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Dialing Into PittNet With PPP on Your Windows NT 4.0 Machine

What is PPP?

Point-to-point Protocol (PPP) is a method for connecting a personal computer to PittNet and the Internet using a standard phone line and a modem. The difference between PPP and other, older dial-up procedures is that a PPP setup will establish a direct Internet connection that allows the PC to use TCP/IP (Internet-based) applications as if it had its own direct Internet port instead of just a phone jack. Communication programs such as Telnet, FTP and Netscape will all run from a Windows-based PC with a good PPP connection. The University of Pittsburgh offers PPP communication to its computing community through all available dial-up lines.

In order to make a connection using PPP, you must have a modem capable of at least 9600 bps communication. A slower modem may be successful, but the performance may be too slow to be of any practical use.

You do not need to install a communications package such as Trumpet Winsock or LAN WorkPlace in order to initiate PPP communication using a modem on a Windows NT PC. Do not install any other outside communications package on your Windows NT PC as they may severely impede your machine's communications ability

If you have a PC running Windows 95 or Windows 98, then these directions do not apply to your PC setup. See the help sheet *Dialing Into PittNet using PPP on your Windows 95 PC* or *Dialing into PittNet using PPP on your Windows 98 PC*.

If you have a PC with an older version of Windows (Windows 3.1 or earlier) then these directions do not apply to your PC setup. See the help sheet *Dialing into PittNet on Your Windows (3.1) PC Using Trumpet Winsock Software*.

Fortunately for users of Windows NT, no additional software is needed in order to set up PPP communication using a modem. However, your PC must be instructed to use Internet protocols, including PPP.

## Section 1 - Install and Configure Your Modem

> **NOTE**: If you have already installed your modem, skip to **Section 2 - Installing Remote Access Service (RAS).**

1. Logon to your machine as the Local Administrator.

2. After the computer boots up, click on the **Start** button.

3. Pass the mouse over **Settings**. The Settings sub-menu will appear.

4. Click on **Control Panel**. The Control Panel window will open.

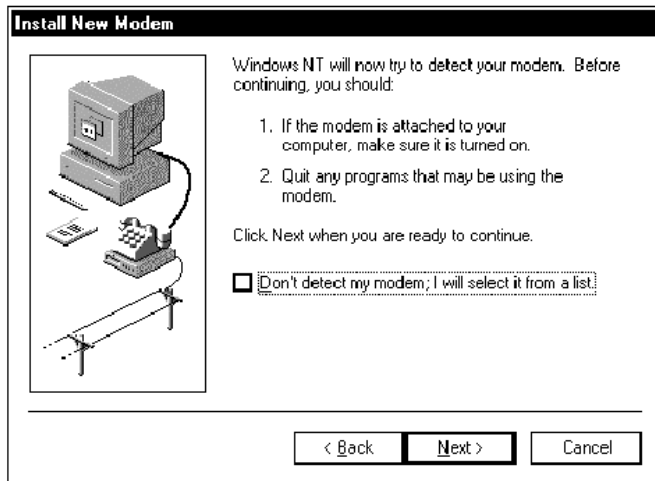5. In the Control Panel window, double-click on the **Modems** icon.

If this is the first modem to be installed on this computer, the **Install New Modem** wizard will begin (See step 7).

If another modem has already been installed, the **Modems Properties** dialog box will open.
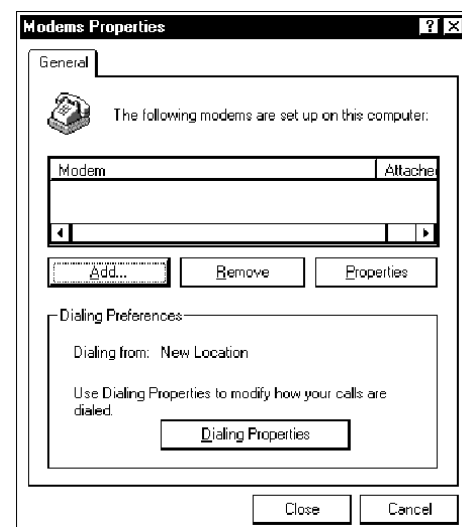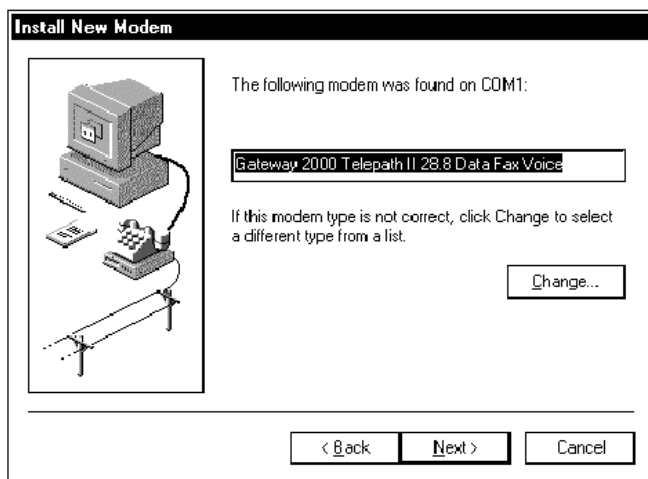
6. Click on the **Add** button. The Install New Modem wizard will appear.

NOTE: A wizard is a series of dialog boxes that take you step by step through a process.

Install New Modem

Windows NT will now try to detect your modem. Before continuing, you should:

1. If the modem is attached to your computer, make sure it is turned on.

2. Quit any programs that may be using the modem.

Click Next when you are ready to continue.

☐ Don't detect my modem; I will select it from a list.
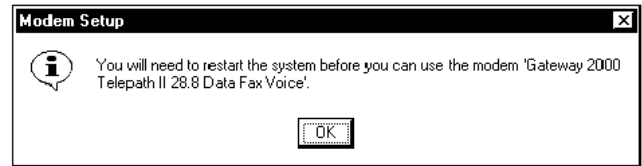
‹ Back   Next ›   Cancel

7. Click on the **Next** button to instruct Windows to automatically detect the modem. This may take a moment. Once Windows finds your modem, the following dialog box will appears:
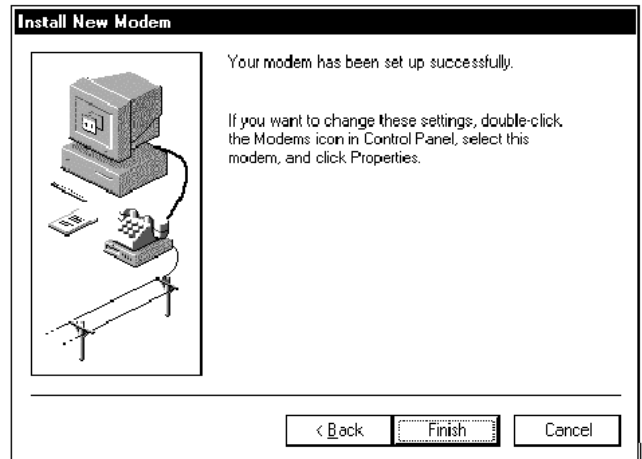
Install New Modem

The following modem was found on COM1:

Gateway 2000 Telepath II 28.8 Data Fax Voice

If this modem type is not correct, click Change to select a different type from a list.

Change...

‹ Back   Next ›   Cancel

NOTE: If Windows is unable to detect your modem, you will be able to pick your make and model from a dialog box. Simply scroll through the manufacturers list on the left and click once on the correct name. All of the known models for that manufacturer will be listed in the right hand box. Find and select your model from the list. Or if you have the manufacturer's installation disk, click on the **Have Disk** button and follow the instructions.

Click **Next** to complete the rest of the installation.

8. After confirming that the modem found is the one you want installed, click on the **Next** button. A dialog box similar to the following will appear:

Modem Setup

ⓘ You will need to restart the system before you can use the modem 'Gateway 2000 Telepath II 28.8 Data Fax Voice'.

OK

9. Click on the **OK** button. The Install New Modem wizard will display its last dialog box.

Install New Modem

Your modem has been set up successfully.

If you want to change these settings, double-click the Modems icon in Control Panel, select this modem, and click Properties.

‹ Back   Finish   Cancel

10. Click on the **Finish** button. The Modems Properties dialog box will appear.

Modems Properties

General

The following modems are set up on this computer:

Modem	Attache
🖉 Gateway 2000 Telepath II 28.8 Data Fax Voice	COM1

Add...   Remove   Properties

Dialing Preferences

Dialing from: New Location

Use Dialing Properties to modify how your calls are dialed.

Dialing Properties

Close   Cancel

11. Click on the **Close** button.

12. If prompted, click on the **Restart** button.

Modem Installation Tips

- Some internal modems on Windows NT PCs cannot be recognized properly due to conflicts with certain sound cards. If your PC is not correctly recognizing your internal modem, try removing the sound card and restarting the PC. With this possible conflict temporarily eliminated, the PC may be able to recognize the modem properly and the sound card can then be re-installed and the PC started again with all equipment recognized and functioning.

- If you are using an external modem on an older PC, you should make sure that the COM port that the modem will be using has a "16650 UART" chip controlling it. Check your PCs specifications or use the WINMSD program in "Command Prompt" window to check your PCs COM ports. If necessary, you may have to reconfigure the COM port that your modem uses or attempt to use a port controlled by an older 8250 UART chip. PC Cards (PCMCIA modems) will have this chip built in.

Section 2 - Installing Remote Access Service (RAS)

**NOTE**: If you have already Installed RAS, skip to **Section 3 - Setting Up Your Phonebook Entry**.

Since Dial-Up Networking is not installed automatically with Windows NT 4.0, you will have to add the software by following these steps:

1. Double click on **My Computer**.

2. Double click on **Dial-Up Networking**. The following message will appear:
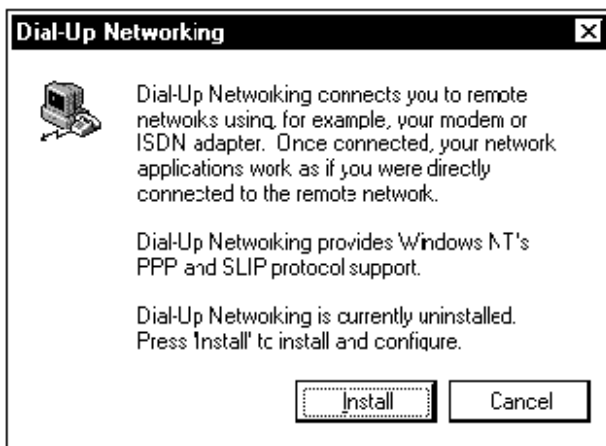
3. Click on the **Install** button to continue.

4. You will be prompted to install files. Insert your Windows NT Workstation CD-ROM and click the **OK** button.

NOTE: As in the illustration below, Windows will assume that your CD drive is letter **E:**. Change this drive letter if it does not correspond with your system.
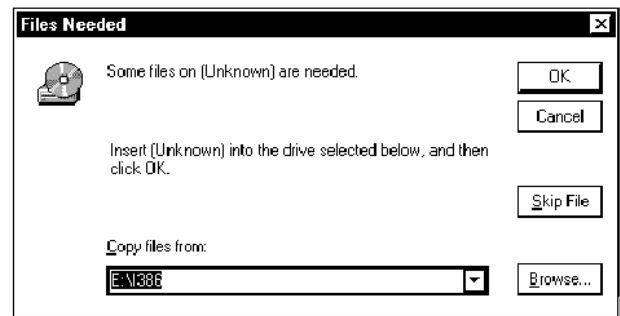

5. Wait while the Remote Access Service setup installs the necessary files. This may take a moment.

6. When Windows has finished installing the necessary files, the following window will appear. Click on the **OK** button.
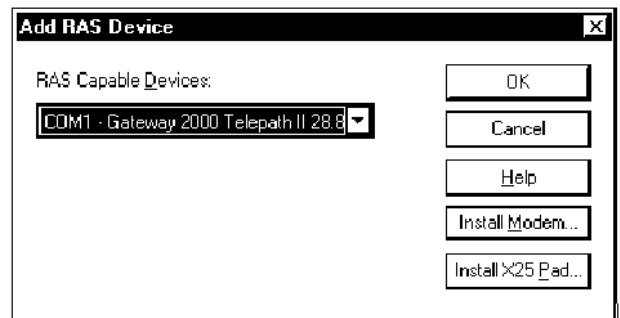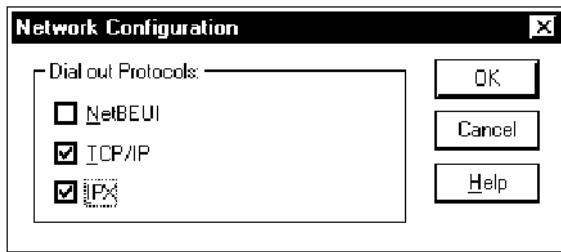

7. Click on the **Continue** button.
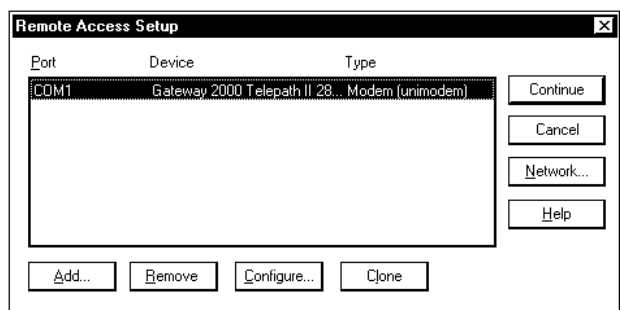
You may get the following message if you do not have any networking protocols already installed on your computer. Click the **OK** button to continue.
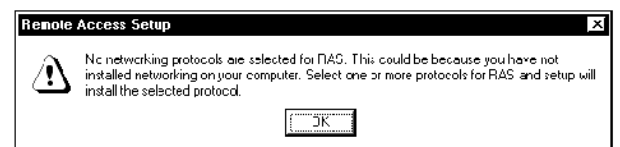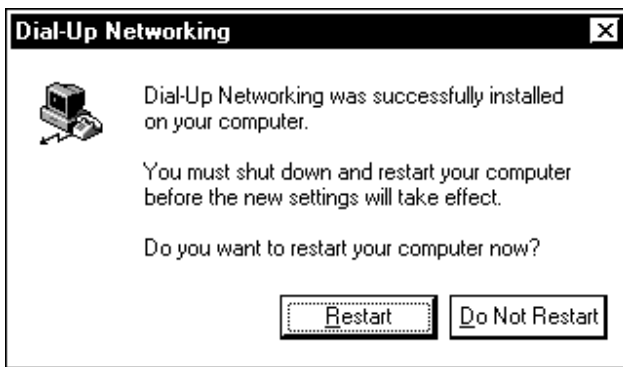

8. After selecting **TCP/IP** and **IPX**, click the **OK** button.

9. Click on the **Continue** button. Wait while RAS is installed.

10. When NT is done installing the RAS components you will be prompted to restart your computer, click the **Restart** button.


Section 3 - Setting Up Your Phonebook Entry

NOTE: If you have already set up your first University of Pittsburgh Phonebook entry, skip to **Section 4: Establishing Your Connection to Pitt**.

1. Double click on **My Computer**.

2. Double click on **Dial-Up Networking**.
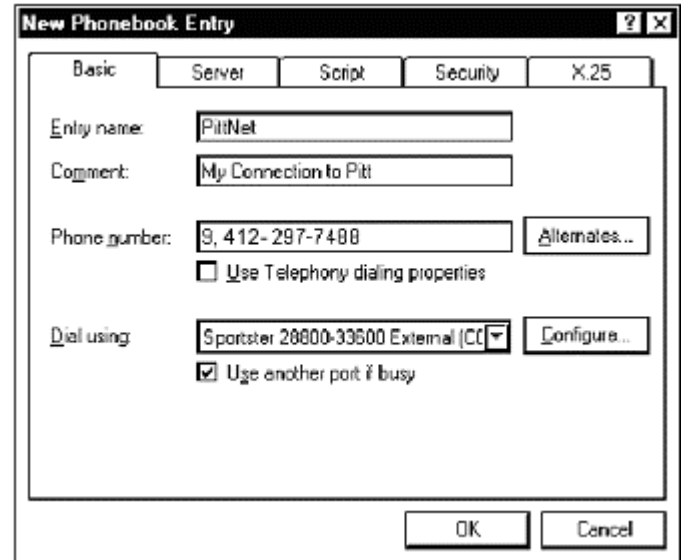
3. Click the **OK** button.
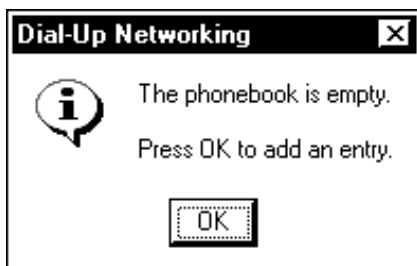
4. When the New Entry Phonebook wizard appears, select the option box next to "**I know all about phonebook entries**..." to edit the properties directly. Click on the **Next** button.
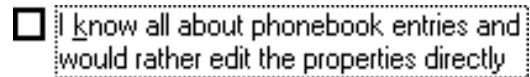
NOTE: If you have already created other Phonebook entries, click the New button to create a new entry.

5. The **New Phonebook Entry** dialog box will appear.

6. Type in an entry name such as **PittNet** in the **Empty name** field. The Comment field is optional.

7. Press the **Tab** key to move to the **Phone number** field. Enter the phone number "**9, 412-297-7488**" if you are calling from an on campus building and "**412-297-7488**" from off campus.

NOTE: The "**9**" will access an outside line from an on campus phone line, while the "**,**" puts a necessary pause in the automatic dialing.

If you wish to dial into a regional campus, use one of the following numbers:

Bradford campus...(814) 362-7597
Greensburg campus ....(724) 836-9997
Johnstown campus...(814) 269-7950
Titusville campus ....(814) 827-4486

8. Click on the **Configure** button. The **Modem Configuration** dialog box will appear.

Modem Configuration

Gateway 2000 Telepath II 28.8 Data Fax V

Initial speed (bps): 115200

Hardware Features
☑ Enable hardware flow control
☑ Enable modem error control
☑ Enable modem compression

☐ Disable modem speaker

OK   Cancel
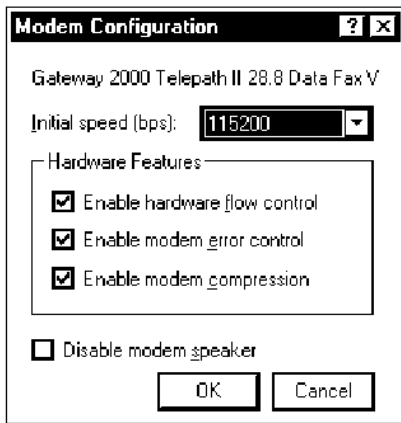
9. Select an initial speed of **115200** and click on the **OK** button. The New Phonebook Entry dialog box will reappear.

10. Make sure that the "**Use another port if busy**" box is not selected.

☐ Use another port if busy
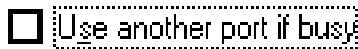
11. Click on the **Server** tab. Verify that the settings are the same as in the picture below.

New Phonebook Entry

Basic | Server | Script | Security | X.25

Dial-up server type:
PPP: Windows NT, Windows 95 Plus, Internet

Network protocols
☑ TCP/IP   TCP/IP Settings...
☑ IPX/SPX compatible
☐ NetBEUI

☑ Enable software compression
☑ Enable PPP LCP extensions

OK   Cancel
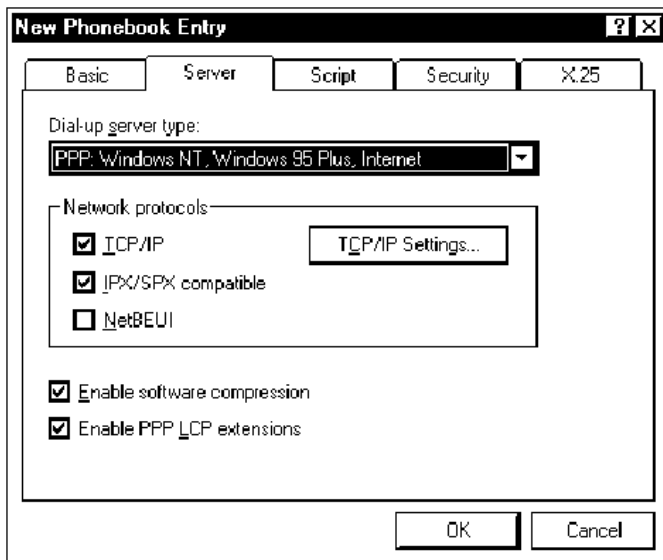
12. Click on the **TCP/IP Settings** button. Verify that the settings are the same as in the picture below.

PPP TCP/IP Settings

⦿ Server assigned IP address
◯ Specify an IP address
   IP address: 0 . 0 . 0 . 0

⦿ Server assigned name server addresses
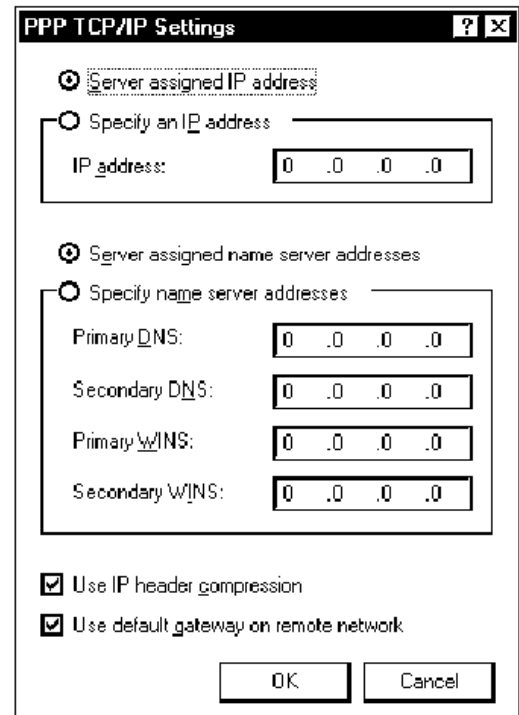◯ Specify name server addresses
   Primary DNS: 0 . 0 . 0 . 0
   Secondary DNS: 0 . 0 . 0 . 0
   Primary WINS: 0 . 0 . 0 . 0
   Secondary WINS: 0 . 0 . 0 . 0

☑ Use IP header compression
☑ Use default gateway on remote network

OK   Cancel

13. Click **OK** (only once) to close the **PPP TCP/IP Settings** window.

14. Select the **Script** tab.

New Phonebook Entry

Basic | Server | Script | Security | X.25

After dialing (login)
◯ None
⦿ Pop up a terminal window
◯ Run this script:
   (none)
            Edit script...   Refresh list

                  Before dialing...

OK   Cancel
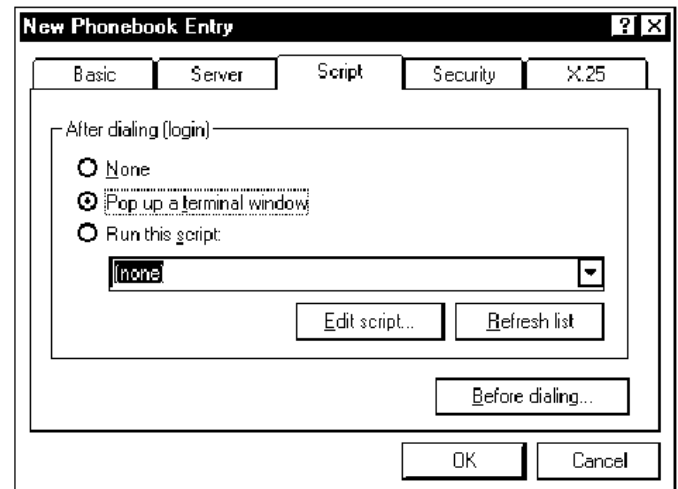
15. Select **Pop up terminal** window**.**

16. Click on the **Security** tab. Verify that the settings are the same as in the picture below.

Edit Phonebook Entry

Tabs: Basic | Server | Script | **Security** | X.25

Authentication and encryption policy
- ● Accept any authentication including clear text
- ○ Accept only encrypted authentication
- ○ Accept only Microsoft encrypted authentication
  - ☐ Require data encryption
  - ☐ Use current username and password

Unsave password

OK   Cancel
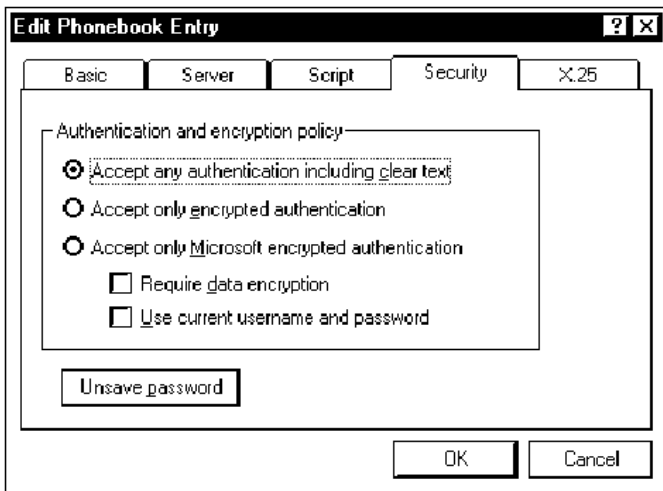
17. Click on the **OK** button.

> **NOTE**: you do not need to modify information on the X.25 tab.

18. Click on the **Close** button to close the Dial-up Networking Window.

19. Click on the **Start** button in the Task Bar.

20. Pass the mouse over **Settings**. The settings sub-menu will appear.

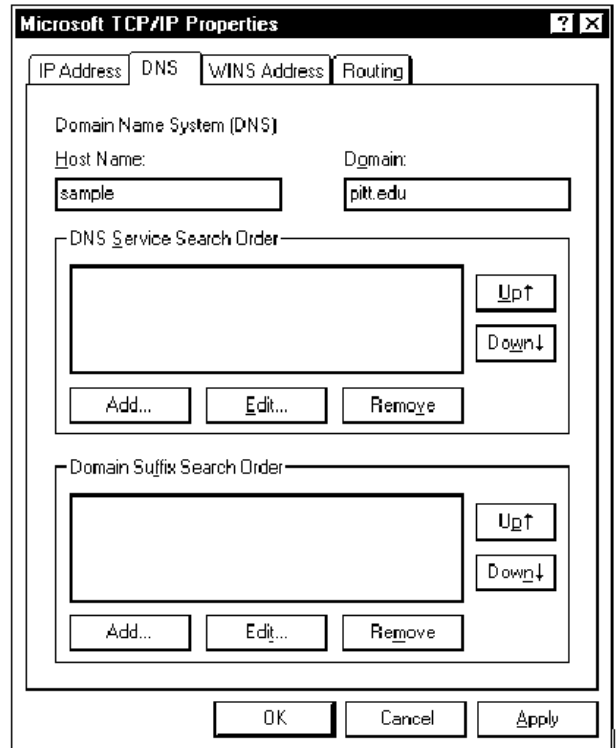21. Click on **Control Panel**. The Control Panel window will open.

22. Double click on the **Network** icon.

Network

23. Select the **Protocols** tab and click once on **TCP/IP Protocol**.

24. Click on the **Properties** button.

25. Click on the **DNS** tab.

Microsoft TCP/IP Properties

Tabs: IP Address | DNS | WINS Address | Routing

Domain Name System (DNS)

Host Name: sample

Domain: pitt.edu

DNS Service Search Order

Up↑   Down↓

Add...   Edit...   Remove

Domain Suffix Search Order

Up↑   Down↓

Add...   Edit...   Remove

OK   Cancel   Apply

26. Type in the domain **pitt.edu**

27. Click **OK** to close the TCP/IP properties window.

28. Click **OK** again to close Network properties.

29. Close the **Control Panel**.

Section 4 - Establishing Your Connection To Pitt

1. Double click on **My Computer**.

2. Double click on **Dial-Up Networking**.

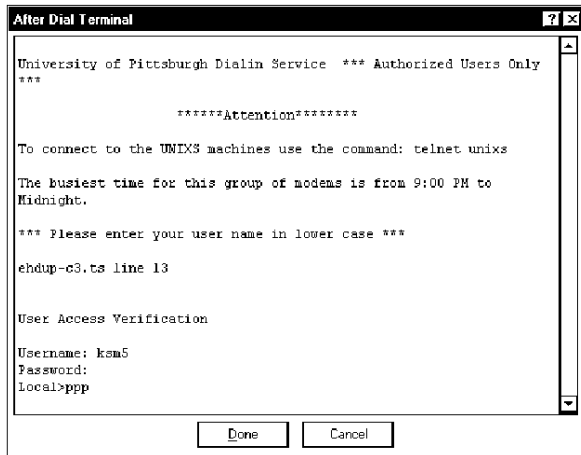3. Choose the correct phonebook entry from the drop down list.

4. Click on the **Dial** button. A dialog box appears, prompting you to enter a username and password. You do not need to type anything in this dialog box.
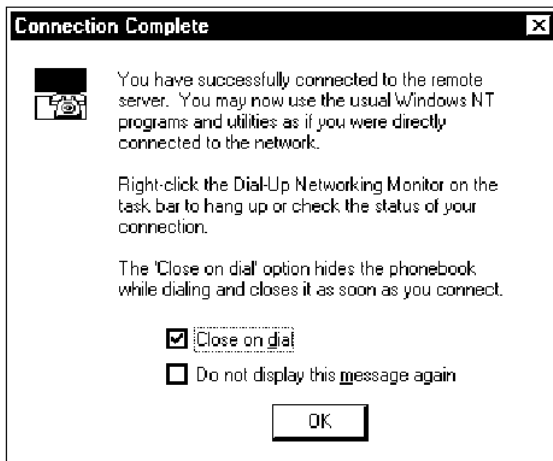
5. Click on the **OK** button.

6. Your computer will attempt to connect to Pitt.

Connecting to PittNet...

Dialing 412-297-7488

Cancel

6

7. The following terminal window should appear:


```
After Dial Terminal                              ? X

University of Pittsburgh Dialin Service  *** Authorized Users Only
***

           ******Attention********

To connect to the UNIXS machines use the command: telnet unixs

The busiest time for this group of modems is from 9:00 PM to
Midnight.

*** Please enter your user name in lower case ***

ehdup-c3.ts line 13


User Access Verification

Username: ksm5
Password:
Local>ppp

                    Done       Cancel
```

8. At the "**Username**" prompt, type your **user name**, press **Enter**.

9. At the "**Password**" prompt, type your **password**, press **Enter**.

10. At the "**Local>**" prompt type **ppp.** And then press **Enter**.

11. Click on the **Done** button**.**

12. If you get a successful connection you will see the following message:


```
Connection Complete                              X

     You have successfully connected to the remote
     server. You may now use the usual Windows NT
     programs and utilities as if you were directly
     connected to the network.

     Right-click the Dial-Up Networking Monitor on the
     task bar to hang up or check the status of your
     connection.

     The 'Close on dial' option hides the phonebook
     while dialing and closes it as soon as you connect.

     ☑ Close on dial
     ☐ Do not display this message again

                    OK
```

13. Click the **OK** button.

NOTES: You may select the option ☐ Do not display this message again if you do not want to see this message every time you log on.
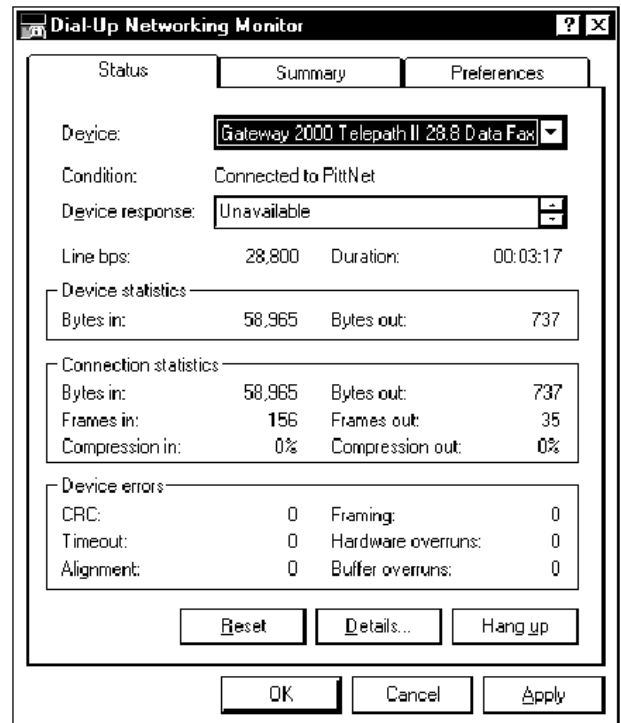
CSSD enforces a four-hour time limit on logins and a twenty-minute inactivity (no keystrokes) limit so use your time wisely.

To Disconnect From Pitt

1. Double click on the **Dial-up Networking Monitor** in the lower right hand corner of your screen. This icon is located in the task bar beside the clock.

This will open the dial-up networking monitor.


```
Dial-Up Networking Monitor                       ? X

  Status      Summary       Preferences

Device:          Gateway 2000 Telepath II 28.8 Data Fax ▼

Condition:       Connected to PittNet

Device response: Unavailable

Line bps:        28,800     Duration:       00:03:17
 Device statistics
Bytes in:        58,965     Bytes out:          737
 Connection statistics
Bytes in:        58,965     Bytes out:          737
Frames in:         156      Frames out:          35
Compression in:     0%      Compression out:     0%
 Device errors
CRC:                0       Framing:              0
Timeout:            0       Hardware overruns:    0
Alignment:          0       Buffer overruns:      0

        Reset      Details...    Hang up

        OK        Cancel       Apply
```

2. Click on the **Hang Up** button. A dialog box will appear asking you to verify the command.


```
Dial-Up Networking                               X

 ⚠  Disconnect device Gateway 2000 Telepath II 28.8 Data Fax Voice (COM1)?

            Yes      No
```

3. Click the **Yes** button to complete the disconnection.

4. Click on the **OK** button to close the Dial-Up Network Monitor.

Running Telnet and FTP

In addition to PPP dial-up software, UNA Windows NT machines also include versions of Telnet terminal emulation software as well as a file transfer protocol (FTP) utility. Both of these utilities can be accessed via the "Start" button.
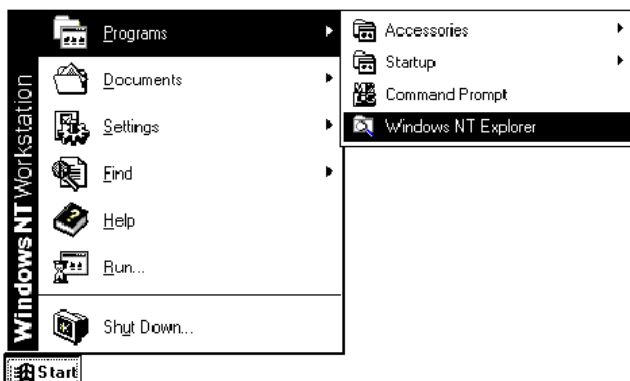
1. Position the arrow-shaped pointer until it is over the "Start" button and hold down the left mouse button. The entire "Start" menu will appear with the "Run" option accessible near the bottom of the list. While continuing to hold in the mouse button, move the arrow-shaped pointer until it is over the "Run..." command and then release the mouse button.


2. The "Run" dialog box will appear. In order to run the FTP utility, enter "ftp" on the line next to "Open:." To begin running Telnet, enter "telnet" on the "Open:" line.
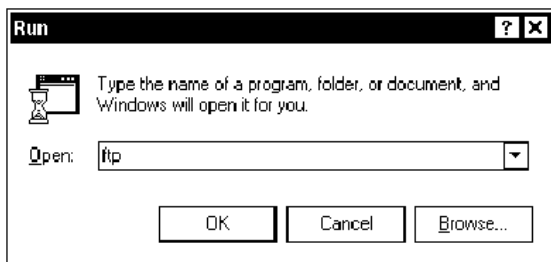

3. Click on the "OK" button. This will begin running either Telnet or FTP. If you think that you will be using either or both of these utilities a great deal in the future, you may want to create a shortcut icon for them on your desktop. This procedure is detailed in steps 4 through 7.

4. To create a shortcut for either Telnet or FTP, select the "Windows Explorer" option, accessible via the "Programs" option from the "Start menu.

5. On the "Explorer" window, double click on the icon for "Windows" under the C drive icon (C:) so that the contents of the "Windows" folder appears on the right section of the window.
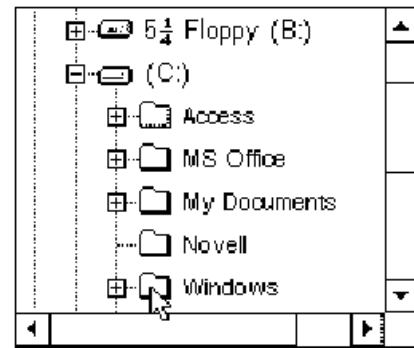
6. Position the arrow-shaped pointer until it is over the icon for Telnet or FTP and hold down the left mouse button. Move the mouse until the pointer "drags" the icon to a section of the desktop not covered by a window.
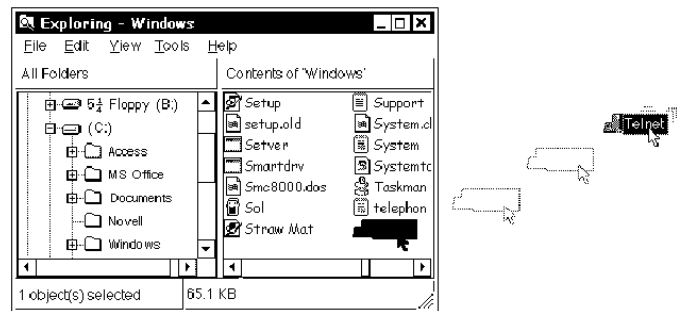
7. This will not remove the Telnet or FTP icon from its original location in the "Explorer" window. It will, however, create a shortcut icon on the desktop that can be easily accessed.

8. You can close the "Explorer" window by selecting the "Close" command under the File menu heading.

Getting Your Own Copy of Netscape

Most users of Internet services such as the Pitt SLIP/PPP service are anxious to use the Netscape World Wide Web browser to check out what is available on the Web. You can acquire a CD, which contains this (and other) software, from any campus computing lab or from Software Licensing Services (SLS) located in 203 Bellefield Hall.

Closing your PPP connection

It is important to remember to close your PPP connection when you are finished using Internet utilities since access to the Internet is becoming increasingly more valuable. This is done by double-clicking on the minimized Dial-up Networking icon (named "Connect to Pitt" in this help sheet) and then clicking on the "Disconnect" button.

Getting Help

For software usage or PPP setup questions, contact the Help Desk 24 hours a day, 7 days a week at (412) 624-HELP [4357] or via the Web at http://technology.pitt.edu.