

Installing and Configuring PPP for the Macintosh

These are the instructions for installing and configuring PPP for the Macintosh. If you have questions or comments, please see a consultant in the computer labs in the Upper Level of the Healey Library or contact the Computing Services Help Desk (617-287-5220) or send an email to helpdesk@umb.edu.

This document is divided into nine sections:

1. Requirements
2. Becoming an Authorized user
3. How to Obtain the Software
4. iMac, G3, G4 Instructions
5. Open Transport Instructions
6. MacTCP (“Classic Networking”) Instructions
7. Troubleshooting

Requirements

PPP (Point-to-Point Protocol) is a method for delivering IP (Internet Protocol) packets to your computer via modem. This is necessary to run Internet applications such as Netscape Navigator and Internet Explorer. To use PPP on a Macintosh, you must have a Macintosh with at least System 7.1, a 9600 bps modem, and 4 MB of RAM. These requirements are minimal. A 28.8 Kbps modem and 24 MB of RAM are recommended for Web browsing. If you are purchasing a new modem, read the troubleshooting section related to modems.

This handout will show you how to determine whether your computer meets the requirements for making a PPP Connection to UMass Boston.

Becoming an Authorized User

You must request a PPP username and password. This is different from your UMass Boston email username and password.

To request a PPP account, send the following information **from your UMass Boston email account to: ppp@umb.edu**.

- Your name
- Student or employee number (9 digits)
- Computer type (Mac or PC)
- Operating system
- Modem type and speed

The message must come from an account issued directly to you by UMass Boston. If your status cannot be verified, you will be required to contact the Registrar's Office to check your status. Once they activate you, re-send the ppp request e-mail message. Students who become inactive will have their access disabled.

Please allow up to four working days for the username to be issued. It will be e-mailed to your UMass Boston e-mail account.

Important: There are a limited number of modems, so you may have trouble connecting. And please remember that other people have work to do as well, so do your work in a timely manner and log off when you are finished.

Once you have received your username and password, you can proceed with configuring your software.

How to Obtain the Software

Step 1: Getting information about your System

Take a minute to get the following information about your computer.

Start up your Mac, and don't start any programs. Go to the Apple menu located in the upper left hand corner of the screen and select the first item in the list.

You should see the "About This Macintosh" or "About This Computer" window. If it's about something else, then you have a program running. Try clicking on a blank space on your screen and trying again.

A) What is your Operating System? (OS)

Look next to Version or System Software. Here you will see the version number, such as 7.1 or 8.0, 9.0 etc.

You must have a Macintosh with at least System 7.1

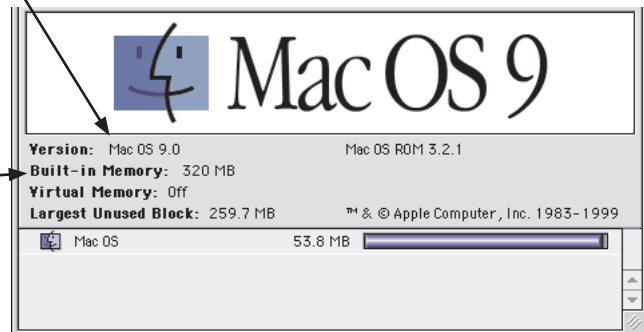
B) How much RAM (memory) does your Mac have?

Look for a number like 320MB or 9,216K (9MB). It may say Built-in or Total memory.

It is recommended to have at least 24 MB of RAM.

C) What is the model of the computer?

Look for something that says 7200, IIsi, etc. If you cannot find it here, check the front or back of the computer for a Model Number.



Step 2: What is your Networking Software?

Go to the Apple menu, click on Control Panels and look to see if any of the following components are displayed:

- TCP/IP
- Appletalk
- MacTCP
- Network
- PPP
- Remote Access

NOTE: You should NOT have both MacTCP and Appletalk listed. Contact the Helpdesk, and you will be advised on how the problem can be corrected.

If you have **NONE** of the above, contact the Helpdesk and provide them with the information you found in Step 1, from questions A, B & C. (You will probably need the MacTCP, Network and PPP software.)

Step 3: Determine your network configuration

· If you have **Remote Access**, you have an iMac, G3, G4 or are running Mac OS 8.0 or above, you should have everything you need, built-in.

Next, go to Page 5 and follow the instructions for **iMac, G3, G4**.

· If you have **TCP/IP**, you are running **OpenTransport**.

Next, you will need to determine what version of Open Transport you are using.

From the Apple Menu, select Control Panels, and open the TCP/IP or the AppleTalk control panel and choose Get Info from the File menu. If you do not have version 1.1.1 or higher, you'll need to obtain the upgrade. Open Transport can be obtained from the Help Desk.

*You will need four unformatted floppy diskettes.

If you have Open Transport 1.1.1, you will also need OT/PPP.

*You will need one blank floppy diskette for OT/PPP.

Once you have all of the necessary software, go to Page 7 and follow the instructions for **Open Transport**.

· If you have **MacTCP** and the **Network** component, you are running **Classic Networking**.

You must have both MacTCP, and the Network components listed for Classic Networking.

If you have one component and not the other, you will have to obtain the software from another Mac or from the Helpdesk.

*You will need one unformatted floppy disk.

Next, you will need to determine what version of MacTCP you are using. From the Apple menu, select Control Panels and open the MacTCP control panel. It will specify the version at the bottom of the window. You will need version 2.0.6 or higher.

If you are running MacTCP, 2.0.6, you will also need MacPPP.

*You will need one blank floppy diskette for MacPPP.

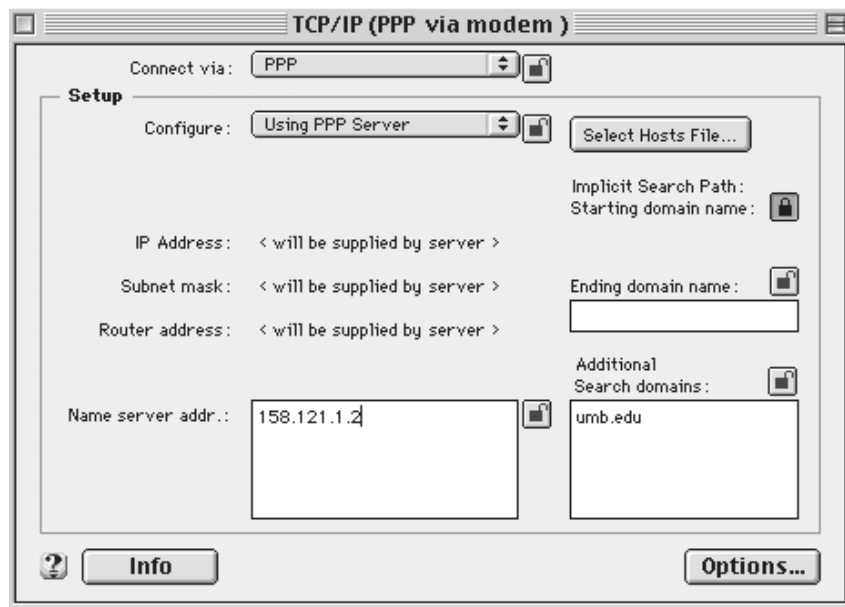
Once you have all of the necessary software, go to Page 9 and follow the instructions for **MacTCP, Classic Networking**.

*Software may be obtained from the Helpdesk, bring the required number of unformatted floppy disks listed in this handout. Please call (617) 287-5220 before coming.

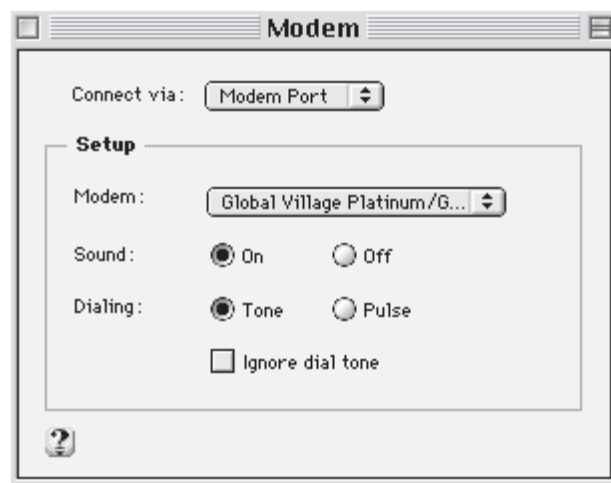
iMac, G3, G4 Instructions

From the Apple Menu, select Control Panels and open the TCP/IP control panel. There is a pop-up menu called “Connect via.” Click on it and choose PPP from this menu. This should make the “Configure:” field change to “Using PPP Server.”

Next, enter 158.121.1.2 into the field labeled “Name server addr.” Close the TCP/IP control panel and save the configuration.



From the Apple Menu, select Control Panels and open the Modem control panel. Select the port your modem is plugged into and the listed modem closest to your model. Close the Modem control panel and save the configuration.



From the Apple Menu, select Control Panels and open the Remote Access control panel.

In the setup box, click the button for Registered User.

In the name box enter your PPP username (not your email username)

In the Password box, enter your PPP password. Remember it is case sensitive.

Click Save Password, unless you share your mac.

In the Number box, enter the phone number (617-287-3500). Enter the phone number just as you would if you were dialing a telephone. If you need to dial 9 for an outside line, you will enter 9,1-617-287-3500. (The comma indicates a two-second pause in the dialing process.)

Next, click the Options button.

Click on the Redialing tab

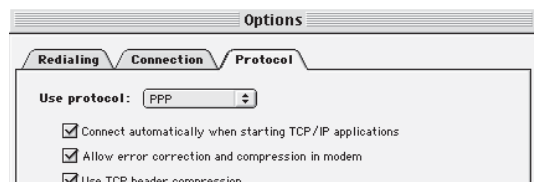
You may select “Redial main number only” if you want it to redial in the case of a busy signal.

Select the number of retries by entering a number (such as 2 or 3) in the Redial Times box

Click on the “Connections” tab

The only item to have a check is “Flash icon in menu bar while connected”

Click on the “Protocol” tab



Select automatic or PPP

Click OK

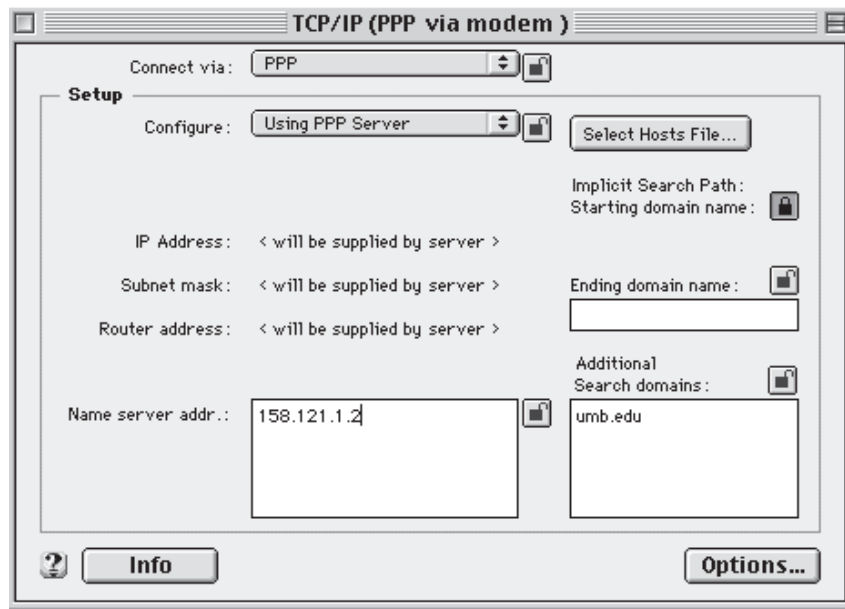
Close Remote Access and Save when asked.

It is not necessary to restart the Mac at this point. Simply start an Internet application, and the PPP should connect automatically. (If you omitted the PPP username or password in the PPP control panel, you will be prompted for it during the dialup process.)

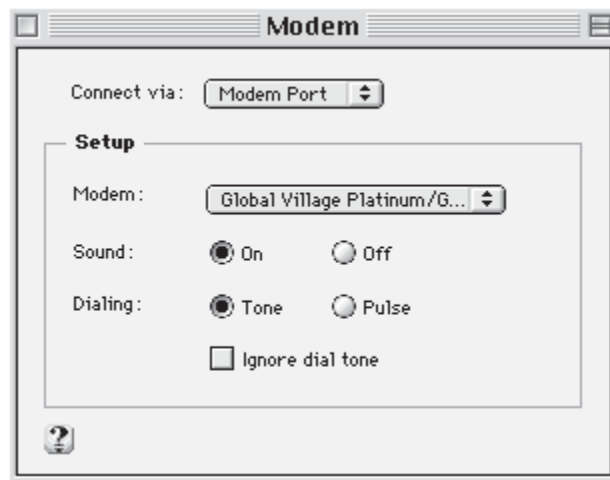
Open Transport Instructions

From the Apple Menu, select Control Panels and open the TCP/IP control panel. There is a pop-up menu called “Connect via.” Click on it and choose PPP from this menu. This should make the “Configure:” field change to “Using PPP Server.”

Next, enter 158.121.1.2 into the field labeled “Name server addr.” Close the TCP/IP control panel and save the configuration.



From the Apple Menu, select Control Panels and open Modem control panel, select the port your modem is plugged into and the listed modem closest to your model. Close the Modem control panel and save the configuration.



From the Apple Menu, select Control Panels and open the PPP control panel, make sure it reads “Connect via: Modem” at the top.

In the setup box, click the button for “Registered User”.

In the “Name” box enter your PPP username (not your email username).

In the “Password” box, enter your PPP password. Remember it is case sensitive.

Click the “Save Password” box, unless you share your mac.

In the “Number” box, enter the phone number (617-287-3500).

Enter the phone number just as you would if you were dialing a telephone. If you need to dial 9 for an outside line, you will enter 9,1-617-287-3500. (The comma indicates a two-second pause in the dialing process.)

Click the “Options” button.

Click the “Redialing tab” and turn redialing on (if desired).

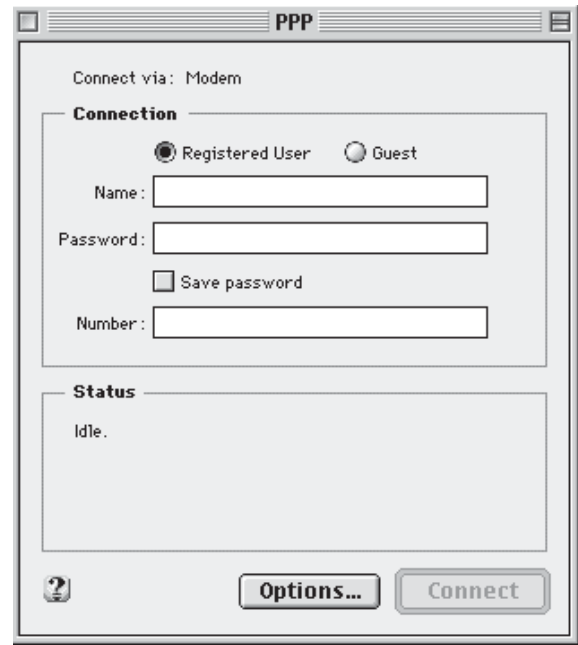
Click the “Connection” tab.

Click on the option to connect automatically.

Leave the “Protocol” tab alone; the defaults are fine. However, if you have problems connecting later, try turning *off* the two check boxes allowing compression in the Protocols tab.

Close the PPP control panel and save the configuration.

It is not necessary to restart the Mac at this point. Simply start an Internet application, and the PPP should connect automatically. (If you omitted the PPP username or password in the PPP control panel, you will be prompted for it during the dialup process.)



MacTCP (“Classic Networking”) Instructions

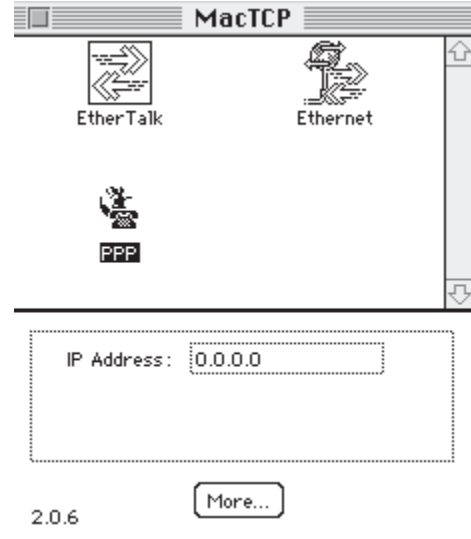
As discussed earlier in this handout in the How to Obtain the Software section, for MacTCP 2.0.6 or higher, you will need MacPPP.

To install, drag the “PPP” and “Config PPP” files from the MacPPP disk into the System Folder. The Mac will report that the files have to be stored in special places.

Click OK.

If you need to install “Network”, simply copy it from the floppy onto your hard drive, into a folder called “Control Panels” which is located in a folder called “System Folder”

You will need to restart the Macintosh for these extensions to be activated, but first, From the Apple Menu, select Control Panels and open MacTCP. In the front panel, you should see LocalTalk and PPP (you may also see EtherTalk or Ethernet). If you do not see the PPP icon, you may need to restart your machine.



Click PPP, then click the “More” button.

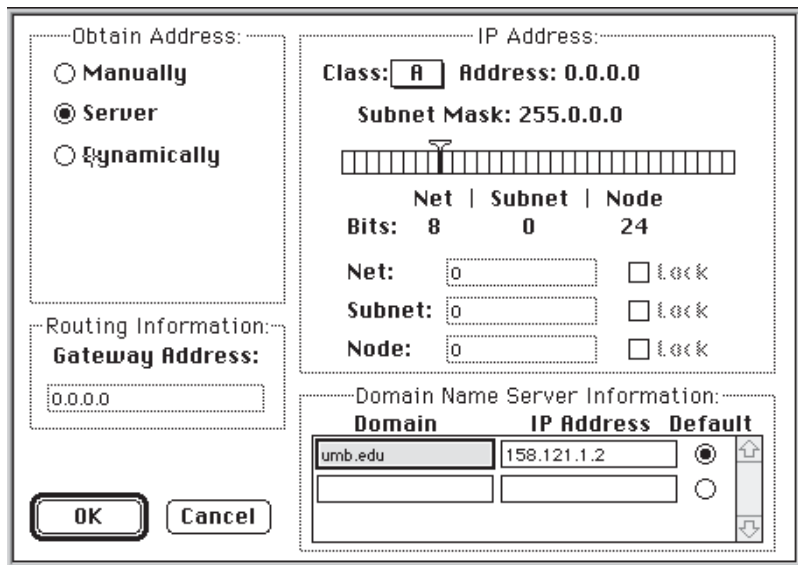
In the next box, look in the upper-left corner and you should see options under “Obtain Address.” Click on Server.

In the lower-right corner you should see an area labeled “Domain Name Server (DNS) Information.”

In the first box, under Domain enter “umb.edu”

In the second box under IP Address type 158.121.1.2

Next, under Default, click the radial button beside it to make this the default domain name server



Close MacTCP.

You will need to restart for the changes to take effect. Restart now.

Next, in the “Config PPP” control panel, specify the port your modem is plugged into. For the most part, you should use the default settings in Config PPP. Do not change anything unless you know why you are changing it, or you are instructed to do so.

Make sure that the Terminal Window option is not checked.

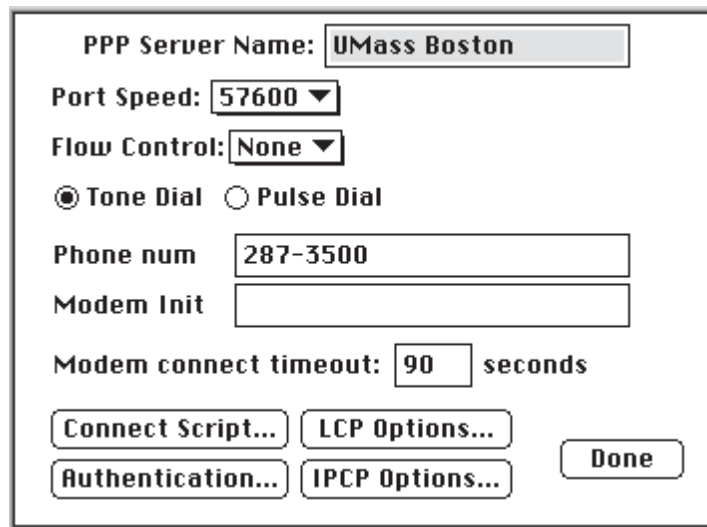


From the Apple Menu select Control Panels, open the Config PPP Control Panel. Click the “Config...” button. You will see a dialog box like the one below.

Select the highest speed your modem will support, typically 57600.

Type the server name “UMass Boston” and phone number (617-287-3500).

Enter the phone number just as you would if you were dialing a telephone. If you need to dial 9 for an outside line, you will enter 9,1-617-287-3500. (The comma indicates a two-second pause in the dialing process.)



Click the Authentication button and enter your username and password, if you wish. If you do, the connection will be made automatically. If you share your machine and do not want to connect to the internet automatically, you will be prompted for the information you did not type in during the dialup process. Note: be certain you enter the username and password *exactly*. If you make a typo, such as entering a lowercase letter instead of an uppercase one, you will see the error “Authorization Failed.”

Restart your Macintosh and start an Internet application. The PPP software should connect automatically. (Remember, if you omitted the PPP username or password in the PPP control panel, you will be prompted for it and must enter it before a connection can be made.) Alternatively, you can select Control Panels from the Apple Menu, select Config PPP and click Open to connect manually.

Troubleshooting

There are a number of things that can go wrong in telecommunications, and PPP can be complex. Following are a few errors you may encounter and what to do about them. First, determine where the problem occurs. There are four basic steps in the MacPPP connection process, each indicated by an icon in the MacPPP Connection Status dialog box. (**Note:** the status box for the Open

Transport PPP software looks different, but uses the same icons for the four steps.)



Dialing. If the process fails here, there is probably something wrong with the modem, serial port, or cable. You may get a busy signal. This could mean the incoming lines are all in use, or you may have entered the phone number incorrectly.



Establishing Connection. The modems will handshake (negotiate a common speed, compression, and so on). If the process fails here, it is probably your modem, although it could be the server's modem, your phone line, or the phone company at fault.



Logging On. At this point, the modems are communicating properly and the PPP software sends the server your username and password. If the process fails here, check your username and password in the Authentication dialog box.



Successful. Generally if you get here, everything is fine, but if the process fails here, the PPP software or the TCP/IP software should be reinstalled.

Following are some error messages you may encounter and what they mean:

A connection was established but it was not a reliable connection and was terminated.

This could mean that your phone line has too much “noise” and too many errors were generated. Try to establish the connection again. If it still fails, and you are sure it is the phone line, contact your phone company. But first, try using a later version of the PPP software and ensure that you are entering your PPP username and password correctly.

Connection box seems to hang on “Establishing Connection.”

See above.

You get a busy signal (or no answer).

The University's modem pool consists of 107 modems, so you may have trouble connecting during busy periods. In addition, if you enter the phone number incorrectly in the Config PPP (or PPP) control panel, you may get a busy signal instead of an error. For instance, entering 1-617-287-3500 would be wrong if you were dialing from the 617 area code, and entering 617-287-3500 without the 1 would cause the modem to dial incorrectly. If you suspect the University's modems are at fault, try dialing the number from your telephone instead of your modem and see if the problem persists.

Authorization failed.

This means you entered the username or password incorrectly. The best way to enter these accurately is to open the mail message with your username and password, copy them, and paste them into the Config PPP (or PPP) control panel. If this is impractical, verify them character by character, keeping in mind that zeros and uppercase Os look alike, as do ones and lowercase Ls. Also, you should be aware that the username and password are *case-sensitive*. In other words, “A” and “a” are *different characters*.

Netscape was unable to create a network socket connection.

This is a Netscape error that means PPP is not active. This could mean that the PPP connection failed or PPP never dialed at all (see the “dial automatically” setup instructions for either MacTCP or Open Transport).

“Can’t use PPP -- Insufficient memory to initialize link access protocol” error at startup.

This error indicates a TCP memory allocation problem, and should only occur when using MacTCP under System 7.1. In certain cases, by the time MacTCP loads, there is insufficient system memory to load PPP. The easiest solution to this is to move MacTCP to the beginning of the boot order by adding a space to the start of the name “MacTCP.” This makes the name “ MacTCP” and it should move to the beginning of the Control Panels folder, when viewed alphabetically. If this does not solve the problem, it will be necessary to either upgrade to System 7.5, purchase a startup utility such as Conflict Catcher or Now Startup Manager, which can allocate additional system memory at startup, or experiment with the unsupported utility “Bootman.”

Config PPP control panel quits, hangs, or does bizarre things.

This could indicate that the software has become corrupted. First, try deleting the PPP Settings file from the Preferences folder in the System Folder. If that doesn’t help, reinstall the PPP software and, if necessary, the MacTCP or TCP/IP software.

Your modem dials, and our modem answers, but they never seem to communicate.

Some modems cannot negotiate to certain speeds, or cannot communicate properly with other modems. Try again, and you may get a different modem at the University to answer. If you cannot connect at 9600, you should buy a faster modem. Many new modems can be found for \$100 or less. **Note:** the newest modems are called 56k and include “X2” or “K56Flex” technology. These modems should work with the University’s modems but will *not* provide higher speeds, since our modems are 33.6. In very rare cases, a 56k modem will not work with the University, and you will have to replace it with a 33.6 or 28.8 modem.

Other problems.

It never hurts to delete all the PPP items, reinstall them, and start from scratch. If all else fails, contact the Help Desk at (617) 287-5220, which may be able to resolve the issue over the telephone. If not, staff and faculty may make an appointment to bring the computer for configuration and testing.