

User Interface

**BL-500, BL-565 and BL-554 in Windows 98,
ME, 2000 and XP**

Version: 1.1



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2. Introduction

The Brain Boxes Bluetooth software suite is designed to enable easy connection between devices containing Brain Boxes Bluetooth hardware and other Bluetooth enabled devices.

This document will give an overview of the use of the 'My Bluetooth Devices' Interface. The information contained in this overview will by its nature be generic and does not necessarily reflect the behaviour when interoperating with your specific device.

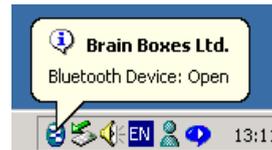
For information relating to connecting to specific devices see the interoperability guides.

For information relating to installing the software, please refer to the product installation guides for your product/operating system combination.

3. Opening the Interface

After completing the software installation, double clicking the **My Bluetooth Devices Icon** on your desktop you will open the My Bluetooth Devices explorer window. This will also start the installed Bluetooth Hardware. If you have not altered the default configuration, this will also begin a device discovery.

An alternative method of opening the user interface is to click the Brain Boxes icon in the system tray.

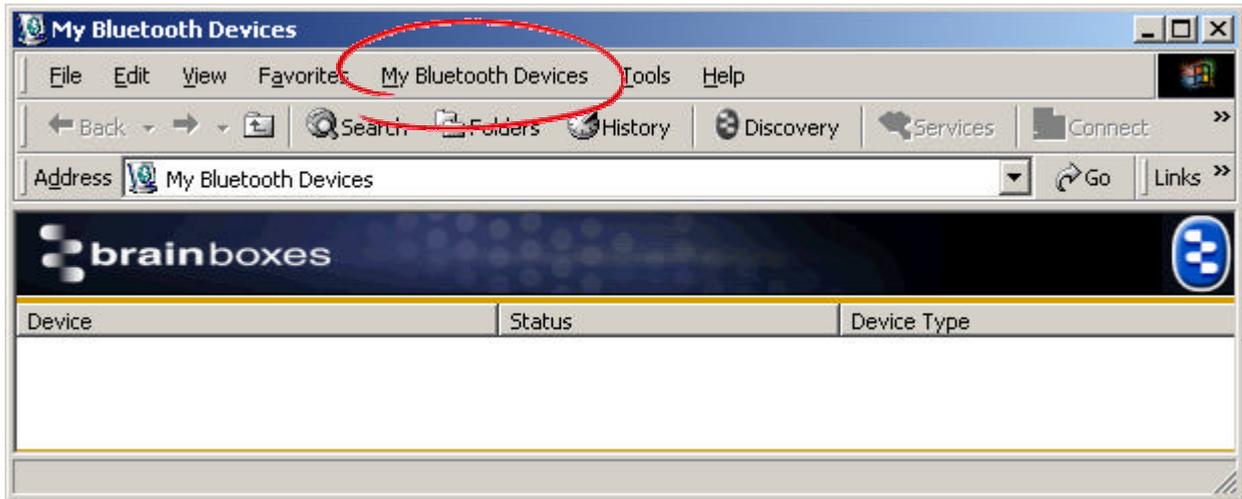


4. Using the Interface

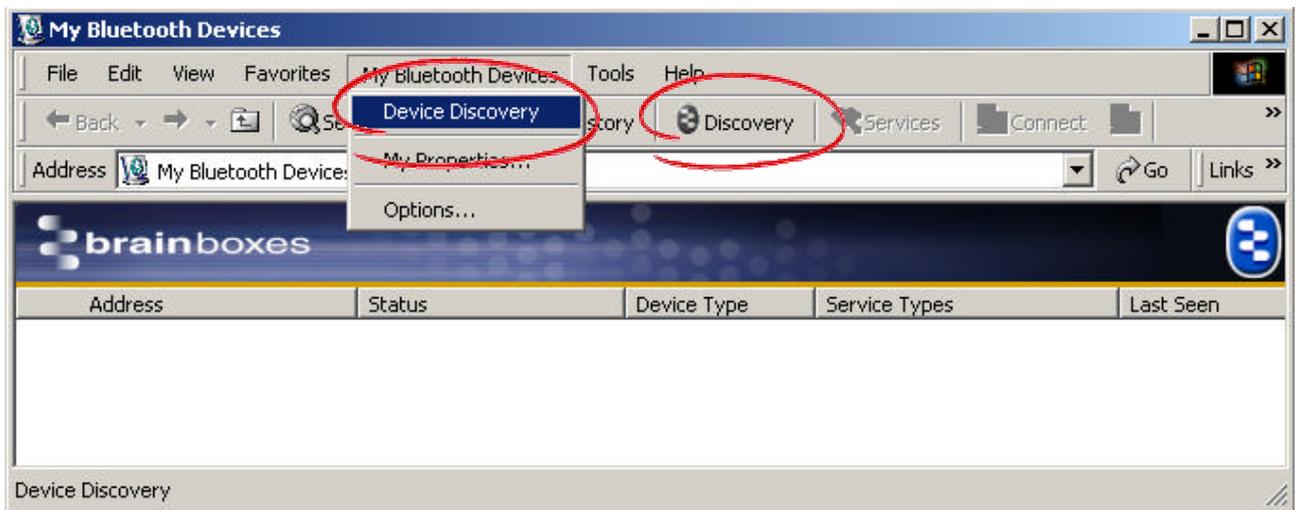
As Brain Boxes Bluetooth Software Suite user interface is built as a Windows Explorer extension, it's operation should be fairly intuitive. However, as with all new technologies, some of the specific's need to be explained rather more fully.

4.1. Menu Bar

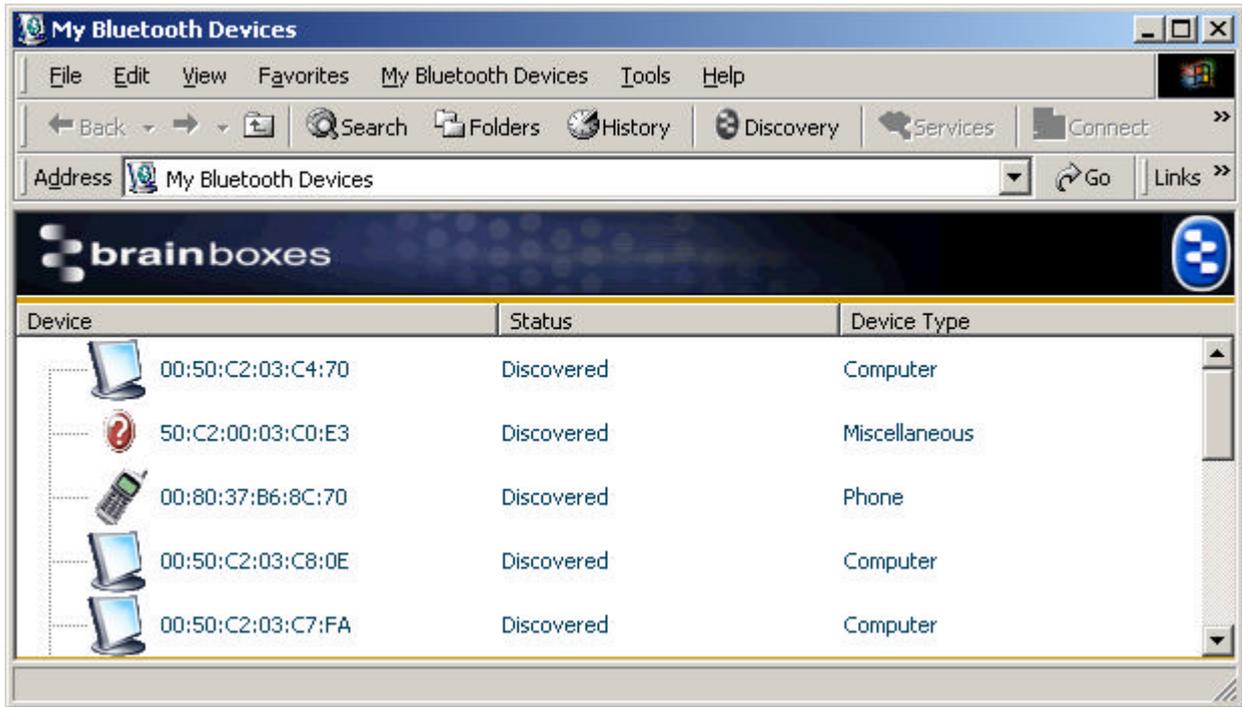
The only non-standard windows item on the menu bar is the **My Bluetooth Devices** item as shown below. This menu contains three items. **Device Discovery**, **My Properties** and **Options**, each of which will be explained more fully further below.



4.1.1. Device Discovery

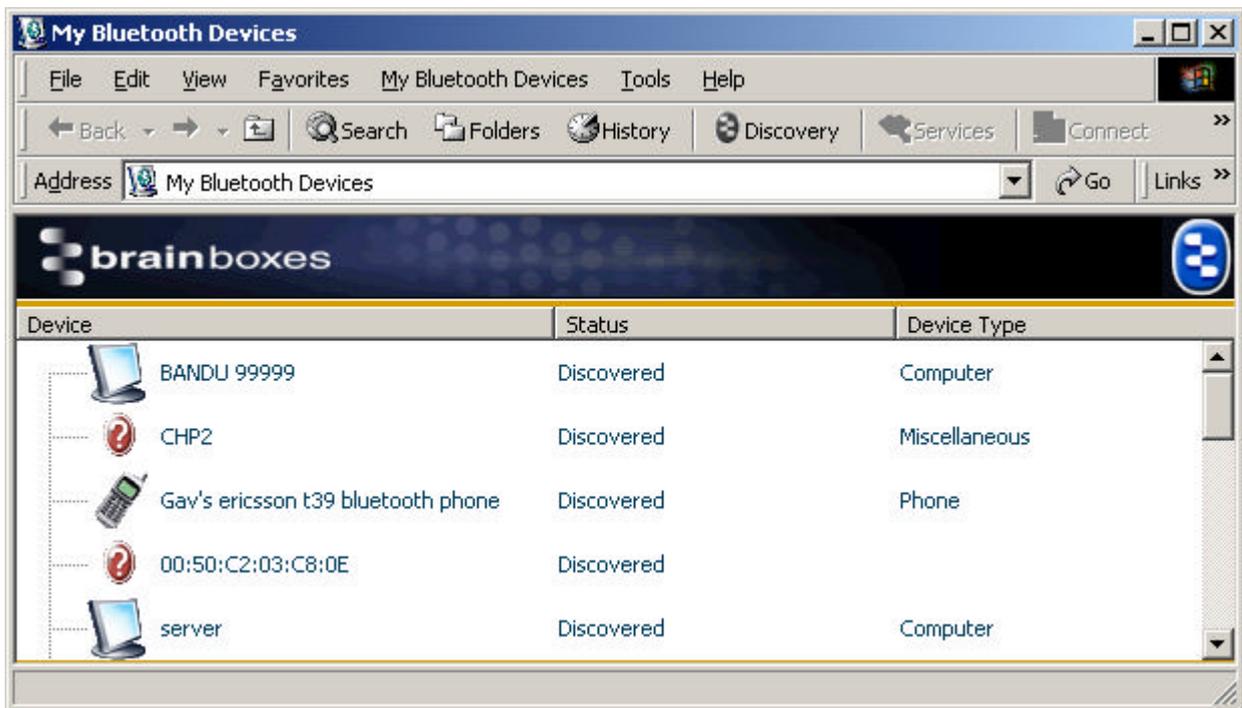


Selecting **Device Discovery** from either the menu or from the explorer toolbar, will perform a search for all Bluetooth enabled devices that are discoverable locally.



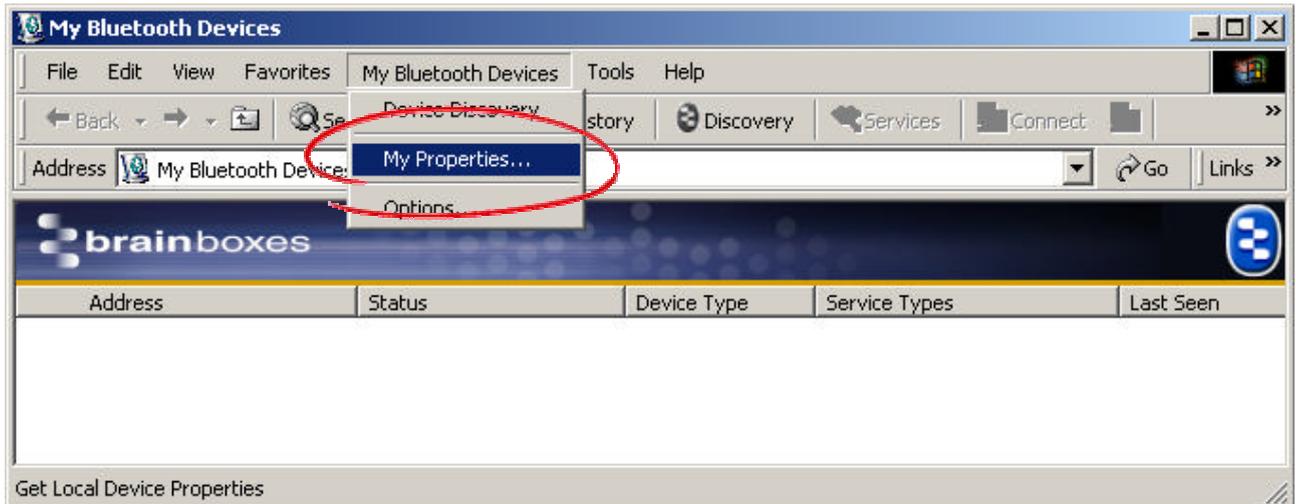
Devices discovered will be listed in the **My Bluetooth Devices** window as shown above.

Devices will be first displayed using their Bluetooth address, as shown above. The default behaviour of the interface is to then automatically determine it's name which takes further time, shown below. For details of how to alter this behaviour see **My Bluetooth Devices – Options – General**, below.

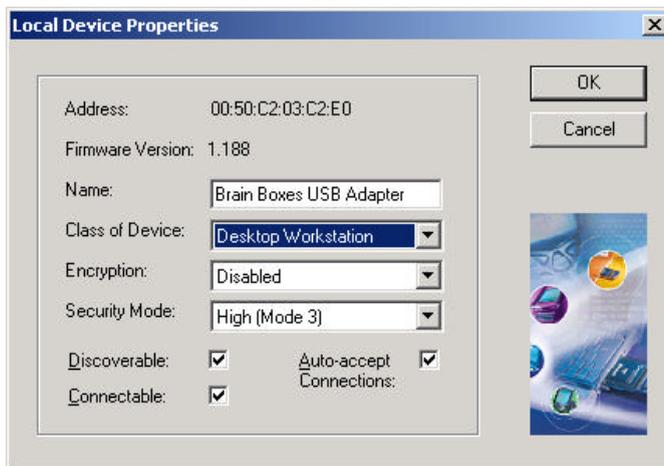


The operation has completed when the icon has stopped spinning. E.g.  Changes to . No other bluetooth operations may be carried out until the current operation has completed.

4.1.2. My Bluetooth Devices – Local Device Properties



Selecting the Local Device Properties item from either the menu or from the explorer toolbar, enables you to change the properties of the Bluetooth Hardware that is installed in your machine.



Address: This field simply displays the unique Bluetooth address programmed onto your hardware. This cannot be modified, as each Bluetooth device MUST have a unique address.

Firmware Version: This field reports the version of firmware that is loaded onto your hardware.

Name: In this section you can name your Bluetooth hardware. This name will be discovered by other bluetooth enabled devices. It is stored on the card and so will retain it's name when you plug the hardware into a different computer.

Class of Device: From this drop down menu you can select the type of device that the card is in. Choose from "Desktop Workstation", "Laptop Computer" and "PDA".

Encryption: This enables different types of data encryption. Allowed values are "Disabled" (default), "Point-to-Point Packets", and "Point-to-Point & Broadcast Packets"

Security Mode: for Incoming Connections: Select "high" if you want to insist that any device connecting to you must do so with a PIN. Select "Low" if you don't care about anyone just connecting to your services.

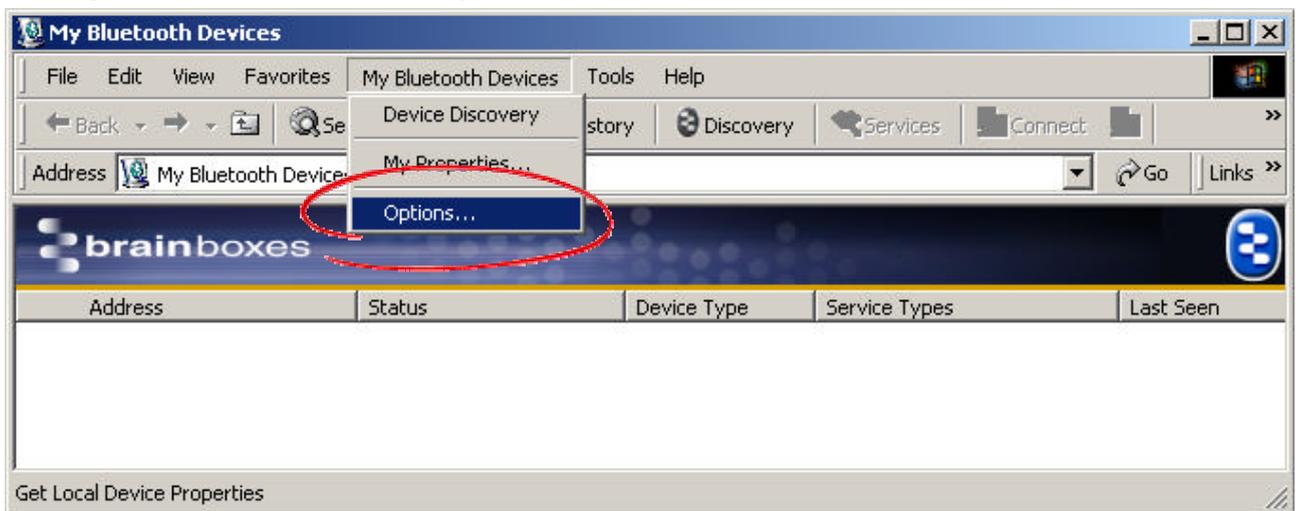
Discoverable: This enables your card to be discovered by other bluetooth enabled devices. Default is checked to allow other devices to find you.

Connectable: This enables other bluetooth enabled devices to connect to you. This needs to be enabled to allow services to be discovered. Default is checked.

To be connectable your card must also be discoverable.

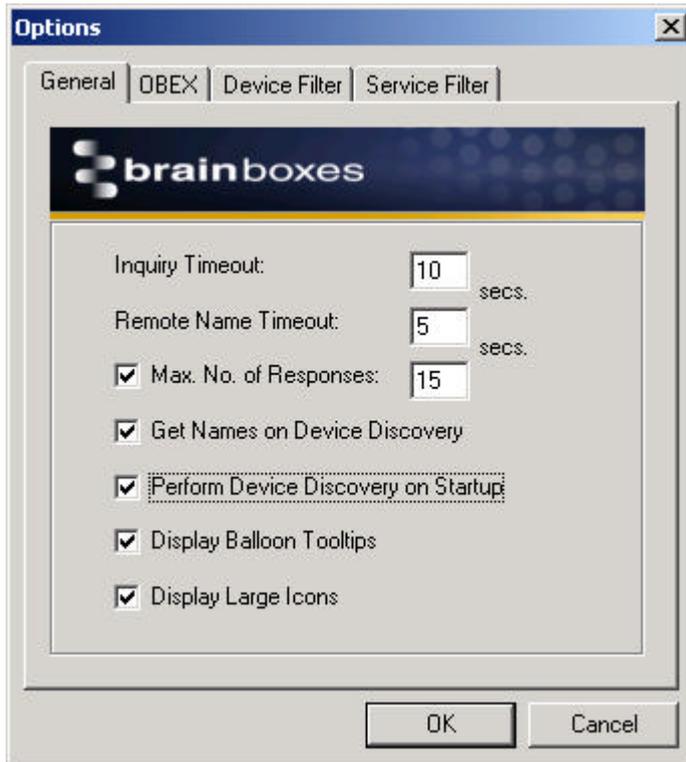
Auto-accept Connections: Without this option checked you will be prompted with a message box every time a remote Bluetooth device tries to connect to you, otherwise, leave it selected and the Brain Boxes software will automatically allow and make the connection for you.

4.1.3. My Bluetooth Devices – Options



Selecting **My Bluetooth Devices – Options** will allow you to control the behavior of the My bluetooth devices interface. There are a number of options, **General**, **OBEX**, **Device Filter** and **Service Filter**, all of which are described in further detail below.

My Bluetooth Devices – Options – General



Inquiry Timeout : Enables you to set a maximum duration for the discovery of remote Bluetooth devices. You can enter a value of between 10 and 120 seconds. Default is 10 seconds

Remote Name Timeout: Enables you to set a maximum time for remote name search for each device discovered. You can enter a value of between 1 and 40 seconds. Default is 10 seconds

Max. No of Responses: This is to enable you to limit the number of devices found during discovery. You can enter a value of between 1 and 255 seconds. Default is 15.

Get Names on Device Discovery: Checking this option will automatically retrieve the names of discovered devices. This may add significantly to device discovery time. Default is checked. Leaving this box unchecked will mean that all remote devices are listed using only their Bluetooth address.

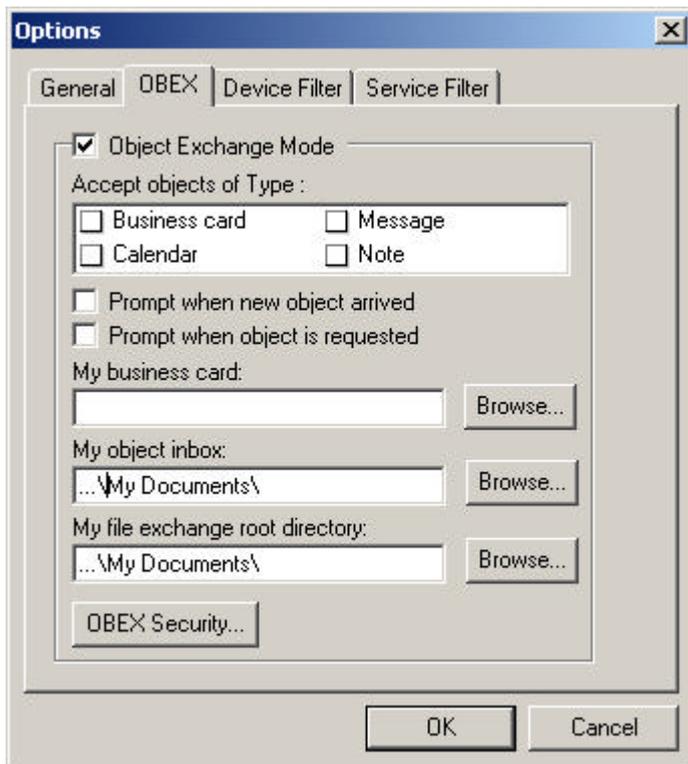
Perform Device Discovery on Startup: By selecting this option a device discovery is automatically performed when the computer starts. Default is checked.

Display Balloon Tips: By selecting this option balloon tips will be shown on mouse rollover. Default is checked.

Display Large Icons: By selecting this option you can switch between ICON display types. Default is to display large icons.

My Bluetooth Devices – Options – Obex

OBEX, or information exchange is used to transfer particular types of information between devices.



Object Exchange Mode : This check box is used to control the availability of this service. Default is for the service to be enabled, thus remote devices will be able to send you objects and receive your business card and any files available in your shared directory.

Accept Objects of Type : This option allows you to restrict the types of object you will allow remote devices to send. As a security measure the default option is to not accept any objects.

Prompt when new object arrived: This option allows you to be informed when remote devices have sent you some information. To avoid the user being swamped by notification messages, the default for this option is for no notifications to be issued.

Prompt when object is requested: This option allows you to be informed when remote devices have requested information from you. It allows you to exercise some control over who you allow to see your data. To avoid the user being swamped by notification messages, the default for this option is for no notifications to be issued.

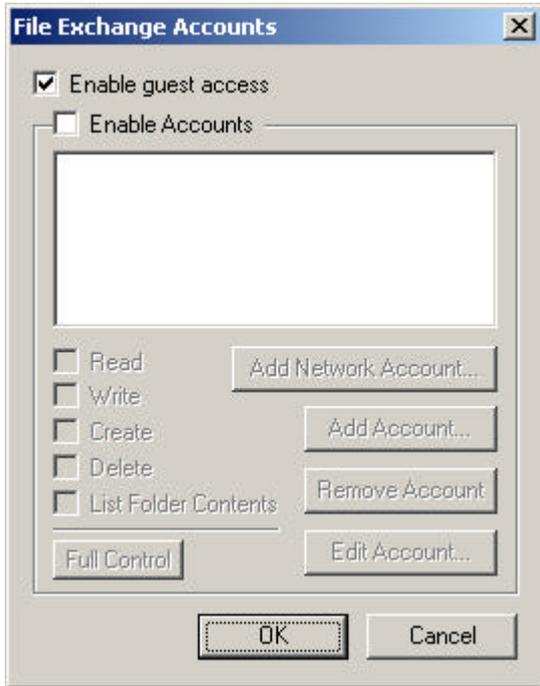
My business card: This is the location of your business card. No default business card is supplied. Business cards can be created from applications like Outlook – See your application’s documentation for details on how to do this.

My object inbox: This is the location where all incoming objects are saved to, whether requested, or just sent. The Default is your “My Documents” – you can alter this to any location you require.

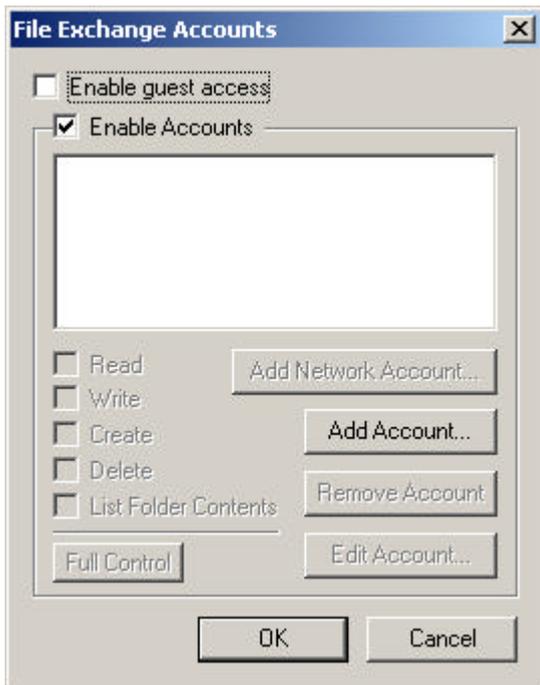
My file exchange root directory: This is the location which remote devices will see when performing a “file exchange” operation. The Default is your “My Documents” – you can alter this to any location you require.

MY BLUETOOTH DEVICES – OPTIONS – OBEX- SECURITY

OBEX has built in security mechanisms to protect you against unauthorised access to your device. However, to avoid too many complexities when setting up your device for the first time, guest access is enabled by default. This means that, in principle, anyone connecting to you via this service will be granted access.



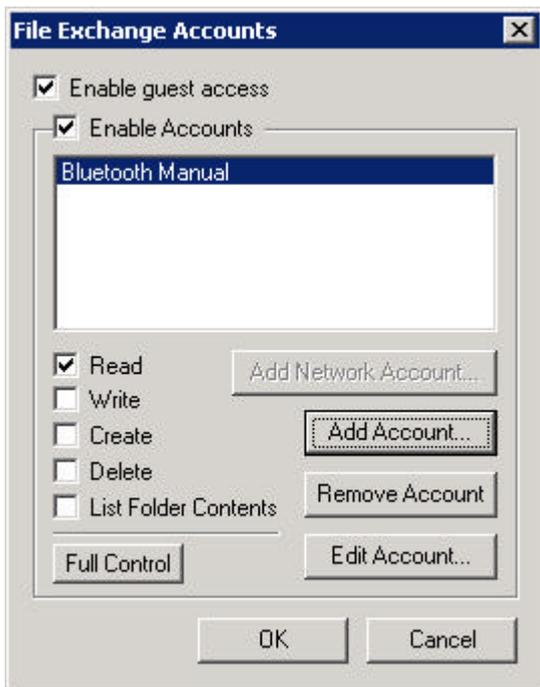
If you wish to restrict access to particular users you can check the **'Enable Accounts'** option. Selecting this option does not automatically disable the guest access, so you can remove this manually if required.



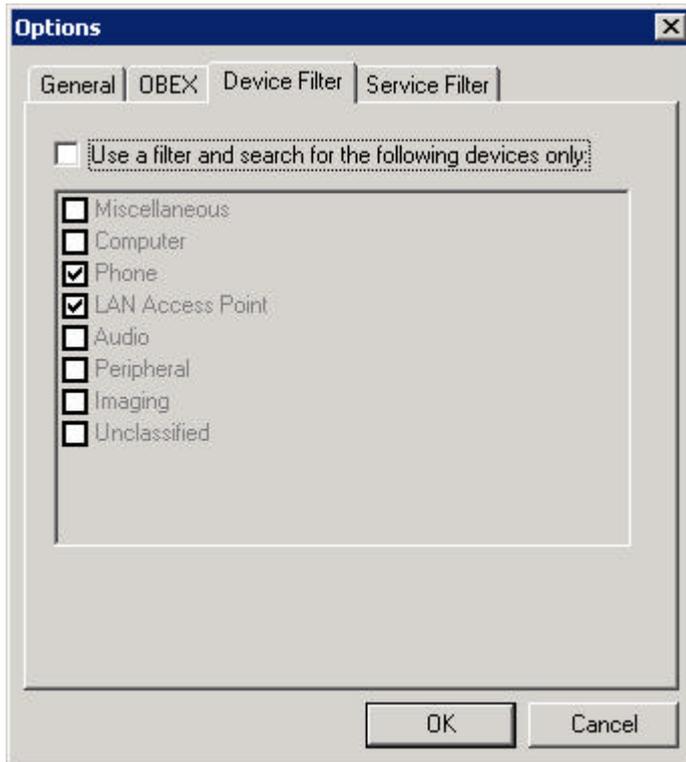
Clicking **"Add Account"** brings up the following dialogue into which new OBEX account names can be entered.



Clicking "OK" returns you to the main OBEX security dialogue from where you can assign priviledges to the new accounts you have set up. In the example shown below, we have enabled the "Bluetooth Manual" account to have Read Only access to our OBEX objects. This means that nothing can be created, deleted or overwritten from our shared resources.



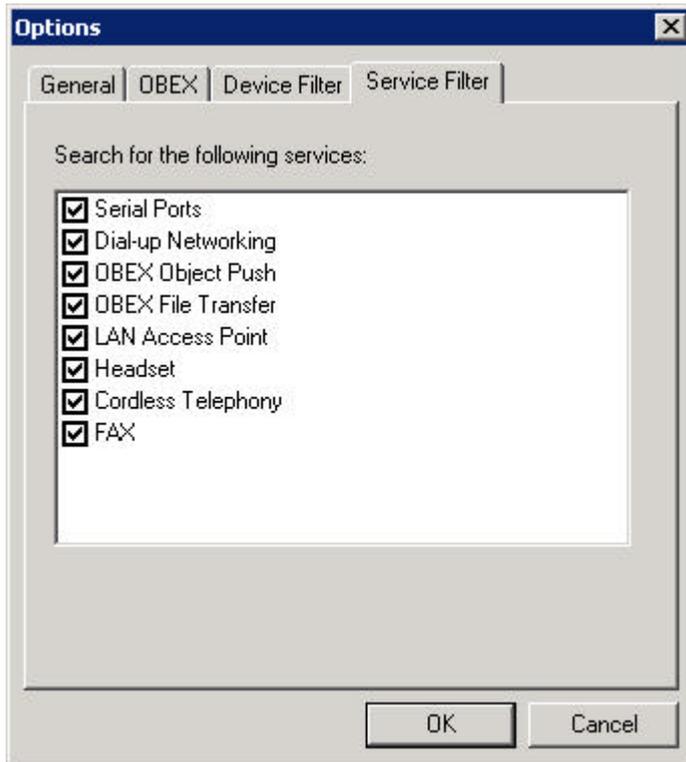
My Bluetooth Devices – Options – Device Filter



By checking the appropriate boxes you are able to limit your device discovery search to find only the devices that you require. The default setting is to have this device filter unchecked which means ALL devices will be shown. This option is particularly useful if you only wish to connect to certain types of devices (e.g. Lan Access Points) when there are a large number of other Bluetooth devices in range.

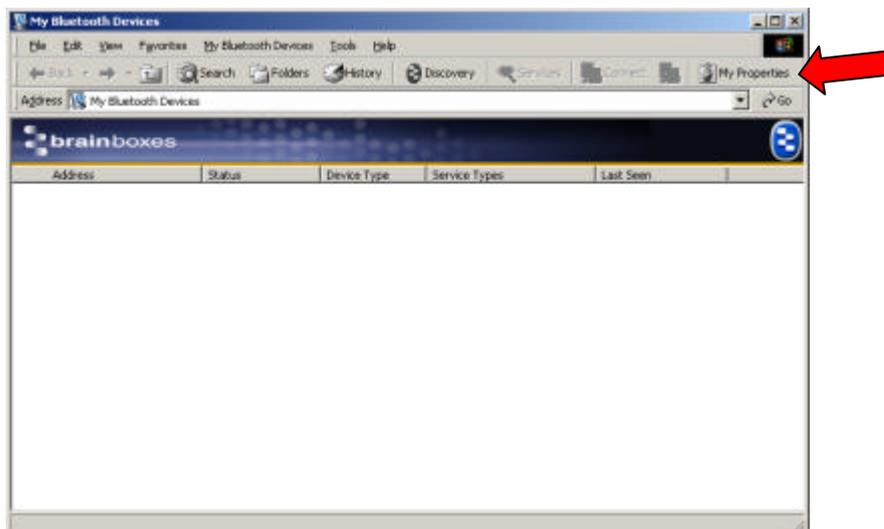
If you have previously performed a discovery without the filter applied, all previously found devices will still be listed.

My Bluetooth Devices – Options – Service Filter



By checking the appropriate boxes you are able to limit your service search on discovered devices to the services you require

4.2. My Bluetooth Devices Toolbar



Discovery : Clicking Discovery will perform a search for all Bluetooth enabled devices that are discoverable and in range.

Services: Selecting a device in the discovery pane and clicking the Services icon will perform a service search on the selected device.

Connect: Selecting a device or service in the discovery pane and

clicking the Connect icon will create a connection. You may need a pin number depending on the device that you are attempting to connect to.

While connected the disconnect icon will become active and clicking on this will break the connection.

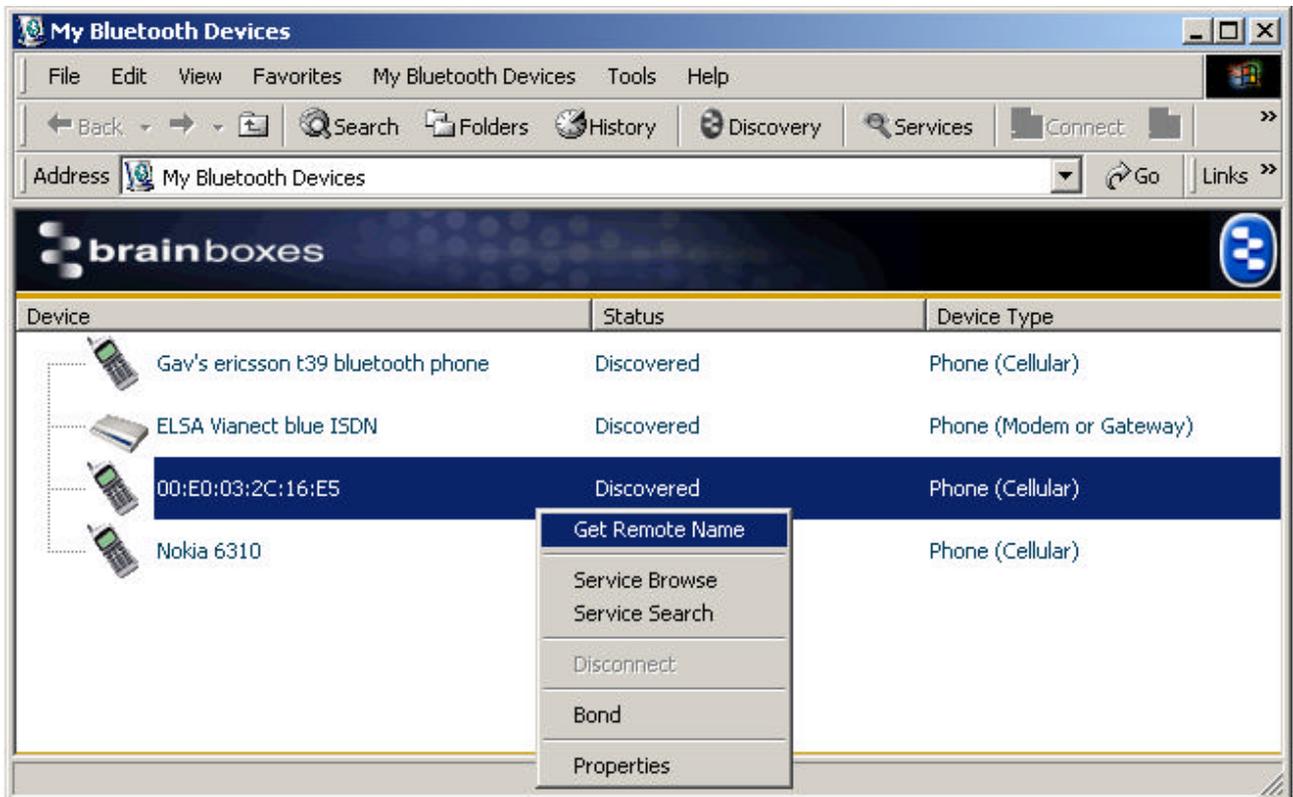
My Properties: Clicking this icon will open the Local Device Properties dialog. This is detailed on Page 16.

4.3. Remote Devices

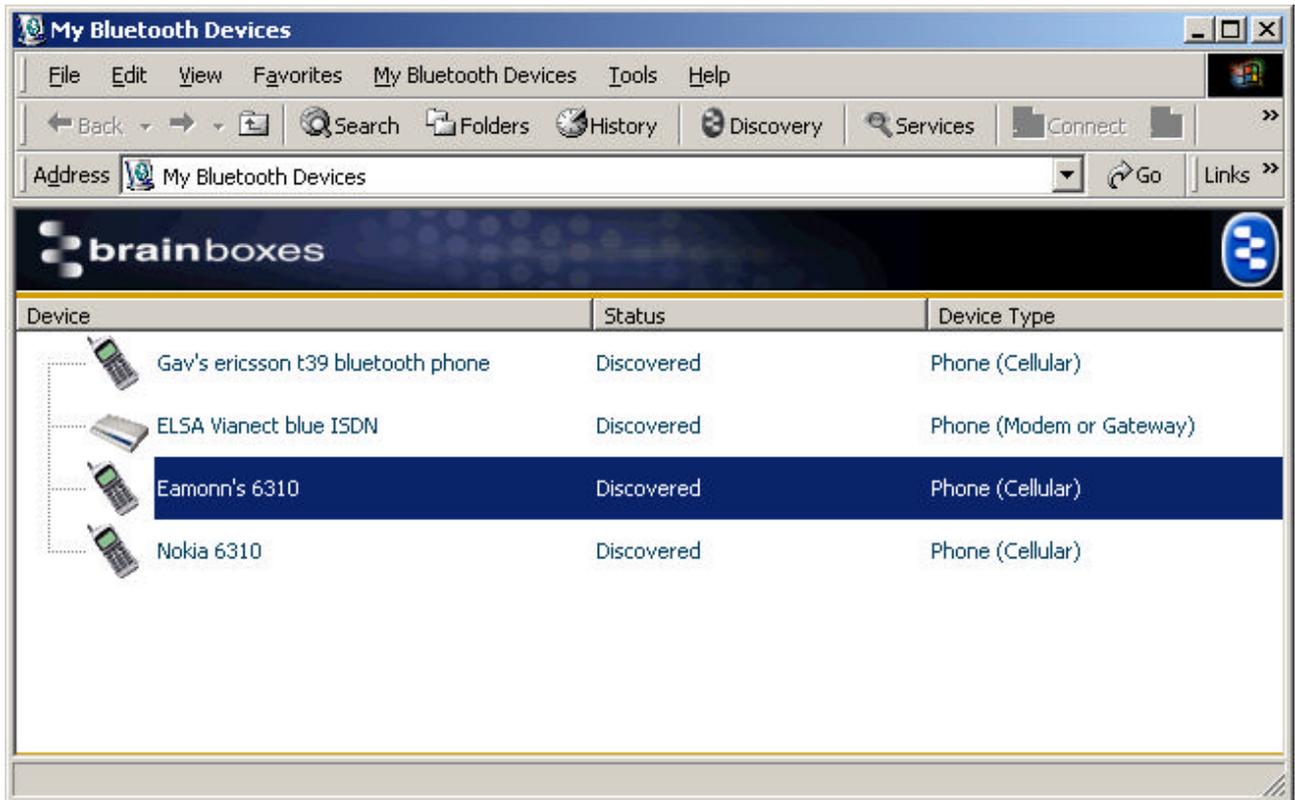
Right Clicking on any remote device listed in the User Interface brings up an additional context menu offering further functionality as described below.

4.3.1. Get Remote Name

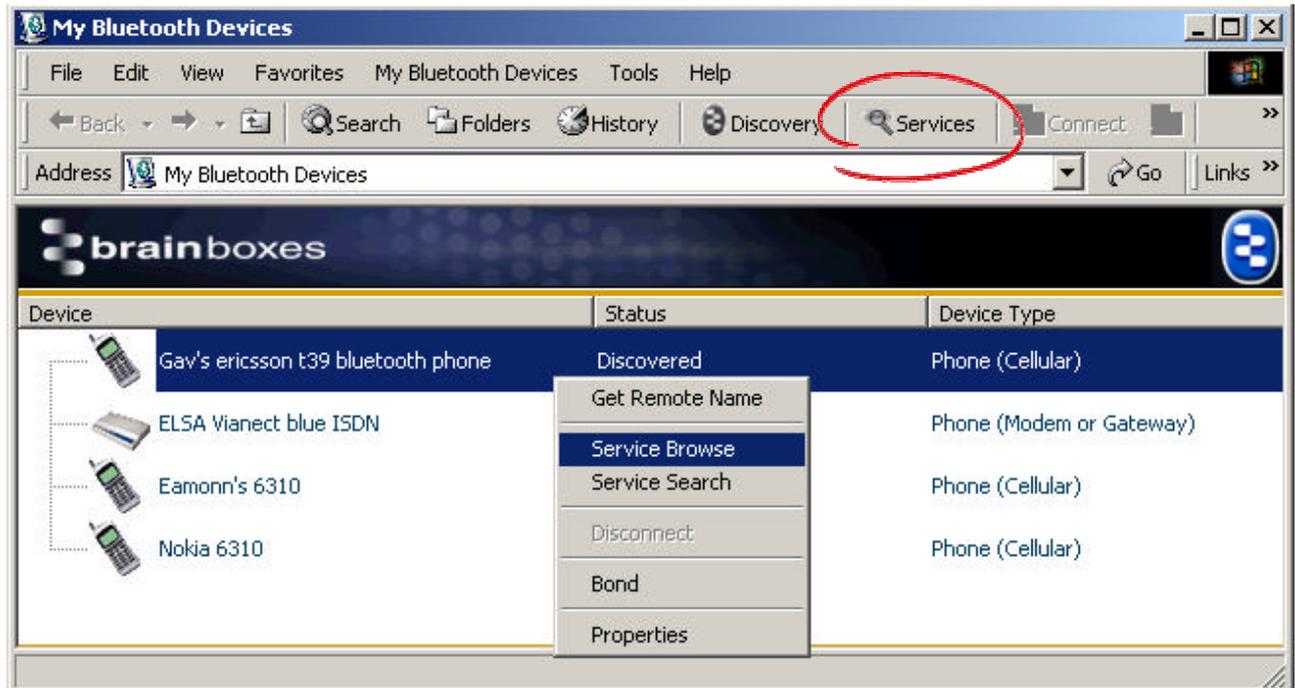
In some instances remote devices may only be listed by giving it's Bluetooth address. In others, a remote devices name may change and the user may wish to update the User Interface to reflect this new name.

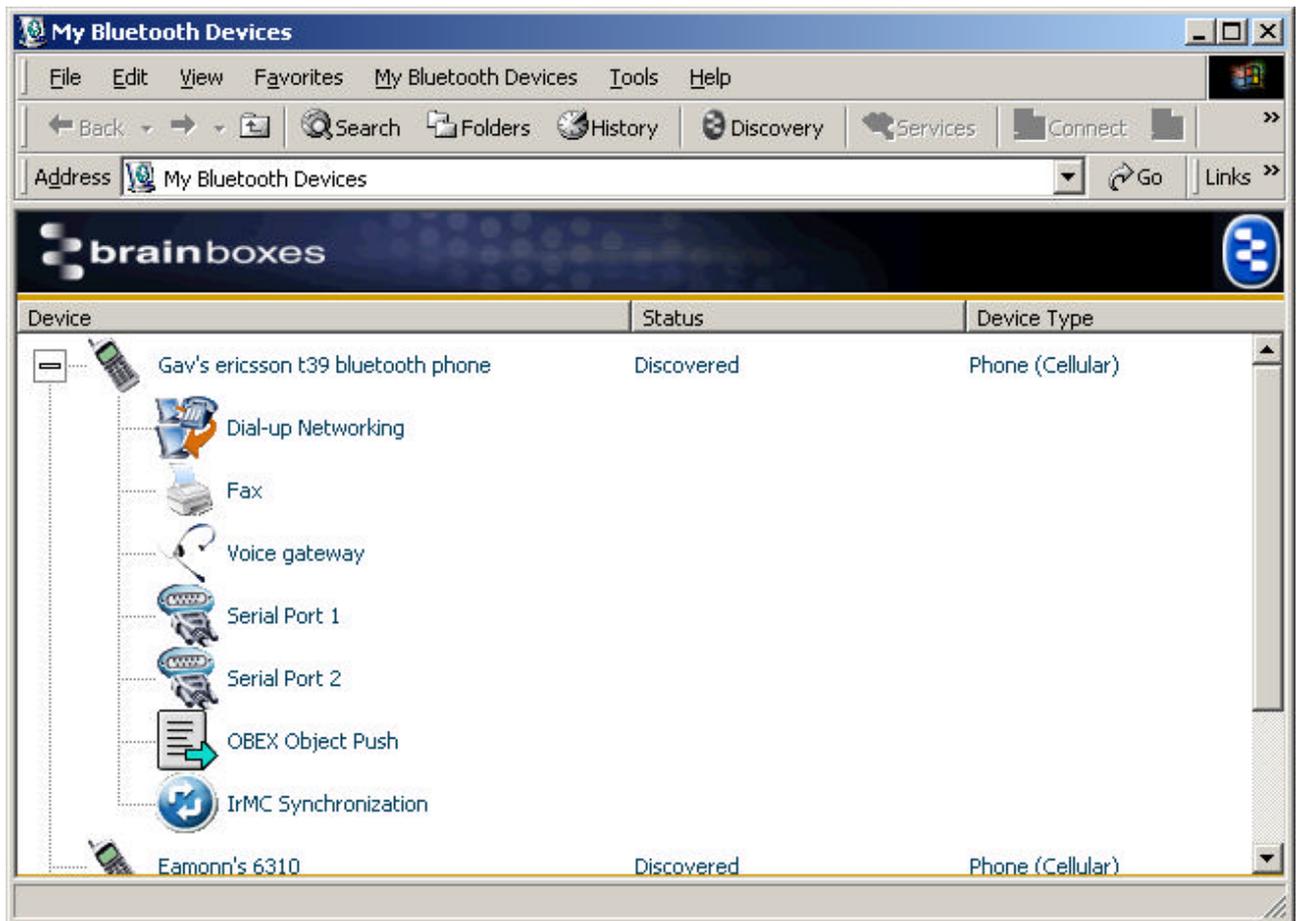


Bringing up the context menu by right clicking the particular remote device you are interested in and clicking the “**Get Remote Name**” option will retrieve the remote devices name as you can see demonstrated below. If this fails to retrieve the name, try increasing the **Remote Name Timeout** as shown in **My Bluetooth Devices– Options– General**.

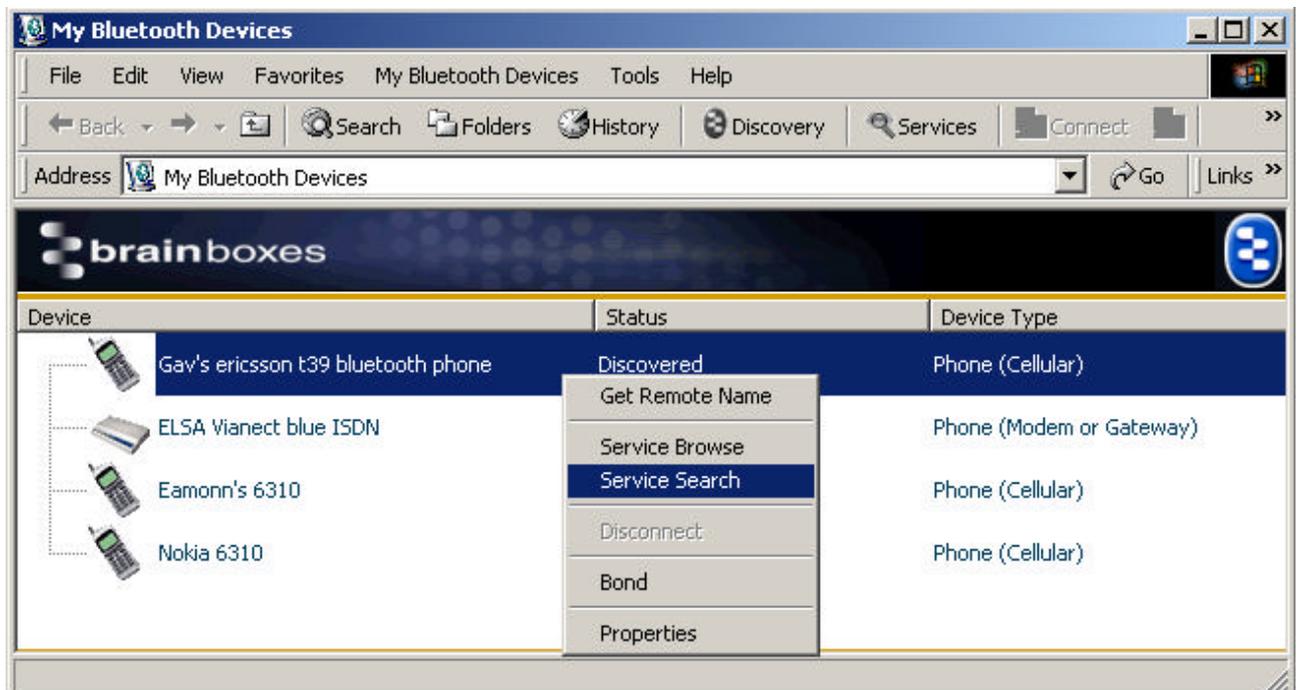


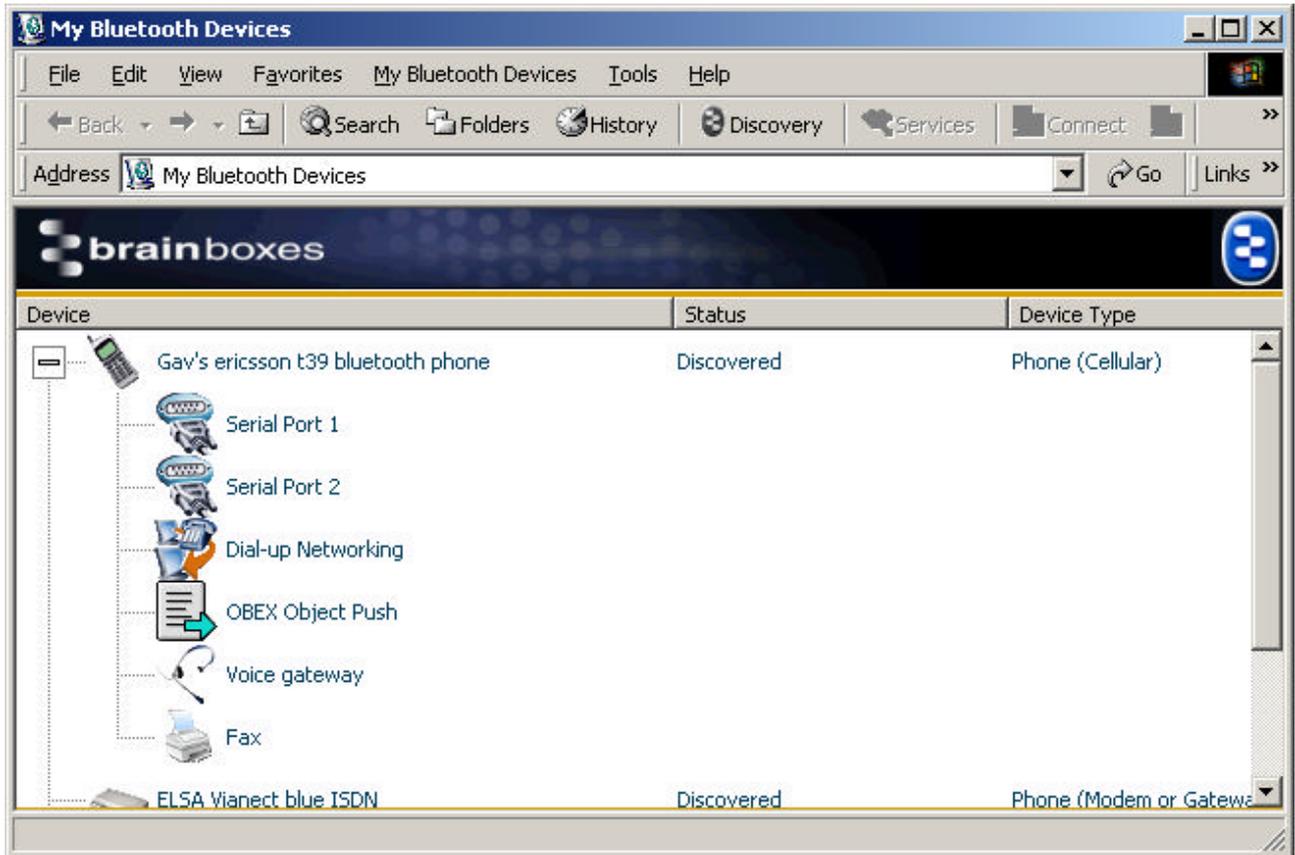
4.3.2. Service Browse





4.3.3. Service Search

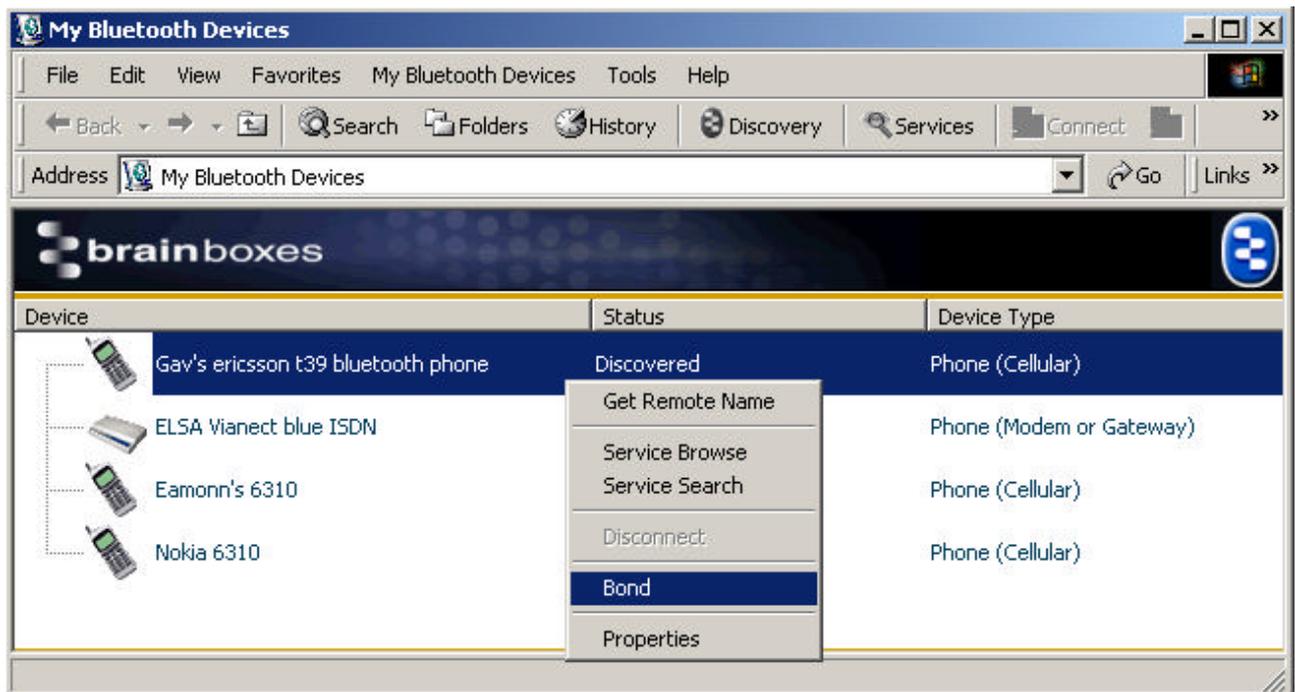




4.3.4. Bond

Some devices need to perform a procedure called Bonding, or Pairing before they will allow the user to connect to their services (some won't even let you browse their services without bonding!). Of these devices which need to Bond, some require manual bonding (as with the phone example below), whereas others will automatically initiate the bonding process as soon as you try to access them.

To manually initiate a Bond to a remote device, ensure the remote device is configured to accept bonding, then right click on the device in the User Interface and select **Bond**.



A **Pin Code Request** dialogue will appear prompting you to enter a PIN.

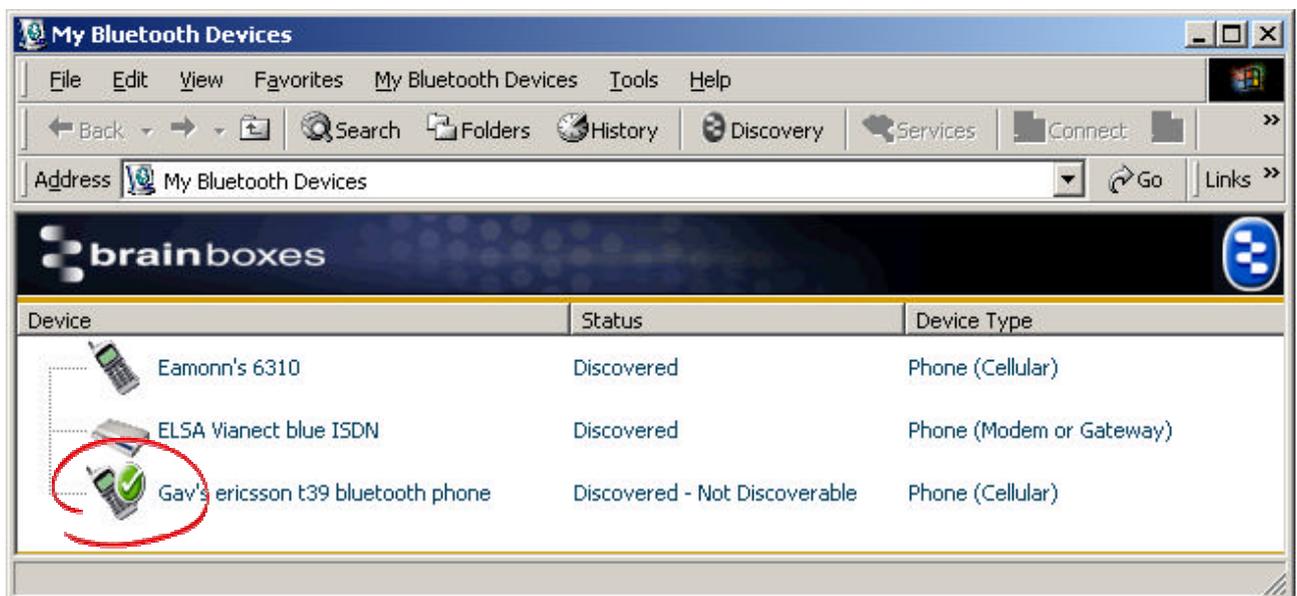
Some remote devices have pre-configured PIN's, so to connect to these you will need to enter the PIN into this box exactly as required, then click **OK**.

Other devices (such as the phone in this example) don't have a pre-configured PIN, but allow the user to specify whatever PIN they want to use for this connection. This means that the device can have different PIN's for each other device it is bonded to. Devices of this type usually require the user to also enter the PIN at both devices. In order to connect to these devices, enter your chosen PIN and click OK, then follow any instructions on your remote device and enter exactly the same PIN.

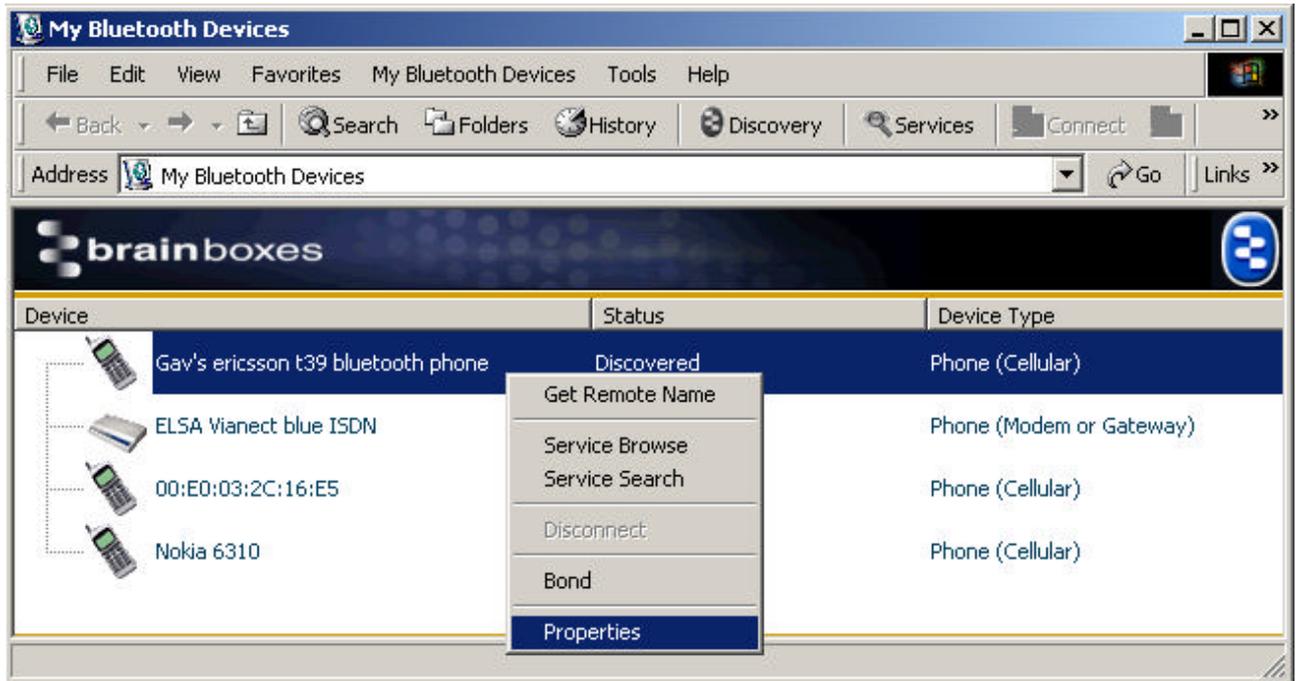
Any character that can be typed can be entered as a PIN, but you should remember that many remote devices (such as Mobile Phones) may not have the same flexibility, so you should choose a PIN that can be easily entered by the input mechanism on the remote device.



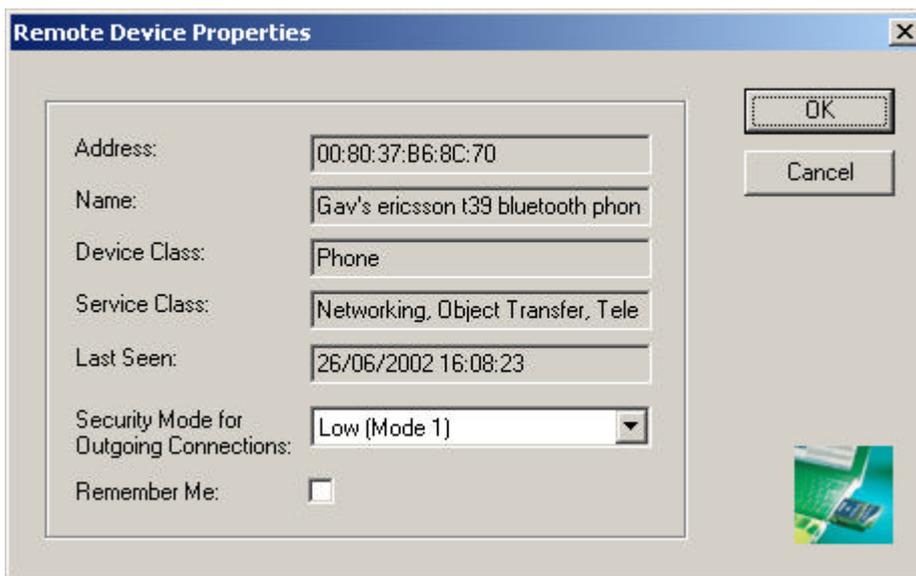
Once the PIN has been negotiated successfully with the remote device, the User Interface will display a green check mark on the icon next to the device.



4.3.5. Remote Device Properties



By right-clicking on a remote device a menu appears. Select 'Properties' to display the following window:



Address: Displays the Unique Bluetooth address of the remote device.

Name: Displays the Remote devices name

Device Class: Gives broad information regarding the type of device found

Service Class: Displays the type of services the remote device claims to support

Last Seen: Informs the user when the remote device was last seen. If this date/time is earlier than when you last performed a device discovery, then it is likely that the device is either switched off, out of

range, or has been set to an undiscoverable state.

Security Mode: This specifies the security level used to connect to the remote device

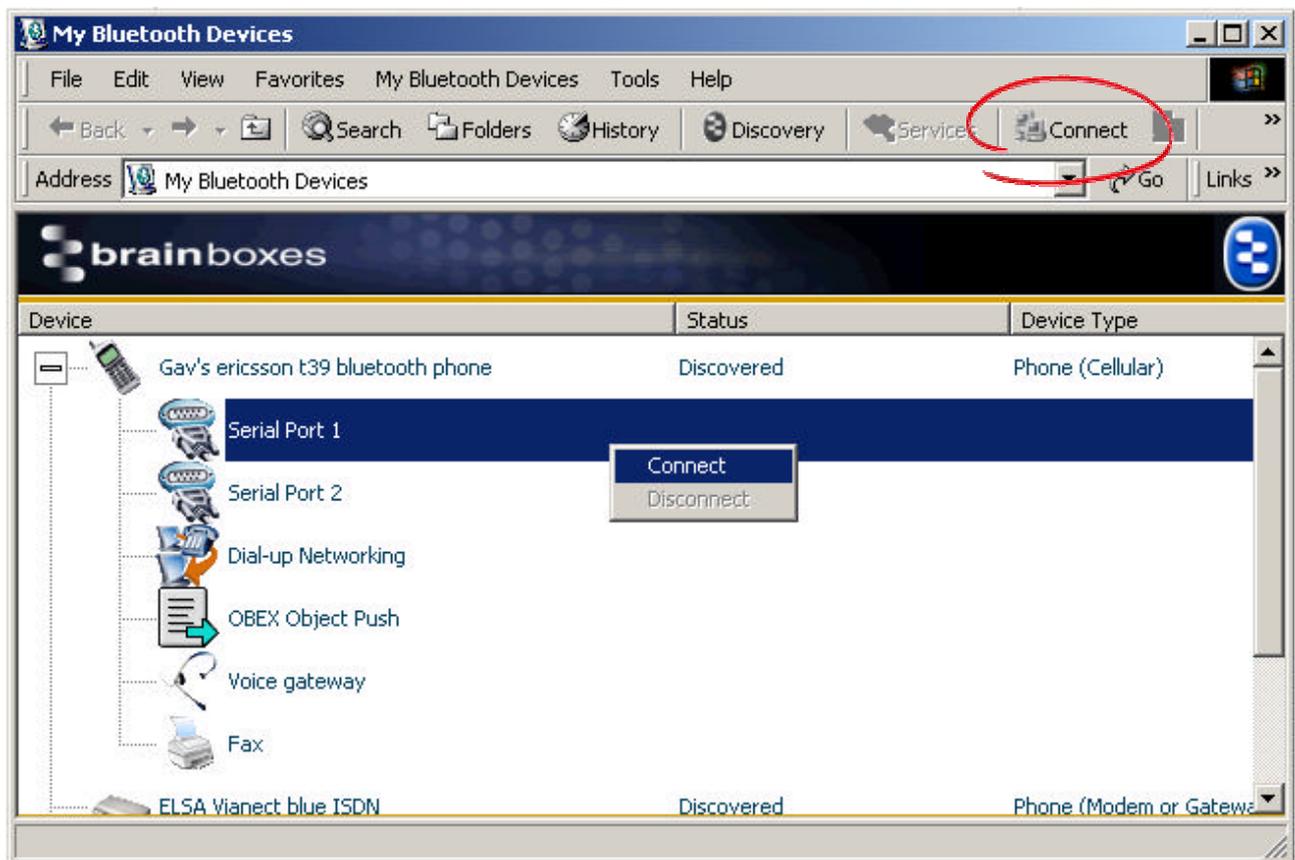
Remember Me: An option to remember the device next time the application is opened.

4.4. Remote Services

This section attempts to describe generically, but by example, how to connect to all supported services and the behaviour the user would expect to see when connecting to these services. For specific information regarding the behaviour of your specific device, please consult its interoperability document (if it exists)

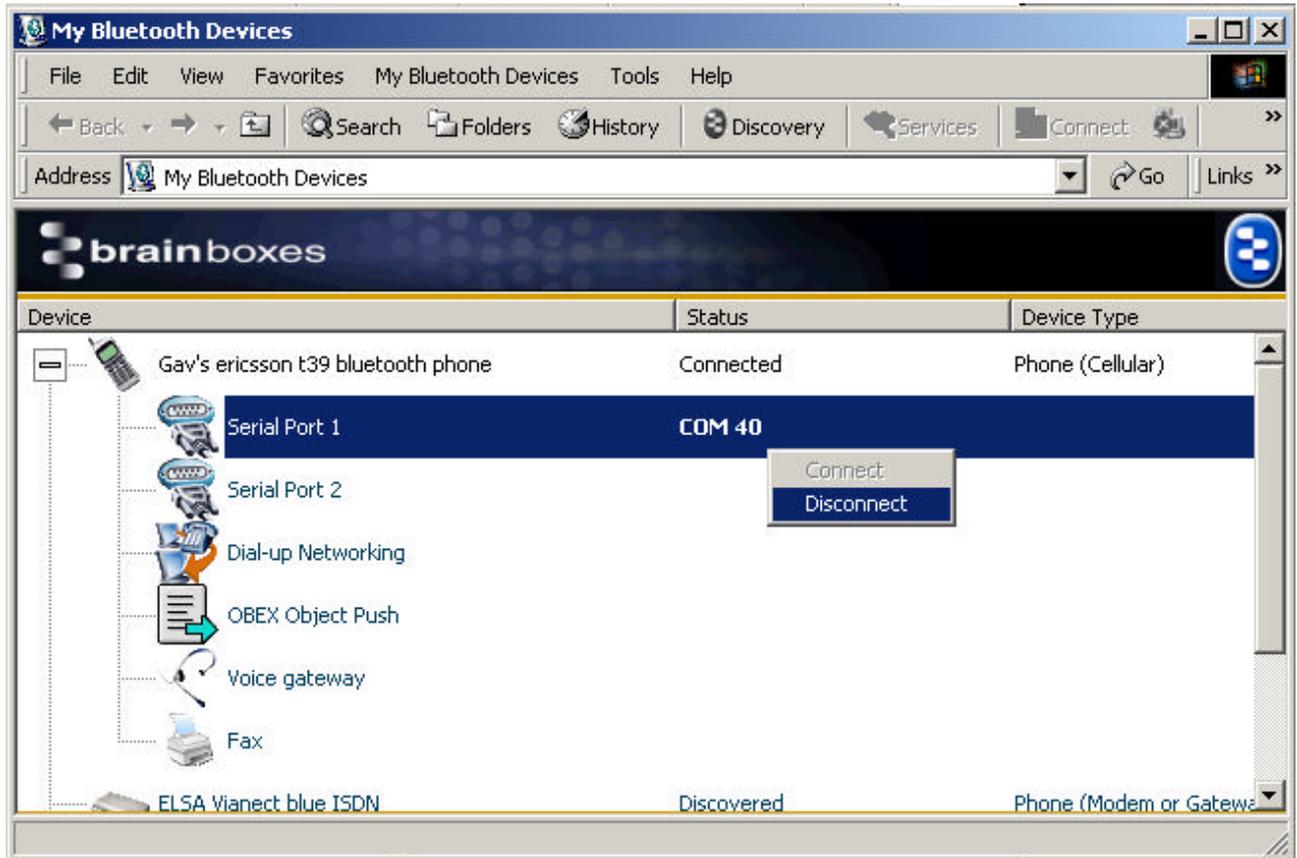
4.4.1. Connect

Connecting to remote services, once found is fairly straight forward. With the exception of the OBEX services (see Object), the connection is made by just double clicking the required service. Alternatively, the user can right click the service and click connect, or select the service and click the connect button on the toolbar (as highlighted).

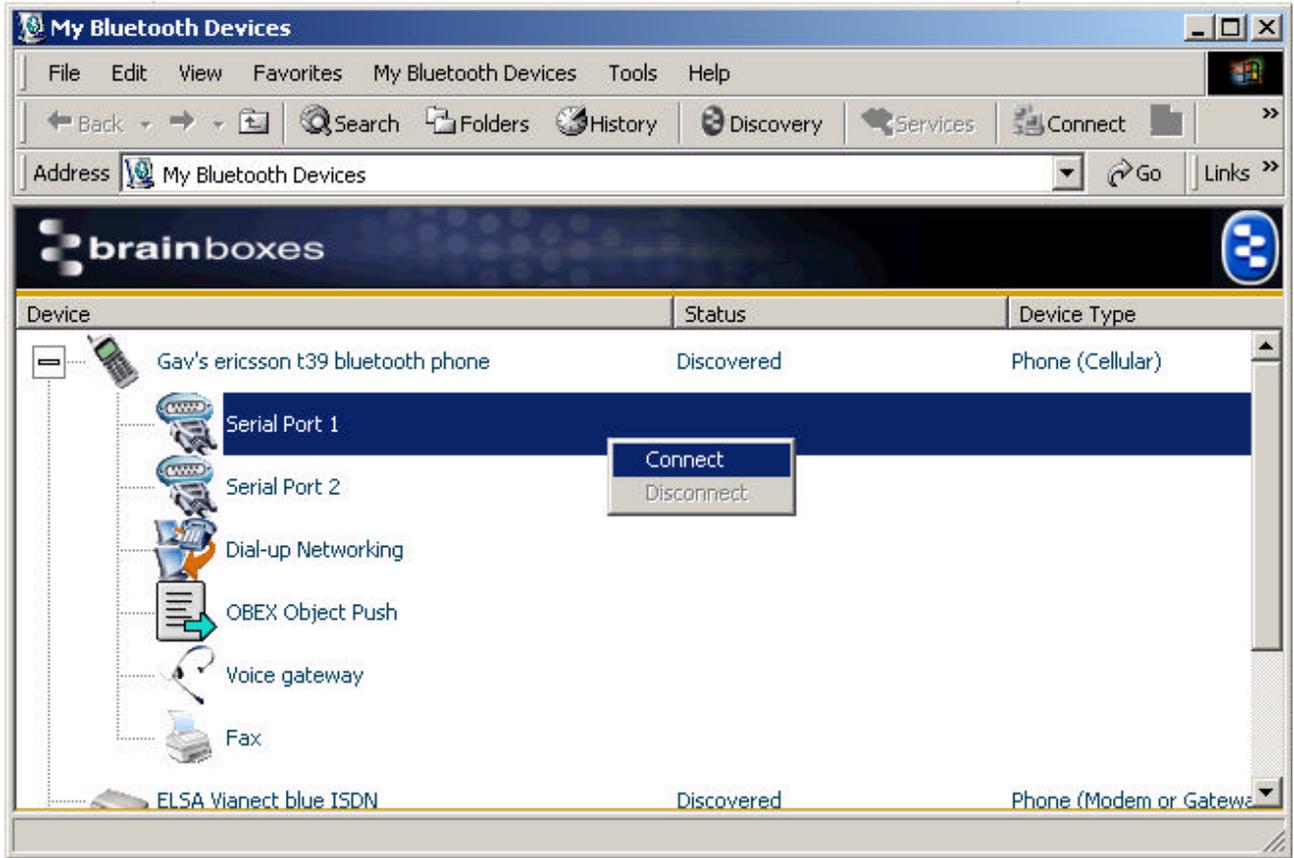


4.4.2. Disconnect

Disconnecting is again a straightforward operation. In many instances disconnecting the Bluetooth service will also result in the automatic disconnection of any applications which use this service, although this does depend on the capabilities of the specific application in question. To perform a disconnect, right click on the currently connected service and select **Disconnect** from the menu.



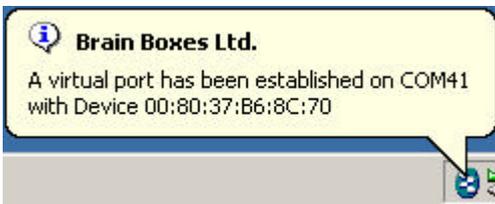
4.4.3. Serial Port



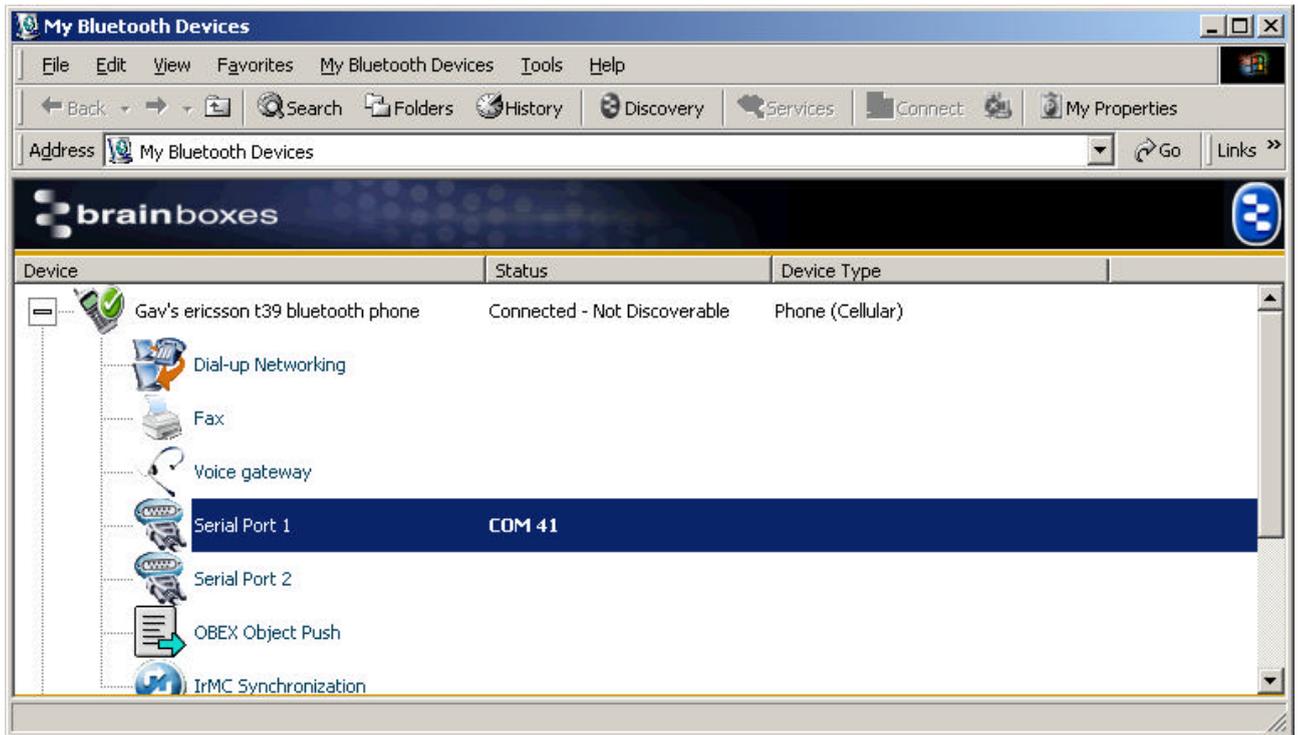
After selecting to connect to a serial port service, the Brain Boxes Bluetooth software will install a COM port locally.



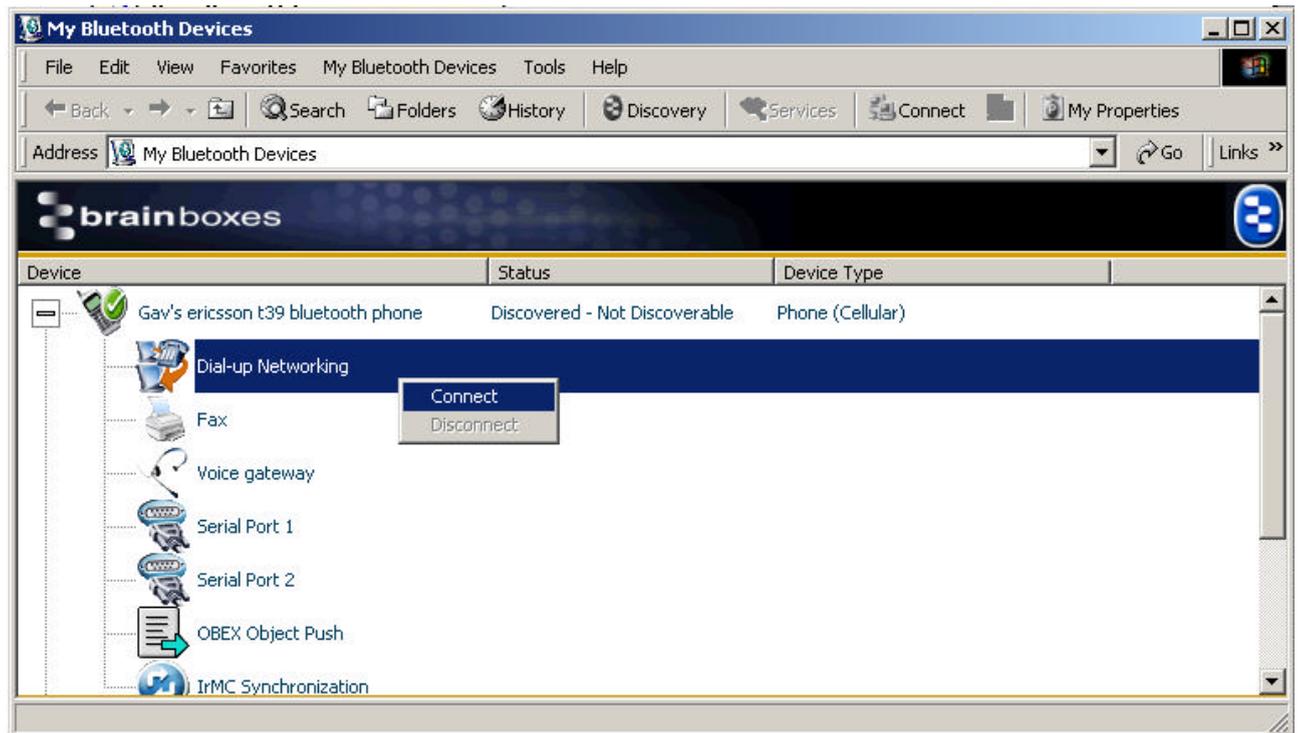
This port is then identified by a balloon tip on the Windows System tray (except in Windows 98 and ME)



And in the column next to the service in the user interface (as below). The number associated with this new COM port is dependant on the resources already present in your computer.



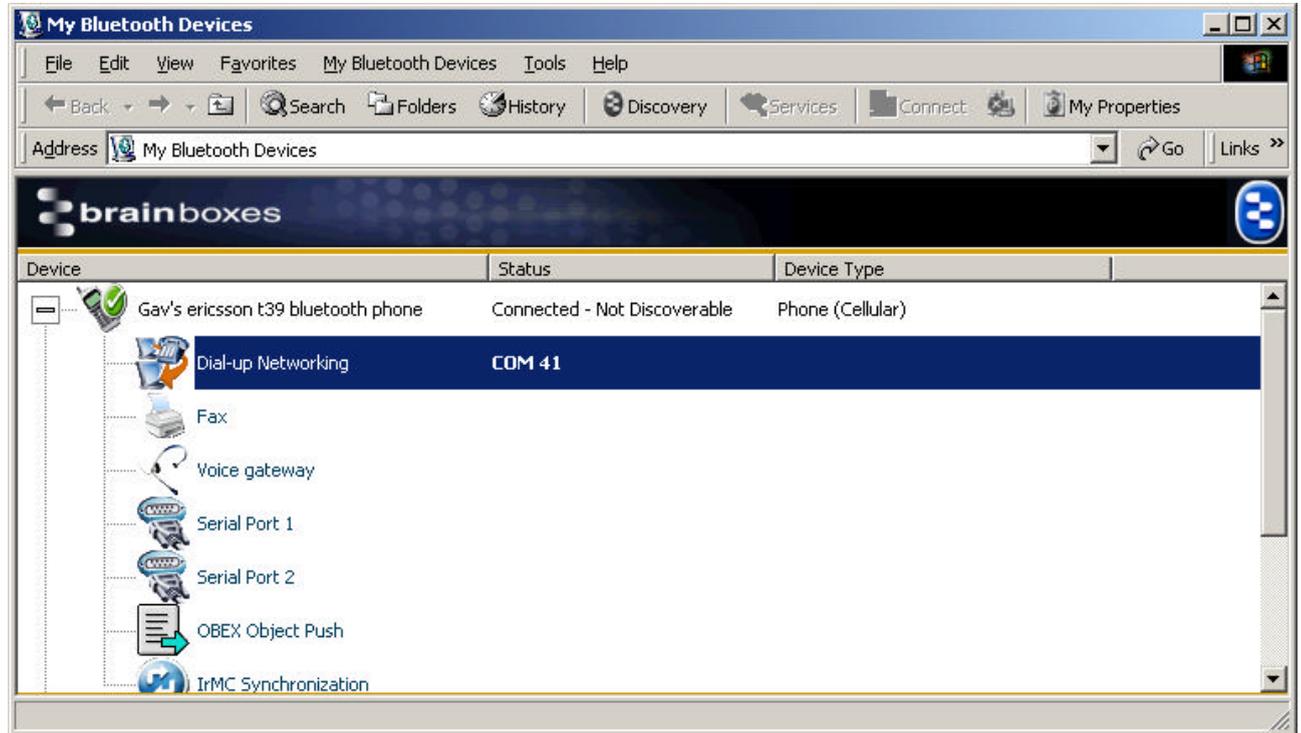
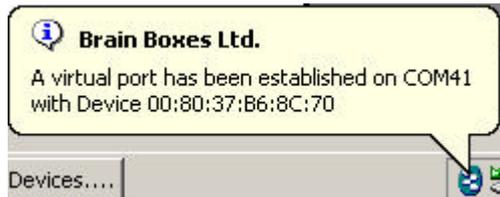
4.4.4. Dial-up Networking



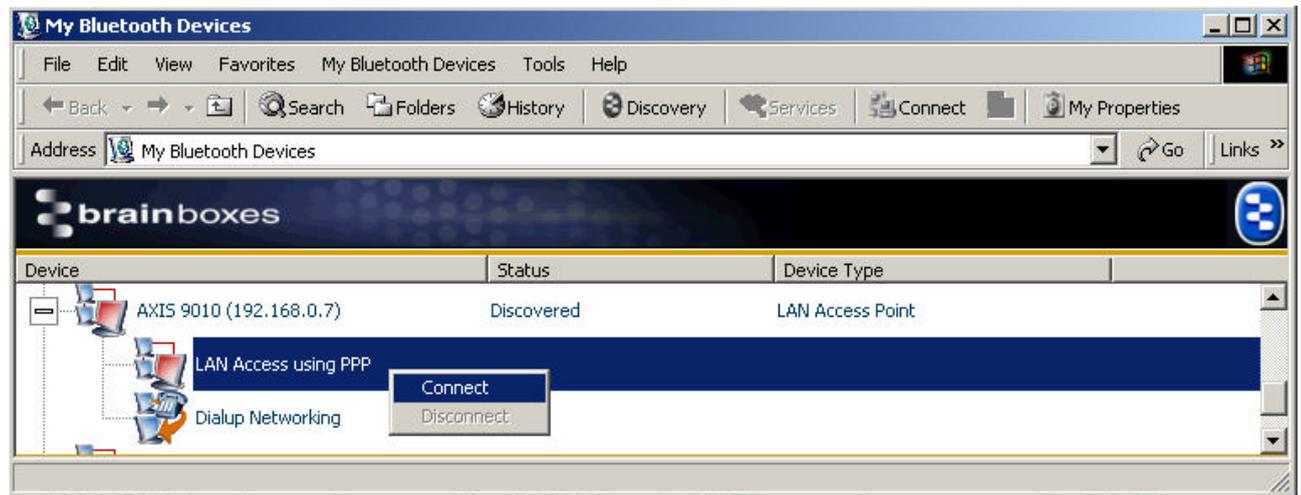
After selecting to connect to the Dial-up Networking service, the Brain Boxes Bluetooth software will install a COM port locally followed by a DUN Modem.

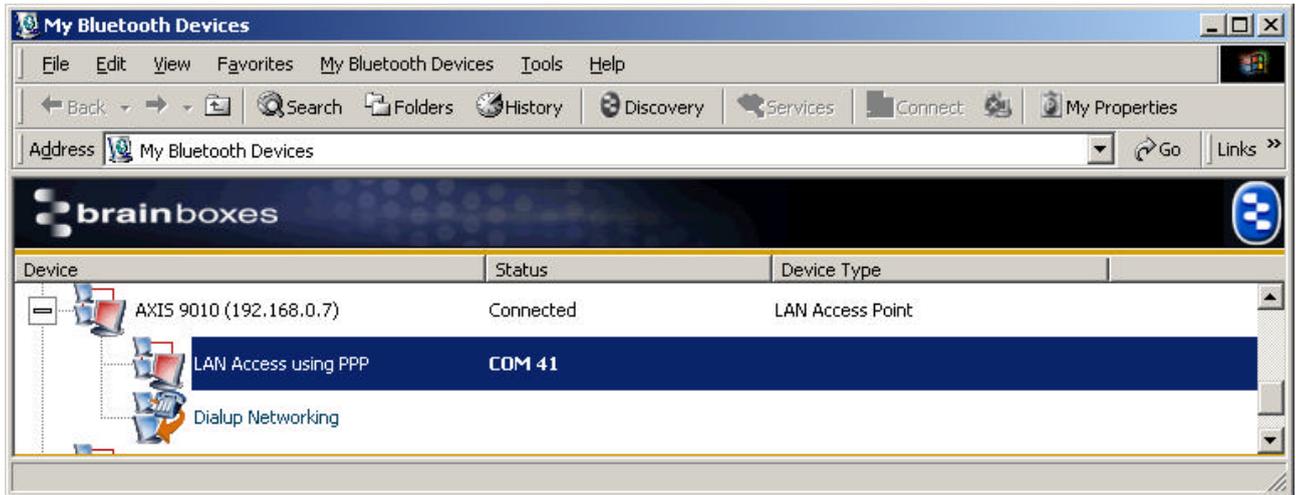


This port is then identified by a balloon tip on the Windows System tray (except in Windows 98 and ME)



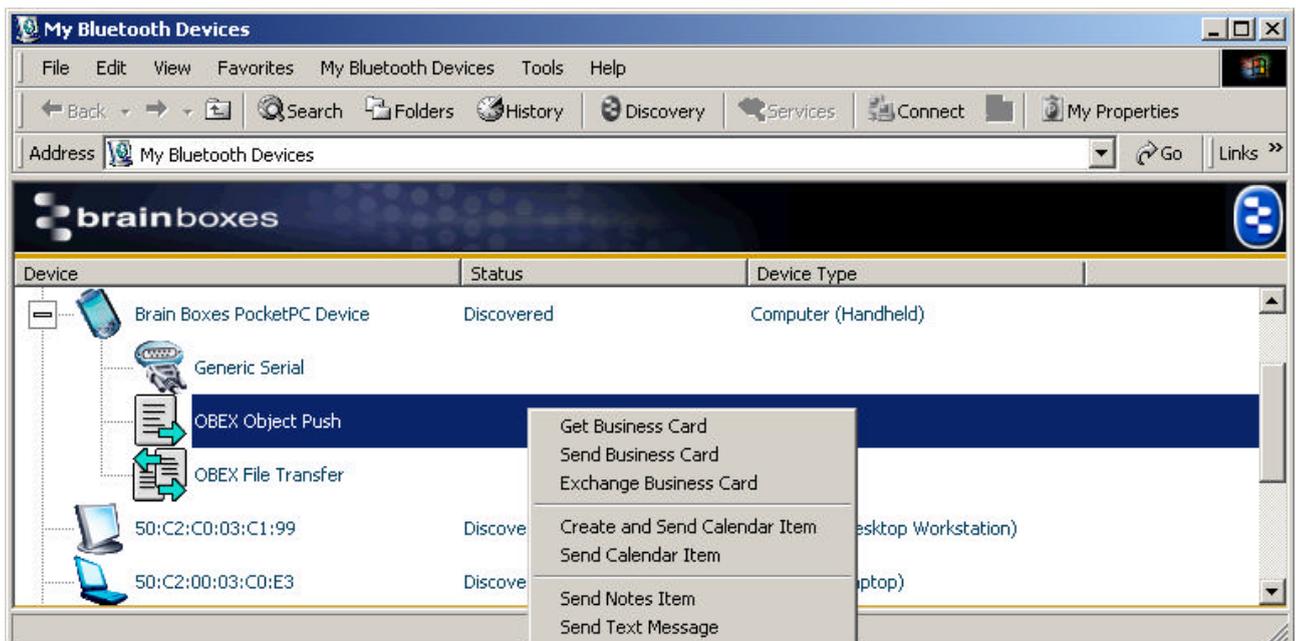
4.4.5. Lan Access



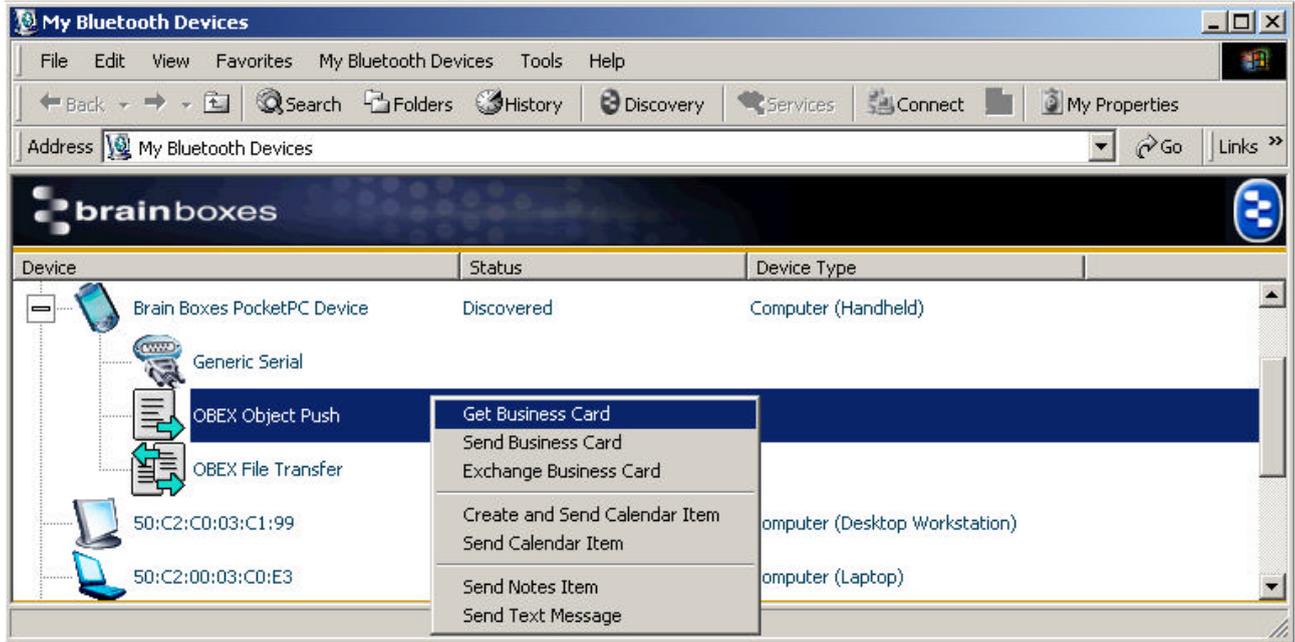


4.4.6. Object Push

As identified above, connection to the OBEX services is not carried out with a double click. The Object Push service will usually have a number of separate options. These additional services are displayed under a context menu accessed by right clicking the Object Push service as shown below. Not all devices that support the Object Push service, will support all the options available. Only those options the remote device claims to support will be listed for your device.

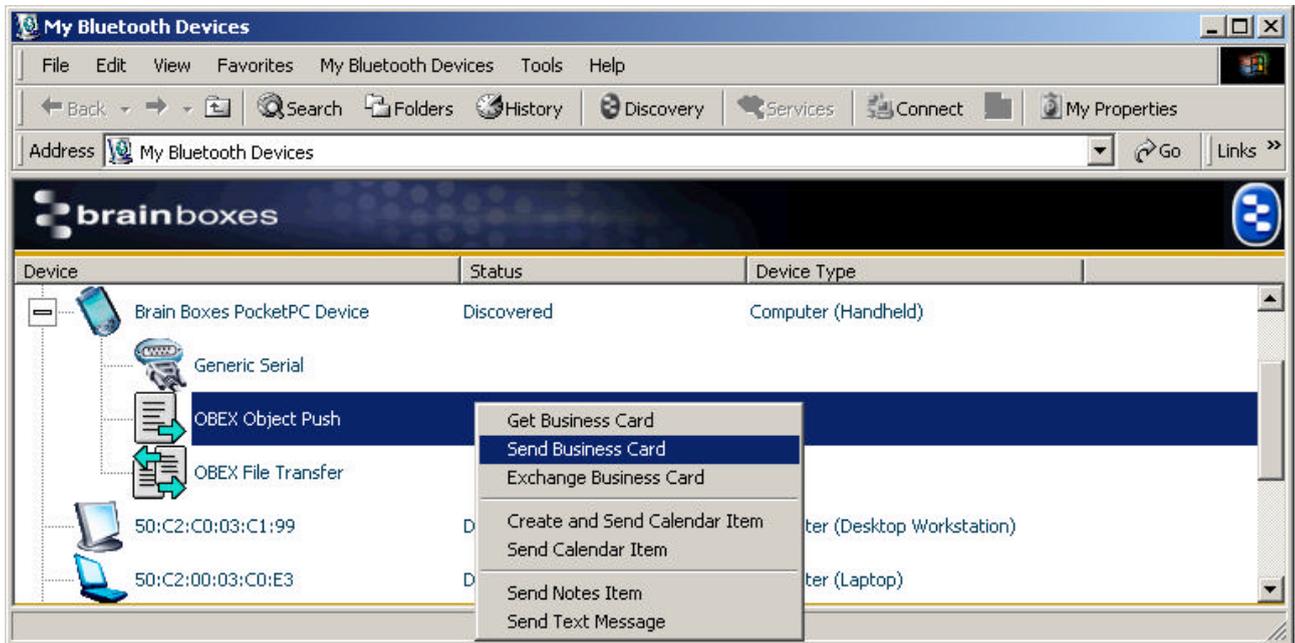


Get Business Card



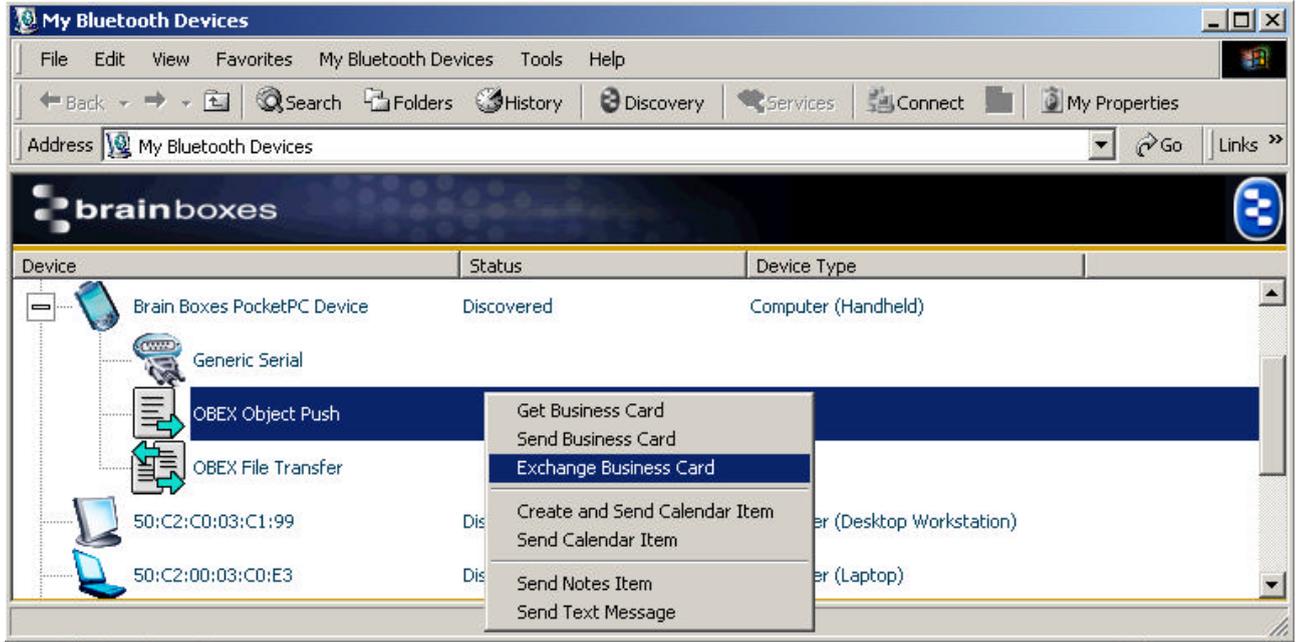
Assuming the remote device actually has a business card set up, clicking the **Get Business Card** option will copy the remote devices business card into the OBEX inbox as configured above in My Bluetooth Devices – Options – Obex. Business cards can be viewed by applications such as Microsoft® Outlook™

Send Business Card



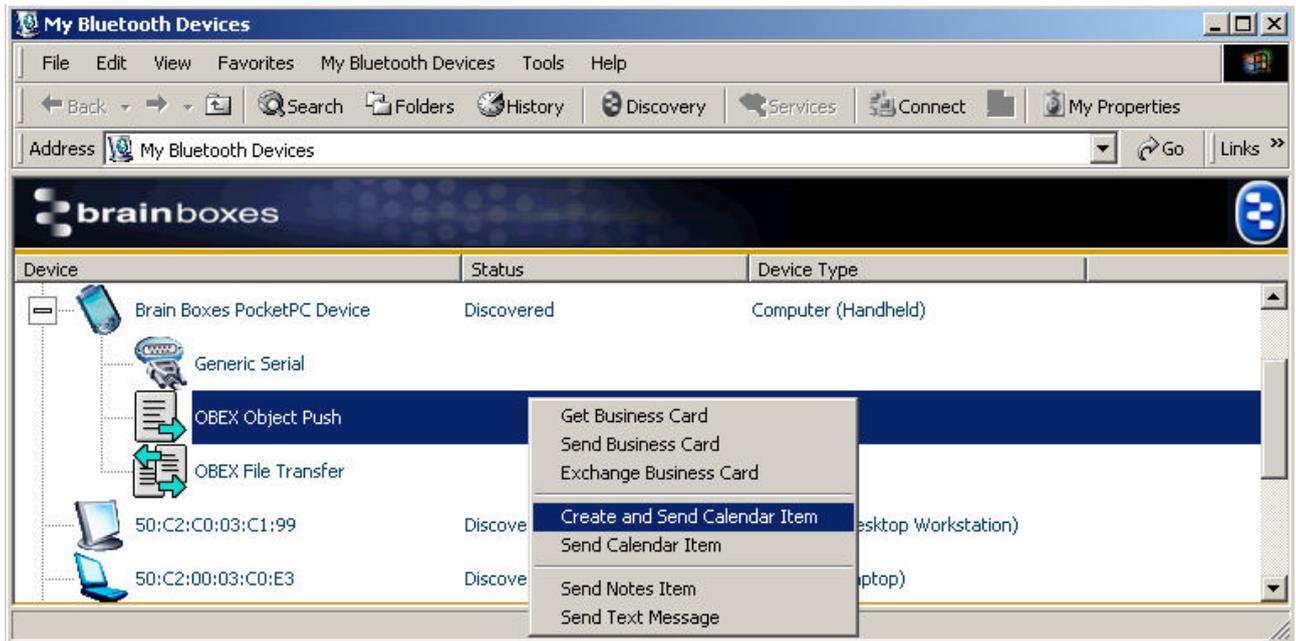
Assuming you have created your own business card, and you have configured My Bluetooth Devices – Options – Obex (as above) to point to it, clicking this option will send your business card to the remote device. Business cards can be created by applications such as Microsoft® Outlook™

Exchange Business Card



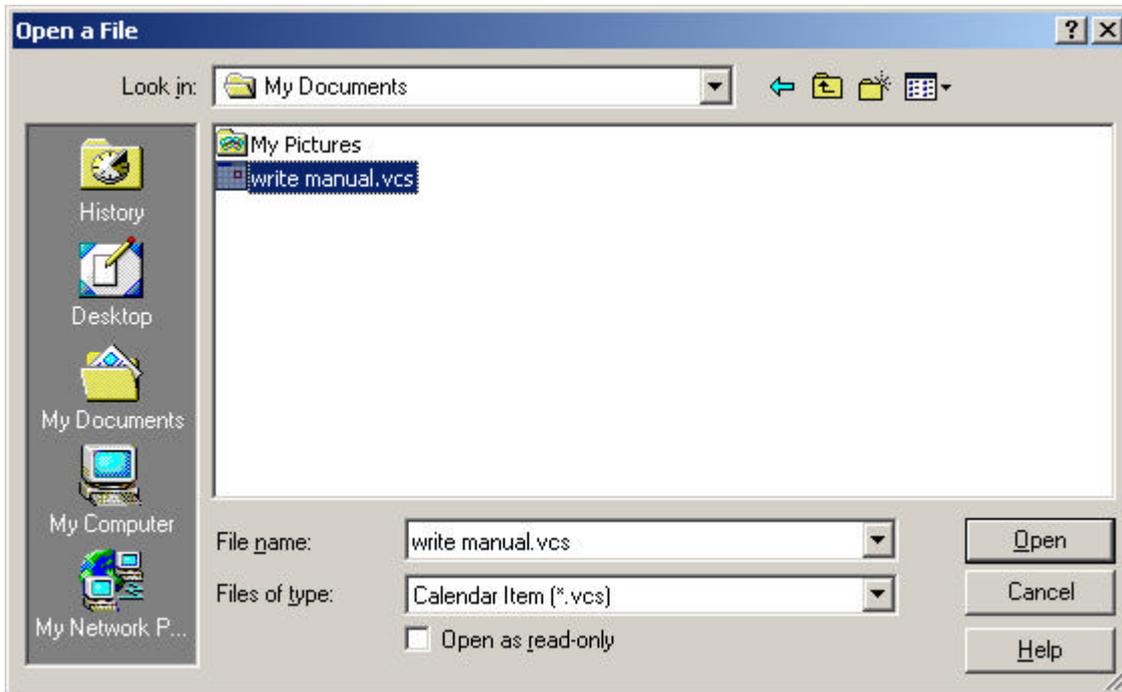
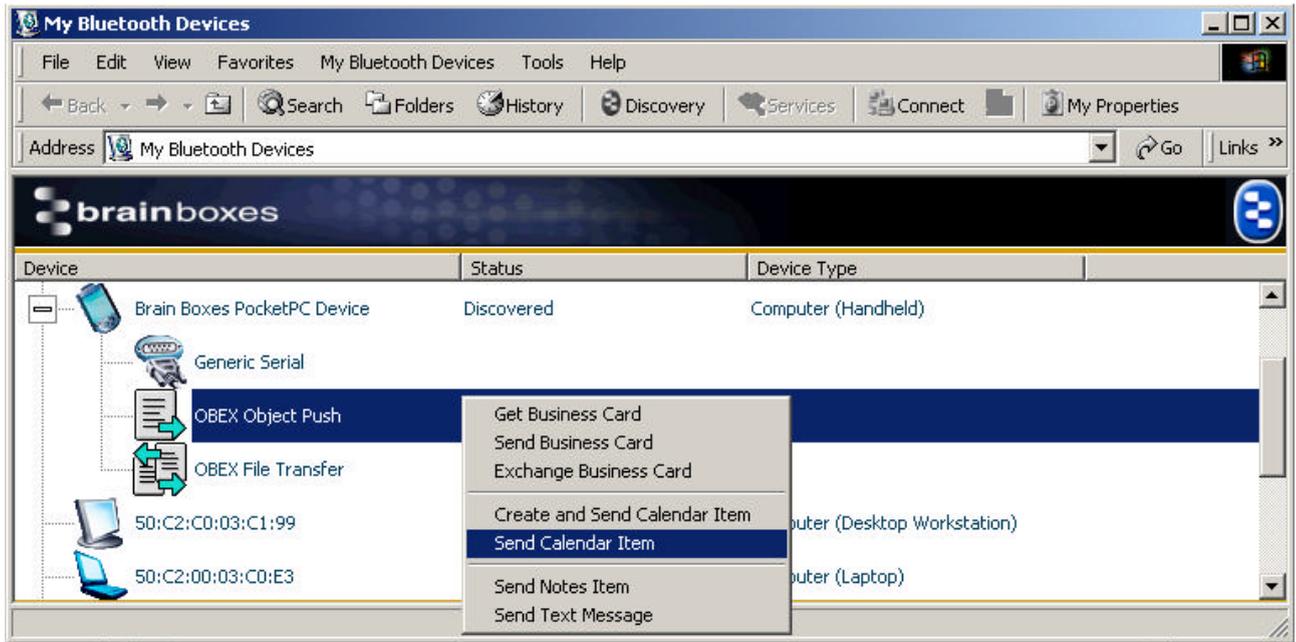
Selecting this option performs both of the above 2 functions (Get and Send) at the same time.

Create and Send Calendar Item



Send Calendar Items

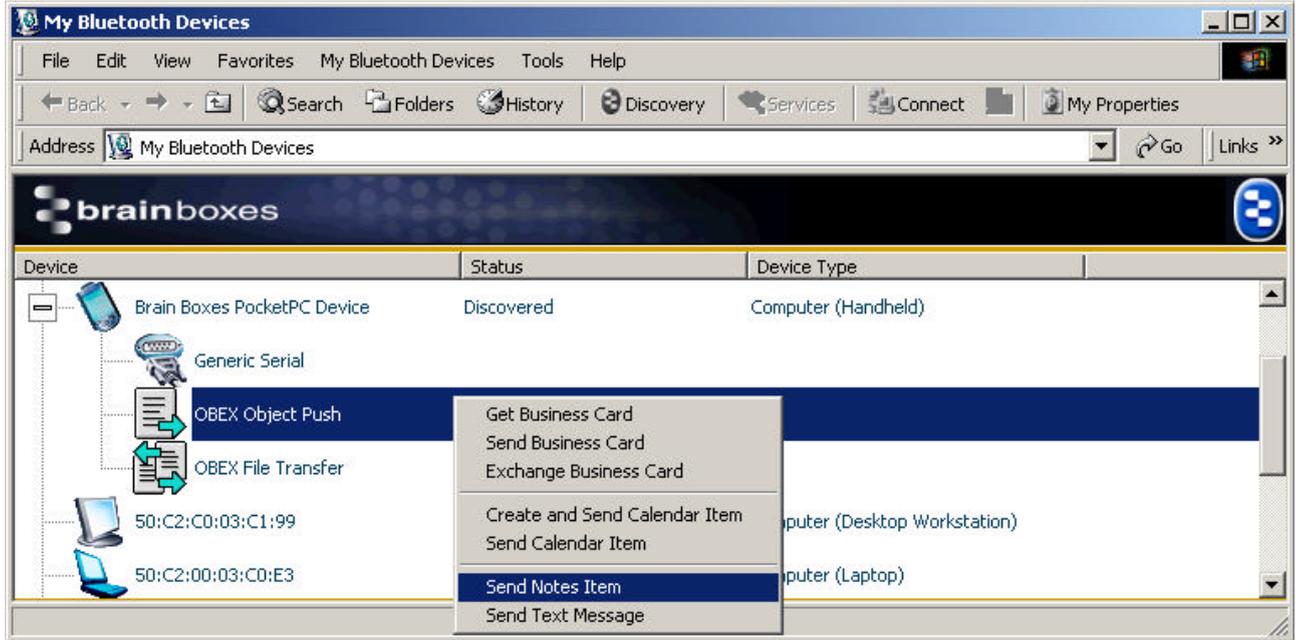
Calendar items can be created from applications such as Microsoft® Outlook™. They are saved with a "vcs" or "ics" file extension. When selecting the option to send calendar item a dialogue will appear giving the user a choice of items to send.



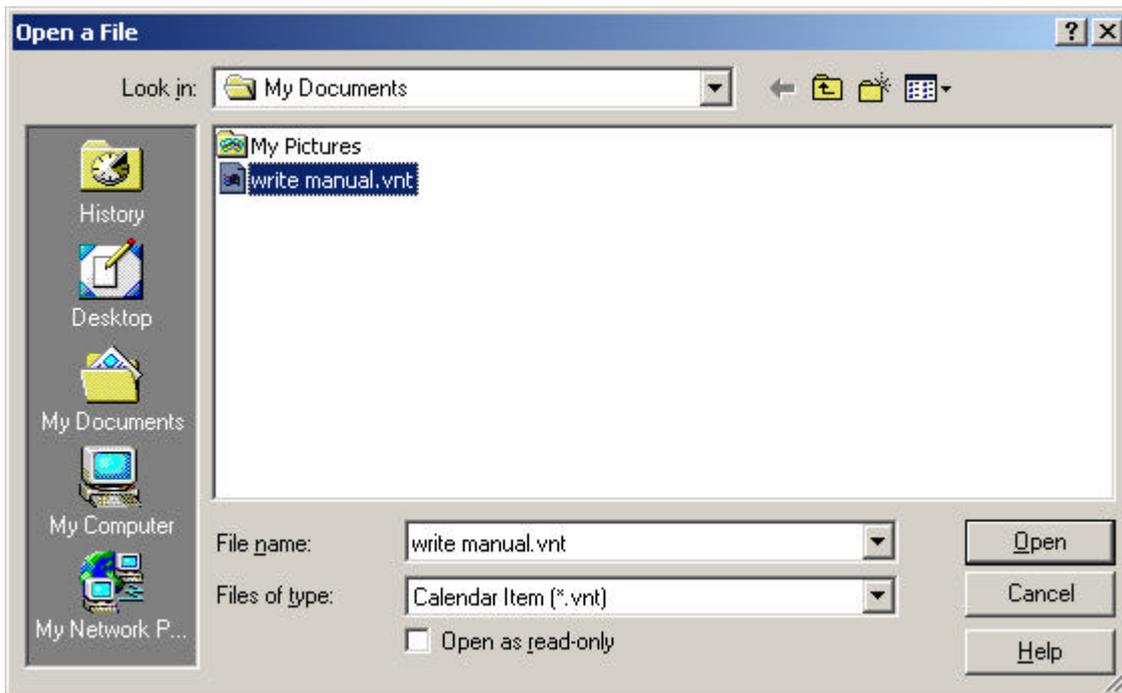
Click Open to send the object to your chosen device.

Some devices then require further operations to accept these objects. Follow instructions on your remote device.

Send Notes Item



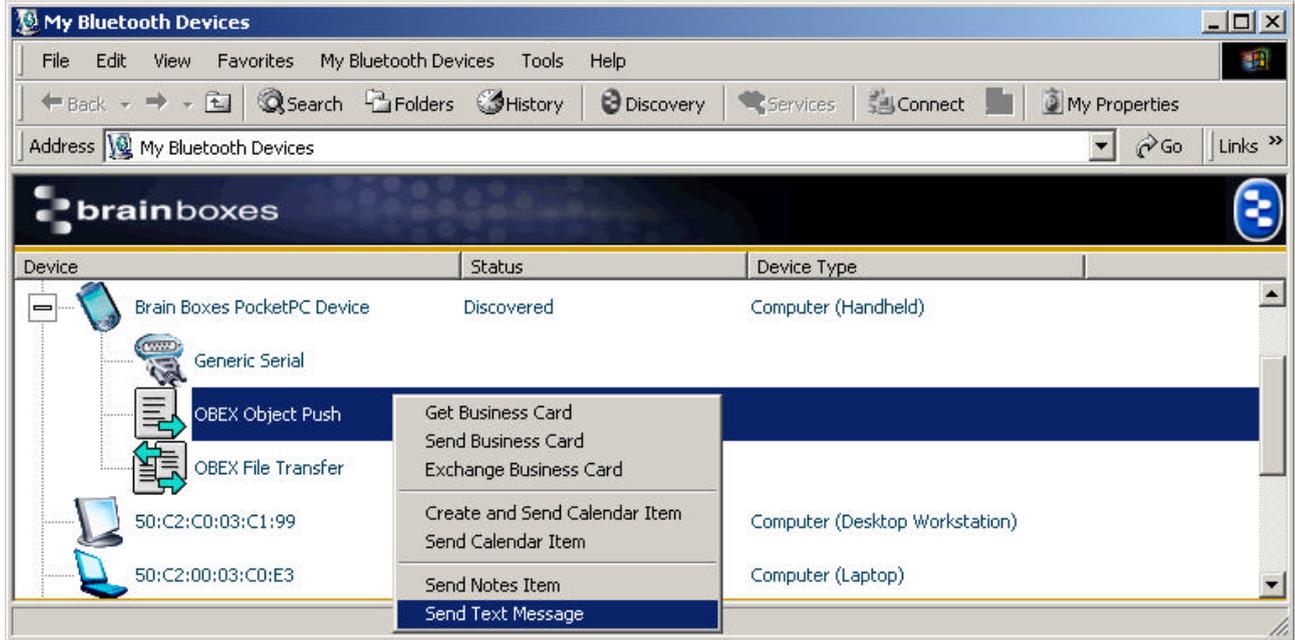
When selecting the option to send a notes item a dialogue will appear giving the user a choice of items to send.



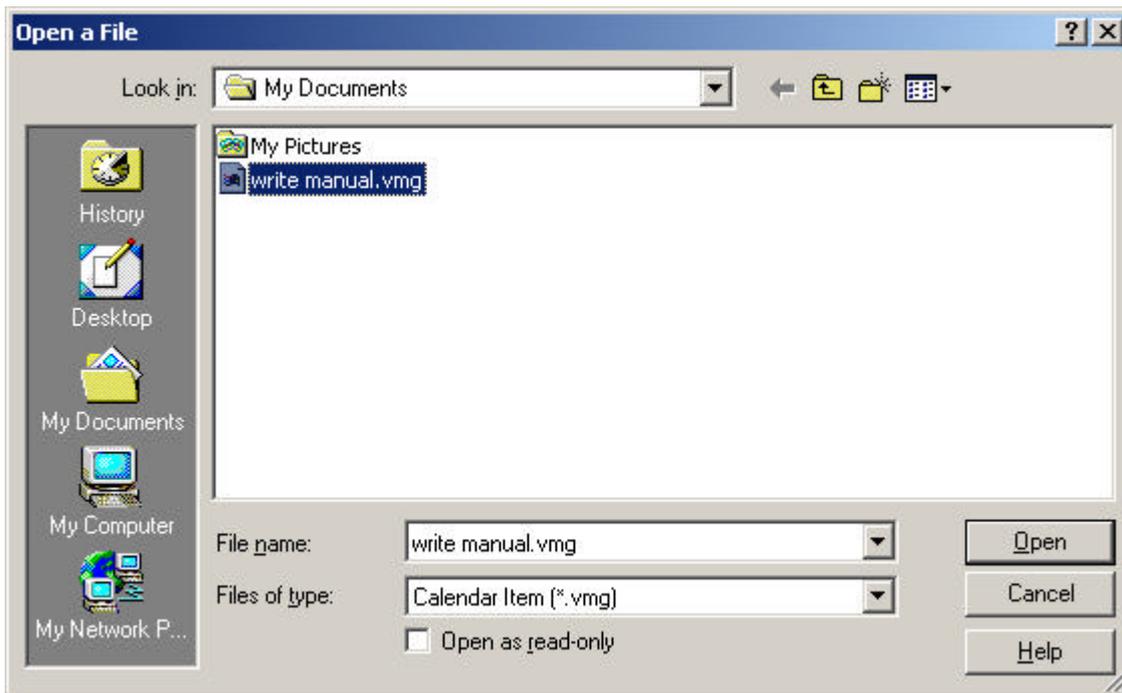
Click Open to send the object to your chosen device.

Some devices then require further operations to accept these objects. Follow instructions on your remote device.

Send Text Message



When selecting the option to send a text message a dialogue will appear giving the user a choice of items to send.

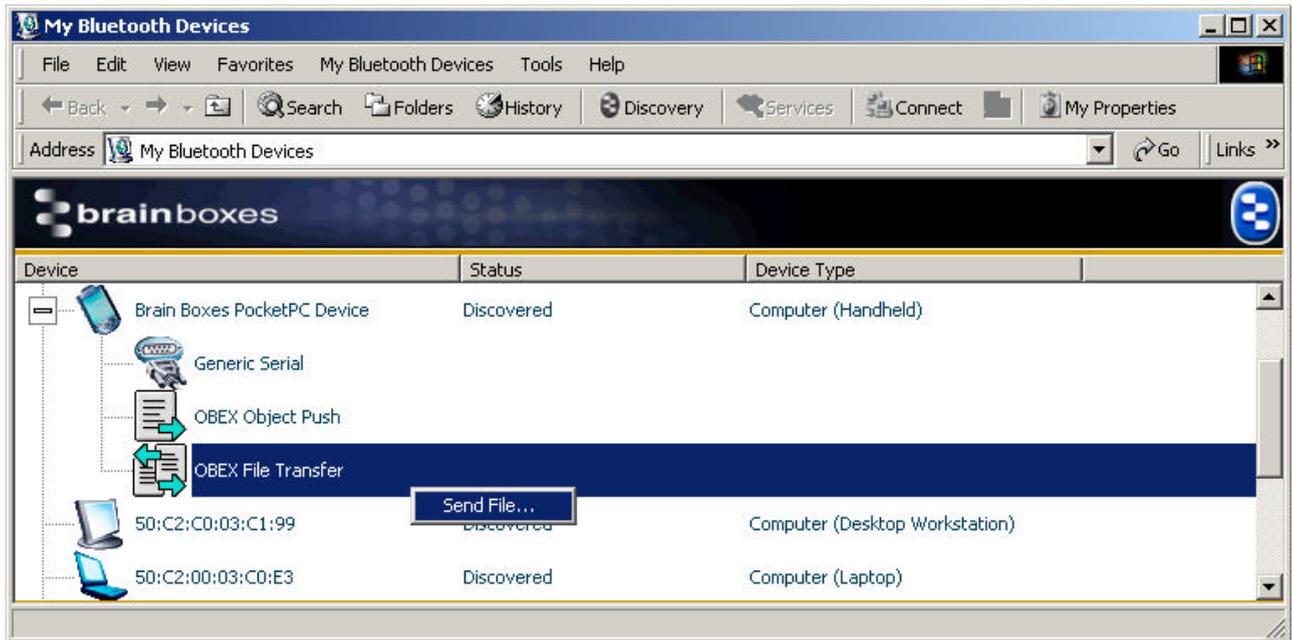


Click Open to send the object to your chosen device.

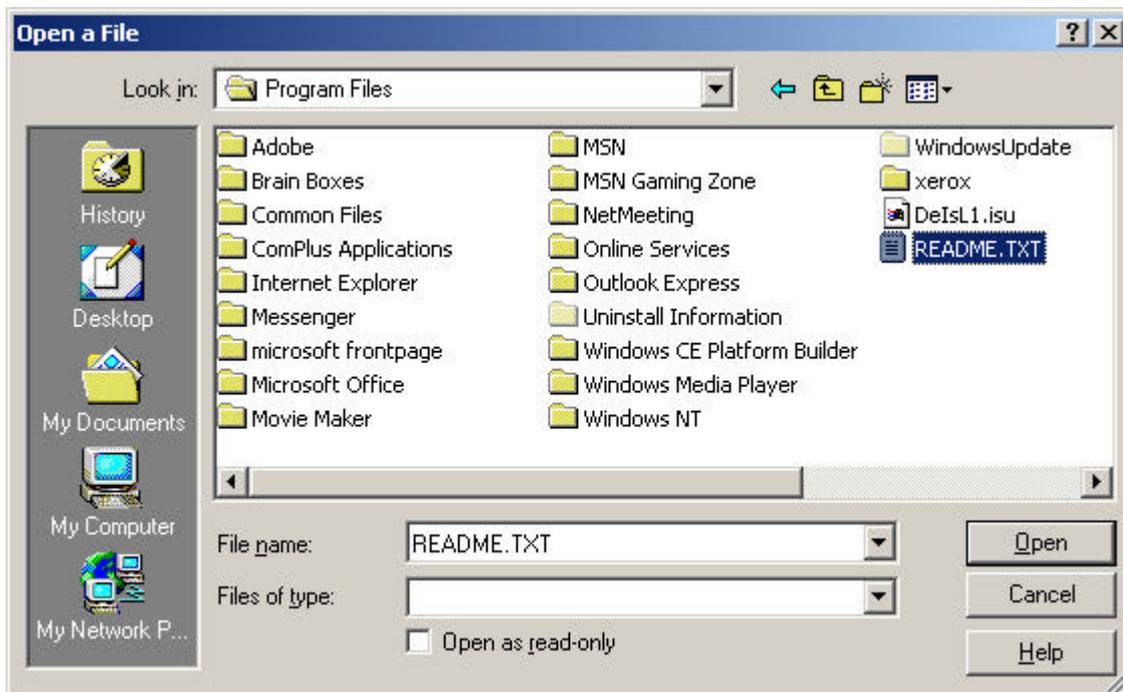
Some devices then require further operations to accept these objects. Follow instructions on your remote device.

4.4.7. File Transfer

Right Clicking a **File Transfer** service enables the user to choose to “send file”.



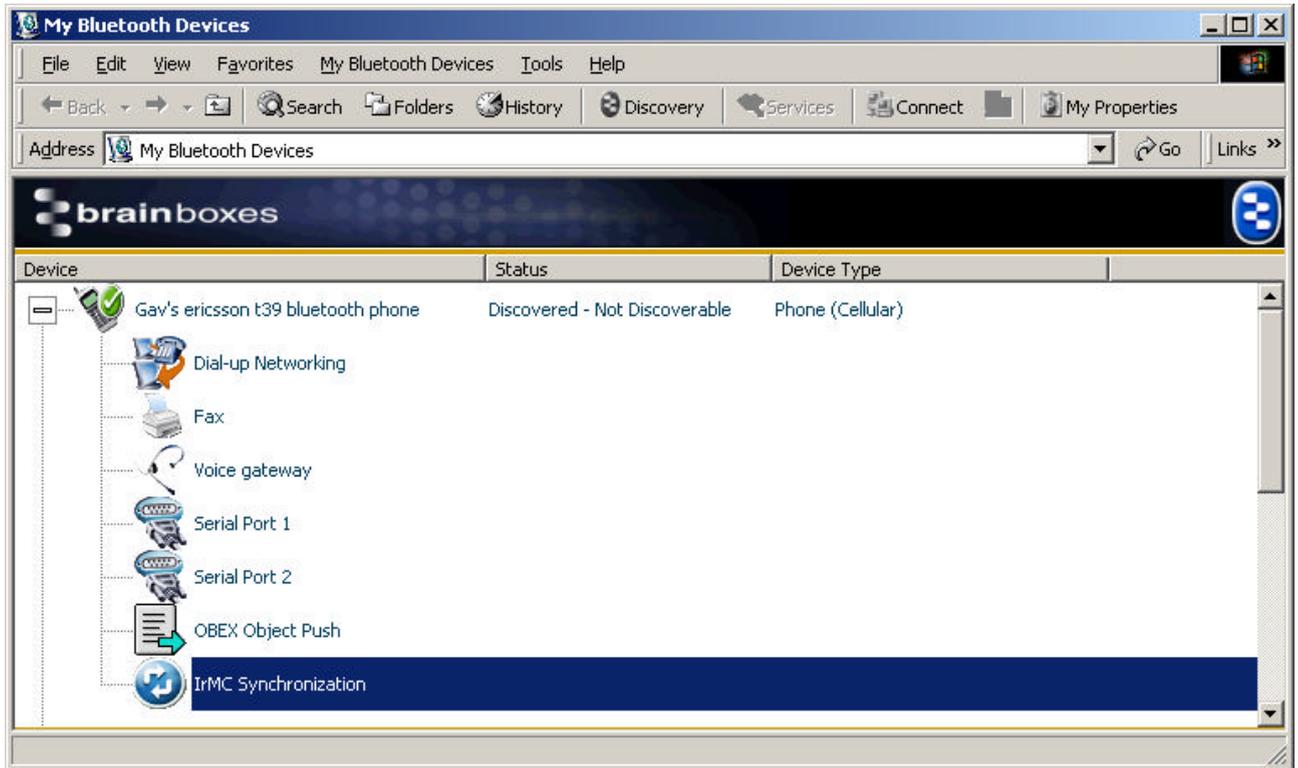
Selecting this option brings up a dialogue where the user can search their computer or entire network for any files they may wish to send to the selected remote device. Only 1 file at a time can be selected.



Clicking “**Open**” sends the selected file to the selected remote device.

4.4.8. Synchronisation

Although this service will be displayed, Brain Boxes Bluetooth Software does not currently support connections to this service.



5. Icon Tray Menu

Right clicking on the Brain Boxes icon in the icon tray will bring up the menu shown below.



5.1. Icon Tray Menu – Open

Clicking open will open the My bluetooth devices explorer window.



5.2. Icon Tray Menu – Start Device



Clicking Start device will start the device and make it discoverable and connectable.



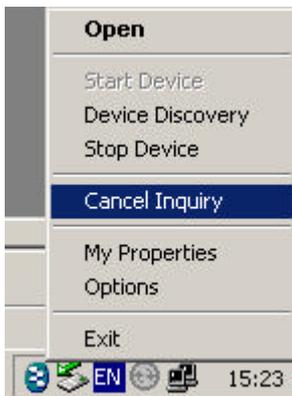
5.3. Icon Tray Menu – Device Discovery

Clicking Discovery will perform a search for all Bluetooth enabled devices that are discoverable.

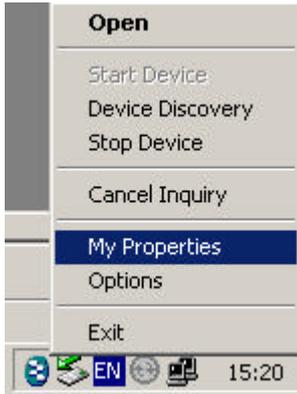


5.4. Icon Tray Menu – Cancel Inquiry

Clicking Cancel Inquiry will stop any active device discovery or service discovery operations.



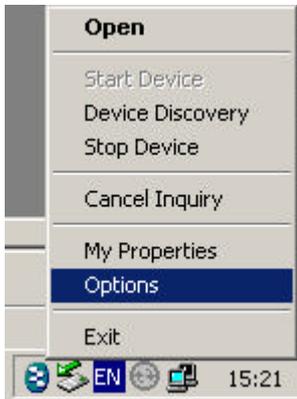
5.5. Icon Tray Menu – Device Properties



Clicking Device Properties will will open the Local Device Properties dialog. This is detailed on Page 16.

5.6. Icon Tray Menu – Options

Clicking Options will open the Options dialog box. Details of this can be found on pages 17-18.



5.7. Icon Tray Menu – Exit



Clicking Exit will close the My device properties software interface.

Version History

Version	Date	Author	Checked By	Comments
1.0	dd/mm/yyyy	Gavin	Name	Comments relating to changes made in this version
1.1	31/05/2002	Gavin		Various clarifications, formatiing changes and filling text