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Business Communications Manager

Nortel Mobile Voice Client 2050

User Guide



Revision history

March 2005

Standard 2.00. This document is issued to support Nortel Mobile Voice Client 2050 Verison 2.00.0161 for Business Communications Manager (BCM).

August 2004

Standard 1.00. This document is issued to support Business Communications Manager (BCM) Release 3.6.

Contents

About this guide	7
Mobile Voice Client 2050 overview	8
Software dependencies	9
Communication servers	9
Supported PDAs	9
Headsets	10
MVC 2050 menus and screen features	11
Installing and configuring the Mobile Voice Client 2050	14
Removing a previous version of MVC 2050	14
MVC 2050 installation method	15
MVC 2050 configuration	17
MVC 2050 Call Handling screen	19
Starting the MVC 2050	19
Navigation	20
Appearance	20
MVC 2050 graphical interface (skins) components	21
Menus	24
Icons	32
Menu and icon summaries	37
Managing calls with Mobile Voice Client 2050	39
Making a telephone call	39
Answering a call	40
Holding a call	40
Retrieving a call	40

Ending a call	40
Maintaining call quality	40
Managing Contacts with Mobile Voice Client 2050	41
Editing the Contacts list	42
Accessing Contacts Help	42
Accessing the PDA Contacts list	42
Dialing a number from the Contacts list	43
Dialing formats	44
Mobile Voice Client 2050 settings	53
Sounds	53
Profiles	56
Server	60
Macros	62
Mobile Voice Client 2050 for expert users	66
Client diagnostics	66
Audio quality	67
Listener IP	70
Hardware ID	71
Connection history	73
WiFi	74

About this guide

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

The Nortel Mobile Voice Client (MVC) 2050 is designed to add wireless voice communication to the Personal Digital Assistant (PDA).

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:

- six programmable line/feature keys
- four soft keys (self-labeled)
- 12-button dialpad
- multifield display
- end user-selectable skins

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

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

Software dependencies

The following are the MVC 2050 primary software dependencies:

- Windows Mobile 2003 for Pocket PC
- Windows Mobile 2003 Second Edition for Pocket PC

Note: Windows Mobile 2003 SE AKU1 is not supported (Version 4.21.1088 (Build 14132)). AKU1 has a bug which makes it impossible for third parties to use Settings applets. This is resolved with WM2003 SE AKU2 (Version 4.21.1088 (Build 14260.2.0.5)).

- 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 Apani™ VPN client has been tested with the MVC 2050.

Communication servers

The following Business Communications Manager (BCM) servers support the MVC 2050:

- BCM 200 Release 3.6 (with patch) or above
- BCM 400 Release 3.6 (with patch) or above

Supported PDAs

Since the PDA industry evolves at a rapid pace, refer to Nortel's web site (www.nortel.com/mvc2050) to determine the latest PDA models tested and supported, and any known issues.

A list of supported PDA's can be found with other MVC 2050 technical documents at: <http://www130.nortelnetworks.com/cgi-bin/eserv/cs/main.jsp?cscat=documentation&tranProduct=13941>.

Alternatively follow the links on www.nortel.com to > Products & Services > Products > Soft Clients & Phones > Mobile Voice Client 2050 > Technical Specifications.

For Nortel Technical Support use this link: <http://www.nortel.com/support>

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 does not recommend using your PDA 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.

PDAs that support stereo headphones with microphones, such as Plantronics M130 Adjustable Fit Headset, are recommended.

The Dell specific headset with a button on the wire allows the MVC 2050 to answer an incoming call or release an active call by pressing the button.



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 17.

MVC 2050 menus and screen features

The MVC 2050 software provides menus and screen features for your PDA. Table 1 lists the MVC 2050 menus and their selections.

Table 1: MVC 2050 menus

Menu	Selections
File	Run in background, Paste, Contacts, Settings, Exit
Keys	Answer, Release, Hold, Features, Macros
Help	Diagnostics, Contents, About
Note: Keys > Features and Keys > Macros selections in Table 1 also provide pop-up menus.	

The MVC 2050 supports both portrait and landscape modes. See “Call Handling screen (portrait)” on page 12 and “Call Handling screen (landscape)” on page 12. This landscape sample has the message waiting lamp displayed.

Figure 1: Call Handling screen (portrait)



Figure 2: Call Handling screen (landscape)

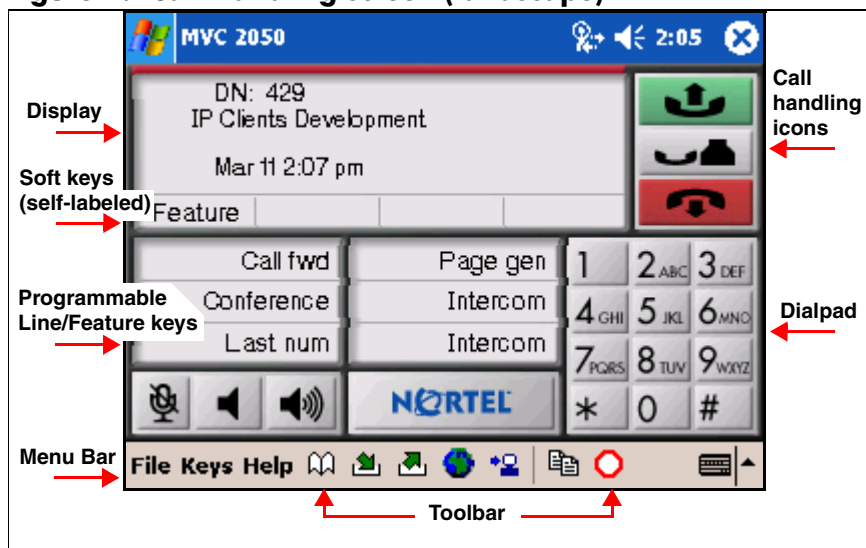


Table 2 describes the MVC 2050 screen features.

Table 2: MVC 2050 screen features

Screen features	Selections
Call Handling icons	Hold, Answer, Release
Toolbar (portrait)	<p>The retractable toolbar is present only on the portrait skin. It contains keys that are not present on the remainder of the display.</p> <p>They are: Directory, Messages, Shift, Services, Expand, Copy, and Exit</p> <p>The toolbar can be shown or retracted using the Toolbar icon on the menu bar. See Figure 6 on page 20.</p> <p>Mute, Volume Up, and Volume Down icons are also present on the Toolbar, and appear on the skin when the Toolbar is retracted.</p>
Toolbar (landscape)	<p>The landscape skin has most of the retractable buttons on the normal (non-retractable) toolbar, some on the skin (Mute, Volume Up, and Volume Down) and the remainder (Settings, Contacts, and Paste) available from menu items. See Figure 2 on page 12.</p>
Toolbar icons	Directory, Messages, Shift, Services, Expand, Copy, and Quit
Menu Bar icons	Paste, Contacts, Settings, Toolbar
Navigation	<p>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.</p>

Installing and configuring the Mobile Voice Client 2050

To install the MVC 2050 on your PDA:

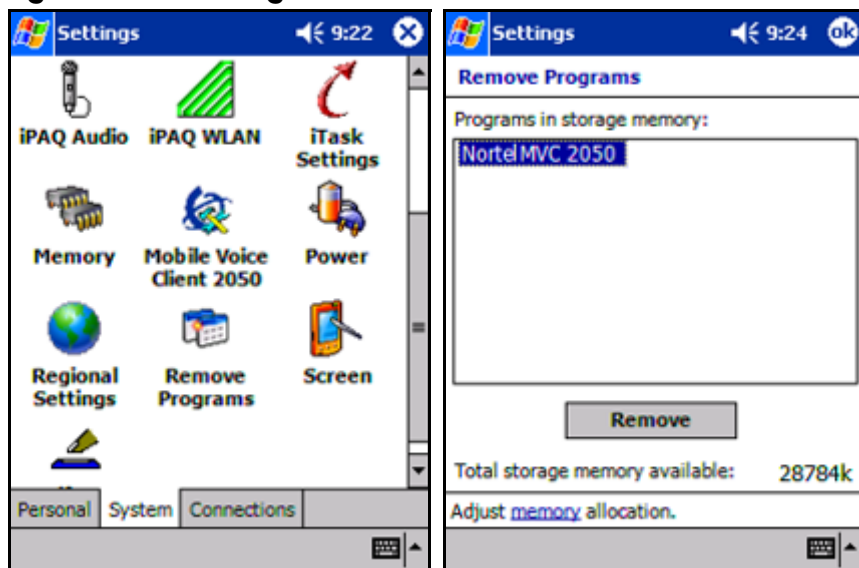
1. If you have an older version of the MVC 2050 installed on your PDA, you must remove it prior to installing a newer version. See “Removing a previous version of MVC 2050” on page 14.
2. Place your PDA in its cradle.
3. Synchronize your PDA with a desktop PC running Microsoft ActiveSync®. See “Connecting a PDA to a desktop PC using ActiveSync” on page 15.
4. Install the MVC 2050 from a desktop PC. See “Installing the MVC 2050 from a desktop PC using ActiveSync” on page 16.

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 3 on page 15.

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 the 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 3: 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.

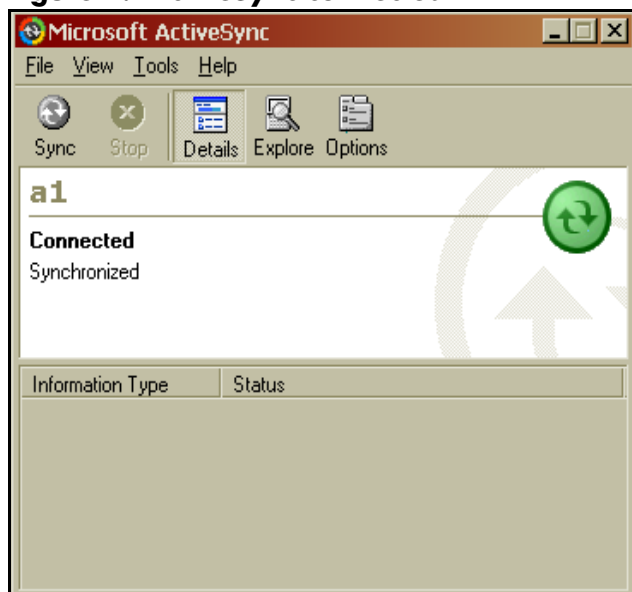
Connecting a PDA to a desktop PC using ActiveSync

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 4 on page 16. For details about synchronization, refer to the User Manual for your PDA.

Figure 4: ActiveSync connected



Installing the MVC 2050 from a desktop PC using ActiveSync

Use the following procedure to install the 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, disabling Automatic Gain Control is sometimes necessary to attain 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 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.

MVC 2050 Call Handling screen

Starting the MVC 2050

To start the MVC 2050 from your PDA:

1. From your PDA Main Application screen, select **Start**.
2. Select **Programs**. See Figure 5.
3. Select **Mobile Voice Client 2050**. The Call Handling screen appears. See Figure 6 on page 20.

Figure 5: Starting the MVC 2050 from the Main Application screen

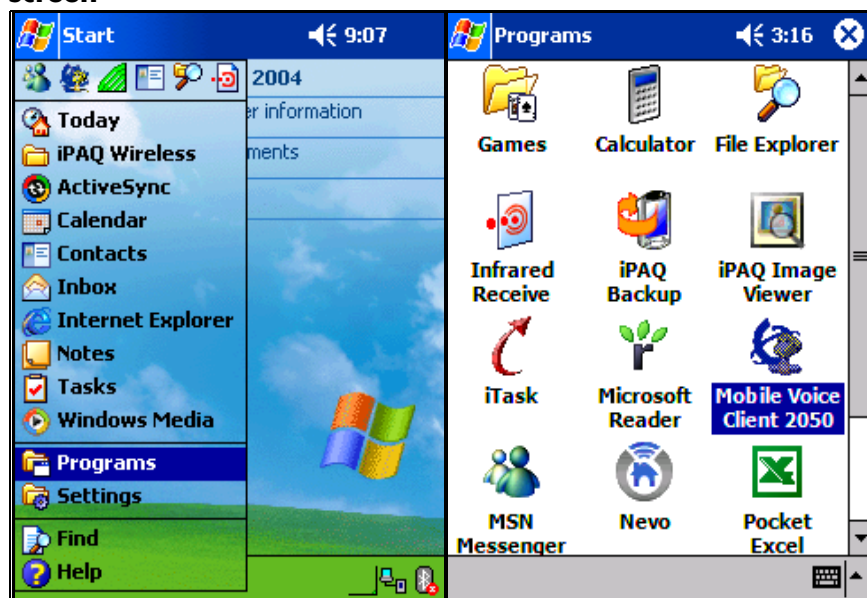
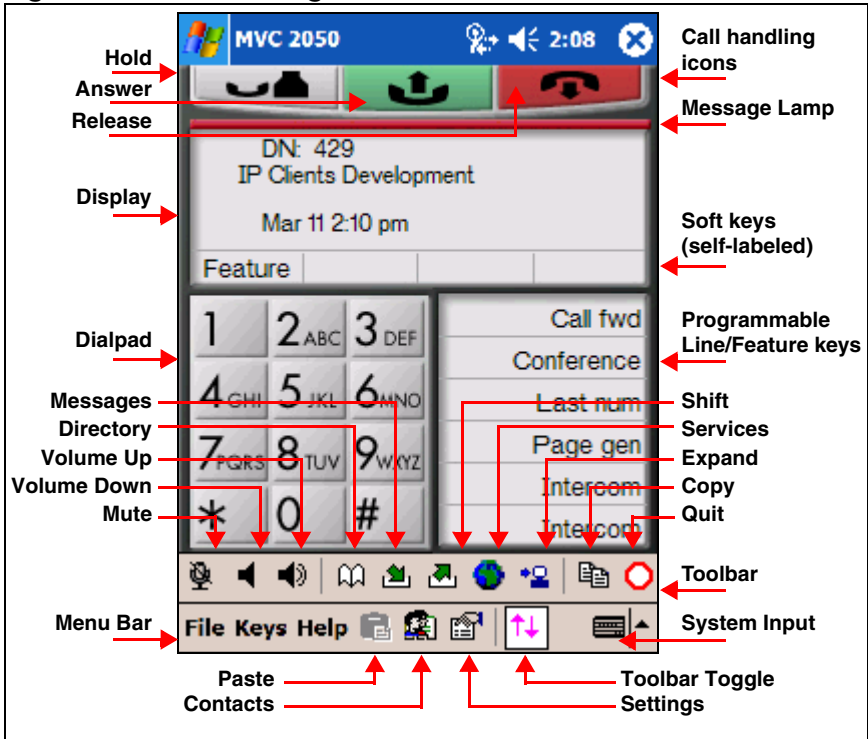


Figure 6: Call Handling screen



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 21.

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 17 for information about enabling ClearType.

MVC 2050 graphical interface (skins) components

The MVC 2050 skins are the graphical representation of the MVC 2050. The dialpad, 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.

- 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 7 to 9 starting on page 22 and Figure 16 on page 32.

Figure 7: Black skin

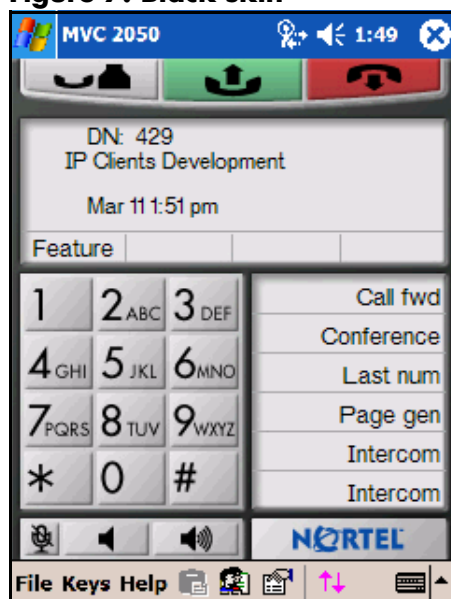


Figure 8: Blue skin

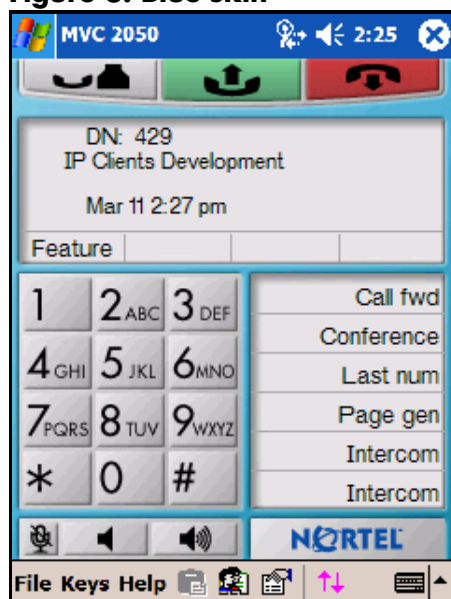
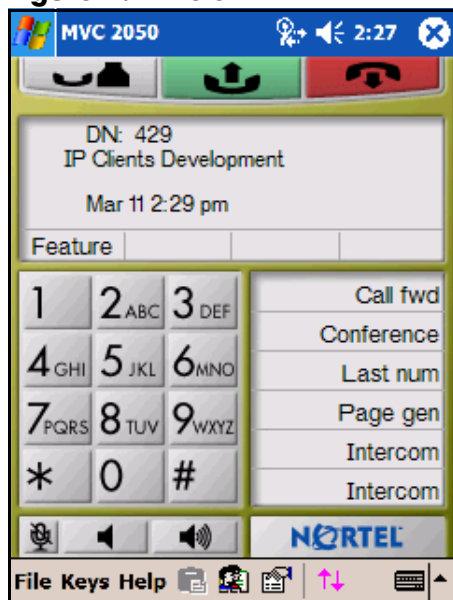


Figure 9: Lime skin

Display

The display is located in the central area of the skin. See Figure 6 on page 20.

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 6 on page 20.

Soft keys (self-labeled)

Four soft keys (self-labeled) are located in the bottom row of the display area. See Figure 6 on page 20.

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 portrait skin. See Figure 6 on page 20. The dialpad is located on the right-hand side of the landscape skin. See Figure 2 on page 12.

Message Lamp

The Message Lamp lets you know if you have voicemail waiting. See Figure 6 on page 20.

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 16 on page 32.

Menus

The MVC 2050 provides the following menus:

- File
- Keys
- Help

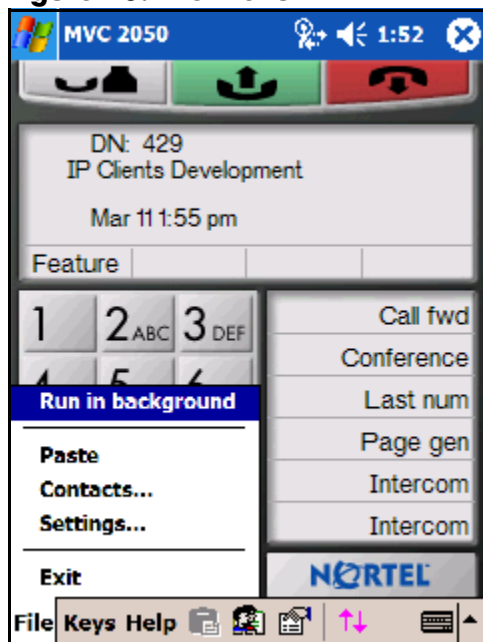
File

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

- Run in background
- Paste
- Contacts
- Settings
- Exit

See Figure 10 on page 25.

Figure 10: File menu



Run in background

Select **Run in Background** to close the MVC 2050 and to 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 10. 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 normally can 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 53.

Exit

Select **Exit** to close the MVC 2050. Once you select Exit, you cannot place or receive calls until you restart the application. For more information, see “Run in background” on page 25.

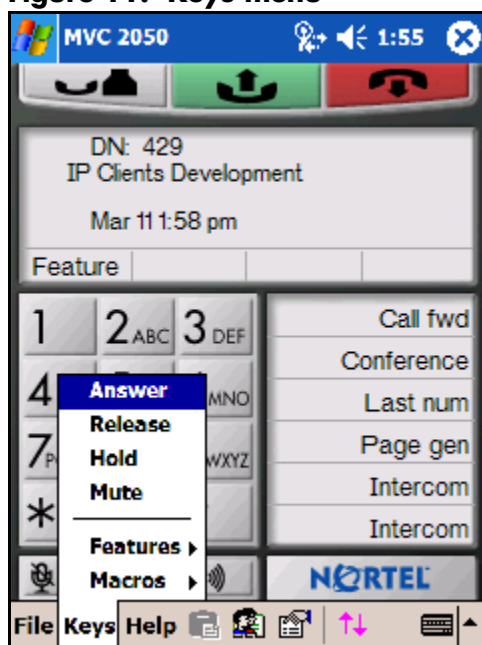
Note: Selecting Exit frees up PDA processing resources.

Keys

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

- Answer
- Release
- Hold
- Features
- Macros

Figure 11: Keys menu



Answer

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

Release

Select **Release** to end your call. See also the **Release** 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** for access to a menu of interface keys. The defaults vary depending on which type of communication server you are connected to.

The Business Communications Manager (BCM) provides the following default menu of features:

- Inbox
- Outbox
- Directory
- Services
- Expand
- Copy
- Quit

Additional items can be added to this list using the **Settings > Features** tab. When selected, these extra items send BCM-specific feature codes to the BCM server. Items can be reorganized, added, or removed from the list. See *IP Phone 2004 User Guide* for descriptions of these additional features.

See Figure 12 on page 29 for access to the Features submenu from the **Keys** screen. Figure 12 is an example of a customized menu. See Figure 13 on page 29 for access to the Features menu from the **Settings** screen.

Figure 12: Keys > Features screen

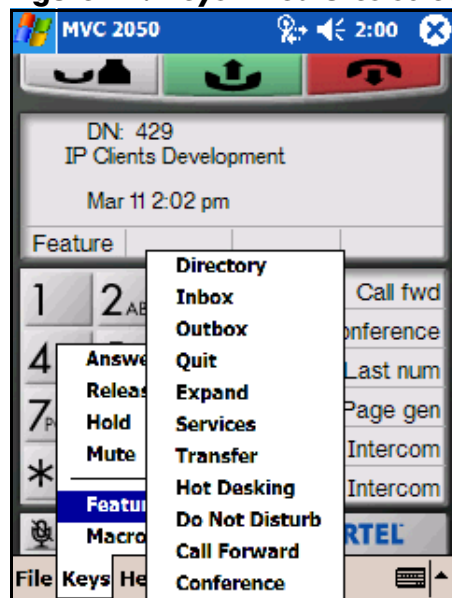
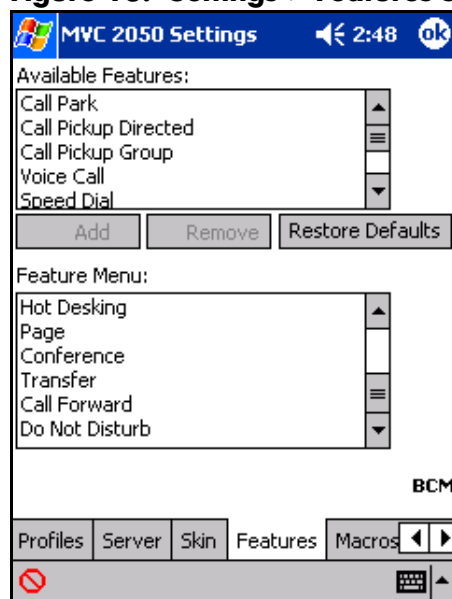


Figure 13: Settings > Features screen



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 62).

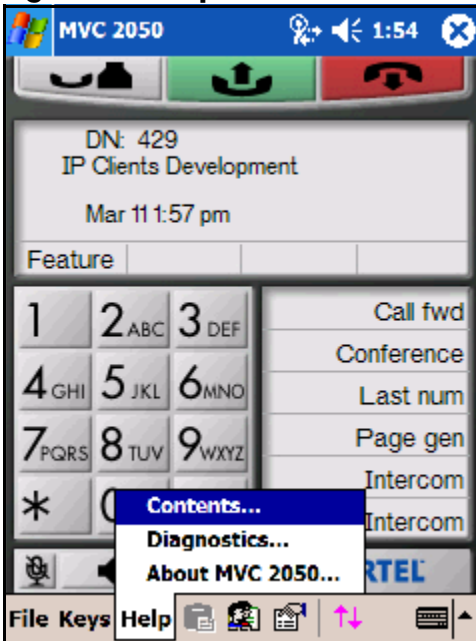
Help

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 14.

Figure 14: 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 name and logo, and Global IP Sound® name and logo. The MVC 2050 uses packet loss concealment provided by Global IP Sound NetEQ™ software.

Figure 15: About screen



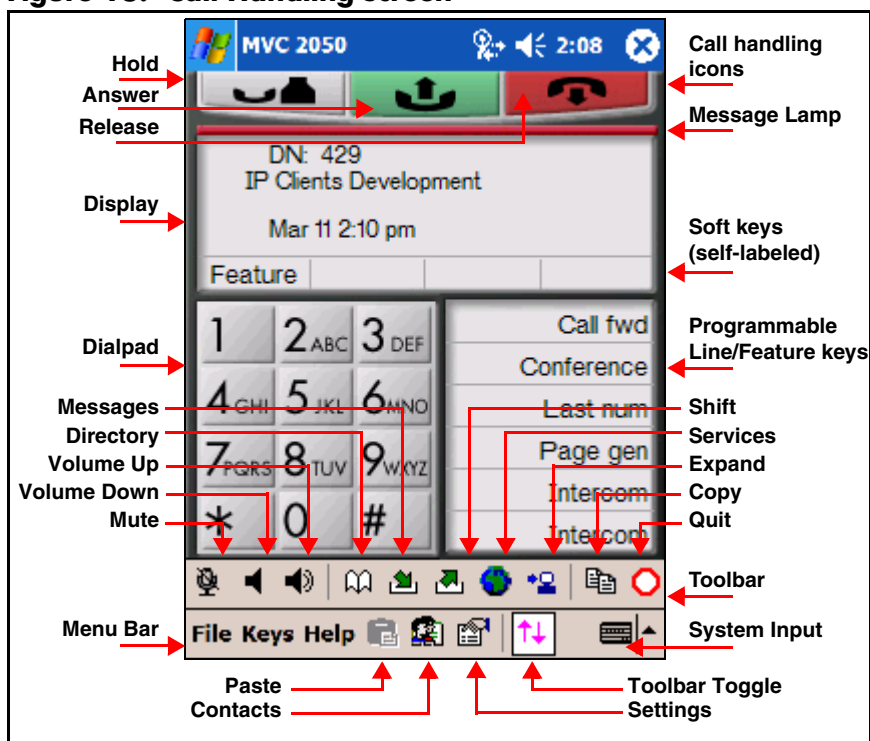
Icons

See Figures 16 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 16: Call Handling screen



Call Handling icons

The Call Handling icons are:

- Hold
- Answer
- Release

These Call Handling icons are located at the top of the skin. See Figure 16 on page 32.

Hold

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

Answer

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

Release

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

Toolbar icons

The Toolbar icons are:

- Directory
- Messages
- Shift
- Services
- Expand
- Copy
- Quit

The Toolbar icons are visible when the Toolbar is retracted. See Figure 16 on page 32.

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) also are repeated on the **Toolbar**.

Directory

Select the **Directory** icon, depending on how your system administrator has set up this service, to access a local directory or some other server-based directory service.

You can use the **Directory** to place a call. **Directory** accessibility depends on the system you are connected to.

Inbox/Messages

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

Outbox/Shift

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

Services

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

Expand

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

Copy

Copy is reserved for future use.

Quit

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

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.

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 desktop's Outlook directory, using Microsoft® ActiveSync. See your PDA user guide for a description of this feature.

Settings

Select the **Settings** icon to view the **Settings** screens. See "Mobile Voice Client 2050 settings" on page 53.

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, shown in Figure 16 on page 32, provides access to the **System Input Panel**. 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 17 on page 36.

Figure 17: Transcriber used to enter a number



Menu and icon summaries

File menu

Table 3 summarizes the **File** menu selections.

Table 3: 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 4 summarizes the **Keys** menu selections.

Table 4: Keys menu (Part 1 of 2)

Selection	Description
Answer	Answers an incoming call or provides a dial tone so you can make a call (also available as the Answer icon located at the top center of the display).
Release	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.

Table 4: Keys menu (Part 2 of 2)

Selection	Description
Macros	Presents a menu of the programmed macros.

Help menu

Table 5 summarizes the **Help** menu selections.

Table 5: 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 calls with Mobile Voice Client 2050

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 the headset 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:
 - **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**
 - **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

Note: 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:
 - **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 **Release** icon, or select **Release** 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.

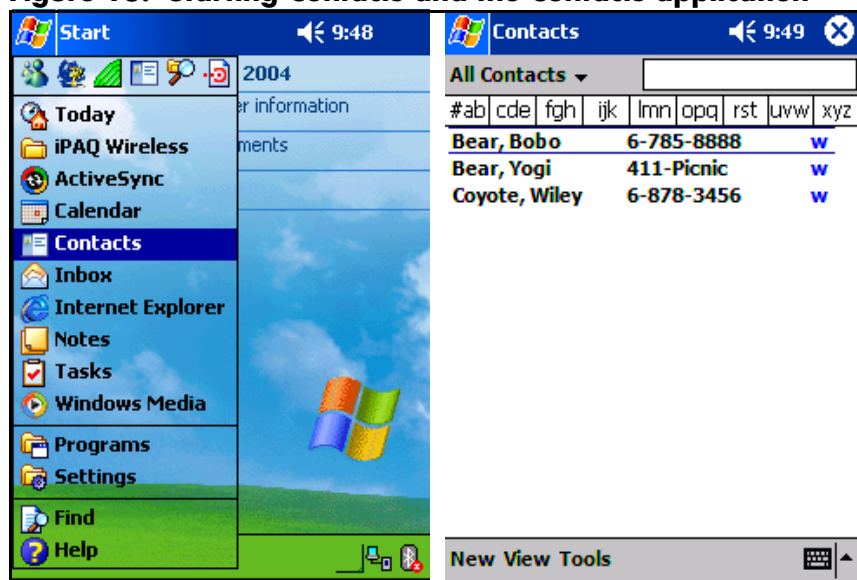
Managing Contacts with Mobile Voice Client 2050

You can place a call from your list of contacts in the PDA Contacts application using Mobile Voice Client (MVC) 2050. See Figure 18.

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 18: 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 Contacts Help system:

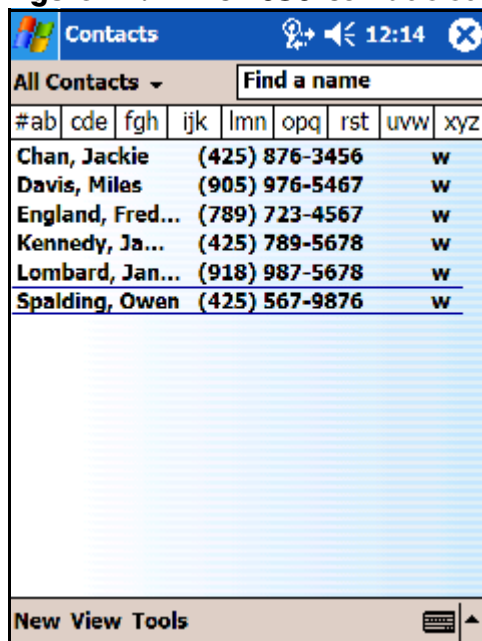
1. Select [Start](#). A drop-down list appears.
2. Select [Contacts](#). The [Contacts](#) screen appears.
3. Select the word [Contacts](#) at the top of the screen. The drop-down list appears.
4. Select [Help](#). The [Contacts Help](#) screen appears.

Accessing the PDA Contacts list

Use the following procedure to access your PDA [Contacts](#) list:

1. Open the PDA [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 19 on page 43.

Figure 19: 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 20 on page 45.
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 20 on page 45.

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 20 on page 45. 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 20: Phone details dialog box

MVC 2050 3:49

Phone details

6-785-8888

Country/Region: United States

City/Area:

Local number: 6-785-8888

☐ Use Dialing Properties
☐ ESN Prefix:
☒ Extension

Dialing Properties

Phone number will be dialed
6-785-8888

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 21 on page 46)

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

Figure 21: Dialing locations

The screenshot shows the 'Settings' window of the Mobile Voice Client 2050. The 'Connections' tab is selected. Under the 'Local Settings' section, the 'Area code' is set to '425' and 'Country code' is '1'. The 'Tone dialing' option is selected with a radio button. There is a checkbox for 'Disable call waiting;' which is unchecked, and a 'dial' dropdown menu. A 'Dialing Patterns...' button is also visible. At the bottom, there are tabs for 'Connections' and 'Dialing Locations', with 'Dialing Locations' being the active tab. The status bar at the bottom right shows '100%' and a volume icon.

Settings 3:31 ok

Connections

Location: Work

New... Remove

Local Settings

Area code: 425 ☒ Tone dialing

Country code: 1 ☐ Pulse dialing

☐ Disable call waiting; dial

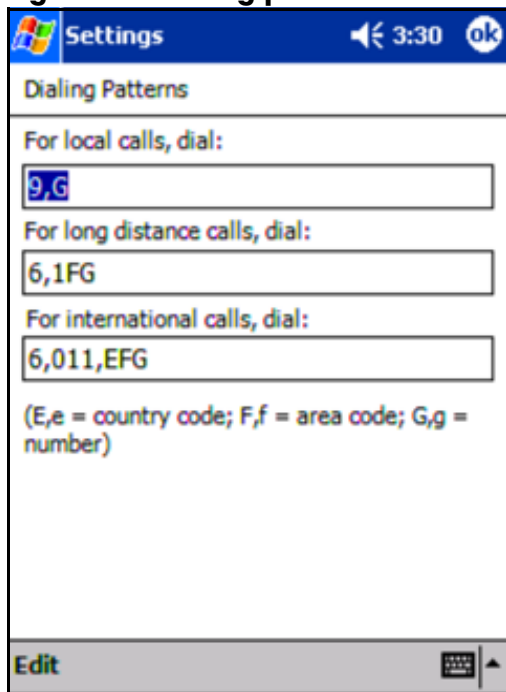
Dialing Patterns...

Connections Dialing Locations

100% ▲

Set the patterns for local, long-distance, and international dialing using **Dialing Patterns**. See Figure 22.

Figure 22: 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 21 on page 46.

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 the software 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 21 on page 46.

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 also has entered ‘646’ as the default area code in the Contacts application.

The end user also has 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 the area code default (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 ten 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 of 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 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 transfers 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 23 on page 51.

Figure 23: ESN dialing

The screenshot shows the 'Phone details' dialog box in the MVC 2050 application. The title bar includes the MVC 2050 logo and a speaker icon with the time 3:51. The dialog contains the following fields and controls:

- Phone details** (collapsible header)
- ~785-8888** (text)
- Country/Region**: A dropdown menu showing 'United States'.
- City/Area**: An empty text input field.
- Local number:** A text input field containing '785-8888'.
- Dialing Properties** (button)
- Use Dialing Properties** (radio button, unselected)
- ESN Prefix:** A radio button (selected) next to a text input field containing '6'.
- Extension** (radio button, unselected)
- Phone number will be dialed**: A text label above the number '6785-8888'.
- Status bar**: A green checkmark, a red 'X' in a circle, and a 'SEND MESSAGE' button.

Extension numbers

The PDA Contacts application dials extension numbers only if they do not satisfy Microsoft 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 24 on page 52.
2. Enter extension numbers in your PC Outlook Contacts application, and ActiveSync your PC Outlook with your PDA Contacts.
3. Select **Keys > Macros**, and enter the direct dial extension number in a macro. See "Macros" on page 62 for information about macros.

Figure 24: Extension number

The screenshot shows the MVC 2050 Mobile Voice Client interface. At the top, there is a blue header bar with the Windows logo, the text "MVC 2050", and a speaker icon with the time "3:49". Below the header, the "Phone details" section is expanded, showing the number "6-785-8888". Underneath, there are three input fields: "Country/Region" with a dropdown menu showing "United States", "City/Area" which is empty, and "Local number:" which contains "6-785-8888". Below these fields, there are three radio button options: "Use Dialing Properties", "ESN Prefix:" (with an empty box next to it), and "Extension" (which is selected). To the right of these options is a grey button labeled "Dialing Properties". Below the radio buttons, the text "Phone number will be dialed" is followed by "6-785-8888". At the bottom of the window, there is a grey taskbar with a green checkmark, a red prohibition sign, and a small "LOAD" button with a right-pointing arrow.

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:

- “Sounds” on page 53
- “Profiles” on page 56
- “Server” on page 60
- “Macros” on page 62
- Skin
- Features
- Audio
- About
- Language
- Hardware ID
- Advanced Audio
- Listener IP

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.

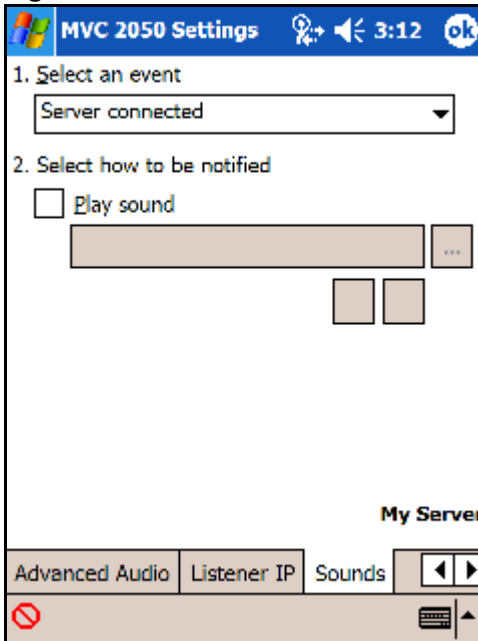
Audible notification of server connection or disconnection

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 25: Sounds - server connected



Sounds are used for the following events (See Figure 26 on page 55):

- Server unreachable
- Server unresponsive
- Server connected

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.

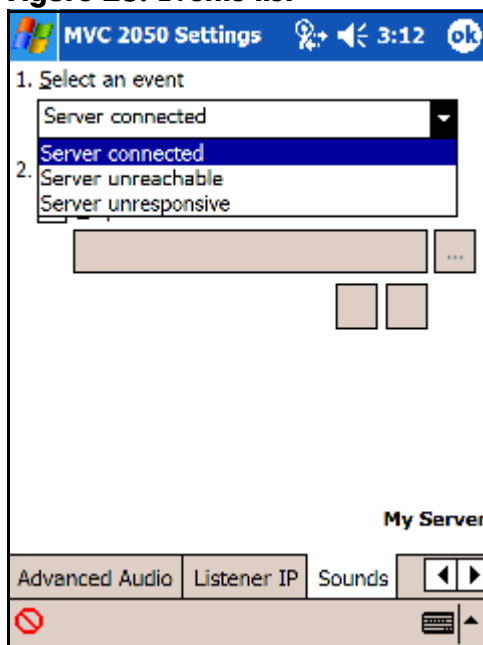
Server unresponsive

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 26: 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.

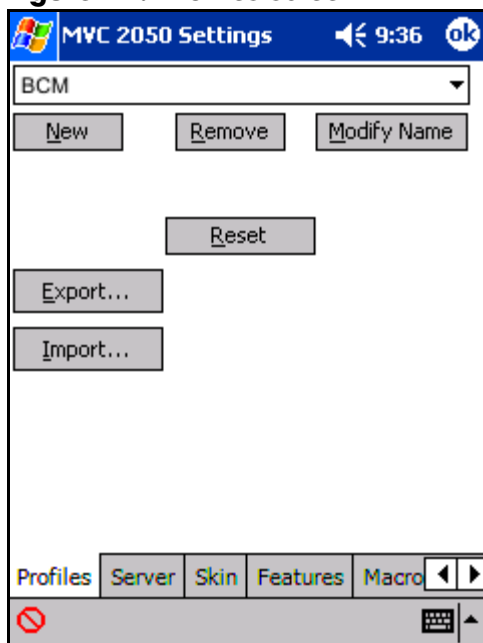
A number of profiles can be created and saved to allow easy switching among different servers, feature programming, and audio programming.

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. See Figure 27.

Figure 27: Profiles screen



The profiles screen enables you to:

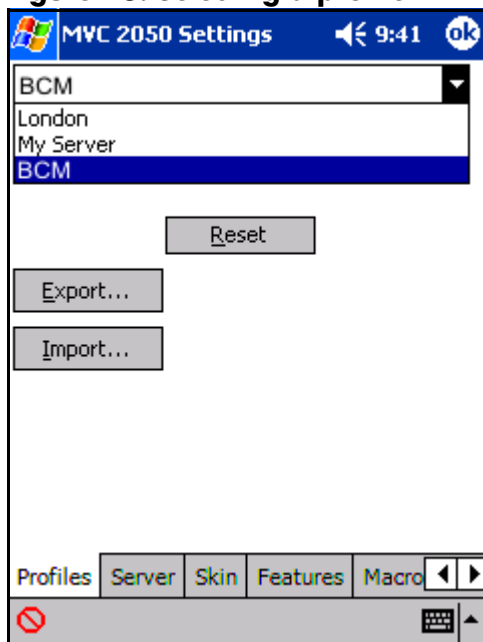
- create profiles
- delete profiles
- modify a profile name
- change the profile used by the application
- export profiles
- import profiles

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 reappears. The new profile is created and selected. The values on all the other tabs is 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 28 on page 58.

Figure 28: 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 28.
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 28.
2. Select **Modify**. The profile name appears highlighted.
3. Enter the new profile name.

4. Select **OK**.

The **Profiles** screen reappears. 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 29 on page 61.

Your system administrator sets up your LAN server to direct your MVC 2050 to the communication server.

Figure 29: Server screen

The screenshot shows the 'MVC 2050 Settings' dialog box with the 'Server' tab selected. The window title bar includes a Windows logo, the text 'MVC 2050 Settings', a speaker icon, the time '9:44', and an 'OK' button. The settings are as follows:

- ☐ Automatic (DHCP)
- Server: Primary (dropdown menu)
- ☒ IP: 47.11.232.31 (text field)
- ☐ Name: (text field)
- Port: 4100 (text field) Retries: 10 (text field)
- Type: BCM (dropdown menu)
- Buttons: Restore Defaults, Reset
- Section: My Server
- Navigation tabs: Profiles, Server (selected), Skin, Features, Macro
- Bottom bar: A red circle with a slash icon and a 'Server' label.

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 to which you want to connect, as well as the server port number and type. For more information about creating and selecting a profile, see "Profiles" on page 56.

If your system is set up with DHCP, the primary and secondary server addresses both are assigned by way of DHCP, and no action is required. See Figure 30 on page 62.

Figure 30: DHCP Setting on the Server screen

MVC 2050 Settings 9:46 ok

☒ Automatic (DHCP)

Server: Primary

IP: 0.0.0.0

Name:

Port: 4100 Retries: 10

Type: BCM

Restore Defaults Reset

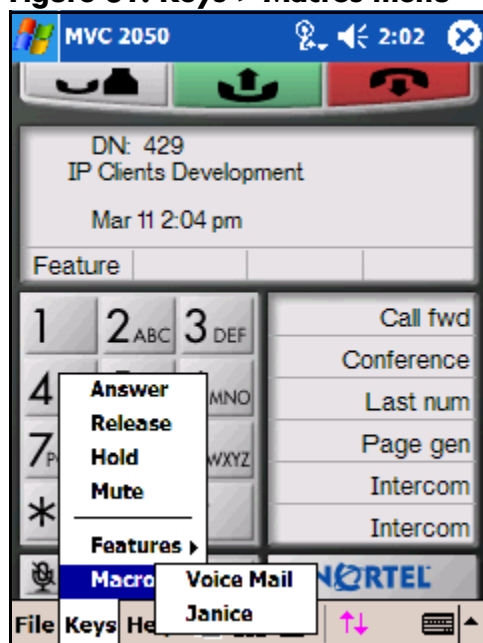
My Server

Profiles Server Skin Features Macro

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 31 and Figure 32 on page 64.

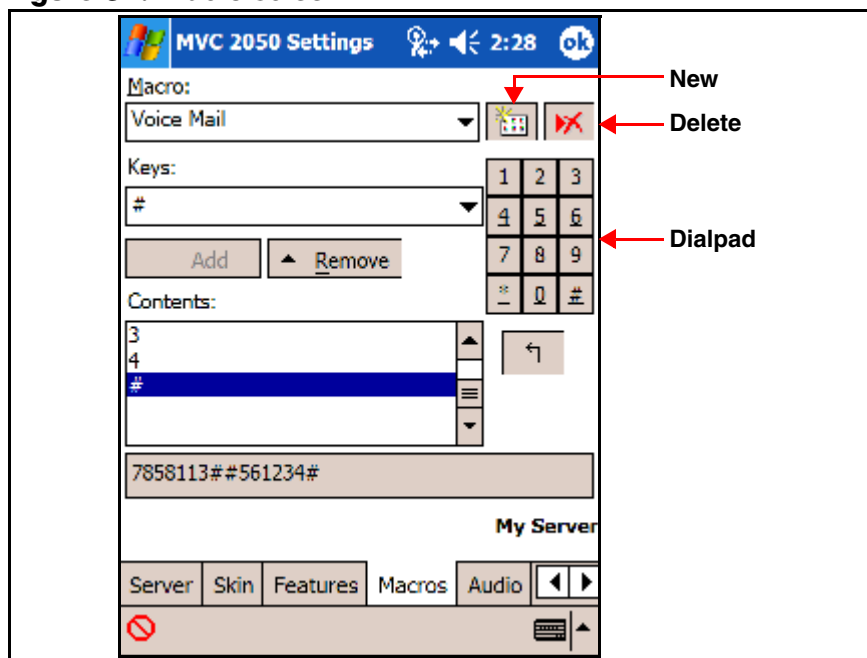
Figure 31: Keys > Macros menu

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 32.

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 32: 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 is required to access some Interactive Voice Response (IVR) applications and the voicemail systems.

Contents

A list of the macro contents appears in the **Contents** list box. When 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 14 on page 30.

Diagnostics include:

- Ping
- TraceRoute
- RUDP Ping

Ping tests whether the network destination is online.

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 56 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)

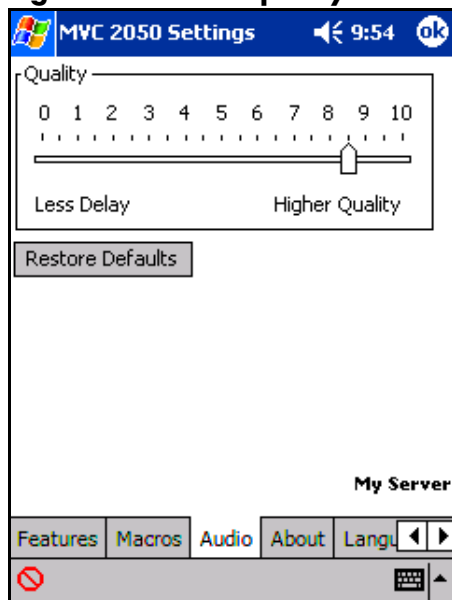
Audio quality slider

You can control audio quality by using the slider tab to reduce audio delay and increase audio clarity. See Figure 33. The slider controls the number of audio buffers the PDA uses to smooth out incoming audio streams.

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.

Figure 33: Audio quality 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.

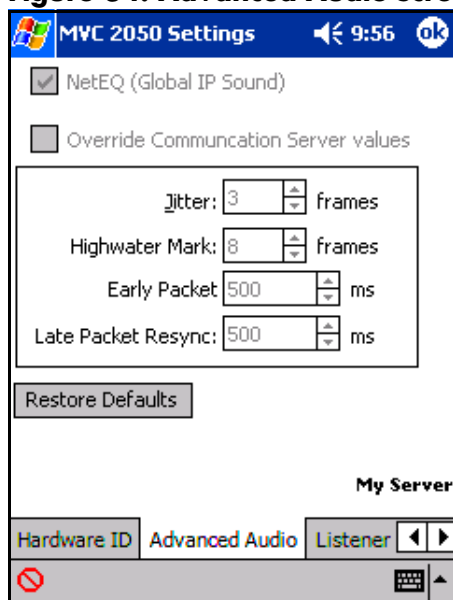
If you experience broken or choppy speech at either end of the call, or if the dial tone sounds choppy, avoid using your PDA volume control. Instead, use the volume controls on the MVC 2050 toolbar to adjust the volume of your call.

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 34.

Figure 34: Advanced Audio screen



NetEQ software, included with the MVC 2050 software, provides loss concealment and compensation; NetEQ is the default setting. You cannot adjust the MVC 2050 Advanced Audio settings.

Items on the Advanced Audio screen

Table 6 describes the selections available on the Advanced Audio screen.

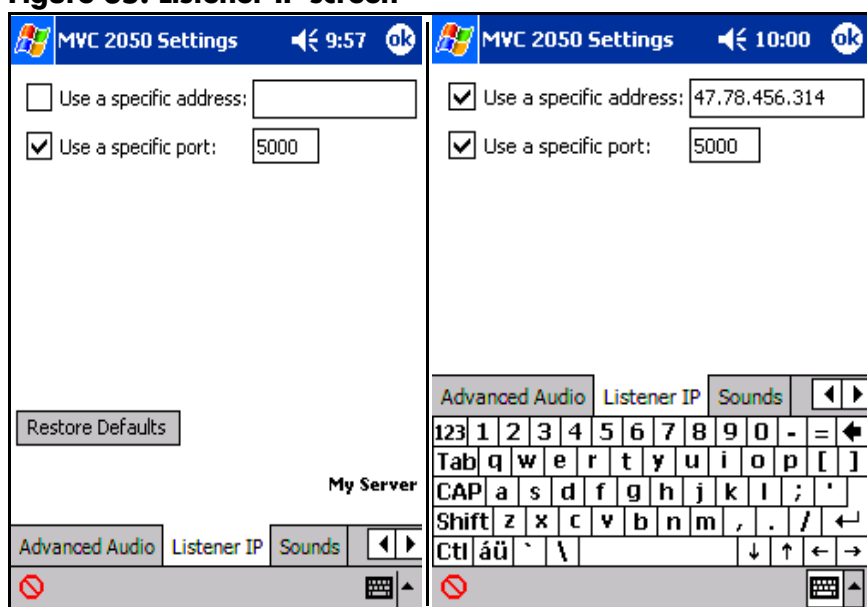
Table 6: Advanced Audio screen

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 number of voice frames the application has in its jitter buffer.
Highwater Mark	Highwater mark indicates the maximum number of voice frames the application can have in its jitter buffer, before it starts discarding packets. Set this value to 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. Set this value to at least 5 times the highwater mark.

Listener IP

See Figure 35. 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 35: Listener IP screen



Items on the Listener IP screen

Table 7 describes selections available on the Listener IP screen.

Table 7: 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.

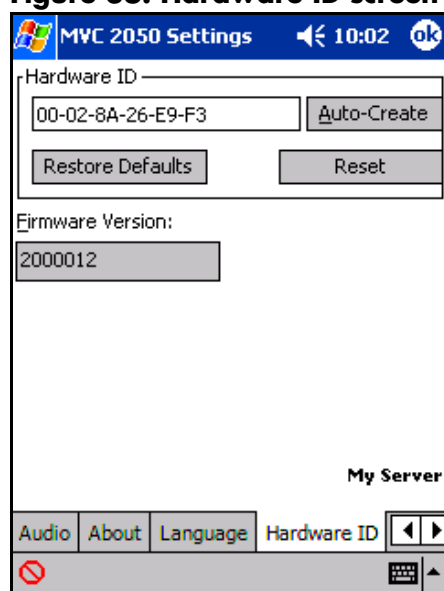
Table 7: Listener IP screen

Selection	Description
Use a specific port	The MVC 2050 listens to IP port 5000 on the device for communication server-to-terminal (UNISTim) messaging.

Hardware ID

The Hardware ID 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. See Figure 36.

Figure 36: Hardware ID screen

The Hardware ID is generated by reading MAC addresses from the PDA 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 that are common

to all installations of the software. As a result, the MAC address is the same on many different computers.

Without a unique MAC address, users sometimes are unable to connect to a server, or will connect to a server, and subsequently 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.

Table 8 describes items on the Hardware ID screen.

Table 8: 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 can 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 Contivity Extranet Switch uses a single MAC address for all clients. This can 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 section describes 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 UNISlim message.

Server connected

This message indicates that the MVC 2050 has connected successfully to the server. It means that the MVC 2050 received the “AssignTerminalID” UNISlim 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 UNISlim “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 UNISlim-related memory. This maps directly to a UNISlim 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.

Business Communications Manager

Nortel Mobile Voice Client 2050

User Guide

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Publication Number: N0035508

Document Release: Standard 2.00

Date: March 2005

Produced in Canada



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