

## Information: About Home Networking

### ► Summary

The following information describes and provides resources about home networking.

### ► Content

A network is a group of computers, printers, and other devices that are connected together with cables. Information travels over the cables, allowing network users to exchange documents & data with each other, print to the same printers, and generally share any hardware or software that is connected to the network.

### Benefits of Home Networking

- Share a high speed Internet connection among several computers/devices in your home - all of them can be online at the same time.
- Save money by sharing a single Internet connection.
- Share a printer among several computers.
- Access files easily from your networked computers without having to e-mail or copy them.
- Play networked or Internet-ready video games like Sony PlayStation® 2, Nintendo® Gamecube, or Microsoft Xbox.
- Protect your computers and files with built-in firewall security.
- Access the Internet from your laptop throughout your home.

More and more households are using more than one computer. In the United States, about half of all households have computers, and of these more than 20 million households have more than one computer! (IDC) Home networks are becoming increasingly common to realize the tremendous opportunities sharing computers offers!

### How Does a Home Network Work?

A home network is a group of two or more computers linked together. Networking your computers and other devices allows you to connect them to the Internet at the same time and to share files and hardware, such as printers. A network also makes it easy to move information from one computer to another (especially very large files that don't fit on a floppy or Zip disk).

A home network is configured by first connecting a cable modem to a cable outlet. Then a router connects to your cable modem and distributes the signal to multiple devices to share the connection, files, printers and/or Internet-ready game consoles. The router also acts as a firewall to protect your home network and files from outsiders.

Computers can be connected together with many different network types, but the two most common are Ethernet, and Wireless Ethernet (WiFi).

## Ethernet Networking

Ethernet, along with its speedier counterpart Fast Ethernet, is the most popular networking standard in use today. If the computers at your workplace are running on a network, they are most likely connected with Ethernet technology.

Ethernet networks are generally faster than the alternatives, although other technologies are closing the speed gap. Because Ethernet is so popular and simple, the essential components of Ethernet networking are easily available and surprisingly inexpensive.

To build an Ethernet or Fast Ethernet network in your home, you will need one Ethernet or Fast Ethernet network card or adapter per computer. Ethernet network cards are installed inside your computer, while network adapters are external. You will also need at least one hub or switch to act as the central point of your network. Unlike a Phonenumber network, you can't string the computers of an Ethernet network directly into one another. They must connect at a central point.

Special cabling (technically called Category 5 UTP) is required to build an Ethernet network. One end of an RJ-45 cable plugs directly into a computer's Ethernet network card or adapter, and the other end plugs into a switch, hub, or similar device, connecting that computer to the other networked computers.

Ethernet or Fast Ethernet networking is the best home networking solution if speed is your primary networking concern.

## Wireless Networking

A relatively new topology is called 802.11b, also known as Wireless. This topology connects computers together without wires. Wireless networks are currently the fastest growing type of networks in the U.S. because users can set them up without running cables between their computers. They also allow a user with a laptop the freedom to roam about his house, or in some cases, their front or backyard, and still maintain access to the Internet and the rest of his network. This solution is more elegant than Ethernet when the computers are far apart from each other or from the cable modem.