

Chapter 1

What Is the Internet? What Is the Web?

In This Chapter

- ▶ What, really, is the Internet?
 - ▶ For that matter, what is a network?
 - ▶ What is the Internet good for?
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What is the Internet? What is the Web? Are they the same thing? The answer (one you'll see more often in this book than you may expect) is, "It depends." The Internet, the Web, and the technologies that make them work are changing so fast that no one can keep track. This chapter begins with the basics and tells you what the Internet and the Web are and, just as important, what has changed during the past couple of years so that you can begin to have an understanding of what it's all about.

If you're new to the Internet, and especially if you don't have much computer experience, *be patient with yourself*. Many of the ideas here are completely new. Allow yourself some time to read and reread. It's a brand-new world with its own language, and it takes some getting used to. Many people find it helpful to quickly read through the entire book once in order to get a broader perspective of what we're talking about. Others plow through one page at a time. Whatever your style, remember that it's *new* stuff — you're not *supposed* to understand it already. Even for many experienced Internet users, it's a new world.

Even if you're an experienced computer user, you may find the Internet to be unlike anything you've ever tackled. The Internet is not a software package and doesn't easily lend itself to the kind of step-by-step instruction that we can provide for a single, fixed program. This book is as step by step as we

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can make it, but the Internet more resembles a living organism mutating at an astonishing rate than it resembles Microsoft Word or Excel, which sit quietly on your computer and mind their own business. After you get set up and get a little practice, using the Internet seems like second nature; in the beginning, however, it can be daunting.

Okay, So What Is the Internet?

The Internet — also known as the *Net* — is the world's largest computer network. "What is a network?" you may ask. Even if you already know, you may want to read the next couple of paragraphs to make sure that we're speaking the same language.

A computer *network* is a bunch of computers hooked together to communicate somehow. In concept, it's sort of like a radio or TV network that connects a bunch of radio or TV stations so that they can share the latest episode of *The Simpsons*.

Don't take the analogy too far. TV networks send the same information to all the stations at the same time (it's called *broadcast* networking); in computer networks, each particular message is usually routed to a particular computer, so different computers can display different things. Unlike TV networks, computer networks are invariably two way: When computer A sends a message to computer B, B can send a reply back to A.

Some computer networks consist of a central computer and a bunch of remote stations that report to it (a central airline reservation computer, for example, with thousands of screens and keyboards in airports and travel agencies). Other networks, including the Internet, are more egalitarian and permit any computer on the network to communicate with any other computer. Many new wireless devices — mobile phones, Palm Pilots, Blackberries, and their ilk — are in this category and expand the reach of the Internet to our very persons.

The Internet isn't really one network — it's a network of networks, all freely exchanging information. The networks range from the big and formal (such as the corporate networks at AT&T, General Motors, and Hewlett-Packard) to the small and informal (such as the one in John's back bedroom, with a couple of old PCs bought at an electronic parts store) and everything in between. College and university networks have long been part of the Internet, and now high schools and elementary schools are joining up. Lately, computers and the Internet have become so popular that more and more households have more than one computer and are creating their own networks at home from which they connect to the Internet.

So What's All the Hoopla?

Everywhere you turn, you can find traces of the Internet. Household products, business cards, radio shows, and movie credits list their Web site address (usually starting with “www” and ending with “dot com”) and their e-mail addresses. New people you meet would rather give you an e-mail address than a phone number. Everyone seems to be “going online and getting connected.” Are they really talking about this same “network of networks?” Yes, *and there's more.*

The Internet is a new communications technology that is affecting our lives on a scale as significant as the telephone and television. Some people believe that when it comes to disseminating information, the Internet is the most significant invention since the printing press. If you use a telephone, write letters, read a newspaper or magazine, or do business or any kind of research, the Internet can radically alter your worldview.

With networks, size counts for a great deal: The larger a network is, the more stuff it has to offer. Because the Internet is the world's largest interconnected group of computer networks, it has an amazing array of information to offer.

When people talk about the Internet today, they're usually talking about what they can do, what they have found, and whom they have met. Millions of computers connected to the Internet exchange information in a bunch of different ways. These different services are so expansive that we don't have room to give a complete list in this chapter, but here's a quick summary:

- ✓ **Electronic mail (e-mail):** This service is certainly the most widely used — you can exchange e-mail with millions of people all over the world. People use e-mail for anything that they might use paper (mail, faxes, special delivery of documents) or the telephone (gossip, recipes, love letters) to communicate — you name it. (We hear that some people even use it for stuff related to work.) Electronic *mailing lists* enable you to join group discussions with people who have similar interests and meet people over the Net. Chapters 10 and 11 have all the details.
- ✓ **The World Wide Web:** When people talk these days about surfing the Net, they often mean checking out sites on this (buzzword alert) multimedia, hyperlinked database that spans the globe. In fact, people are talking more about the Web and less about the Net. Are they the same thing? Technically, the answer is “No.” But practically speaking, the answer for many people is “Yes.” We tell you the truth, the whole truth, and nothing but the truth in Chapter 6.



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The Web, unlike earlier Internet services, combines text, pictures, sound, video clips, animation, and even live broadcasts of news, concerts, and wildlife. You can move around with a click of your computer mouse. New Web *sites* (sets of Web pages) are growing faster than you can say “Big Mac with cheese,” with new sites appearing every minute. In 1993, when we wrote the first edition of this book, the Internet had 130 Web sites. Today, it has many millions, and statistics indicate that the number is doubling every few months.

The software used to navigate the Web is known as a *browser*. The most popular browsers today are Netscape and Internet Explorer. We tell you all about them in Chapter 6, along with one less popular but worthy alternative.

- ✓ **Chat services:** People are talking to people all over the globe about everything under the sun. They enter chat rooms with several other people or one special someone. They’re using the chat facilities of America Online, Microsoft, Yahoo, Internet Relay Chat (IRC), or Web-based chat rooms. We tell you how to get chatting in Chapter 15.
- ✓ **Instant Messaging (IMing):** With the help of special programs on your computer and on your friend’s computer, you can start up a conversation in a heartbeat. Paging programs like Windows Messenger, Yahoo Messenger, and AOL Instant Messenger let you send messages that “pop up” on the recipient’s screen. We hear tales of nimble-fingered youth carrying on upwards of 13 IM sessions simultaneously. We tell you about AOL Instant Messenger, ICQ, Windows Messenger, and Yahoo Messenger in Chapter 14.

A Few Real-Life Stories

Seventh-grade students in San Diego use the Internet to exchange letters and stories with kids in Israel. Although it’s partly just for fun and to make friends in a foreign country, a sober academic study reported that when kids have a real audience for their stuff, they write better. (Big surprise.)

For many purposes, the Internet is the fastest and most reliable way to move information. In September 1998, when special prosecutor Kenneth Starr delivered his report on the scandal involving President Clinton and Monica Lewinsky to the U.S. House of Representatives, the House quickly put the report online, thus allowing millions of people to read it the day it came out. (We can still debate whether it was a good idea to do that, but the Internet is what made it possible.) And Matt Drudge’s *Drudge Report* online gossip sheet broke much of the scandal first.

In the hours and days following the terrorist attacks of September 11, 2001, people gave up on the overloaded phone system (cell phones were particularly useless) and turned to e-mail to find out whether their loved ones and co-workers had survived. The Web provided folks in the U.S. with news coverage from all over the world, thus allowing Americans a glimpse at how the rest of the world saw the situation.

During the 2003 Iraq war, soldiers and civilians kept in touch with friends and relatives by e-mail. One young man in Baghdad kept a widely read weblog (or *blog* — see Chapter 9) that gave people all over the world a view of the run-up to the war.

Medical researchers around the world use the Internet to maintain databases of rapidly changing data. People with medical conditions use the Internet to communicate with each other in support groups and to compare experiences. Forward-thinking physicians make themselves available to their patients via e-mail and encourage their patients to use e-mail instead of the phone for non-emergency questions.

The Internet has more prosaic uses, too. Here are some from our personal experience:

- ✔ When we began writing our megabook, *Internet Secrets*, we posted notices on the Internet asking for contributions. We got responses from all over the world. Many of these contributors became our friends. Now we have people to visit all over the world. It could happen to *you*.
- ✔ We get mail every day from all over the world from readers of our *For Dummies* books and are often the happy recipients of readers' first-ever e-mail messages.
- ✔ The Internet is its own best source of software. Whenever we hear about a new service, it usually takes only a few minutes to find software for our computers (various computers running various versions of Windows and a Macintosh), download it, and start it up. Much of the software available on the Internet is free or inexpensive shareware.
- ✔ When Margy wanted to buy a used Subaru, she and her husband found listings of the models they wanted at dealers all over their state. They could even get insurance and registration information about the cars before they went to the dealer, so they knew where and when the cars had been driven, and whether they'd been in major accidents.

The Internet has local and regional parts, too. When John wanted to sell a trusty but tired minivan, a note on the Internet in a local for-sale area found a buyer within two days. Margy's husband sold his used computer within a half-hour of posting a message in the relevant Usenet newsgroup. Carol checks local movie listings and cultural events

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Why Is This Medium Different from Any Other Medium?

The Internet is unlike all the other communications media we've ever encountered. People of all ages, colors, creeds, and countries freely share ideas, stories, data, opinions, and products.

Anybody can access it

One great thing about the Internet is that it's probably the most open network in the world. Thousands of computers provide facilities that are available to anyone who has Internet access. Older networks limited what users could do and required specific arrangements for each service, but the Internet connects everyone to everything. Although pay services exist (and more are added every day), most Internet services are free for the taking: that is, after you are online. If you don't already have access to the Internet through your company, your school, your library, or a friend's attic, you probably have to pay for access by using an Internet service provider (ISP). We talk about some ISPs in Chapter 4.

It's politically, socially, and religiously correct

Another great thing about the Internet is that it is what one may call "socially unstratified." That is, one computer is no better than any other, and no person is any better than any other. Who you are on the Internet depends solely on how you present yourself through your keyboard. If what you say makes you sound like an intelligent, interesting person, that's who you are. It doesn't matter how old you are or what you look like or whether you're a student, a business executive, or a construction worker. Physical disabilities don't matter — we correspond with people who are blind or deaf. If they hadn't felt like telling us, we never would have known. People become famous in the Internet community, some favorably and some unfavorably, but they get that way through their own efforts.

Does the Internet really reach every continent?

Some skeptical readers, after reading the claim that the Internet spans every continent, may point out that Antarctica is a continent, even though its population consists largely of penguins, who (as far as we know) are not interested in computer networks. Does the Internet go there? It does. A few machines at the Scott Base on McMurdo Sound in Antarctica are on the Internet, connected by radio link to New Zealand. The base at the South Pole is reported

to have a link to the United States, but it doesn't publish its electronic address.

At the time of this writing, the largest, Internet-free landmass in the world is probably Queen Elizabeth Island in the Canadian arctic. We used to say New Guinea, a large jungle island north of Australia, but a reader there sent us e-mail in 1997 telling us about his new Internet provider.

Note: If you are on Queen Elizabeth Island and you're online there, please e-mail us right away!

The Net advantage

Maybe it's obvious to you that Internet technology is changing so quickly that you have barely had time to crack the spine of *The Internet For Dummies*, 8th Edition, and here you are holding the 9th Edition. (We said the same thing about the last couple of editions.) "Could it possibly be all that different?" you ask yourself. Trust us — we've asked ourselves the same thing. The answer, by the way, is a resounding "Yes." It's *that* different again this year. This year, we have to say that the Internet is totally mainstream, and you're falling further behind the curve — and at a faster rate — if you haven't yet gotten started. Increasingly, news gets out on the Internet before it's available any other way, and the cyber-deprived are losing ground.

Here are some of the ways people use the Internet:

✔ **Getting information:** Many Web sites have information free for the taking. Information ranges from IRS tax forms that you can print out on your computer to help-wanted ads, real estate listings, and recipes. From U.S. Supreme Court decisions and library card catalogs to the text of old books, digitized pictures (many suitable for family audiences), an enormous variety of software, from games to operating systems — you can find virtually anything on the Net. You can find out the weather anywhere in the world, view movie listings, and even see school closings.

Special tools known as *search engines*, *directories*, and *indices* help you find information on the Web. Lots of people are trying to create the fastest, smartest search engine and the most complete Web index.

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We tell you about Google, the most complete one this year so you at least get the picture. As mentioned in the Introduction to this book, when you see a Web icon in the margin of this book, we describe resources that you can retrieve from the Internet (usually the Web), as described in Chapter 16.

- ✔ **Finding people:** If you've lost track of your childhood sweetheart, now's your chance to find him or her anywhere in the country. You can use one of the directory services to search the phone books of the entire United States. We tell you more about this subject in Chapter 7.
- ✔ **Finding businesses, products, and services:** New yellow pages directory services enable you to search by the type of company you're looking for. You can indicate the area code or ZIP code to help specify the location. Also, many people are shopping for that hard-to-find, special gift item. A friend told us of her search for a bear pendant that led her to a company in Alaska that had just what she was looking for. John and Margy's dad found exactly the crystal he wanted — in Australia.
- ✔ **Research:** Law firms find that information they formerly paid \$600 an hour to get from commercial services can be found for free when they go directly to the Internet. Real estate appraisers use demographic data available on the Net, including unemployment statistics, to help assess property values. Genetics researchers and other scientists download up-to-date research results from around the world. Businesses and potential businesses research their competition over the Net.



Where did the Internet come from?

The ancestor of the Internet was the *ARPANET*, a project funded by the Department of Defense (DOD) in 1969, both as an experiment in reliable networking and to link DOD and military research contractors, including the large number of universities doing military-funded research. (*ARPA* stands for Advanced Research Projects Administration, the branch of the DOD in charge of handing out grant money. For enhanced confusion, the agency is now known as *DARPA* — the added *D* is for Defense, in case anyone had doubts about where the money was coming from.) Although the *ARPANET* started small — connecting three computers in California with one in Utah — it quickly grew to span the continent.

In the early 1980s, the *ARPANET* grew into the early Internet, a group of interlinked networks connecting many educational and research sites funded by the National Science Foundation, along with the original military sites. By 1990, it was clear that the Internet was here to stay, and *DARPA* and the *NSF* bowed out in favor of the commercially run networks that comprise today's Internet. Familiar companies such as AT&T, Sprint, Verizon, and Quest run some of the networks; others belong to specialty companies such as Level3 and Verio. No matter which one you're attached to, they all interconnect, so it's all one giant Internet. For more information, read our Web page located at

net.gurus.com/history

- ✓ **Education:** Schoolteachers coordinate projects with classrooms all over the globe. College students and their families exchange e-mail to facilitate letter writing and keep down the cost of phone calls. Students do research from their home computers. The latest encyclopedias are online.
- ✓ **Buying and selling stuff:** On the Internet, you can buy anything from books to stock in microbreweries. And we hear you can make a mint by cleaning out your closets and selling your old junk on eBay. We talk about the relevant issues later in this chapter and in Chapter 8.
- ✓ **Travel:** Cities, towns, states, and countries are using the Web to put up (or *post*) tourist and event information. Travelers find weather information; maps; plane, train, and bus schedules and tickets; and museum hours online.
- ✓ **Intranets:** Wouldn't ya know? Businesses have figured out that this Internet stuff is really useful. Companies use e-mail internally and externally to communicate with employees, customers, and other businesses. Many companies use Web pages for company information like corporate benefits, for filing expense reports and time sheets, and for ordering supplies. Stuff you can see from inside a company that folks on the outside can't see is known as an *intranet*. Apparently, e-mail and intranets are reducing the amount of paper circulating in some organizations. We talk about intranets in Chapter 2.
- ✓ **Marketing and sales:** Software companies are selling software and providing updates via the Net. (Aside from the large pile of AOL CDs we now use as coasters, most software distribution is migrating to the Internet.) Companies are selling products over the Net. Online bookstores and music stores enable people to browse online, choose titles, and pay for stuff over the Internet.
- ✓ **Games and gossip:** Internet-based multiuser games can easily absorb all your waking hours and an alarming number of what would otherwise be your sleeping hours. You can challenge other players who can be anywhere in the world. Many kinds of games are available on the Web, including such traditionally addictive games as bridge, hearts, chess, checkers, and go. In Chapter 20, we tell where to find these games.
- ✓ **Love:** People are finding romance on the Net. Singles ads and matchmaking sites vie for users. Contrary to Internet lore, the Net community is no longer just a bunch of socially challenged male nerds under 25.
- ✓ **Healing:** Patients and doctors keep up to date with the latest medical findings, share treatment experience, and give one another support around medical problems. We even know of some practitioners who exchange e-mail directly with their patients.

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- ✓ **Investing:** People do financial research, buy stock, and invest money online. Some online companies trade their own shares. Investors are finding new ventures, and new ventures are finding capital.
- ✓ **Organizing events:** Conference and trade-show organizers are finding that the best way to disseminate information, call for papers, and do registration is to do it on the Web. Information can be updated regularly, and paper and shipping costs are dramatically reduced. Registering online saves the cost of on-site registration staff and the hassle of on-site registration lines.
- ✓ **Nonprofits:** Churches, synagogues, mosques, and other community organizations put up pages telling Web users about themselves and inviting new people. The online church newsletter *always* comes before Sunday.

Some Thoughts about Safety and Privacy

The Internet is a funny place. Although it seems completely anonymous, it's not. People used to have Internet usernames that bore some resemblance to their true identity — their name or initials or some such combination in conjunction with their university or corporation gave a fairly traceable route to an actual person. Today, with the phenomena of screen names (courtesy of America Online) and multiple e-mail addresses (courtesy of many Internet providers), revealing your identity is definitely optional.

Depending on who you are and what you want to do on the Net, you may, in fact, want different names and different accounts. Here are some legitimate reasons for wanting them:

- ✓ You're a professional — a physician, for example — and you want to participate in a mailing list or newsgroup without being asked for your professional opinion.
- ✓ You want help with an area of concern that you feel is private, and you don't want your problem known to people close to you who may find out if your name were associated with it.
- ✓ You do business on the Internet, and you socialize on the Net. You may want to keep those activities separate.

And a warning to those who may consider abusing the anonymous nature of the Internet: Most Net activities can be traced. If you start to abuse the Net, you'll find you're not so anonymous.

Safety first

The anonymous, faceless nature of the Internet has its downside, too.

In chat rooms and other getting-to-know-you situations, don't use your full name. Never provide your name, address, or phone number to someone you don't know. Never believe anyone who says that he is from "AOL tech support" or some such authority and asks you for your password. No legitimate entity will ever ask you for your password. Be especially careful about disclosing information about kids. Don't fill out profiles in chat rooms that ask for a kid's name, hometown, school, age, address, or phone number because they are invariably used for "targeted marketing" (also known as junk mail).

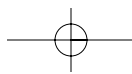
Although relatively rare, horrible things have happened to a few people who have taken their Internet encounters into real life. Many wonderful things have happened, too. We've met some of our best friends over the Net, and some people have met and subsequently married. We just want to encourage you to use common sense when you set up a meeting with a Net friend. Here are a few tips:

- ✓ Talk to the person on the phone before you agree to meet. If you don't like the sound of the person's voice or something makes you feel nervous, don't do it.
- ✓ Depending on the context, try to check the person out a little. If you've met in a newsgroup or chat room, ask someone else you know whether they know this person. (Women, ask another woman before meeting a man.)
- ✓ Meet in a well-lit, public place. Take a friend or two with you.
- ✓ If you're a kid, take a parent with you. Never, ever meet someone from the Net without your parents' explicit consent.

The Net is a wonderful place, and meeting new people and making new friends is one of the big attractions. We just want to make sure that you're being careful.

Protect your privacy

Here in the United States, we've grown up with certain attitudes about freedom and privacy, many of which we take for granted. We tend to feel that who we are, where we go, and what we do is our own business as long as we don't bother anyone else. However, bunches of people are extremely interested in who we are, where we go (on the Net, at least), and, most especially, what we buy.



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Some people worry that snoopers on the Net will intercept their private e-mail or Web pages. That's fairly unlikely, although if you're worried about it, you can lock them with a secret password. The more serious problem is advertisers who build profiles of the sites you visit and the stuff you buy. Most Web ads are provided through a handful of companies like `doubleclick.com` and `advertising.com`, who can use their ads to tell that the same person (you) is visiting a lot of different Web sites and create a profile. They say they don't, but they don't say they won't.

Throughout this book, we point out when your privacy or security may be in danger, and suggest ways to protect yourself.

