to a *.vcf file. This file can then be imported into e-mail or contact manager applications, or other software applications that use the *.vcf file format.

Properties - Email Address tab

Use this tab to store e-mail information:

• Email address - Enter the contact's e-mail address.

• Email type - Enter a label for the e-mail address. For example, "Personal e-mail account."

   Note: You cannot send e-mail using the Softphone.

Properties - Notes tab

Use this tab to record miscellaneous information about a contact. You can enter significant dates, recent orders, meeting locations, or any information you need to be available when you call the contact.

Properties - Settings tab

Use this tab to select which telephone number you dial by default. The Default Dial telephone number setting you specify here applies only to this contact.

   Tip: You can dial a contact's non-default telephone number by right-clicking the contact and selecting any other telephone number that appears in the pop-up menu.

Managing IP Softphone 2050 calls

Making telephone calls

Before making a call, ensure you are wearing your headset.

To make a call:

1. Select the line you want to use by clicking a **Line** key.

2. Choose one of the following methods to enter the phone number:

   — Enter the phone number using the number pad on your keyboard.

   — Use the mouse and the IP softphone 2050 dial pad.

   — Open a directory application, such as Personal Directory, Redial List, or Callers List, scroll through the directory, and double-click the number you want to dial.

   Tip: To make a call on your prime telephone line, click the **Answer/Handsfree** button and dial the telephone number as described above.

Answering telephone calls

To answer a call, ensure you are wearing your headset. When you receive a call, you will hear the IP Softphone 2050 ringer through the Ringing Speaker and you will see Caller ID (if available) on the display area.

Note: The Ringing Speaker is the device you specify on the Select Sound Devices screen of the Configuration Utility.

To answer a call:

Do one of the following:

- Click the **Answer/Handsfree** button.
- Click the **Line** key of the ringing line.

 If you are on another call, that call is put on Hold.

> **Tip**: To switch between callers, click the appropriate **Line** key.

Holding and retrieving telephone calls

To manage calls, ensure you are wearing your headset.

To put a call on Hold, or remove a call from Hold:

1. Click the **Line** key for the call.
2. Click the **Hold** button.

Hanging up telephone calls

You must terminate a call when it has ended.

To hang up a telephone call:

1. Click the appropriate **Line** key to ensure it is selected.
2. Click the **Goodbye/Release** key.

IP Softphone 2050 USB Headset Adapter

Overview

The features of the USB Headset Adapter are briefly described in Table 3.

Table 3: USB Headset Adapter elements and functions (Part 1 of 2)

Element	Function
Message Waiting light	The red Message Waiting light is located at the top of the USB Headset Adapter. This light has the same function as the Message Waiting light on the IP Softphone 2050 interface. This light flashes when you have voicemail messages. On most systems, this light also flashes when a call is ringing on the IP Softphone 2050.
Maximize button	Press the **Maximize** button to maximize or minimize the IP Softphone 2050. If the IP Softphone 2050 is minimized, press this button to maximize the IP Softphone 2050 window. If the IP Softphone 2050 is maximized, but behind another window, press this button to bring the IP Softphone 2050 to the foreground. If the IP Softphone 2050 is maximized, press this button to minimize the IP Softphone 2050.
i2050 Smart Functions button	Press this button to access the i2050 Smart Functions menu. For more information about the i2050 Smart Functions menu, refer to Using the **i2050 Smart Functions** button.

Table 3: USB Headset Adapter elements and functions (Part 2 of 2)

Element	Function
Answer button	If you have an incoming call, press the **Answer** button to answer the call.
	If you have no incoming call when you press this button, the IP Softphone 2050 selects a line and you hear dial tone.
Release button	Press the **Release** button to hang up the current call.
Mute button	Press the **Mute** button to put a call on mute or take a call off mute. When you mute a call, you can still hear your caller, but your caller cannot hear you.
Mute light	The Mute light is beside the Mute button. When a call is on mute, the Mute light is on. When a call is not on mute, the Mute light is off.
Volume button	Use the **Volume** button to control the volume of the headset.
	When the i2050 Smart Functions Menu appears, use these buttons to move up and down in the menu.

Answering calls with the USB Headset Adapter

You can answer a call using the USB Headset Adapter even if the IP Softphone 2050 is minimized or in the background.

To answer a call using the USB Headset Adapter:

1. Ensure you are wearing your headset.
2. Press the **Answer** button.

To view Caller ID information before you answer the call if IP Softphone 2050 is minimized or in background:

1. Ensure you are wearing your headset.

2. Press the **Maximize** button to display the IP Softphone 2050 interface.

3. Press the **Answer** button.

Hanging up calls with the USB Headset Adapter

You can hang up a call using the USB Headset Adapter even if the IP Softphone 2050 is minimized or in the background.

To hang up a telephone call using the USB Headset Adapter, press the **Release** button.

Adjusting the volume with the USB Headset Adapter

You can easily adjust the volume of your telephone calls using the USB Headset Adapter. Ensure you are wearing your headset so you can hear the changes as you make them.

To decrease the volume, press the left side of the **Volume** button.

To increase the volume, press the right side of the **Volume** button.

Muting a call

When you mute a call, you can still hear your caller, but your caller cannot hear you.

To mute a call using the Headset adapter, press the **Mute** button.

Using the i2050 Smart Functions menu

The i2050 Smart Functions menu provides quick access to
IP Softphone 2050 features. You can customize what appears on this
menu using the i2050 Configuration Utility.

To access the i2050 Smart Functions menu:

1. Press the **i2050 Smart Functions** button on the USB Headset
   Adapter.

2. Highlight the feature you want by using one of the following:

   — the mouse

   — the keyboard arrow keys

   — the **Volume** button on the USB Headset Adapter

3. To select the feature, do one of the following:

   — Click the **OK** button.

   — Press the **i2050 Smart Functions** button on the USB Headset
      Adapter.

If the i2050 Smart Functions menu displays only one feature, the
Don't display this dialog again check box appears. If you select this
check box, the i2050 Smart Functions menu does not appear when you
press the **i2050 Smart Functions** button. Instead, the feature on the
i2050 Smart Functions menu is automatically executed when you press
the **i2050 Smart Functions** button.

Customizing the i2050 Smart Functions menu

You can customize the features that appear on the i2050 Smart Functions
menu using the i2050 Configuration Utility.

To customize the i2050 Smart Functions menu:

1. Click the **Start** button.

2. Click **Settings**.

3. Click **Control Panel**.

4. Double-click the **IP Softphone 2050** icon.

5. Click the **USB Headset Adapter** tab.

6. Click the **Configure Smart Functions** button.

7. Click the **OK** button to close the Configure Smart Functions dialog box.

8. Click the **OK** button to close the i2050 Configuration Utility.

Use the procedures below to change the functions that are available.

To add a function:

1. On the **Available functions** list, click the function you want to add.

2. Click the **Add** button.

3. Click the **OK** button to close the Configure Smart Functions dialog box.

4. Click the **OK** button to close the i2050 Configuration Utility.

To remove a function:

1. Click the function you want to remove.

2. Click the **Remove** button.

3. Click the **OK** button to close the Configure Smart Functions dialog box.

4. Click the **OK** button to close the i2050 Configuration Utility.

To rearrange the functions on the menu:

1. Click the function you want to move up or down on the i2050 Smart Functions menu.

2. Do one of the following:

    —   Click the **Move Up** button to move the function to a higher position on the menu.

    —   Click the **Move Down** button to move the function to a lower position on the menu.

You can also add special functions to the i2050 Smart Functions menu. For information about adding special functions, refer to Custom Functions for i2050 Smart Functions menu.

Custom Functions for i2050 Smart Functions menu

From the Configure Smart Functions dialog box, you can add, delete, and modify custom functions on the i2050 Smart Functions menu.

To add a custom function:

1. Click the **New** button.

2. In the **Name** box, enter the name you want to appear on the i2050 Smart Functions menu.

3. In the **Command** box, enter the pathname and file name of the function you want to add.

   Note: If you do not know the pathname or file name of the function, click the **Browse** button beside the **Command** box. You can then navigate to the correct file, select it, and click the **Open** button.

4. In the **Arguments** box, enter any arguments that are required for this function.

   Note: If you want the IP Softphone 2050 to prompt you for the argument when you select this special function, select the **Prompt for arguments** check box.

5. In the **Initial directory** box, enter the pathname of the directory you want this function to use.

   Note: If you do not know the pathname of the directory, click the **Browse** button beside the Initial directory box. You can then navigate to the correct directory, select it, and click the **OK** button.

6. To change the icon that appears beside this function on the i2050 Smart Functions menu, click the **Change** icon and perform steps 7 to 9. If you do not want to change the icon, go to step 10.

7. Click the **Browse** button.

8. Navigate to the file you entered in the **Command** box and select it.

9. Click the **Open** button.

10. Click one of the icons that appears.

11. Click the **OK** button.

12. Click the **OK** button to add the new function to the i2050 Smart Functions menu.

To modify a custom function:

1. Click the custom function you want to modify.

2. Click the **Modify** button.

3. Make the required changes.

4. Click the **OK** button.

To remove a custom function:

1. Click the custom function you want to remove.

2. Click the **Delete** button.

3. Click the **Yes** button to confirm the deletion.

IP Softphone 2050 macros

About macros with the IP Softphone 2050

The IP Softphone 2050 enables you to record macros. A macro is a recorded sequence of steps that can be used to automate repetitive actions. For example, you can program a macro that selects a particular telephone line and then dials a telephone number automatically or macros that ensure certain numbers are always dialed out on a particular telephone line.

To access the IP Softphone 2050 Macro menu from the Standard Call Control window, click the **Macro** menu.

To access the IP Softphone 2050 Macro menu from the Enhanced Call Control window, click **Application menu > Macro**.

Once you have recorded a macro, it is saved under the Macro menu.

Recording a macro

You can record a macro to automate a procedure or repetitive action.

To record a macro:

1. Click the **Macro** button.
2. Click **New**.
3. Enter the name of your new macro.
4. Click **Record**.
5. Enter the keystrokes to complete the action or procedure.
6. Click **Add** to add the new macro to the macro list.

   TIP: You can insert a short pause in the macro by using the **Pause** key. A pause introduces a delay which may be required to access some Interactive Voice Response applications and the voicemail systems.

Note: If you started recording a macro but you do not complete this function, click the **Abort** button at the bottom of the Call Control window.

Deleting a macro

You can delete a macro.

To delete a macro

Record a new macro over the existing macro.

Playing a macro

You can play macros to dial telephone numbers or access your voicemail.

To play a macro:

Do one of the following:

• Click **Macro** **>** [Macro name].

• Click **Application menu** **> Macro >** [Macro name].

IP Softphone 2050 menu commands

Enhanced Call Control window menu

The Application menu provides access to the Enhanced Call Control window.

To access the Enhanced Call Control window:

1. Click **Application Menu**.

2. Select **Skin**.

3. Select **Enhanced**.

Following are the items in the Enhanced Call Control window menu:

- **Trays** – Selects the information that appears on the Enhanced Call Control window.

  — **Retract Tray** - Displays no additional information, so the Enhanced Call Control window takes up less space.

  — **Lines** - Displays the Line keys in two columns.

  — **Number Pad** - Displays the dialpad.

  — **Combo** - Displays the Line keys and the dialpad.

- **Configure Audio** – Specifies the sound device you want to use with the IP Softphone 2050. A sound device such as the USB Audio Kit enables your computer to send and receive audio (sound) signals.

- **Select Skin** – Selects a Call Control window: Standard or Enhanced.

- **Select Language** – Selects the language that is used on the IP Softphone 2050.

- **Local Directory** – Opens the Local Directory.

- **Redial List** - Opens the Redial List.

- **Callers List** - Opens the Callers List.

- **Macro [Name]** – Executes the macro you saved in this command.

- **Record** – Starts recording a macro.

- **Help** – Opens the IP Softphone 2050 Help window.

- **About** – Displays information about the IP Softphone 2050.

- **Exit** – Closes the Call Control window, but does not disconnect your computer from the telephony server so you can still receive telephone calls (the i2050srv application remains running in the background).

Standard Call Control window menu

The **Standard Call Control** window menu contains the following items.

- **Configure Audio** – Specifies the sound device you want to use with the IP Softphone 2050. A sound device such as the USB Audio Kit enables your computer to send and receive audio (sound) signals.

- **Select Skin** – Selects a Call Control window: Standard or Enhanced.

- **Select Language** – Selects the language that is used on the IP Softphone 2050.

- **Exit** – Closes the application.

View menu

The View menu contains the following items:

- **Local Directory** – Displays the Local Directory.

- **Message Waiting** – Shows or hides the Message Waiting Light.

- **Toolbar** – Shows or hides the Toolbar.

- **Primary Display** – Shows or hides the Primary Display.

- **Compact Lines** – Displays the IP Softphone 2050's Line keys in two columns so that the main window takes up less space.

- **Numeric Pad and Lines** – Displays the Dial Pad and the Line keys in one column.

- **System Tray** – Shows or hides the IP Softphone 2050 task tray icon. Right-click this icon to make or manage telephone calls.

Macro menu

The Macro menu contains the following items.

*   **Macro [Name]** – Executes the macro you saved in this command.

*   **Record** – Starts recording a macro.

*   **Abort** – Stops recording a macro.

Help menu

The Help menu contains the following items.

*   **Contents** – Displays the help topics.

*   **Search** – Searches the help topics for a word or phrase.

*   **Index** – Displays the index for the help topics.

*   **What's This?** – Activates Context Sensitive Help. After selecting this command, click any area of the screen to see help information about it.

*   **About** – Displays information about the IP Softphone 2050.

Troubleshooting the IP Softphone 2050

Application interoperability issues

Some applications do not properly check versions of shared system files at installation time. This can cause interoperability problems between the IP Softphone 2050 and other applications.

For example, installing Timbuktu version 2.0 for Windows 2000 overwrites a .dll file that is also used by the IP Softphone 2050. The IP Softphone 2050 requires the newer version of the .dll and installs this newer version if necessary. To use the IP Softphone 2050 on the same computer as version 2.0 of Timbuktu, you must install Timbuktu first.

The IP Softphone 2050 follows Windows and Install Shield standards for version management of system files.

Connectivity problems

Communication Server is unreachable

Symptom:

One of the following messages appears:

- Connecting...

- Server unreachable. Reconnecting in xx seconds.

- 802.1 QoS is not supported on your network.

Description:

These messages indicate that the connection with the communication server could not be established. A random retry time is set, after which the IP Softphone 2050 attempts to re-connect. This process is repeated until the IP Softphone 2050 is successfully connected.

If the communication server is up and reachable and the IP Softphone 2050 is pointed to the correct IP address, the "Connecting..." message appears briefly (or not at all).

The "Server unreachable" message indicates that there is a problem contacting the communication server.

Potential causes:

- Network is down.

- Computer is not connected to the network.

- Invalid communication server settings in the Configuration Utility.

- Invalid communication server settings in DHCP configuration.

- Communication server is down.

Action:

- Ping another station on the network.

- Ping the communication server.

- Use the Configuration Utility to verify the communication server IP address and port number.

- Verify that the communication server configuration is correct (a port is available, a license is available, security is correct).

- In the IP Softphone 2050 Configuration Utility QoS tab, select **Off**, then restart the IP Softphone 2050 application.

Connection is reinitializing

Symptom:

The following message appears: "Connection Established. Reinitializing..."

Description:

This message indicates that the IP Softphone 2050 has established a connection and has sent a request to the communication server to resume connection. The communication server is expected to reply to this request. Some communication servers pass the IP Softphone 2050 to

different sub-components, causing this message to appear two or three times in rapid succession during a normal startup.

Potential causes:

- If the message appears briefly, this is part of a normal startup.

- If the message persists, the communication server programming may be in error.

Action:

Wait to ensure that this message is not a transient startup message. If the message still appears, ensure your communication server programming is correct.

Authorization failed

Symptom:

The following message appears: "Authorization failed".

Description:

Client has not been authorized to use the communication server.

Potential causes:

- The client has not been authorized by your system administrator.

- The HardwareID in your configuration (Configuration Utility) does not match the HardwareID provisioned for the communication server.

Action:

Contact your system administrator.

Unable to retrieve communication server parameters from DHCP server

Symptom:

The following message appears:"DHCP server is not available".

Description:

A connection with the DHCP server cannot be established.

Potential causes:

• Network is down

• DHCP server configuration error

Action:

Contact your system administrator.

Service denied

Symptom:

The following message appears:"Service Denied. Reason XXXX ".

Description:

You are not authorized to use the communication server.

Potential causes:

• Invalid HardwareID in the Configuration Utility

• Invalid communication server configuration

Action:

• Ensure your communication server programming is correct.

• Contact your system administrator.

Display updates are very slow

Symptom:

• Cannot connect properly to the communication server

• Messages written to the IP Softphone 2050 appear very slowly.

• Floppy drive may be active.

Potential causes:

The Trace utility may be turned on and writing signaling information to a slow disk such as a floppy drive.

Action:

- The Trace feature should be disabled (unchecked) during normal operation. To check the status of the Trace feature, open the **Configuration Utility** and then open the **Trace** tab.

- If you are using the Trace feature, the specified directory should be on a local, high-speed disk drive.

Audio problems

Verify basic audio operation

To verify the physical connection and proper Windows audio configuration, record an audio message and play it back using the USB headset.

One-way audio

Check that the handsfree option has been programmed for the IP Softphone 2050 on the communication server.

Check if the mute option has been turned on. If the mute option is on, the **Mute** button appears red on the IP Softphone 2050 interface.

Check that Network Address Translation (NAT) device is used in the system. If so, check the NAT configuration. You will get one-way audio if the NAT configuration causes the IP Softphone 2050 to attempt to connect to the wrong IP address.

Broken or choppy speech

The Audio Quality slider adjusts the number of buffers between the computer audio device and the IP Softphone 2050 application. Less delay reduces the audio delay but increases the chances of getting broken or absent audio. Higher quality reduces the chance of broken audio but increases audio delay.

If you are receive choppy or broken speech, move the **Audio Quality** slider toward **Higher Quality**.

The Windows operating system uses very high process and thread priorities when performing low-level Windows operations, such as

minimizing and maximizing applications. This can cause brief breaks in the IP Softphone 2050 audio streams.

To reduce the severity of this symptom, turn off the Windows transition effects for menus and tool tips.

To turn off the Windows transition effects:

1. Click the **Start** button.

2. Click **Settings**.

3. Click **Control Panel**.

4. Click **Display**.

5. Select the **Effects** tab.

6. Clear the **Use transition effects for menus and tool tips** check box.

Other causes of audio issues

Other applications running on your computer, especially CPU-intensive applications or applications that intercept or delay packets (such as firewalls), can cause broken audio.

Multiple Ethernet interfaces on a single PC may not work well together. For example, the IP Softphone 2050 may exhibit intermittent breaks in audio when using notebooks that have a Xircom RealPort Cardbus Ethernet 10/100+Modem 56 PC Card (PCMCIA) inserted when the notebook is docked. In the specific case of this PC card, the problem relates to a version of the Xircom driver. This driver takes CPU cycles even when it is not active and this, in turn, causes IP Softphone 2050 audio to become choppy.

Solutions for this example are:

1. Upgrade your Xircom driver.

2. Remove the PC card when the notebook is docked.

To upgrade your Xircom driver:

1. Download and install a new PC card driver from the Xircom web site.

2. Follow the installation instructions provided by Xircom.

   Note: You require administrator privileges on Windows 2000.

Windows sound comes out of the headset

Description:

Windows sound comes out of the headset, but you want Windows sound to come out of the loudspeakers and the Softphone audio to come from the headset.

Action:

In some cases, the Windows operating system defaults all the sounds to the new sound device.

If you want to use the computer speakers for playing the Windows sounds:

1. Click the **Start** button.
2. Click **Settings**.
3. Click **Control Panel**.
4. Click **Sounds and Multimedia**.
5. Select the **Audio** tab.
6. Select **Sound Playback Preferred device**.
7. From the drop-down list, select your computer sound card. (Select your computer's **Sound Recording Preferred device** as another device if you do not wish to use the Headset Adapter for this purpose.)

Advanced audio settings

Under normal conditions, you should always select the option **Use Communication Server values**. When you choose this option, the IP Softphone 2050 uses the jitter buffer parameters sent from the communication server.

You can override these settings by selecting the **Override Communication Server**. Nortel Networks recommends that you do not use this option.

Reset conditions

The IP Softphone 2050 resets when:

• instructed to do a hard reset by the communication server

• you change the IP Softphone 2050 skin

• firewall applications intercept or delay packets causing the IP Softphone 2050 to reset due to the expiration of the Watchdog timer

 Note: Use care when using firewall applications on the same computer as the IP Softphone 2050.

• excess delay or loss of communication with the server occurs

USB Headset problems

Headset not functioning

Try the following in the order presented:

1. Verify that you have a supported operating system. To check the type of operating system you are using, from the PC desktop, right-click the **My Computer** icon and then click **Properties**.

2. Ensure that *Universal Serial Bus controllers* appears in the Windows Device Manager. If it does not appear, you might need to enable USB in your computer's setup menus or get a BIOS upgrade. Contact your computer supplier.

3. Ensure that *USB Audio Device* appears under "Sound, video and game controllers" in the Windows Device Manager. Also ensure that *HID-compliant device and USB Human Interface Device* appears under Human Interface Devices. If they do not, and the above conditions are correct, see the USB Troubleshooting section in Windows Help.

4. Ensure that you have selected *USB Audio Device* as the microphone and speaker for the Softphone.

USB Headset Adapter features grayed out

Symptom:

All of the features on the USB Headset Adapter tab in the i2050 Configuration Utility are grayed out.

Description:

The adapter is not recognized as a Nortel Networks USB Headset Adapter or the version of the USB Headset Adapter is earlier than 2.0.

Potential causes:

1. The USB Headset Adapter does not support the functions listed on the USB Headset Adapter tab.

2. The USB Headset Adapter has failed to enumerate properly.

Action:

If you suspect potential cause 2, do the following:

1. Unplug the USB cable from the USB Headset Adapter.

2. Wait one minute.

3. Plug the USB cable into the USB Headset Adapter. This forces the USB Headset Adapter to re-enumerate.

Cannot hear audio through headset

Ensure that the headset plugged into the USB adapter is provided by the manufacturer.

Check the connectors for a loose connection.

Sound still comes out of my computer speakers

Description:

The IP Softphone 2050 is not configured to direct all call audio to the headset.

Action:

Configure the USB Headset by doing the following:

1. Go to the IP Softphone 2050 Call Control Window.

2. Click **Application Menu.**

3. Click **Configure Audio**.

4. Select **Headset Microphone**.

5. Choose **USB Audio Device** from the drop-down list.

6. Choose **Headset Speaker**.

7. Choose **USB Audio Device** from the drop-down list.

8. Chose **Ringing Speaker**.

9. Choose the desired device from the drop-down list.

10. Click **OK**.

Directory problems

Redial List and Callers List must be available on your Call Server, and the appropriate class of service must be enabled, in order for you to use them. If you cannot access Redial List or Callers List contact your system administrator.

Mobile Voice Client 2050 overview

Designed to work with your personal digital assistant (PDA) and IP-based telephone systems, the Mobile Voice Client (MVC) 2050 provides real-time voice service over the Internet.

The MVC 2050 supports several features, including the following:

- 6 programmable line/feature keys

- 4 soft keys (self-labeled)

- 12-button dialpad

- multi-field display

- end user-selectable skins

- directory capabilities including Personal Directory, Redial List, and Callers List

To make a call from your PDA using the MVC 2050, you can dial with your dialpad, use a macro, or use Paste to copy a number from another application. You can also use one of the methods on your PDA System Input Panel.

If you are using Microsoft® Windows Mobile™ 2003 as your operating system, the MVC 2050 can also coexist with a secure Virtual Private Network (VPN) client such as certicom™ movianVPN™ or Apani™Networks, for connection to a business network.

The MVC 2050 functions like the IP Softphone 2050. However, the MVC 2050 cannot be used as an Agent or Supervisor in Call Center Portal applications.

Software dependencies

The following are the MVC 2050 primary software dependencies:

• Windows Mobile 2003

• GIPS NetEQ (included with the MVC 2050 software)

• VPN client (for secure access to a network)

For secure (VPN) access to a network, a VPN client is required. The Certicom™ movian™ VPN client and the Apani™ Networks VPN client have been tested with the MVC 2050.

Supported PDAs

The following is a list of PDAs supported for use with the MVC 2050:

• Dell® Axim® X5

• Dell Axim X3/C3i

• Hewlett Packard® iPAQ® h5550/h5555

• Toshiba e750/e755

• Toshiba e800/e805

Note: Dell Axim X3, 300 MHz PDA model, is not supported for use with the MVC 2050. Since the PDA industry evolves at a rapid pace, contact Nortel Networks technical support to determine the latest PDA models tested and supported, and any known issues.

PDA processor models, speed, and amount of memory vary. To maintain audio quality, do not overload the processor with intensive tasks while using the MVC 2050. For example, Nortel Networks does not recommend using your PDA version of the Internet browser while using the MVC 2050.

PDA vendors offer two types of rechargeable battery: standard and extended-life. The extended-life battery is recommended to provide longer call duration and increased call volume.

Headsets

A headset is required in order to send and receive telephone calls using the MVC 2050 and your PDA. The headset is an important part of audio quality.

MVC 2050-compatible iPAQ and Toshiba PDAs support stereo headphones and microphones like Plantronics M130 Adjustable Fit Headset, which is iPAQ-certified.

The Dell MVC 2050-compatible PDA supports a stereo headphone but not a microphone.

CAUTION

MVC 2050 does not support Bluetooth headsets.

Contact your PDA vendor to obtain headset recommendations.

For more information about Automatic Gain Control, see "MVC 2050 configuration" on page 77.

MVC 2050 menus and screen features

The MVC 2050 software provides menus and screen features to your PDA. Table 4 lists the MVC 2050 menus and their selections.

See also "Mobile Voice Client 2050 Call Handling screen" on page 79 and "Menu and icon summaries" on page 99.

Table 4: MVC 2050 menus

Menu	Selections
File	Run in background, Paste, Contacts, Settings, Exit
Keys	Headset, Answer, Goodbye, Hold, Features, Macros
Help	Diagnostics, Contents, About
Note: **Keys > Features** and **Keys > Macros** selections in Table 4 also provide pop-up menus.	

Table 5 on page 72 describes the MVC 2050 screen features. See also "Mobile Voice Client 2050 Call Handling screen" on page 79.

Table 5: MVC 2050 screen features

Screen features	Selections
Call Handling icons	Hold, Answer/Headset, Release
Toolbar	The retractable toolbar contains keys that are not present on the remainder of the display. They are: Directory, Messages, Shift, Services, Expand, Copy, Exit, Redial List, and Callers List. The toolbar can be shown or retracted using the Toolbar icon on the menu bar. See Figure 18 on page 93. Mute, Volume Up, and Volume Down icons are also present on the Toolbar and appear on the skin when the Toolbar is retracted.
Toolbar icons	Directory, Messages, Shift, Services, Expand, Copy, Quit, Callers List, Redial List
Menu Bar icons	Paste, Contacts, Settings, Toolbar
Navigation	The up, down, left, and right cursor control arrow keys are mapped to the hardware navigation buttons on the PDA hardware. These buttons are used for cursor control.

Figure 3: Call Handling screen (with Toolbar retracted)

Call Handling icons

Display

Soft keys (self-labeled)

Programmable Line/Feature keys

Toolbar

Dialpad

Menu Bar
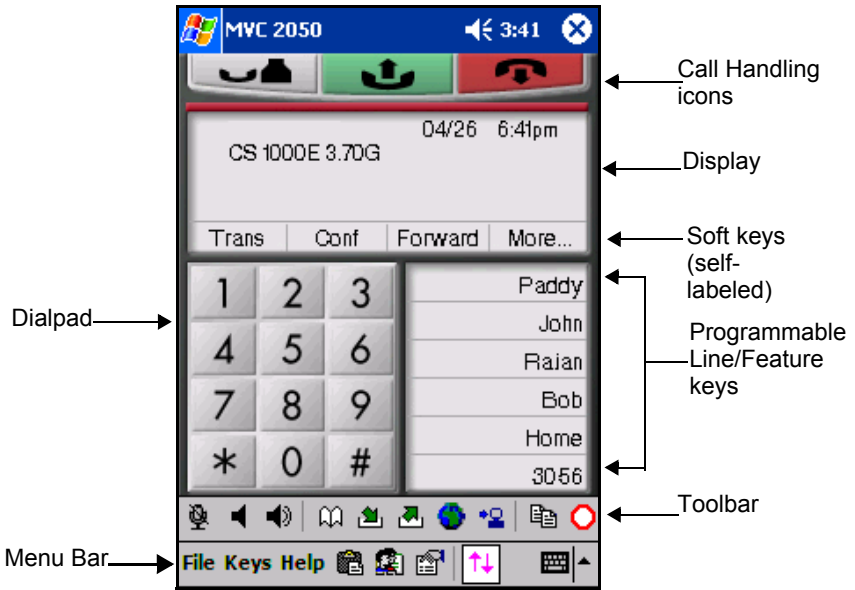
Installing and configuring the Mobile Voice Client 2050

To install MVC 2050 on your PDA:

1. If you have an older version of MVC 2050 installed on your PDA, you must remove it prior to installing a newer version. See Removing a previous version of MVC 2050.

2. Place your PDA in its cradle.

3. Synchronize your PDA with a desktop PC running Microsoft ActiveSync. See "Connecting a PDA to a desktop PC using ActiveSync" on page 75.

4. Install the MVC 2050 from a Desktop. See "Installing the MVC 2050 from a Desktop PC using ActiveSync" on page 76.

Removing a previous version of MVC 2050

If a previous version of the MVC 2050 is installed on your PDA, delete the old version before installing the new one, or the installation fails. See Figure 4 on page 75.

Use the following procedure to remove the MVC 2050 from your PDA:

1. Select **Start** from the Main Application screen. A drop-down menu appears.

2. Select **Settings**. The Settings dialog box appears.

3. Select the **System** tab. The System dialog box appears.

4. Select **Remove Programs**. A list of programs appears.

5. Select **Mobile Voice Client 2050**.

6. Select **Remove**. A dialog box appears, asking you to confirm this decision.

7. Select **Yes**. A brief pause occurs while the PDA removes MVC 2050. After the pause, a dialog box appears asking if you want to perform a soft reset.

8. Select **Yes**. Your PDA restarts.

Figure 4: Removing MVC 2050
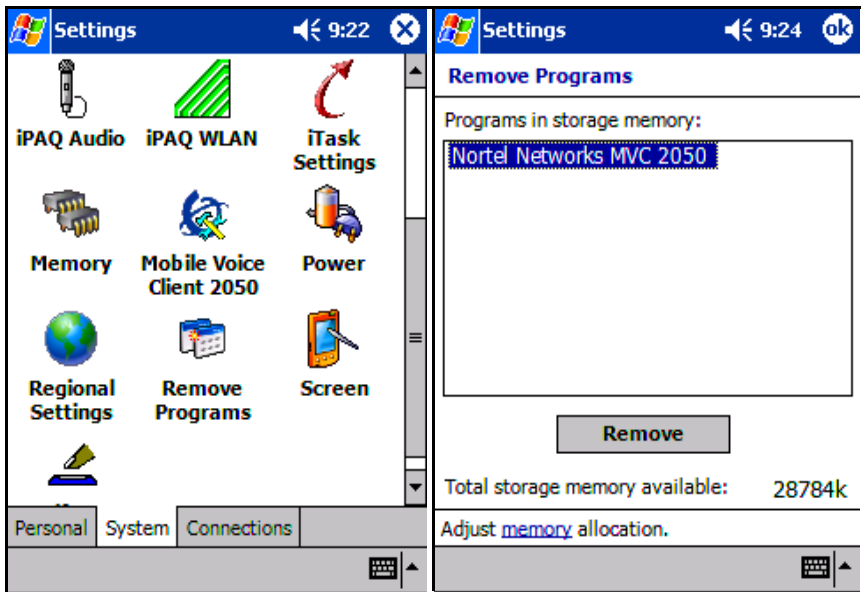
MVC 2050 installation method

The MVC 2050 supports installation from a docked PDA with a Microsoft ActiveSync connection to a desktop PC.

Connecting a PDA to a desktop PC using ActiveSync

Use the following procedure to synchronize your PDA to your desktop PC:

1. Place your PDA in its cradle.

2. Ensure that ActiveSync is running. Connection is confirmed on the ActiveSync screen.

3. Wait for the two PCs to synchronize. Synchronization is confirmed on the ActiveSync screen.

See Figure 5 on page 76. For details about synchronization, refer to the Users Manual for your PDA.

Figure 5: ActiveSync connected

Installing the MVC 2050 from a Desktop PC using ActiveSync

Use the following procedure to install MVC 2050 using the CD:

1. Insert the MVC 2050 CD into the CD-ROM drive of your desktop PC.

2. Go to your desktop and double-click **My Computer**.

3. Select the CD Drive.

4. Select **Setup**.

5. Follow the instructions on the screen. The Install Wizard displays a message asking you if you want to modify, install, or remove the MVC 2050.

6. Select **Install**. The Install Wizard installs the MVC 2050. When the installation finishes, a message appears on the PC's display requesting that you attend to your device (PDA) and a message appears on the PDA's display asking you if you want to perform a soft restart.

7. Select **Yes**. Your PDA restarts with the new version of the MVC 2050.

MVC 2050 configuration

Enable ClearType

The MVC 2050 uses a special screen font which requires that ClearType® be enabled on your PDA.

To enable ClearType:

1. From the PDA's Main Application screen, select **Start**.

2. Select **Settings**.

3. Select **Screen**.

4. Select **Enable Clear Type**.

Automatic Gain Control

Since the MVC 2050 requires a headset to operate properly, there may be a requirement to disable Automatic Gain Control to ensure optimum audio quality.

Note: When the PDA is used in handsfree mode, without a headset, the PDA microphone picks up sounds from the speaker, creating a feedback loop. Automatic Gain Control is used in this instance to avoid feedback. For further information about device hardware settings, see your PDA's Help system.

To disable **Automatic Gain Control**:

1. Select **Start**.

2. Select **Settings**.

3. Select **System**.

4. Select one of the following, depending on the PDA you are using:

   a. **Audio**

   b. **Advanced Sounds**

   c. **Microphone**

5. Select **Automatic Gain Control**.

6. Select **Disable**.

7. Select **Yes**.

For further information about MVC 2050 configuration and settings, see the MVC 2050 Help system.

Mobile Voice Client 2050 Call Handling screen

Starting the MVC 2050

To start the MVC 2050 from your PDA:

1. From your PDA's Main Application screen, select **Start**.

2. Select **Programs**. See Figure 6.

3. Select **Mobile Voice Client 2050**. The Call Handling screen appears. See Figure 7 on page 80.

Figure 6: Starting MVC 2050 from Main Application screen
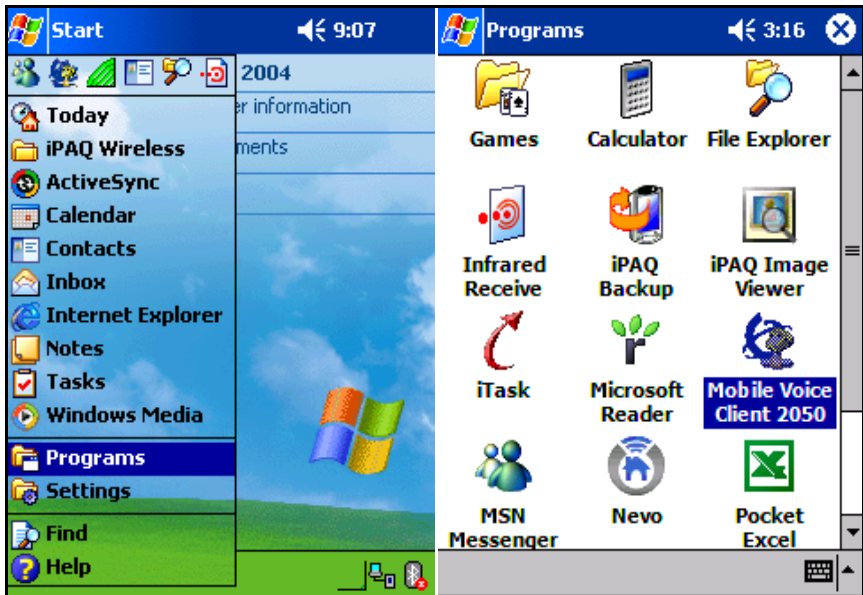
Figure 7: Call Handling screen (with Toolbar retracted)
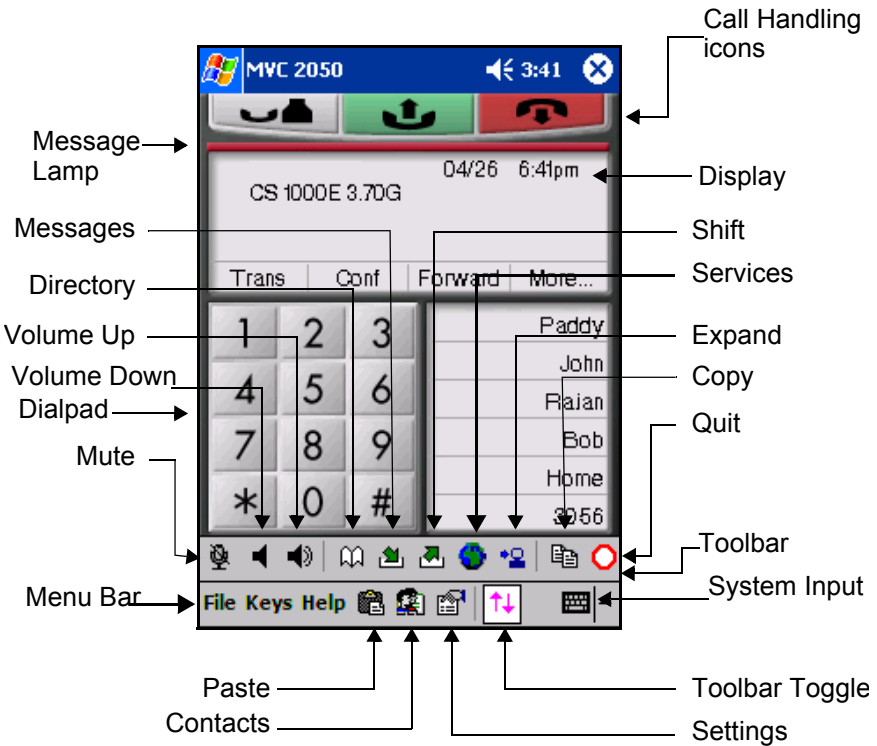
Navigation

You can use the up, down, left, and right cursor control arrow keys on your PDA as navigation buttons to move around the display of MVC 2050.

Appearance

The appearance of the Call Handling Screen differs with each available skin. For more information about skins, see "MVC 2050 graphical interface (skins) components" on page 81.

The MVC 2050 uses a special screen font which requires that ClearType® be enabled on your PDA. ClearType software improves the

appearance and readability of text on liquid crystal displays (LCDs), pocket PC screens, and flat panel monitors. See "MVC 2050 configuration" on page 77 for information about enabling ClearType.

MVC 2050 graphical interface (skins) components

The MVC 2050 skins are the graphical representation of the MVC 2050. The diapad, menu, and icon buttons are located on the skin. Skins come in several colors and arrangements.

To select a skin:

1. Select **Settings**.

2. Select **Skin**.

3. Select a skin from the list.

All skins share the following common components. See Figure 8 on page 82.

• programmable line/feature keys

• soft keys (self-labeled)

• dialpad

• display

• Call Handling icons

• Toolbar icons

• Menu Bar icons

• retractable toolbar

• System Input Panel icon

See the following examples of the MVC 2050 skins: Figures 8 to 11 starting on page 82 and Figure 18 on page 93.
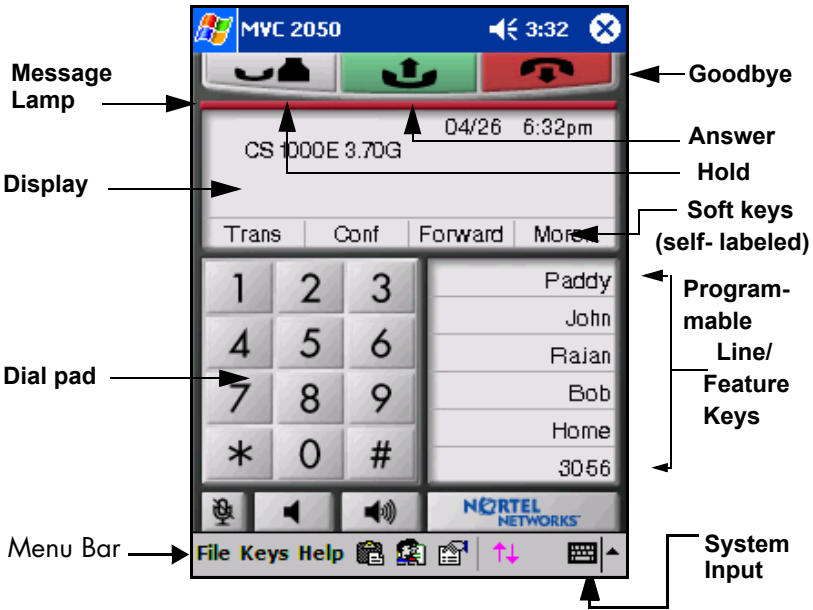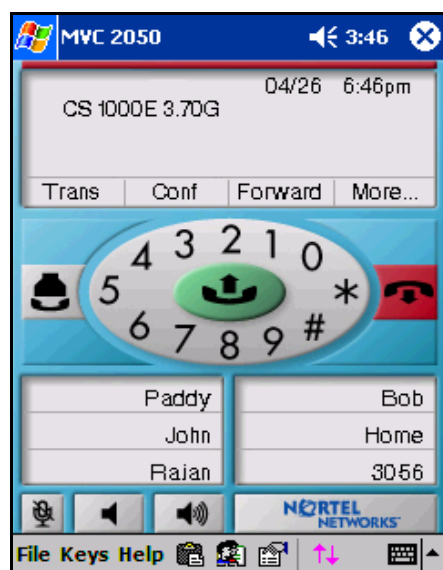
Figure 8: Black skin

Figure 9: Blue skin

Figure 10: Lime skin

Figure 11: Round skin

Display

The display is located in the central area of the skin. See Figure 8 on page 82.

Programmable line/feature keys

Six programmable line/feature keys are located on the right side of the skin. They are aligned vertically and are the same color as the display. See Figure 8 on page 82. On the round skin, the programmable lIne/feature keys are arranged in two rows of three on either side of the skin, under the dialpad. Figure 11.

Soft keys (self-labeled)

Four soft keys (self-labeled) are located in the bottom row of the display area. See Figure 8 on page 82.

> *Note 1:* The label on the key changes, based on the active feature.

> *Note 2:* A triangle before a key label indicates that the key is active.

Dialpad

The 12-button dialpad is located on the left-hand side of the skin. See Figure 8 on page 82. The dialpad is located in the center of the Round skin. See Figure 11 on page 83.

Message Lamp

The Message Lamp lets you know if you have voicemail waiting. See Figure 8 on page 82.

Mute Indication Lamp

The color of the **Mute** button changes to red when the call is muted. The **Toolbar** must be retracted to see this indicator because the **Toolbar** icon for **Mute** does not change color when the microphone is muted. See Figure 18 on page 93.

Menus

The MVC 2050 provides the following menus:

• File

• Keys

• Help

File

The following items are available from the **File** menu:

• Run in background

• Paste

• Contacts

• Settings

• Exit

See Figure 12 on page 86.

Figure 12: File menu

Run in background

Select **Run in Background** to close the MVC 2050 and keep it running in the background so that incoming calls can ring on your PDA.

To accept an incoming call while the MVC 2050 is running in the background:

1. From the Main Application screen, select **Start**.

2. Select **Recently Used Application**.

    Note: You can also select **Start > Today** or **Start > Home**, depending on your PDA. When you select **Start > Today** or **Start > Home**, the MVC 2050 icon appears in the lower right corner of this screen.

After you have completed your call, press the "X" in the upper right-hand corner of the PDA display to close the application. See Figure 12. This returns the MVC 2050 to Run In Background mode.

Paste

Select **Paste** to paste a telephone number, copied from another application, into the MVC 2050. You can do this to place a call rather than entering it through your Call Handling screen dialpad.

Contacts

Select **Contacts** to launch the **Contacts** dialog box. The Contacts application reads a list of contacts from the PDA Contacts list. The PDA Contacts List application can normally be synchronized with Outlook on your desktop PC.

Settings

The following items are available on the **File > Settings** submenu:

• Profiles

• Server

• Skin

• Features

• Macros

• Audio

• About

• Language

• Hardware ID

• Advanced Audio

• Listener IP

• Sounds

For more information about Settings, see "Mobile Voice Client 2050 settings" on page 127.

Exit

Select **Exit** to close the MVC 2050. Once you select Exit, you cannot place or receive calls until you re-start the application. For more information, see "Run in background" on page 86.

Note: Selecting Exit frees up PDA processing resources.

Keys

The following items are available from the **Keys** menu:

• Headset

• Answer

• Goodbye

• Hold

• Features

• Macros

Figure 13: Keys menu

Headset

Select **Headset** to answer an incoming call or to obtain dial tone to place a call. (See also the **Headset/Answer** icon, located at the top, center, of the Call Handling screen).

Answer

Select **Answer** to answer an incoming call or to obtain dial tone to place a call. See also the **Headset/Answer** icon, top center in the Call Handling screen.

Goodbye

Select **Goodbye** to end your call. See also the **Goodbye** icon, top right in the screen.

Hold

Select the **Hold** menu item to place a call on hold. See also the **Hold** icon, top left in the Call Handling Screen.

Features

Select **Features** to access to a menu of interface keys. The defaults vary depending on which type of communication server you are connected to.

- See Figure 14 on page 90 to access the Features submenu from the **Keys** screen.
- See Figure 15 on page 90 to access the Features menu from the **Settings** screen.
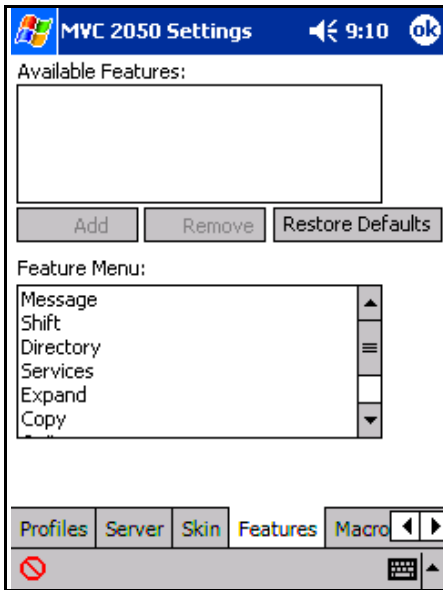
The following are the default Features:

- Message
- Shift
- Directory
- Services
- Expand
- Copy
- Quit
- Redial List
- Callers List

Items in Features submenu can be re-organized using the **Settings > Features** tab; however, items cannot be added or removed.

Figure 14: Keys > Features screen

Figure 15: Settings > Features screen

Macros

Select **Macros** from the **Keys** menu to access macros available through the **Settings > Macros** dialog box. You can use macros to make speed-dial calls, access voicemail, and perform routine functions faster and easier (see "Macros" on page 137).

Help

The following items are available from the **Help** menu:

• Contents

• Diagnostics

• About MVC 2050

MVC 2050 offers a PDA-specific version of Help, shown in Figure 16.

Figure 16: Help menu

Contents

Select **Contents** to access the MVC 2050 **Help** system.

Diagnostics

Diagnostics provides access to a list of methods to determine server connection state.

To access **Diagnostics:**

1.   Select **Help**.

2.   Select **Diagnostics** to see the following items in the drop-down list.

— Ping

— Trace Route

— RUDP Ping

About MVC 2050

Select **About MVC 2050** to see the MVC 2050 system product name, version number, copyright indication, Nortel Networks name and logo, and Global IP Sound® name and logo. The MVC 2050 uses packet loss concealment provided by Global IP Sound's NetEQ™ software.

Figure 17: About screen

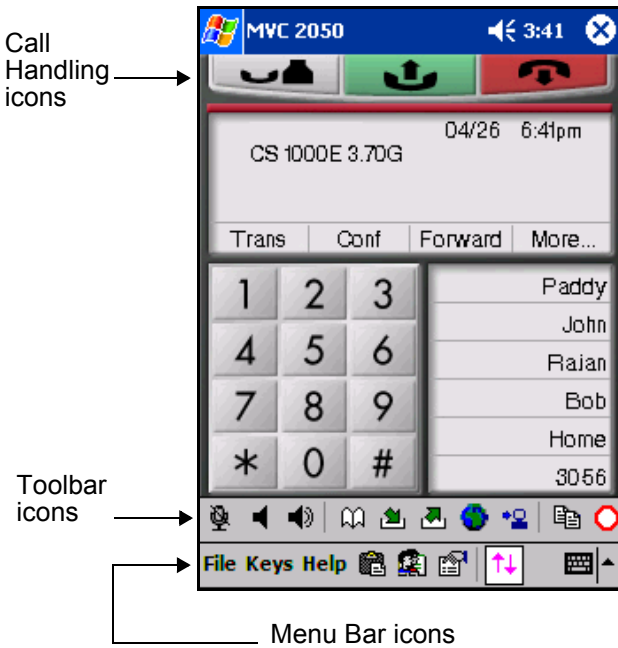**Figure 18: Call Handling screen (with Toolbar retracted)**
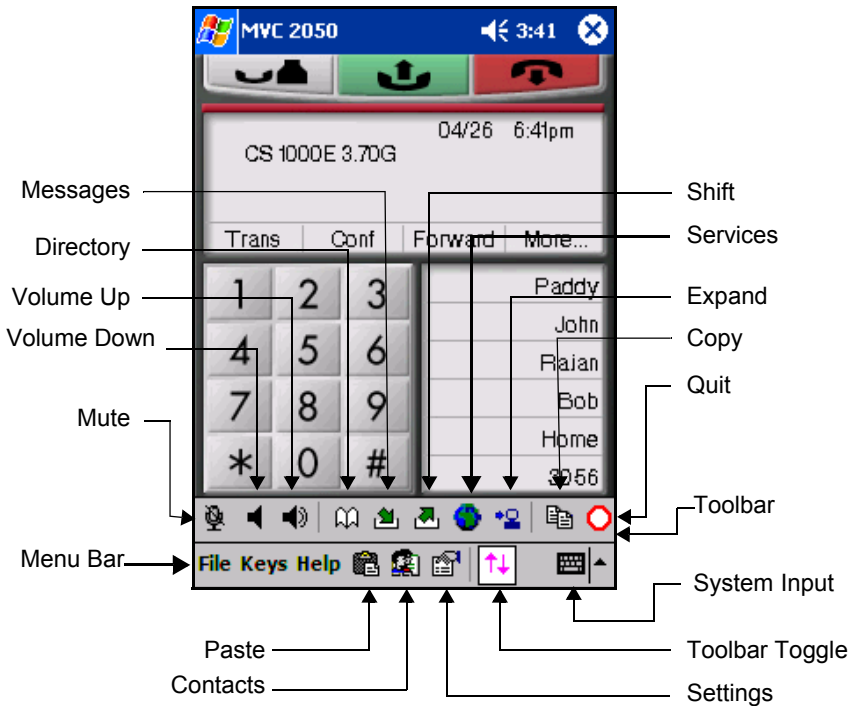
Icons

See Figures 18 and 19 to view the icons available in the MVC 2050.

Icons can be divided into three types:

• Call Handling icons

• Toolbar icons

• Menu Bar icons

Figure 19: Icons

Call
Handling
icons

Toolbar
icons

Menu Bar icons

Call Handling icons

The Call Handling icons are:

- Hold

- Answer/Headset

- Goodbye

These Call Handling icons are located at the top of the skin. See Figure 19. The call handling icons are located across the middle of the Round skin.

Hold

Use the **Hold** icon to place calls on **Hold** and remove them from **Hold**.

Answer/Headset

Use the **Answer/Headset** icon to receive and place calls.

Goodbye

The **Goodbye** icon is used to terminate calls.

Toolbar icons

The Toolbar icons are:

• Directory

• Messages

• Shift

• Services

• Expand

• Copy

• Quit

• Callers List

• Redial List

The Toolbar icons are visible when the Toolbar is retracted.

See Figures 18 and 19 to view the Toolbar retracted.

Note 1: Select **Keys > Features** to view menu items that are exact equivalents to tapping these **Toolbar** icons.

Note 2: **Volume Up**, **Volume Down**, and **Mute** (which are covered when the **Toolbar** is shown) are also repeated on the **Toolbar**.

Directory

The **Directory** icon, depending on how your system administrator has set up this service, may access a local directory, the **Personal Directory** with up to 100 entries, **Password Administration**, or some other server-based directory service.

Select the **Directory** icon to place a call. **Directory** accessibility depends on the system you are connected to.

Inbox/Messages

Select the **Inbox/Messages** icon to access your messages or to return a call.

Outbox/Shift

Select the **Outbox/Shift** icon to shift between sets of programmable line/feature keys.

Services

Select the **Services** icon to access a list of network services.

Expand

Select the **Expand** icon to access additional services, depending on the system you are connected to.

Copy

Select **Copy** to add contacts to the Personal Directory by copying entries from the Redial List, the Callers List, or other directory applications. Availability of the Copy feature depends on which type of communication server you are connected to, and on how your system administrator has set up the Directory service.

Tip: If you are creating multiple entries in the Personal Directory, you can make and edit multiple copies in an existing entry.

Quit

Select the **Quit** icon to exit a network service or feature.

Callers List

The **Callers List** icon provides access to information on up to 100 telephone numbers of calls received.

Redial List

The **Redial List** icon provides access to information on up to 20 telephone numbers you have recently dialed.

Menu Bar icons

The Menu Bar icons are:

• Paste

• Contacts

• Settings

• Toolbar toggle

• System Input

Paste

Use the **Paste** icon to paste a number from another application to the MVC 2050.

Settings

Select the **Settings** icon to view the **Settings** screens.

Contacts List

Use the MVC 2050 **Contacts List** icon to view, select, and dial contacts. The MVC 2050 **Contacts List** is a read-only list available from the PDA **Contacts List**. To add, modify, or delete entries, use the PDA **Contacts** application. The PDA **Contacts List** can also be updated by synchronizing it with your deskptop's Outlook directory using Microsoft® ActiveSync®. See your PDA's user guide for a description of this feature.

Toolbar

Select the **Toolbar** icon to toggle the **Toolbar** display on and off.

System Input

The **System Input** icon in the system tray at the bottom right-hand corner of the PDA provides access to the **System Input Panel**, shown in Figure 8 on page 82. Consult your PDA documentation for a description of the **System Input Panel**.

You can use the **System Input Panel** to enter data for the MVC 2050 and other applications.

The following are four methods you can use to input data on your PDA:

• Keyboard

• Transcriber

• Letter Recognizer

• Block Recognizer

Using the MVC 2050 application, the PDA keyboard can act like a dialpad. For instance, the alphabetical J, K, or L is interpreted as a number five (5). Keys that are not alphanumeric are ignored.

You can use a transcriber to write a telephone number on the display area to place a call. See Figure 20.

Figure 20: Transcriber used to enter a number
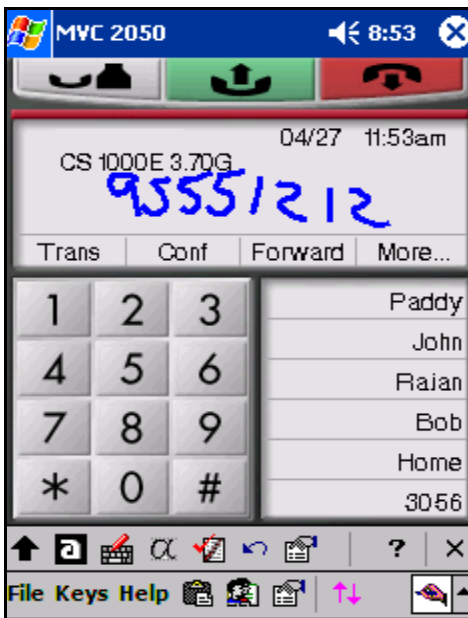
Menu and icon summaries

File menu

Table 6 summarizes the **File** menu selections.

Table 6: File menu

Selection	Description
Run in Background	Closes the MVC 2050 application, but leaves it running in the background to allow incoming calls to be received.
Paste	Pastes a telephone number into the call interface to place a call (also available as a Menu Bar icon).
Contacts	Opens the Contacts List (also available as a Menu Bar Icon).
Settings	Provides access to the Settings dialog boxes (also available as a Menu Bar Icon).
Exit	Shuts down the MVC 2050 application (also available as a Menu Bar Icon).

Keys menu

Table 7 summarizes the **Keys** menu selections.

Table 7: Keys menu

Selection	Description
Headset	Answers an incoming call or provides dial tone so you can make a call (also available as the **Headset/ Answer** icon located at the top center of the display).
Answer	Answers an incoming call or provides dial tone so you can make a call (also available as the **Headset/ Answer** icon located at the top center of the display).
Goodbye	Releases the call.
Hold	Places the current call on hold (also available as the **Hold** icon at the top left of the display).
Features	Presents a menu of available features.
Macros	Presents a menu of the programmed macros.

Help menu

Table 8 summarizes the **Help** menu selections.

Table 8: Help menu

Selection	Description
Contents	Accesses the Help system.
Diagnostics	Provides access to MVC 2050 diagnostics.
About	Provides information about your MVC 2050 system.

Managing Mobile Voice Client 2050 calls

Making a telephone call

Use the following procedure to make a call from your PDA using the MVC 2050:

1. Plug the headset into the PDA and put it on.

2. Select **Mobile Voice Client 2050** from the **Start > Settings/System** menu or **Start > Programs** menu.

3. Open the line by selecting one of the following:

   — **Headset/Answer** icon

   — **Answer key** from the **Keys** menu

   — a **line** key

4. Dial the number by using one of the following:

   — **dialpad**

   — **macro**

   — **Contacts** within the MVC 2050 interface

   — network **Directory**

   — **Personal Directory**

   — **Callers List**

   — **Redial Lis**t

   — **Paste** icon or menu item to paste a number copied from another application

   — a PDA System Input Panel such as the keyboard, block recognizer, letter recognizer, or transcriber to write the number on the input screen

Tip: To use the transcriber, select the **System Input Panel** icon, select transcriber from the drop-down list, and write the number in the application display area using your PDA's transcriber.

Answering a call

Use the following procedure to answer a call from your PDA:

1. Select one of the following:

    — **Headset/Answer** icon

    — **Answer** key from the **Keys** menu

    — ringing line key

2. Speak into your headset microphone.

Holding a call

Select the **Hold** icon or select **Hold** from the **Keys** menu to place a call on hold.

Retrieving a call

Select the line key to retrieve a call from **Hold**.

Ending a call

Select the **Goodbye** icon or select **Goodbye** from the **Keys** menu to end your call.

Maintaining call quality

If you are experiencing poor quality during a call on the MVC 2050, move closer to the WLAN access point. Distance from the access point reduces the throughput/data rate.

Using MVC 2050 on a PDA in a closed area or indoors also reduces the throughput, compared to open space.

MVC 2050 does not support Bluetooth accessory use. Bluetooth and 802.11b operate on the same frequency band and use the same WLAN hardware on the PDA.

Managing Contacts with Mobile Voice Client 2050

You can place a call from your list of contacts in the PDA's Contacts application using Mobile Voice Client (MVC) 2050. See Figure 21.

Use the **Contacts** application to do the following:

• add or modify entries on the PDA

• download entries from the Outlook contacts on your PC

• use the infrared ports on two PDAs to transfer entries between them (beam)

Figure 21: Starting Contacts and the Contacts application
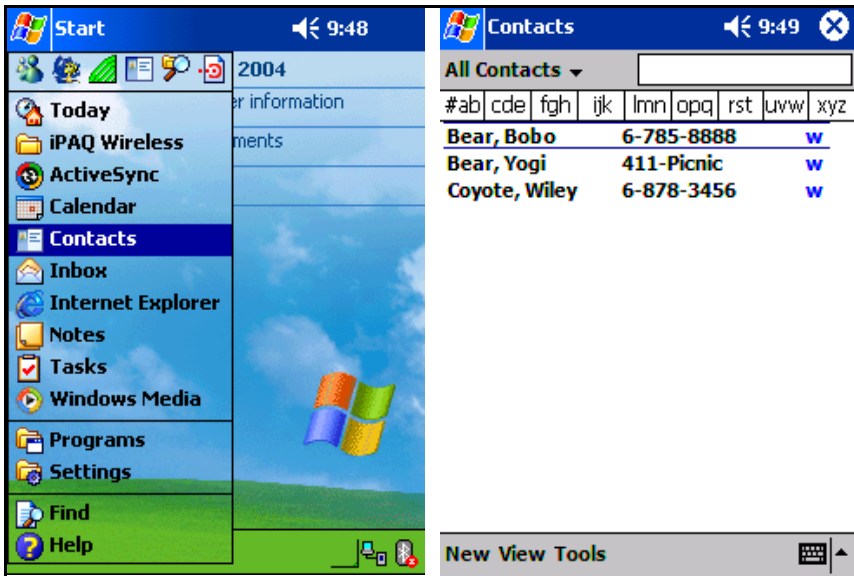
Editing the Contacts list

See the **Contacts Help** on your PDA for information about adding, deleting, and editing **Contacts**.

See the appropriate **Help** screen for information on editing the **Contacts** in Outlook on your desktop PC.

Accessing Contacts Help

Use the following procedure to access your PDA's Contacts Help system:

1. Select **Start**. A drop-down list appears.

2. Select **Contacts**. The **Contacts** screen appears.

3. Select the word **Contacts** at the top of the screen. The drop-down list appears.

4. Select **Help**. The **Contacts Help** screen appears.

Accessing the PDA Contacts list

Use the following procedure to access your PDA **Contacts** list:

1. Open the PDA's **Today** or **Home** screen.

2. Select **Start > Contacts**. The **Contacts** read-only screen appears.

   Note: To view the **Contacts** list within the MVC 2050, select **File > Contacts**. See Figure 22 on page 106.

Figure 22: MVC 2050 Contacts screen
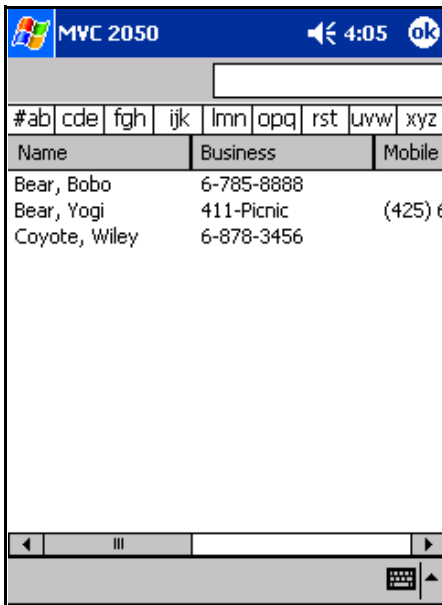
Dialing a number from the Contacts list

Use the following procedure to dial a number from the MVC 2050 using the **Contacts** list:

1. Select **File > Contacts**. The **Contacts** list appears.

2. Double-tap the **name** or **number** you want to dial. The **Phone details** dialog box appears. See Figure 23 on page 108.

3. Use the **Phone details** dialog box to modify the number to be dialed, as needed.

4. To dial the number, press the check-mark in the lower left-hand corner of the display. See Figure 23 on page 108.

Dialing formats

Numbers must be in the canonical dialing format in order for your PDA to use them for dialing.

The canonical address format is a universal telephone number format recognized by the WIndows Telephony Application Interface (TAPI).

The canonical format identifies the components of a telephone number, which TAPI translates according to a country's or region's dialing rules. The canonical format is:

+ Country/Region Code (Area Code) Subscriber number

> *Note:* For further information on canonical dialing, refer to the Microsoft web site.

When you select **File > Contacts** and double-tap a number to dial from the contacts list, the **Phone details** dialog box appears, shown in Figure 23 on page 108. The dialog box provides options for the criteria to properly route your call.

Use the **Phone details** dialog box to:

- modify the number being dialed
- select or deselect canonical dialing rules
- interpret the number as a private network (ESN) number
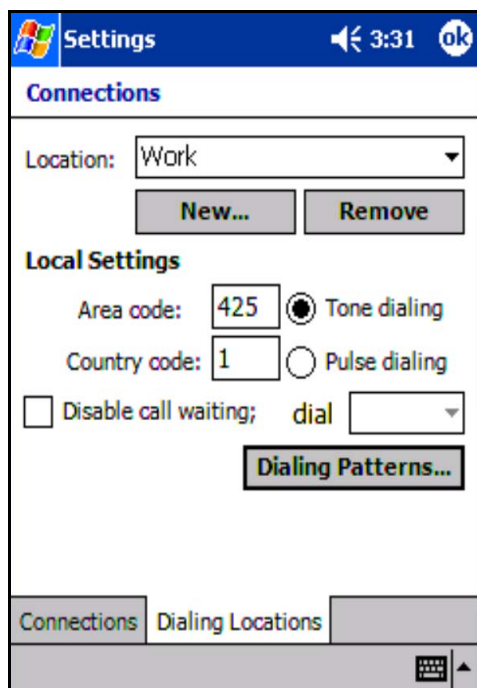
Figure 23: Phone details dialog box

The following are the components for creating and using canonical dialing numbers:

- area code, in the Contacts application

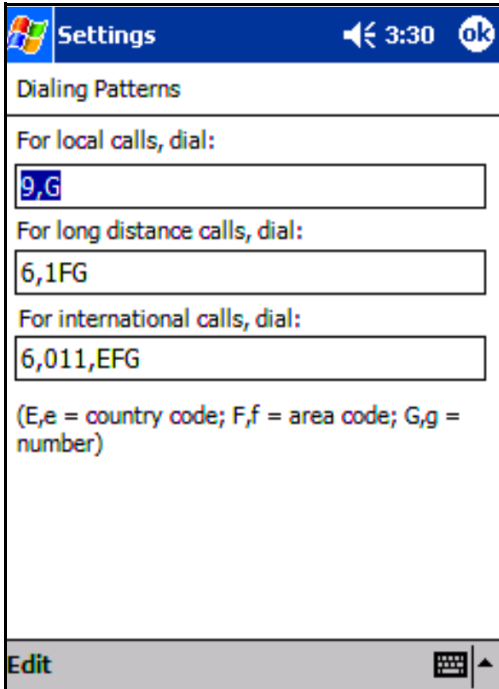- dialing properties, called **Dialing Locations** (see Figure 24 on page 109)

   Note: Information in the **Dialing Locations** tab indicates the origin of the call.

Figure 24: Dialing locations

You set the patterns for local, long-distance, and international dialing using **Dialing Patterns**. See Figure 25.

Figure 25: Dialing patterns

Area code

Set the Area code to provide the default area code for dialed numbers.

To establish the default Area code:

1. Select the PDA **Contacts > Tools > Options**.

2. Assign the correct value to the **Country/Region** and **Area code**.

See Figure 24 on page 109.

The Contacts application prefixes the default area code to numbers you enter in your Contacts application. The PDA attempts to interpret the numbers as canonical.

For example: enter a seven-digit number. Contacts assumes that the number is in your area code, and it adds the area code as a prefix to the seven-digit number to create a canonical number.

In North America, if you enter a default area code of "415" in your Contacts and then enter the number "555-1212", the following occurs:

• Contacts prefixes the area code to the number

• the displayed number changes to "(415) 555-1212".

This number is interpreted as a canonical number that the PDA can use for dialing.

Dialing Locations

Dialing Locations describe the dialing rules to be applied when you dial a number. The dialing rules allow you to enter prefixes to access local and long-distance numbers. Use the location of your server. See Figure 24 on page 109.

To establish the dialing rules:

• Select **Start > Settings > Connections > Dialing Locations**.

• Enter your server's **Area Code**.

• Enter your server's **Country Code**.

• Specify **Tone dialing**.

• Select **Dialing Patterns**.

• Enter or modify the dialing patterns for local calls, long-distance calls, and international calls.

Example

An end user has a DN on a server located in Atlanta and another DN on a server located in New York. The end user has set up two dialing locations: one named "Atlanta"', with an area code of 404, and another named "New York", with an area code of 646. The end user has also entered '646' as the default area code in the Contacts application.

The end user has also programmed Dialing Patterns as follows:

• For local calls, dial: 9,G

• For long-distance calls, dial: 6,1FG

• For international calls, dial: 6,011,EFG

> *Note:* According to the Dialing Patterns dialog, E means insert country code, F means insert area code, and G means insert the number. Insertion of "," (a comma) indicates a one half-second pause.

— With the location of New York selected, the end user enters information for a contact whose business number is 555-1212. The Contacts application uses the Contacts Area code to determine that the area code should default to 646.

— With the location of New York selected, the end user enters information for a contact whose business number is 416-555-1212. The end user enters all 10 digits to record the number in Contacts as (416) 555-1212.

— With the location of New York selected, when the end user selects 555-1212 in the MVC 2050 Contacts list and selects Dial Business, the Phone details dialog box appears and displays the number to be dialed as 9,5551212.

— With the location of New York selected, when the end user selects 416-555-1212 in the MVC 2050 Contacts list and selects Dial Business, the Phone details dialog box appears and displays the number to be dialed as 6,4165551212.

— With the location of Atlanta selected, when the end user selects 555-1212 in the MVC 2050 Contacts list and selects Dial Business, the Phone details dialog box appears and displays the number to be dialed as 9,16465551212.

See your PDA Help system for a description for the values used in dialing patterns.

ESN numbers

To enter ESN numbers in **Contacts**, enter the ESN prefix followed by the number.

Note: PDA **Contacts** does not accept the '~' character used in the IP Softphone 2050 to express ESN numbers. You can provide a '~' character to your PDA **Contacts** application by storing a '~' character prefix digit in your PC **Outlook Contacts**. Then use ActiveSync to synchronize your PDA with your PC **Outlook**. This will transfer the '~' to your PDA.

To assign the ESN prefix:

1. Dial a number using the Contacts list.

2. When the **Phone details** dialog box appears, select ESN and enter or modify the ESN prefix in the box.

See Figure 26 on page 114.

Figure 26: ESN dialing

Extension numbers

The PDA Contacts application normally dials extension numbers only if they do not satisfy Microsoft's criteria for numbers that require an area code.

The following three methods can be used to manage dialing extension numbers:

1. Select **Extension** in the **Phone details** dialog box. See Figure 27 on page 115.

2. Enter extension numbers in your PC's Outlook Contacts application and ActiveSync your PC's Outlook with your PDA's Contacts.

Select **Keys > Macros** and enter the direct dial extension number in a macro. See "Macros" on page 137 for information about macros.

Figure 27: Extension Number

Personal Directory, Redial List, and Callers List

Personal Directory, Redial List, and Callers List are features supported on CS 1000 systems running CS 1000 Release 4.0 software. The contents of these directories are maintained in a remote, central database called the Application Server.

To open Personal Directory, Redial List, or Callers List:

1. Tap the **Directory** icon.

2. Make your selection from the following list.

    — Personal Directory

    — Callers List

    — Redial List

    — Password Administration

    Note: The Personal Directory, Redial List, and Callers List features have a one-minute time-out control period. If the application is idle for one minute during any of the operations, the application is closed and your IP Softphone 2050 goes back to the idle state.

The Personal Directory, Redial List, and Callers List features support:

• multiple languages

• access using the **Directory** key

• feature launch while in Call Transfer and Conference modes (your MVC 2050 does not have to be idle)

• Branch Office in normal mode only

• Virtual Office

• menu-driven configuration of Station Control Password (SCPW) from your IP Softphone

• database backup and restoration by your system administrator

• system administrator functions, such as unlocking your SCPW

•   system administrator restoration of profiles for single, multiple, or all
    users

User preferences for Personal Directory, Redial List, and Callers List

The following is a list of options you can change:

•   language

•   date/time display format

•   call timer

•   name display format

•   call log options

    —   log all/unanswered calls

    —   area code setup

    —   preferred name match

    —   new call indication

To set user preferences:

1.   Tap the **Services** icon.

2.   Tap **Telephone Options**.

3.   Select one of the following:

     —   **Language**

     —   **Date/time**

4.   Scroll down the list.

5.   Tap your selection.

6.   Tap **Select** or **Cancel**.

Call Log Options

The following is a list of Call Log Options:

•   Log all/unanswered incoming calls

•   New call indication

- Preferred name match

- Area code set-up

- Name display format

Table 9 describes the Call Log Options.

Table 9: Call Log Options (Part 1 of 2)

Call Log Option	Description	Default value
Log all/unanswered incoming calls	Callers List logs all of the incoming calls or only the unanswered incoming calls.	Log all calls
New call indication	Telephone displays a message indicating that a new incoming call was received.	On
Preferred name match	If set to Off, the CPND from the Call Server is displayed for an incoming call. If set to On, the name stored in the Personal Directory is displayed, if a match is found.	Off
Area code set-up	Incoming call phone numbers display in the order you set, if the area code matches one of the three that you have set up. Example: area code first or area code last.	No area code specified

Table 9: Call Log Options (Part 2 of 2)

Call Log Option	Description	Default value
Name display format	You can define the format of the name displayed for incoming calls. The options are: first name/last name or last name/first name	First name/last name

To set Call Log Options:

1. Tap the **Services** button.

2. Tap **Telephone Options**.

3. Tap **Call Log Options.**

4. Tap one of the following:

   — **Incoming Calls**

   — **Preferred Name Match**

   — **Area Code Setup**

   — **Name display forma**t

5. Scroll through the selected list.

6. Tap your selection.

7. Tap **Select** or **Cancel.**

Personal Directory

You control your own Personal Directory. You can create up to 100 entries. You can edit, copy, or delete individual entries, or delete the entire list, and you can copy entries from other applications to Personal Directory or from Personal Directory to other applications.

The following list describes the contents of a Personal Directory entry:

• last name (up to 24 characters)

• first name (up to 24 characters

• DN at work (up to 31 characters)

- DN at home (up to 31 characters

- cell phone (up to 31 characters)

- pager (up to 31 characters)

To add a contact to Personal Directory:

1. Tap the **Directory** icon.

2. Tap **Personal Directory.**

3. Tap the **Add** key to start a text editor.

4. Enter the contact information.

   TIP: you can tap the **Pause** soft key any time during data entry to add a pause in the number.

5. Tap **Done** to submit the entry.

You can also add contacts to the Personal Directory by copying entries from the Corporate Directory, the Redial List, the Callers List, or other available directory applications. If you are creating multiple entries in the Personal Directory, you can make and edit multiple copies of an existing entry.

To edit a contact in the Personal Directory:

1. Tap the **Directory** icon.

2. Select **Personal Directory** from the Directory list.

3. Search for the desired entry.

4. Highlight the entry.

5. Tap the **Edit** soft key and make the changes.

6. Tap the **Done** soft key.

You can temporarily edit contacts in the Redial List and the Callers List then dial the edited entry. The changes are not retained.

To dial from the Personal Directory:

1. Tap the **Directory** icon.

2. Scroll to the **Personal Directory**.

3. Tap **Personal Directory**.

4. Find the contact by one of the following:

    — Scroll to the desired contact.

    — Search for the contact by name or number.

    — Enter the number of the contact to find it.

5. Double-tap the contact to dial the selected entry.

Call Log features: Redial List and Callers List

Redial List and Callers List are Call Log features. The content of Redial List and Callers List is generated by the system during call processing. You can delete individual entries or the entire directory in Redial List and Callers List, but you cannot add an entry or permanently change the content of an entry.

Callers List

The Callers List can contain up to 100 entries. When the list is full, the system overwrites the oldest entry.

In Directory View mode, the caller's name displays along with the Callers List entry count. Entries in the Callers List are sorted by Call Log time. The first entry you see is the first new entry. If you press the down navigation key, more new items in the Callers List display. If you press the up navigation key, an older item in the list displays.

The following list describes the contents of a Callers List entry:

•   last name (24 characters)

•   first name (24 characters)

•   DN (31 characters)

•   time/date

•   number of calls

Dialing from the Callers List

To dial from the Callers List:

1. Do one of the following to open Callers List:

   — Tap the **Callers List** icon on the Toolbar

   — Tap the **Directory** icon and tap Callers List.

2. Find the contact by one doing of the following:

   — Scroll to the desired contact

   — Search for the contact by name or number

   — Enter the number of the contact to find it

3. Double-click the contact to dial the selected entry.

Redial List

The Redial List can contain up to 20 entries. When the list is full, the system overwrites the oldest entry.

In Directory View mode, the number you dialed is displayed. Redial List content is updated when you dial out. Entries in the Redial List are sorted by Call Log time. The oldest entry is at the beginning of the list. Press the down navigation key to go to the newest entry and press the up navigation key to go to the oldest.

The following list describes the contents of a Redial List entry:

- user name (up to 24 characters)
- DN (up to 31 characters)
- time of the last call occurrence
- time/date

Dialing from the Redial List

To dial from the Redial List:

1. Do one of the following to open Redial List:

   — Tap **Redial List** on the Toolbar.

   — Tap the **Directory** icon and tap **Redial List**.

2. Find the contact by one doing of the following:

   — Scroll to the desired contact.

   — Search for the contact by name or number.

   — Enter the number of the contact to find it.

3. Double-tap the contact to dial the selected entry.

To temporarily edit a contact and dial it using the Redial List or the Callers List:

1. Tap the **Directory** icon.

2. Select **Redial List** or **Callers List** from the Directory list.

3. Search for the desired entry.

4. Highlight the entry.

5. Tap the **Edit** soft key and make the changes.

6. Tap the **Dial** soft key to dial the edited entry.

To find contacts in Personal Directory, Redial List, or Callers List:

1. Tap the **Directory** icon.

2. Tap the desired directory and do one of the following:

   — Scroll through the directory to the desired entry.

   — Enter the number of the entry to go directly to it.

   — Search by first name, last name, or number.

To delete a contact in Personal Directory, Redial List, or Callers List:

1. Tap the **Directory** icon.

2. Select the **Personal Directory**, **Redial List**, or **Callers List**.

3. Search for the entry.

4. Highlight the entry.

5. Tap the **Delete** soft key.

6. Tap the **Confirm** or **Cancel** key.

To delete the Redial List or Callers List:

1. Tap the **Directory** button.

2. Select **Redial List** or **Callers List**.

3. Tap the **Del** soft key.

4. Tap **Yes**.

Password Administration

The Password Administration feature is available on the Directory list. The Station Control Password (SCPW) protects your private directory information. You can perform Password Administration from your MVC 2050 once your SCPW is defined by your system administrator on the Call Server. This includes turning password protection on or off and changing your password.

When password protection is enabled, authentication is required before you can access Personal Directory, Redial List, or Callers List. You are prompted to enter your password in order to gain access to any of the password-protected features, such as Personal Directory, Redial List, Callers List, or Virtual Office.

> *Note:* The default setting for Password Protection is **Off**.

To turn Password Protection On/Off:

1. Tap the **Directory** icon.

2. Select **Change Protection** mode.

    If Password Protection is enabled, you are prompted to enter your password.

3. Tap one of the following:

    — **Ent** to confirm

    — **Del** to delete your password

    — **Clr** to clear your password

    — **Can** to cancel and return to the Directory list

4. If you tapped **Ent**, select one of the following:

   — **Enable Pwd Protection**

   — **Disable Pwd Protection**

5. Tap one of the following:

   — **Yes** to accept your selection

   — **No** to return to the Directory list

6. If you selected **Yes**, tap **Done** to enable or disable Password Protection.

To change your password:

1. Tap the **Services** icon.

2. Select **Telephone Options** (you will be prompted to enter your password).

3. Enter your password.

4. Select **New Password**.

5. Tap one of the following:

   — **Sel** to select New Password

   — **Del** to return to the previous menu

   — **Clr** to clear your password

   — **Can** to end

   If you tapped **Sel**, you are prompted to enter a new password.

6. Enter your new password and tap **Sel.** You are prompted to confirm your new password.

7. Tap one of the following:

   — **Sel** to select New Password

   — **Del** to return to the previous menu

   — **Clr** to clear your password

   — **Can** to end

   If you tapped **Sel**, your password is changed.

If you make three consecutive incorrect password attempts within an hour, you are locked out of the password-protected features for an hour. "Locked access" displays on your telephone.

If Virtual Office is enabled, it is also locked out. If you fail to access Virtual Office with incorrect password attempts, your access to other password-protected features is also locked out.

Your system administrator can reset and unlock your access at any time if you have been locked out or have forgotten your password.

Mobile Voice Client 2050 settings

Use the MVC 2050 **Settings** to select choices for the appearance, behavior, and operation of your PDA. The **Settings** tab provides access to the following selections:

• Profiles

• Server

• Skin

• Features

• Macros

• Audio

• About

• Language

• Hardware ID

• Advanced Audio

• Listener IP

• Sounds

This section provides information about setting sounds to accompany events, profiles creation and use, server assignment, and macro creation and use.

Sounds

The Mobile Voice Client (MVC) 2050 can make sounds to indicate server connection or disconnection.

Sound files and sound settings are not saved or transmitted between device infrared ports (beamed) when profiles are saved or beamed. Therefore, the sounds must be programmed by the user.

Audible notification of server connection or disconnection

You can program sounds to accompany notification of server connection or disconnection events.

To program up to three sounds for use with audible notification of server connection or disconnection:

1. Select **File**.

2. Select **Settings**.

3. Select **Sounds**.

Figure 28: Sounds - server connected
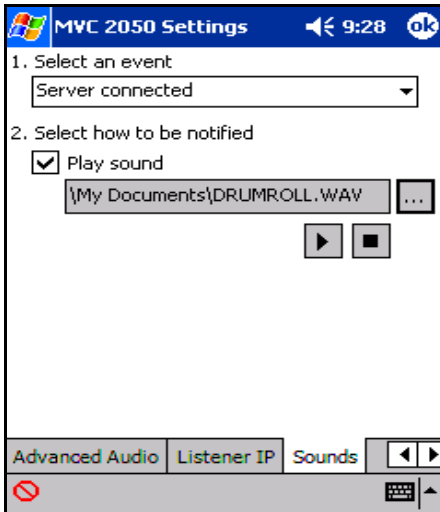
Sounds are used for the following events:

• Server unreachable

• Server unresponsive

• Server connected

See Figure 29.

Server unreachable

The sound you select for this event plays when MVC 2050 loses contact with the server. The message "Server unreachable" displays on the PDA screen.

Server unresponsive

The sound you select for this event plays if MVC 2050 fails to connect to the server. The message "Server unresponsive" displays on the PDA screen.

Server connected

The sound you select for this event plays when MVC 2050 connects to a server. The message "Server connected" displays on the PDA screen.

Figure 29: Events list
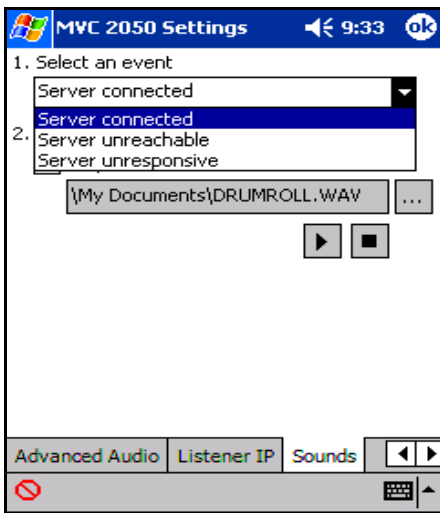
Profiles

Each profile is a named file that contains a combination of servers and other attributes that control the connection, behavior, and appearance of the MVC 2050.

A number of profiles can be created and saved to allow easy switching among different servers, feature programming, and audio programming.

Profiles can be created, selected, or deleted. Once selected, the name of the profile can be modified.

When a profile is selected, all other **Settings** tabs refer to the selected profile.

The name of the selected profile is shown in the lower-right corner on each tab. SeeFigure 30.

Figure 30: Profiles screen
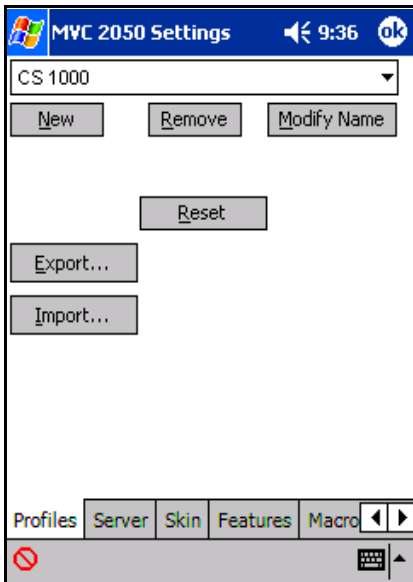
The profiles screen allows you to:

- create profiles

- delete profiles

- modify a profile's name

- change the profile used by the application

- export profiles

- import profiles

Creating a new profile

Use the following procedure to create a new profile:

1. Select **New**. A screen appears with an empty text box labeled Name.

2. Enter the new profile **name**.

3. Select **OK**.

The **Profiles** screen re-appears. The new profile has been created and selected. The values on all the other tabs have been set to their defaults for this profile. Any value modified on any of the other tabs is associated with this profile until another profile is selected. To change settings on other tabs for this profile, select the tab you wish to change. For example, select the **Server** tab from the **Settings** screen to modify the default server settings. See Figure 31 on page 132.

Figure 31: Selecting a profile
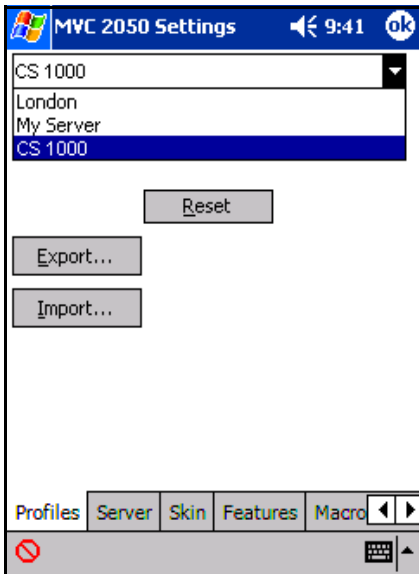
Removing a profile

Use the following procedure to remove a profile:

1. From the drop-down list on the profiles tab, select the profile you want to remove. See Figure 31.

    Note: "My Server" is a built-in profile name that cannot be deleted.

2. Select **Remove**.

The profile disappears from the list.

Modifying the name of a profile

Use the following procedure to modify the name of a profile:

1. Select the profile you want to change from the drop-down list on the profiles tab. See Figure 31.

2. Select **Modify**. The profile name appears highlighted.

3. Enter the new profile name.

4. Select **OK**.

The **Profiles** screen re-appears. The new profile is selected.

Changing the current profile

Use the following procedure to select the profile for your MVC 2050:

1. Select the name of the profile you want to change from the drop-down list at the top of the **Profiles** screen.

2. Choose one of the following:

    a. If MVC 2050 is running, press **Reset**. The application disconnects from the current server and attempts to connect to the server defined by the newly selected profile.

    b. If MVC 2050 is not running, press **OK**. The next time the application starts, it uses the selected profile.

    Note 1: To modify the profile itself, select the profile and select the tabs you wish to change.

    Note 2: The application briefly indicates which profile is in use as it starts up.

Exporting profiles

Use the following procedure to export a profile to a file:

1. Select **Export**. A dialog box appears.

2. To save as a file, select "**Export to a file**".

3. Select **OK**.

4. Enter a file name.

5. Use the folder object to select a directory.

6. Select **OK**.

    Note: To keep the profile as a backup, copy the profile to your desktop PC using ActiveSync.

Use the following procedure to export a profile to another device:

1. Select **Export**. A dialog box appears.

2. To export to another device, select "**Export to another device**".

3. Select **OK**.

4. Align the infrared ports of the two devices. The profile is exported to the other device.

Importing profiles

Use the following procedure to import a profile from a file:

1. Select **Import**. A dialog box appears.

2. To Import from a file, select "**Import from a file**".

3. Select **OK**.

4. Use the file explorer to locate the file containing the profile.

5. Select **Cancel** or **Select**.

6. Select **OK**.

7. Select the profiles to import.

8. Select **Cancel** or **Select**.

9. Select **OK**.

Use the following procedure to import (beam) a profile from another device:

1. Select **Import**. A dialog box appears.

2. To Import from another device, select "**Import from another device**".

3. Select **OK**.

4. Align the infrared ports of the two devices.

5. Select the profiles to be imported.

Server

The **Server** tab contains all of the settings that enable MVC 2050 to contact a communication server. See Figure 32 on page 135.

Your system administrator sets up your LAN server to direct your MVC 2050 to the communication server. See Figure 34 on page 136.

Figure 32: Server screen

When you want to connect to your home office communication server rather than the local office server, if you are not using a Dynamic Host Configuration Protocol (DHCP) server, you can create a profile to manage the connection.

This profile contains the IP address of the server you want to connect to and the server's port number and type. See Figure 34 on page 136. For more information about creating and selecting a profile, see "Profiles" on page 130.

If your system is set up with DHCP, the primary and secondary server addresses are both assigned by way of DHCP and no action is required. See Figure 33 on page 136.

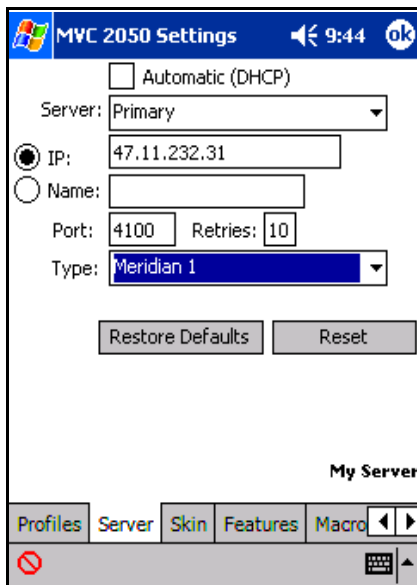**Figure 33: DHCP Setting on the Server screen**
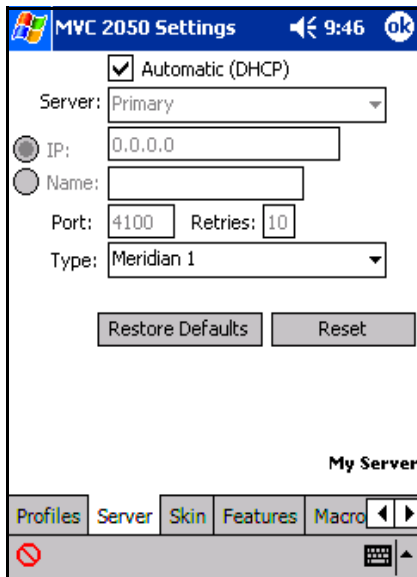
Figure 34: Assigning Server values

Macros

The Mobile Voice Client (MVC) 2050 **Macros** tab enables you to record and use macros. A macro is a recorded sequence of steps that saves you keystrokes.

For example, you can create a macro that selects a particular line and then dials that telephone number automatically. Another example of macro use is programming voicemail access numbers and codes for faster access.

See Figure 35 and Figure 36 on page 138.

Figure 35: Keys > Macros menu

Macro screen

To enter a new macro name, or to select an existing macro to modify or delete, select the **New** icon to the right of the list box. See Figure 36.

To select an existing macro, tap the down arrow in the **Macro** list box and make your selection.

To delete a selected macro, tap the **Delete** icon, the button to the right of the list box.

Figure 36: Macro screen
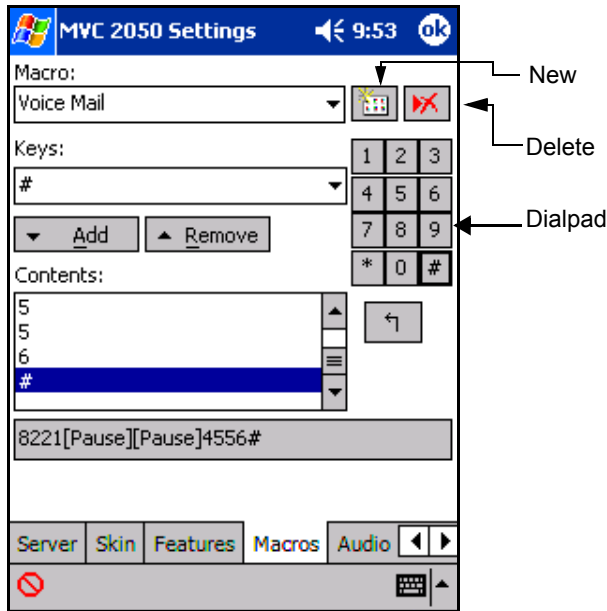
Keys

Once you have selected a macro name, tap the down arrow in the **Keys** drop-down list to select a key to add to the macro. Press the **Add** button to add the key.

The **Pause** key is used to insert a short pause in the macro. A pause introduces a delay which may be required to access some Interactive Voice Response (IVR) applications and the voicemail systems.

Contents

A list of the macro's contents appears in the **Contents** list box. Once two or more entries are in this box, the keystrokes can be moved around by using the up and down navigation buttons which appear to the right of the box.

You can remove keystrokes from the **Contents** box by selecting a keystroke and pressing the **Remove** button.

Preview

You can preview your macro in a single view by viewing the read-only field under the **Contents** box.

Dialpad

You can select the **Keys** list box and press the **Add** button, or you can use the numbers on the dialpad to enter numbers into your macro.

Mobile Voice Client 2050 for expert users

This section discusses the selections used to diagnose or correct error conditions and are not used during normal operation of Mobile Voice Client 2050.

Client diagnostics

Client diagnostics are used to determine the connection status of the MVC 2050. Access client diagnostics from the **Help > Diagnostics** screen. See Figure 16 on page 91.

Diagnostics include:

- Ping
- TraceRoute
- RUDP Ping

Ping tests whether the network destination in on line.

TraceRoute is an operation for sending trace packets to trace the route of user datagram protocol (UDP) from local host to remote host.

RUDP Ping tests if the IP port is responding as a terminal proxy server (TPS).

See also "Profiles" on page 130 for information on changing, importing, and exporting profiles to assist in troubleshooting.

Audio quality

Audio quality of voice transmission depends on many factors, such as codec characteristics, echo canceller, jitter buffer size, and listener perception.

Audio quality is controlled from two screens:

- **Audio**, the quality slider tab
- **Advanced Audio** (for expert users)

Audio quality slider

You can control audio quality using the slider tab to reduce audio delay and increase audio clarity. See Figure 37. The slider controls the number of audio buffers the PDA uses to smooth out incoming audio streams.

Figure 37: Audio quality screen
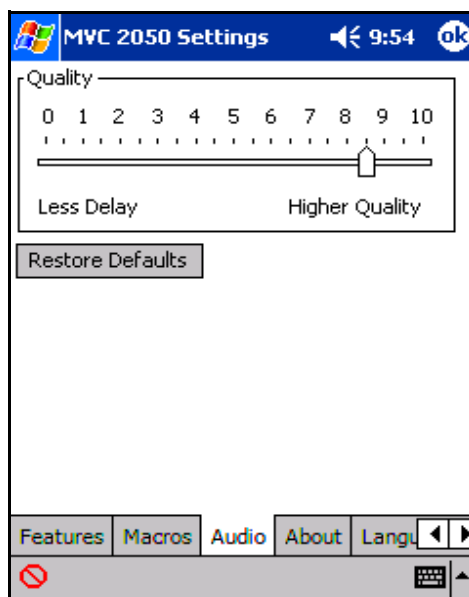
Audio delay

If you experience audio delay, you can decrease the number of buffers and reduce the delay by adjusting the slider on the **Audio** screen.

Audio clarity

If you experience breakups in the receive audio stream, adjust the setting towards **Higher Quality**. This increases the number of audio buffers used to process incoming audio. If the delay is too large, you can decrease this setting.

If you experience broken or choppy speech at either end of the call, or if the dial tone sounds choppy, your PDA's volume control may be the cause. To prevent this problem, use the volume controls on the MVC 2050 toolbar to adjust volume while using the MVC 2050.

> *Note:* QoS 802.11 p/q is not supported due to device constraints.

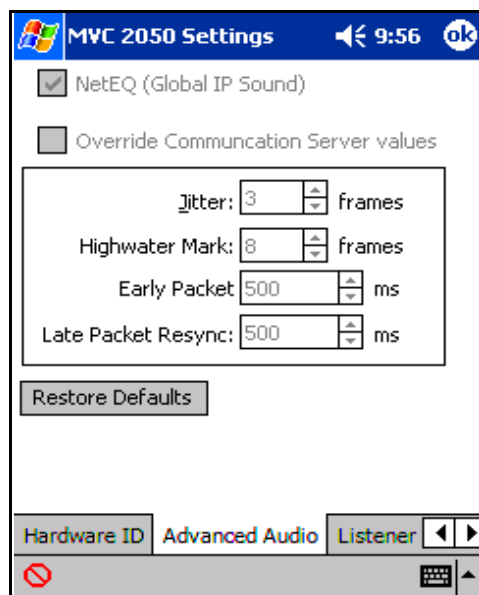## Advanced Audio

Advanced audio settings are recommended for use only by advanced users. See Figure 38 on page 143.

NetEQ software, included with the MVC 2050 software, provides loss concealment and compensation and NetEQ is the default setting.

You cannot adjust the MVC 2050 Advanced Audio settings.

Figure 38: Advanced Audio screen

Items on the Advanced Audio screen

Table 10 describes the selections available on the Advanced Audio screen.

Table 10: Advanced Audio screen

Selection	Description
NetEQ (Global IP Sound)	NetEQ packet loss concealment software is the default mode of operation.
Jitter Buffer	The rate of arrival of voice frames is variable. A jitter buffer is used to minimize this variability by sending voice frames to your PDA sound system at a fixed rate. The value of "jitter" is the normal number of voice frames the application should have in its jitter buffer.
Highwater Mark	Highwater mark indicates the maximum number of voice frames the application should have in its jitter buffer before it starts discarding packets. This value should be at least 2.5 times the value of jitter.
Early Packet and Late Packet Resync	Early Packet Resync and Late Packet Resync indicate the points at which MVC 2050 discards and restarts the jitter buffer contents. This value should be at least 5 times the high water mark.

Listener IP

See Figure 39. This screen is for expert users only. It can be used to override the port assignments when a conflicting application is on the PDA.

Figure 39: Listener IP screen
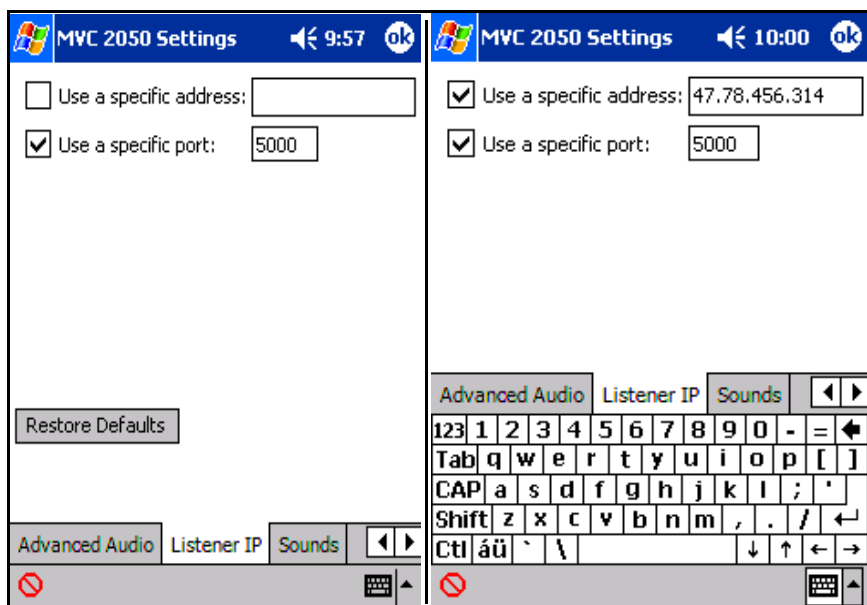
Items on the Listener IP screen

Table 11 describes selections available on the Listener IP screen.

Table 11: Listener IP screen

Selection	Description
Use a specific address	The MVC 2050 normally listens to all IP addresses on the device for communication server-to-terminal (UNIStim) messaging on all the Network Interface Cards (NIC) on the device. This is the default mode of operation. To override this behavior, select the check box and enter a specific IP address.
Use a specific port	The MVC 2050 listens to IP port 5000 on the device for communication server-to-terminal (UNIStim) messaging.

Hardware ID

See Figure 40 on page 147. This screen is for expert users and system administrators. It can be used to select the Media Access Control (MAC) address that the MVC 2050 reports to the communication server.

The Hardware ID being used by MVC 2050 can be viewed on the MVC 2050 **Settings** > **Hardware ID** tab.

The Hardware ID is generated by reading MAC addresses from the PDA's NIC. When the MVC 2050 is used with most server types, the Hardware ID it uses must be unique. Some software, such as VPN client software, creates artificial network interfaces with MAC addresses which are not unique. These may be addresses that are common to all installations of a particular VPN client.

Without a unique MAC address, users may not be able to connect to a server, or may connect to a server and cause another device with the same Hardware ID to be disconnected from the server. If the MVC 2050 is disconnected from the server, it automatically attempts to reconnect, and the resulting conflicts will prevent a stable connection from being made.

Select the **Auto-Create** button on the Settings > Hardware ID screen to prevent conflict with another device. Auto-Create fabricates a random value, which is unlikely to be repeated by another device.
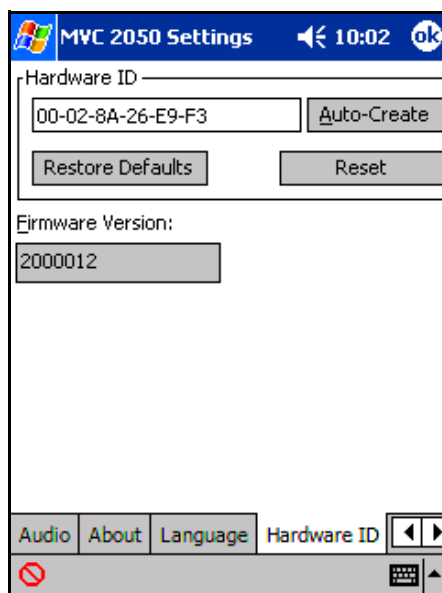
Figure 40: Hardware ID screen

Table 12 describes items on the Hardware ID screen.

Table 12: Hardware ID screen

Selection	Description
Hardware ID	This box contains the MAC address for the Ethernet hardware installed in your device. MVC 2050 uses the MAC address of the Ethernet hardware as its Hardware ID. You may have to change this value if there is more than one MAC address, or if the device is using an Extranet client that hides the true MAC address. For example, the Nortel Networks Contivity Extranet Switch uses a single MAC address for all clients. This might cause connection problems with your communication server.
Auto-Create	This changes the MAC address that appears in the **Hardware ID** box. If your device has more than one MAC address, press the **Auto-Create** button to cycle through the set of MAC addresses on your computer. Auto-Create also makes up random Hardware IDs in case the Ethernet hardware addresses are not unique to the communication server.
Firmware Version	Shows the build number of MVC 2050 installed on your device. This value is the version number of the application last reported by the server.

Connection history

Connection history writes indication messages to the registry key "\HKCU\Software\Nortel Networks\MVC2050\Log" for connection or disconnection events. This is a circular queue of 29 entries.

Each time a connection or disconnection event occurs, a log entry is written. The entries contain a date and time and a description of the connection or disconnection event.

The following sections describe connection and disconnection events.

Soft reset, server n

This message indicates that the server has instructed the MVC 2050 to reset and connect to a server n, where the value of n is determined, and possibly written, by the server. This maps directly to a UNIStim message.

Server connected

This message indicates that the MVC 2050 has successfully connected to the server. It means that the MVC 2050 received the "AssignTerminalID" UNIStim message, which is the last message received by the MVC 2050 before a normal session commences.

Recovering: Server unreachable

This message is generated when the MVC 2050 has lost its connection with the server. It indicates that the UNIStim "watchdog timer" has expired. This indicates loss of network connection.

Hard Reset

This message indicates that the server has instructed the MVC 2050 to reset and clear its UNIStim-related memory. This maps directly to a UNIStim message.

WiFi

You can ActiveSync your PDA with your PC using WiFi.

WiFi use for a cradled PDA

If you do not want to lose the MVC 2050 connection to the server when you return the PDA to its cradle, deactivate ActiveSync. Otherwise, the connection is lost because ActiveSync uses Point-to-Point Protocol (PPP). This causes the PDA connection to the network to be dropped and then connected to the PC.

Application Server Administration

This feature is available for your system administrator. The Personal Directory, Redial List, and Callers List features use a separate, central database, called the Application Server, to store directory data and user

profile options. Backup and restoration of the database can be performed, and user profiles can be managed, by your system administrator using the Application Server Administration feature.

Nortel Networks Communication Server 1000

IP Softphone 2050 and Mobile Voice Client 2050
User Guide

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