

What is the Web?



If you've been poking around the World Wide Web already and feel comfortable with online services, the Internet, podcasting, web pages, links, plug-ins, etc., **skip this chapter.** Jump to the quiz at the end—if you can easily fill in every blank, then move right on.

If you haven't spent too much time on the web yet, or if you've never actually been there at all, this chapter will fill you in on the things you need to know *before* you start designing your own pages. This chapter covers information such as how the web is different from the Internet, what a modem does for you, how you get connected, what a browser is, a web page, a web address, and more.

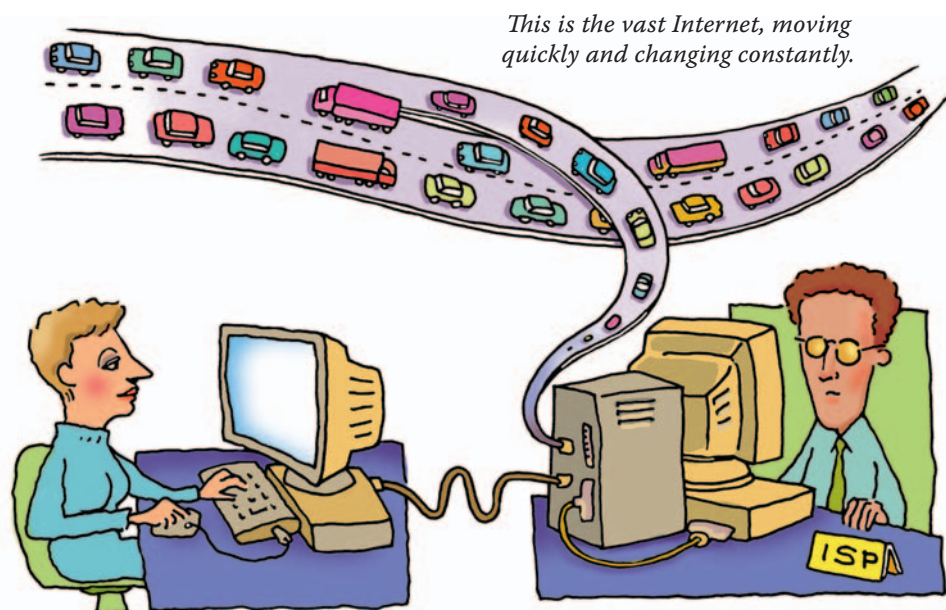
You probably already have at least a vague idea that this hoopla called the Internet allows computers to send messages to each other. You really don't need to know much more than that to get your work done, but it is rather satisfying to understand exactly what everyone else is talking about and to start talking yourself about dial-up vs. broadband connections, modem speeds, search engines, and downloads.

The Internet

Yes, what you've heard is true—computers send messages to each other. The **Internet** is a vast collection of computers all over the world that store information and send it out.

When you connect your computer to the Internet, you are establishing a line that will reach out and jump on the “freeway” (network) that is buzzing overhead, that Internet freeway. Your computer itself, though, is not a stop on the Internet, but is more like an private on-ramp to the virtual highway. As a user, you're part of the Internet, but if your computer broke down, it wouldn't affect anyone else. No one on the whole Internet would give a hoot.

Most of us are users at our computers, browsing the Internet for information and sending messages back and forth. When you hear talk about the growing number of people on the Internet, it's mainly us. The number of computers connected to the freeway is also rapidly growing. So the Internet and the amount of information on it just continues to grow at an amazing pace.



You need an Internet Service Provider to connect your computer to the Internet.

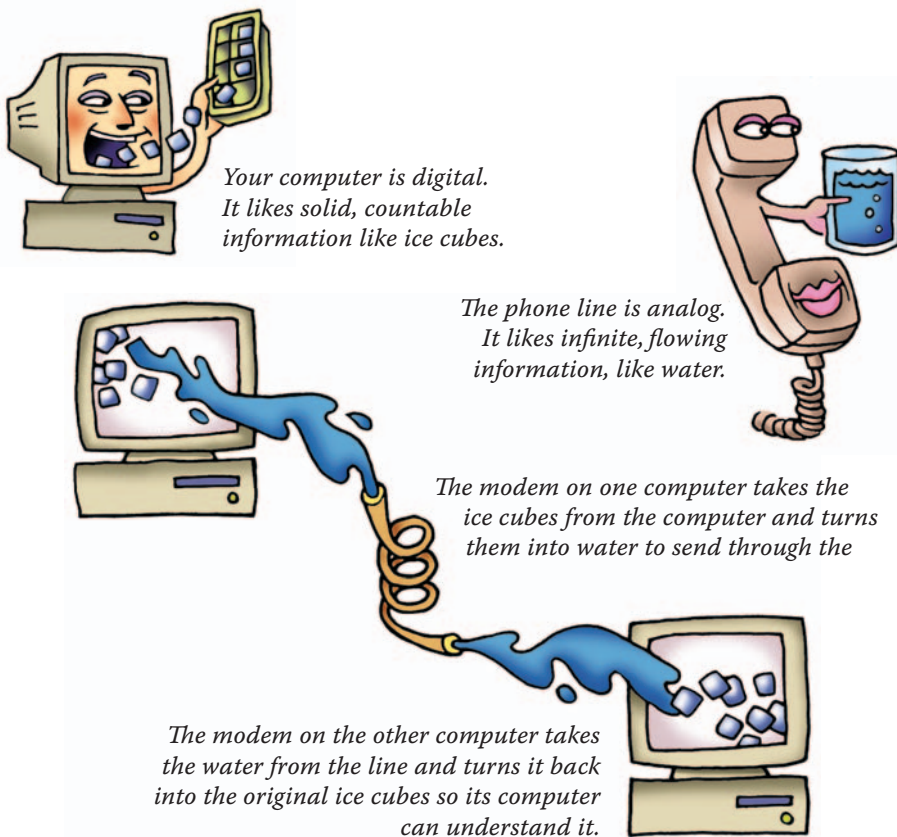
This is an Internet Service Provider (ISP) or an online service (page 19), giving you access to the Internet.

Modems

You're probably already connected to the Internet through an *Internet Service Provider (ISP)* or to an *online service* (we'll talk about the difference between the two in a minute). You probably have a **modem** inside of your computer or sitting in a little box next to it. Most people use modems, either dial-up modems connected to a phone line, or broadband modems with a cable connection, satellite connection, or a DSL high-speed phone connection. The reason you have a modem is that your computer and the transmission lines use two different technologies.

A computer is *digital*, meaning it can only work with information that is in concrete, countable pieces. The phone lines are *analog*, meaning they work with information (like sound) that is infinite, flowing, uncountable.

So a **modem** has to **modulate** and **demodulate** the information between the two systems—the modem on one end turns the digital information into analog information so it can go over the phone lines; the modem on the other end turns the analog information back into digital info so the other computer can understand it.



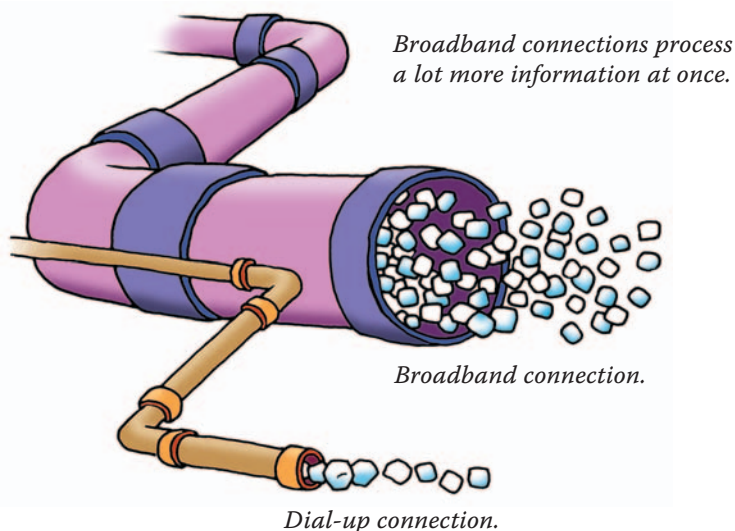
Modem speeds

Modems are not all the same. Their biggest difference is their speed. When you hear people say things like “I just bought a 56K,” or “This cable connection is as fast as a T1!” they are talking about how fast the modem can send and receive information, which is called the **baud rate** (pronounced *bod*).

The baud rate refers to how many **bits** (digital pieces of information, or ice cubes) **per second** the modem can send and receive. You can think of the baud rate as the size of the pipe: a higher baud equals a fatter pipe down which more ice cubes/water can travel.

A typical *dial-up* modem is 56K, or a baud rate of 56,000 bps (bits per second). A dial-up modem actually dials a number to temporarily connect, or “log in,” to the Internet. When you “log out,” you disconnect the phone line from the Internet.

Broadband (high-speed) connections refer to full-time connections such as satellite, cable, T1 lines, DSL, ISDN, and variations of those. You use a special broadband modem with these, and your connection is *open* and available full-time, at speeds up to and over 1500 bits per second. With a broadband connection, you can have audio and video chats and even play video movies right from the Internet. A broadband connection is usually a little more expensive than a dial-up, but most people find it's worth it.



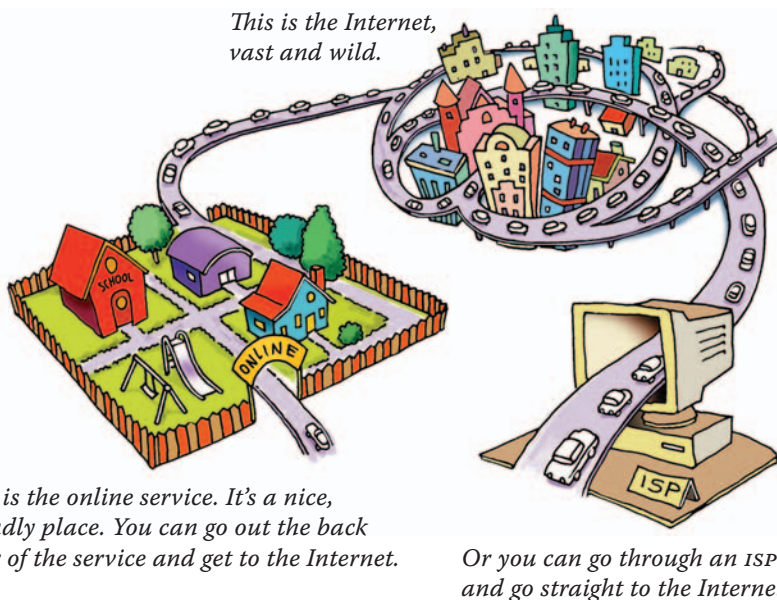
Online services and ISPs

So through a modem your computer connects to an ISP, which connects you to the online world. An **online service**, such as America Online, provides access to the Internet, but it is *not* the Internet or the web! Just because you are a member of an online service and are logged in as a member does not mean you are on the web.

An online service such as America Online is like a little village. Inside the village you have access to organized groups, clubs, stores, services, parties, mailboxes, conferences, etc., and there's a "mayor" who runs the show. There are "police officers" who run around the village helping some people and admonishing others. Everything is set up for you, maps are drawn, directions are available, guides are present, and it's a fairly safe, controlled, and easy to get around world. Every online service provides a back door (a link) that provides access to the Internet, like a button that says "Go to the Web," or "Internet." When you click that button, you are leaving the village.

If you are not a member of an online service, you can get a "direct connection" through an **Internet Service Provider**, also known as an **ISP**. An ISP has a computer (called a *server*) that is connected to the Internet 24 hours a day, usually with a very fast connection (not a modem) and you can *log in* to their service and connect directly to the Internet.

On page 30 we'll talk about how to decide whether to use an online service or go straight through an ISP.



What's on the Internet?

If you picture an online service as an independent, controlled village, then the **Internet** itself is a vast, uncontrolled, and basically uncontrollable anarchistic world. Once on the Internet, it is up to you to make sense of it, to find your own clubs, form your own groups, figure out how to participate in a conference, search for the things that interest you. There are many parts to the Internet.

Newsgroups are groups of people around the world with common interests, such as women giving birth in August, classic Porsche owners, Robert Burns' fans, etc. There are about 54,000 newsgroups. People in each group "post" their news on the Internet, kind of like pinning a message on a bulletin board, and everyone in the group can read it and post their own answers, comments, or questions.

Mailing lists, or **listservs**, are similar to newsgroups except instead of posting messages on a bulletin board, you get email delivered to your box. Once you join a mailing list, any email message sent by anyone on the list automatically goes to everyone else on the whole list. In an active list, this can mean *lots* of mail.

Search engines such as Google, Yahoo, and Excite have huge databases that keep track of billions of web pages. You can search for almost any kind of information.

Blogs (web logs) are web-based publications that range from personal diaries and commentary to corporate newsletters, network news, and professional information. Blogs are often provided in a format that allow anyone to subscribe and to choose how often to automatically check for newly posted comments.

Podcasts are audio files you can listen to on your computer or copy to an MP3 player. You can subscribe to podcasts and have your computer check for new *episodes*. Podcasts range from occasional, personal episodes to regular, professionally produced programs.



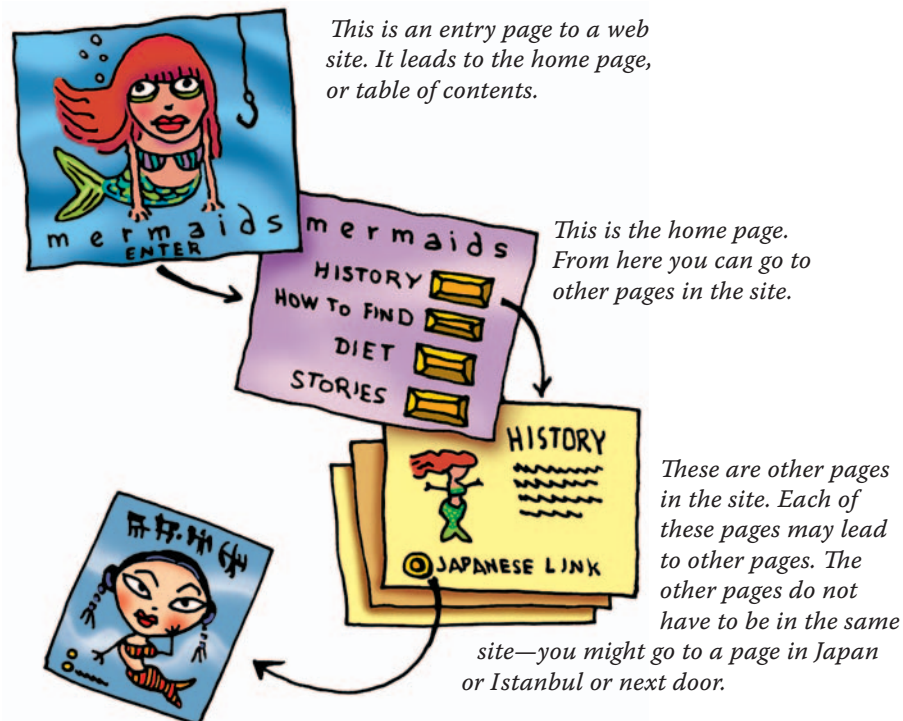
The World Wide Web

The part of the Internet we hear about the most these days is the **World Wide Web**. The Internet has been around since the early '60s, but not many people cared much about it because you had to be a nerd to know what was there and how to access it. There were no pictures, no sounds—just ugly yellow text on a black background and weird codes to get what you wanted. Today's web, however, has color, sound, graphics, animation, video, interactivity, and ways to jump from place to place.

The web actually consists of billions of individual **pages**, very much like the word processing pages you are used to making. That's all the web is—a bunch of pages.

These individual pages are **linked** to other pages, which we'll see in a minute. Usually a business or a person creates a unified collection of pages that are all related, as for a business, family, products, service, etc. A collection of related pages is called a **web site**.

Each web site has a **home page**. This page is like a table of contents. Usually the home page is the first page of a site, but some sites include an **entry page** (also called a splash page or front door), which is sort of like the title page in a book, which then leads to the home page.



Getting around the web

On the web, you get around from page to page through **links**. These links are called **hypertext**: text that is “connected” to other pages so when you click on the hypertext, you “jump” to another page. Imagine if, in a book, you could touch one of the topics in the table of contents and instantly the book flies open to that page. That’s linking. That’s hypertext.

On the web, you can usually recognize links by their **underlines**, and they are usually in a contrasting color. Graphics can also be links. But even if the text does *not* follow the convention of an underline and different color, and even if a graphic does *not* have a colored border, you can always tell by the **browser hand**:



when the pointer on the screen is positioned over a link, the pointer turns into a little hand. This is your visual clue that if you click, something will happen (usually you jump to another page). (**Note:** You *will* run into some web pages where the designer has built the page using the Flash technology and did not program the browser hand to appear, which means you have no clue where the links are; this is bad design.)

As the page and the graphics appear on your screen, we say it is **loading**. You might complain about the time it takes to load all the graphics on a fancy page.



This is a home page. From here you can go to other pages in the site. The browser hand is about to click on a graphic link.

Clicking on the graphic link circled above jumps you to this page in the site. Each graphic and underlined link leads to other pages.



Browsers

To see pages on the web, you must have software called a **browser**. As you already know, to type pages to be printed, you need a word processor; to create a spreadsheet, you need spreadsheet software. And to see web pages, you need browser software. You probably already have a browser on your computer.

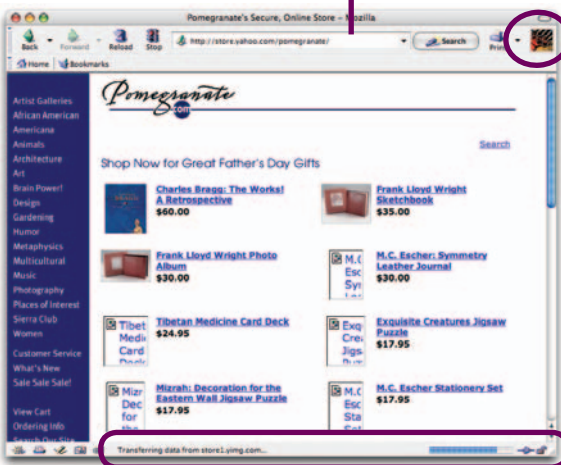
The browser lets you see the graphics, color, links, etc. It reads the information on the web page and displays it on your screen. When you click on a link or otherwise try to find a certain page, the browser finds the web page on the server (computer) where it is stored, translates the coded information for you, and displays the lovely and colorful page on your screen.

As the page loads onto your screen, you will see several visual clues that tell you the browser is working, as noted below.

*In Apple's **Safari** browser, the address field shows a progress bar that tells you the page is loading.*

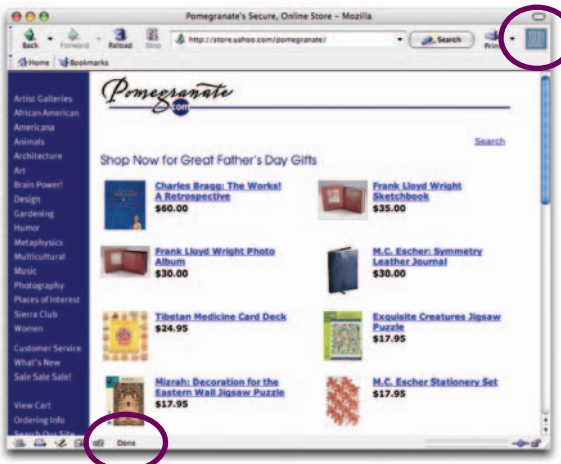


Mozilla is one of the many browsers available.



As Mozilla loads a web page, you will see this icon animate.

The status bar in most browsers gives you a clue as to how much more of the page has yet to load.



In this browser, you know the page is fully loaded when the logo animation in the top-right corner stops and the status bar at the bottom of the window says "Done."

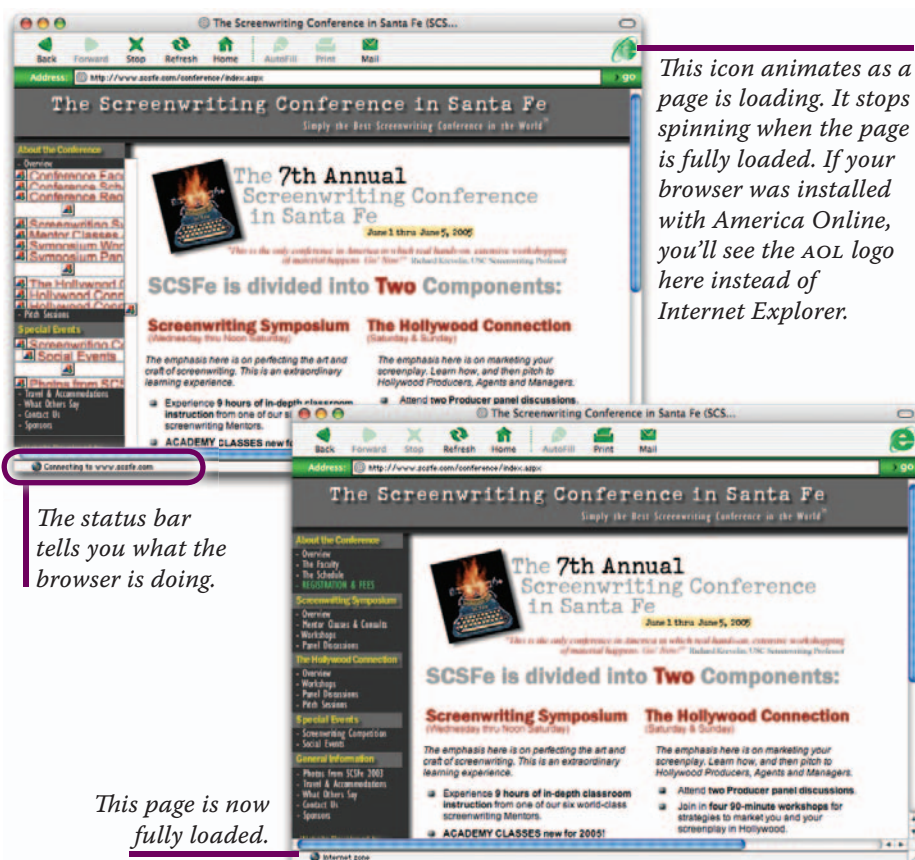
Browsers are not equal

Not all browsers are the same. Every browser and each new version of every browser displays web pages slightly differently, which presents major challenges to web site designers. There are quite a few browsers available, and most of them are free. Most Mac users prefer **Safari**. PC users often use **Microsoft Internet Explorer** by default, but **Firefox** is a very good cross-platform browser and a popular alternative. Online services include their own browser software, so when go to the web through America Online, you are actually using a browser supplied to you by AOL.

Below you see web pages through the browser Internet Explorer. Besides the differences that individual browsers might display, there are other differences that users at their own computers can impose, but we'll talk about those later. The point to keep in mind is that everyone does not see exactly the same page in exactly the same way.



Microsoft Internet Explorer
is another browser.



Web addresses, or URLs

Every page on the web has an **address**, just like we have addresses for our homes and businesses. This address is called the Uniform Resource Locator, or **URL** (go ahead and forget the term “uniform resource locator”). The abbreviation “URL” is usually pronounced by its initials: *you–are–ell*.

When you finish your web site, you will **post** it on a **server**, which is a special computer directly connected to the Internet 24 hours a day. Every page on the World Wide Web is stored on a server; there are millions of servers. Whoever owns the server and is **hosting** your site will work with you to determine what your personal URL will be. Once you know the URL for your site, you can tell everyone and they can visit your fun and enchanting pages. There is a chapter at the end of this book that teaches you how to post your pages—it’s easy, really easy!

*This **www** stands for **World Wide Web**, but it’s really just a convention; that is, **www** is not the part of the address that means the file is a web page.*

*Some URLs do not have **www** in their address.*

*This is the **domain name**. It tells you who owns the site—**apple.com**, **toyota.com**, and **nfl.com**, for example. You can buy domain names. I bought **ratz.com**.*

http://www.ratz.com/robin/hats.html

*This stands for **hypertext transfer protocol**. Who cares. The important thing is that **this** part of the URL is what tells you that the file you are looking for is a page on the World Wide Web. Instead of **http://**, in some URLs you might see **news://**, **ftp://**, or other abbreviations. These refer to other files that are not ordinary web pages.*

*After the **domain name**, the rest of the address is just a **path** telling the browser where to find the page you need. For instance, in this address, the browser finds **ratz.com**, and the **slash** tells it to look inside the **ratz.com** folder and find a folder or directory called **robin**. Then the next **slash** tells it to look inside that **robin** folder and find the file called **hats.html**. (All web pages are called “html files.” We’ll talk about that later.)*

Entering an address

If you know the address, or URL, of a page, type it into the **Location box** at the top of the browser window, hit Return or Enter, and the browser will go find that page.



You might see the phrase **http://** in the web address, but you don't have to type that at all. In fact, if the address is in the form of **www.somewhere.com** (.com only), all you need to type is **somewhere**. Really. You can type google, apple, or ebay, hit the Return or Enter key, and you will go directly to **www.google.com**, **www.apple.com**, or **www.ebay.com**. (If there is no site with that name, the browser may do a search for you; see Chapter 2.)

Details of the domain name

The “.com” part of the address gives you a clue as to the nature of the web site. For instance, “com” stands for commercial, meaning it is a commercial web site. You can buy your own domain name; see page 87. Below are some of the other abbreviations (called “top-level” domains) you will also find in web addresses in the United States:

.aero	air transport industries only
.biz	businesses
.com	commercial sites
.coop	cooperative associations
.info	information sites similar to .com sites
.jobs	human resource managers (coming soon)
.museum	museums
.net	network organization sites
.org	organizations , usually non-profits
.pro	accredited professionals and related entitites
.travel	travel related sites
.edu	educational , accredited post-secondary institutions only
.gov	government , United State government only
.mil	military , United States military only
.int	international treaties between governments only

Other countries have **country codes** in their domain names, so if you see a web address with **uk** in the domain name—such as www.bbc.co.uk—you know the site is being *served* to you from the United Kingdom. Below is a list of some common country codes.

jp	Japan	au	Australia
ca	Canada	fr	France
de	Germany	mx	Mexico
ru	Russia	ch	Switzerland
us	United States	uk	United Kingdom

More address details

The **period** you see in URLs is pronounced *dot*. So ratz.com is pronounced *ratz dot com*.

The **slash**, /, in an address is always a forward slash, so you don't need to say "forward slash." Just say "slash."

This character, ~, is a **tilde** (pronounced *till' duh*). It's not very common in English words, but shows up in web addresses a lot. To type it, press Shift ~ (usually found in the upper-left corner of the keyboard).

This character, _ , is the **underscore**. Type it by pressing Shift Hyphen.

In the domain name portion of the address (the first part, from www through [.com](http://www)), whether you type capitals or lowercase is not critical. However, after the first slash, the rest of the address is **case-sensitive**, meaning it is *extremely* important whether you type capital letters or not. If the address has a capital letter (after the first slash), you darn well better type a capital letter or the browser will not find the page!

And just so you know, there is never an empty **space** in a web address. If you see a web address in print somewhere and it has a space in the address, it's a mistake.



What's a plug-in?

At some point you may run across a message that tells you something is missing, or there is something you need to install before you can see the animation, play the game, or take full advantage of the site. These are usually **plug-ins**, which are little pieces of software that make special things happen. You can live without many plug-ins if you don't mind missing some fancy stuff. The most important ones are usually included with your browser software, especially if you make sure to have the latest version of the browser.

If you run across such a message and you want to **download** the plug-in (which means to *load* a copy of it from another computer onto your computer), just follow the links on the screen. There are almost always directions that tell you what to do with the plug-in: they belong in the plug-ins folder that you'll find inside the folder that contains your browser. Some plug-ins require that you restart after you install them, so be sure to read the directions on the screen when you click to download.



If you see a message like this, the page you are viewing needs a plug-in that you don't have installed. Nothing terrible will happen if it's not installed, you just won't be able to see whatever fancy thing that plug-in can do for you. If you wish, click the button to download or install the missing plug-in.



This is what your plug-ins folder might look like. It is already on your computer. Put the plug-in in this folder, if your software didn't already do it for you. You may have to restart your browser, or even your computer, before the plug-in works.



These are what typical plug-in icons will look like on a Mac.

Which file to download?

(.sit .hqx .bin .sea .zip .mme)

When you find a page that offers files to download, you often have a choice of items. First, of course, you choose the file that is appropriate for your type of system (such as Mac or Windows). The extension at the end of the file, such as .hqx or .zip, indicates how the file was *compressed* (made smaller so it would go through the lines faster) and/or *encoded* (transformed into plain text for transfer). The extensions give you an instant clue as to which type of system the file is compressed and/or encoded for:

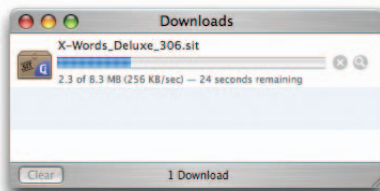
Mac

.sit	Compressed for a Mac.
.sea	"Self-extracting archive" that will uncompress itself.
.hqx	Binhex encoding; best for Internet files on a Mac.
.sit.hqx	Compressed and encoded.
.bin	Binary encoding; smaller file than hqx, but you need a full-blown compression program to uncompress it.
.mme	Mime file for both Mac and PC.

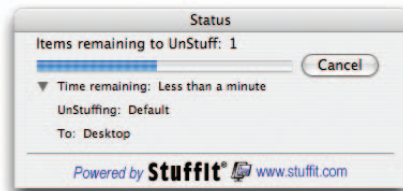
PC

.zip	"Zipped" file or collection of files. Can also be opened on Macs.
.exe	"Executable" program; these are often "self-extracting archives" that will uncompress themselves when you double-click or use the Run command.
.sea	"Self-extracting archive" that will uncompress itself. It may be a collection of files in the archive.
.mme	Mime file for both Mac and PC.

A file that has been *compressed* must be *uncompressed* to be useful (by the way—lungs *decompress*, files *uncompress*). You need a special program to uncompress (also called *unstuff* or *unzip*) files. On a Mac, you need a small program called StuffIt Expander that will automatically unstuff most files you download. On a PC, you also need to download a program that will unstuff your files—you can get WinZip from www.winzip.com, or PKZIP from www.pkware.com.



Downloading a file that is *stuffed* (compressed). Notice the ".sit" name extension.



Stuffit can automatically uncompress a file after it downloads to your computer.

Online Service or ISP?

If you're reading this book, you are probably already connected to the Internet either through an online service or an Internet Service Provider. But just in case you're not, these are some things to think about when trying to decide if you should use an online service or get a direct connection to the Internet through a service provider.

Commercial online service

Connecting through an online service is easy. You just click some buttons, answer some questions about your personal life (like credit card number or checking account), and you're on.

Getting around an online service is easy. Everything is spelled out for you, and at all times there are live humans available who can help.

Participating in chat groups (people "talking" to each other by typing) is easy. Participating in "live conferences" (a "speaker" with an audience in windows called "rooms") is easy.

Figuring out how to do email, send attachments, download files, etc., is usually easy, although some limitations make it more difficult.

Using an online service can be more expensive than a direct connection, depending on which service you choose and how much you use it.

Internet Service Provider

If you have a fairly new computer, connecting through an ISP can be very easy. There is certain information you will need to enter into certain places on your computer; call your ISP and ask for those pieces of information. If you are nervous or intimidated, hire someone to set things up.

At first, nothing is as easy on the Internet as it is on an online service. But once you kind of figure out what's what, then you can get around and chat, download files, find web pages, join mailing lists, and do everything else without interference.

A direct connection to the Internet can be less expensive than using an online service.

If you think you'll enjoy the ready-built online community that an online service provides, then join the service and access the Internet whenever you want. But if you really just want access to the vast Internet world, without filtered or monitored content, sign up with an ISP and enjoy using the Internet without going through a third-party service.

Self-Guided Tour of the web

If you've never been on the World Wide Web, go now. We're assuming you have a connection that works (when you sign up with an ISP, a technician usually schedules a visit to set things up for you). Once you have a modem, a connection that works, and a browser, you're ready to go. *Once all that stuff works, the rest is easy.*

If you have a dial-up phone connection, log on first, then open your browser. If you have a broadband connection, just open your browser. If you are using an online service, log on to your service, then find the button that takes you to the web.

Poke around the web, clicking on links. Notice these things:

- ☐ What color are most links?
- ☐ Click a link, then go back to that page.
The link you clicked has probably changed color—why is that?
- ☐ When does the little browser hand appear?
- ☐ Position the pointer over a link so you get the browser hand. Before you click, look at the status bar at the bottom of the browser window. You will see the address, or URL, of the page you will jump to when you click that link!
- ☐ Be conscious of the animation in the browser icon. What is it telling you?
- ☐ Watch for the things that give you a clue as to how long it will take for the page to load.

If you have a dial-up connection, when you're finished surfing the Internet be sure to close your modem connection. If you're using a broadband connection (such as cable or DSL), you can stay connected 24 hours a day. Obviously, broadband is the way to go if at all possible.

Oh boy, it's a Quiz!

Taking a few minutes to go through this quiz will help cement these new concepts into your brain. Just fill in the blanks with one of the words or phrases listed at the right.

The _____ is a network of computers all over the world. To connect to the Internet, most people use a _____. A modem is necessary because computer information is _____, while phone line information is _____; the modem "translates" the two technologies. How fast a modem can interpret data is called its _____ rate, or _____.

There are several parts to the Internet, such as _____, _____, and the most popular (and fun) of all, the _____.

The web consists of millions of individual _____. A related collection of these pages is called a _____. The first page of a web site is usually the _____, although some web sites feature an _____, which takes the viewer to the home page. The home page is like a _____.

On each web page you will find _____ that you click to jump to other web pages. You can usually tell if text is linked because it is _____ and in a different _____. Linked text is called _____. Often graphics act as links, also. Even if there are no visual clues such as a _____ or an underline, you can tell if an item is a link because the pointer turns into a _____ when it is positioned over a _____.

To see web pages on the World Wide Web, you must have software known as a _____. To find a particular topic on the web, you need to use a _____. Sometimes you can't see the fancy stuff on web pages because you are missing a _____. You can usually _____ the plug-in you need.

A web page address is known as a _____. You know the address refers to a web page if you see the letters and symbols _____ in the address. The "www.company.com" part is called the _____. The rest of the address is the _____ of file names, telling the browser where to find the web page.

Internet
modem
digital
analog
baud
bits per second
newsgroups
mailing lists
podcasts

World Wide Web
pages
web site
home page
entry page
table of contents
links
underlined
color
hypertext
border
little hand
link
browser
search engine
plug-in
download
URL
http://
domain name
path