

Networking with **CLIP** and Windows® 95/98

Have you ever thought about networking your office computers together but decided it was too expensive and too complicated? Well with Windows 95 all that has changed. Now it is possible to set up a peer-to-peer network in your office quickly and relatively inexpensively. No servers, no NetWare®-based network, no Certified Network Engineer charging \$100.00 per hour. You just need a minimum of two computers that run Windows 95, network adapter cards and some cable. Of course you'll need the Multi-User version of **CLIP** for Windows to complete your network.

Here is a little network trivia. A network is a group of computers connected to each other or to a central server so they can exchange files, share resources, and run common programs.

- **Exchanging files** means that you can send and receive files from other people on the network without having to leave your computer. The purpose is to get information from another computer without having to transfer the information to a floppy disk and inserting it into your computer.
- **Sharing resources** refers to common hardware that several computers can use on the network. These resources include printers and hard drives.
- **Running common programs** refers to applications kept on other computers. This can be done by accessing another computer from your computer (called peer-to-peer networking) or by accessing a computer dedicated as a file server (called client-server networking). An excellent common program to run on a network is **CLIP**.

Client-Server networking requires a dedicated main computer called a file server that *serves* out files and programs to other computers on the network. The file server requires special network-server software to make it operate the network. The file server computer and its accompanying software can be very expensive to setup. However, if your company is constantly sharing files and programs this is the way to go. File server networking is almost as fast as working on your own computer.

On a peer-to-peer network the computers are link to each other via a cable. There is no dedicated file server, however each computer in the network can act like a file server. The major drawback to peer-to-peer networks in the past was that when another user in the network accessed your computer everything slowed down to a crawl. Networking with Windows 95 solves this problem. Though there is some speed deprecation, the system does not slow down to a crawl. Peer-to-peer networking is the most cost effective networking solution for a small business that wants to connect two or three computers together.

Once you have your computers networked, you'll need to have network compatible software. I will use **CLIP** to illustrate this point.

Assume that Seymour currently uses the Unlimited version of **CLIP** for Windows on his computer. Seymour builds his network of three computers, Seymour's, Sally's, and John's with Windows 95 and everything is working fine. Seymour is ready to print Route Sheets and all is well. Later that day Sally accesses **CLIP** to credit accounts. No problem. That evening John accesses **CLIP** to Mark Work Done. So far so good. Each of the users accessed **CLIP** through their own computer without a hitch. Networking, well yes, but not 100%. The true beauty of networking comes when Sally can enter credits while Seymour is entering customer information and John is working on an estimate all at the same time. With the standard version of **CLIP** only one user can access the program at a time, however with the Multi-User version of **CLIP** numerous users can access the program simultaneously.

Seymour is a smart guy and knows that if all of his workers can enter data into **CLIP** simultaneously his business will be more efficient, productive, and profitable. So Seymour calls Sensible Software and orders the Multi-User upgrade. Seymour is now truly networking and profiting.

CLIP for Windows Multi-User version

The Multi-User version of **CLIP** is essentially an Unlimited version of **CLIP** that when used in a network allows for multiple users to access different areas simultaneously. The Multi-User version is only available in the Unlimited version due to the additional programming required for network usage.

Installation: Install **CLIP** on your fastest computer. This is the computer that will be performing the bulk of the data entry. This will provide the primary operator the fastest access speed available when other users are not connected in the network. Follow the instructions in the **CLIP** manual if this is a new **CLIP** for Windows installation. If you are upgrading from another **CLIP** for Windows version follow the instructions on the diskettes.

Installing the Network Adapter Card and Cables:

Thanks to Windows 95's built-in peer-to-peer networking functions, you can easily share files, printers and **CLIP** in a small workgroup without a server. There are two major steps in setting up a network: setting up your hardware, and setting up your software.

Network Adapter: call it a Local Area Network (LAN) card, network interface card, or a Ethernet-based network board. This card is connected directly to your computer's motherboard and communicates with the computer's CPU and the other computers in the network. Every computer in the network must have this card installed in order to be connected in the network. Installation is fairly simple and can be done by the computer user or by a qualified computer technician.

Cables: Cabling provides the pathway for network communications. The most common type of LAN cabling for peer-to-peer networks is coaxial. In most cases the type of cable used will be determined by the type of network adapter used.

Recommendation: Purchase a good quality 16 Bit Jumperless Ethernet Adapter card. Prices range from about \$40.00 for a standard card to around \$100.00 for Plug-and-Play specification cards. There are also complete kits available which include adapter cards, cabling, and full instructions. Consult your computer supplier for further information. Ensure that you read and follow the manufacturer's instructions carefully while performing the installation.

Helpful Hints:

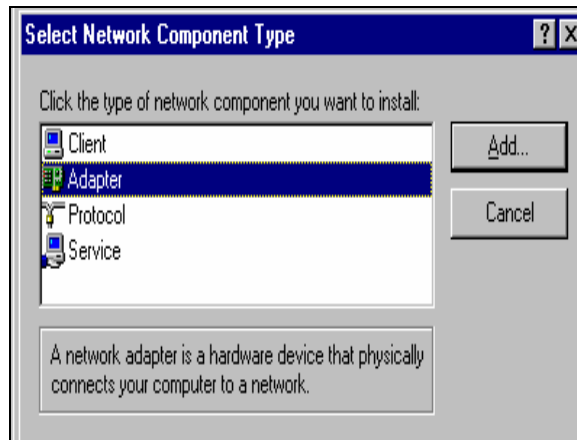
- After you install your new network adapter card, run the diagnostic program that is on the disk that came with the card to ensure it is working properly. Make note of the IRQ and I/O Address Range settings. You will need to know these settings when setting up the Windows 95 network.
- Ensure that that your cable connectors are seated properly, and that a terminator is installed on the exposed end of each "T" connector.
- Your network adapter card diagnostic software should allow you to "Master" and "Slave" your computers in order to perform a network operational test. If this test is successful you can be highly confident the network adapter card and cabling is working properly.

Setting up your Windows 95 Network:

Windows 95: One of the many exciting features of Windows 95 is the ability to set up new hardware quickly and easily. Networking is no exception. Follow the instructions in the Windows 95 manual entitled "Setting Up Your Computer to Use a Network" and you will be up and running in no time. Each and every computer that is going to be connected in the network needs to be set up similarly. Once you are set up read the section entitled "Using Resources Located on Other Computers" in your Windows 95 manual.

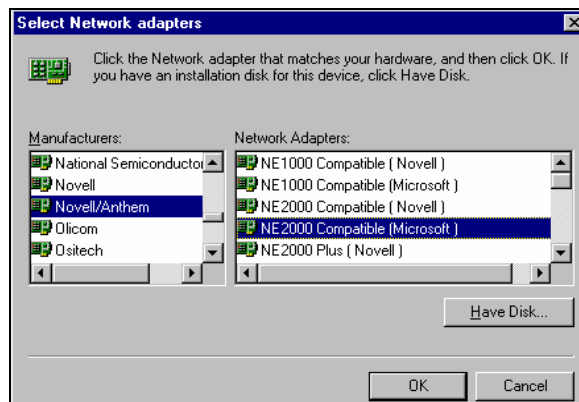
Helpful Hints:

Follow the instructions in your Windows 95 manual, and use these instructions as a supplement. Remember, these instructions are very generic and may or may not work for your particular computer. When you set up a network adapter, Windows automatically sets up the other network components. As a rule the default settings should be adequate. Windows 95 contains an excellent on-line Help and Troubleshooting system. If you run into problems just click on Help and let Windows 95 guide you through the process.



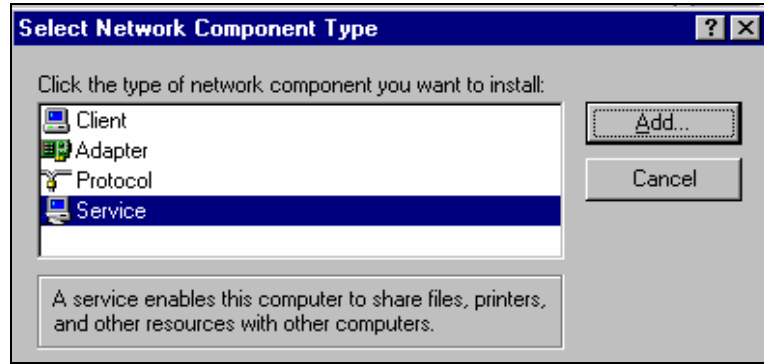
then click Add.

Click Adapter,

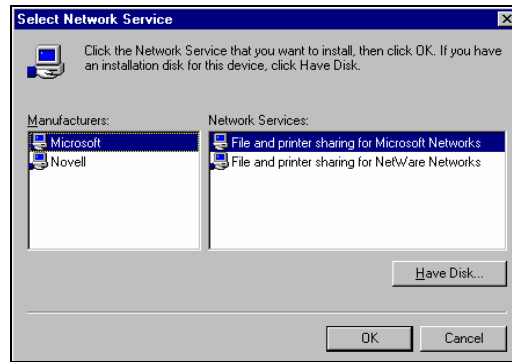


Search for your particular Adapter brand or if you have a generic Adapter card, click on Novell/Anthem, then NE2000 Compatible (Microsoft). Click OK.

NOTE: Any Adapter that you use should be NE2000 compatible.



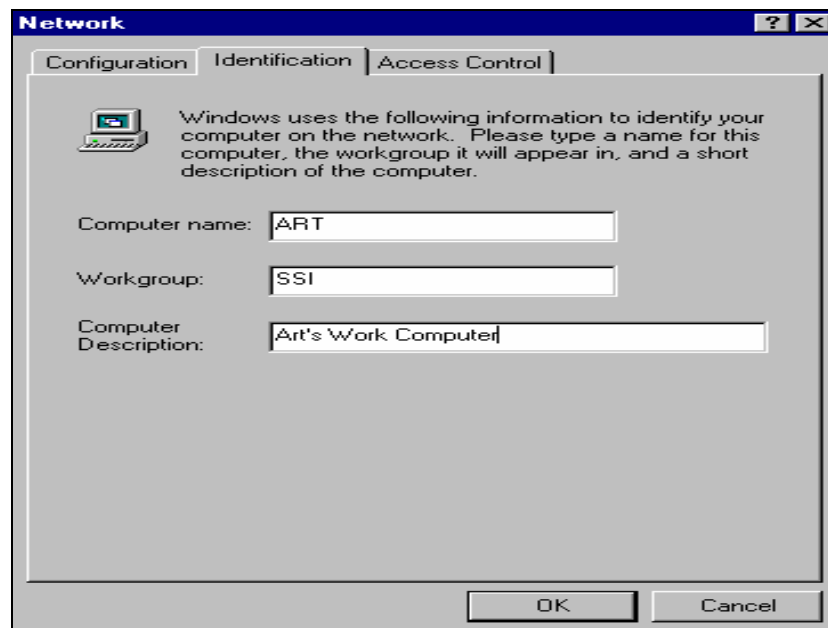
Click Service, and then click Add.



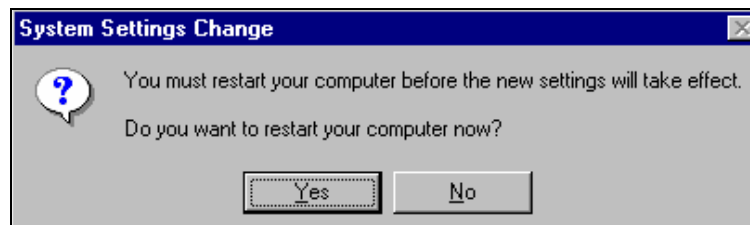
Select Microsoft and click OK

Your network components should now be set up.





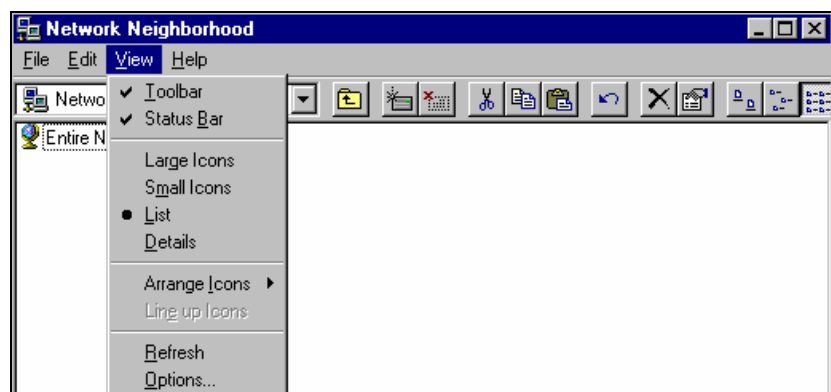
Click on “Identification” and fill out the name and workgroup. Each computer in the network should have a different computer name but be in the same workgroup. Make a note of each computer name in the network. Click OK.



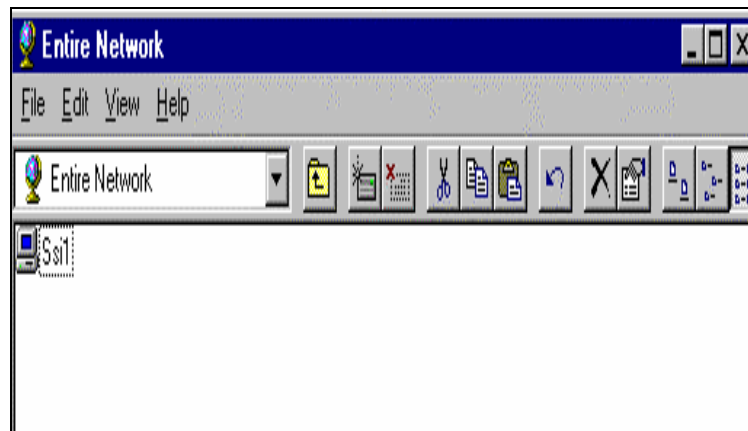
Restart your computer to put the new settings into effect.

When Windows 95 restarts, the Network Neighborhood icon should be included on the screen.

Double-click on the icon.



Click on “View” and ensure the Toolbar is checked. Then Click anywhere in the Window.



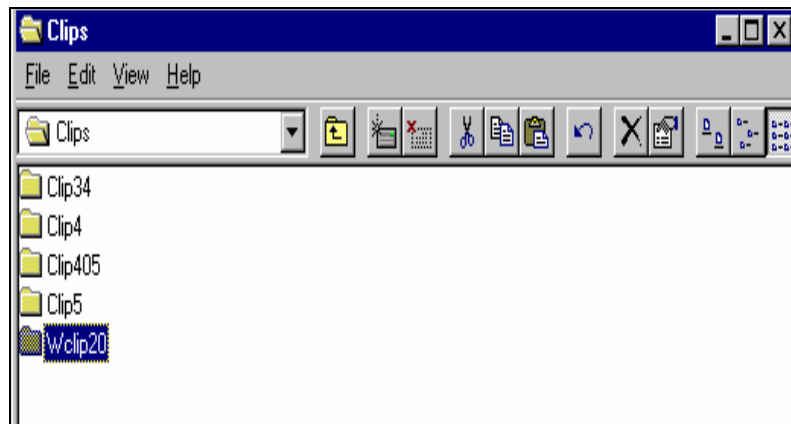
Click on Entire Network. Your network computers should be in view.

Refer to the Windows 95 manual for instructions on Sharing Your Folders or Printers.

Helpful Hint: Sharing programs and printers is an easy operation. The main point to remember is that the program, disk drive, file, or printer that you want to share with the network users must be designated for sharing on the computer that contains the shared resource.

To share **CLIP**: On the computer that **CLIP** is installed in:

- Click on the computer icon that represents that computer in your network. Locate the **CLIP** program file and click.



- Click on **File**, then click sharing.
- Click the options you want.

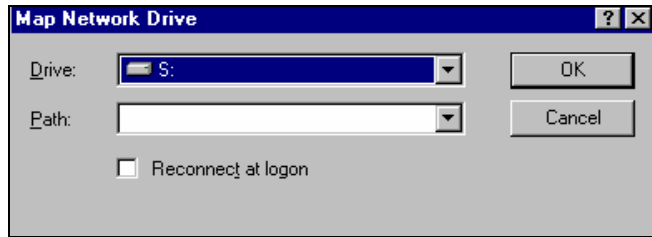
See “To share a folder” in the Windows 95 manual for further information.

Sharing printers is very similar. See “To share a printer” in the Windows 95 manual for further instructions.

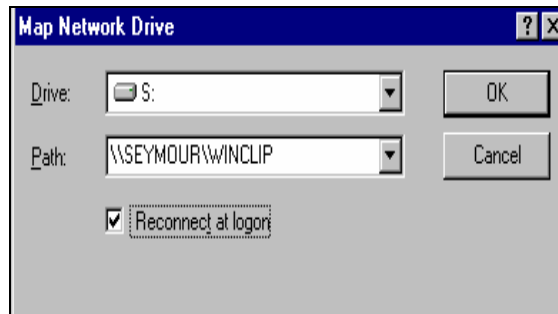
Since you will be using the **CLIP** program on a daily basis it only makes sense to map a drive letter to the **CLIP** program.

This will allow the operator to switch to the **CLIP** program from My Computer or Windows Explorer quickly. You will also be able to set up a shortcut to **CLIP**.

- From the Network Neighborhood window click the Map Network Drive button.



- Choose a Drive that is not in use by any computer.
- In the Path box map the drive to the **CLIP** program.



- The format is: \\computer name\file name
- Click the “Reconnect at logon” button to tell the computer to maintain this map at computer startup.
- Click OK

See “Using Resources Located on Other Computers” in the Windows 95 manual, and “mapping, drive letters” in the Windows 95 Help Index for further instructions.

BELOW ONLY FOR WINCLIP & CLIP4

Setting up the resource file - After your network is set up, one last function needs to be done to allow **CLIP** to operate. From a network station. Double click on the **CLIP** Support Menu icon in the **CLIP** menu or program group. You will receive two warnings before arriving at the Support Menu, click “OK” and “Yes”. Click on “Change Locations”. The new drive and directory should designate the network drive and directory you have set up. Edit as necessary. Click “Make the Change”. From the Support Menu, click on “Browse Memory” and your memory variable paths are displayed. From the network station the first nine variables should be pointing to the network drive in which **CLIP** is located, except for the seventh variable, MDOSPT. This should point to the local hard drive alone, i.e. “c:\”. Edit this line as necessary. Press escape to return to the support menu. Press return to exit the Support Menu. Restart **CLIP**.

Once your **CLIP** has been designated as a shared network resource you and your fellow operators are ready to operate **CLIP**. Now your company can benefit from the efficiency and savings that a peer-to-peer network offers.

