3.0

Bluetooth™

USB Adapter

Manual and

Application note

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Introduction

Bluetooth is an open specification for a cutting-edge technology that enables short-range wireless connections between desktop and laptop computers, personal digital assistants, cellular phones, printers, scanners, digital cameras and even home appliances — on a globally available band (2.4GHz) for worldwide compatibility. In a nutshell, Bluetooth unplugs your digital peripherals and makes cable clutter a thing of the past. Now you can connect your PDA or PC to Bluetooth™ enabled mobile phone with this Bluetooth™ adapter.

You can access e-mail & Internet no matter where you are with just a little help from your Bluetooth™ mobile phone.
Plus, when you are back in the office, you can hook yourself up to your office network as well as communicate with other Bluetooth™-enabled devices.

1

Chapter1

Package

- One Bluetooth adapter
- One driver and software disk
- This user manual

Features

- Bluetooth v1.2 compliant
- USB Bluetooth adapter support full speed USB v1.1 Interface.
- Wireless communication within a radius of 32 Feet (10 Meters) for Class 2 Bluetooth devices.
- Wireless communication within a radius of 328 Feet (100 Meters) for Class 1 Bluetooth devices.
- Connect up to 7 different Bluetooth enabled devices
- Encryption and authentication to ensure safe, secure communications
- Low power consumption

Bluetooth profile support

Generic Access Profile **(GAP)**

Serial Port Profile **(SPP)**

Service Discovery Application Profile **(SDAP)**

Generic Object Exchange Profile **(GOEP)**

Object Push Profile **(OPP)**

File Transfer Profile **(FTP)**

Dial-up Network Profile **(DUN)**

LAN Access Profile **(LAP)**

Fax Profile **(FAX)**

Synchronization Profile

Headset Profile

Personal Area Network **(PAN)**

Human Interface Device **(HID)**

BIP Basic Image Profile **(BBIP)**

Drivers support

Windows 98SE, ME, 2000, XP

Chapter 2

Setup for Windows 98SE/ME/2000/XP

Installing Bluetooth software for Windows

(1) Place installation CD into PC and the setup menu should launch automatically.

If the setup menu does not launch automatically, use Windows Explorer to navigate to the appropriate CD-ROM drive and run **"bsetup"**.

(2) Select "**Install Drivers and Application Software**".

(3) Please select your device from the menu.

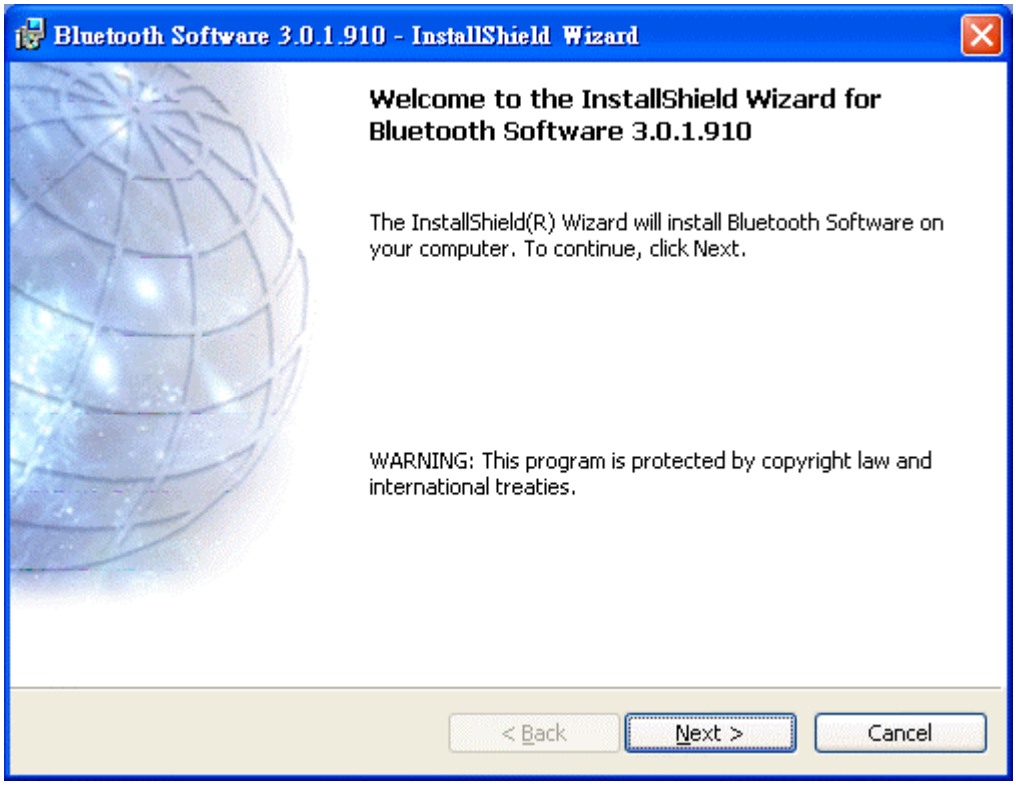
(4) Complete the following steps to install Bluetooth software:

(a) Exit all applications.

(b) InstallShield Wizard setup dialog box will automatically be displayed.

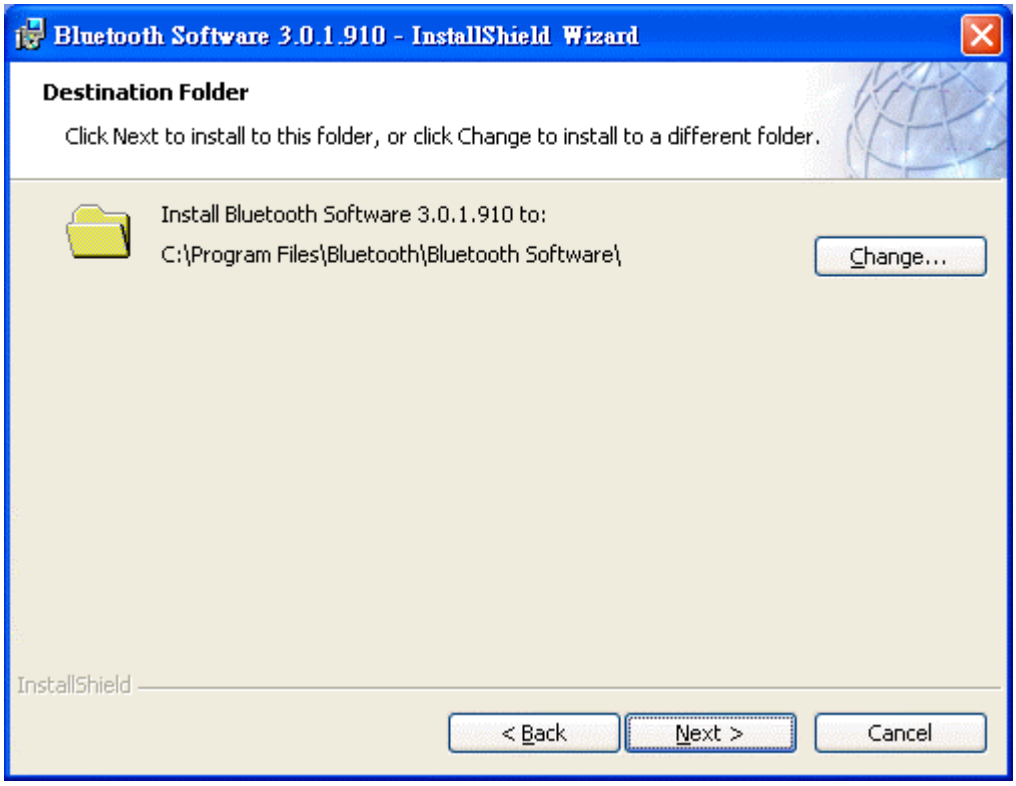
(c) Follow the instructions on screen:

(d) On the *Welcome* screen, click the "**Next**" button.

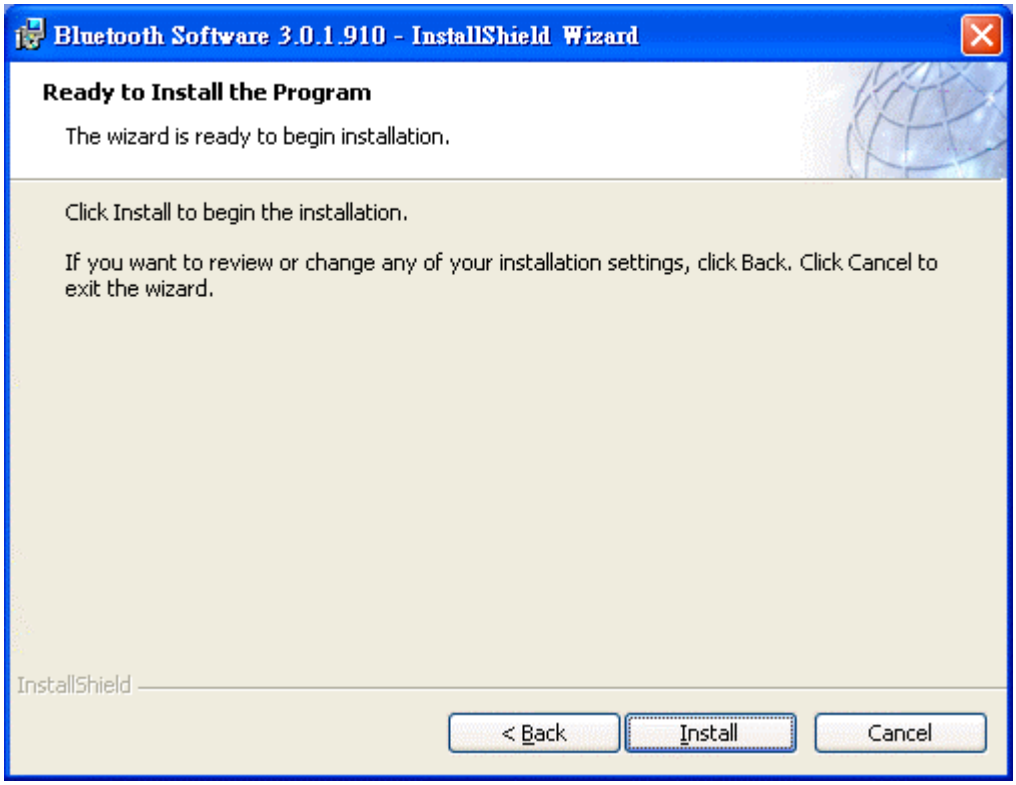


(e) When the *License Agreement* screen is displayed, read the License Agreement, then click the radio button to the left of **"I accept the terms in the license agreement"** and click the "**Next**" button.

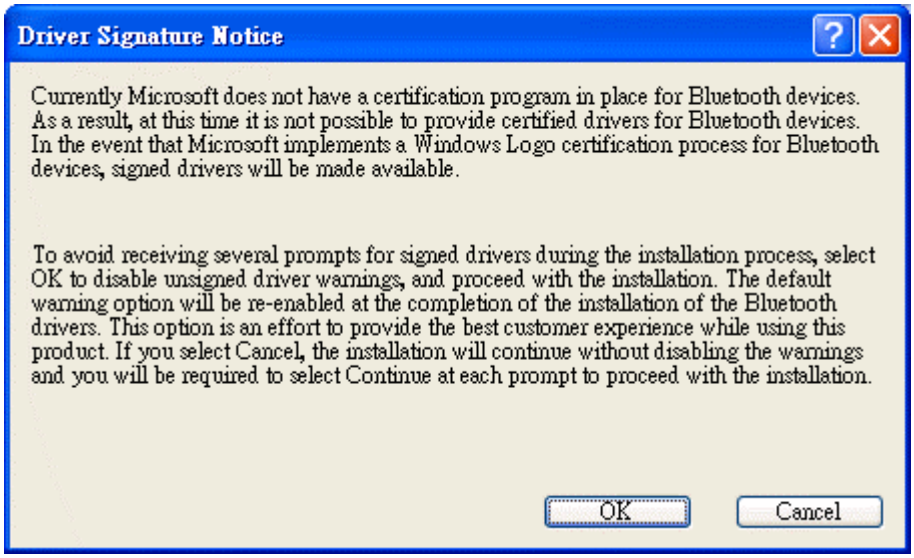
(f) You can choose the destination folder in your system, if you do not want to change the destination folder please click “**Next**“. On the *Destination Folder* screen, click the **Change** button to browse to a new destination folder for the Bluetooth software. Otherwise, click the “**Next**“ button to accept the default folder.



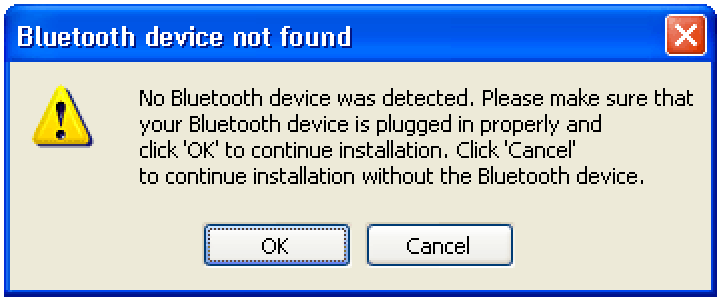
(g) The system is ready to install the Bluetooth software. If you need to review or change any settings, click the **"Back"** button. Click the **"Cancel"** button to exit the Wizard. Otherwise, click the **"Install"** button.



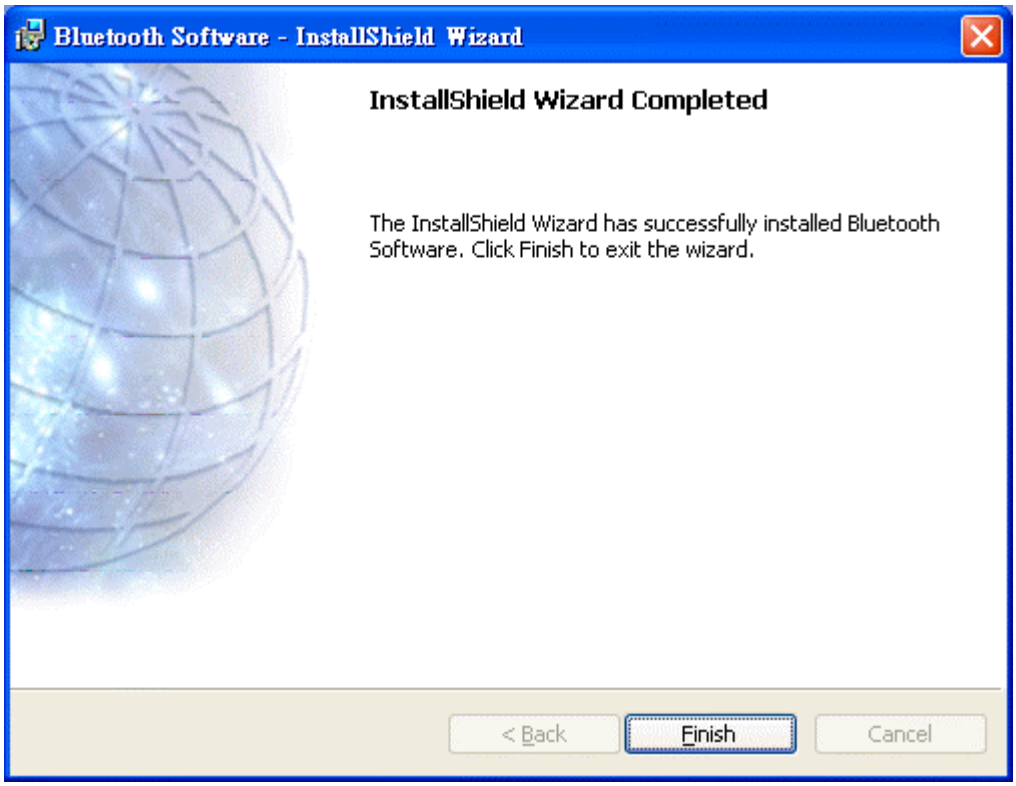
(h) For Windows 2000/XP users, system will popup a **"Driver Signature Notice"**, please click the **"OK"** button.



(i) During the installation, system will try to detect your Bluetooth device, please plug in your Bluetooth device when the following message is displayed. Then click "**OK**" to continue, or you can click "**Cancel**" to continue the installation without the Bluetooth device.



(j) When the installation is completed, please click the "**Finish**" button.



For more information of Bluetooth software Configuration & User's Guide, please refer to Chapter 3 of this application note.

Chapter 3

Application note for Windows 98SE/ME/2000/XP

3.1 Icons used for Bluetooth devices and services

Bluetooth icons provide at-a-glance feedback about a device or service's status by changing appearance.
The Bluetooth icon in the Windows system tray provides feedback about Bluetooth status.

Basic Bluetooth Icon

Bluetooth Icon Indicates Bluetooth Status		
Enabled	Disabled	Connected
Blue with White	Blue with Red	Blue with Green

Device Icons for Windows 98SE, Me and 2K

Device Icons for Windows 9x, Me and 2K			
Name	Normal	Connected	Paired
Audio Gateway			
Desktop			
Headset			
Laptop			
Modem			
Network Access Point			
Personal Digital Assistant			
Printer			
Telephone			
Unknown			

Service Icons for Windows 98SE, Me and 2K

Service Icons for Windows 9x, Me and 2K			
Name	Normal	Connected	Not Available*
Audio Gateway			
Dial-up Networking			
Fax			
Headset			
Network Access			
PIM Item Transfer			
PIM Synchronization			
Public Folder			
Serial Port			
*Services may be unavailable because they are in use or because the necessary hardware is not installed.			

Device Icons for Windows XP

Device Icons for Windows XP			
Name	Normal	Connected	Paired
Audio Gateway			
Desktop			
Headset			
Laptop			
Modem			
Network Access Point			
Personal Digital Assistant			
Printer			
Telephone			
Unknown Device			

Service Icons for Windows XP

Service Icons for Windows XP			
Name	Normal	Connected	Not Available*
Audio Gateway			
Dial-up Networking			
Fax			
Headset			
Network Access			
PIM Item Transfer			
PIM Synchronization			
Public Folder			
Serial Port			
*Services may be unavailable because they are in use or because the necessary hardware is not installed.			

NOTE: *Only available services are displayed in the menus*

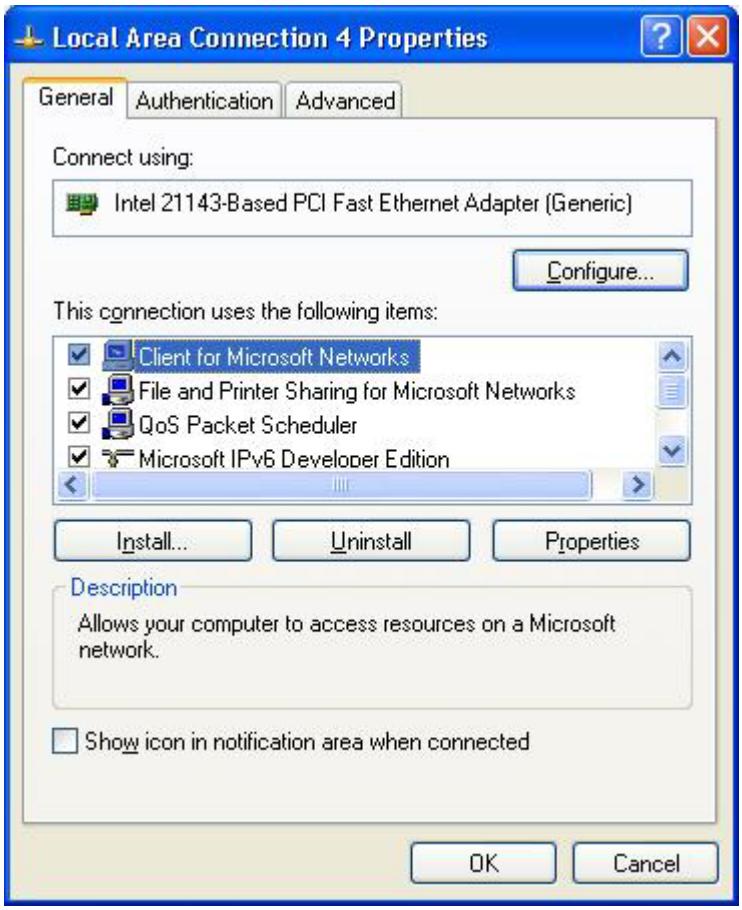
3.2. Network sharing setting for Windows

The Network Access service permits a Bluetooth enabled PC (client) to access the Internet via another Bluetooth enabled PC (Server) that already has an Ethernet connection.

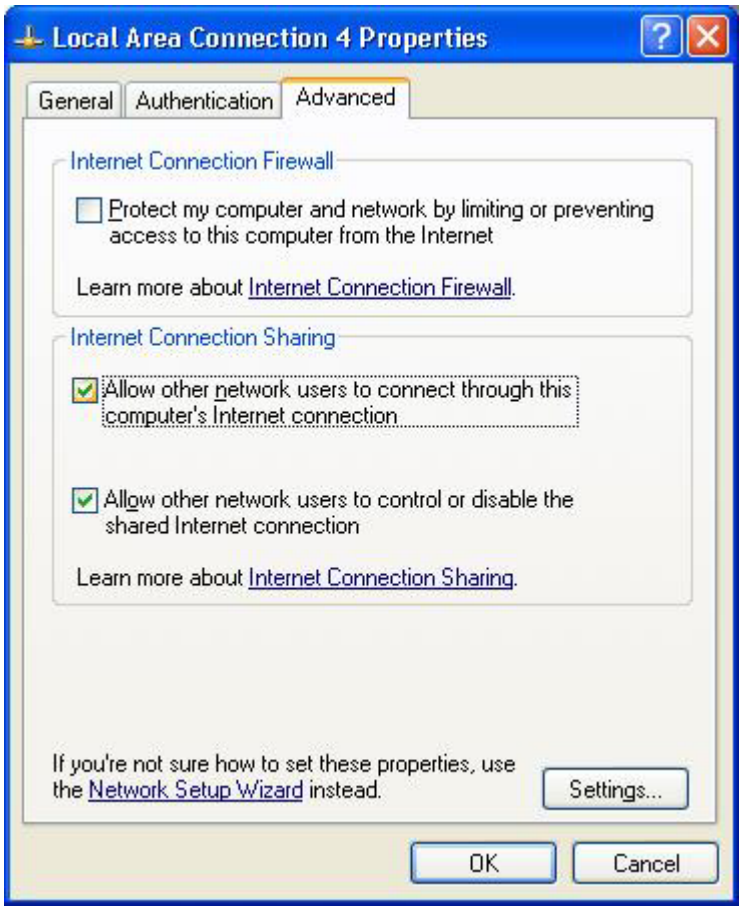
Windows network sharing setting

PC to PC (Windows 2000 or Windows XP)

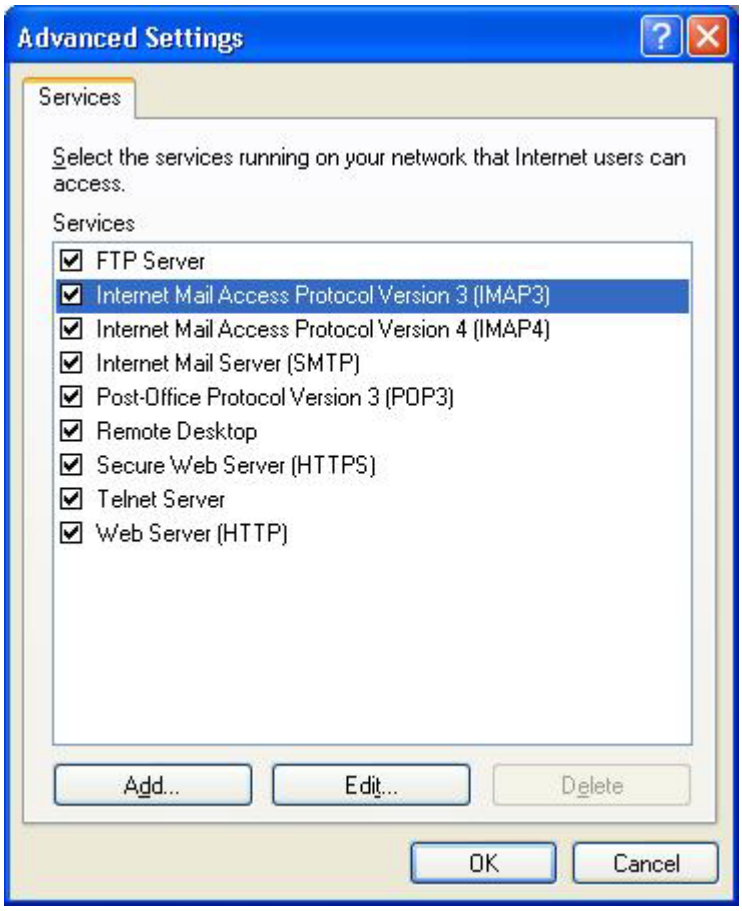
1. To enable Internet Connection Sharing on the server PC.
2. Click on **Start menu** → **Network Connections** and find your Local Area Connection (LAN) that is connected to the Internet.
3. Right click the active LAN connection to open the **"Properties"** dialog box.



4. Click on **"Advanced"** tab and select the **"Internet Connection Sharing"** checkbox to enable Internet sharing.



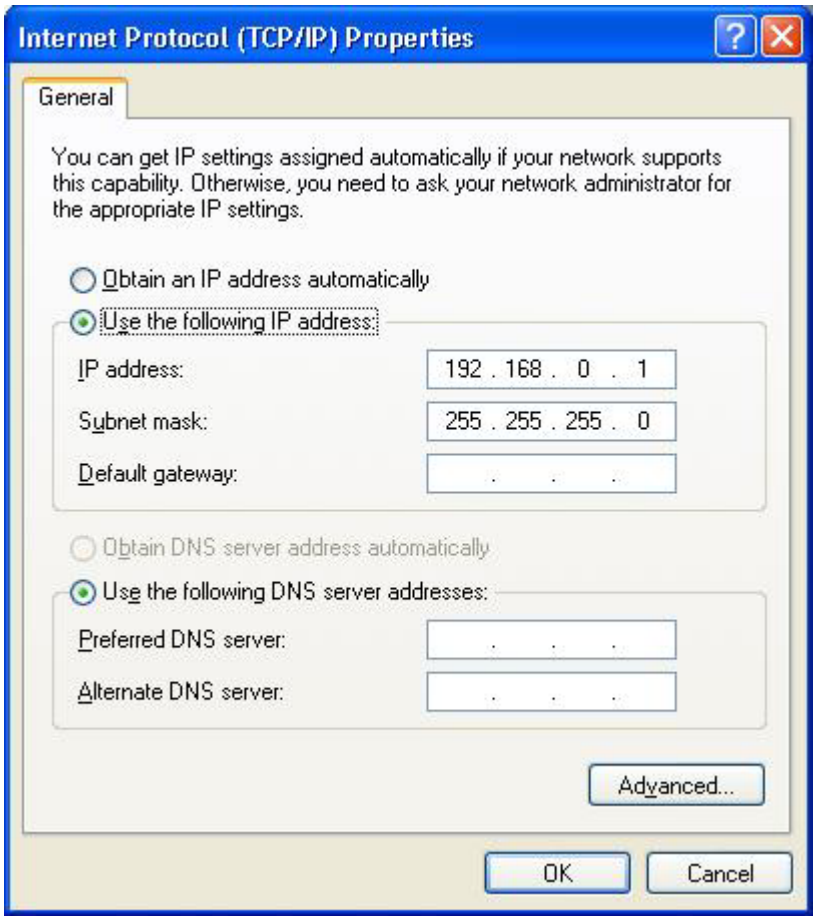
5. Click on **"Settings..."** button and select the services you wish to provide other Bluetooth devices. Click **"OK"** to save the changes.



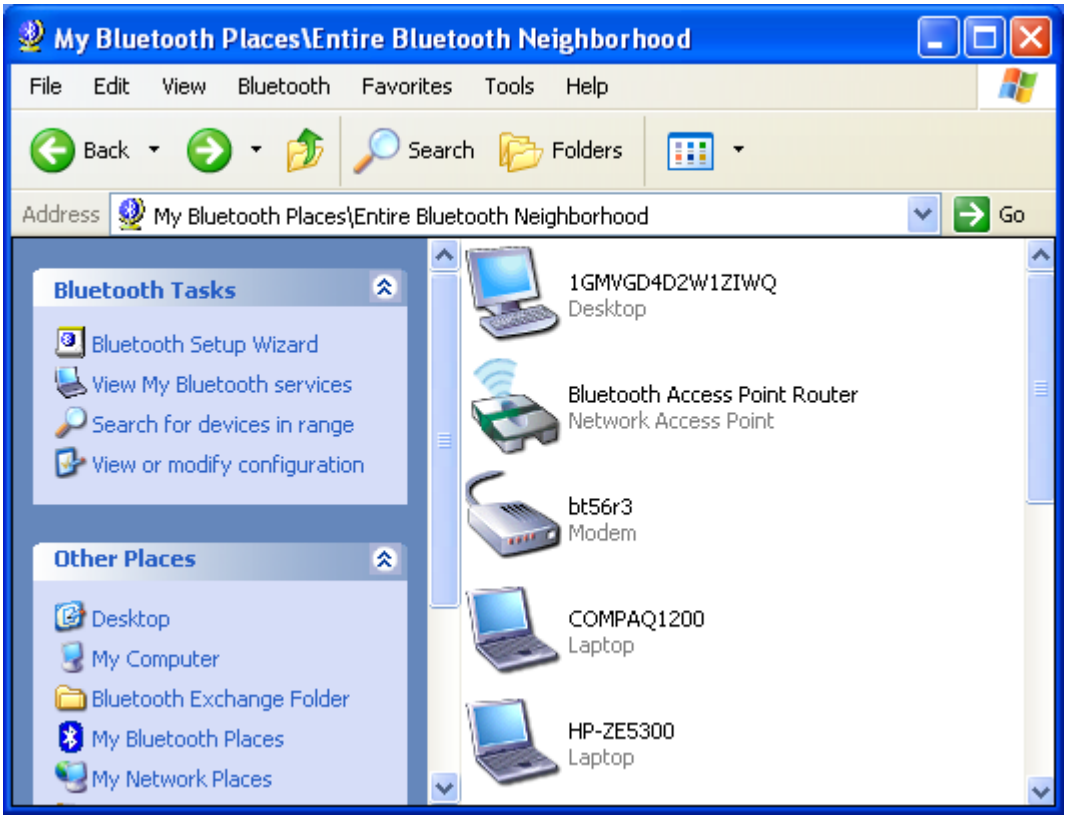
6. Go back to the **"Network Connections"** window, right click the **"Bluetooth LAN Access Server Driver"** and select **"Properties"**.

7. Under **"General"** tab, click on **"Internet Protocol (TCP/IP)"** and **"Properties"**.

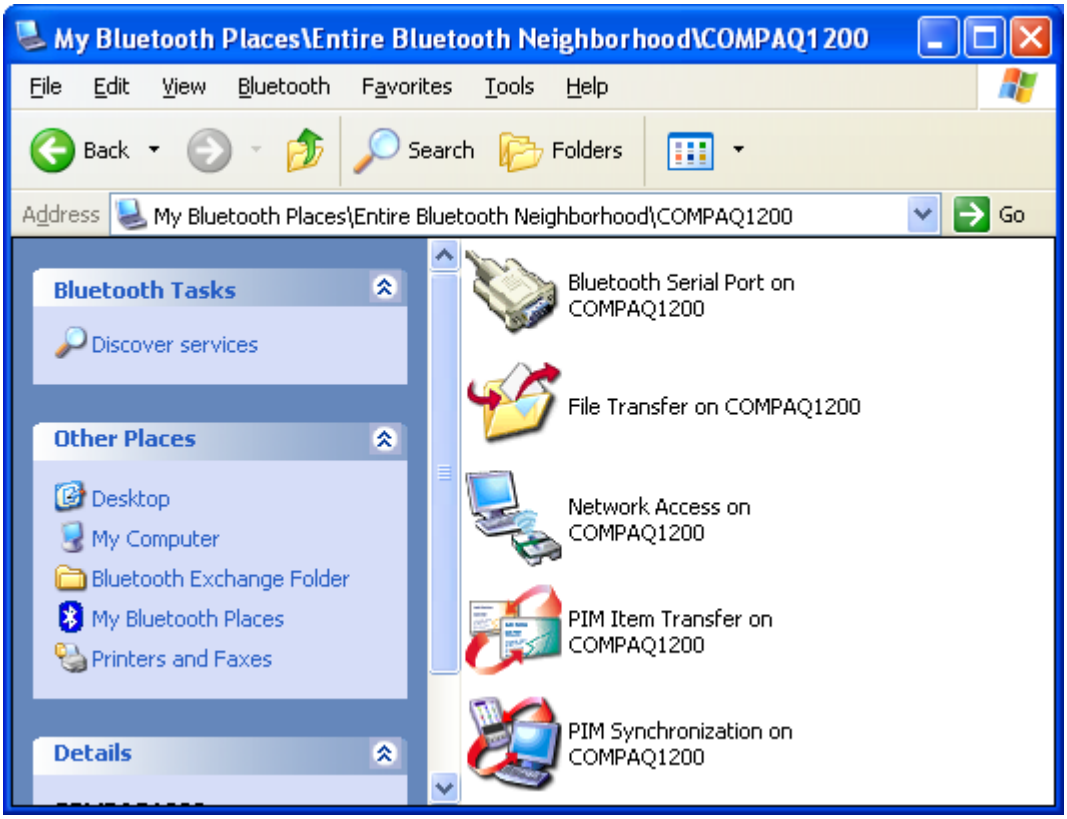
8. Under **"General"** tab, assign a virtual IP as shown in the picture below. Then click **"OK"** to save the changes.



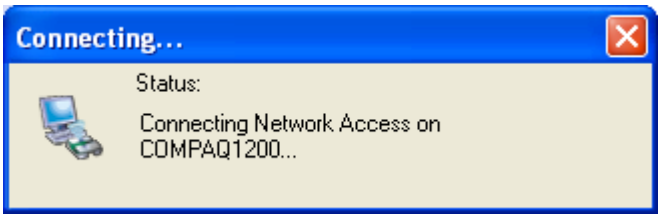
9. This allows the server PC to act as a DHCP server towards the client PCs.
   NOTE: For Win98SE and WinMe, please download and install WinRoute (or similar program) on the Server PC to allow DHCP service.
10. On the client PC, launch the Bluetooth software stack by clicking the **"My Bluetooth Places"** icon located on the desktop.
11. Click the **"Search for devices in range"** icon to search for other Bluetooth devices nearby.



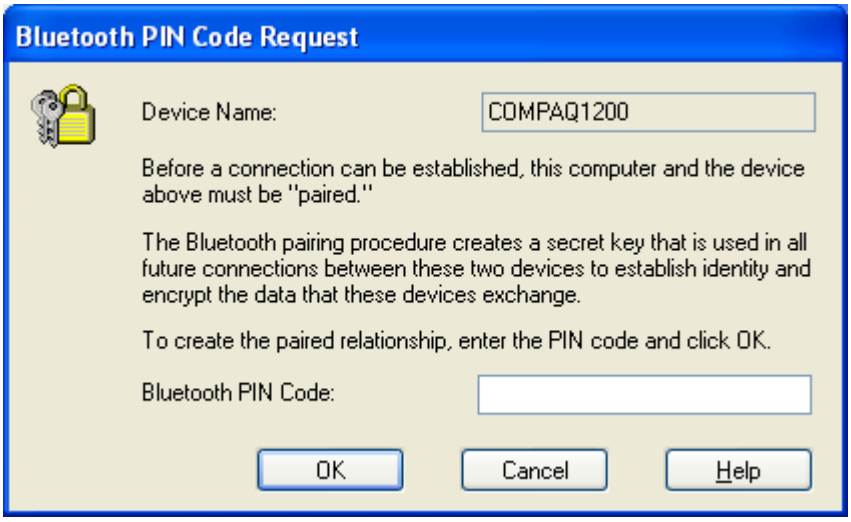
12. After searching is completed, locate the computer name of the Server PC and double click it to discover the Bluetooth services it has to offer. (i.e. Bluetooth Serial Port, Desktop, Personal Digital Assistant, Network Access Point, etc.).



13. Click on the “Server PC " icon to connect to the shared Internet server PC.



14. Click OK without entering any username or password. If one is already present, click OK anyway and it will still connect.



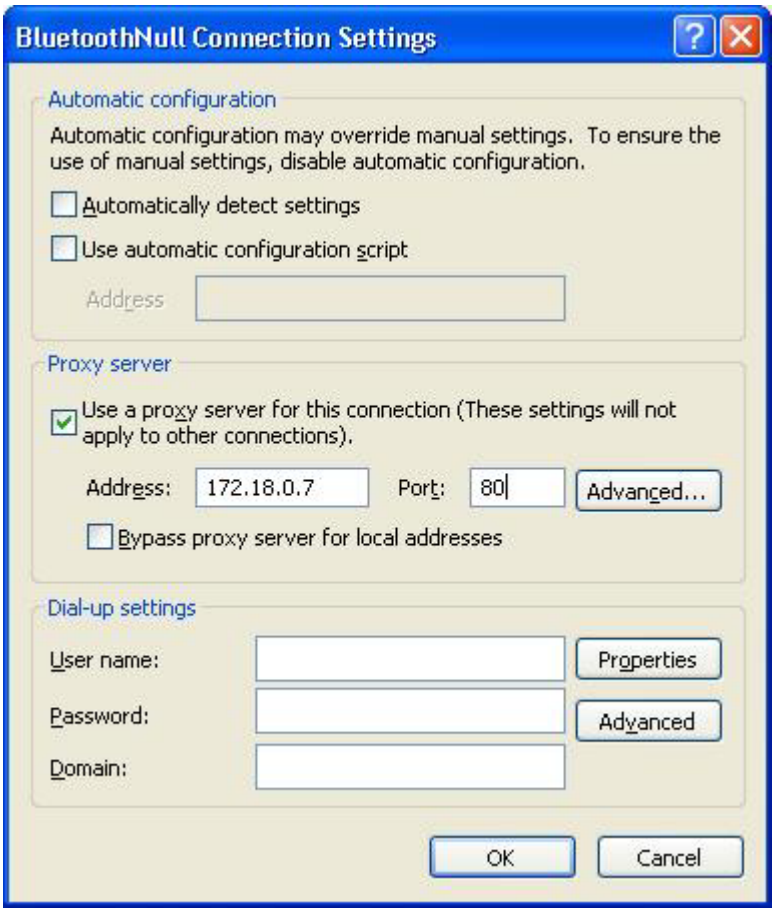
15.Now you can access the Internet via Bluetooth.

Note: *If your PC accesses the Internet via a proxy server, remember to configure the proxy setting of you browser program in the client PC. Consult your MIS personnel if you're not sure what to set.*

Proxy setup

1. To set up proxy, right click **"Internet Explorer"**, select **"Properties"**, select **"Connections"** tab. Select **"BluetoothNull Connection"** and click on **"Settings..."**.

2. Select the **"Proxy server"** checkbox and enter the proxy address of you company and Port number. Then click “**OK**” to save the changes.



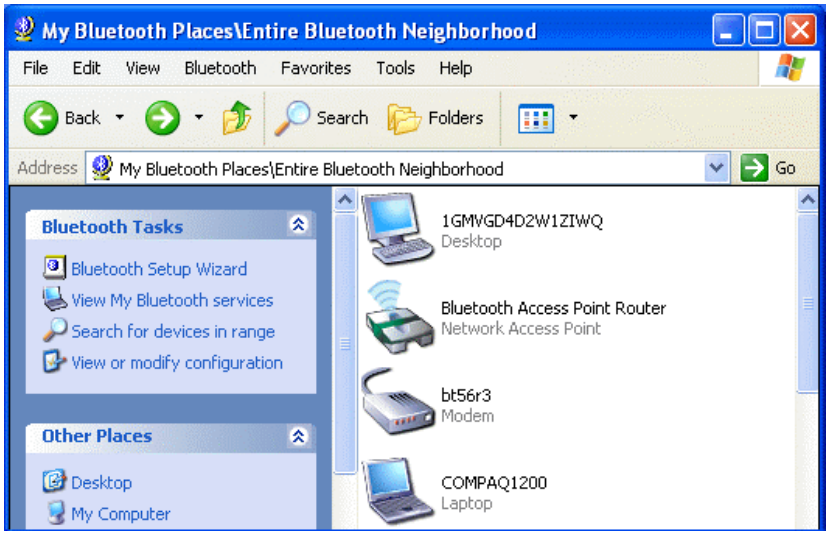
3.3. File transfer setting for Windows

The File Transfer service allows one Bluetooth device to perform file operations on the default File Transfer directory (and the folders and files it contains) of another Bluetooth device.

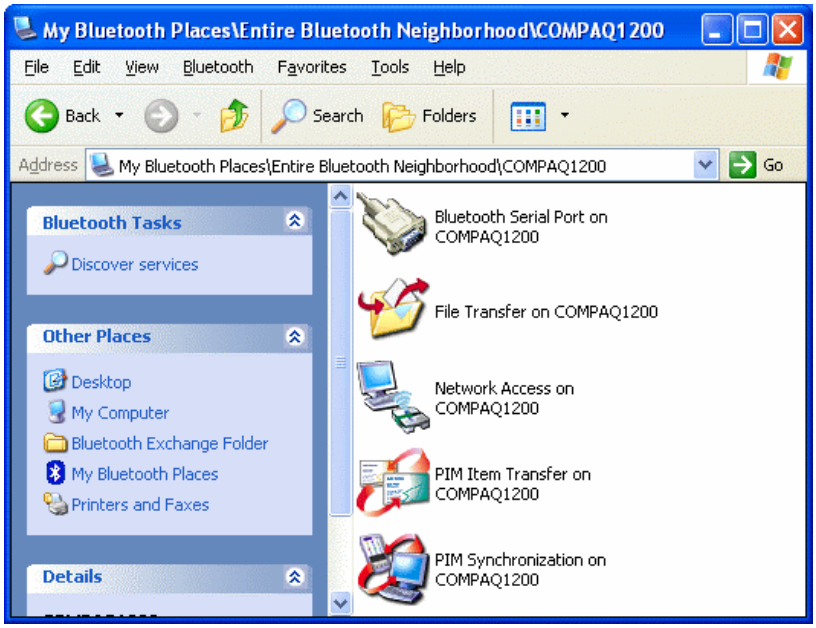
File transfer setting for Windows

PC to PC

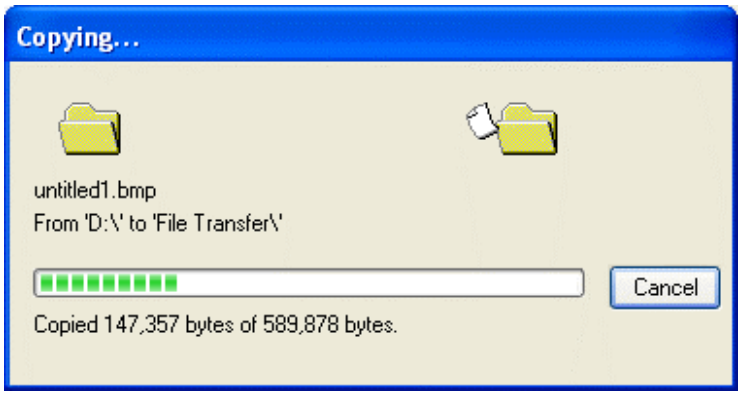
1. After successful USB adapter setup on two PCs, launch the Bluetooth software stack on both PCs by clicking the **"My Bluetooth Places"** icon located on the desktop.
2. On one PC only, double click on **"Entire Bluetooth Neighborhood"** icon to search for other Bluetooth devices nearby.



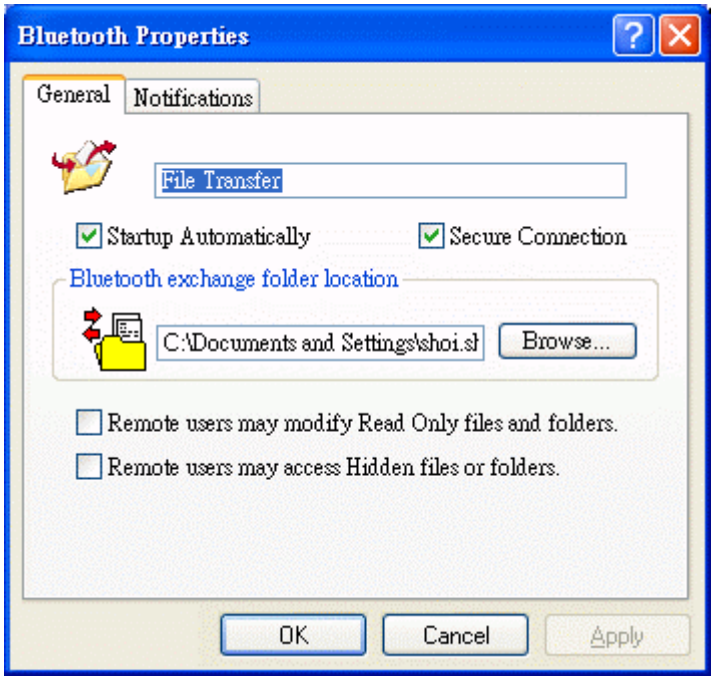
3. After searching is completed, locate the name of PC that you wish to transfer the file to and double click it to discover the Bluetooth services it has to offer (i.e. Bluetooth Serial Port, Dial-up Networking, File Transfer, Network Access, etc.).



4. Double click the **"Public Folder"** icon to open the Bluetooth shared folder on the other PC.
5. Locate the file you want to transfer to that PC and drag it into the **"Public Folder"** window.
6. At this time, a window will pop up to indicate that a file transfer connection is being established, and then file transfer will begin.



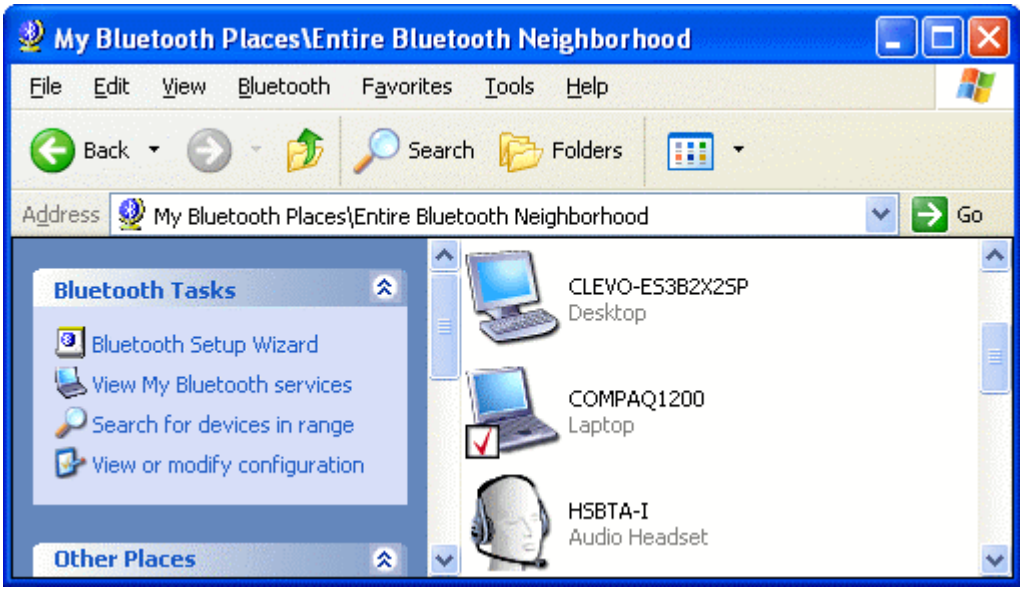
7. The file will be opened once the transfer is completed, if the **"Start Automatically"** checkbox is selected.


Bluetooth Properties
General
Notifications
File Transfer
Startup Automatically
Secure Connection
Bluetooth exchange folder location
C:\Documents and Settings\shoi.sl
Browse...
Remote users may modify Read Only files and folders.
Remote users may access Hidden files or folders.
OK
Cancel
Apply

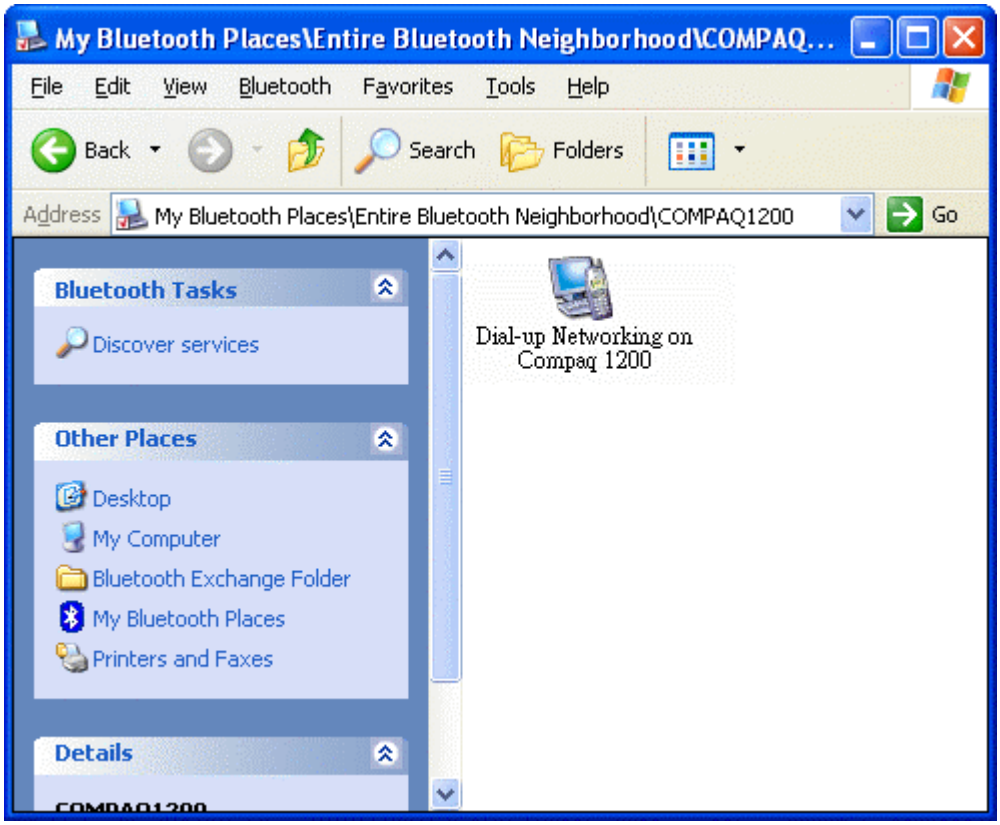
3.4. Dial-up networking setting for Windows

The Dial-up Networking service permits a Bluetooth client to use a modem that is physically connected to a different Bluetooth device (the server). After the Bluetooth wireless connection is established the client can use the server's modem as if it were a local device on the client.
To establish a Dial-up Networking session:
Dial-up networking setting for Windows
Connections are initiated from the client:

1. On the client, in the Folders pane of **"My Bluetooth Places"**, select **"Entire Bluetooth Neighborhood"**.
2. In the right pane of **"Entire Bluetooth Neighborhood"**, right-click anywhere *except on a device name* and select "**Refresh**" from the pop-up menu.
3. In the Folders pane of **"My Bluetooth Places"**, right-click the server that will provide the Dial-up Networking Service and select Discover Available Services from the pop-up menu to update the available services list. The available services will be displayed in the right pane of **"My Bluetooth Places"**.

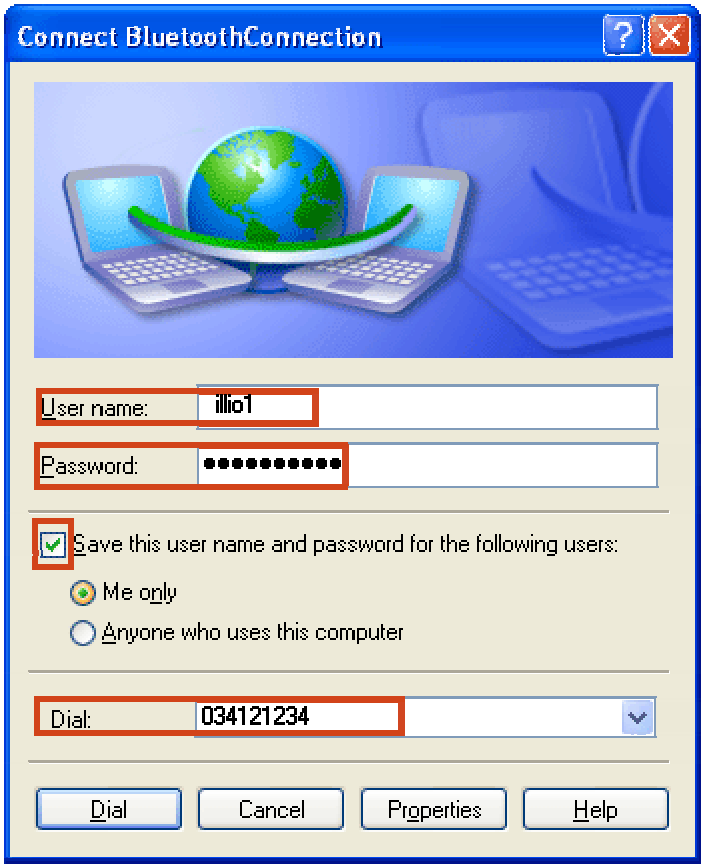


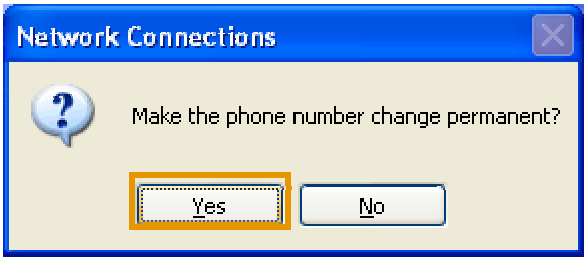
4. In the right pane of **"My Bluetooth Places"**, double-click **"Dial-up Networking"**.



5. In the “Connect To” dialog box, type in your user name, password, and the phone number to be dialed, and then click the "Dial" button.
6. Select the "Save password" checkbox and the dialog box will not appear for subsequent connections to the same phone number. You can now open a web browser and connect to the Internet.

Note: *When using the GPRS Dial up function, you do not have to type in the user name or password.*





To close a Dial-up Networking connection

1. On the client, in the Folders pane of **"My Bluetooth Places"**, select (highlight) the device that is providing the Dial-up Networking service.
2. In the right pane of **"My Bluetooth Places"**, right-click **"Dial-up Networking"** and then select **"Disconnect Dial-up Networking"** from the pop-up menu.

3.5. FAX setting

The Fax service allows a Bluetooth client to wirelessly send a fax using a device that is physically attached to a Bluetooth server.
FAX setting for Windows
To send a Fax
Connections are initiated from the client:

1. On the client, in the Folders pane of **"My Bluetooth Places"**, select **"Entire Bluetooth Neighborhood"**.
2. In the right pane of **"Entire Bluetooth Neighborhood"**, right-click anywhere except on a device name and select Refresh from the pop-up menu.
3. In the Folders pane of **"My Bluetooth Places"**, right-click the server that will provide the Fax service and select **"Discover Available Services"** from the pop-up menu to update the available services list. The available services will be displayed in the right pane of **"My Bluetooth Places"**.
4. In the right pane of **"My Bluetooth Places"**, double-click Fax. After the Fax connection is established, open or create the document to be faxed and use the **"Print"** or **"Send to Fax Recipient"** option available in most applications. The Fax connection closes automatically when the transmission is completed.

3.6. PIM Item Transfer setting

Overview
The Bluetooth PIM Item Transfer application allows this computer to send and receive Personal Information Manager items to-and-from a remote Bluetooth device. Item transfer can be accomplished several ways:
To send, receive or exchange business cards:

1. From Windows Explorer, My Bluetooth Places, right-click the PIM Item Transfer service on a remote device and select the appropriate option.

   or In the Windows system tray, right-click the Bluetooth icon, select Quick Connect Business Card Exchange, select a device from the list, select the appropriate option from the shortcut menu, and then click OK.

2. From Windows Explorer, My Bluetooth Places, highlight the PIM Item Transfer service on a remote device, and then, from the Bluetooth menu on the Windows menu bar, select the appropriate action.

   In addition to the business card options listed above, you can also send Notes (*.vnt), Email (*.vmg) and Calendar (*.vcs) items from this menu.

3. From within a supported Personal Information Manager, select one or more items and then, from the PIM's File menu, select Send to Bluetooth.

   Whether sent items are accepted by the remote device is determined by how the remote device's PIM Item Transfer service is configured.

Close a PIM Item Transfer Connection

This application closes the open connection automatically when its task is complete.

Configure PIM Item Transfer

The Bluetooth Configuration Panel > Client Applications > PIM Item Transfer > General tab provides options to configure:

- Click the application name to change it, highlight the existing name and enter the new name.
- Enable or disable secure connection. To enable secure connection, place a checkmark in the box.
- How your business card is handled when it is requested by a remote device. The Send My Business Card options are:

Choose a business card as needed-each time a remote device requests your business card you must select a card from your PIM. If you ignore the request the remote device will receive a timeout notice.

Always send the same business card-when this option is selected a dialog appears that allows you to set a default business card, which will be sent automatically when requests are received.

Where to store received business cards. The Received Business Cards options are:

Microsoft Outlook

Outlook Express

Lotus Notes

NOTE: The selected Received Business Cards option does not influence the settings on other PIM-related property pages.

For example, even if the PIM Item Transfer *service* business card option on this computer is configured to "Do Not Accept", the PIM Item Transfer *application* will still accept business cards that the application has specifically requested via its "Receive" or "Exchange" functions.

Email attachments. The only option is include or do not include attachments with email that is sent or received on this computer using this service.

3.7. PIM Synchronization setting

Overview

The PIM Synchronization Application is used to synchronize the Personal Information Manager (PIM) database of this computer with the PIM database of a remote Bluetooth device.

The supported PIMs are:

- Microsoft Outlook
- Microsoft Outlook Express
- Lotus Notes

The supported data types are:

- Business cards
- Calendar items
- Email (with or without attachments)
- Notes

Configure PIM Synchronization

The Bluetooth Configuration Panel > Client Applications > PIM Synchronization > General tab provides options to configure:

- The application name- to change it, highlight the existing name and enter the new name.
- Enable or disable secure connection. To enable secure connection, place a checkmark in the box.
- The PIM items to be synchronized and the PIM on this computer with which those items should be synced.

NOTE: *If synchronization is enabled for a specific item type, but is not enabled for that item type on the remote device, synchronization WILL NOT take place for that item.*

The data item types which can be synchronized are:

- Business cards
- Calendar items
- Email (with or without attachments-see below)
- Notes

Possible synchronization options for each of these data item types include:

Do Not Synchronize-this item type will not be synchronized

Synchronize Microsoft Outlook-this item type will be synced with its matching entry in Microsoft Outlook, regardless of the PIM that contains this entry on the remote device. If a matching Outlook entry does not exist, it will be created

Synchronize Outlook-Express-this item type will be synced with its matching entry in Express, regardless of the PIM that contains this entry on the remote device. If a matching Express entry does not exist, it will be created

Synchronize Lotus Notes-this item type will be synced with its matching entry in Lotus Notes, regardless of the PIM that contains this entry on the remote device. If a matching Notes entry does not exist, it will be created.

NOTE: All choices are not available for all items. For example, Notes items can only be synchronized in Microsoft Outlook, therefore Lotus Notes and Outlook Express do not appear as options in the "Notes" item shortcut menu.

Personal Information Managers that are not installed on this computer do not appear as options in the shortcut menus.

Email attachments. The only option is include or do not include attachments with email that is sent or received on this computer using this service.

3.8. Serial port setting

The Bluetooth Serial Port service allows two Bluetooth devices to establish a wireless connection through virtual communications ports and then use that connection as if it were a hardwired serial cable between the devices.
To establish a Bluetooth serial port connection:
Connections are initiated from the client:

1. On the client, in the Folders pane of **"My Bluetooth Places"**, select **"Entire Bluetooth Neighborhood"**.
2. In the right pane of **"Entire Bluetooth Neighborhood"**, right-click anywhere *except on a device name* and select **"Refresh"** from the pop-up menu.
3. In the Folders pane of **"My Bluetooth Places"**, right-click the server you want to establish a connection with and select **"Discover Available Services"** from the popup menu to update the available services list. The available services will be displayed in the right pane of **"My Bluetooth Places".**
4. In the right pane of **"My Bluetooth Places"**, double-click **"Bluetooth Serial Port"**. A dialog box appears that contains the communications port number assigned to this connection by the client. The application that will use this connection must be configured to send data to this port.

Depending on the security configuration, the dialog box that provides communications port information may not appear until after Authentication and Authorization have been accomplished.

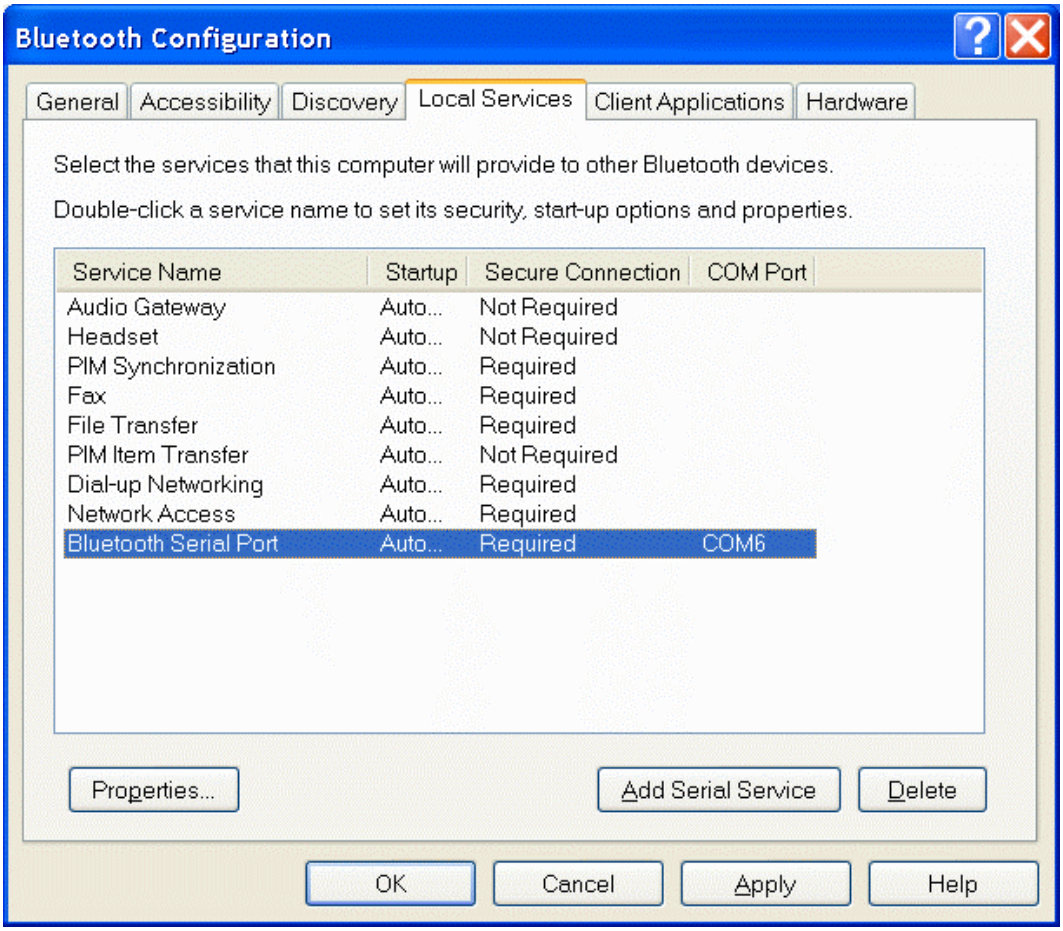
The application on the server must be configured to use the correct communications port.

To determine the communications port being used by the service:
* On the server, in the Folders pane of **"My Bluetooth Places"**, right-click **"My Device"** and select **"Properties"** from the pop-up menu
* In the **"Bluetooth Configuration Panel"**, select the **"Local Services"** tab.
* Double-click the **"Bluetooth Serial Port"** service to display its **"Service Properties"** dialog box. The **"Service Properties"** dialog box shows the communications port the connection is using.
To close a Bluetooth serial port connection
Connections are normally closed from the client:
* On the client, in the Folders pane of **"My Bluetooth Places"**, select (highlight) the device that is providing the **"Bluetooth Serial Port"** service.
* In the right pane of **"My Bluetooth Places"**, right-click **"Bluetooth Serial Port"** and then select **"Disconnect Bluetooth Serial Port"** from the pop-up menu. Though not recommended, connections can also be closed from the server:
* On the server, in the Folders pane of **"My Bluetooth Places"**, select (highlight) **"My Device".**
* In the right pane of **"My Bluetooth Places"**, right-click **"Bluetooth Serial Port"** and then select Stop to close the service. The service must be re-started before it will be available to remote devices (right-click Bluetooth Serial Port and select Start from the pop-up menu).

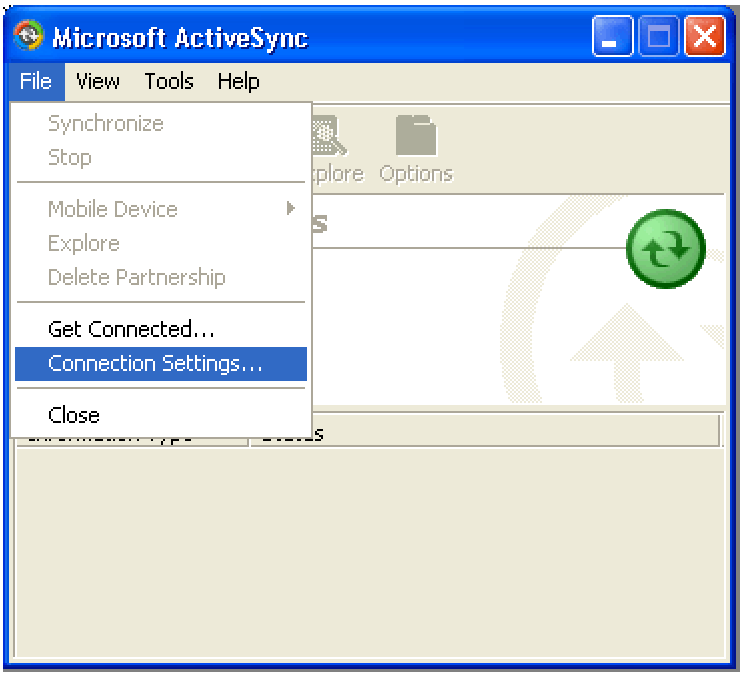
3.9. ActiveSync setting

ActiveSync setting for Windows

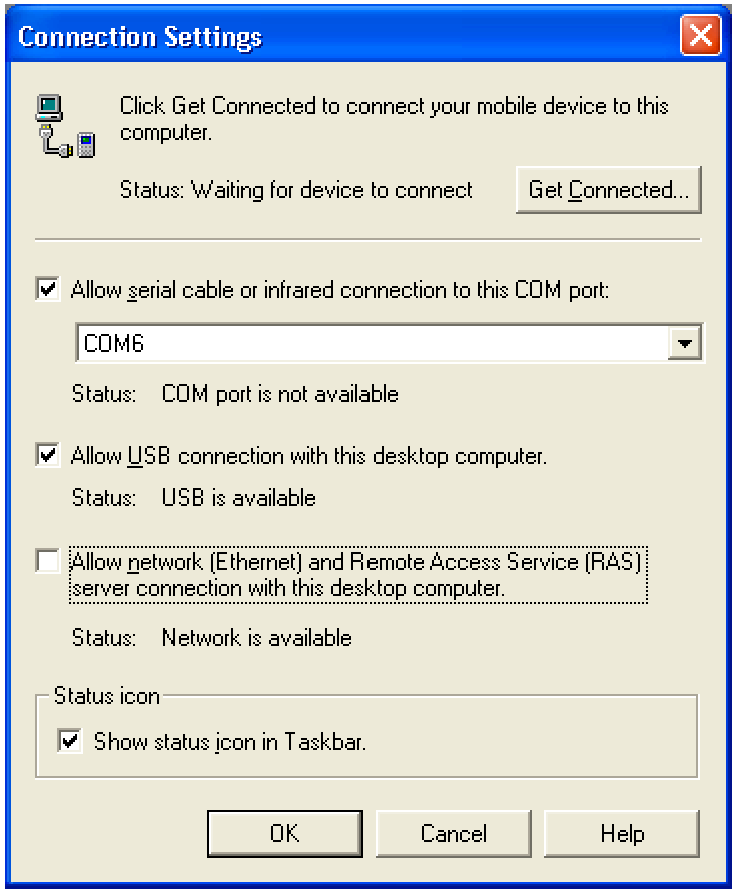
1. Right-click on ***Bluetooth Configuration*** icon from the toolbar in the desktop window. Select ***Setup*** and then open ***Configuration*** window.
2. Select ***Local Service*** tab from the Bluetooth Configuration window. In the ***Service Properties*** window, please learn by heart the current COM port this computer uses, for example: COM 6, in order to identify this value with the configuration of Microsoft ActiveSync later.



3. In the *Microsoft ActiveSync* window, select ***Connection Settings...*** from drop-down list of File menu.



4. Choose the same COM port. (in this case, it is COM 6 that Bluetooth Serial port uses shown in the Step 2.)



5. Please refer to the PDA ActiveSync Setting to complete the Bluetooth ActiveSync Configuration Process