Bluetooth
Compact Flash Card
User’ s Manual

Version 2.0

REGULATORY INFORMATION

Federal Communications Commission Interference Statement

The equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation. If this equipment dose cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

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- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 2.5 cm between the radiator & your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

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Marking by the symbol CE indicates compliance of this equipment to the R&TTE Directive 1999/5/CE. Such marking is indicative that this equipment meets or exceeds the following technical standards:

- EN 300 328
- EN 301 489 -1, EN 301 489 -17
- EN 60950

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Table of Contents

1 INTRODUCTION TO BTW-CE 1
1.1 BLUETOOTH ICON 1
1.2 APPLY POWER TO THE BLUETOOTH HARDWARE 1
1.3 INSTALLATION 2
1.3.1 Requirements 2
1.3.2 Installation Process 2
1.4 UNINSTALL BTW-CE 4
2 BLUETOOTH CONTROL PANEL: CONFIGURING BTW-CE 5
2.1 GENERAL TAB 7
2.1.1 Profiles 9
2.1.1.1 Create A New Profile 9
2.1.1.2 Rename or Delete a Profile 9
2.1.1.3 Save Configuration Settings In A Profile 10
2.2 ACCESSIBILITY TAB 11
2.3 BTW-CE SERVICE TABS 12
2.3.1 Common Options 13
2.3.2 File Transfer Tab 14
2.3.3 Information Exchange Tab 15
2.3.4 Serial Port Tab 16
2.3.5 Dial-up Networking Tab 17
2.3.6 Personal Network Server Tab 18
2.4 ABOUT TAB 19
3 BLUETOOTH MANAGER: USING BTW-CE 20
3.1 TABS 22
3.1.1 My Shortcuts 22
3.1.1.1 Connection Open – Context Sensitive Menu Options 23
3.1.1.2 Connection Status Screen 23
3.1.1.3 Connection Inactive – Context Sensitive Menu Options 24
3.1.1.4 Connection Properties Screen 25
3.1.2 Active Connections 26
3.2 MENUS 27
3.2.1 New 27
3.2.2 Tools 27
3.2.2.1 Paired Devices 28
3.2.2.2 Business Card Exchange 29
3.2.3 View 29
3.3 ICONS 29
4 BLUETOOTH BROWSER 30
5 USING REMOTE DEVICE SERVICES 32
5.1 SERIAL PORT 32
5.2 DIAL-UP NETWORKING: CONNECT TO A REMOTE COMPUTER 32
5.3 BLUETOOTH FILE EXPLORER 34
5.3.1 Change the Remote Device Folder 36
5.3.2 File Menu 36
5.3.2.1 Send a File to the Remote Device 36
5.3.2.2 Create a Folder on the Remote Device 36
5.3.2.3 Get a File From the Remote Device 36
5.3.2.4 Delete a File on the Remote Device 36
5.3.3 Tools Menu 37
5.3.3.1 Set Local Folder 37
5.3.3.2 Refresh 37
5.4 SEND VIA BLUETOOTH 37
5.5 USING A PERSONAL NETWORK 38
5.5.1 Hosting a Personal Area Network 38
5.5.2 Joining a Personal Area Network 39

Table of Figures

Figure 1: The Welcome screen shown on the PocketPC following a successful installation. 3
Figure 2: ActiveSync's Tools > Add/Remove Programs... dialog box 4
Figure 3: Control Panel tabs scroll arrows 5
Figure 4: Configuration overview 6
Figure 5: Control Panel, General tab, integrated hardware 7
Figure 6: Control Panel, General tab, external hardware 8
Figure 7: Control Panel, Accessibility tab 11
Figure 8: Bluetooth Passkey screen 13
Figure 9: Control Panel, File Transfer tab 14
Figure 10: Control Panel, Information Exchange tab 15
Figure 11: Control Panel, Serial Port tab 16
Figure 12: Control Panel, Dial-up Networking tab 17
Figure 13: Control Panel, Dial-up Networking tab 18
Figure 14: Control Panel, About tab 19
Figure 15: Bluetooth Manager Menu/Toolbar 21
Figure 16: Connection status displayed by icon color 22
Figure 17: Connection Status screen 23
Figure 18: Connection Properties screen 25
Figure 19: Active Connections screen, signal strength indicator 26
Figure 20: The first Connection Wizard' s first page 27
Figure 23: A screen example where you are required to select a device. 30
Figure 24: The Bluetooth Browser window allows you to select a Bluetooth device. 30
Figure 25: Bottom of the Select a device wizard screen (composite overview) 31
Figure 26: Dial-up Networking overview 32
Figure 27: Dial-up Networking, overview (composite screenshot) 33
Figure 28: Bluetooth File Explorer overview (composite screenshot) 35
Figure 29: Send via Bluetooth menus 37
Figure 30: The personal network wizard in action. 38
Figure 31: Adding devices to a personal network. 39
Figure 32: PAN network settings 40
Figure 33: Browsing files on a remote device (via the PocketPC File Explorer) after joining a personal network. 40

1 Introduction To BTW-CE

BTW-CE is the solution for the seamless integration of Bluetooth technology into devices that use the PocketPC operating system. It provides PocketPCs with the means to:

- Locate other Bluetooth devices in the immediate vicinity (inquiry)
- Discover the services that those devices offer (discovery)
- Connect to, use, and disconnect from those services
- Enable/disable individual services
- Security features, on a service-by-service basis, including:
  - Authentication
  - Authorization
  - Encryption.

This User' s Guide is divided into four major sections:

- Introduction
- Configuring BTW-CE–see the sections on the Bluetooth Control Panel
- Using BTW-CE–see the sections on the Bluetooth Manager
- Using Remote Device Services –an overview of how to use services provided by remote Bluetooth devices.

1.1 BLUETOOTH ICON

The Bluetooth icon in the lower-right corner of the Today screen provides quick access to the Bluetooth Control Panel.

It also provides visual feedback about whether Bluetooth is "on" or "off":

- When BTW-CE is active (on) the Bluetooth icon is blue .
- If BTW-CE is disabled (off) the icon appears grayed with a red X in the lower right corner .

1.2 APPLY POWER TO THE BLUETOOTH HARDWARE

When the Bluetooth hardware is an expansion device such as a CompactFlash card, power is applied/removed by inserting/removing the card (Figure 6).

1.3 INSTALLATION

If a version of BTW-CE prior to version 1.2.0 is installed on the handheld computer it must be uninstalled before proceeding. See Section 1.4 for uninstall instructions.

1.3.1 Requirements

1. A desktop computer with:
   - Microsoft Windows 98SE, Me, 2000 or XP operating system
   - CD-ROM drive
   - Microsoft ActiveSync, version 3.5 or greater.
2. A PocketPC or PocketPC 2002 that is capable of accepting a CompactFlash card. The Bluetooth CompactFlash cards that are supported are:
   - Brainboxes
   - Samsung
   - Sharp
   - Philips
   - CC&C
   - Billionton

1.3.2 Installation Process

NOTE: *Your PocketPC must be connected to your desktop (via ActiveSync) during the installation. This is required for the installation process to properly update the PocketPC.*

Should you re-install BTW-CE 1.3.0, you must execute the full installation procedure (i.e. run Setup.exe) instead of re-installing BTW-CE from ActiveSync (via the Add/Remove Programs option).

1. On the PocketPC:
   - Insert the Bluetooth CompactFlash card into the handheld device.

   Connect the PocketPC to the desktop computer. Microsoft ActiveSync will automatically establish a connection.
2. On the desktop computer:
   a) Insert the BTW-CE compact disc into the CD-ROM drive.
   b) When the Welcome screen appears, Click Next to continue.
   c) Click Yes to accept the License Agreement and install the software on the desktop computer.
3. On the PocketPC:
   - Tap Yes to accept the default directory and install the software.
4. On the desktop computer:
   - Click OK to close the Download Complete dialog box, and then click Finish.

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5. On the PocketPC:
   a) A Welcome screen will be shown with basic instructions to use BTW-CE (see Figure 1).
   b) Check off **Add a shortcut in the Start menu** in order to have access to the **Bluetooth Manager** from the Start menu (otherwise, the **Bluetooth Manager** will be accessible from **Start > Programs**).
   c) Perform a "soft" reset of the handheld computer. Refer to your device's documentation for the exact procedure.

NOTE: *A **soft** reset leaves installed applications and stored data intact, and simply restarts the device. A **hard** reset deletes ALL downloaded applications on the handheld. See the handheld computer's documentation for additional information.*

Figure 1: The Welcome screen shown on the PocketPC following a successful installation.

1.4 UNINSTALL BTW-CE

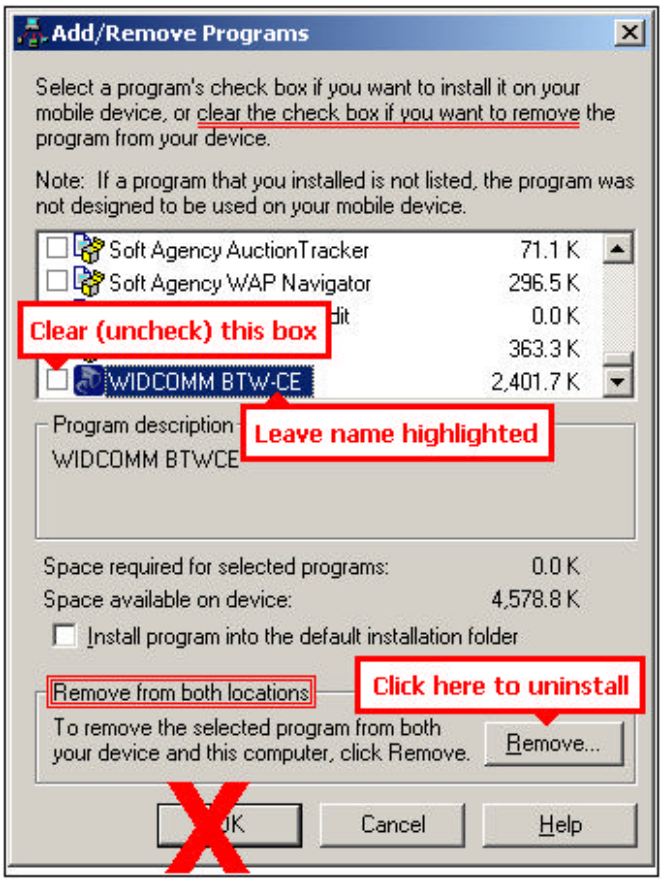
If you have a version of BTW-CE prior to version 1.2.0, it must be uninstalled before installing version 1.2.0 or later. For versions 1.2.0 and later this step is not necessary.

To uninstall BTW-CE:

1. Connect the handheld computer, via its cradle and Microsoft ActiveSync, to the desktop computer.
2. On the desktop computer, in the system tray, double-click the ActiveSync icon.
3. From the ActiveSync Tools menu, click Add/Remove Programs…
4. In the list of applications installed on the handheld computer, clear (un-check) WIDCOMM BTW-CE. Verify that WIDCOMM BTW-CE is still highlighted (see Figure 2).
5. Click the Remove button (***DO NOT*** click the OK button, see Figure 2).
6. Click OK to acknowledge the Remove Application notification.

The prior version of BTW-CE will be uninstalled on both the handheld and desktop computers (follow any additional on-screen instructions may appear on the desktop computer to complete the uninstall process).

Figure 2: ActiveSync's Tools > Add/Remove Programs... dialog box



2 Bluetooth Control Panel: Configuring BTW-CE

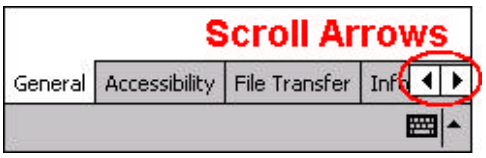
BTW-CE provides a Control Panel to adjust Bluetooth settings.

To access the Control Panel, in the lower-right corner of the Today screen, tap the Bluetooth icon .

BTW-CE can have multiple saved configurations. Individual configuration sets are saved in profiles, which can be quickly loaded to meet the appropriate situation. See Section 2.1.1 for more information about profiles.

The Control Panel has seven tabs. All tabs are not visible on the screen at the same time; use the arrows (Figure 3) to the right of the tab names to scroll back-and-forth and expose the different tabs.

Figure 3: Control Panel tabs scroll arrows

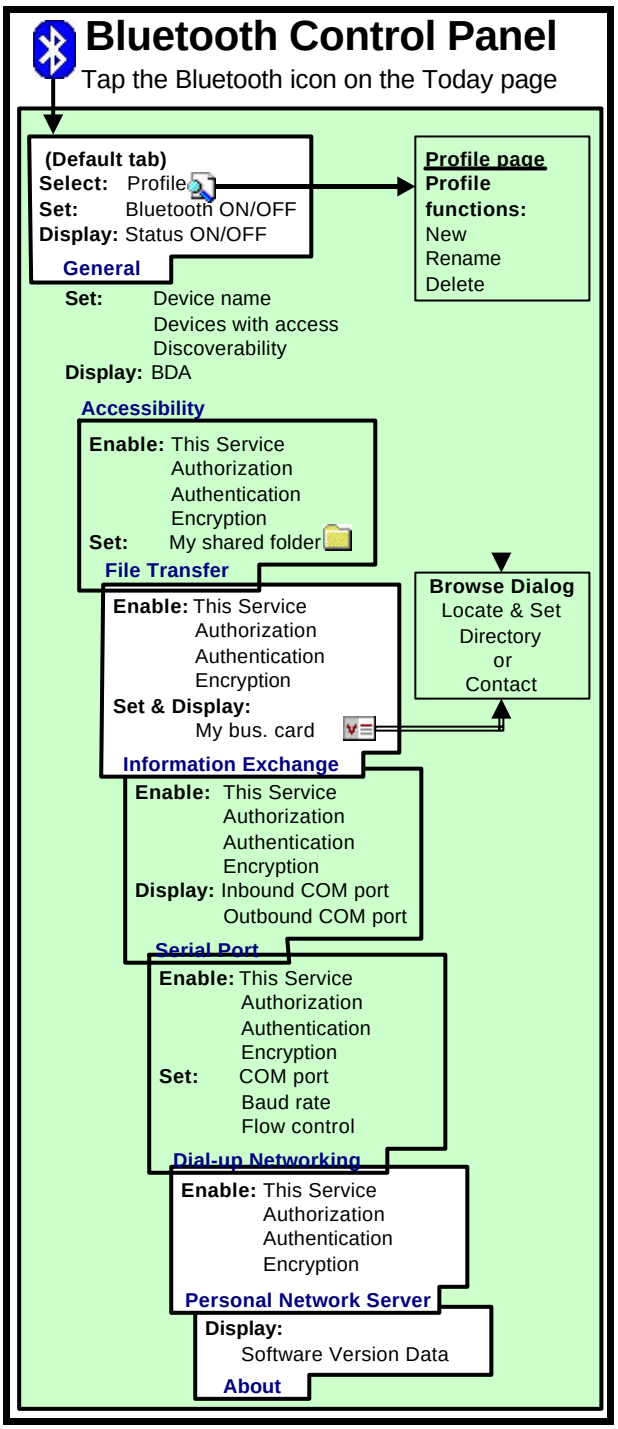


The Control Panel's tabs are (see Figure 4):

- General
  - User profile selection
  - Bluetooth status (ON/OFF) indicator
  - Hardware power control (ON/OFF)
  - Shortcut to the Bluetooth Manager.
- Accessibility
  - Set the device name
  - The device's Bluetooth Device Address (BDA)
  - Determine which remote devices are allowed to connect
  - Determine whether remote devices can "see" this PocketPC.
- Service tabs—BTW-CE can provide four services. They are:
  - File Transfer—set the highest-level directory on this PocketPC that remote devices will be able to access.
  - Information Exchange—Set the default business card (Pocket Outlook contact entry)
  - Serial Port—Bluetooth serial port information
  - Dial-up Networking—configure the COM port, baud rate and flow control.
  - Personal Network Server—configure the service availability
- About—there are no configurable options on this tab.
  - Software version information
  - Copyright information
  - Website and Technical Support links.

Each of these tabs is explained in detail in the remainder of this section.

Figure 4: Configuration overview



2.1 GENERAL TAB

There are three options on this screen:

- **Current Profile**: to change the active profile, tap the down-arrow in the "Current profile:" field and select the new profile from the drop-down list. The current profile will be saved, and the settings from the selected profile will be loaded.
  To add, delete, or rename a profile, tap (see Section 2.1.1).
- **Bluetooth Status:**
  - Integrated Bluetooth hardware (see Figure 5)
  - External Bluetooth hardware (CompactFlash or PC expansion card) (see Figure 6 on the next page).
- **Bluetooth Manager:**
  - Tapping on this shortcut starts the Bluetooth Manager.

When Bluetooth is OFF, no connections, incoming or outgoing, are possible.

When Bluetooth is ON, Bluetooth is always "up" and battery drain is significantly greater than when Bluetooth is disabled. *To conserve battery power, do not enable Bluetooth when it is not being used.*

Figure 5: Control Panel, General tab, integrated hardware

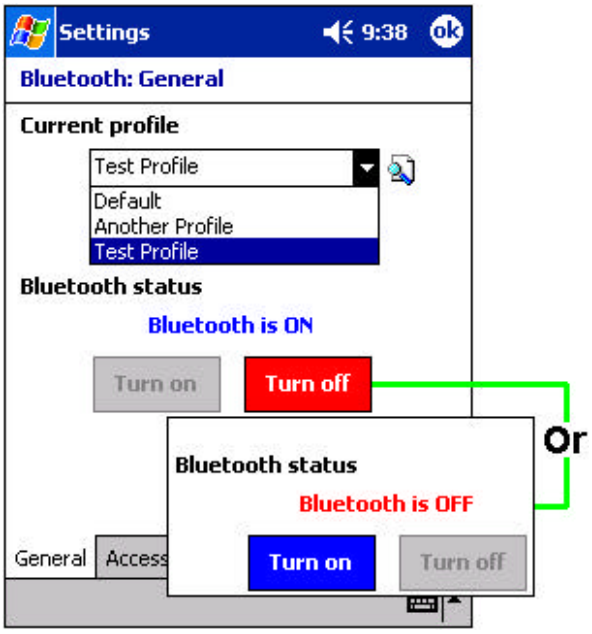
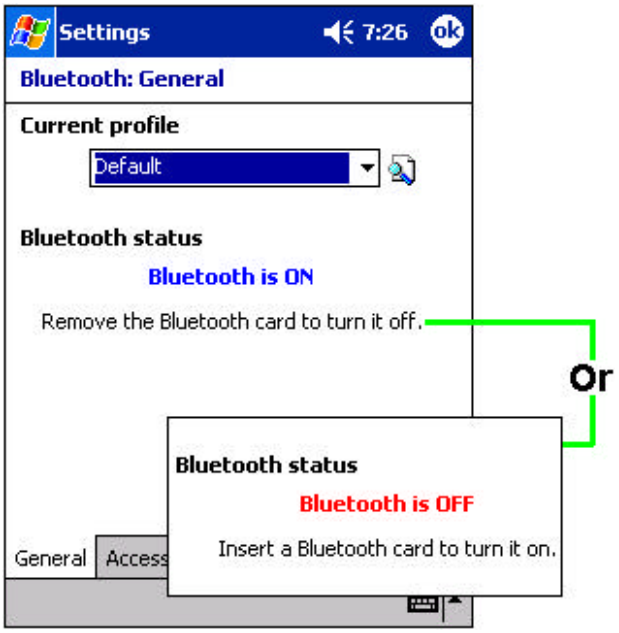


Figure 6: Control Panel, General tab, external hardware



2.1.1 Profiles

Profiles are accessed and managed from the Control Panel, General Tab. They allow:

- Different users to quickly re-configure a PocketPC to their personal preferences. For example, if Joe and Mary both use the same PocketPC, but each uses it for a different purpose, selecting a pre-configured profile will alter the settings to those of the appropriate user.
- A single user to quickly re-configure a PocketPC for a different environment. If Joe uses his device primarily at the office, but also uses it when traveling, he can easily switch to a pre-configured profile that has more secure settings for hotel, airport and similar "public" environments.

All Bluetooth settings are saved in the active profile. A profile named "Office," for example, may include Bluetooth Authentication and Encryption settings, and connection icons to specific services on work-related Bluetooth devices. A profile named "Private" on the same device may only allow the owner's laptop computer to connect to the PocketPC. When the "Private" profile is selected, only the Bluetooth settings related to that profile are active, the "Office" profile settings have no affect.

When the PocketPC is turned off, BTW-CE saves the last-used profile and reloads that profile the next time the device is turned on.

The Profile options (available from the Control Panel, General Tab) are:

- A list of existing profiles—when BTW-CE is started for the first time the only profile listed will be "Default." To enable a profile, tap it.
- Accesses a screen from which you can:
  - Add a profile
  - Rename a profile
  - Delete a profile.

2.1.1.1 Create A New Profile

1. From the Today screen, tap the Bluetooth icon.
2. From the General tab, tap .
3. From the Add/Delete Profiles screen:
   a) Tap the New button
   b) Enter a descriptive name for the new profile, for example, "Office."
   c) Select an existing profile on which to base the new profile.
4. Tap the OK button.

The new profile does NOT automatically become the active profile; to activate the new profile, select it from the "Current Profile" field on the General Tab.

2.1.1.2 Rename or Delete a Profile

1. From the Today screen, tap the Bluetooth icon.
2. From the Bluetooth Control Panel, General tab, tap .
3. From the Add/Delete Profiles screen:
   a) Tap a profile name, then the Rename button and enter the new name.
   Or
   b) Tap a profile name, then the Delete button.

2.1.1.3 Save Configuration Settings In A Profile

When you make changes to the PocketPC's configuration, those changes are automatically saved when you select a different profile, turn Bluetooth off, or shut down the PocketPC.

To save a specific configuration:

1. Select (or create and then select, see Section 2.1.1.1) the desired profile (for example "Travel") from the Current Profile field on the General Tab.
2. Setup the PocketPC (see Section 2) so that it behaves in the desired manner.
3. Tap OK
4. Close the Control Panel; the changes are saved automatically.

To use the Travel profile and its associated configuration in the future, from the Control Panel, General Tab, select "Travel" from Current Profile drop-down list.

To avoid saving unwanted changes to a regularly used profile, create a new profile that is based on the profile currently in use (see Section 2.1.1.1), select the new profile, and then make the changes while the new profile is active.

2.2 ACCESSIBILITY TAB

Figure 7: Control Panel, Accessibility tab

All information on this tab is saved with the active profile, including the device name.

The options on the Accessibility tab are:

- Device Identification:
  - Name—the name of this device, as displayed to remote devices when the associated profile is active. To change the device name associated with this profile, highlight the name and enter the new name.
  - Address—the Bluetooth Device Address (BDA) of this device. This information is permanently associated with the Bluetooth hardware during the manufacturing process and cannot be changed.
- Accessibility:
  - Allow other devices to connect—when this option is enabled, other devices are permitted to connect to this device. Two mutually exclusive sub-options provide additional refinement. They are:
    - All devices—select this option to allow all devices to connect.
    - Paired devices only—select this option to allow only devices that have a paired relationship (see Section 3.2.2) with this device to connect.
  - Other devices can discover me—when this option is enabled, other Bluetooth devices can see and report this device.
    Even though remote devices cannot discover this device unless this option is checked, if a remote device has this device's Bluetooth Device Address, that device may still be able to connect to this device (see Note below).

NOTE: *The ability of remote devices to connect is also subject to security restrictions and whether Bluetooth is enabled on this device.*

2.3 BTW-CE SERVICE TABS

The functions that a PocketPC can provide to other devices are called "Services."

The services that this PocketPC is capable of providing are:

- File Transfer—file-related operations such as get a file/use a file/delete a file, etc.
- Information Exchange—Send the default business card (Pocket Outlook contact) on request.
- Serial Port—Bluetooth serial port operations. Bluetooth serial ports are used as a replacement for a physical cable between devices.
- Dial-up Networking—provide access, via a phone line or other access system, to a remote computer network such as an Internet service.
- Personal Network Server-to join or host a Bluetooth-based personal network.

Each of these tabs is explained in detail in the remainder of this section.

2.3.1 Common Options

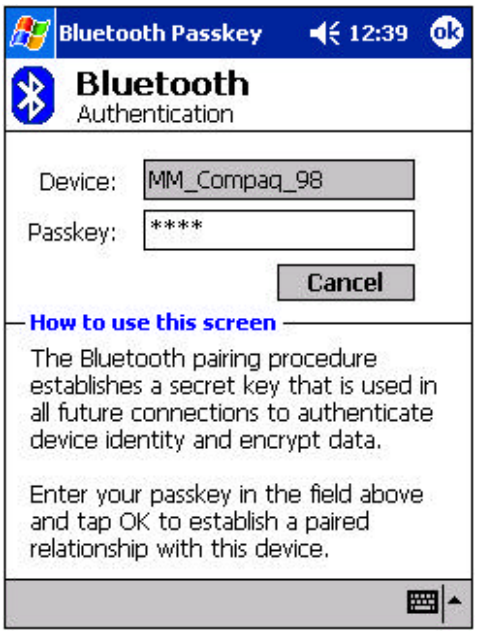
All of the services have some common settings. Even though the options are the same, in each case they are specific to the service being configured on the individual tabs.

The common options are listed under the **About this service** heading on each individual service tab. They are:

- **Enable service:** check this option to have the service start when BTW-CE initializes. When this option is enabled the service is enabled and "listening" for connection attempts when Bluetooth is enabled.
- **Authorization required:** check this option to require that each attempt to establish a connection be individually authorized. When Authorization is enabled and a remote device attempts to connect to this service, BTW-CE asks if the connection should be permitted.
- **Authentication (Passkey) required:** check this option to require a passkey or a Link Key from the remote device before allowing the connection.
  When this option is enabled and a remote device attempts to establish a connection, the Bluetooth Passkey screen (Figure 8) appears. Enter the passkey to allow the connection to proceed, or tap the OK button to deny permission for the connection.
  If the notification is ignored, the connection attempt will time out (fail).
- **Encryption required:** check this option to require that all the data exchanged between this device and the remote Bluetooth device be encrypted.
  Encryption depends on the key that is used for Authentication; if Authentication is not enabled, Encryption will not be available.
  Only the data exchanged by the Bluetooth devices is encrypted.

The individual services, and their unique options, are explained in the remainder of this section.

Figure 8: Bluetooth Passkey screen



2.3.2 File Transfer Tab

Figure 9: Control Panel, File Transfer tab

The options on this tab only affect *incoming File Transfer connections.*

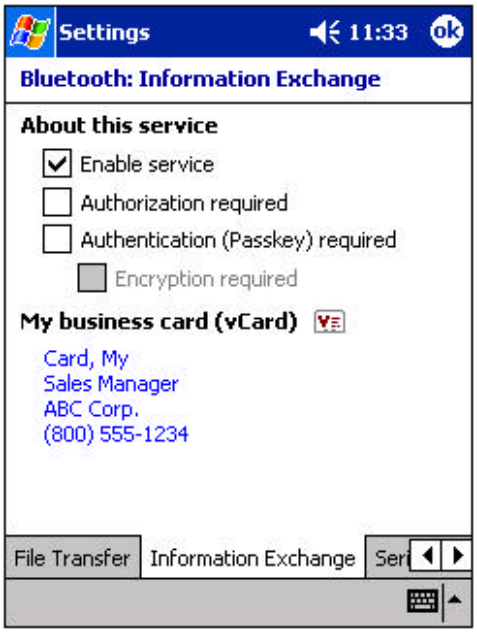
All of the Common Options (see Section 2.3.1) are available.

There is one additional configurable item: "My shared folder," which allows you to specify the default File Transfer directory, the highest level directory on this PocketPC that remote devices have access to.

To change the default File Transfer directory, tap , navigate to the desired directory, and then tap the OK button.

2.3.3 Information Exchange Tab

Figure 10: Control Panel, Information Exchange tab



The Common Options (see Section 2.3.1) on this tab only affect *incoming Information Exchange connections*.

There is one additional configurable item: "My business card (vCard)".

The "My business card" information comes from a selected record in the Contacts list of Pocket Outlook. Information from the selected record is sent to remote devices on request. It is also the contact information that is sent when you select "Send your business card to one or more recipients" while using Business Card Exchange.

The default selection is "none" (no information).

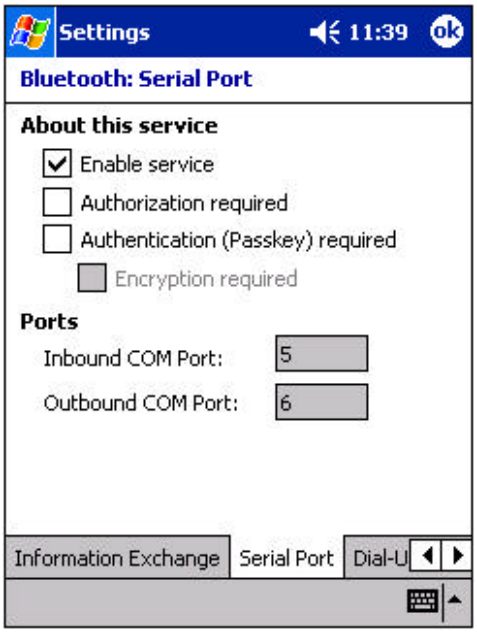
To select a vCard, tap , choose a contact from the list, and then tap OK.

To discontinue sending contact information when it is requested, tap , choose "(none)" from the list, and then tap OK.

If you reach the contacts list by mistake, tap OK to return to the previous screen.

2.3.4 Serial Port Tab

Figure 11: Control Panel, Serial Port tab



The configurable options on this tab only affect *incoming Serial Port connections.*

All of the Common Options (see Section 2.3.1) are available.

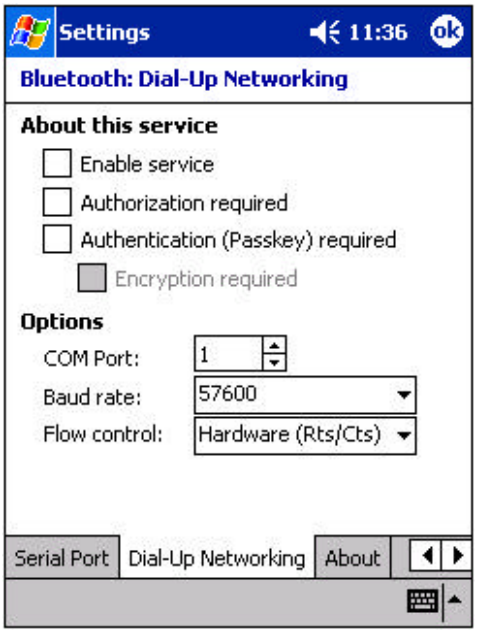
There are two additional, non-configurable items:

- Inbound COM Port: the local communications port that is used for inbound serial connections.
- Outbound COM Port: the local communications port that is used for outbound serial connections.

The Inbound and Outbound COM ports are permanently assigned and cannot be changed.

2.3.5 Dial-up Networking Tab

Figure 12: Control Panel, Dial-up Networking tab



The options on this tab only affect *incoming Dial-up Networking connections*.

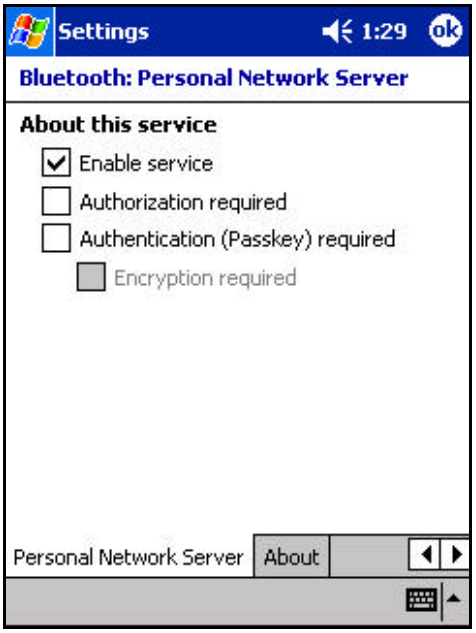
All of the Common Options (see Section 2.3.1) are available.

There are three additional items:

- COM Port: select the communications port to be used.
- Baud rate: tap the down-arrow and select a baud rate from the drop-down list. The options range from 1,200 to 115,200 baud, in nine steps.
- Flow control: tap the down-arrow and select the type of flow control to be used from the drop-down list. The options are:
  - Off
  - Hardware (Rts/Cts).

2.3.6 Personal Network Server Tab

Figure 13: Control Panel, Dial-up Networking tab



The options on this tab only affect *personal network connections.* All of the Common Options (see Section 2.3.1) are available.

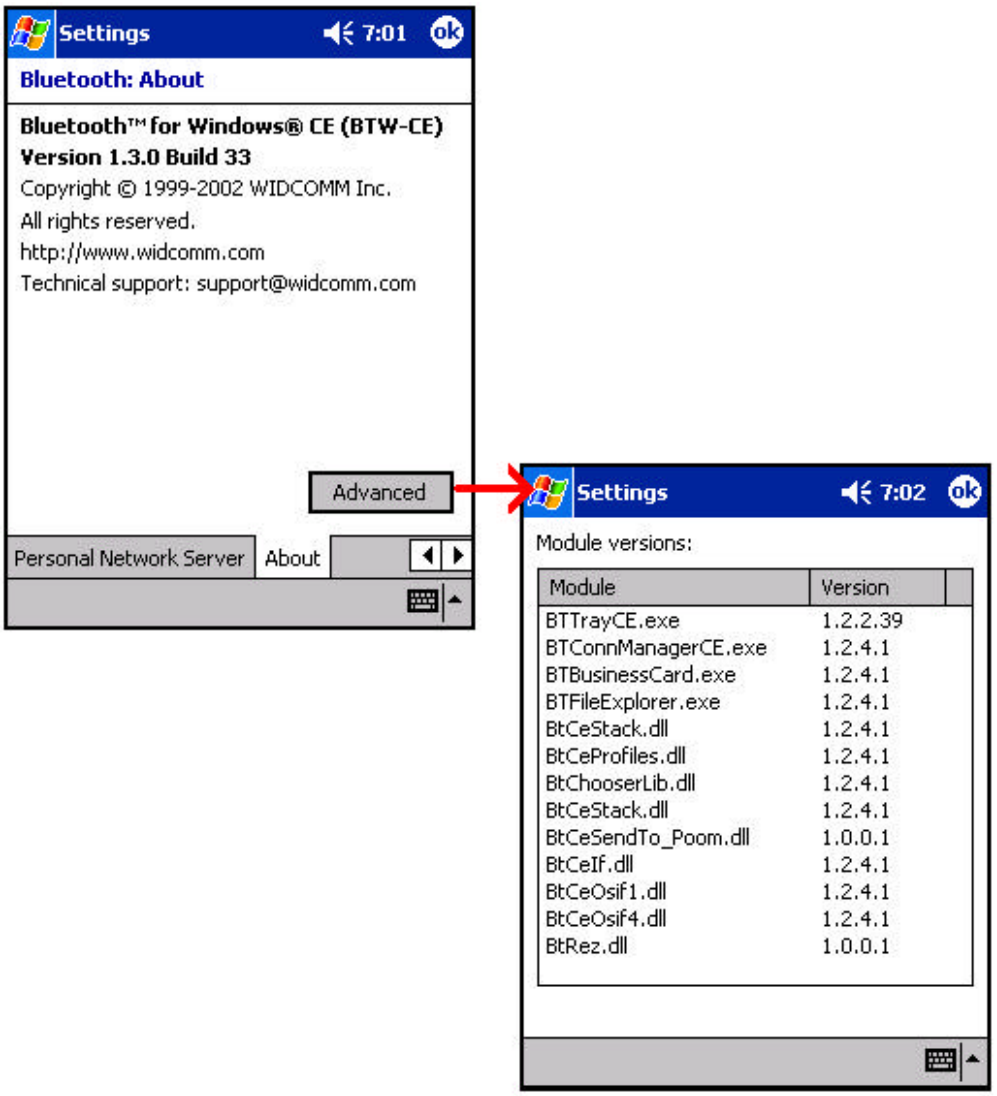
2.4 ABOUT TAB

This tab provides:

- Release Version information
- Copyright notice
- Website address
- Technical support email contact address
- An Advanced button, which displays a screen that contains version information about the individual software modules that make up BTW-CE.

There are no configurable options on this tab.

Figure 14: Control Panel, About tab



3 Bluetooth Manager: Using BTW-CE

The Bluetooth Manager allows you to setup connections and communicate with remote devices over Bluetooth. The Bluetooth Manager is accessed as follows:

1. From the Today screen, tap > Programs > Bluetooth Manager.
   – or –
2. From the Today screen, tap > Bluetooth Manager. This option is available if you checked off **Add a shortcut in the Start menu** when you installed BTW-CE.

The Bluetooth Manager has (see Figure 15):

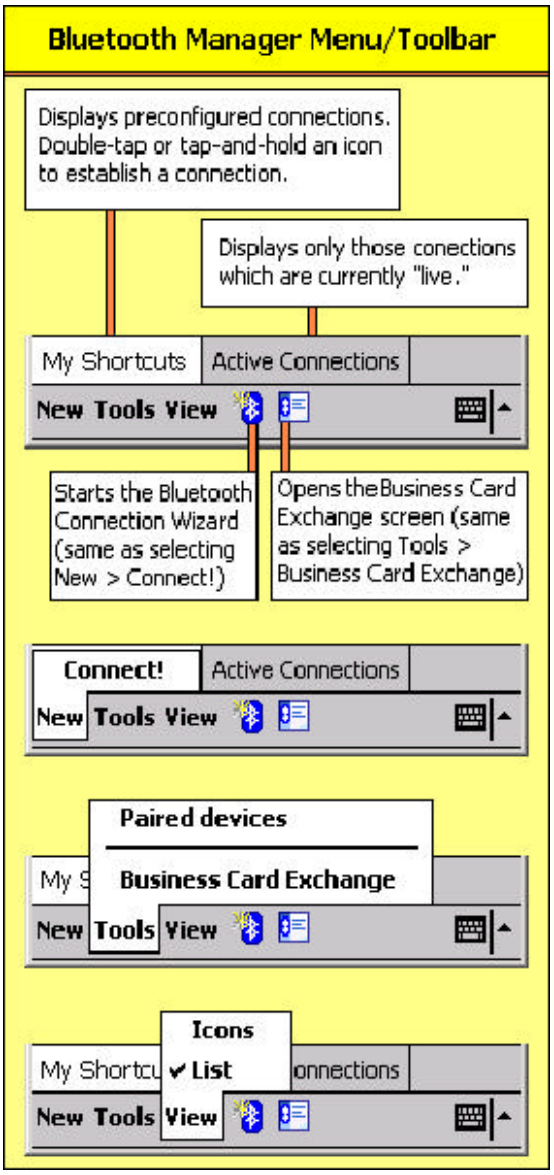
- Two tabs:
  - My Shortcuts–displays pre-configured connection icons and establishes connections
  - Active Connections–displays active incoming and outgoing connections.
- Three menus:
  - New
    - Connect!–create a new connection using the Bluetooth Connection Wizard
  - Tools
    - Paired devices–pair/un-pair with other devices
    - Business Card Exchange–opens the Business Card Exchange.
  - View–controls the on-screen display (icons or list).
- Two icons:

  Accesses the Bluetooth Connection Wizard, which helps you setup connections with remote Bluetooth devices. This icon is a shortcut to the New > Connect! menu item.

  Accesses the Bluetooth Business Card Exchange screen. This icon is a shortcut to the Tools > Business Card Exchange menu item. It allows you to:
    - Get a business card from a remote device
    - Send your business card to a remote device
    - Exchange business cards with a remote device.

These options are explained in detail in the remainder of this section.

Figure 15: Bluetooth Manager Menu/Toolbar



3.1 TABS

The two tabs at the bottom of the Bluetooth Manager screen are:

- My Shortcuts
- Active Connections.

3.1.1 My Shortcuts

The default tab on the Bluetooth Manager is My Shortcuts. This screen displays the icons that have been created for connections to other devices. The icons provide visual feedback about the status of the connection to which they are linked (see Figure 16).

Figure 16: Connection status displayed by icon color

The double-tap is context sensitive:

- If the connection is not open—double-tap its icon to establish a connection
- If the connection is open—double-tap its icon to display the connection's status screen (Figure 17).

Connections can also be opened/closed, and other options accessed, using the tap-and-hold technique. If you tap a connection icon and hold the stylus in place for a few seconds, a context sensitive menu appears.

The options on the context sensitive menu are dependent on the state of the connection:

- Connection open
- Connection not open.

3.1.1.1 Connection Open–Context Sensitive Menu Options

From the My Shortcuts screen, tap-and-hold a connection icon that is associated with an OPEN connection to access the context sensitive menu.

The Menu options are:

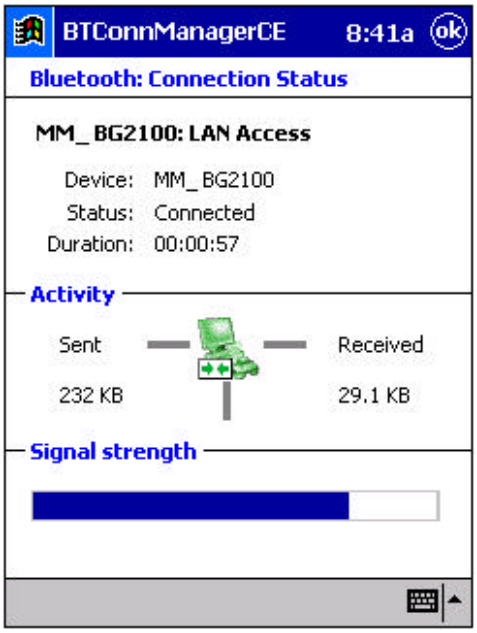
- Disconnect–close the open connection
- Status–select this option to display the Connection Status screen (Figure 17) (double-tap default).

3.1.1.2 Connection Status Screen

This screen displays:

- The connection's name
- The remote device's name
- The connection status: Connected/Not Connected
- The length of time the connection has been active
- Activity information:
  - The amount of data sent
  - The amount of data received.
- A graphic signal strength indicator.

Figure 17: Connection Status screen



3.1.1.3 Connection Inactive – Context Sensitive Menu Options

From the My Shortcuts screen, tap-and-hold a connection icon that is associated with an INACTIVE connection to access the context sensitive menu.

The menu options are:

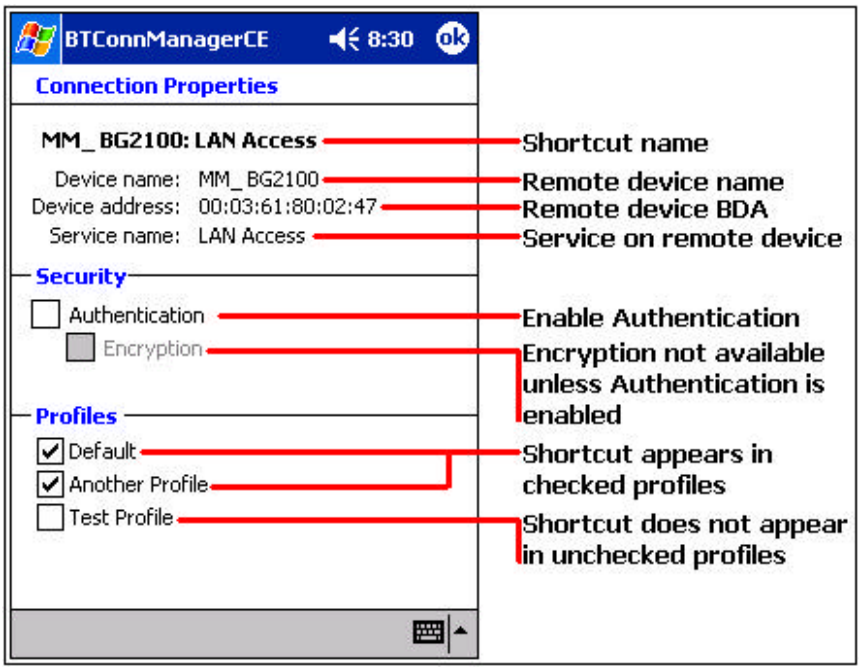
- Connect – select this option to establish a connection (double-tap default).
- Rename – select this option to rename the connection shortcut. This option is often used to rename shortcuts that were created in a group (see Section 1.1.1.1 for information about creating shortcuts); when multiple connection shortcuts are created at the same time they are given default names and no option is provided at that point to change the default.
- Delete – select this option to permanently delete the connection shortcut.
- Properties – select this option to display the Connection Properties screen (Figure 18).

3.1.1.4 Connection Properties Screen

This screen displays:

- The connection' s name
- Connection Properties—non-configurable information about the remote device, including:
  - The remote device name
  - The remote device Bluetooth Device Address (BDA)
  - The name of the service on the remote device that this icon accesses.
- Security—enable/disable Authentication and Encryption.
- Profiles—a list of the available profiles on this device. To assign, or remove, this connection icon to/from a profile, select or clear the profile' s associated check box.

Figure 18: Connection Properties screen



3.1.2 Active Connections

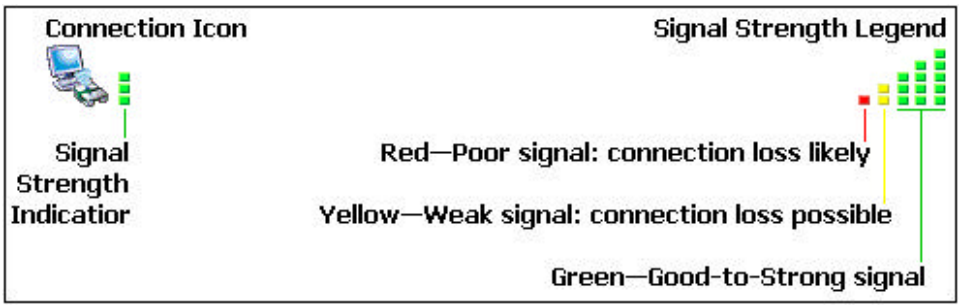
This tab displays the currently active Outgoing and Incoming Connections on the PocketPC.

To the right of each active connection icon is a signal strength indicator (Figure 19).

Tap-and-hold a connection to access a context sensitive menu. The menu options are:

- Disconnect—close this connection
- Status—display the connection status screen (Section 3.1.1.2 and Figure 17).

Figure 19: Active Connections screen, signal strength indicator



3.2 MENUS

There are three menus on the bottom of the Bluetooth Manager. They are:

- New
- Tools
- View.

3.2.1 New

The New menu has only one option; Connect!

Connect! starts the Bluetooth Connection Wizard, which walks you through the process of creating a connection. The first screen lists several types of connections you can create (see Figure 20). Choose the type of connection and then **Next**. The next page(s) will guide you through establishing the parameters of the desired connection. The exact content of the page(s) depends on the type of connection being created. On any given page, where applicable, choose **Next** to move to the next page, or **Back** to return to the previous page.

Figure 20: The first Connection Wizard' s first page.

3.2.2 Tools

The Tools menu has two options:

- Paired devices
- Business Card Exchange

3.2.2.1 Paired Devices

When two devices are paired, they share, and exchange prior to each connection, an internally generated security key. This security key, called a Link Key, is based on a unique Bluetooth Device Address, a random number, and a user-defined password.

To pair with another device:

1. From the Bluetooth Manager, Tools menu, select "Paired devices…".
2. On the Paired devices screen, tap Add
3. On the Device Pairing screen:
   a) Tap
   b) Tap a device on the "Select a Bluetooth device" screen to return to the prior screen and populate the "Device:" field.
   c) Enter the correct password in the "Passkey:" field
4. Tap OK.

To break (remove) a Paired Relationship

1. From the Bluetooth Manager, Tools menu, select "Paired devices…".
2. Tap a device name to select it
3. Tap the Remove button, and then tap Yes in the confirmation dialog.

3.2.2.2 Business Card Exchange

Business Card Exchange is accessible from:

- An icon on the Bluetooth Manager's menu bar
- From Tools > Business Card Exchange.

Business Card Exchange allows you to:

Send your business card to one or more remote devices.

Request a business card from one or more remote devices

Exchange business cards with one or more remote devices.

NOTE: *To Send or Exchange business card(s) you must first specify your default business card in the Bluetooth Control Panel, Information Exchange tab (see Section 2.3.3).*

To Send, Request or Exchange Business Cards

1. From the Bluetooth Manager, tap the business card icon .
2. Tap the Send, Request or Exchange icon, as appropriate.

From the Bluetooth Browser screen, tap the name of the remote device and then tap OK.

3.2.3 View

The View menu has two options. They are:

- Icons–select this option to view the on-screen connection icons as large icons
- List–select this option to view the on-screen connection icons in list format.

3.3 ICONS

There are two icon shortcuts on the bottom the Bluetooth Manager screen. They are:

- New Connection–a shortcut to the New > Connection shortcut..menu item. See Section 3.2.1 for information on how to create a new connection.
- Business Card Exchange–a shortcut to the Business Card Exchange menu item. See Section 3.2.2.2 for information on how to use Business Card Exchange.

4 Bluetooth Browser

Various BTW-CE applications require you to select the device you want to connect to. For instance, from the Bluetooth Manager, when creating a connection to explore a Bluetooth device, you must select the device to connect to (see Figure 23).

Figure 23: A screen example where you are required to select a device.

Whenever you are required to select a device, the **Bluetooth Browser** window automatically shows up and starts searching for other Bluetooth devices (see Figure 24). As the search progresses, devices will gradually be listed in the window. To select a particular device, simply tap on it (whether the search is ongoing or stopped). This will close the window and return to the previous screen.

Figure 24: The Bluetooth Browser window allows you to select a Bluetooth device.

The search automatically terminates after a few seconds. You can interrupt it by tapping the **Stop** icon at the bottom of the screen. Once stopped, you may restart the search (i.e. refresh the list) by tapping the **Refresh** icon. Note that in some instances, it may be necessary to refresh the list once or twice to "find" all Bluetooth devices around.

Located at the bottom of this wizard screen (Figure 25) are:

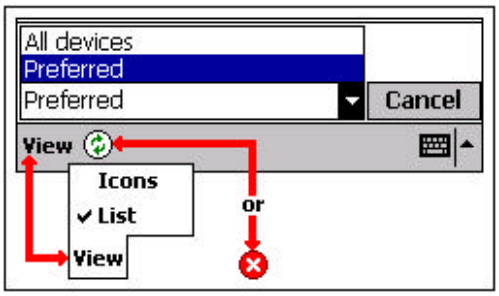
- An optional[1] drop-down menu with two options:
  - Preferred – when this option is selected the wizard attempts to display only those devices that potentially offer the desired service.
  - All devices – select this option to have the wizard display all devices in the vicinity, without regard to the type of service(s) they offer.
- The View menu, which has two options:
  - Icons – displays the found devices as large icons
  - List – displays the found devices in a list.
- An icon – the icon that is displayed is determined by what the wizard is doing:

  The wizard is searching for devices. When the desired device appears on the screen, tap the device to select it and stop the search.

  You can also stop an in-process search by tapping .

  The wizard has completed its search for devices. Tap to search again or to refresh the screen.
- Cancel button – tap this button to close the window and return to the previous screen without changing the selected device.

Figure 25: Bottom of the Select a device wizard screen (composite overview)



[1] In some cases, the drop-down menu is not shown when only one type of devices is shown.

[2] Another term may be used when applicable (.e.g "Phones").

5 Using Remote Device Services

This section provides overview instructions for using services provided by other devices.

5.1 SERIAL PORT

The use of a Bluetooth wireless serial port connection is identical to the use of a physical cable serial port connection between two devices.

As with a physical connection, the application that will use the connection must be configured to use the correct serial port.

To determine the communications port assigned to the Bluetooth serial port:

1. From the Today Screen, tap the Bluetooth icon to open the Bluetooth Control Panel.
2. Use the scroll arrows at the bottom-right of the screen to expose the Serial Port tab, and then select the Serial Port tab.
   The Outbound COM Port is listed in the lower portion of the screen.
   Configure the application that will use the Bluetooth Serial Port to send data to this port.

NOTE: *For information about configuring your application's outbound COM port, refer to the application's documentation.*

3. From Bluetooth Manager's My Shortcuts screen open the Bluetooth serial port connection to the remote device.
4. Send/Receive data from the application.

5.2 DIAL-UP NETWORKING: CONNECT TO A REMOTE COMPUTER

Dial-up Networking allows you to connect to a remote computer via a phone line. Once connected, you can browse the Internet, check your email, etc.

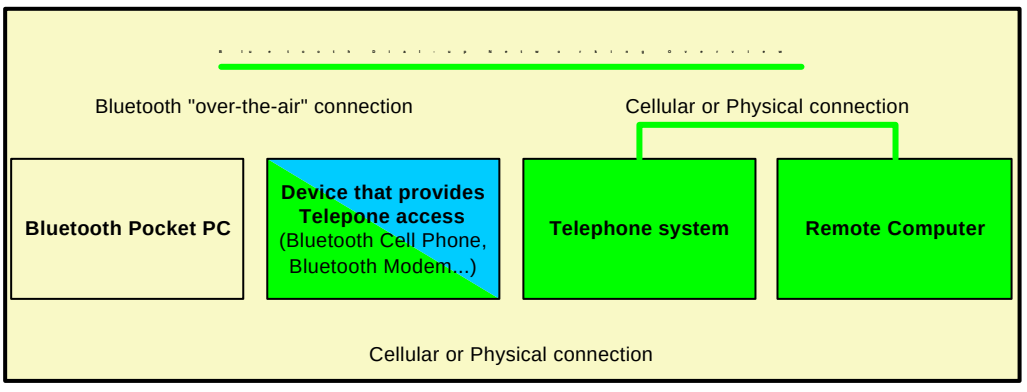
The remote Bluetooth device that will provide the Dial-up Networking service must have access to a telephone system (either a physical or cellular connection).

Devices that might provide the Dial-up Networking service include:

- Bluetooth-enabled cellular telephones
- Bluetooth-enabled desktop computers that are attached to a telephone system
- Bluetooth modems.

The remote computer to which you are connecting must also be attached to the phone system and capable of answering a call.

Figure 26: Dial-up Networking overview



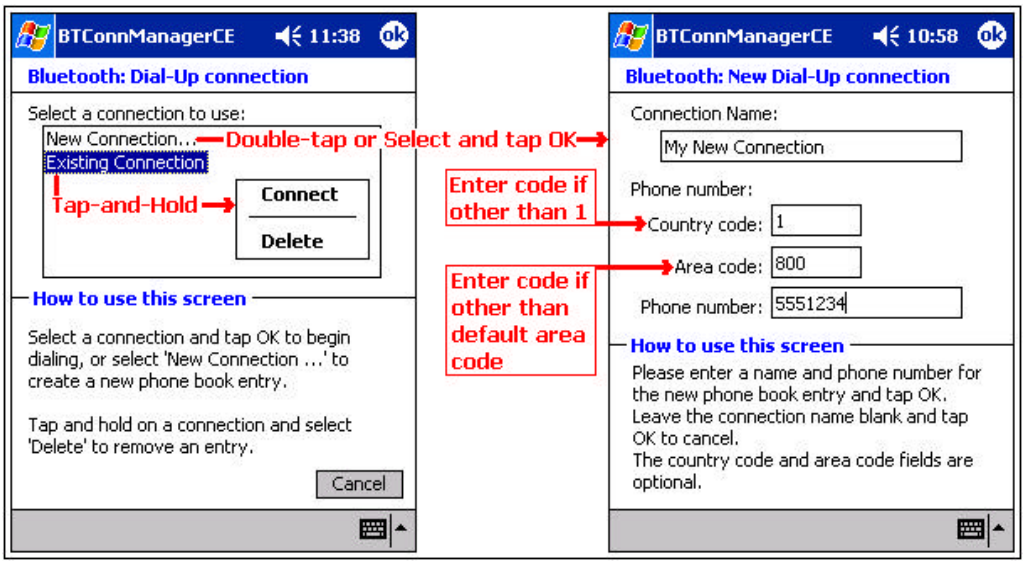
To use Dial-up Networking:

1. Create a connection to the device that will provide telephone access (see Section 3.2.1).
2. From the Bluetooth Manager, My Shortcuts tab, tap-and-hold the Dial-up Networking connection shortcut, and then select Connect from the pop-up menu.
3. On the first Bluetooth: New Dial-up Connection screen (Figure 27, left), double-tap New Connection…
4. On the second Bluetooth: New Dial-up Connection screen (Figure 27, right):
   a) Enter a name for the connection
   b) If dialing outside of the default country setting, enter the country code
   c) If dialing outside of the default area code setting, enter the area code
   d) Enter the phone number to be dialed.
5. Tap OK

To proceed with the connection, you must complete the PocketPC screen(s) that follow(s). Refer to the PocketPC documentation for assistance.

After the connection is active, open a web browser on the PocketPC.

Figure 27: Dial-up Networking, overview (composite screenshot)



5.3 BLUETOOTH FILE EXPLORER

Bluetooth File Explorer appears automatically when a File Transfer connection is established. It allows you to:

- Navigate the directory structure of the remote device
- View files and folders on the remote device
- Create new folders on the remote device
- Send files to, and get files from the remote device
- Delete and rename files on the remote device.

NOTE: *File operations on the remote device are limited to the remote device's configured FTP root directory and its sub-directories.*

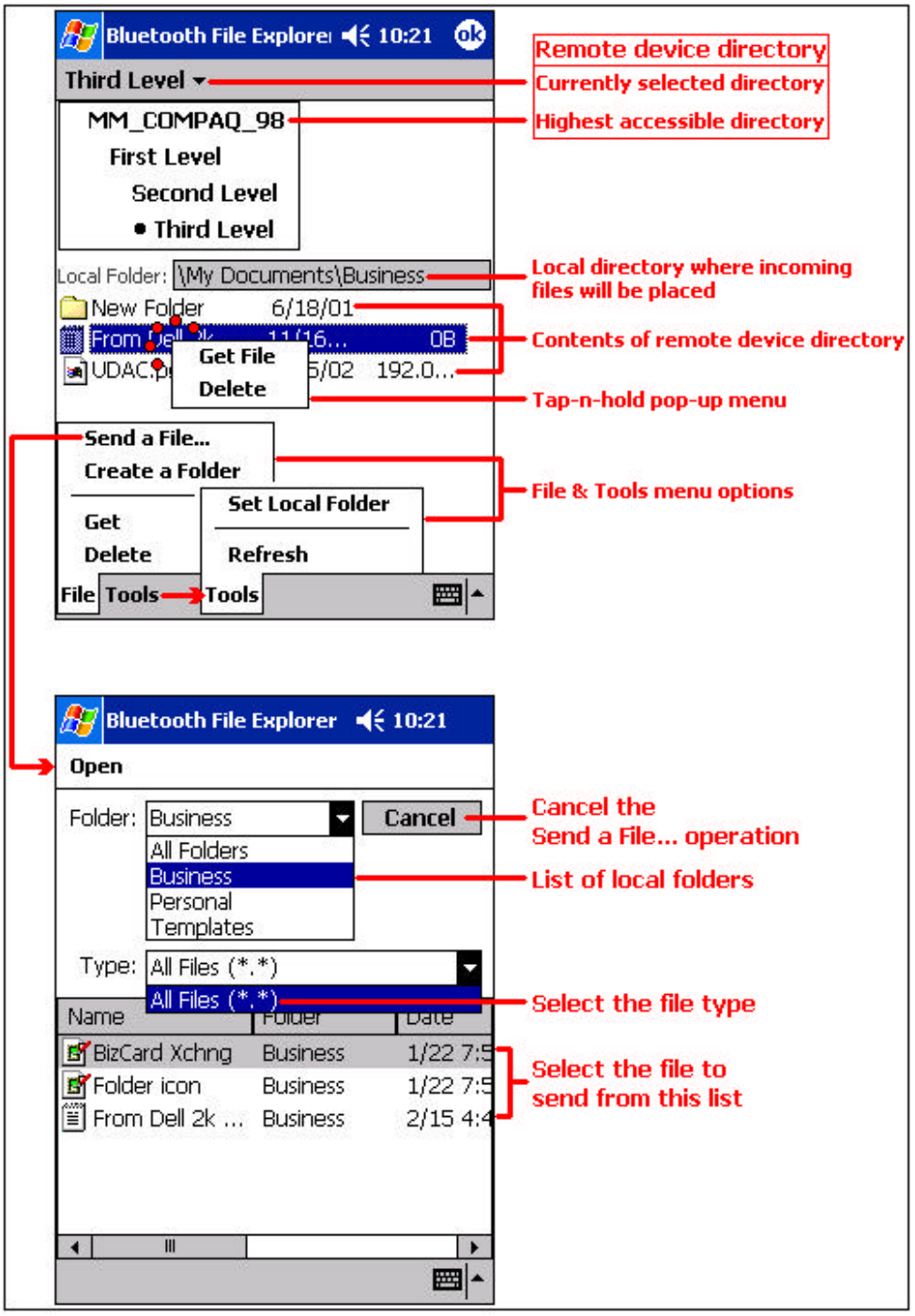
Bluetooth File Explorer also allows you to set the folder on your PocketPC that will receive inbound files. This folder is configurable on an individual basis for each connection shortcut.

Bluetooth File Explorer has two menus:

- File:
  - Send a File…
  - Create a Folder
  - Get
  - Rename
  - Delete.
- Tools:
  - Set Local Folder
  - Refresh.

Figure 28 on the next page is an overview of Bluetooth File Explorer.

Figure 28: Bluetooth File Explorer overview (composite screenshot)



5.3.1 Change the Remote Device Folder

To move down in the directory structure of the remote device, tap the new folder in the main portion of the Bluetooth File Explorer window.

To move up in the directory structure of the remote device, tap the down-arrow to the right of the currently selected folder and select the new folder from the drop-down list.

5.3.2 File Menu

All of the instructions in the subsections that follow assume that there is an open File Transfer connection with a remote device.

5.3.2.1 Send a File to the Remote Device

To send a file to the remote device, from the File menu, tap Send a File…to display the Open screen.

The options on the Open screen are:

- Folder—tap the down-arrow and select the folder that contains the file to be sent.
- Type—the only option is "All Files (*. *)"
- A list of files in the selected folder; tap the file to be sent
- Cancel button—aborts the Send a File…operation.

The selected file is sent automatically when it is tapped, without further intervention, and the Bluetooth File Explorer main screen reappears.

5.3.2.2 Create a Folder on the Remote Device

To create a folder on the remote device, navigate to the folder in which the new folder will be placed, and then, from the File menu, tap Create a Folder. Enter a name for the new folder while the default name (New Folder) is highlighted.

5.3.2.3 Get a File From the Remote Device

To get a file from the remote device:

1. Navigate to the folder on the remote device that contains the file
2. Tap the desired file to highlight it
3. From the File menu, tap Get.

The file is copied to the local folder listed in the Local Folder field near the top of the screen.

This operation can also be performed using the tap-and-hold technique: tap-and-hold the desired file and select Get from the pop-up menu.

5.3.2.4 Delete a File on the Remote Device

To delete a file on the remote device: tap the file to be deleted to highlight it, then, from the File menu, tap delete. Tap OK in the confirmation dialog box.

This operation can also be performed using the tap-and-hold technique: tap-and-hold the desired file and select Delete from the pop-up menu. Tap OK in the confirmation dialog box.

5.3.3 Tools Menu

5.3.3.1 Set Local Folder

The local folder, i.e. the folder on the PocketPC where incoming files are placed, can be configured on an individual basis for each connection shortcut.

To configure the local folder:

1. From the Tools menu, tap Set Local Folder
2. Use the drop-down menu at the top of the screen to navigate to the desired folder
3. Tap OK to return to the Bluetooth File Explorer main screen.

The Local Folder field is updated to reflect the new folder selection.

NOTE: *The Local Folder information is associated with the shortcut to the connection that is open and is saved with the active profile. A different Local Folder can be associated with each File Transfer shortcut.*

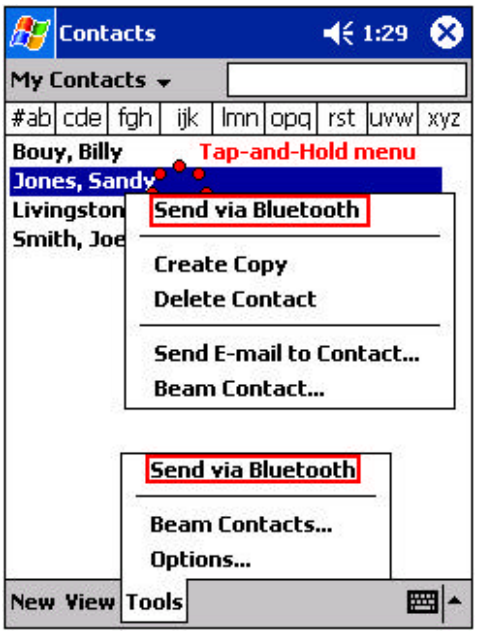
5.3.3.2 Refresh

To refresh the list of displayed files and folders on the remote device, from the Tools menu, tap Refresh.

5.4 SEND VIA BLUETOOTH

Pocket Outlook contacts, calendar items, and tasks can be sent individually or collectively to a remote device.

Figure 29: Send via Bluetooth menus



To send data via Bluetooth transfer:

1. From the Start menu, Programs, open Calendar, Contacts or Tasks
2. Highlight the item(s) to be sent
3. Tap-and-hold the item(s), and from the pop-up menu, tap Send via Bluetooth.
4. On the Select a Bluetooth device screen, tap the name of the destination device, and then tap OK.

5.5 USING A PERSONAL NETWORK

A personal network allows you to create a private , ad-hoc network among up to eight devices. Establishing a personal network among devices makes it easy to exchange information that normally requires an underlying TCP/IP network, such as chat utilities, multi-player games, etc. Because the network is established via Bluetoo th, the network is under the same security settings that govern other Bluetooth communications (service availability, authorization, authentication and encryption).

Note that using personal network is different than connecting to a LAN Access Point (LAP). The latter essentially establishes a conduit between your device and an existing network; whereas the former creates a temporary network that is private and only shared by the devices connected to it.

The notion of using a personal network relies on a device hosting the personal network and other device(s) joining the network as "clients" (or "guests"). The host offers some control over the network as it can accept and reject incoming clients.

5.5.1 Hosting a Personal Area Network

To host a personal network, go to the Bluetooth Manager, choose **New** > **Connect** > **Join a personal network** > **Next**. This will show the following screen:

Figure 30: The personal network wizard in action.

Choose **Host a personal network** and tap Next. You will then be shown the following screen, which allows you to "bring in" one or more guests, if desired. This step is optional, since guests can join later on as long as the personal network is active (more details in the following section).

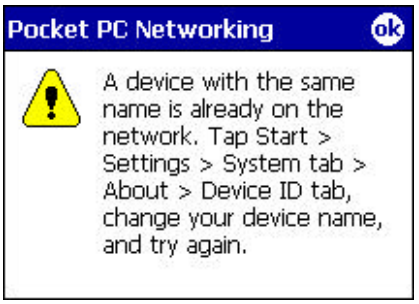
Figure 31: Adding devices to a personal network.

5.5.2 Joining a Personal Area Network

BTW-CE makes it easy to join an existing personal network, hosted by another Bluetooth device (PocketPC, desktop, etc.) From the Bluetooth Manager, choose **New** > **Connect** > **Join a personal network** > **Next** (see Figure 30), but choose **Join a personal network** this time. The Bluetooth Browser (see Figure 24) will be shown for you to select the device that is hosting the personal network. After selecting the host, choose **Next**. A connection will then be established between your PocketPC and the host over the personal network.

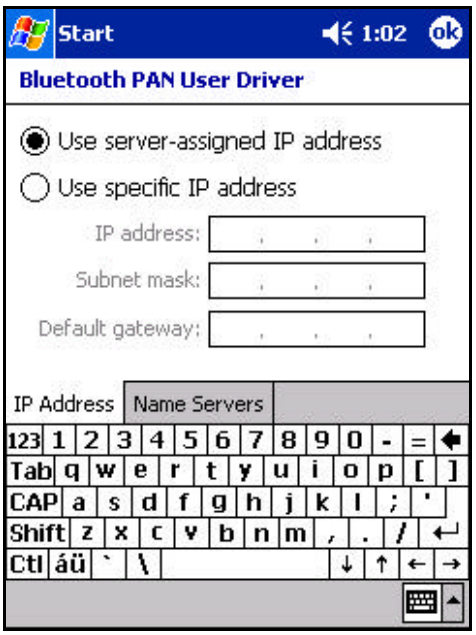
At this moment, you might be prompted to enter IP network settings (see Figure 32); if this is the case, choose "**Use server-assigned IP address**" and tap **OK**.

The following warning may also be shown to you. As instructed, change the name of your device and tap OK.



Since the network is established via Bluetooth, the network host' s service availability, authorization and/or authentication security settings are in effect and may prevent you from joining the network.

Figure 32: PAN network settings.



After joining the personal network, you can use any application that requires an underlying network connection. For instance, you can view a remote folder via the File Explorer by choosing **Open** and entering a remote, accessible device path (see Figure 33).

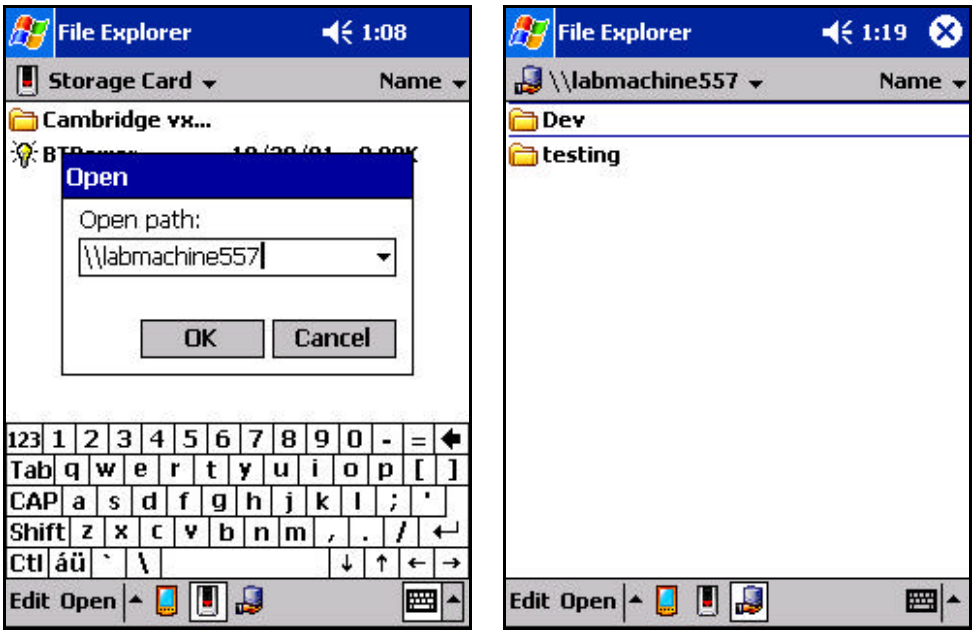



Figure 33: Browsing files on a remote device (via the PocketPC File Explorer) after joining a personal network.