

**Application Note:  
GSM0000AN002**

**Enabler<sup>®</sup> - G PPP Configuration  
for Windows 2000**

**Revision 1.00**

**Objective:** To provide modem definition parameters that can be used to establish a PPP connection using a Windows Dial-Up Networking connection under Windows 2000.

### Equipment Needed:

In this example the requirements are:

- An Enfora, Inc. Enabler-G Modem loaded with firmware version 1.4.0 or above is required.
- A notebook or desktop computer with a version of Microsoft Windows 2000.

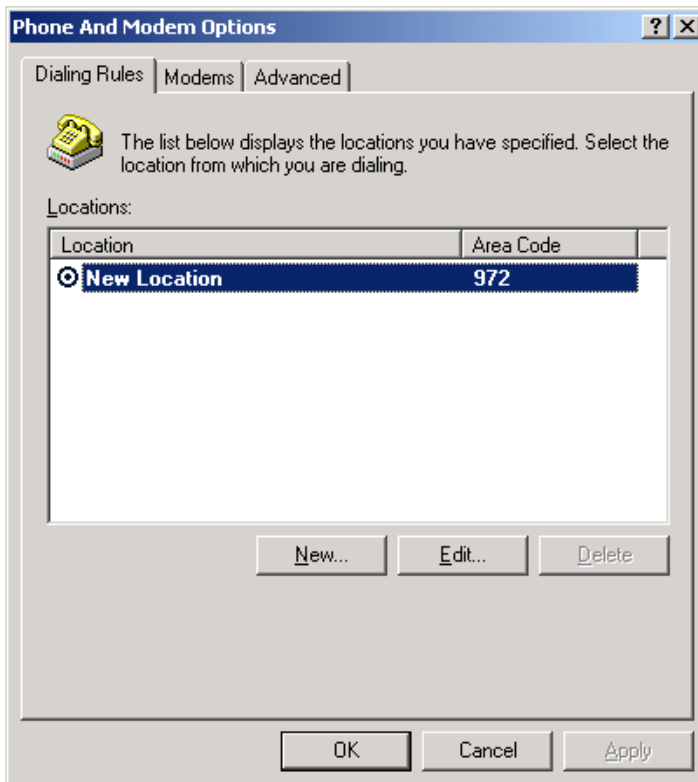


*Make sure ALL applications that use a serial port that could conflict with your test are disabled. PDA synchronization, MP3 player, and other peripheral device software are examples of applications that typically load and run when a system is booted and can cause COM port conflicts.*

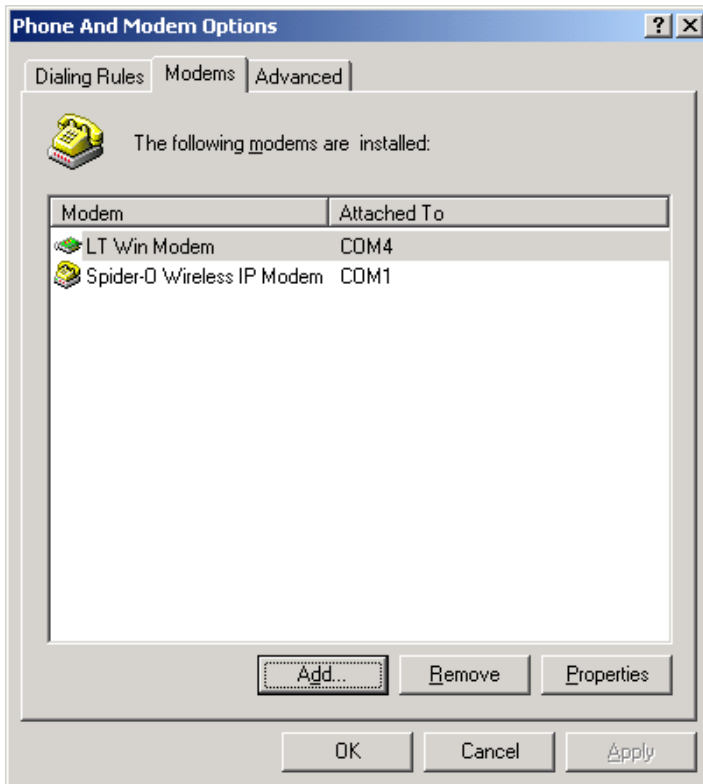
### Procedures:

To set up a windows PPP dial up connection, a Modem must be created for the Enfora GPRS modem. The following steps will outline the definition and configuration of the modem and Dial-Up Networking entries required to establish a PPP connection to the Enabler-G and a GPRS network.

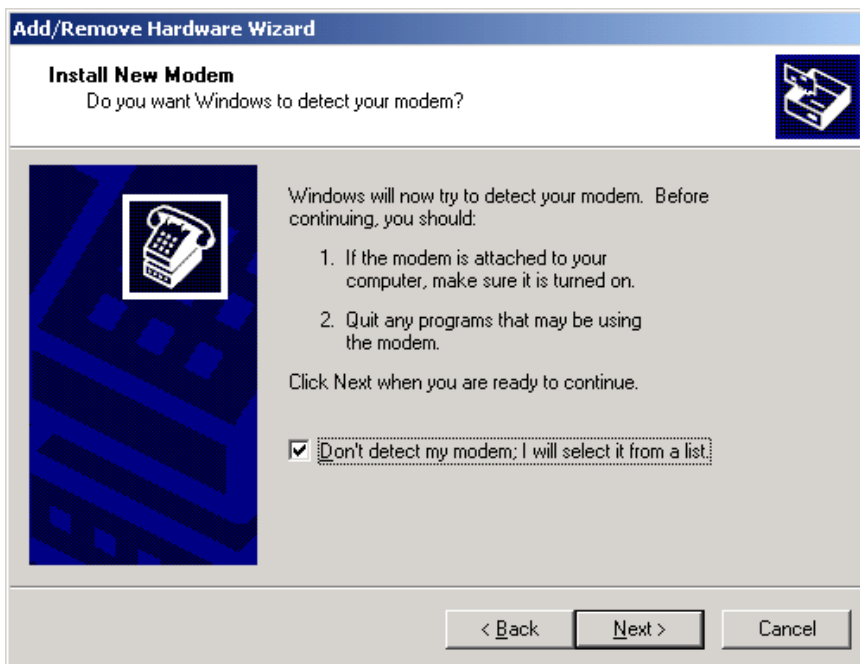
1) Under *Control Panel/Phone and Modem Options*, select **Modems**



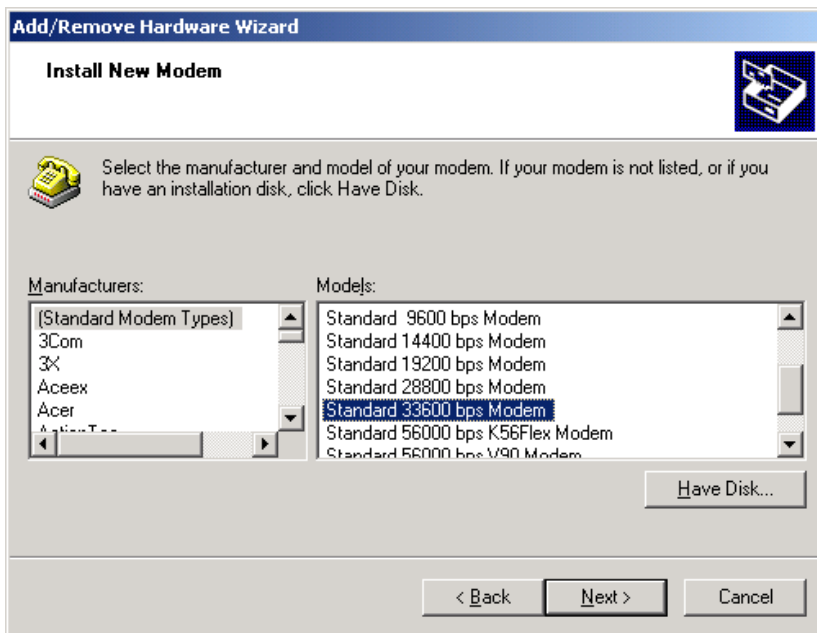
2) Press the **Add...** button.



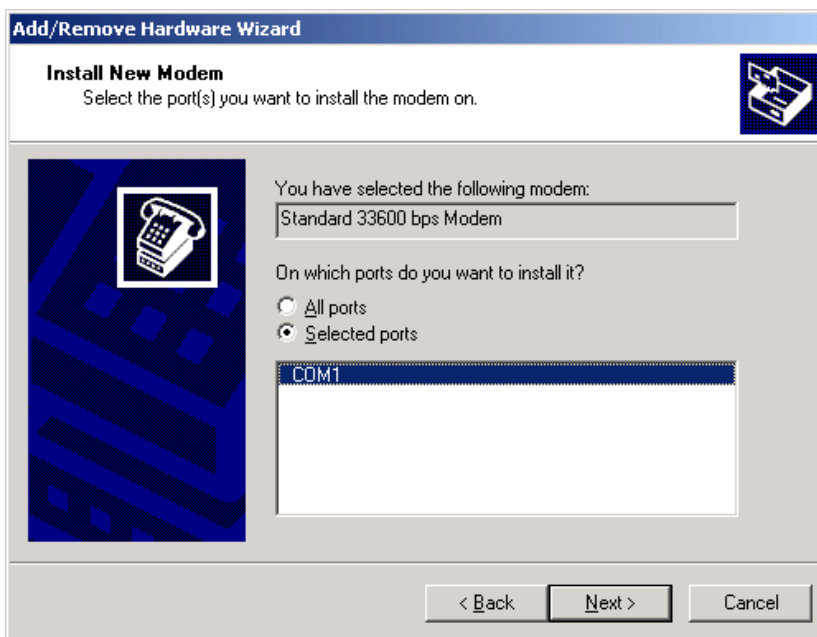
3) Select **Don't detect my modem; I will select it from a list** and press **Next**>



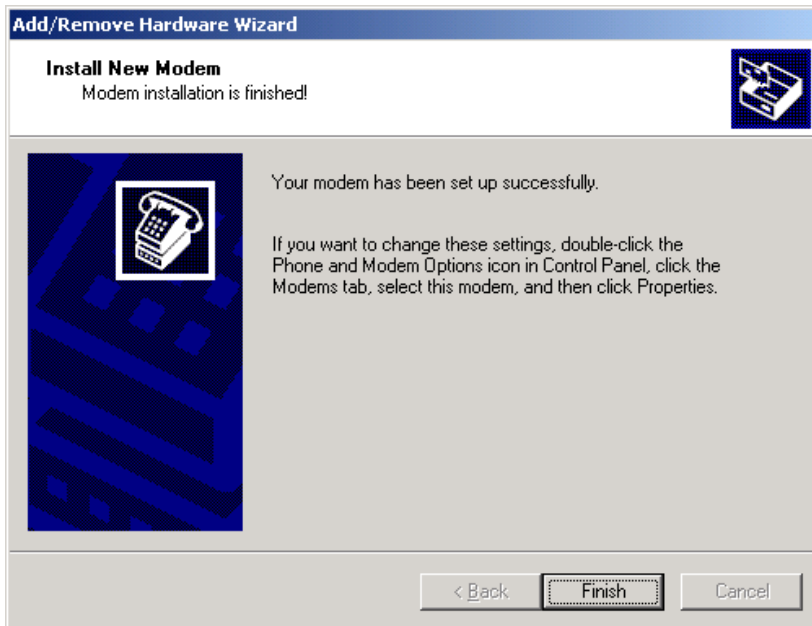
- 4) Select any of the Standard modem entries under **(Standard Modem Types)**. Do not be concerned with the modem speed, as that will be changed in the modem definition in a later step, but make sure the modem entry provides a port speed of 115200. Press the **Next>** button.



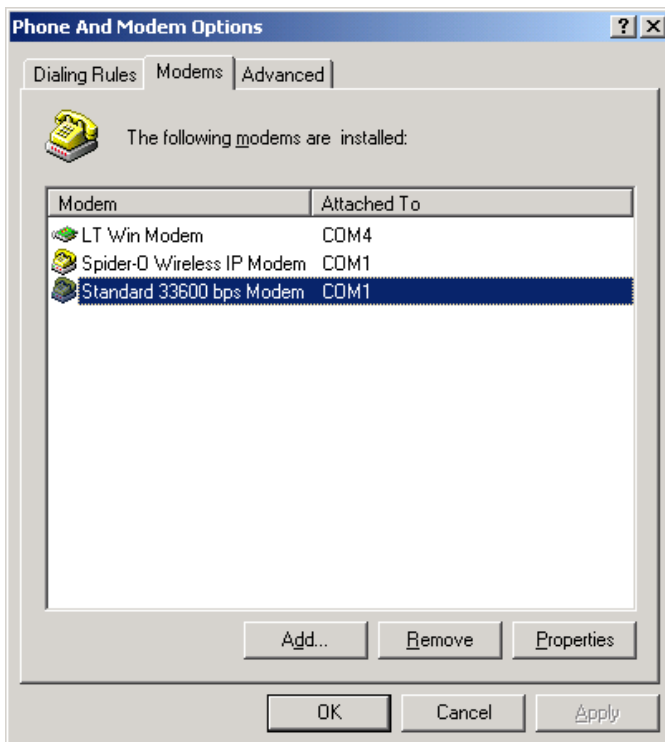
- 5) Select the appropriate COM port and click **Next>**.



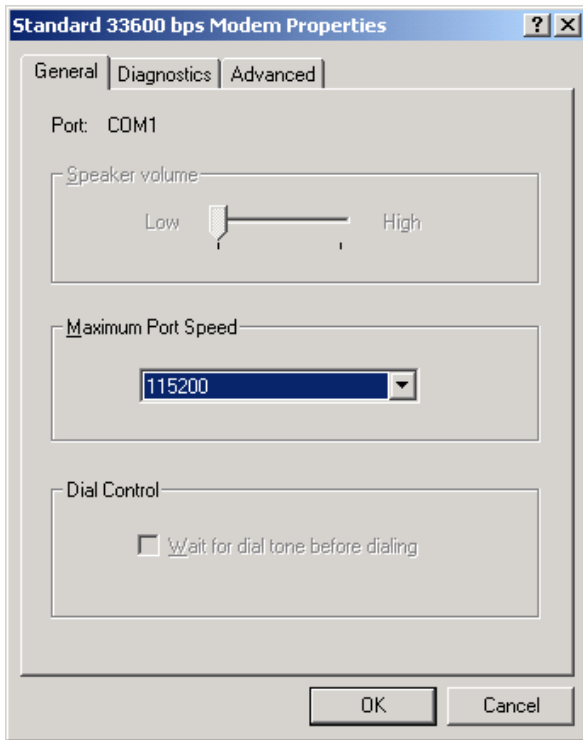
6) Click **Finish**.



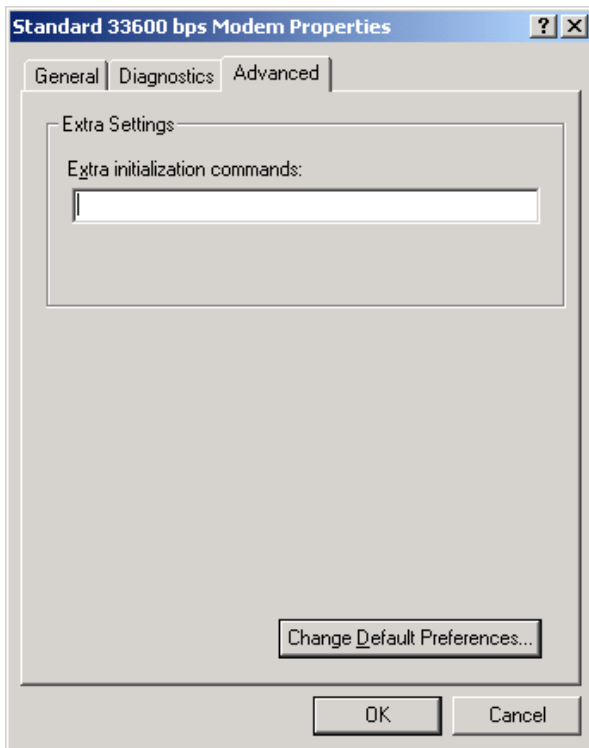
7) Select the modem entry just created and press **Properties**.



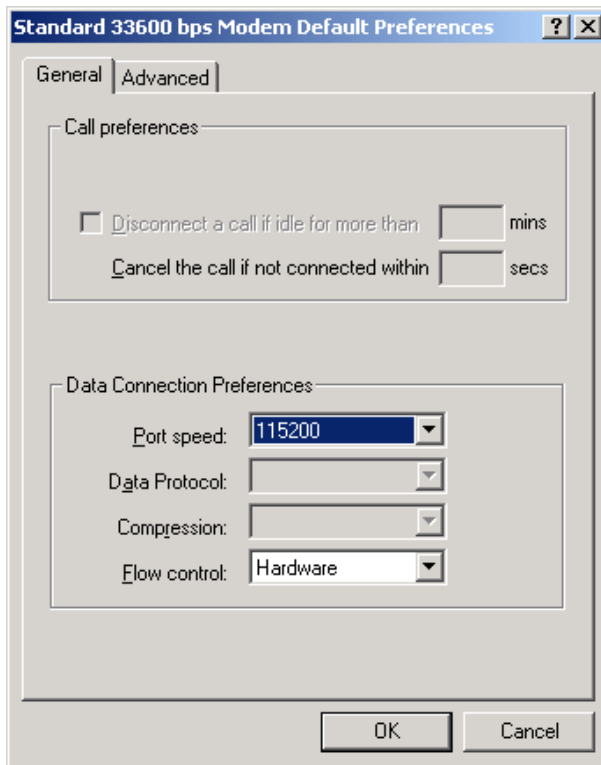
8) Make sure that the **Maximum Port Speed** is set to 115200 and select the **Advanced** tab.



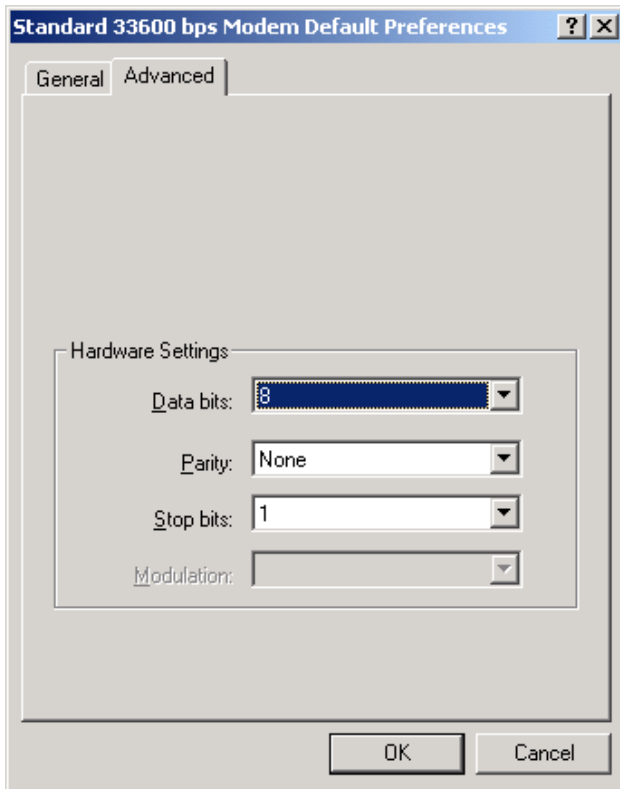
9) Press the **Change Default Preferences...** button.



10) Make sure that the **Port speed** is **115200** and that **Flow control** is set to **Hardware**. Select the **Advanced** tab.



11) Make sure that **Data bits** are set to **8**, **Parity** to **None**, and **Stop bits** to **1**. Press **OK** until you are back to the Control Panel.

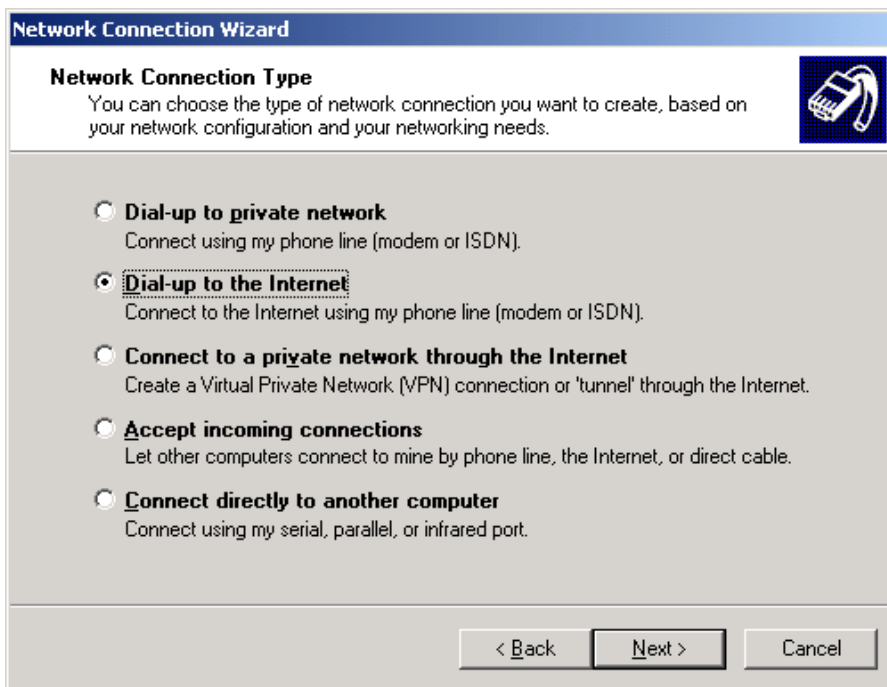


The Enabler-G modem entry has now been created and is ready to be used in Dial-Up Networking. The following steps should be used to configure the Dial-Up Networking entry.

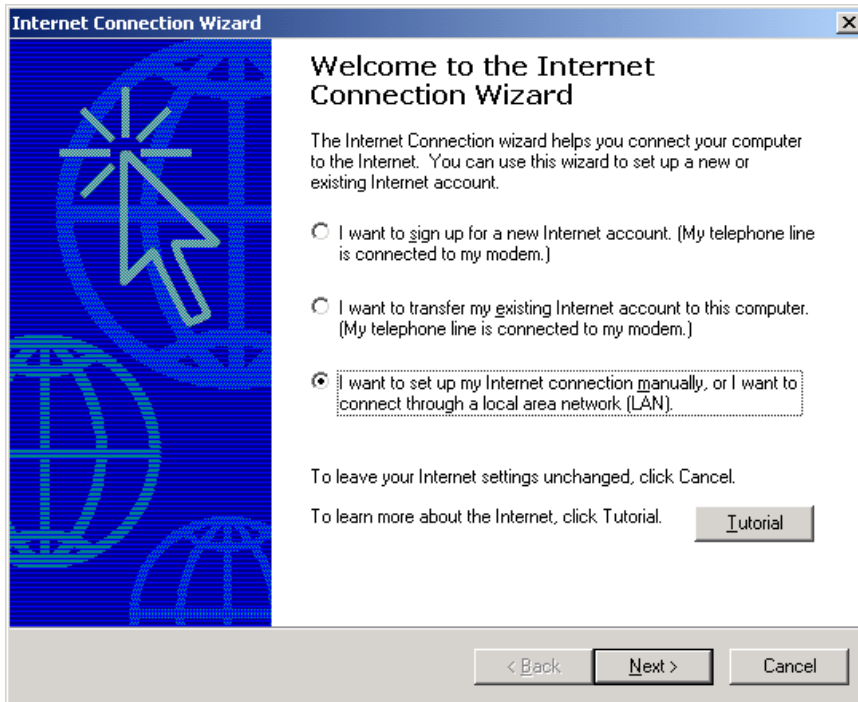
1) From *Settings/Networking and Dial-Up Connections*, select **Make New Connection**. Press **Next>**.



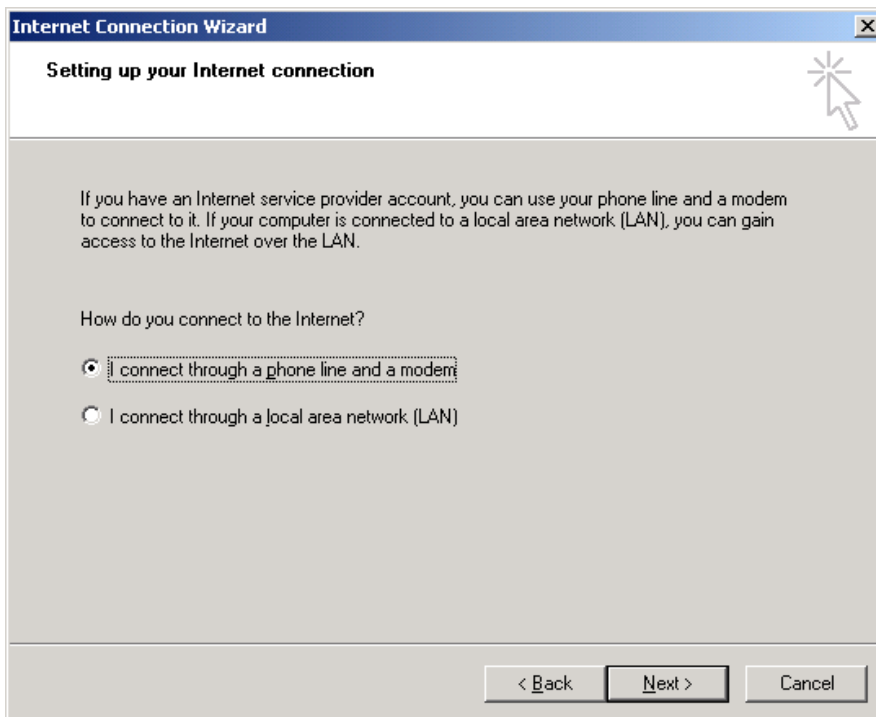
2) Select **Dial-up to the Internet** and press **Next>**.



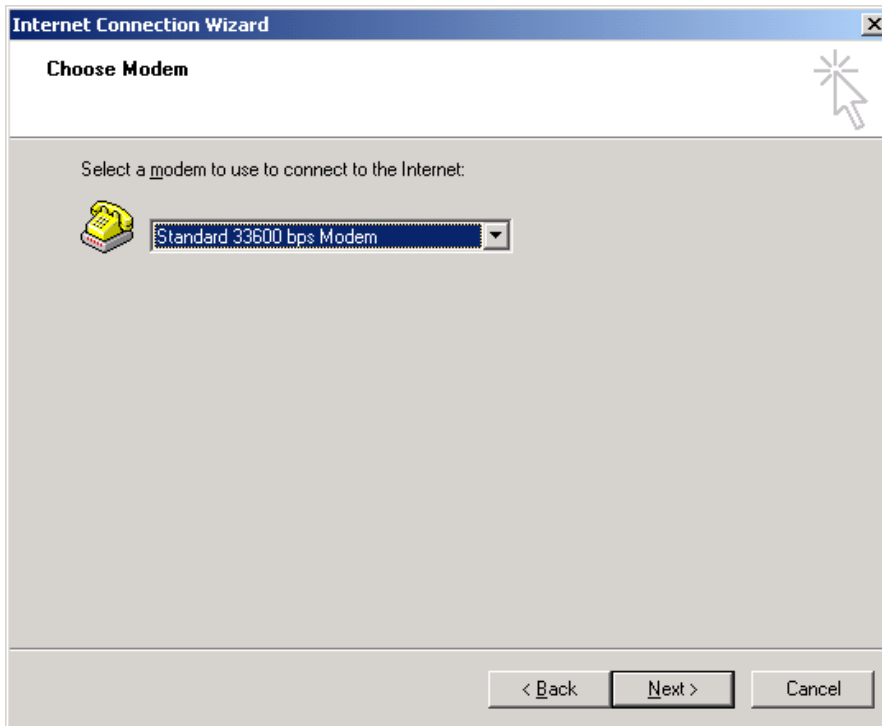
- 3) Select **I want to set up my Internet connection manually, or I want to connect through a local area network (LAN)** and press **Next>**.



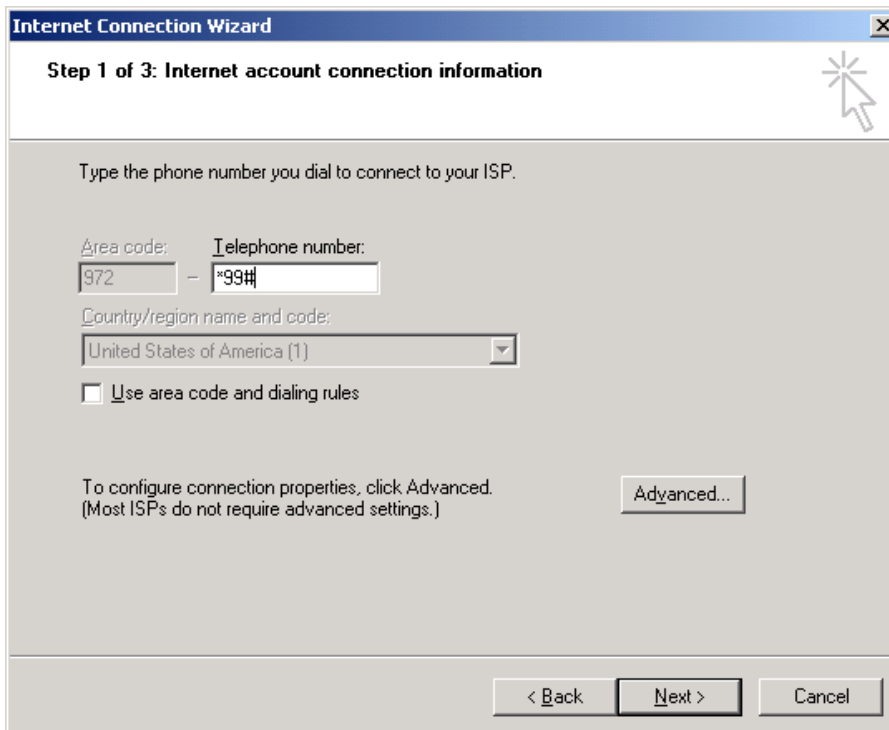
- 4) Select **I connect through a phone line and a modem** and press **Next>**.



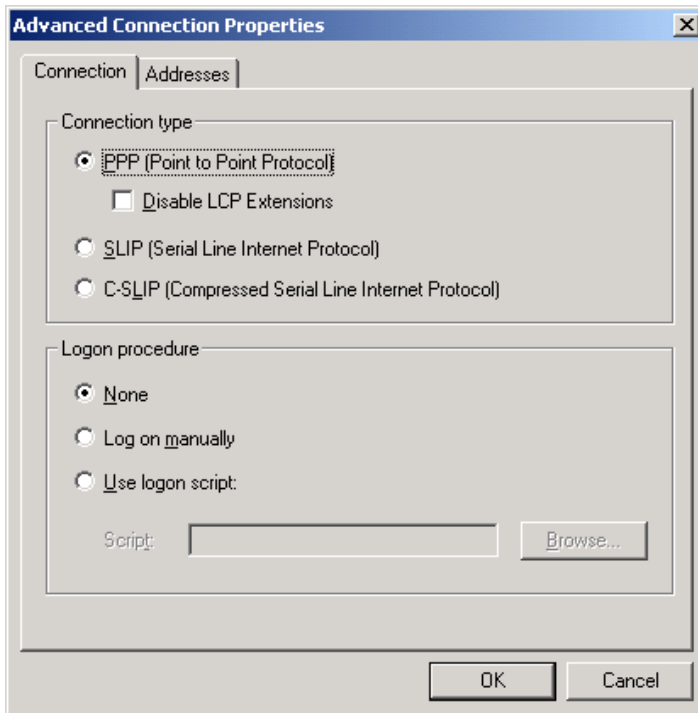
5) Select the modem defined above. Click **Next>**.



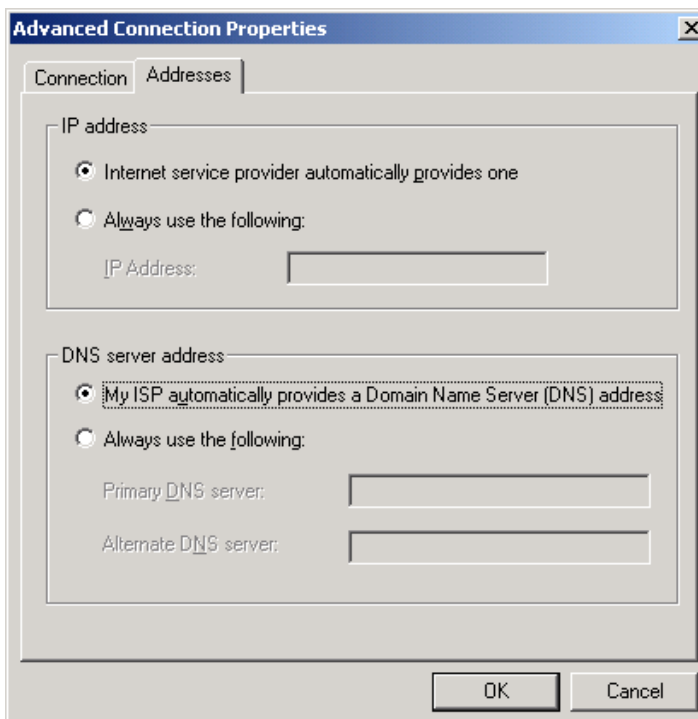
6) Enter **\*99#** in the **Telephone number** field. Make sure that **Use area code and Dialing Properties** is **NOT** checked. Press the **Advanced** button.



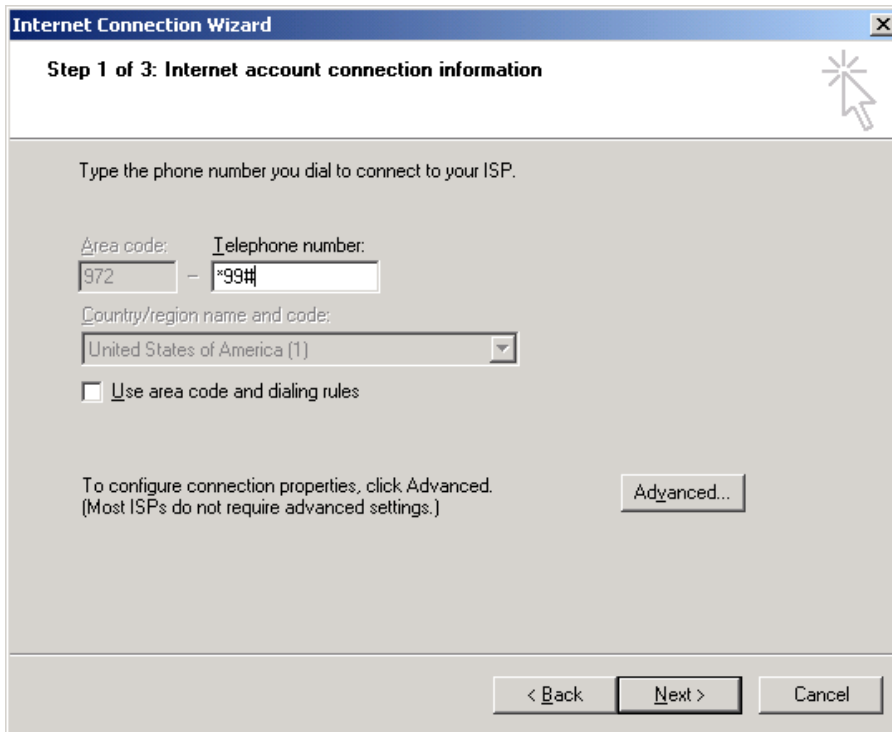
- 7) Make sure that the **Connection type** is **PPP (Point to Point Protocol)** and that the **Disable LCP Extensions** box is **NOT** checked. **None** should be selected for the **Logon procedure**. Press the **Addresses** tab.



- 8) Select **Internet service provider automatically provides one** under **IP address**. The **DNS server address** selection configuration should be provided by the network operator. Some operators will dynamically assign them and some will provide static addresses. Contact your network operator for the values required. Press **OK**.



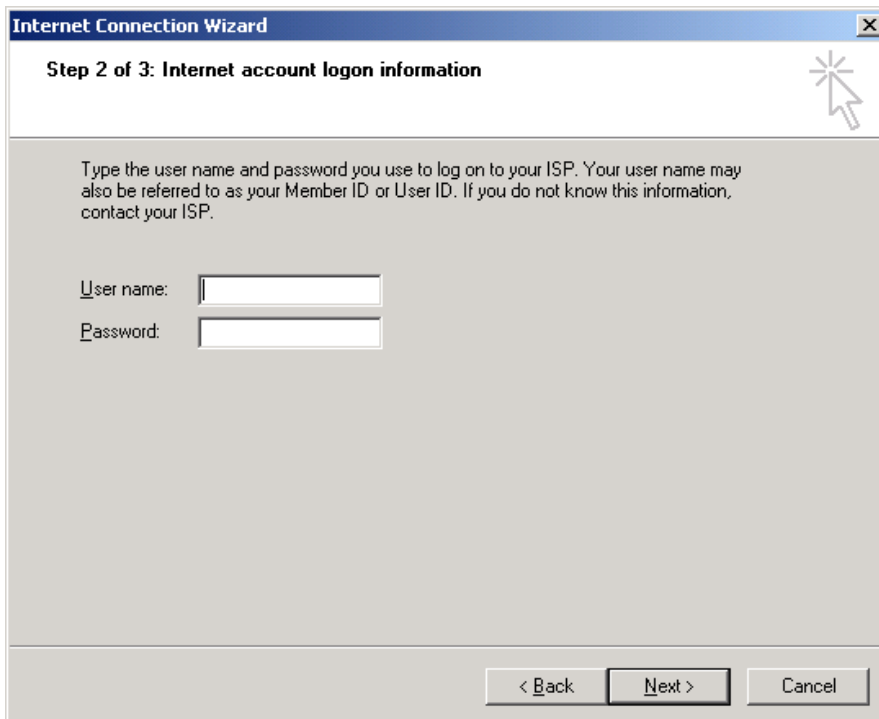
9) Press **Next>**.



The screenshot shows the 'Internet Connection Wizard' window at 'Step 1 of 3: Internet account connection information'. The window title bar includes a close button (X). The main content area contains the following elements:

- Instruction: 'Type the phone number you dial to connect to your ISP.'
- Form fields: 'Area code:' with a text box containing '972', and 'Telephone number:' with a text box containing '\*99#'. A minus sign is positioned between the two boxes.
- Dropdown menu: 'Country/region name and code:' with a dropdown menu showing 'United States of America (1)'.
- Checkbox: 'Use area code and dialing rules' which is currently unchecked.
- Text: 'To configure connection properties, click Advanced. (Most ISPs do not require advanced settings.)' with an 'Advanced...' button to its right.
- Navigation buttons at the bottom: '< Back', 'Next >', and 'Cancel'.

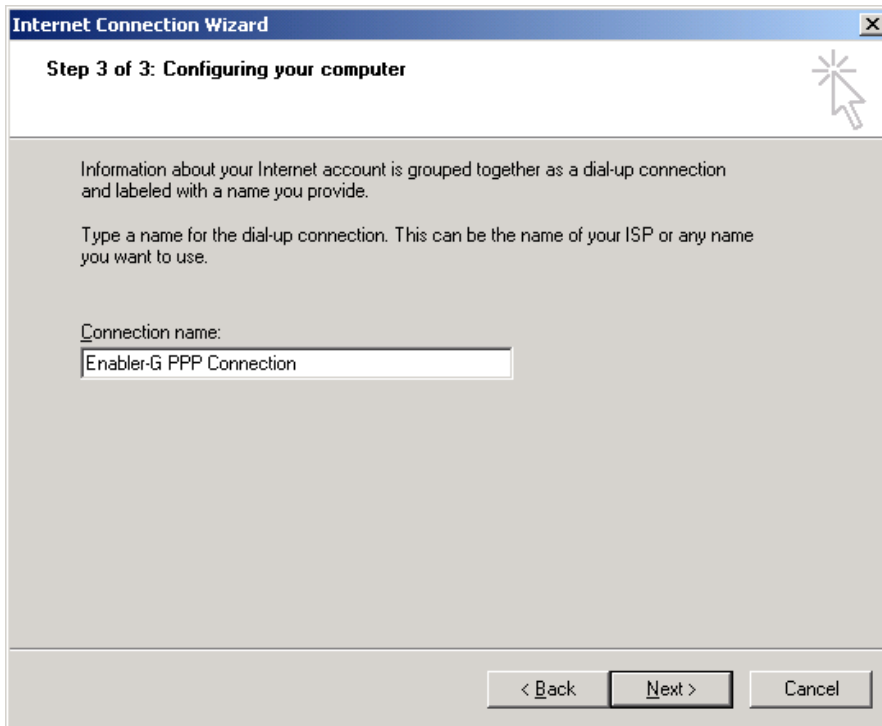
10) Depending on the network operator architecture, you may or may not have to provide a **User Name** and **Password** to gain network access. This will be dependent on whether the network is transparent or non-transparent. Speak with your network operator to verify. Once this is determined, enter the appropriate information and press **Next>**.



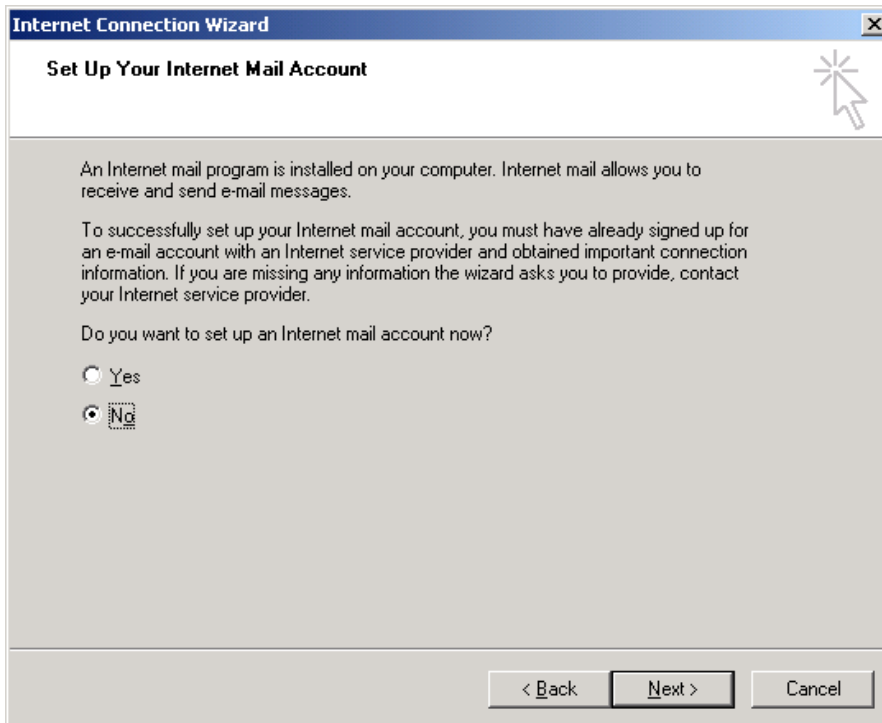
The screenshot shows the 'Internet Connection Wizard' window at 'Step 2 of 3: Internet account logon information'. The window title bar includes a close button (X). The main content area contains the following elements:

- Instruction: 'Type the user name and password you use to log on to your ISP. Your user name may also be referred to as your Member ID or User ID. If you do not know this information, contact your ISP.'
- Form fields: 'User name:' with an empty text box, and 'Password:' with an empty text box.
- Navigation buttons at the bottom: '< Back', 'Next >', and 'Cancel'.

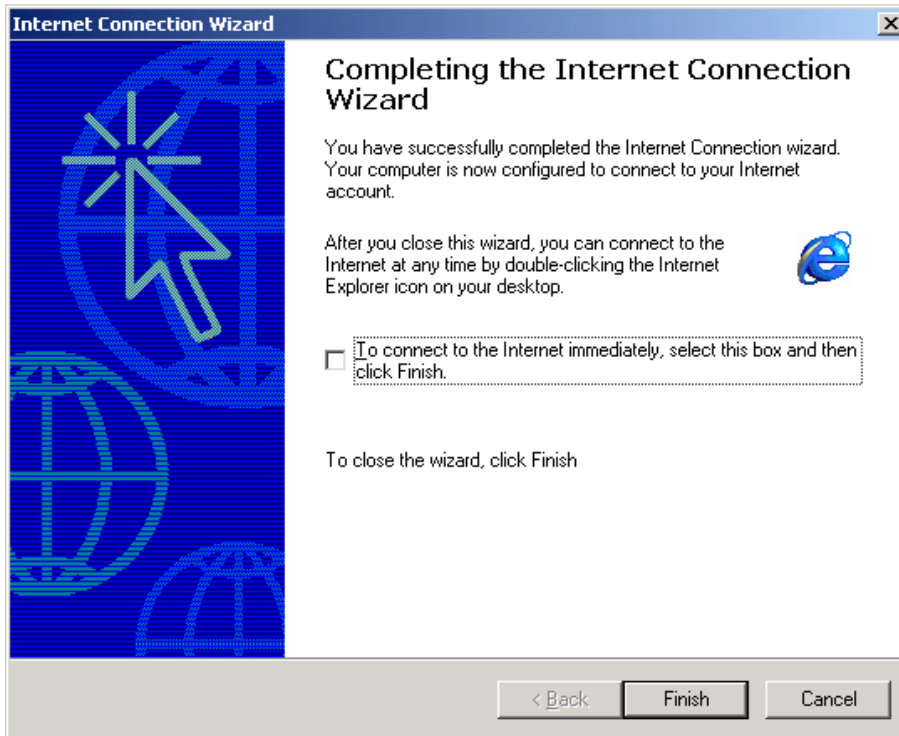
11) Enter a name for the connection in the **Connection name** field. Press **Next>**.



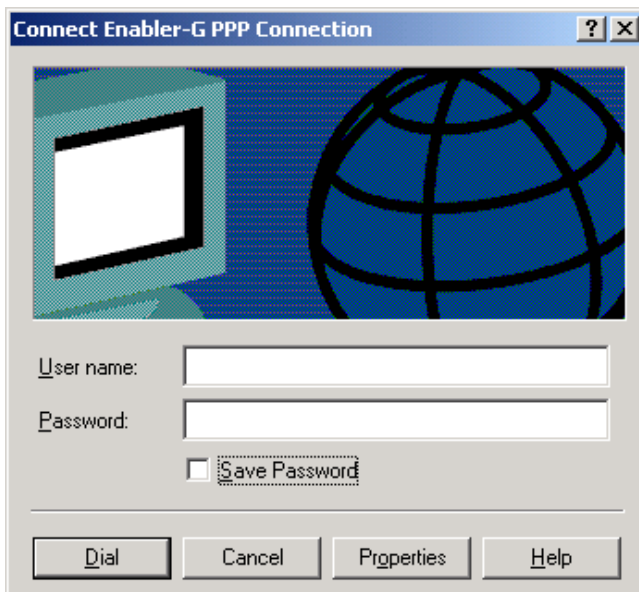
12) Select **No** for **Mail Account** setup.



- 13) Make sure that **To connect to the Internet immediately**, select this box and then click **Finish** is **NOT** selected. Press **Finish**.



- 14) The Dial-Up Networking entry is now ready for use. Please refer to **Application Note GSM0000AN005 - Enabler-G Automated Network Connection Configuration and Use**, to set the appropriate network connection. If you have a Non-Transparent network, you will need to enter the User name and password. This information will be supplied by the network operator (For instance for Singtel the user is the phone number of the SIM and the password is given through a SMS from the network). For a transparent network, nothing needs to be entered. Push the **Dial** button.



15) A screen will pop up saying that the computer is verifying user name and password, followed by authenticating.

If the modem successfully connects, the pop up screen will disappear and the connection icon will appear in the system tray at the lower right portion of the screen.



You can verify data transfer three ways, ICMP Ping, FTP or web browsing.

**To ping:** bring up command prompt (MSDOS) :

- 1) Type ping -w 10000 -I 255 -l 128 63.240.14.63
- 2) You should see 4 responses back with a response time. The length of the ICMP message can be varied by adjusting the value after -l (i.e. 512, 1024, 32)

Please note that some networks block ICMP messages and ping may not work on all networks. In this is the case; many carriers will allow ICMP message responses to their own domain. For instance, on Voicestream you would enter: ping -w 10000 -I 255 -l 128 www.voicestream.com.

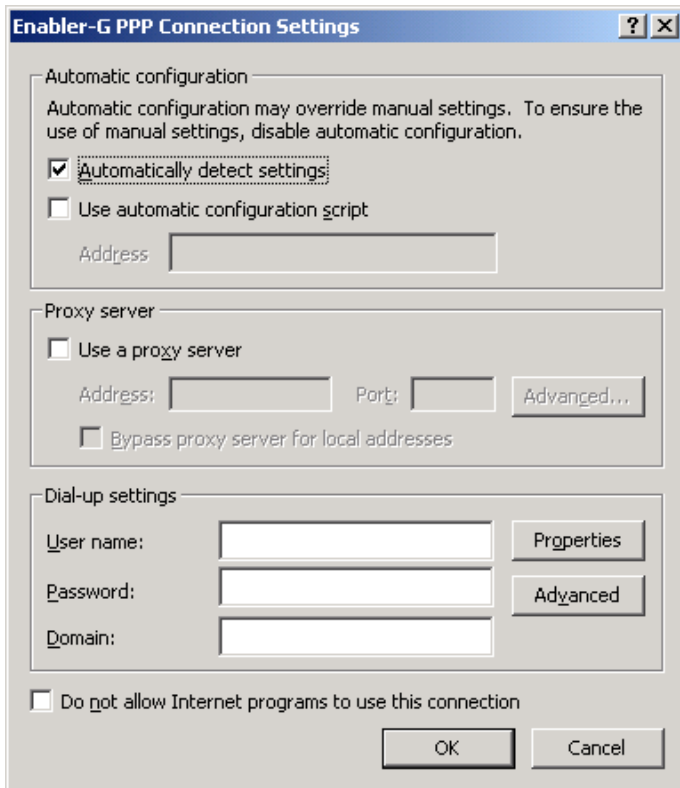
**To FTP:** bring up command prompt (MSDOS) :

- 1) For Redhat FTP type FTP 63.240.14.63
- 2) The server will prompt you for a Username. Enter: **anonymous**
- 3) The server will prompt you for a Password. Enter: **anonymous**
- 4) Once you have connected, Type **cd lib**
- 5) Type **ls** to list the files available for download
- 6) Type **get <filename>** to download file
- 7) Type **Bye** to exit FTP

**To Web browse:** Each network is different on how it allows access to the Internet. Certain settings will need to be adjusted for each network. To check the settings of the Internet browser, right mouse click on the browser icon, go to properties, **Connections**, select the PPP entry created, click **Settings...**

It is best to start with the following settings:

- 1) Make sure that **Automatically detect settings** is checked.



- 2) Click **Properties**, and make sure the settings are the same as those defined above.
- 3) This is a good starting point, however settings that may need to be changed are DNS setting, Use Proxy server, and server assigned name and address.
- 4) You are now ready to web browse. Click on the Internet browser select a web page for browsing.

## Revision History

Date	Rev	Author	Description
8/16/02	Draft	Matt Glover	Initial Draft.
9/3/02	1.00	Matt Glover	<ul style="list-style-type: none"><li>• Added COM port conflict warning.</li><li>• Changed reference to GSM0000AN005 - Enabler-G Automated Network Connection Configuration and Use due to architecture change that provides automated network attachment.</li><li>• Initial Release.</li></ul>