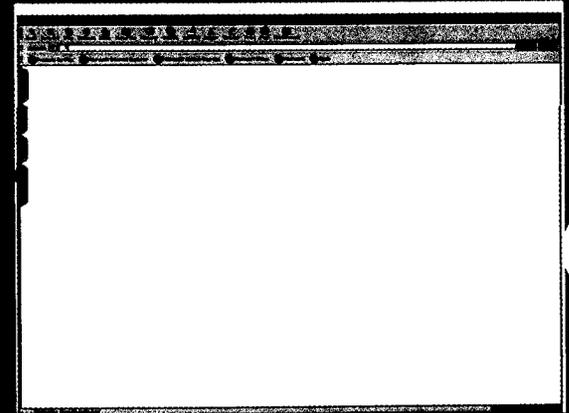


CHAPTER 2

The Internet and the World Wide Web

Chapter Overview and Related Terms

Computers establish a foundation that allow a user to gather knowledge. Computers allow individuals the opportunity to obtain information and knowledge from a wide variety of resources. The largest computer-based resource is the Internet. This chapter focuses on teaching the basics of the Internet and World Wide Web (WWW). After reading this chapter, you will have an understanding of the Internet and the WWW. You will also learn techniques to effectively use your browser. Here are some terms that you should know. Knowing these terms will help you understand the material contained in this chapter.



Terms

- Internet - A collection of networks that offers valuable services to users.
- Network - The connection of two or more computers for the sharing of files, programs, information, and Internet connections.
- E-mail (Electronic Mail) - Messages sent from one person to another by a computer. E-mail can also be sent automatically to a large number of addresses.
- Chat - An Internet service that allows individuals to communicate in real time by typing messages that the other person can see and answer.
- Protocol - Forms of communication used over the Internet such as e-mail, chat, file transfer protocol, and listserv.
- World Wide Web - The largest and fastest growing segment of the Internet. The WWW is a part of the Internet, but is not the Internet. It is possible to access many other services of the Internet using only a web browser, but the WWW itself is only made up of sites using certain protocols (HTTP and HTTPS).
- FTP (File Transfer Protocol) - A very common method of moving files between two Internet sites. FTP is a special way to login to another Internet site for the purposes of retrieving and/or sending files.
- Usenet Newsgroups - A world-wide system of discussion groups, with comments passed among hundreds of thousands of machines.



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- Modem - A device that you add to your computer and to a phone line that allows the computer to talk to other computers using phone lines. Basically, modems do for computers what a telephone does for humans.
- Hypertext - The word hypertext is used to mean a system in which music and images can be linked to each other. This allows someone using a computer to explore information. Most of the time hypertext refers to what is called a link. It is what allows you to jump from one page to another on the Internet.
- HTML (Hypertext Markup Language) - The coding language used to create Hypertext documents for use on the WWW.
- HTTP (Hypertext Transfer Protocol) - This is the protocol that makes the WWW possible. It is the way a web browser requests files from their source, which is called a web server.
- Address - There are many different types of addresses on the Internet. The first type is the address of a web page. Every web page has an address. The second type of address is an e-mail address.
- Web browser - This is software that is used to navigate the WWW. Many browsers, such as Netscape and Internet Explorer, have other features to help you use other services of the Internet such as e-mail.



The Internet

The Internet is a collection of thousands of computers in over 65 countries. The Internet is made up of many combined networks. The Internet is changing all the time and has become the single largest telecommunications system in history. The Internet has allowed individuals to do many different things. Below you will find some of the things the Internet has allowed individuals to do.

A girl in Sioux City learns about computers by becoming a pen pal with a boy in China.

A Des Moines man finds a job with a local company on a job search page.

A Dubuque woman locates her long lost brother in Germany over the Internet.

A boy in Council Bluffs who is sick and home from school, checks the homework and class materials that he has missed for the day. He turns in his homework by sending an e-mail to his teacher.

All of these situations and many others are available to you via the Internet. A judge called the Internet "the single most important advancement to freedom of speech since the writing of the Declaration of Independence." The Internet has information on any topic you can imagine. What do you want to learn? You can find it on the Internet!

To use the Internet, you must connect to it. You can connect to the Internet by a dial-up modem, a cable connection, digital subscriber line (DSL) connection, or some other connection. Most people connect to the Internet through a dial-up modem. A dial-up modem is connected to your phone line to access the Internet.





Who's Using the Internet?

When the Internet was first developed, it was only used by military and academic professionals. Now, everyone is using the Internet. The Internet is used in over 65 countries and by an estimated 375 million individuals. These numbers are growing quickly. It is estimated that by 2003, some 774 million people will have access to the Internet. The Internet is used by people of all ages, all races, all economic backgrounds, and all geographical regions. The only requirement to use the Internet is that you have access to it. With free access points in public libraries, schools, and other areas, the Internet is becoming more accessible. What does the Internet allow you to do?

What's on the Internet?

There are many protocols that the Internet allows you to experience. We are going to concentrate on some of the most basic protocols.

The World Wide Web

The World Wide Web (WWW) is often mistaken as the Internet. They are actually two separate entities. The WWW is a part of the Internet. The WWW is a system of Internet servers that support access to several Internet protocols or services. Almost every protocol type available on the Internet is accessible on the WWW. This includes e-mail, chat, File Transfer Protocol, and Usenet Newsgroups. The WWW has its own protocol: HyperText Transfer Protocol, or HTTP.

The WWW provides a single way for accessing all these Internet protocols. This creates a graphical environment which makes it easy for people to use. It is also the most used part of the Internet.

In order for pages to be displayed on the WWW, the pages must be written in a computer programming language. This programming language is called hypertext. Producing hypertext for the WWW is done by writing in the Hypertext Mark-up Language (HTML). HTML is an evolving computer language that allows a developer to incorporate words, graphics, sound, video, and other multimedia into a web page.

Internet Service Providers: Accessing the Internet and WWW

An Internet Service Provider (ISP) is a very generic term for a company that connects you to the Internet. An ISP connects to the Internet, and then users dial into the connection. When you are connecting to the Internet, you are actually connecting to your ISP's network which is connected to the Internet.

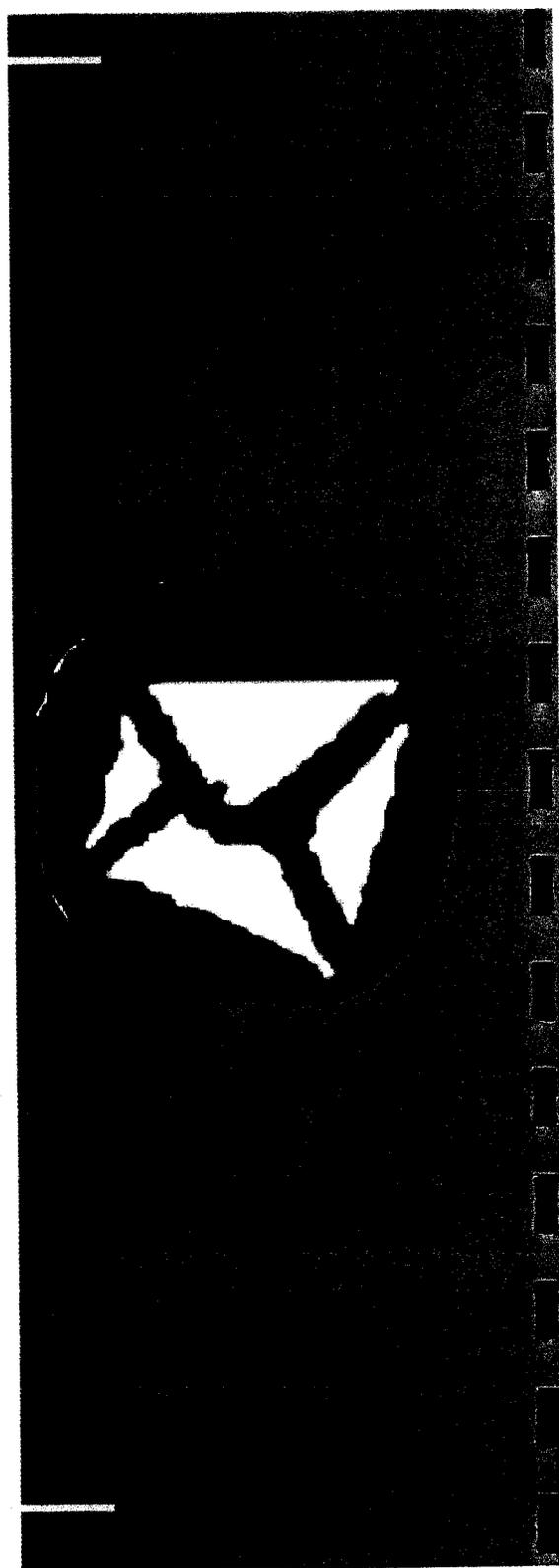
There are several different ways of selecting an ISP. One way to select an ISP is by knowing the type of connection you want to have to the Internet. If you would like a



standard dial-up connection for a 56K modem, then you will have many different ISP's from which to choose. From here, you would want to consider the monthly price each ISP charges to connect to the Internet and also the quality of service that the ISP provides. Quality of service means how reliable the connection is to the Internet. If you want to connect to the Internet by using a cable modem or DSL (Digital Subscriber Line), then you would have to find a company that offers this type of service. Usually you will not have many options with these advanced connections, but if you do, consider the price and quality of service to make the best selection.

E-mails

E-mail allows you to send messages to anyone on the Internet who has an "address." E-mail allows you to communicate with individuals all across the world for little or no cost. It is becoming one of the easiest and most cost effective ways of communication.



melissa1234@aol.com says:

hi- how are you? :)

--sandy5678@aol.com says:

good, i just got a new
job!!!!

send

Other advantages of e-mail include the fact that when you send a message, it is delivered within minutes. You can also read your e-mail when you want to, unlike a phone call that may come at dinner time. As e-mail becomes more and more advanced, the possibilities become endless. For example, if you had a picture of your baby, you could write an e-mail to a friend in Florida with a picture of your baby attached to the e-mail. Your friend would get the message and picture in a matter of minutes. E-mail has capabilities of connecting people in ways that mail and the telephone cannot.

Chat

Chat programs allow users on the Internet to communicate with each other by typing in real time. Real time means that messages are seen by the person receiving the message as it is typed. Chat programs are sometimes included as a feature of a web site, where users can log into the "chat room" to exchange comments and information about the topics addressed on the site. Chat rooms can be about any topic.

In addition to chat rooms, individuals can use chat services that allow them to have personal conversations. This type of "chatting" is just like having a telephone conversation with someone, but on your computer. This is a cost effective way to communicate in real time with someone who is a long distance away from you.

A variation of chat is instant messaging. With instant messaging, a user on the WWW can contact another user currently logged in and type a conversation. Instant messaging also allows you to bring other individuals into your existing conversations for group discussions. This is also a very effective way of communication between individuals who are far apart.

File Transfer Protocol (FTP)

FTP allows you to share files on your computer with someone else.



Another user could allow you access to his/her files through FTP. There is a large amount of different types of information that you can transfer using FTP. The most common files transferred include on-line books, large sound files, software, and free images.

In order to transfer files you have to have a FTP program. You can find free FTP programs on the Internet that allow you to access someone's computer and download files from their computer or share files from your computer to other individuals on the Internet.

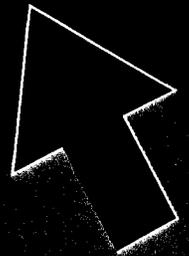
World Wide Web and Browser Basics

In order to view web pages on the WWW, you must use a software program called a web browser. The web browser displays the web pages for you. The two most recognized web browsers are Netscape Navigator and Microsoft Internet Explorer. You can tell whether or not you have a web browser on your computer by looking for either the Netscape Navigator icon or Microsoft Internet Explorer icon on the desktop.



Your web browser uses a special language called Hypertext Transfer Protocol (HTTP) to communicate with other web pages. The browser uses HTTP to interpret the HTML and displays the web page for you. Your browser has some basic functions that let you navigate from web page to web page.

Web browsers are the software programs that allow you to view the content of the Internet. A web browser takes the information of the Internet and displays it in a graphical manner. Browsers allow you to view and participate in all types of media, text, images, sounds, and video. Web browsers are very graphical in nature, and it is easy to understand their capabilities. Although browsers perform a very specific function, you can set up your browser to function how you like. There are many nice features of web browsers. The best is that web browsers are usually free. Other nice aspects of browsers are that you can have multiple windows of your browser open at one time. You could be viewing five different web pages at one time by opening five browser windows at a time.



Basic Navigation Tips

There are basic navigation tips that you should know before surfing the Internet. First, you must familiarize yourself with the "navigation tool bar." If you open your browser, you will see the navigation tool bar across the top of the browser. The tool bar will contain buttons. These buttons include: "Back," "Forward," "Reload," "Home," "Search," and "Stop." There are other buttons, but these are the ones you will use most. Below is a description of each button's function and how to use each button.

The "Back" Button - The back button is especially useful in navigating through the Internet. The back button allows you to immediately go to the page that you just left. If you were to go to the national Legal Services Corporation web site (www.lsc.gov) and then to five different pages within that site, you would be able to get back to the original national Legal Services Corporation web page by clicking the back button five times.

The "Forward" Button - The forward button acts in the same way that the back button does, but it moves you forward if you have already used the back button. If you were navigating the net by hitting the back button, you could immediately move to the page you just left by hitting the forward button. The forward button and the back button work together to help you navigate the Internet.

The "Reload" Button - The reload button is a useful button, but not for navigating the Internet. You use the reload button anytime that you may need to refresh a web page. If you are in the middle of downloading a web page and for some reason the page stops downloading, you should use the reload button. This allows you to have a web page download again, without typing in the address of the web site. Another nice feature of the reload button is that it reloads your page starting from where it left off in the previous download, so loading the page does not take as long.



The "Home" Button - The home button takes you to your home page. When you open up your browser, the first web site that appears is your home page. Usually your home page is a page that you frequently access and instead of typing in the address of your home page when you wish to go there, all you have to do is hit the home button and you are taken to your home page. If you are ever searching the Internet and begin to feel lost, hitting the home button will take you back to where you started.

The "Search" button - The search button is an easy way to go to a page where you can instantly search the Internet. By hitting the search button, you will immediately be taken to a page where you can type in a phrase or look through the pages of topics listed.

The "Stop" button - The stop button is an easy way to stop the loading of a web page that might not be downloading. This is effective when a site that you are trying to access is not responding or if the web page is experiencing technical difficulties. The stop button can

also be used if you start to download a page but realize that you really don't wish to download that page. The stop button stops the action of downloading a web page.

Using Bookmarks and Favorites

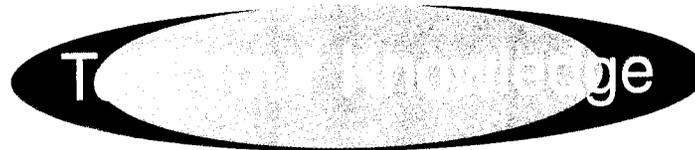
An effective way to keep a list of sites you use frequently is by "bookmarking" them or adding them to your favorites list. Using bookmarks or favorites is also a good idea if you come across a page that you feel might be useful to you in the future, and the address is too long to remember. Using bookmarks and favorites is quite simple. All you have to do is click on the bookmarks or favorites button and select "Add Bookmark" or "Add to Favorites." After completing this you will see a screen pop up asking you if the name of the page specified within the box is acceptable. Click yes and from then on, if you wish to view that page without typing in the address, go to your bookmarks or favorites button and find the name of the



site you wish to see. The only difference between bookmarks and favorites is the name.

Explorer. Both bookmarks and favorites do the exact same thing. They keep a log of selected sites that you wish to access.

Bookmarks is a component of Netscape and favorites is a component of Internet



1. What are some of the protocols associated with the Internet? _____
2. What will the World Wide Web allow you to do? _____
3. Which button on the Navigation Tool Bar should you click if you wish to view the previous web page? _____
4. Open your web browser. Click the "search" button. Type in the phrase "Flying Pigs" to search for this topic. You should see a link to the Flying Pigs home page. Click this. From here, find your way around the site by clicking on links and using the "back" and "forward" buttons. Navigate your way back to the home page, www.flyingpigs.com. Once you get back to flying pigs home page, establish this page as a bookmark or favorite. Close down your browser. Re-open your browser and find the bookmark or favorite. Click on the flying pig bookmark and have some fun!