3

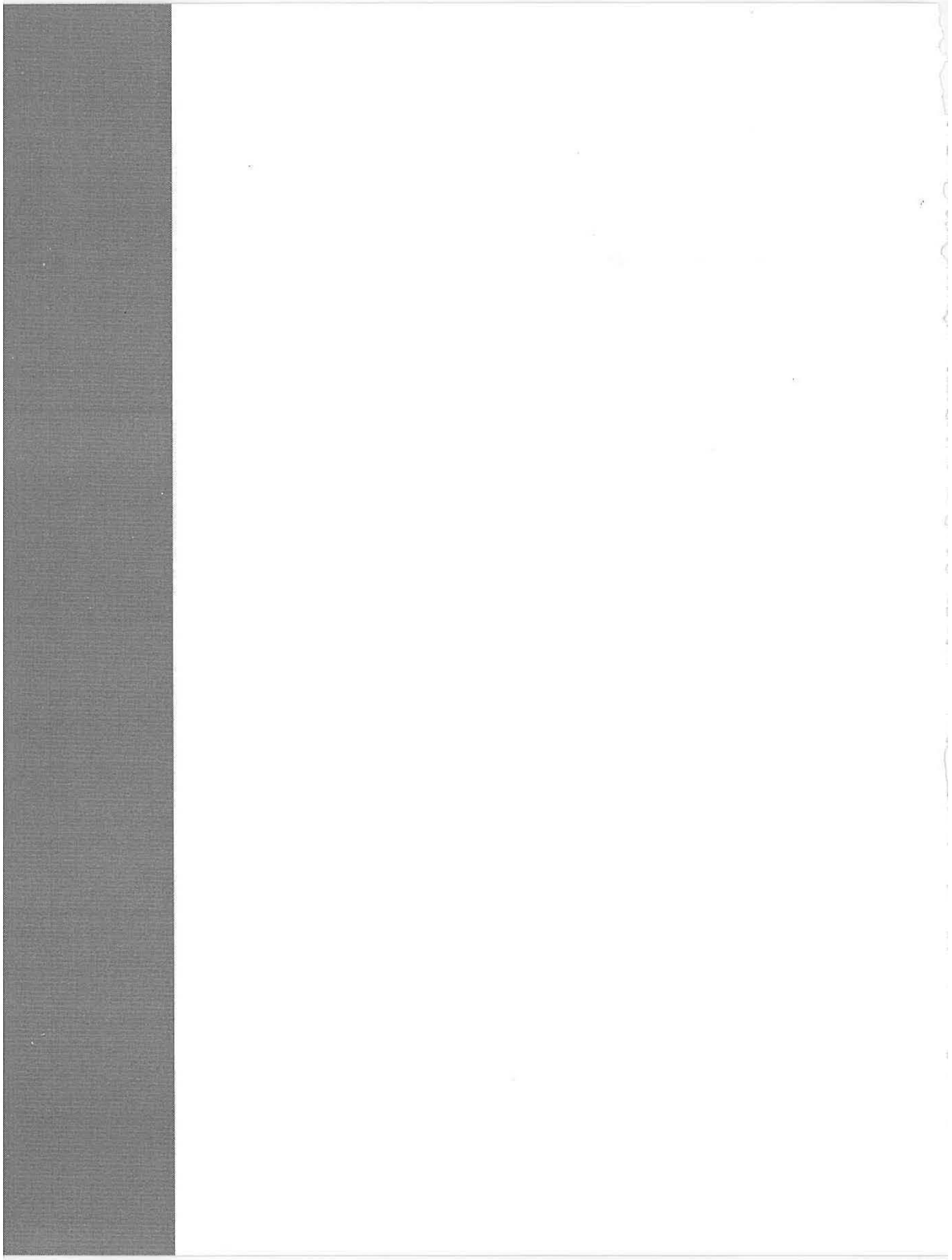
Part Three: Windows Online

Chapter 9: Hooking Up to the Internet

Chapter 10: Security, Firewalls, and Service Pack 2

Chapter 11: Web, Chat, and Videoconferencing

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CHAPTER
9

Hooking Up to the Internet

Plenty of people buy a PC to crunch numbers, scan photos, or cultivate their kids' hand-eye coordination. But for millions of people, Reason One for using a PC is to access the Internet. Few computer features have the potential to change your life as profoundly as the World Wide Web and email.

To join the Internet party already in progress, you need three components: a *connection*, such as a modem, cable modem, DSL, or corporate network; an Internet *account*; and Internet *software*, like the Web browsers and email programs described in the next chapter.

Five Degrees of Online Readiness

If you have any intention of making your PC a citizen of the Internet, you probably fall into one of these categories:

- **Your PC can already get online.** This is the case if, for example, you upgraded to Windows XP from an earlier version of Windows. (The XP installer is thoughtful enough to preserve your old Internet settings.) If you can already access the Internet, you don't need the advice in this chapter, which explains how to set up an account yourself. Just skip to the following chapter.
- **You have an Internet account on another PC that you want to transfer.** In this case, consider using the Files and Settings Transfer Wizard, described on page 570. It teaches your new Windows XP machine all about the settings that worked on the old machine.

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Alternatively, if you know all the configuration details for your existing account—your account name, local access number, password, and so on—you can use the New Connection Wizard described on page 300.

- **You want to sign up for a new America Online account.** Microsoft, an AOL rival, no longer includes the America Online starter software with Windows. You'll need to secure the AOL installer on your own—using one of the several billion AOL starter CDs that come with magazines, in cereal boxes, and sometimes out of the faucet.
- **You want to sign up for a new MSN account, or a standard Internet account (EarthLink, AT&T, Sprint, or whatever).** In this case, use the New Connection Wizard described on page 300.
- **You want to access the Internet, but don't yet know the best way to do it.** In this case, read on.

How to Get Online

Most people connect to the Internet using a *modem,* a device that connects your PC to a standard voice phone line. Almost every modern computer comes with a built-in, preinstalled modem.

Cable Modems and DSL

On the other hand, nearly half of all Internet-connected computer fans now use much faster gear called *cable modems* and *DSL.* These contraptions offer several gigantic advantages over dial-up modems. For example:

- **Speed.** These modems operate at 5 to 50 times the speed of a traditional dial-up modem. For example, you might wait 5 minutes to download a 2 MB file with a standard modem—a job that would take about 10 *seconds* with a cable modem. And complex Web pages that take almost a minute to appear in your browser with a standard modem will pop up almost immediately with a cable modem or DSL.
- **No dialing.** These fancier connection methods hook you up to the Internet permanently, full time, so that you don't waste time connecting or disconnecting—ever. You're *always* online.
- **No weekends lost to setup.** Best of all, there's no need to do any of the setup yourself. A representative from the phone company or cable company generally comes to your home or office to install the modem and configure Windows XP to use it. If you sign up for a cable modem, the cable TV company pays you a visit, supplies the modem, installs a network card into your PC, and sets up the software for you.
- **Possible savings.** At this writing, cable modems and DSL services cost about $30 to $50 a month. That includes the Internet account for which you'd ordinarily pay $20 if you signed up for a traditional ISP. And since you're connecting to the

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Internet via cable TV wires or unused signal capacity on your telephone lines, you may be able to save even more money by canceling your second phone line.

Virtually all cable TV companies offer cable modem service. Unfortunately, you may not be able to get DSL if the phone company doesn't have a central office within about three miles of your home.

It's also worth noting that cable modems and DSL modems aren't *always* blazing fast. The cable modem can slow down as more people in your area use their cable modems simultaneously. And DSL modems may be slower the farther away you are from the telephone company.

Even so, these devices are always faster than a dial-up modem.

Tip: Actually, neither cable modems nor DSL modems are *modems,* since they don't *mo*dulate or *demo*dulate anything. (That's where the term modems comes from: they convert data into bursts of sound.) Still, we need to call them something, so most people call them modems anyway.

Wireless Networks

If you have a broadband connection like a cable modem or DSL, you're in heaven, but not on the penthouse floor of heaven. These days, the ultimate bliss is connecting without wires, from anywhere in your house or building—or, if you're a laptop warrior, someone *else's* house or building, like Starbucks, McDonald's, airport lounges, hotel lobbies, and anywhere else that an Internet "hot spot" has been set up.

Those are places where somebody has set up an *802.11 access point* (or base station), which is a glorified antenna for their cable modem or DSL box. Any computer that's been equipped with a corresponding wireless networking card (as most new laptops are these days) can hop online, at high speed, with only a couple of clicks.

Tip: Whenever you try to get online, Windows XP automatically hunts for a working connection–wired or wireless. That's a blessing for laptops: When you're at the office plugged into an Ethernet cable, you can use its stability and speed. When you're in some hotel-lobby hot spot, and your laptop can't find the Ethernet cable, it automatically hops onto the wireless network, if possible. (And how does the dial-up modem enter into all this? That's up to you. Open Internet Options in your Control Panel, click the Connections tab, and turn on, for example, "Dial whenever a network connection is not present" or "Never dial a connection.")

For the basics of setting up your own wireless network, see page Chapter 17. But for details on connecting to someone else's wireless network (using a laptop in a hotel lobby, for example), see Figure 9-1.

ISP vs. Online Service

If you decide to connect to the Net using a dial-up modem, your next task is to get an Internet *account.* You can get one in either of two ways: by signing up for an *online service,* such as America Online or MSN, or through a direct Internet account with an Internet service provider (or *ISP,* as insiders and magazines inevitably call them).

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National ISPs like EarthLink and AT&T have local telephone numbers in every U.S. state and many other countries. If you don't travel much, you may not need such broad coverage. Instead, you may be able to save money by signing up for a local or regional ISP. Either way, dialing the Internet is a local call for most people.

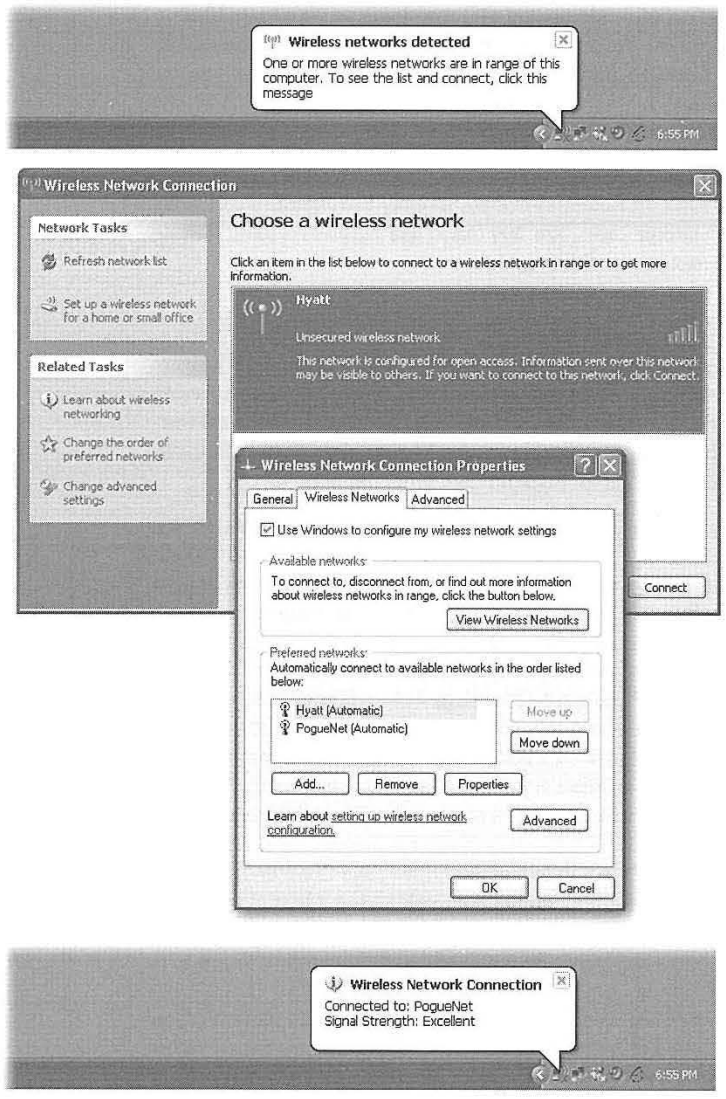


Figure 9-1:
Top: You're wandering with your WiFi laptop. Suddenly, fortune smiles: this notification-area balloon appears. You've found a hot spot! You click the balloon.

Second from top: You get to read about the network you've found. To get online, click the network's name and then click Connect. (This message is warning you that hackers with network-sniffing software could, in theory, intercept your wireless transmissions—always a concern with public wireless networks.) If a yellow padlock appears, you can't use the network without a password.

Third from top: In your Network Places window, getting Properties on a wireless connection produces this box. By rearranging the networks' names, you tell Windows which ones you want to connect to first, in the delightful event that more than one hot spot is available at once.

Bottom: The next time you wander into a hot spot you've connected to before, XP connects automatically—no muss, no dialog boxes.

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Tip: The Internet is filled with Web sites that list, describe, and recommend ISPs. To find such directories, visit Google and search for *ISP listings*. One of the best Web-based listings, for example, can be found at *www.boardwatch.com*. (Of course, until you've actually got your Internet account working, you'll have to do this research on a PC that *is* online, like the free terminals available at most public libraries.)

Each route to the Internet (online services or ISP) has significant pros and cons.

- Most national ISPs charge $22 a month for unlimited Internet use; America Online costs $24 per month.
- Online services strike many people as easier to use, since a single program operates all Internet functions, including email and Web surfing. When using an ISP, on the other hand, you fire up a different application for each function: Internet Explorer for surfing the Web, Outlook Express for email, and so on.
- Some online services, notably America Online, disconnect automatically if you haven't clicked or typed for several minutes. ISPs don't hang up on you nearly as quickly, if at all.
- Some online services are screened to block out pornography. The Internet itself, of course, isn't sanitized in this way. (Of course, you can get *to* the Internet from any online service, which makes this point less relevant.)
- Online services provide proprietary, members-only features like games and chat rooms.
- Because online services are slightly easier to use than ISP accounts, you'll run into people who look down on MSN and America Online members.

Establishing a New Dial-Up Internet Account

If you'd like to sign up for Microsoft's Internet service, called MSN (and by the way, Microsoft would *love* you to sign up for MSN), or a traditional ISP, you're ready for the New Connection Wizard.

1. **Choose Start→All Programs→Accessories→Communications→New Connection Wizard.**

   If you managed to mouse across that labyrinth of menus, the New Connection Wizard appears (Figure 9-2).

2. **Click Next. On the next screen, click Connect to the Internet, and then click the Next button.**

   Now you reach an important juncture: the Getting Ready screen (third from top in Figure 9-2).

3. **Click "Choose from a list of Internet service providers (ISPs)." Click Next.**

   Here's where you tell the wizard whether you want to sign up for the pricier, but sanitized, world of MSN, or a standard Internet service provider.

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4. Click either "Get online with MSN" or "Select from a list of other ISPs," and then click Finish.

If you choose MSN, the graphic design scheme of the wizard changes—suddenly you're in pastel land. This, of course, is the MSN Signup Wizard. Over the next few minutes, you'll be guided through the process of signing up for a new account. You'll be asked for your name, address, birthday, occupation, credit card number, and so on. You'll also be offered the chance to preserve your existing Microsoft-service email address (anything ending with *@hotmail.com* or *@msn.com*). (During the process, the computer will dial a toll-free number to connect with MSN.)

If you choose "Select from a list of other ISPs," the wizard disappears, and Windows deposits you into a folder window containing two shortcuts: "Get online with

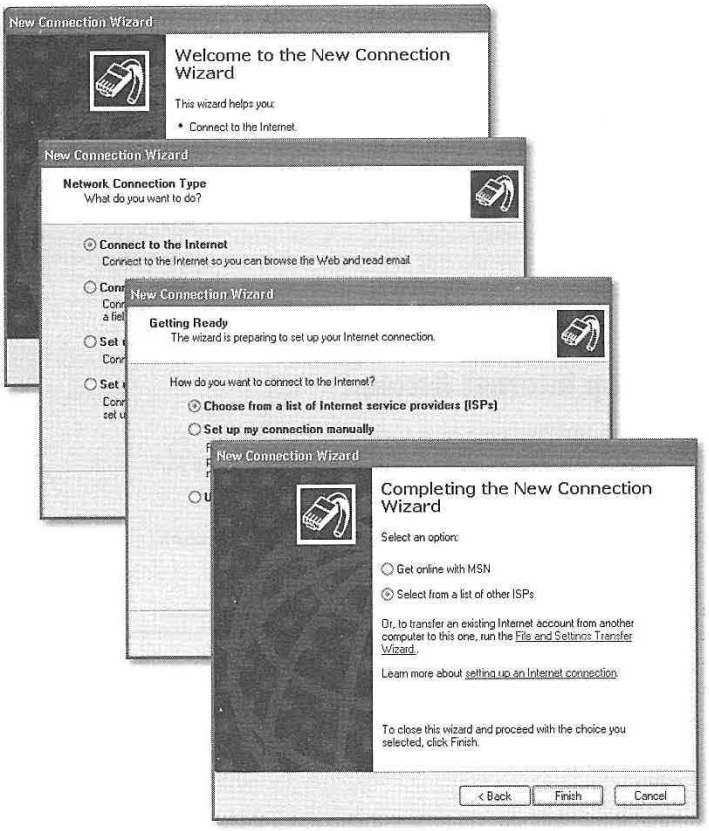


Figure 9-2: *You can use this same New Connection Wizard to set up a small office network, a corporate network, and so on, but for now, you want the Connect to the Internet option. To sign up for a standard Internet account, just keep clicking the first choice on each wizard screen. At the last step, you'll have to choose between signing up for Microsoft's own Internet service, called MSN, or an independent one like EarthLink or AT&T. In the end, these services are essentially identical, and let you use precisely the same features. The deciding factors should be the price of the service and the presence of a local phone number that your modem can use to dial in.*

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MSN" (which opens the same wizard described in the previous paragraph) and "Refer me to more Internet Service Providers." Use the latter shortcut to sign up for traditional Internet accounts, as shown in Figure 9-3.



Figure 9-3: *In the U.S., the ISP Signup Wizard starts by calling a toll-free number to retrieve a list of Internet service providers that have deals with Microsoft in "your area" (in general, this means "in your country"). Click one, and then read the details of its deal in the scrolling right-side window. After settling on one, click the Next button to begin the signup process (providing your name, address, credit card number, and so on). Along the way, you'll probably be asked to select a local telephone number (that your modem will call to get online) from an existing list.*

Whether you choose MSN or a more traditional ISP, however, both signup wizards share a few things in common:

- Along the way, the wizard dials a second time. This time, it's contacting the Internet company you've selected. The details of the service plan now appear on your screen. If you agree with the ISP's rules, click the Accept button, and then click Next.
- You'll also be asked to invent an email address for yourself. The ending part of the address is determined by your choice of ISP—*@earthlink.net*, for example, or *@msn.com*. The first part is up to you, but keep in mind that names like *Bob* and *Seinfeld* were snapped up some time in the Reagan era. Therefore, if the email name you type in isn't unique, you'll be asked to try a different one.
- When you're shown a list of phone numbers, choose one that's local. If there are no local numbers listed, and you'd rather not pay long distance charges every time you connect to the Internet, consider canceling this entire signup operation and spending some time researching smaller, regional ISPs.

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The Connection Icon

When it's all over, Windows XP stores your ISP information, your name, your password, and so on, into a single icon called a *connection*. To see the one you've just created, choose Start→All Programs→Accessories→Communications→Network Connections, as shown in Figure 9-4. There are dozens of ways to get online, and one way is to double-click this special icon.

Doing so produces the dialog box shown in Figure 9-4 at left. This box will soon become extremely familiar, since it appears every time your computer attempts to access the Internet for any reason.

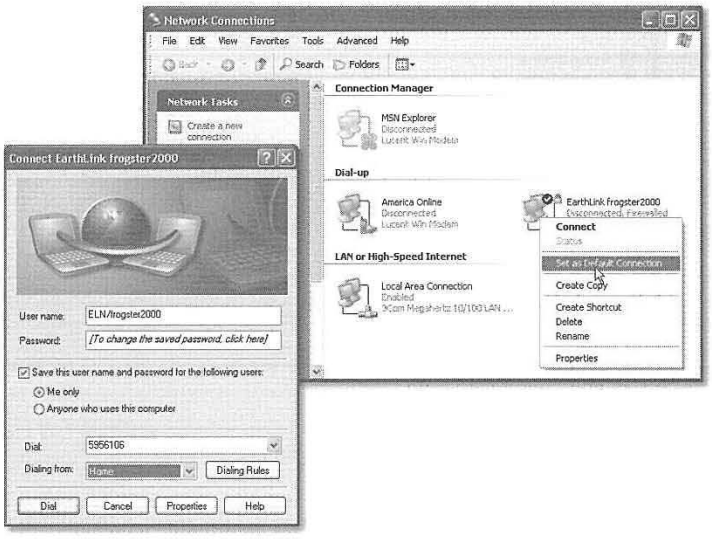


Figure 9-4: *Right: This particularly well-endowed individual has four different ways to get to the Internet. The New Connection Wizard created two of them—the ones represented by the MSN Explorer and EarthLink icons. One of the many ways to go online is to double-click this icon.*

Left: Double-clicking one of these icons produces this dialog box, where you can click Dial to go online. (Turning on "Save password" eliminates the need to type your password each time—in general, a great idea.)

Once you've set up your connection, skip ahead to "Connecting to the Internet." You're now ready to explore the Net.

Manually Plugging in Internet Settings

Although the New Connection Wizard does an admirable job of trying to simplify the hairy process of accessing the Internet, it's not always appropriate. Here are a few cases when you may want to arrange your settings manually:

- You already have an Internet account.
- You have a cable modem or DSL connection.

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- The New Connection Wizard didn't find any ISPs with local phone numbers for you, but you've heard about a local service—offered by your local PC user group, for example—that sounds just right.
- Your PC is connected to a network through which your company provides Internet service.

In each of these cases, you can still use the New Connection Wizard; however, a good deal more typing is required.

Via Dial-up Modem

If you connect to the Internet via telephone jack, like most of the world, choose Start→All Programs→Accessories→Communications→New Connection Wizard. Make sure that your computer is plugged into a phone jack.

Click Next, "Connect to the Internet," Next, "Setup my Internet connection manually," and Next. Now click "Connect using a dial-up modem," and then Next.

On the following several screens, you'll be asked to type in a few pieces of information that only your ISP can provide: the local phone number that connects your PC to the Internet, your user name, and your password. (You can call your ISP for this information, or consult the literature delivered by postal mail when you signed up for an ISP account.)

You'll also be offered these three important checkboxes:

- **Use this account name and password when anyone connects to the Internet from this computer.** This option refers to the Windows XP *user accounts* feature described in Chapter 16, in which various people who share the same computer keep their worlds of information and settings separate by signing in each time they use the machine. It's asking you: "Is this the Internet account you want this PC to use no matter who's logged in at the moment?"
- **Make this the default Internet connection.** Some people have more than one way to access the Internet. Maybe you connect your laptop to a cable modem when you're at home but dial out using the modem when you're on the road. Turn on this checkbox if the account you're setting up is the one you want it to use most often.

Tip: You can always change your mind. In the Network Connections window (Figure 9-3), right-click a connection icon and choose Set as Default Connection from the shortcut menu. On the other hand, if you're a laptop-toting traveler, you might want to specify a different connection in each city you visit. In that case, right-click the default icon (shown by the checkmark at right in Figure 9-3) and choose Cancel as Default Connection from the shortcut menu. This way, your laptop will never dial away automatically, using some hopelessly irrelevant access number for the city you're in.

- **Turn on Internet Connection Firewall for this Connection.** Windows XP offers a certain degree of protection from incoming hacker attacks in the form of a personal

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firewall (see the facing page). Turn this off only if you've equipped your PC with other firewall software (or if you have a *router*, as described in Chapter 17).

When it's all over, you'll find that you've given birth to a *connection icon*, as shown at right in Figure 9-4. Once you've correctly typed in all of the necessary information, you should be ready to surf.

Tip: If you carry a laptop from city to city—each of which requires a different local Internet number—you might want to create more than one connection icon by plugging in a different local access number each time. (Alternatively, just create one connection icon—and then, in the Network Connections window, right-click it and choose Create Copy.) Another helpful hint: Name each of these connections after the appropriate location ("EarthLink Cleveland," "EarthLink Stamford," and so on), so you'll remember which one to use for which city.

Via Cable Modem, Network, or DSL

As noted earlier in this chapter, you're usually spared the hassle of setting up these so-called broadband accounts. The installation person generally handles it for you.

If you ever need to set up such an account yourself for some reason, here's the procedure:

1. **Choose Start→Control Panel. In Classic view (page 243), double-click Network Connections.**

   (That's an alternate route to the Network Connections window shown in Figure 9-3.) If your PC does, in fact, have an Ethernet adapter—a requirement for a cable modem, DSL modem, or network Internet account—you'll see an icon for it in this window.

2. **Right-click the Local Area Connection icon; from the shortcut menu, choose Properties.**

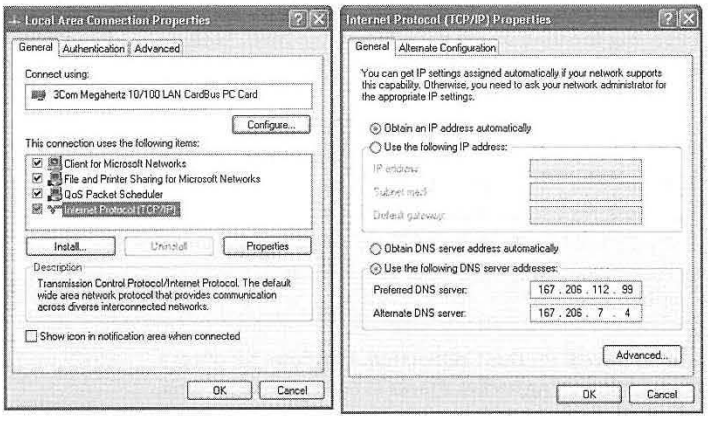


Figure 9-5:
Left: In this dialog box, double-click the Internet Protocol (TCP/IP) item that corresponds to your Ethernet card.

Right: Your cable or phone company generally configures these settings for you. But if a freak solar eclipse wipes out all of your settings, you can re-enter them here. When you click OK, you should be back online.

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You get the dialog box shown at left in Figure 9-5.

3. **Double-click the listing that says Internet Protocol (TCP/IP).**

   An even more intimidating dialog box now appears, as shown at right in Figure 9-5.

4. **With your cable company, DSL company, or network administrator on the phone, type in your account information.**

   Most of the time, you'll be instructed to turn on "Obtain an IP address automatically" and "Obtain DNS server address automatically." You don't know how lucky you are—you've been saved from typing in all the other numbers in this dialog box. Otherwise, turn on "Use the following IP address" and type in the appropriate numbers. Do the same with "Use the following DNS server addresses."

5. **Click OK.**

   As a courtesy, Windows XP doesn't make you restart the computer in order for your new network settings to take effect.

Upon completing this task, you won't wind up with a connection icon, as you would if you intended to connect to the Internet using a dial-up modem. Instead, you're online all the time, 24 hours a day—or at least whenever your cable/DSL/network is working correctly.

Dialing Up to the Internet

If you enjoy a full-time Internet connection like a cable modem, DSL, or some wireless variation thereof, you're constantly online. Skip to the next chapter.

If you have a dial-up modem, however, you should now have a connection icon in your Network Connections window.

UP TO SPEED

IP Addresses and You

Every computer connected to the Internet, even temporarily, has its own exclusive *IP address* (IP stands for Internet Protocol). When you set up your own Internet account, as described on these pages, you'll be asked to type in this string of numbers. As you'll see, an IP address always consists of four numbers separated by periods.

Some PCs with high-speed Internet connections (cable modem, DSL) have a permanent, unchanging address called a *fixed* or *static* IP address. Other computers get assigned a new address each time they connect (a *dynamic* IP address). That's always the case, for example, when you connect via a dial-up modem. (If you can't figure out whether your machine has a static or fixed address, ask your Internet service provider.)

If nothing else, dynamic addresses are more convenient in some ways, since you don't have to type numbers into the Internet Protocol (TCP/IP) Properties dialog box shown in Figure 9-4.

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Manual Connections

Double-click the connection's icon in the Network Connections window (Figure 9-3). The Connect To dialog box appears, as shown at left in that figure. Just press Enter, or click Dial, to go online.

But that's just the beginning. If you crave variety, here are a few other ways of opening the connection:

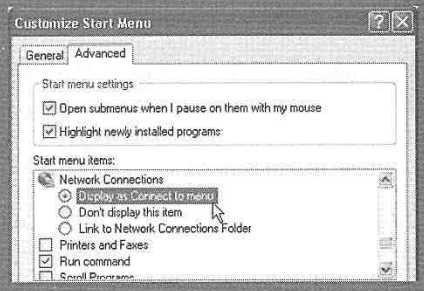
- Right-click your connection icon, and then choose Connect from the shortcut menu.
- If you've added the "Connect to" submenu to your Start menu, as described in the box on page 308, just choose the name of the connection you want.
- Create a desktop shortcut for your connection icon (the icon in the Network Connections window) by right-dragging it out of the window and onto the desktop. When you release the mouse button, choose Create Shortcut(s) Here from the shortcut menu. Now just double-click the shortcut whenever you feel the urge to surf.
- Drag your connection icon shortcut onto the Quick Launch toolbar (page 95), so that you can now get to the Internet with just one click.

GEM IN THE ROUGH

Faster Access to Connection Icons

In the following pages, you'll quite frequently work your way to the Network Connections window and the connection icons inside it. With just a little Start-menu surgery, however, you can directly access this folder, or the connection icons inside it, without burrowing through the Control Panel window first.

To do so, right-click the Start button. From the shortcut menu, choose Properties. Click the Customize button, and then click the Advanced tab.



Finally, scroll down until you see Network Connections. Here you have a couple of useful options. "Display as Connect to menu" adds a submenu–directly to your Start menu–listing the various connections available. If you're a laptop owner, for example, and you've established connection icons for several different cities, this submenu makes it extremely easy to get online using the correct local phone number.

"Link to Network Connections Folder," meanwhile, adds a command to the right side of the Start menu called Network Connections. It opens the Network Connections window, once again saving you the intermediate step of opening Control Panel first.

When you're finished, click OK twice. Use the new spare time you've just won yourself to take up hang gliding or learn French.

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The Notification Area Icon

While you're connected to your ISP, Windows XP puts an icon in the notification area (Figure 9-6), reminding you that you're online. You can watch the icon light up as data zooms back and forth across the connection. And if you point to it without clicking, you'll see a yellow tooltip showing your speed and how much data has been transmitted. (If this little taskbar icon isn't visible, take a moment to turn it back on, as directed in Figure 9-6. You'll find it to be an important administrative center for going online and offline.)

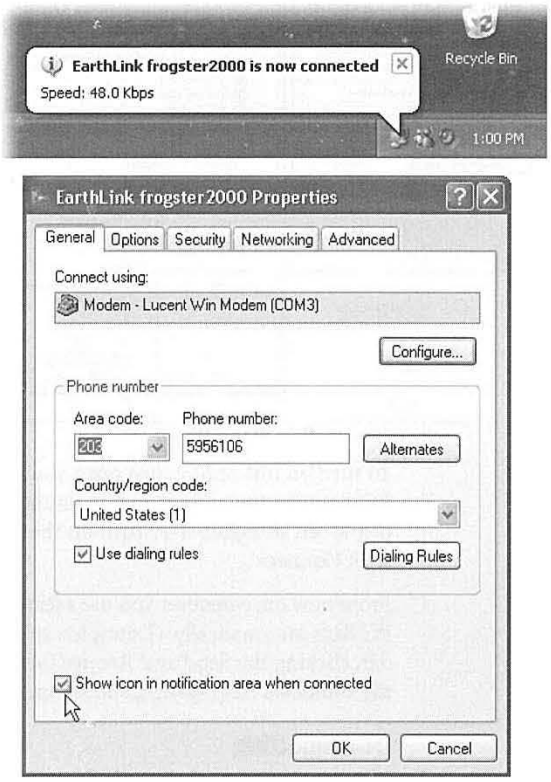


Figure 9-6:
Top: To make the notification area icon appear, right-click the icon for your connection (Figure 9-3). From the shortcut menu, choose Properties.

Bottom: At the bottom of the General tab, you'll see the key feature, "Show icon in notification area when connected." Turn on this option, and then click OK.

Automatic Dialing

It's important to understand that when your PC dials, it simply opens up a connection to the Internet. But aside from tying up the phone line, your PC doesn't actually *do* anything until you then launch an Internet program, such as an email program or a Web browser. By itself, making your PC dial the Internet is no more useful than dialing a phone number and then not saying anything.

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Therefore, using the Internet is generally a two-step procedure: First, open the connection; second, open a program.

Fortunately, Windows offers a method of combining these two steps. You can make the dialing/connecting process begin automatically whenever you launch an Internet program. This way, you're saved the trouble of fussing with the connection icon every time you want to go online.

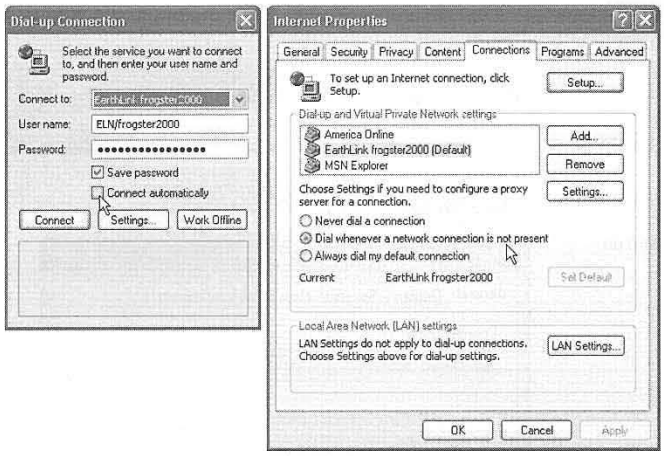


Figure 9-7:
Left: "Connect automatically" makes your PC dial whenever any of your programs tries to go online.

Right: If you can't seem to get online despite taking this step, open the Internet Options program in the Control Panel. Click the Connections tab. Make sure that "Never dial a connection" isn't selected; choose one of the other options. (That's an option for people who like to establish the Internet connection manually before opening an Internet program like a Web browser.)

To turn on this option, just open your Web browser and try to Web surf. When the PC discovers that it's not, in fact, online, it will display the Dial-up Connection dialog box at left in Figure 9-7. Turn on the "Connect automatically" checkbox, and then click Connect.

From now on, whenever you use a feature that requires an Internet connection, your PC dials automatically. (Examples: specifying a Web address in a window's Address bar, clicking the Send and Receive button in your email program, clicking a link in the Windows Help system, and so on.)

Disconnecting

The trouble with the standard dial-up Internet connection is that, unless you intervene, it will never hang up. It will continue to tie up your phone line until the other family members hunt it down, hours later, furious and brandishing wire cutters.

Therefore, it's worth taking a moment to configure your system so that it won't stay online forever.

Disconnecting manually

When you're finished using the Internet, end the phone call by performing one of the following steps:

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- Right-click the little connection icon on your taskbar. Choose Disconnect from the shortcut menu (Figure 9-8, top).
- Double-click the little connection icon on the taskbar. Click the Disconnect button in the Status dialog box that appears (Figure 9-8, bottom), or press Alt+D.
- Right-click the connection icon in your Network Connections window. Choose Disconnect from the shortcut menu.

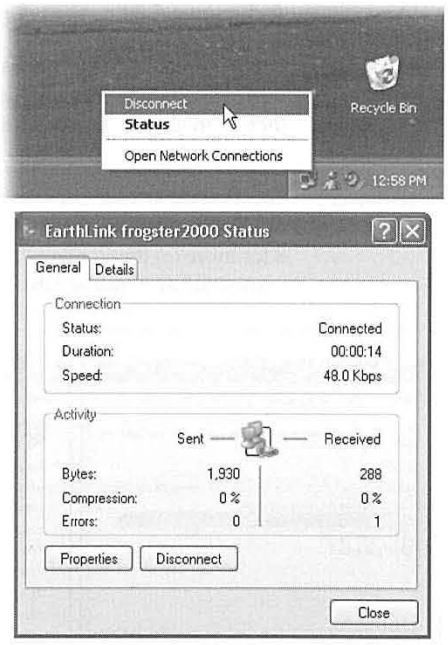


Figure 9-8:
Top: The quickest way to hang up is to use the notification-area icon. Right-click it and choose Disconnect from the shortcut menu that appears.

Bottom: You can also double-click the icon to view statistics on your session so far, and to produce a Disconnect button for hanging up.

FREQUENTLY ASKED QUESTION

Laptop's Lament: Away from the Cable Modem

When I'm home, I connect my laptop to my cable modem. But when I'm on the road, of course, I have to use my dial-up ISP. Is there any way to automate the switching between these two connection methods?

If there weren't, do you think your question would have even appeared in this book?

The feature you're looking for is in the Internet Options program in the Control Panel (page 270). Open it, click the Connections tab, and then turn on "Dial whenever a network connection is not present."

From now on, your laptop will use its dial-up modem only when it realizes that it isn't connected to your cable modem.

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Disconnecting automatically

You can also set up your PC to hang up the phone automatically several minutes after your last activity online.

To find the necessary controls, right-click your connection icon (page 304); from the shortcut menu, choose Properties. In the resulting dialog box, click the Options tab. Near the middle of the box, you'll see a drop-down list called "Idle time before hanging up." You can set it to 1 minute, 10 minutes, 2 hours, or whatever.

Advanced Modem Settings

Because so many people consider the Internet such an important PC feature, Windows XP lets you fine-tune its dialing, modem, and Internet settings to within an inch of their lives. You should consider the rest of this chapter optional—or power-user—reading.

To adjust the settings for your modem's dialing patterns, choose Start→Control Panel. In Classic view (page 243), double-click Phone and Modem Options. (See Chapter 8 for more on the Control Panel window.) The resulting dialog box (Figure 9-8, left) consists of three major tabs, each serving important functions.

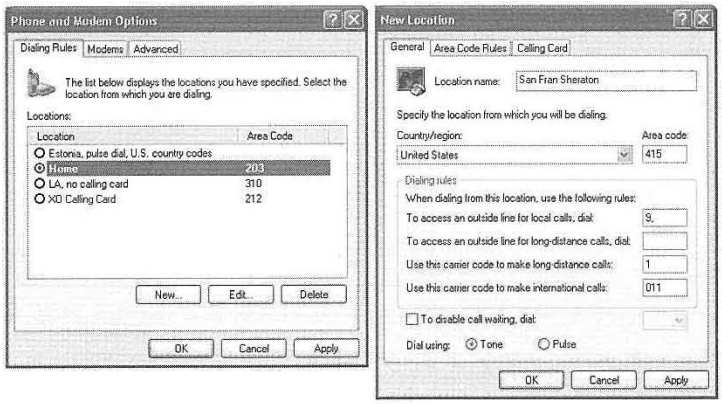


Figure 9-9:
Left: This dialog box has two priorities: to establish rules for dialing out, and to define as many different sets of rules for dialing as you need. If you're setting up dialing properties for a desktop computer, you won't need to change these settings after the first successful call.

Right: Setting up a new dialing rule.

Dialing Rules Tab

The Dialing Rules tab (Figure 9-9, left) is made for travelers. As you move from place to place, you may wind up in locations that have very different dialing requirements. The area code may change, not to mention the requirement to dial 9 for an outside line, the availability of touch-tone dialing, and so on.

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To set up the dialing rules for your current location, click its name and then click the Edit button. The New Location box appears (Figure 9-8, right), bristling with enough controls to make your modem sing, dance, and stand on its head.

General tab

Here are the guidelines for filling out this dialog box:

- **Location name, Country, Area code.** These boxes inform Windows where you're presently located. When your modem dials another city or country, Windows XP will know when to dial a 1 (and a country or area code, when necessary) before dialing.
- **To access an outside line for local/long distance calls.** In many offices and hotels, you must dial a number (usually 8 or 9) to get an outside line. If you enter numbers into these text boxes, Windows will dial them before the regularly scheduled Internet number.
- **Use this carrier code to make long distance/international calls.** These options specify the codes that you have to dial, even before the area code, when dialing internationally. For example, in the United States, the long distance carrier code is 1. For international calls, the carrier code consists of the digits you dial before the country code—to make international calls from the United States, for example, the carrier code is 011.
- **To disable call-waiting.** If you have call-waiting service, that little beep that announces another incoming call can scramble your Internet connection. Fortunately, Windows XP will be delighted to automatically disable call-waiting whenever you use the modem. Turn on this checkbox; from the drop-down list to its right, choose from the list of the common call-waiting disabling key sequences (*70, 70#, and 1170). (If you don't know which sequence works for your local phone company, check the front of your phone book.)

  When the modem disconnects from the Internet after your online session, call-waiting automatically returns to the phone line.
- **Tone or pulse dialing.** Specify whether your telephone service is touch-tone (push-button) or pulse (as on old-fashioned rotary-dial phones).

Area Code Rules tab

It used to be easy to dial the telephone in America. For local calls, you dialed a seven-digit number. Calls to other area codes started with 1 and then the area code.

Not any more. Many metropolitan areas now utilize *ten-digit dialing*—an insidious system that requires you to dial the full area code even for your next-door neighbor. Worse, some cities have several *different* area codes—not all of which require a 1+ area code dialing pattern. To confuse things further, in some cases, you dial *only* the area code plus the seven-digit number.

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To clue your modem in on the vagaries of your own area's area code practices, click the Area Code Rules tab. From there, set up the dialing sequences for certain locations by clicking the New button to open the New Area Code Rule dialog box. The resulting options (Figure 9-10) let you specify the area code and three-digit prefixes. Click OK to return to the New Location dialog box.

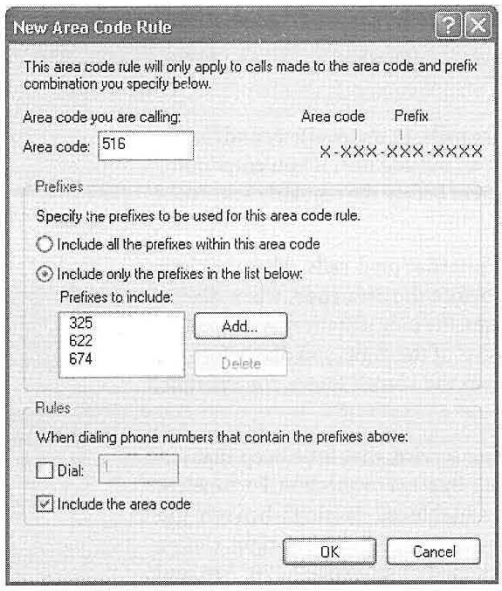


Figure 9-10:
This dialog box can handle any weird and convoluted area code rule in your town. (If there aren't special rules yet in your area, it's only a matter of time.) When your local phone company changes the rules, don't forget to open this dialog box and explain the changes to your modem.

Calling Card tab

If you, the shrewd traveler, feel that there's a better use for your money than paying most of it to your hotel's $3-per-minute long distance scheme, this dialog box is for you. It lets you train your modem to bill its calls to a calling card (Figure 9-11).

Note: Creating a calling card profile doesn't mean you must use it every time you use your modem. In fact, you can choose whether or not to use the calling card each time you dial out.

If your calling card isn't listed, you can create a setup for it yourself, which Windows then adds to the list. Armed with the instructions from your calling card company, click the New button. In the resulting dialog box, specify the card name, account number, PIN, and so on.

By clicking the Long Distance tab in the New Calling Card dialog box, you can specify the steps needed to use the card for long distance. For instance, you may need to dial a number and then wait for a tone that confirms that the number has been accepted. In this dialog box, you can specify the number of seconds you want Windows to wait.

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(You can set up the same kinds of rules for international and local calls by clicking the appropriate tabs.)

Once you've set up a calling card, it becomes part of one of these dialing rules. Now when you want to go online, you'll be able to bill your modem calls to your calling card on a case-by-case basis.

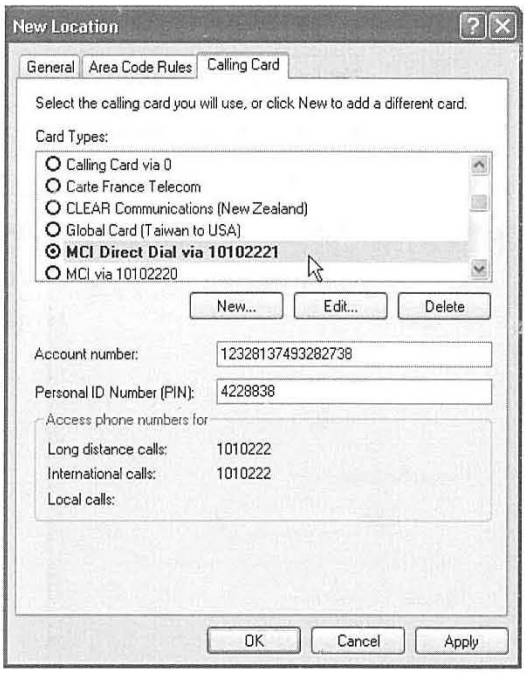


Figure 9-11:
Windows XP already knows about the dialing requirements for most major calling cards. When you choose one from the Card Types list box at top, Windows XP automatically fills in the fields at the bottom with the correct information. On the remote chance you can't find your own card, just type in the necessary dialing codes manually.

To do so, start by double-clicking your connection icon (Figure 9-4). When the dialog box shown at left in Figure 9-4 appears, use the "Dialing from" drop-down list to choose the name of the dialing-rule setup that contains your calling card configuration. Now click Dial to start your call.

Modems Tab

All the preceding discussion concerns only the first of the three tabs in the Phone and Modem Options program. The second tab, called Modems, is simply a list of the modems currently connected to your PC. (Most people not in Oprah's tax bracket, of course, see only one modem listed here.)

Double-clicking the name of your modem opens its Properties dialog box, which bursts with technical parameters for your modem. In general, you'll need to visit

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these dialog boxes only when troubleshooting, following the instructions of some telecommunications geek from your modem company. Two of them, however, are more generally useful:

- **Change the speaker volume.** The modern modem may have revolutionized computer communications, but the squealing sounds it makes could wake the dead—or, worse, the spouse. To turn the speaker off, so that you no longer hear the shrieks every time you dial, click the Modem tab (Figure 9-12), and then drag the Speaker volume slider to Off.

Tip: The slider affects the speaker volume only while it's dialing and making a connection to another computer. After the connection is established, the speaker *always* goes silent, so you don't have to listen to all the squawking noises that indicate data transmission.

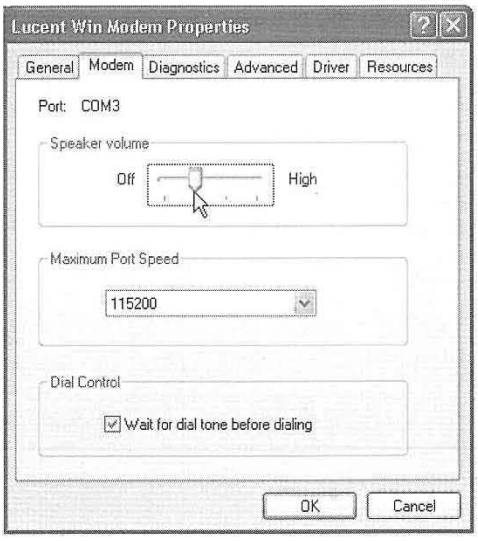


Figure 9-12:
The Modem tab of the Modem Properties dialog box. Many people, perhaps thinking wishfully, set a speed higher than the modem's rated speed. Unfortunately, the speed doesn't actually improve as a result.

- **Wait for the dial tone before dialing.** This checkbox (also on the Modem tab, as shown in Figure 9-12) is normally turned on. If you travel abroad with your laptop, however, you may experience trouble connecting if the foreign country's dial tone doesn't sound the same as it does back home. Turning off this checkbox often solves the problem.

Advanced Tab (of Phone and Modem Options)

These controls, too, are extremely advanced options that you'll never need to adjust except in times of intense troubleshooting.

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CHAPTER
10

Security, Firewalls, and Service Pack 2

If it weren't for that darned Internet, personal computing would be a lot of fun. After all, it's the Internet that lets all those socially stunted hackers enter our machines, unleashing their viruses, setting up remote hacking tool, feeding us spyware, and otherwise making our lives an endless troubleshooting session. It sure would be nice if they'd cultivate some other hobbies.

In the meantime, these people are doing astronomical damage to businesses and individuals around the world—along the lines of $100 billion a year (the cost to fight viruses, spyware, and spam).

A big part of the problem was the design of Windows XP itself. In the quaint old-fashioned days of 2000, when XP was designed, these sorts of Internet attacks were far less common. Microsoft left open a number of back doors that were intended for convenience (for example, to let system administrators communicate with your PC from across the network) but wound up being exploited by hackers.

Finally, in the fall of 2004, Microsoft released Service Pack 2 (SP2), a gigantic, multi-megabyte bundle of patches, fixes, and security reinforcements designed to make it increasingly difficult for the bad guys to do their thing. The company devoted enormous amounts of time and resources to this project, so much that the *next* version of Windows, code-named Longhorn, was delayed by nearly a year.

Today, every new Windows computer comes with Service Pack 2 preinstalled. If you have an older PC, the Automatic Update feature (page 325) probably offered the Service Pack 2 download to you sometime in the fall of 2004. (If not, you can download it manually, in the form of something called the Network Install, or order a free CD, from *www.microsoft.com.*) To find out if you have it, see the instructions in Figure 10-1.

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Security Center

This chapter covers Service Pack 2 in detail, including what it does and does not do for you. But the central idea behind Internet security for Windows (and most of the point of Service Pack 2) is that *everyone* should install and maintain three pieces of software for protection:

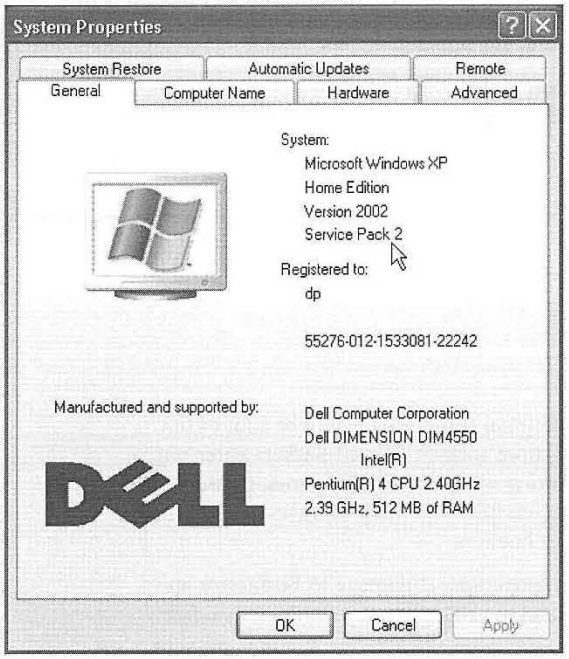


Figure 10-1:
To see if your PC has Service Pack 2 installed, right-click My Computer. From the shortcut menu, choose Properties. On the General pane, you'll see the phrase "Service Pack 2," as shown here by the cursor.

- **A firewall,** which is a hardware or software shield that protects your PC from unsolicited Internet traffic.
- **Antivirus software,** which is frequently updated to protect you against emerging viruses as they're written.
- **Anti-spyware software,** which helps you clean out your PC once some Web page has installed spyware without your knowledge (see the box on the facing page).

It's impossible to overstate the importance of installing and maintaining these three sorts of protection software and keeping them up to date (after all, the hackers aren't resting either). An anti-spam program is a good idea, too (see Chapter 12).

Unfortunately, all of this means that owning a Windows PC now requires a lot more fiddling, maintenance, and administrative work. In fact, one study showed that just installing Service Pack 2 "breaks" something on one out of 10 PCs, meaning that you

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have to either replace or tinker with one program or another. In a few rare cases, the computer won't even turn on after the installation.

Tip: This chapter walks you through troubleshooting the thing. But remember that, as a last resort, you can always uninstall Service Pack 2. It shows up as a listing in the Add or Remove Programs Control Panel, just like any other program you've installed.

In these regards, the software terrorists have scored a victory. Even so, you really have no choice; maintaining these programs is the only way to be relatively confident that your PC won't be attacked—an event that could be far more disruptive than the preventive efforts described on the following pages.

Security Center

Once you've installed Service Pack 2, your Control Panel contains a new icon called Security Center. It's an easy-to-understand status report on three important security features: Firewall, Automatic Update, and Virus Protection. If any of these are turned off, dire messages appear on your screen at startup and as balloons in your notification area (Figure 10-2, top).

Note: So why isn't there a Spyware panel in the Security Center? Excellent question. Unfortunately, only the engineers at Microsoft know the answer.

As you can see by Figure 10-2 at bottom, the Security Center is primarily just a status dashboard; the big ON or OFF "lights" are just indicators, not clickable buttons. But it does contain links to numerous help screens, online resources, and other parts of Windows that let you control its three central functions.

UP TO SPEED

Spyware Defined

Spyware is a program that you don't know you have. You usually get it in one of two ways: First, a Web site may try to trick you into downloading it. You'll see what looks like an innocent button in what's actually a phony Windows dialog box; or maybe you'll get an empty dialog box—and clicking the Close box actually triggers the installation.

Second, you may get spyware by downloading a program that you do want—the free Kazaa file-swapping program is a classic example—without realizing that a secret program is piggybacking on the download.

Once installed, the spyware may surreptitiously hijack your browser start or search page, make changes to important system files, install ads on your desktop (even when you're not online) or report back to the spyware's creators, letting them know what you're doing online.

As noted later in this chapter, there are both free and commercial programs that can clean your system out after a spyware installation.

But if you'd rather avoid getting spyware in the first place, use a pop-up blocker like the one that's now in Internet Explorer, so you won't fall victim to the fake-dialog-box trick. If you're tempted to download a piece of free software, do a quick search of its name at http://groups.google.com to see if other people are reporting it as a spyware container.

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The Windows Firewall (and Others)

If your machine connects to the Internet, it really should have a firewall. If it's connected to the Internet full-time, as with a cable modem or DSL, it really *really* should have a firewall. Most of the people who have fallen victim to snooping attacks from the Internet are people without a firewall.

Here are three ways to get yourself a firewall:

A Hardware Firewall (Router)

A *router* is an inexpensive box that distributes the signal from a single cable modem (or DSL) to one, four, eight, twelve, or more computers on your network. As a delicious benefit, most routers these days contain a built-in firewall. The beauty of a hardware firewall like this is that first of all, it's always on, and second of all, it protects the entire computer simultaneously.

In the following paragraphs, you'll be reading about software firewalls. But a hardware firewall is even better. Some people, in fact, buy a router even if they *don't* intend to share the cable modem's signal with other PCs—they get it just for its firewall protection.

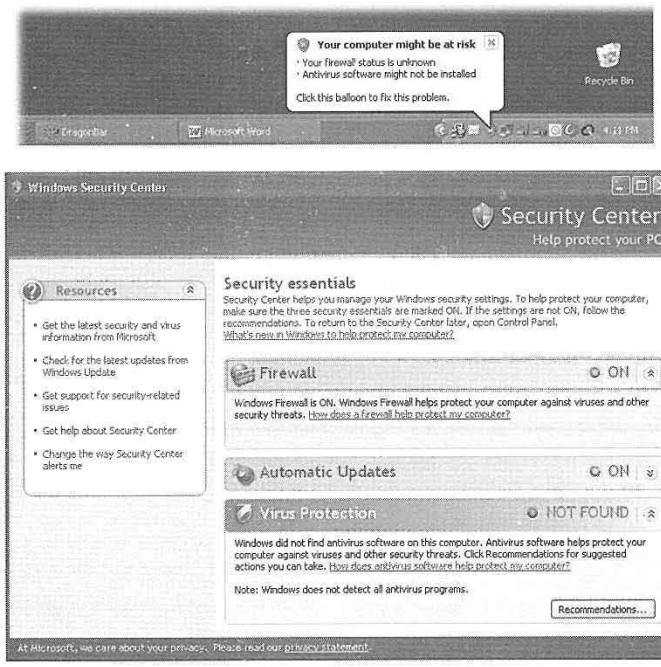


Figure 10-2: *Top: On an SP2 computer, balloons like this sprout instantly if Windows considers your PC insufficiently protected—or if Windows XP doesn't recognize the antivirus or firewall software you're using. When you click the balloon, the Security Center (bottom) appears. Bottom: Click one of the headings (Firewall, Automatic Updates, Virus Protection) to expand that section of the dialog box. In this case, you have a firewall in place (the built-in Windows one), Automatic Updates is turned on, but you haven't installed antivirus software. (Or maybe you have antivirus software, but the Security Center doesn't recognize it. This could be true if it's some obscure brand, or, more likely, if your antivirus version was released before Service Pack 2.)*

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In general, in fact, you can pretty much tune out of the following firewall discussion if you're protected by a hardware firewall. That is, *unless:*

- **You're on a small-office or home network.** In this case, your router will protect your network from nastiness coming in from the Internet—but a software firewall can protect your PC from other PCs *on your network.* If little Timmy up in his bedroom downloads some virus-infested bit of file-swapware, your machine will still be safe.
- **You use a laptop, and you travel with it.** If you carry your machine around, it may be worth using a software firewall, because when you're away from your home, you'll no longer be protected by your router.

If you're confident that your hardware router is all you need, then you'll have to turn *off* the Windows firewall, which means whistling past a warning that says, "Turning off Windows firewall may make this computer more vulnerable to viruses and intruders." Thanks to your router, that's not actually true.

The Windows Firewall

Windows XP has included firewall software from the very beginning (it used to be called Internet Connection Firewall). Unfortunately, in the original Windows XP, the firewall's factory setting was Off, and finding its deeply buried On switch required three weeks and the assistance of a sherpa. ("It's like we gave you a car with seat belts that were really well hidden," admits a Windows product manager. "You had to open a secret panel and press three buttons to make them appear.")

In SP2, you can't miss the presence of the firewall. It comes already turned on, and, if it somehow gets turned off, the Security Center offers a direct link to the Windows Firewall control panel. (Of course, you can also open it at any time by choosing Start→ Control Panel→Windows Firewall.)

All about ports

Now, if you really wanted complete protection from the Internet, you could always just disconnect your PC from the modem. Of course, that might be a little *too* much protection; you'd be depriving yourself of the entire Internet.

Instead, you can open individual *ports* as necessary. Ports are authorized tunnels in the firewall that permit certain kinds of Internet traffic to pass through: one apiece for email, instant messages, streaming music, printer sharing, and so on. (Part of what made the original Windows XP so insecure was that Microsoft left a lot of these ports open, to the delight of evildoers online.)

On a computer with Service Pack 2 installed, far more of these ports are left open and exposed to the Internet than before. (Microsoft has equipped the firewall with ready-to-use tunnels for several exceptions: the Files and Settings Transfer Wizard; File and Printer Sharing; your local, in-house network; America Online; EarthLink; and your computer's FireWire connector, if it has one.)

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The Windows firewall works like this: Each time a piece of software tries to get onto the Internet, the Windows firewall will pop up a dialog box that lets you know. As shown in Figure 10-3, Windows wants to know if it's OK for this piece of software to burrow through the firewall to go about its business. The golden rule: If you recognize the name of the software (for example, an online game), go ahead and grant permission by clicking Unblock. If you don't (for example, PsatNetQuery.exe), click one of the other two buttons.

Note: If you're an online gamer, you'll be seeing a lot of this dialog box. Internet attackers were especially fond of using the ports that interactive online games open.

On the other hand, if you're using a public PC (in a library, say), you might never be asked permission. That's because some administrator has turned on the "Don't allow exceptions" option shown in Figure 10-4 at top. That means, "No holes in the firewall, ever. This is a public terminal, and we can't permit God-knows-what activity to corrupt our system."

If you grant permission, then each time you use that software, Windows will briefly open up a special port for that kind of activity, and then seal the port closed again when you're finished.



Figure 10-3:
When a new program wants to get online, this box appears. Click Unblock to open a port through the firewall, which will close each time you finish using the program. Click Keep Blocking if you don't even know which program is doing the asking. And click Ask Me Later if you want to deny permission this *time, but you want to be asked again the next time you run the program.*

The exceptions list

When that little Security Alert box opens up, there will be times when you make the wrong decision. You'll deny permission to something that looks fishy, and then find out that one of your programs no longer works. On the other hand, maybe you'll approve something that has a recognizable name, and then you'll later find out that it was actually a trick—an evil program deliberately named in order to get your approval. That, unfortunately, is life in the Windows fast lane.

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Fortunately, you have a second chance. At any time, you can take a look at the list of authorized holes in your Windows firewall, using the Windows Firewall control panel (Start→Control Panel→Windows Firewall). When you click the Exceptions tab, you see something like Figure 10-4 at bottom: a list of every program that has been granted an open port in the firewall.

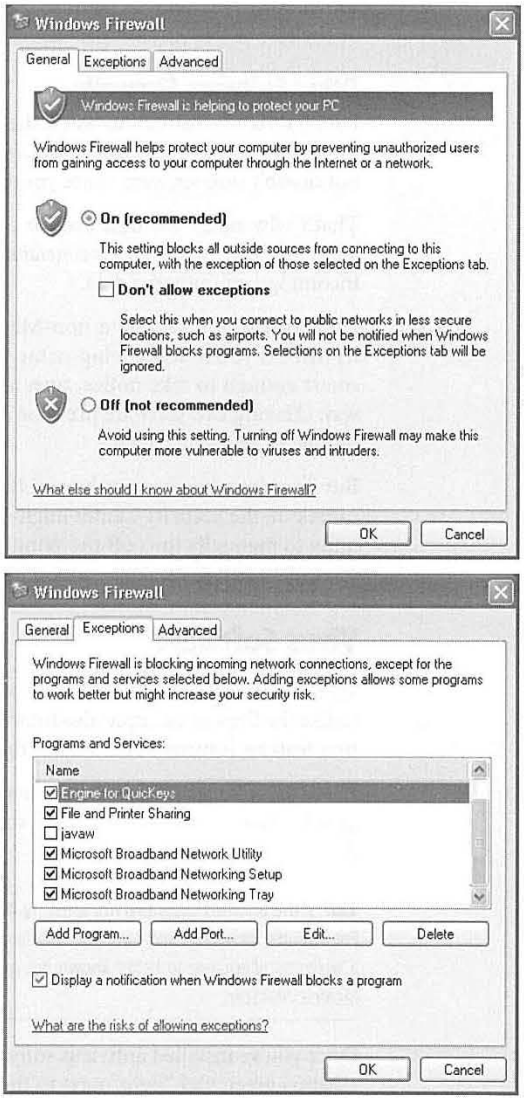


Figure 10-4:
Top: Here, in the new Windows Firewall control panel, you can turn the Windows firewall on or off. You should turn it off (despite the stern warning) if you're using a non-Microsoft firewall (like Zone Alarm).

Bottom: The Exceptions tab and the Advanced tab list all of the programs and ports that Windows Firewall is permitted to open–but only when these programs are actually requesting Internet access. These are holes in your firewall that you or Microsoft has deemed to be safe. Use the checkboxes to temporarily turn exceptions on or off; use the Delete button to get rid of them entirely.

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Using this list, you can also add a program manually (rather than waiting for it to ask permission at the time of launching). To do so, click the Add Program button, and choose the program's name from the list that appears.

Similarly, you can open individual ports by number. Click Add Port; you'll be asked to type in a name for this exception (anything you want) and to type in the port number. In this situation, Microsoft assumes that you know the port number, either because somebody gave it to you, because the manual for some piece of software provides it, or because you're just a super-smart geek.

Other Software Firewalls

For all its convenience and its excellent price ($free), the Windows firewall has a significant drawback: It's only one-way protection. It blocks attacks from the outside, but doesn't stop spyware (once your PC has been infected) from sending data *out*.

That's why many PC fans opt for a sturdier firewall, like the equally free but far superior Zone Alarm (*www.zonelabs.com*). Zone Alarm protects your PC from both incoming and outgoing data.

Unfortunately, installing a non-Microsoft firewall creates a few complications of its own. If you're using a big-name firewall program like Zone Alarm, Windows is smart enough to take notice, turn off its own built-in firewall, and step out of the way. (Having two software firewalls is asking for trouble, as your programs may not be able to get online at all.)

But if you're using a lesser-known firewall program, or one that you got before SP2 came out, the Security Center might not recognize it. In that case, it's your responsibility to manually turn off the Windows firewall so it doesn't conflict—or to update your firewall software to a version that's Security Center–savvy.

Virus Software

Windows XP SP 2 also direly warns you if you have no antivirus software installed—but unlike the firewall example, this time Microsoft doesn't provide any. The Virus Protection feature, it turns out, is not an inoculation but simply an alert.

However, if you click the Recommendations button (visible in Figure 10-2), you're taken online to a Web page filled with free time-limited trials of various antivirus programs.

Tip: Some antivirus programs *not* listed by Microsoft on this page aren't just trials–they're actually free. For example, at *www.grisoft.com,* you can download AVG Free Edition, which is free antivirus software. It's a welcome alternative to better known but much more expensive products like Symantec Antivirus and McAfee VirusScan.

Once you've installed antivirus software, the Security Center will smile on you with a happy green ON "light" next to the Virus Protection heading. (That is, it will if it

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recognizes the antivirus software. As with firewall software, lesser- known brands and versions released before Service Pack 2 may not be recognized.)

You'll have a much more relaxed computing life once you've protected your PC with this kind of software. Consider antivirus software part of the cost of doing business, and remember that *you* are the best defense against viruses. Don't open email attachments, no matter how juicy they look.

Automatic Updates

It might come as a surprise to you that most Internet attacks don't occur when online lowlifes discover a hole in Windows' security. As it turns out, they're not quite that smart.

Instead, what usually happens is that *Microsoft* discovers the soft spot. (Actually, some super-brainiac researcher usually finds the hole, and then notifies Microsoft.) Microsoft then puts together a security patch, which it releases to its millions of customers to protect them.

The hackers and virus writers learn about the security hole by studying the *patch*. They leap on the information and create some piece of evilware in a matter of days—yes, *after* Microsoft has already written software that closes the hole.

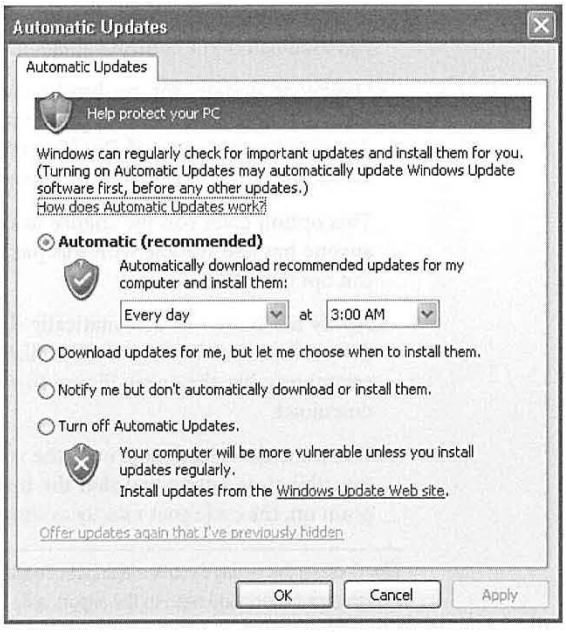


Figure 10-5:
If you turn on Windows XP's auto-update-installation feature—and Microsoft is practically frantic that you do so—you can ask to be notified either before the software patch is downloaded (third choice) or after it's been downloaded and is ready to install (second choice). You can also permit the updates to be updated and then installed automatically, on a schedule that you specify (top choice).

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So how can PCs get infected *after* Microsoft has already created a patch? Because it takes weeks or months for Microsoft's patch to get distributed to all those millions of customers. The hackers simply beat Microsoft to your PC's front door.

The painful part is that Windows XP already *contains* a mechanism for downloading and installing Microsoft's patches the very day they become available. It's called Automatic Updates, and it's yet another icon in your Control Panel (Figure 10-5).

Now, any patches or updates that Microsoft wants to send your way are also available for do-it-yourself download and installation at *http:// windowsupdate.microsoft.com* (or choose Start→All Programs→Windows Update; if you're already surfing in Internet Explorer, you can also choose Tools→Windows Update). As a bonus, this site also reports exactly which bugs are fixed in each update, usually using fairly technical language.

Furthermore, whereas Automatic Update offers you *only* security-related patches, the Windows Update Web page also offers updates that speed up your PC, offers new features, updates Windows Media Player, and so on.

But a patch won't do you any good if you don't know that it exists. So Automatic Update presents four options, as you can see in Figure 10-6. They correspond to four levels of trust people have in Microsoft, the mother ship:

- **Automatic (recommended).** Translation: "Download and install all patches automatically. We trust in thee, Microsoft, that thou knowest what thou do-est." (All of this will take place in the middle of the night—or according to whatever schedule you establish in the control panel—so as not to inconvenience you.)
- **Download updates for me, but let me choose when to install them.** The downloading takes place in the background, and doesn't interfere with anything you're downloading for yourself. But instead of installing the newly downloaded patch, Windows pauses to get your permission, as shown in Figure 10-6.

  This option gives you the chance to conduct a quick search on Google to see if anyone has had trouble with this particular patch. If the coast is clear, *then* you can opt to install.
- **Notify me but don't automatically download or install them.** When Windows detects that a patch has become available, that yellow ! shield icon appears in your system tray, like the one in Figure 10-6. Click the icon to choose which updates to download.

  When the downloading is over, the yellow ! shield appears *again* in your system tray, this time telling you that the updates are ready for installation. From this point on, the cycle goes exactly as shown in Figure 10-6.

Tip: Consider this setting if you're a laptopper. People who use the fully automated option have been known to grab their laptops and head to the airport, only to discover that they're midway through a 25-minute Service Pack installation. Leaving your laptop *on* as you pass it through the X-ray machine is never a good way to make friends with the security staff.

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- **Turn off Automatic Updates.** Microsoft will leave your copy of Windows completely alone—and completely vulnerable to attacks from the Internet. This choice is preferred by people who like to fully research each patch before installing it (at, for example, *http://annoyances.org*).

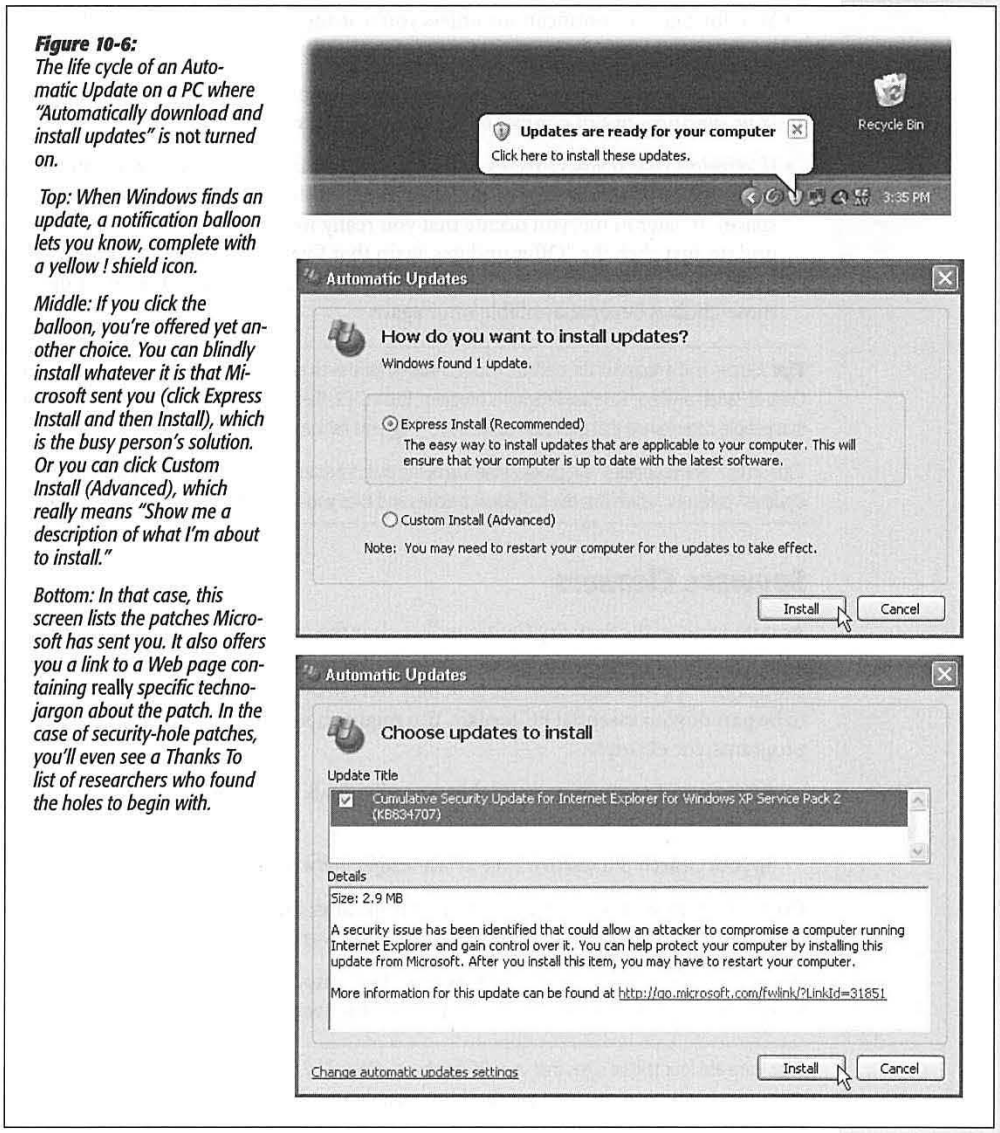


Figure 10-6: *The life cycle of an Automatic Update on a PC where "Automatically download and install updates" is* not *turned on.*

Top: When Windows finds an update, a notification balloon lets you know, complete with a yellow ! shield icon.

Middle: If you click the balloon, you're offered yet another choice. You can blindly install whatever it is that Microsoft sent you (click Express Install and then Install), which is the busy person's solution. Or you can click Custom Install (Advanced), which really means "Show me a description of what I'm about to install."

Bottom: In that case, this screen lists the patches Microsoft has sent you. It also offers you a link to a Web page containing really *specific techno-jargon about the patch. In the case of security-hole patches, you'll even see a Thanks To list of researchers who found the holes to begin with.*

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Microsoft *hates* when people choose anything but the first option, because it's no better than the old system (when hackers attacked *after* a hole was patched but *before* people had installed the patch).

And now a few notes:

- You don't get *any* notifications unless you're using an administrator-level account (page 492).
- Some updates require that you restart your PC. (Actually, you can decline to restart your machine, but of course the update won't take effect until you do.)
- If Windows XP reveals that an update is ready to be installed, but you choose not to install it, Windows makes the updater invisible on your hard drive (if it has space). If, later in life, you decide that you really *would* like to have that particular update, just click the "Offer updates again that I've previously hidden" link at the bottom of the Automatic Update tab. Then, the next time you install an update, those choices become available once again.

Tip: You can find a record of the updates you've installed (and even uninstall them, if you want) in the Start→ Control Panel→Add or Remove Programs program. But in SP2, they're hidden. (There used to be so many, that people complained that their Add or Remove Programs list was ridiculously cluttered.)

Turn on the "Show updates" checkbox at the top of the dialog box to reveal the new "Windows XP –Software Updates" category, which lists the individual patches and fixes you've installed.

Spyware Cleaners

As noted above, the Security Center makes clear the importance of installing firewall, antivirus, and automatic-update software—but weirdly, doesn't even mention spyware protection. Spyware detectors are generally free, so by all means consider one of them to be part of your essential PC toolkit. You might choose one of these highly regarded programs, for example:

- **Ad-Aware.** Free version available to individuals (and commercial versions for corporations) at *www.lavasoftusa.com*
- **Spybot Search & Destroy.** Free at *www.safer-networking.org*

Current versions of commercial antivirus programs, including those from Symantec, McAfee, and Trend Micro, also include some spyware-cleaning functions.

Having a spyware cleaner available is especially important if you download a lot of programs from the Internet (this means you, file swappers).

Tip: Here are four telltale signs that your PC has been infected by spyware: The computer suddenly slows down a lot; Internet Explorer doesn't work right anymore; you get a lot of apparently irrelevant, nonsensical error messages; and the PC freezes up a lot.

These are signals that you should run one of those spyware utilities.

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Other Miscellaneous Features

If you're an active and with-it PC fan, your first reaction to all of this discussion might be, "Service Pack, Schmervice Pack. I already have antivirus software, anti-spyware software, and a sophisticated firewall. Do I really need to install Service Pack 2?"

The answer is yes—if you want to feel safe. The three items listed in the Security Center may represent the big-ticket changes in SP2, but they're not the only changes. Microsoft also made hundreds of additional changes to make Windows XP more secure in the modern era.

Geeky, Tweaky Changes

Many of these changes are generally invisible to you. They're deep-seated code changes designed to thwart hackers.

Here are just a few examples:

- The *RPC service* (remote procedure call) lets a program on one computer run a program on another by remote control. In the original Windows XP, if you can believe it, Microsoft permitted *anonymous* RPC connections, meaning that strangers could wiggle into your computer. (This is, for example, how the Blaster worm of 2003 caused such global damage.) In Service Pack 2, anonymous connections are no longer permitted.
- Some viruses and Trojan horses did their damage by causing *buffer overruns*—they basically filled up your memory to the point of overflow, thereby incapacitating your PC. In Service Pack 2, Windows is designed to contain any program that makes such an attempt.
- Before Service Pack 2, there was a brief interval during the startup process when the Windows firewall hadn't yet kicked in. During those few seconds, your PC was vulnerable to Internet invasion.

  Fortunately, that window of opportunity has been slammed shut. The firewall now includes something called a *boot-time filter* that protects the PC during startup and shutdown.

Reinforcements in Internet Explorer

Service Pack 2 also introduces some small feature changes to Internet Explorer, the standard Web browser.

The pop-up blocker

As you can read in Chapter 11, there's a new feature designed to pop-ups off your screen—that is, those infuriating advertisements that pop up in front of, or behind, the Web window you're actually trying to read. Internet Explorer is probably the last Web browser on Earth to offer a pop-up blocker, but better late than never. You can find the details of the pop-up blocker on page 348.

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The Information Bar

An *add-on,* in Microsoft lingo, can be any bit of software that beefs up your Web browser. Some examples:

- *Plug-ins*, like the Flash or QuickTime plug-ins that let you view online animations and movies.
- *ActiveX controls,* little programs that can download and run right within your browser window.
- *Add-on toolbars,* like the popular Google toolbar.

The trouble is, any of these little goodies might, in fact, be malicious. Before SP2, they could install themselves behind your back (so-called "drive-by downloads"). Some add-ons might be designed to simulate a Windows dialog box on your screen, for example, tricking you into downloading spyware.

The bad guys will find it much more difficult to play such pranks from now on, (which isn't to say that they won't figure out another way to gum up your works).

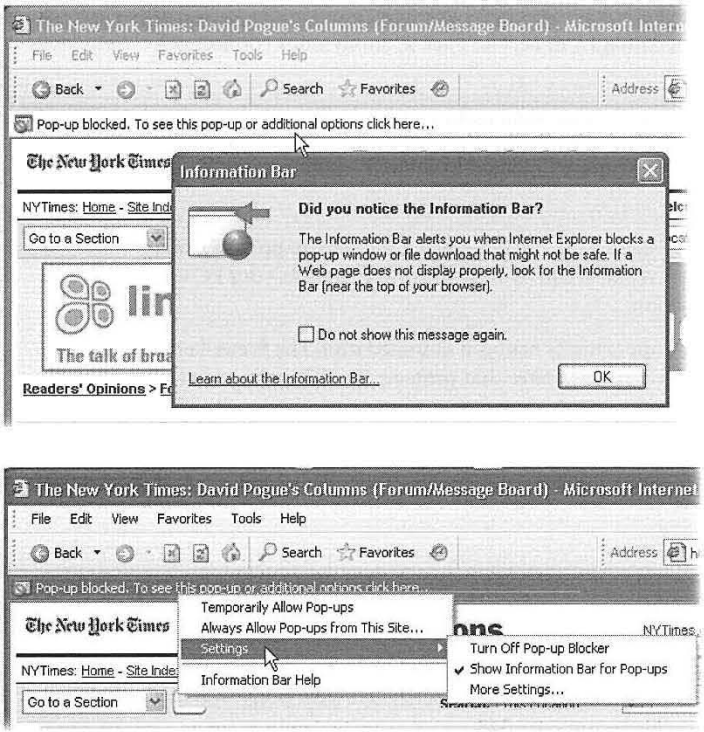


Figure 10-7: *Top: The Information Bar appears automatically just underneath your toolbars. (The first time, a dialog box will call your attention to it.) The bar's purpose: to let you know about potentially insidious security violations in your browser.*

Bottom: When you click the Information Bar, you're offered the chance to see the pop-up just this time, to permit all *pop-up windows from this Web site, install the questionable program, and so on. But unless you're sure that the result is safe, you should decline.*

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Whenever a Web site attempts to install an ActiveX control, open a pop-up window, or send a file to your PC, a new toolbar will appear to warn you. You've just met the Information Bar (Figure 10-7).

The Information Bar lets you know what the Web site is attempting to do—and if you click the bar itself, a shortcut menu offers you the chance to proceed (Figure 10-7, bottom). But if you're not absolutely positive that the download, plug-in, or pop-up window is safe, you should decline.

The Add-ons Manager

Microsoft has also made it easier for you to track and manage which plug-ins you've installed in Internet Explorer. Just choose the Tools→Manage Add-ons command. As you can see in Figure 10-8, the resulting control center lets you turn add-ons on or off individually, see (sometimes) where each one came from, and see how often it's been used.

Tip: Microsoft has beefed up Internet Explorer's defenses to a considerable degree. But if you'd like to avoid *all* of its weaknesses–remember that Internet Explorer is the Number 1 target of Internet nastiness–consider switching to a superior, more modern browser like Mozilla Firefox (*www.mozilla.org*). Thanks to its greater speed, far superior interpretation of Web-page standards, tabbed windows, pop-up blocker, auto-password fill-ins, autoform fill-ins, easy-to-understand downloads window, and other features, you'll never look back.

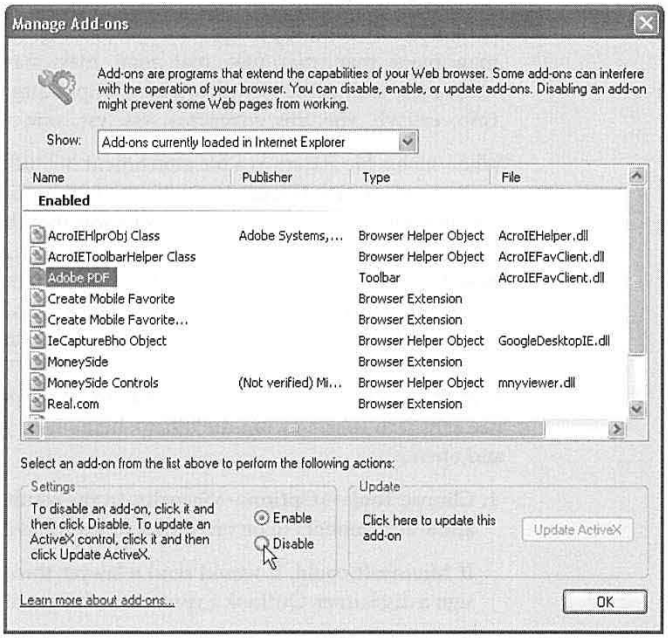


Figure 10-8: *Browser add-ons are a frequent source of Internet Explorer crashes. By turning certain add-ons off, you can greatly speed up your trial-and-error troubleshooting process. This box also lets you update any ActiveX controls you've installed, which is another way to keep safe and keep current. (To turn something off, use the Show drop-down menu to choose "Add-ons that have been used by Internet Explorer. Next, highlight an entry in the leftmost column and click Disable. Also, pay close attention to the "Publisher" column, although it'll be blank for many add-ons; you may wish to designate certain software companies as trustworthy, and not others.)*

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No more commandeered browser windows

Another way that Internet baddies have fun is to seize control of your browser window, displaying their own material in a window size that's so big, it even covers up your toolbars.

Once you install SP2, they can't pull this particular stunt anymore. Scripts (programs that make other programs do stuff) aren't allowed to resize or move Internet Explorer windows any more.

Attachment Blocking

Microsoft has spent years pleading with people not to open attachments sent by email. Nevertheless, people still blithely double-click attached files, which is how one virus after another gets unleashed on their systems. Never underestimate the power of a subject line that says "I love you," "Your refund check," or "Anna Kournikova pics."

Tip: Even seemingly innocent files like .jpg photographs may turn out to be virus installers. The evildoers simply name the file something like "Flowers.jpg .exe" (see the 42 spaces?). You don't see the final filename extension, because it doesn't fit in your email window. (You don't even see it in the icon's name when it's on your desktop.) So you go ahead and open it, and boom—you're infected.

If you use Outlook Express for email, Internet Explorer for Web downloads, or Windows Messenger for chat, you'll now find it a lot harder to open the kinds of files that can harbor viruses. (If you're keeping score at home, that means not only .exe files, but also those with filename extensions .ade, .adp, .app, .asp, .bas, .bat, .cer, .chm, .cmd, .com, .cpl, .crt, .csh, .fxp, .hlp, .hta, .inf, .ins, .isp, .its, .js, .jse, .ksh, .lnk, .mad, .maf, .mag, .mam, .maq, .mar, .mas, .mat, .mau, .mav, .maw, .mda, .mdb, .mde, .mdt, .mdw, .mdz, .msc, .msi, .msp, .mst, .ops, .pcd, .pif, .prf, .prg, .pst, .reg, .scf, .scr, .sct, .shb, .shs, .tmp, .url, .vb, .vbe, .vbs, .vsmacros, .vss, .vst, .vsw, .ws, .wsc, .wsf, and .wsh.)

When such a file arrives as a file attachment in Outlook Express, you'll find that you can't open or save it (Figure 10-9). If you double-click the message to open it into its own window, a little info strip lets you know that the file has been "blocked."

Note: The software that blocks and quarantines these files isn't actually written into Outlook express, Internet Explorer, and so on. It's now part of Windows, and those programs are simply tapping into it. The point here is that Outlook, Eudora, and other programs may eventually tap into the same feature in successive versions.

If you're really, truly sure that the attachment is safe and virus-free (for example, if you sent it to *yourself* from the office), here's how you can unblock the attachment and open it.

1. **Choose Tools→Options→Security. In the resulting dialog box, turn off "Do not allow attachments to be saved that could be a virus." Click OK.**

   If Microsoft could, it would send a lawyer through your screen at this point to sign a disclaimer. Outlook Express is no longer blocking your attachments. You're on your own now, pal.

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2. **Set the attached file free of Outlook Express.**

   That is, if you see the attachment's icon (because you've double-clicked a message to open it), drag the icon to any visible part of your desktop. Or right-click it and choose Save As from the shortcut menu.

   If a little paper clip icon appears instead, click it to reveal the attachment's name—and, while the little menu is open, drag the attachment's icon to the desktop. (Or, from the little menu, choose Save Attachments, and choose a folder location for it.)

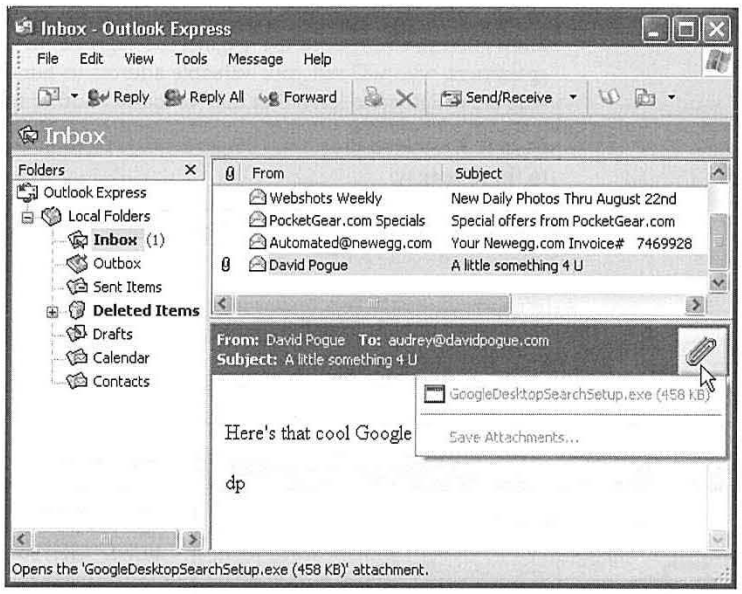


Figure 10-9: *To open a block the file, you must locate the file's icon on the hard drive, right-click it, choose Properties from the shortcut menu, and finally choose the Unblock option. It's a heck of a lot of hassle, but eliminates the casual release of viruses by the ranks of the clueless.*

3. **Double-click the icon on your desktop.**

   A Security Warning dialog box may appear, as shown in Figure 10-10.

4. **Turn off "Always ask before opening this file," if you like, and then click Run.**

   The file opens normally, spewing viruses and spyware all over your PC. (Just kidding.) If you turn off "Always ask," you'll never be interrupted by the security warning again.

Note: Alternatively, you can right-click the file's icon on the desktop and, from the shortcut menu, choose Properties. In the dialog box, you'll see a button called Unblock. Clicking it is exactly the same as turning off "Always ask before opening this file" as described in step 4. (Furthermore, clicking Unblock makes the Unblock button *itself* disappear in future appearances of the Properties dialog box.)

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Picture Blocking

There are two kinds of graphics you might see in an email message:

- An image attached to the message, like a baby picture from your Aunt Ethel. (Outlook Express still shows you this kind of picture, as long as you haven't turned on the plain-text option described below.)
- A programmed *reference* to a graphic that's actually sitting out on a Web site somewhere. When you open the message, Outlook Express fetches the graphic and displays it right in the message.

  Or, rather, *used* to. The problem is that when an email program sends its little "Fetch hither yon graphic" message, the Web site that receives the signal now knows that you've opened the original message. Boom—you're a gold nugget for spammers, who will sell your valuable address to hundreds of *other* spammers who are delighted to learn that they've found another sucker.

  So in SP2, Outlook Express no longer displays pictures that aren't actually attached to the messages.

Tip: You can turn off this feature by choosing Tools→Options→Security tab and turning off "Block images and other external content in HTML e-mail."

And why would you want to? Because some perfectly safe messages may not look right without their graphics, that's why. (Some PayPal email messages, for example, use that fetch-a-graphic-from-a-Web-site technique to display the PayPal logos.)

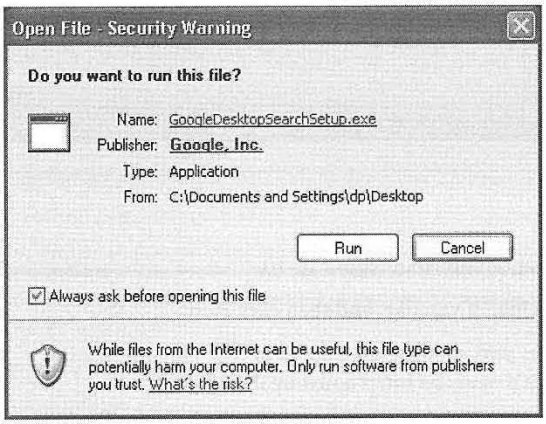


Figure 10-10:
A lot of hoops to go through, just to open a file attachment? You better believe it, baby. Five years of telling people, "DON'T OPEN ATTACHMENTS!" hasn't done the trick apparently.

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Service Pack 2 Installation Checklist

If SP2 came preinstalled on your PC, smile and turn to a more interesting page.

If you're installing it over a previous Windows XP installation, you might get lucky, and the process may take between 45 minutes and several hours.

If you're less lucky, you may be in for a troubleshooting sabbatical, as your existing software's portholes to the network get sealed shut. Glitchiness seems to be especially prevalent in corporations, where, according to one study, one PC in 10 runs into trouble.

Microsoft has posted a list of several dozen common foundering programs—and ways to fix them—at *http://support.microsoft.com/default.aspx?kbid=842242*. A number of popular games and utilities are listed there.

But there may be worse problems. Some people can't even start up their PCs after installing the service pack.

The best way to avoid problems is to be slow and methodical *before* you install SP2. Then proceed through the following checklist with all the care of an archaeologist unearthing a skeleton:

1. **Check your hard drive for free space.**

   You need at least 500 megabytes of free space, or SP2 won't even install. (For the speediest installation, *defragment* your hard drive first, as described on page 457.)

Tip: If your PC is your life—or your job, at least—you may want to take one additional, advanced step: Install a *second copy* of Windows XP, using the sort of dual-booting scenario described on page 561. Then install SP2 on the duplicate copy and test your most essential programs. This way, you'll know about any potential crises before committing your "real" copy of Windows to SP2.

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2. **Remove spyware.**

   Use a program like Ad-Aware or Search & Destroy to make sure your PC is free of these programs.

5. **Visit the Web page of your PC manufacturer.**

   Search for information regarding SP2. It may turn out that your PC won't work with Service Pack 2 unless you first update your BIOS (basic input output system, the built-in software that controls your keyboard, screen, disk drives, communications, and so on). In that case, you would find, at *www.dell.com* or *www.gateway.com* (for example), a BIOS updater program that you're supposed to download and run.

6. **Back up your stuff.**

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At the very least, make safety copies of your photos, email, music, documents, and so on. Think of it this way: Your PC is going in for brain surgery, so if you can back up your entire hard drive, all the better.

7. **Visit the Windows Update Web site.**

   If you never did install Service Pack 1, not to worry—Service Pack 2 actually gives you both software blobs. But a preliminary visit to *www.windowsupdate.com* is nonetheless an important prerequisite. This Web site will actually interactively inspect your PC to see what condition your copy of Windows is in. If you're missing pieces, they'll be filled in for you—an important step before the big Service Pack 2 installation.

   Click the Express Install link to begin. After a moment of computation, you'll see a list of updates that Microsoft thinks you need, under the heading High Priority Updates. Installing them now will ensure that, when Service Pack 2 comes along, your copy of Windows will be everything the installer expects.

8. **Uninstall your virus and firewall programs.**

   Installing Service Pack 2 on top of outdated utilities can result in two different unpleasant side effects. First, the new Security Center doesn't recognize ancient versions of these programs. Second, your PC might not even be able to start up after the installation, which is something of a drawback. (Later, after the installation, put your virus and firewall programs back—updated versions, if possible—one at a time.)

9. **Log off everyone but yourself.**

   In other words, if you have Fast User Switching turned on (page 502), make sure all the other accounts have been signed *off*.

That about does it. You should now be ready to install SP2 successfully, whether from the Windows Update Web page, a CD that you've ordered, or from the Automatic Updates dialog box that appears on your screen one day.

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CHAPTER
11

Web, Chat, and Videoconferencing

Microsoft has gone to great lengths to integrate the Internet into every nook and cranny of Windows XP. Links and buttons that spur your modem into a dialing frenzy are everywhere: on the Help screens, in the Search window, and even in the "Send error report to Microsoft?" dialog boxes that appear after program crashes. Once you've got your Internet connection working (Chapter 9), you may find that it's easier to go online than it is *not* to.

The Internet offers dozens of different features, most of them graced with such unhelpful, invented-by-government-scientists-in-the-sixties names as FTP, Telnet, Gopher, and so on. But a few of the most popular Internet services are both easy to understand and easy to use: the World Wide Web, email, online chatting, videoconferencing, and free phone calls.

You can use whichever software you prefer for these functions. To connect to the Web, for example, experts rave about the free Mozilla Firefox (*www.mozilla.org*). To check your email, use Eudora, Lotus Notes, and so on.

But most Windows XP users wind up using the Internet programs that are built right into the operating system: Internet Explorer, newly enhanced in Service Pack 2,; Outlook Express for email; and Windows Messenger or NetMeeting for chatting, free long-distance "phone" calls, and teleconferencing. This chapter covers all of these programs except Outlook Express, which is described in Chapter 12.

Internet Explorer

Internet Explorer (or IE, as it's often abbreviated) is the most famous Web browser on earth, thanks to several years of Justice-department scrutiny and newspaper headlines.

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Even with Service Pack 2, Windows XP still comes with IE version 6, which you can open in a number of ways:

- Choosing its name from the Start menu (either the left column or the All Programs menu).
- Clicking its shortcut on the Quick Launch toolbar.
- Choosing a Web site's name from your Start→Favorites menu (that is, if you've put favorites there).
- Typing a Web address—sometimes called its *URL* (*Uniform Resource Locator*) into a window's Address bar. A Web page URL usually begins with the prefix *http://*, but you can leave that part off when typing into the Address bar.
- Clicking a blue, underlined link on a Windows Help screen.

...and so on.

As you can see in Figure 11-1, the Internet Explorer window is filled with tools that are designed to facilitate a smooth trip around the World Wide Web.

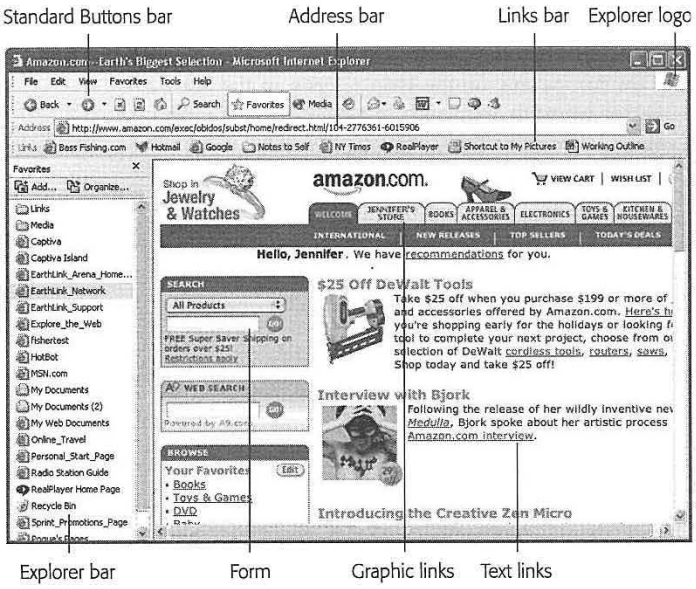


Figure 11-1: *The Internet Explorer window offers tools and features that let you navigate the Web almost effortlessly; these various toolbars and status indicators are described in this chapter. Chief among them: the Address bar, which displays the address (URL) of the Web page you're currently seeing, and the standard set of buttons, which let you control the Web-page loading process.*

Browsing Basics and Toolbars

Navigating the Web requires little more than clicking buttons or those underlined blue phrases, as shown in Figure 11-1.

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When you click an underlined *link* (or *hyperlink*), you're transported from one Web page to another. One may be the home page of General Motors; another may contain critical information about a bill in Congress; another might have baby pictures posted by a parent in Omaha. Several hundred million Web pages await your visit.

Around the edges of any Web page, as well as within it, you'll encounter standard Internet features. For example:

- **Explorer logo.** When this globe is spinning, your PC is still downloading (receiving) the information and graphics on the Web page. In other words, you're not seeing everything yet.
- **Button and picture links.** Clicking a picture or a button generally takes you to a new Web page.
- **Text links.** Clicking a link takes you to a different Web page (or a different place on the same Web page).

Tip: Text links aren't always blue and underlined. In fact, modern Web designers sometimes make it very difficult to tell which text is clickable, and which is just text. When in doubt, just move your cursor over some text. If the arrow changes to a pointing-finger cursor, you've found yourself a link.

Actually, you can choose to hide *all* underlines, a trick that makes Web pages look cleaner and more attractive. Underlines appear only when you point to a link (and wait a moment). If that arrangement appeals to you, open Internet Explorer. Choose Tools→Internet Options, click the Advanced tab, scroll down to "Underline links," select the Hover option, then click OK.

- **Graphics worth saving.** When you see a picture you'd like to keep, right-click it and choose Save Picture As from the shortcut menu. After you name the picture and then click the Save button, the result is a new graphics file on your hard drive containing the picture you saved. (You can also choose Set as Background, which makes the picture part of your desktop image itself.)
- **Scroll bars.** Use the scroll bar to move up and down the page—or to save mousing, press the Space bar each time you want to see more. Press Shift+Space bar to scroll *up*. (The Space bar has its traditional, space-making function only when the insertion point is blinking in a text box or the Address bar.)

  You can also press your up and down arrow keys to scroll. Page Up and Page Down scroll in full-screen increments, while Home and End whisk you to the top or bottom of the current Web page.

Tip: If you have a mouse with a scroll wheel on the top, you can use the roller wheel to scroll the page, too.

Internet Explorer Toolbars

Many of Internet Explorer's most useful controls come parked on toolbars exactly like those described in Chapter 1. You summon or hide these toolbars the same way,

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too: by choosing their names from the View→Toolbars submenu. Here's what you'll find on each.

Tip: Drag the tiny "grab bar" at the left end of a toolbar up or down to rearrange the bars' vertical stacking order. You can even drop this grab bar halfway across *another* toolbar, thus placing two toolbars side-by-side on the same horizontal strip.

The Standard Buttons toolbar

This toolbar, identified in Figure 11-1, contains the buttons that most people use for browsing most of the time. Some of them lack text labels, but all offer tooltip labels:

- **Back button, Forward button.** Click the Back button to revisit the page you were just on. (*Keyboard shortcut:* Backspace, or Alt+left arrow.)

  Once you've clicked Back, you can then click the Forward button (or press Alt+right arrow) to return to the page you were on *before* you clicked the Back button. Click the tiny black triangle for a drop-down list of *all* the Web pages you've visited during this online session.

- **Stop button.** Click to interrupt the downloading of a Web page you've just requested (by mistake, for example). (*Keyboard shortcut:* Esc.)

- **Refresh.** Click if a page doesn't look or work quite right, or if you want to see the updated version of a Web page (such as a stock ticker) that changes constantly. This button forces Internet Explorer to redownload the Web page and reinterpret its text and graphics.

- **Home button.** Click to bring up the Web page you've designated as your home page (see page 350).

Tip: You can rearrange these buttons, delete some, or add additional function buttons, by choosing View→Toolbars→Customize. For details on operating Microsoft's toolbar-rearrangement window, see page 85.

The Information bar

This yellow strip, new in Service Pack 2, lets you know what's going on with pop-up windows and naughty plug-ins. For details, see page 330.

The Address bar

When you type a new Web page address (URL) into this strip and press Enter, the corresponding Web site appears. (If only an error message results, then you may have mistyped the address, or the Web page may have been moved or dismantled—a relatively frequent occurrence.)

Because typing out Internet addresses is so central to the Internet experience and such a typo-prone hassle, the Address bar is rich with features that minimize keystrokes. For example:

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- You don't have to click in the Address bar before typing; just press Alt+D.
- You don't have to type out the whole Internet address. You can omit the *http://www* and *.com* portions by pressing Ctrl+Enter—which makes Internet Explorer fill in those standard address bits for you. To visit Amazon.com, for example, a speed freak might press Alt+D to highlight the Address bar, type *amazon*, and then press Ctrl+Enter.
- Even without the Ctrl+Enter trick, you can still omit the *http://* from any Web address, since Internet Explorer adds it automatically. (Most of the time, you can omit the *www*, too.) To jump to today's Dilbert cartoon, type *dilbert.com* and then press Enter.
- When you begin to type into the Address bar, the AutoComplete feature compares what you're typing against a list of Web sites you've recently visited. IE displays a drop-down list of Web addresses that seem to match what you're typing. To spare yourself the tedium of typing out the whole thing, just click the correct complete address with your mouse, or use the down arrow key to reach the desired listing and then press Enter. The complete address you selected then pops into the Address bar.

  (To make Windows *forget* one of the Web sites you've visited recently, highlight it in the drop-down AutoComplete list and then press your Delete key. Or, to make Windows forget *all* of the sites you've seen, choose Tools→Internet Options, click the General tab, and then click the Clear History button.)

Tip: IE can also remember user names, passwords, and other information you type into Web page text boxes *(forms)*. You can turn on this feature by choosing Tools→Internet Options, clicking the Content tab, clicking AutoComplete, and turning on the appropriate checkboxes. Or you can just wait for Internet Explorer to *invite* you to turn it on, via a little dialog box that appears when you first type something into such a form. Having your browser remember the names and passwords for your various Web sites is a great time and memory saver, even though it doesn't work on all Web sites.

When you want Internet Explorer to "forget" your passwords–for security reasons, for example–choose Tools→Internet Options, click the Content tab, click the AutoComplete button, and then click Clear Forms and Clear Passwords.

- Press F4 (or use the drop-down list at the right end of the Address bar) to view a list of URLs you've visited during this browsing session. (The list drops down from the Address bar.) Once again, you can click the one you want—or press the up or down arrow keys to highlight one, and the Enter key to select it.

You can also type a plain English phrase into the Address bar. When you press Enter, IE does a Web search for that term and opens up the first Web page that seems to contain what you're looking for. At the same time, the Search pane appears at the left side of the browser window, offering a list of other Web sites that seem to match your query.

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Tip: For more control over which search site Internet Explorer uses, download TweakUI, a free Microsoft utility that comes with Powertoys (see page 586). After installing the Powertoys, choose Start→All Programs→Powertoys for Windows XP→TweakUI. Click Internet Explorer in the list at left, and then click Search.

You're offered the chance to create little keywords that, when they precede your search term, will direct Windows to a certain search page. You could set up *ggl* to mean Google, for example. Thereafter you could type *ggl llamas* into the Address bar to make Internet Explorer search for "llamas" at *www.google.com.*

The Links toolbar

The Favorites menu described on page 582 is one way to maintain a list of Web sites you visit frequently. But opening a Web page listed in that menu requires two mouse clicks—an exorbitant expenditure of energy. The Links toolbar, on the other hand, lets you summon a few, very select, *very* favorite Web pages with only *one* click.

Figure 11-2 illustrates how to add buttons to, and remove them from, this toolbar. It's also worth noting that you can rearrange these buttons simply by dragging them horizontally.

Tip: As shown in Figure 11-2, you can drag a link from a Web page onto your Links toolbar. But you can also drag it directly to the desktop, where it turns into a special Internet shortcut icon. To launch your browser and visit the associated Web page, just double-click this icon whenever you like.

Better yet, stash a few of these icons in your Start menu or Quick Launch toolbar for even easier access. (If you open your My Computer→C: drive→Documents and Settings→[Your Name]→Favorites folder, moreover, you'll see these shortcut icons for *all* your favorite links. Feel free to drag them to the desktop, Quick Launch toolbar, Links toolbar, or wherever you like.)



Figure 11-2:
Once you've got a juicy Web page on the screen, you can turn it into a Links icon just by dragging the tiny Explorer-page icon from the Address bar directly onto the Links bar, as shown here. (You can also drag any link, like a blue underlined phrase, from a Web page onto the toolbar.) To remove a button, right-click it and choose Delete from the shortcut menu.

Status Bar

The status bar at the bottom of the window tells you what Internet Explorer is doing (such as "Opening page..." or "Done"). When you point to a link without clicking, the status bar also tells you which URL will open if you click it.

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If you consult this information only rarely, you may prefer to hide this bar, thus increasing the amount of space actually devoted to showing you Web pages. To do so, choose View→Status Bar. (A checkmark appears next to its name in the View menu to indicate that the status bar is showing.)

Explorer Bar

From time to time, the *Explorer bar* appears at the left side of your browser window. Choosing commands from the View→Explorer Bar menu triggers a number of helpful lists: Search, Favorites, History, and so on. They're described in greater detail on page 69.

Ways to Find Something on the Web

There's no tidy card catalog of every Web page. Because Web pages appear and disappear hourly by the hundreds of thousands, such an exercise would be futile.

The best you can do is to use a *search engine:* a Web site that searches *other* Web sites. The best of them, such as *www.google.com,* consist of little more than a text box where you can type in your desired subject. Then, when you click the Search button (or press Enter), you're shown a list of Web site links that contain the information you want.

Other popular search pages include *yahoo.com, altavista.com, infoseek.com,* and *hotbot.com.* Using the Search panel of the Explorer bar, you can even search several of these simultaneously. That's handy, because no single search engine "knows about" every Web page on earth.

UP TO SPEED

More Web Pages Worth Knowing

The Web can be an overwhelming, life-changing marketplace of ideas and commerce. Here are some examples of Web pages that have saved people money, changed their ways of thinking, and made history:

www.dilbert.com–A month's worth of recent Dilbert cartoons.

www.zap2it.com or *tvguide.com*–Free TV listings for your exact area or cable company.

www.shopper.com, www.shopping.com, www.mysimon.com–Comparison-shopping sites that produce a list of Web sites that sell the particular book, computer gadget, PalmPilot, or other consumer good you're looking for. This quick, simple research can save you a *lot* of money.

www.efax.com–A free service that gives you a private fax number. When someone sends a fax to your number, it's automatically sent by *email.* You read it on your screen with a free fax-viewer program. You're saved the costs of a fax machine, phone line, paper, and ink cartridges–plus you can receive faxes anywhere in the world.

http://terraserver.microsoft.com–Satellite photographs of everywhere (your tax dollars at work). Find your house!

www.yourdictionary.com–A web of online dictionaries.

www.homefair.com/homefair/cmr/salcalc.html–The International Salary Calculator.

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Tip: If you value your time, you'll install the Google toolbar, a free, delicious IE enhancer available at *http://toolbar.google.com*. It blocks pop-ups, fills in forms for you, and best of all, lets you search Google from any Web page.

Tips for Better Surfing

Internet Explorer is filled with shortcuts and tricks for better speed and more pleasant surfing. For example:

Full-screen browsing

All of the toolbars and other screen doodads give you plenty of surfing control, but also occupy huge chunks of your screen space. The Web is supposed to be a *visual* experience; this encroachment of your monitor's real estate isn't necessarily a good thing.

But if you press F11 (or choose View→Full Screen), all is forgiven. The browser window explodes to the very borders of your monitor, hiding the Explorer bar, status bar, stacked toolbars, and all. The Web page you're viewing fills your screen, edge to edge—a glorious, liberating experience. Whatever toolbars you had open collapse into a single strip at the very top edge of the screen, their text labels hidden to save space.

You can return to the usual crowded, toolbar-mad arrangement by pressing F11 again—but you'll be tempted never to do so.

Bigger text, smaller text

You can adjust the point size of a Web page's text using the View→Text Size commands (and then pressing F5 to refresh the screen, if necessary). When your eyes are tired, you might like to make the text bigger. When you visit a Web site designed for Macintosh computers (whose text tends to look too large on PC screens), you might want a smaller size.

Tip: If you have a scroll-wheel mouse, you can also enlarge or reduce the type on the page by pressing the Ctrl key as you turn the mouse's wheel. (This works in Microsoft Office programs, too.)

Enlarge or shrink online photos

Internet Explorer has always offered a number of great features when it comes to graphics found online. Right-clicking an image, for example, produces a shortcut menu that offers commands like Save Picture As, E-mail Picture, Print Picture, Set as Background (that is, wallpaper), and Set as Desktop Item (that is, an Active Desktop item, as described on page 259). There was only one problem: Most people never knew these features existed.

In Internet Explorer, therefore, Microsoft tries to make it more obvious that this browser has some smarts with regards to pictures. Whenever your cursor moves over a graphic, a small *image toolbar* appears, as shown in Figure 11-3. And if it's a big picture—too big to fit in your browser window—Internet Explorer automatically shrinks it so that it does fit, also as shown in Figure 11-3.

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Tip: To turn off IE's picture toolbar and picture-shrinking feature, choose Tools→Internet Options. Click the Advanced tab, scroll down to the Multimedia heading, and turn off "Enable Automatic Image Resizing" and "Enable Image Toolbar (requires restart)." Click OK, and (if you turned off the toolbar) quit and reopen IE.

Faster browsing without graphics

Of course, graphics are part of what makes the Web so compelling. But they're also responsible for making Web pages take so long to arrive on the screen. Without them, Web pages appear almost instantaneously. You still get fully laid-out Web pages; you still see all the text and headlines. But wherever a picture would normally be, you see an empty rectangle containing a generic "graphic goes here" logo, usually with a caption explaining what that graphic would have been.

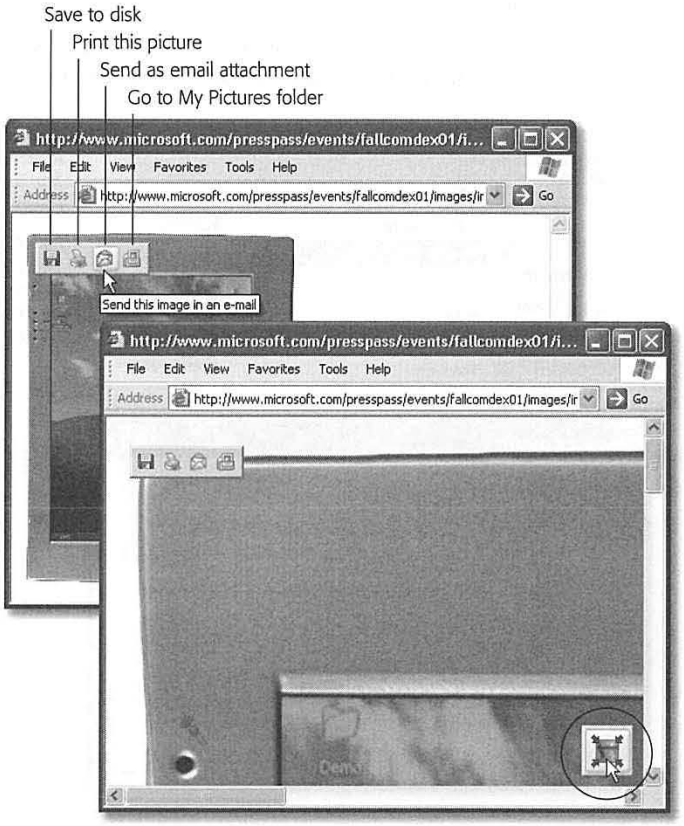


Figure 11-3: *Top left: Internet Explorer automatically displays its image toolbar whenever your cursor points to a graphic. One click on its icons can save a graphic, print it, email it, or open your My Pictures folder to manage your collection.*

Bottom right: If you click the Expand button, you see the graphic at its regularly scheduled size, which may be much too big for your browser window. Click the Shrink button (circled) to make Internet Explorer do its shrink-to-fit favor for you once again.

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To turn off graphics, choose Tools→Internet Options, which opens the Internet Options dialog box. Click the Advanced tab, scroll down halfway into the list of checkboxes, and turn off "Show pictures" (in the Multimedia category of checkboxes; see Figure 11-5). Now try visiting a few Web pages; you'll feel a substantial speed boost.

And if you wind up on a Web page that's nothing without its pictures, you can choose to summon an individual picture. Just right-click its box and choose Show Picture from the shortcut menu.

Favorites: "Bookmarking" favorite Web sites

When you find a Web page you might like to visit again, press Ctrl+D. That's the keyboard shortcut for Favorites→Add to Favorites—but it's better, because it doesn't make you slog through a dialog box. The Web page's name appears instantly at the bottom of your Favorites menu. The next time you want to visit that page, just choose its name.

You can rearrange the commands in your Favorites menu easily enough: Just drag them up and down the open menu (something that doesn't occur to most Web fans.)



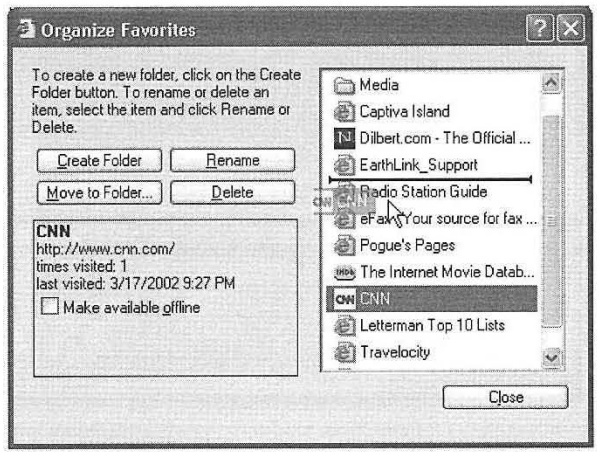


Figure 11-4:
Top: To edit the Favorites menu, choose Favorites→Organize Favorites.

Bottom: When the Organize Favorites window opens, you can drag names up or down to rearrange the list, as shown. Or click one and then use the buttons at left to rename, delete, or file it in a folder.

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If your Favorites *pane* is open at the left side of the window, you can rearrange them there, too, just by dragging with the Alt key pressed.

For more dramatic management tasks—to edit, rename, or delete your favorites, for example—see Figure 11-4.

Viewing Web pages offline

You don't have to be connected to the Net to read a favorite Web page. Using the Offline feature, you can make Internet Explorer *store* a certain Web page on your hard drive so that you can peruse it later—on your laptop during your commute, for example.

The short way is to choose File→Save As. For greatest simplicity, choose "Web Archive, single file (*.mht)" from the "Save as Type" drop-down list. (The other options here save the Web page as multiple files on your hard drive—a handy feature if you intend to edit them, but less convenient if you just want to read them later.) Name the file and click the Save button. You've just preserved the Web page as a file on your hard drive, which you can open later by double-clicking it or by choosing File→Open from within Internet Explorer.

That sweet, simple technique isn't quite what Microsoft has in mind when it refers to Offline Browsing, however. This more elaborate feature adds more options, such as automatic *updating* of the page you've saved and the ability to click *links* on that same page.

To store a Web page in this way, follow these steps:

1. **Add the Web page to your Favorites menu or Links toolbar, as described earlier.**

   Before saving a Web page for offline viewing, you must first designate it as a Link or Favorite.

2. **Right-click the Web page's name in the Favorites menu or on the Links toolbar; from the shortcut menu, choose "Make available offline."**

   The Offline Favorite Wizard appears.

3. **Answer the questions posed by the wizard, clicking Next after each answer.**

   You'll be asked, for example, whether or not you want IE to store pages that are *linked* to the page you're saving—and how many "levels deep" you want this page-to-linked-page storage to proceed. In other words, if you're storing a World News page, you'll probably find nothing but headlines on its home page. When you're sitting on the train to work with your laptop, you'll appreciate the ability to click the headlines to open the attached article pages, which are one link "deep."

   On the other hand, be careful. Links to links exponentially increase the amount of disk space IE uses. Increasing the "Download pages __ links deep from this page" number too high could fill your hard drive with hundreds of Web pages and thousands of graphics you never intended to download.

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The wizard also asks how often you want this stored page updated when you *are* connected to the Internet. (If you decline to specify a schedule, you can always update the stored page manually by choosing Tools→Synchronize.)

4. **When you want a page you've stored offline, choose File→Work Offline. Then use the Favorites menu or Links toolbar to choose the page you want.**

   It springs instantly to the screen—no Internet connection required.

Ditching Pop-Ups and Pop-Unders

The ad banners at the top of every Web page are annoying enough—but nowadays, they're just the beginning. The world's smarmiest advertisers have begun inundating us with *pop-up* and *pop-under* ads: nasty little windows that appear in front of the browser window, or, worse, behind it, waiting to jump out the moment you close your browser. They're often deceptive, masquerading as error messages or dialog boxes…and they'll do absolutely anything to get you to click inside them.

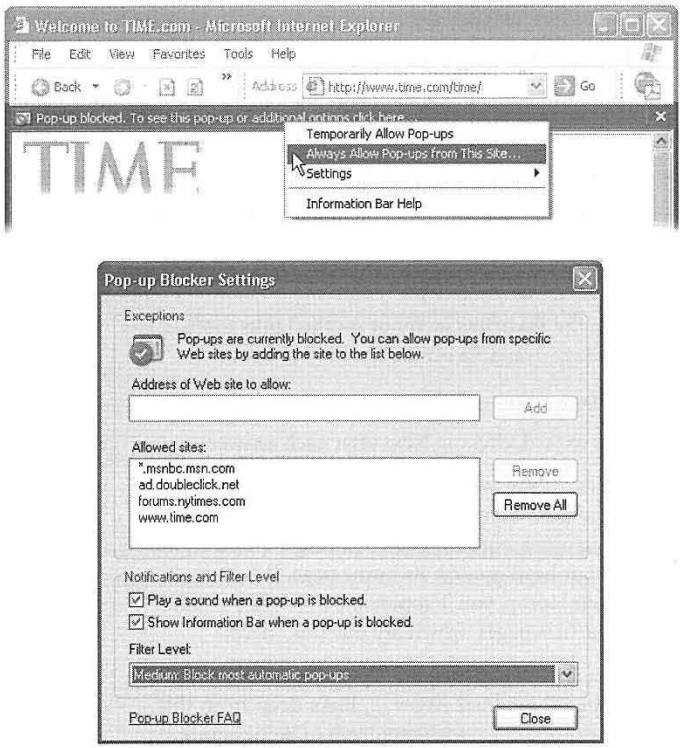


Figure 11-5:
Top: If you click the "pop-up blocked" message, you can choose Temporarily Allow Pop-ups, which lets you see what IE is blocking.

Or if pop-ups are important on a certain page (like the confirmation screen on a travel-booking site), choose Always Allow Pop-ups from This Site (and then click Yes).

Bottom: Later, you can always manage the list of "pop-ups permitted" sites by choosing Tools→Pop-up Blocker→ Pop-up Blocker Settings. This dialog box appears, listing all pop-up approved Web sites (and offering a Remove button if you're having second thoughts).

Here, too, you can turn off the "blocked pop-up" sound, eliminate the Information bar, or adjust the level of the pop-up filter (High, Medium, or Low).

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Better browsers, like Netscape and Firefox, have superb pop-up blockers—and with an add-on available at *http://adblock.mozdev.org*, they can even block regular ads and animations. But with Service Pack 2, Microsoft finally got around to adding a basic pop-up blocker right in IE. You won't have to browse for very long before you see the "Pop-up blocked" message in the yellow Information bar (Figure 11-5).

Tip: If you've installed some other company's pop-up blocker, you can turn off IE's version by choosing Tools→Pop-up Blocker→Turn Off Pop-up Blocker.

Note that IE blocks only pop-ups that are spawned *automatically,* not those that appear when you click something (like a seating diagram on a concert-tickets site). And it doesn't block pop-ups from your local network, or from Web sites you've designated as Trusted (choose Tools→Internet Options→Security, click "Trusted sites," and then click Sites).

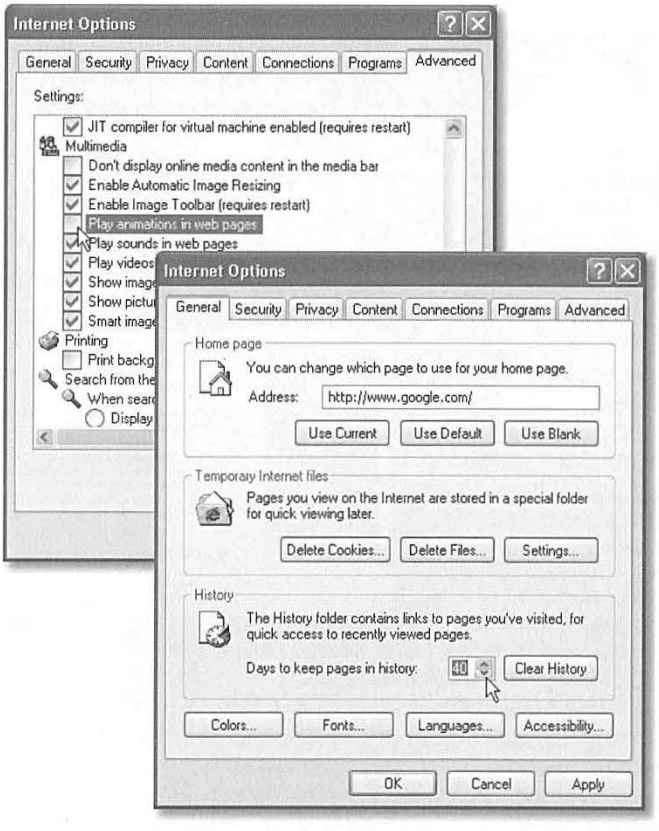


Figure 11-6:
Peculiar though it may seem, choosing Tools→Internet Options takes you out *of Internet Explorer. It opens the Internet Options program in the Control Panel; two of its tabs are shown here.*

Left: Turning off those annoying blinking animations (highlighted) can save your sanity. Alas, it doesn't stifle all animations; the jerks of the ad-design world have grown too clever for this option.

Right: On the General tab, you should take a moment to designate a new home page and boost the "memory" of the History feature (to 60 days, for example).

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Tip: As you can read in Figure 11-5, there *is* a High setting that blocks all pop-ups, even the ones that appear when you click a link. Even then, you still have a way to see the occasional important pop-up: hold down the Ctrl key as your Web page is loading.

Basic IE Options

By spending a few minutes adjusting Internet Explorer's settings, you can make it more fun (or less annoying) to use. To see the most important options, choose Tools→ Internet Options (see Figure 11-6).

Designate your home page

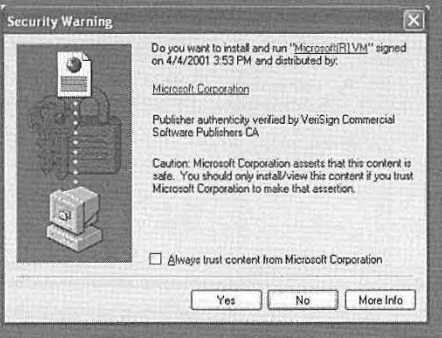
The first Web site you encounter when IE connects to the Internet is a Microsoft Web site (or Dell, or EarthLink—the point is, *you* didn't choose it). This site is your *home page*. Unless you actually work for Microsoft, Dell, or EarthLink, however, you'll probably find Web browsing more fun if you specify your *own* favorite Web page as your home page.

WORKAROUND WORKSHOP

Missing in Action: Java

Many Web sites—especially electronic banking, stock trading, and game sites—rely on a programming language called *Java* to make them look less like ordinary Web sites and more like actual software, complete with stock tickers, interactive animation, and so on.

You can't see these goodies unless your Web browser understands the Java language. Technically, you need a blob of software called a *Java virtual machine*. Previous versions of Windows came with this software—but not the original version of Windows XP.



As it turns out, Microsoft had a long-running feud with Sun Microsystems, the company that created the Java language. Sun sued Microsoft, accusing the bigger company of making changes to the Java language. But as everybody knows, it's not nice to anger Mother Microsoft. Bill Gates's revenge was swift and terrible: he and his team simply removed Java from Internet Explorer. The original version of Windows XP didn't let you access Java-based Web sites at all.

Fortunately, Service Pack 1 restored Java, although Microsoft says that it may remove it in a future update. And if you upgraded your PC from an earlier version of Windows, your previous installation of the Java virtual machine will continue to work just fine in Windows XP. Just forget everything you've read here.

On the other hand, if you have a new PC, or if you performed a clean installation of Windows XP (a copy that preceded SP1), you'll have to download the Java virtual machine yourself. There's not much to it: The first time you visit a Java Web site, you'll see a message like the one shown here, offering to send you the Java virtual machine software. Just click Yes.

The download is 5 MB, which can take some time if you're on a dial-up modem. But after the Java virtual machine has been installed, the Java Web sites should be available to you once again.

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In the Home Page section of the General tab (Figure 11-6, right), enter the Internet address of a favorite Web site. You might consider one of the Web sites described in the previous section, for example, or Google.

Tip: Instead of typing in a URL into the Address box to specify a new home page, you can also click Use Current. This button means: "Use the Web page I'm looking at *right now* as my home page in the future."

If you can't decide on a home page, or your mood changes from day to day, click the Use Blank button. Some people prefer this setup, which makes IE load very quickly when you first launch it. Rather than wasting time loading some home page you've specified, it displays an empty window instead. Once this window opens, *then* you can tell the browser where you want to go today.

Set storage options for temporary files

Most Web pages take a long time to appear in your browser because they're crammed with *pictures*, which, on the great scale of computer files, are big and slow to download. If you use a modem, Web surfing can be a severe test of patience.



Figure 11-7:
To change the size of your cache folder, click the Settings button in the General tab of the Internet Options dialog box (Figure 11-6), and then adjust the number shown here. Enlarging the number makes it possible to store more files, enhancing the odds that when you revisit a Web site you've seen before, it will pop up onto the screen quickly. To see the temporary files (if you can even think of a reason to do so), click the View Files button. To view a list of programs you've downloaded, click the View Objects button.

Every now and then, you might decide to return to a Web page you've already visited, perhaps during a recent Internet session. To help speed the process of loading pages you've already seen, Internet Explorer constantly saves the contents of *every* page visited onto your hard drive. When you revisit a site, the saved file is opened—fast—thus eliminating the time-consuming process of downloading the contents again.

These saved-up Web page files are called *cache* files. (Cache, pronounced "cash," is French for "hide.") IE stashes its cache in the Local Disk (C:)→Documents and Set-

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tings→[Your Name]→Local Settings→Temporary Internet Files folder. (The Local Settings folder is generally hidden; see page 80.) This folder has a limited, albeit adjustable, capacity (see Figure 11-7). Windows XP deletes older files automatically to make room for new files.

Set options to check for changes

The cache-file scheme is great when it comes to speeding up the reappearance of Web pages you've seen before. Unfortunately, it has one significant drawback: If you decide to visit a Web page you've seen before, and IE blasts it onto your screen from its saved temporary files folder, then you're seeing *an old version* of that page—as it was the last time you visited. Therefore, if that Web page has been updated in the meantime, you're looking at old news—a particular hazard if it's a news Web site.

Fortunately, the dialog box shown in Figure 11-7 offers a great deal of control regarding when IE checks a particular Web page for changes made since your last visit. Here are your options:

- **Every visit to the page.** This option forces IE to check *every* Web page to see if its contents have changed since you last visited. If so, IE loads the updated page from the Internet. Of course, this option slows the process of reopening Web pages, since IE must download all of those pages' contents anew. Select this option only if you consistently visit Web sites with rapidly changing contents (stock ticker pages, news pages, Madonna hairstyle pages).
- **Every time you start Internet Explorer.** This option divides your Web browsing into two categories: sites you've visited during *this session* of using IE, and sites you visited in previous sessions.

  When you select this option, IE checks for new contents only on pages you visited in previous sessions. Revisiting any pages you viewed in the *current* session (which, of course, are less likely to have changed) produces the stored file. If you think the contents of the Web page may have changed, click the Refresh button on the IE toolbar to reload the page from the Internet.
- **Automatically.** This option, the factory setting, is similar to the previous one, but smarter. It instructs IE to keep an eye on your Web activity, in order to determine a pattern for the type of pages you visit. *Most* of the time, IE reloads pages from the Internet exactly as described in the previous paragraph—that is, only when you visit a site you'd visited in a previous session. But this time, IE pays attention to individual Web sites: When reloading them from the Internet, what percentage of the time have they actually changed? Eventually, IE stops checking for updates on sites that change infrequently.
- **Never.** This option instructs IE to load the stored, hard drive–based cache files for any Web site you're revisiting. The program never checks the site's contents to see if they've changed. (Of course, you can always click the Refresh button on your IE toolbar to force the browser to download the latest version of the page.)

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Configure and view the History folder

This *history* is a list of the Web sites you've visited. It's the heart of three IE features: AutoComplete, described at the beginning of this chapter; the drop-down list at the right side of the Address bar; and the History list found in View→Explorer Bar (it also appears when you click the unlabeled icon to the right of the Media button; see Figure 11-8). These are all great features if you can't remember the URL for a Web site that you remember having visited, say, yesterday.

You can configure the number of days for which you want your Web visits tracked. To do so, choose Tools→Internet Options (Figure 11-6); click the General tab. The more days IE tracks, the easier it is for you to refer to those addresses quickly. On the other hand, the more days you keep, the longer the list becomes, which may make it harder to use the list easily and efficiently.

Tip: Some people find it creepy that Internet Explorer maintains a complete list of every Web site they've seen recently, right there in plain view of any family member or co-worker who wanders by. If you're in that category, then turn the history feature off completely. Just click the Clear History button in the General tab, then set the "Days to keep pages in history" to 0. (After all, you might be nominated to the Supreme Court some day.)

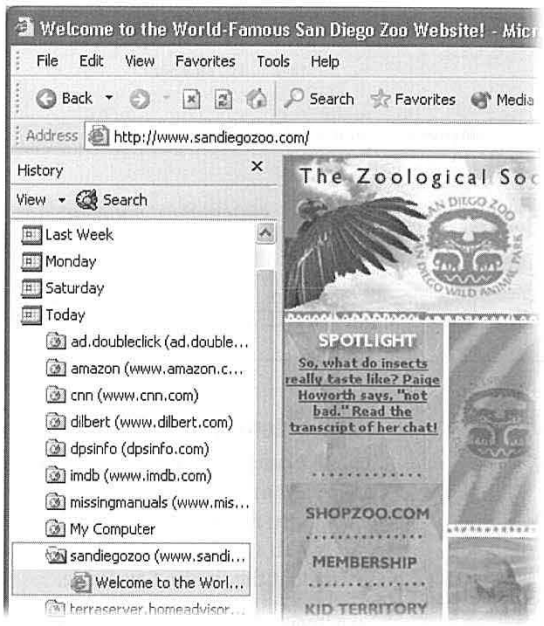


Figure 11-8 :
The History panel (left) appears when you click the tiny History button (the unlabeled button to the right of the Media button) on the Standard toolbar. It offers more details than the History list displayed in the Address bar.

Click one of the time-period icons to see the Web sites you visited during that era. Click the name of a Web site to view a list of each visited page within *that site–information you don't get from the drop-down list on the Address bar. You can sort the sites by clicking the View button in the History pane and choosing one of these sorting schemes: Date, Site, Most Visited, Order Visited Today.*

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To delete an individual Web site from the list, right-click its name and choose Delete from the shortcut menu.

Turn off animations

If blinking ads make it tough to concentrate as you read a Web-based article, choose Tools→Internet Options, click the Advanced tab, and then scroll down to the Multimedia heading (Figure 11-6). Turn off "Play animations in web pages" to stifle certain kinds of animated ads. (Take a moment, too, to look over the other annoying Web page elements that you can turn off, including sounds.)

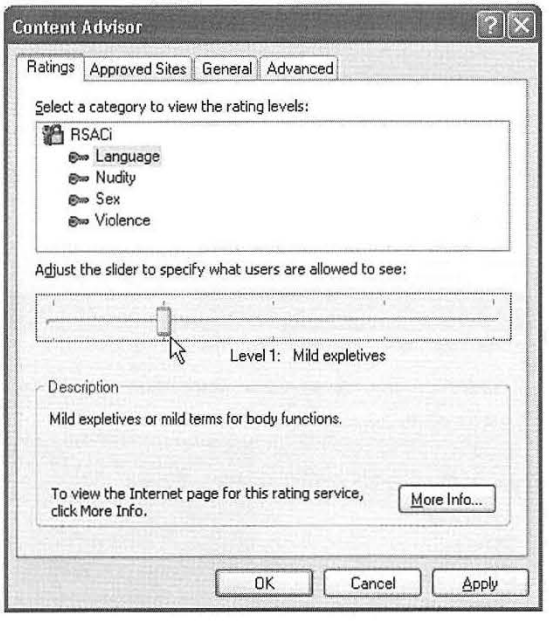


Figure 11-9:
The Internet represents ultimate freedom of expression for anybody, causing some parents to think of it as a wild frontier town where anything goes. To protect young eyes, you can use the options in the Content Advisor to control what's available to your copy of IE. You can also password-protect these settings so nobody else can make changes to them.

The Content Advisor

The IE Content Advisor is designed to give parents a way to control what their children view on the Web—an especially important feature for home computers. You can specify sites you approve, as well as sites you want to block. If somebody tries to visit a Web site that you've declared off-limits using this feature, he'll see a message saying that the site isn't available.

To activate the Content Advisor, choose Tools→Internet Options. Click the Content tab, and then click the Enable button. The Content Advisor dialog box, shown in Figure 11-9, presents four tabs, called Ratings, Approved Sites, General, and Advanced.

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Ratings tab

In theory, you can click a raunchiness category (like Language, Nudity, or Sex) and then move the slider bar to the left or right to loosen or tighten the restrictions. (Hint: You can't actually drag the slider's handle. You must click a notch on the slider with your mouse.)

FREQUENTLY ASKED QUESTION

Cookie Control

Help! I'm afraid of cookies!

Cookies are something like Web page preference files. Certain Web sites—particularly commercial ones like Amazon.com—deposit them on your hard drive like little bookmarks, so that they'll remember you the next time you visit. Most cookies are perfectly innocuous—and, in fact, are extremely helpful, because they help Web sites remember you. Cookies spare you the effort of having to type in your name, address, credit card number, and so on, every single time you visit these Web sites.



But fear is on the march, and the media fans the flames with tales of sinister cookies that track your movement on the Web. If you're worried about invasions of privacy, Internet Explorer is ready to protect you.

Once the browser is open, choose Tools→Internet Options→Privacy tab. As you'll see, the slider in this dialog box is like a paranoia gauge. If you drag it all the way to the top, you create an acrylic shield around your PC. No cookies can come in, and no cookie information can go out. You'll probably find that the Web is a very inconvenient place, because you'll have to re-enter your information upon every visit, and some Web sites may not work properly.

As you drag the slider down, Windows becomes more permissive. For example, it may welcome only cookies with a published privacy policy (which, presumably, contains a promise not to use your information for secret commercial purposes).

But here's a simpler, quicker method of disposing with the cookie threat. On the Privacy tab shown here, click the Advanced button, and then turn on "Override automatic cookie handling." You can now choose how you want the browser to handle two kinds of cookies: *first-party* cookies (those given to you from the Web site you're actually viewing) and *third-party* cookies (those deposited on your hard drive by sites you're not actually visiting—maybe given to you by an especially evil banner ad, for example).

For best results, then, choose Accept for first-party cookies, and Block for third-party cookies. Or, if you're especially paranoid, you can choose the Prompt option, in which case Internet Explorer will ask for individual permission to download every single cookie that comes your way.

Finally, note that the Web is crawling with more flexible and more powerful cookie-control programs, including CookieWall. (You can download it from *www.missingmanuals.com*, among other places.)

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This slider works by looking for the ratings associated with each Web page, as defined by the Internet Content Rating Association (*www.icra.org*). Unfortunately, the Content Rating Association doesn't actually rate Web sites; Web sites are supposed to rate *themselves*. As you can well imagine, the resulting Ratings feature isn't exactly a foolproof (or even half-finished) system.

Tip: The Content Advisor feature comes set to block *all* Web sites that don't have a rating—which is to say, 99.99 percent of them. If you do decide to turn on this feature, therefore, consider clicking the General tab and turning on "Users can see sites that have no rating." Otherwise, Internet Explorer will "protect" you and your kids from virtually the entire Internet—including perfectly innocent sites.

Approved Sites tab

Use the Approved Sites tab to enter the addresses of particular sites you either want to permit or block. (It's normal for this list to show up empty, since it's designed to list Web pages *you* specify.) After you enter a URL, select Always to make the site available to your Web browser, or choose Never to make it unavailable.

The listings in the Approved Sites tab take precedence over the Ratings tab. If you type in a Web address and then click the Always button, your kids will be able to view that site regardless of where it falls in the ratings scheme.

General tab

It wouldn't do you much good to declare certain Web sites off-limits to your kids if, after you've gone to bed, they could simply open the dialog box in Figure 11-9 and declare those Web sites available again. Fortunately, you can use the Change Password button to assign yourself a supervisor's password. Once that's accomplished, nobody can change the settings or visit a forbidden Web site without knowing the password.

Caution: Don't lose this password. There's no way to recover it, and no way to change your security settings without it.

Turning on "Supervisor can type a password to allow users to view restricted content" makes every restricted site available—if you type in the correct password. For example, you can share the password with the adults in your household. You may also want to use it so that your children will have to explain why they need access to a restricted site. If you buy their explanation, then type the supervisor's password to permit one-time access to the site.

Advanced tab

The Advanced tab is the place to add new rating systems and rating rules as Internet citizens invent them.

Note: Programs like Symantec's Norton Internet Security and McAfee's Internet Guard Dog give you finer control over what your browser can supervise on the Web. These products don't rely on Content Ratings, and they let you define different standards for different users on the computer.

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Windows Messenger

You might argue that you'll have plenty to do at your desk, what with all of the games and programs included with Windows XP (oh, yeah…and *work*). But if you've got even more time to kill, Microsoft invites you to "chat" with other people on the Internet by typing live comments into a little window. For millions of people, chat is a big deal. It offers the immediacy of a phone call, with the privacy, transcript-keeping features, and price ($0) of email.

Better yet, you don't have to *type* all of your witty comments. If your PC has a microphone and speakers (or a headset), you can also *speak* to your friends, using the Internet as a free long-distance service. It's not quite as handy as a phone—you and your conversation partner must arrange to be online at a specified time—but the price is delightful. And adding an inexpensive Web camera means that you can actually turn your PC into a cheapo videophone, Dick Tracy–style.

The software you need is Windows Messenger (which was called MSN Messenger Service in previous versions of Windows). The quickest way to open it is by double-clicking the icon that appears in your notification area (see Figure 11-10). If you don't see it, just choose Start→All Programs→Windows Messenger (although you may also find the icon listed in the left-side column of your Start menu).

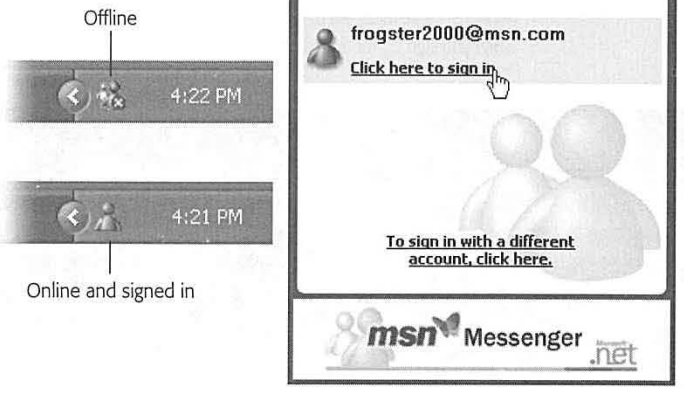


Figure 11-10:
Left: To open Windows Messenger, double-click its icon in your notification area. (This icon's appearance indicates whether or not you're online and signed in.)

Right: If Windows Messenger didn't automatically sign you in when you went online, you may have to click the link to do so. (This dialog box may look different in your version of Messenger. Microsoft updates this Windows component, via the Automatic Updates feature, more often than almost any other.)

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Note: At the moment, Windows Messenger can communicate only with other people who use Windows Messenger. People who use the extremely popular AOL Instant Messenger (AIM) are off-limits, separated from you by a great invisible wall of incompatibility.

That situation may change, however. With Windows XP, Microsoft has adopted a new, universal standard for chat programs. And if America Online decides to adopt the same standard, it will be a great day in the land of chatters, who will now be united in a single, unified, global standard of chatting love.

The .NET Passport

Windows Messenger is one of several Windows XP features that require a *.NET Passport*—a fancy way of saying that you need to enter yourself into Microsoft's database of Internet users. It's free, and it doesn't require you to expose any more information than your email address. (It doesn't even require that you have a Hotmail or MSN email address, as in previous versions of Windows.)

It's certainly not difficult to figure out how to sign up for this passport. From the first day you use Windows XP, a balloon in the notification area begins to nag you to sign up for one (Figure 11-11, top). To start the Passport sign-up wizard, you can click that balloon, double-click the Windows Messenger icon in the notification area, or launch the wizard yourself. To do so, open the Control Panel. Double-click the User Accounts icon, and click the green arrow button called "Set up my account to use a .NET Passport" (see Figure 11-11, bottom).

Note: Once you've signed up for a passport, Microsoft's software robot sends a message to the email address you specified. Your Passport account isn't official until you reply to it. You'll be able to use Windows Messenger in the meantime, but everybody you correspond with will see your name stamped with "E-mail Address Not Verified." All of this is Microsoft's way of saying, "It's not worth providing a bogus email address when you sign up for a Passport, buddy."

WORKAROUND WORKSHOP

Antisocialites' Corner

Windows XP comes set up to run the Windows Messenger software every time you turn on the computer. Its icon always appears in the notification area of the taskbar, whether you intend to use it or not.

Difficult though it may be to believe, there are actually people here and there who have no particular use for Windows Messenger. There exists a tiny minority that doesn't feel the need to start up chat sessions online, and who, perhaps, could do without the Windows Messenger icon appearing every day on the notification area.

To delete it, double-click that icon to open Windows Messenger. In the resulting window, choose Tools→Options. Click the Preferences tab, turn off "Run this program when Windows starts," and then click OK.

You can also eliminate the "Bob Smith has just signed in" notification that pops up in the lower-right corner of your screen every time somebody on your buddy list goes online. Within Windows Messenger, choose Tools→Options, click the Preferences tab, and turn off "Display alerts when contacts come online." Now click OK.

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Your Buddy List

After creating a Passport account, you must build a list of people who have Passport accounts. To do that, open Windows Messenger, log in and then click the Add a Contact link. As you probably could have predicted, the result is something called the Add a Contact Wizard, which offers you the chance to add people to your list whose email address you know.

In general, there's no need to bother with the "Search for a contact" option. It can search only part of your Outlook Express address book (it doesn't search addresses that the program added to the address book automatically), and part of the online Hotmail.com member registry (it doesn't search people who have declined to be listed in the registry). Furthermore, it finds a match only if you have typed the entire name precisely.

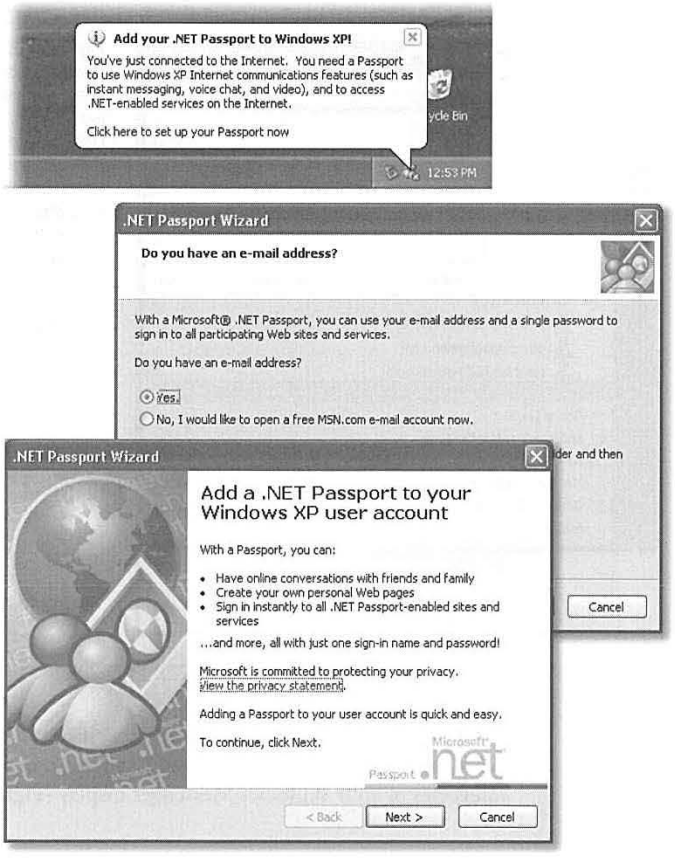


Figure 11-11: *Top: The instant you access the Internet for the first time, Windows XP invites you to become a part of the great Passport database.*

Bottom: The .NET Passport Wizard invites you to provide your existing email address–or to create a free MSN.com email account in the process of signing up for the Passport. Either way, you need a .NET Passport to use Windows XP online features like Windows Messenger. If you feel like it, you can also pay a visit to www.passport.com *to create a Passport* wallet, *meaning that you can input your credit card numbers and other personal information, to save you time when buying stuff on Passport-compatible Web sites.*

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Tip: You can also turn someone in your Outlook Express address book into a Windows Messenger "buddy." To do so, right-click a name in the Contacts pane at the lower-left corner of the Outlook Express window (see Figure 12-1 in the next chapter). From the shortcut menu, choose Set as Online Contact. Once again, however, you won't be able to add the person to your Messenger buddy list unless she already has a Passport.

As a slender reed of privacy protection, Windows Messenger requires your permission before somebody else can declare you his buddy. Likewise, you can't add anyone to *your* list of buddies without *his* permission. (The permission request takes the form of a dialog box that appears on your screen the next time you go online.)

If the person whose email address you've specified hasn't yet signed up for a Passport account, the wizard offers to fire off an email message to that person—from you—with instructions on how to acquire one. Until both of you are fully signed up, you won't be able to chat using this program.

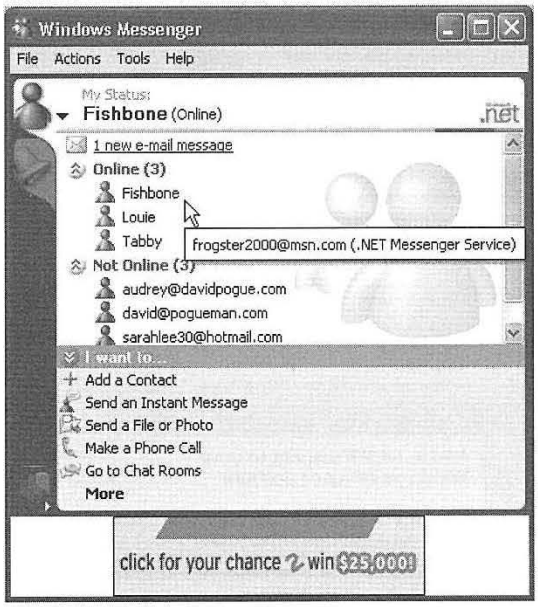


Figure 11-12:
To commence with some high-tech communications, you can proceed in either of two ways. First, you can double-click somebody in your Online list to open up a chat window. From there, you're able to start a voice conversation, window-sharing session, videoconferencing session, and so on. Second, you can click one of the "I want to..." links shown here at bottom and then *specify with whom you'd like to do it. Note that if you have a Hotmail account, the top of the window reveals how many email messages you have waiting.*

On the other hand, if you have indeed specified the email address of somebody who has a Passport account, his name now shows up in either the Online or Not Online categories of your Windows Messenger display (Figure 11-12).

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Beginning a Chat

To start a conversation, connect to the Internet. Then double-click somebody's name in your Online list, also as shown in Figure 11-12. (You can't conduct a very meaningful chat with somebody who *isn't* online.)

Chances are pretty good that your colleague is, in fact, running Windows Messenger in the background; the program comes set to run automatically whenever you connect to the Internet. If that's the case, a special alert box appears at the lower-right corner of his screen, as shown in Figure 11-13 (top right).



Figure 11-13:
Top: You're being invited to chat. (You also hear a chime, and a Windows Messenger taskbar button, shown here, blinks and changes color to get your attention.) Clicking the words in the square invitation box opens Windows Messenger.

Bottom: Now you can type away. A chat session is like a teleprompter transcript that rolls down the screen. You type into the bottom box, pressing Enter after each comment, and inserting little "emoticons" (smiley faces, frowny faces, and so on) by choosing them from the drop-down list.

If he's interested in accepting your invitation to chat, he can click the words in that little box. And suddenly, you're chatting—whatever you type is transmitted to his

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Windows Messenger window as soon as you press Enter, and vice versa. Figure 11-13 shows the effect.

Tip: You might find it easier to distinguish your words of brilliance from the drivel of your correspondents by changing the font for your own comments. To do so, choose Tools→Options; on the Personal tab, click the Change Font button. Choose a new font, size, style, or color in the resulting dialog box, and then click OK twice. (Both of you will see the change, assuming you have similar fonts installed.)

Fun Things to Do While Chatting

As the conversation goes on, you can spice things up, as well as add more controlling features, like this:

Screen out the riffraff

If some idiot keeps bothering you for a chat, turn on the blocking feature for that person. There are a number of different ways to go about it:

- Right-click the person's name in your contact list and, from the shortcut menu, choose Block.
- Choose Tools→Options; on the Privacy tab, click the name of the person you want to block and then click the Block button. This is the quickest way to block a whole bunch of people at once.
- If you're already chatting with someone, just click the Block button in the chat window.

Of course, you were already given the opportunity to perform a preemptive strike. Remember, people can't add you to their buddy lists unless you first give your permission by clicking OK in the dialog box that appears the first time they try to do so.

Grin, sob, or stick out your tongue

At the bottom of the chat window, you'll find a drop-down list of little smiley-face icons. Some find them adorable, others find them insufferable—but they're there if you want a little graphic expression of, well, your expression. Choose one at any time, and then press Enter or click Send, to pop it into your chatter.

Tip: In the heat of chat, it's sometimes inconvenient to take your hands off the keyboard to select a smiley face from the little drop-down list. Fortunately, any of these symbols can be triggered right from the keyboard. Type :) to make a smiley face, :D to make a laughing face, :P to "stick out your tongue," (Y) to give a thumbs-up, (N) for thumbs-down, and so on. Then press Enter or click the Send button to see them in the actual chat window.

(If you really want to delve into this, check out the complete list of keystroke equivalents for Windows Messenger's 30 *emoticons,* as they're known, by choosing Help→Help Topics from within Windows Messenger, and then typing *emoticons* in the "For help on Windows Messenger" box. Click "Use Emoticons in messages to show feelings" on the resulting Help Topics page.)

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Duck out for a moment

Windows Messenger offers a list of Status messages: Online, Busy, Be Right Back, On The Phone, and so on. Whatever status you choose appears next to your name on the screens of your conversation partners.

To hang out one of these little "Do not disturb" signs, choose from the File→My Status submenu, or right-click the Windows Messenger icon in the notification area and choose from the My Status submenu there. (To duck out for good, sign out. Do that by right-clicking the Messenger icon in the notification area and choosing "Sign out" from the shortcut menu.)

Send a text message to a phone

To send a message to somebody's pager or cellphone, just right-click the person's name, and then choose Send a Message to a Mobile Device from the shortcut menu. (If it's a text pager, you can even type up a little message to send.)

Exchange files

As the conversation proceeds, you can send a photo, Word document, or any other file to your chat partner. There are two ways to do so:

- Drag the icon of the file you want to send right into the chat window (from the desktop or a folder, for example).
- Click the Send a File or Photo link at the right side of the screen. A "Send a File" window appears, so that you can navigate to and double-click a file that you want to send.

Either way, your buddy sees an invitation to accept the file (Figure 11-13), and then a stern warning to be careful of doing so, for fear of viruses and other nasty surprises.

Tip: This feature is especially welcome if you've grown frustrated transmitting files via email. Some programs, notably Microsoft Outlook, refuse to accept files–like application programs (*.exe* files)–that could conceivably harbor viruses. Messenger imposes no such restriction. Nor will you encounter "mailbox full" problems when you send files back and forth using Messenger, the way you sometimes do when sending them as email attachments.

Add another chatter

You can include another person in your chat by choosing Actions→Invite Someone to this Conversation. You'll be offered a list of other people in your buddy list who are already online. (Up to five people can participate in a typed chat, although only two of you can use the video or phone features described in the following sections.)

Get help

As you can see by Figure 11-14, "Ask for Remote Assistance" is another link on the task pane. Clicking it initiates a *Remote Assistance* session, in which some helpful

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geek on the other end of the line takes control of your computer, and sees what's on your screen, in order to troubleshoot a specified problem. Complete details in Chapter 4.



Figure 11-14: *You can send a file from your hard drive to your conversation partner—a great way to turn this time-wasting feature into a useful collaboration tool. (Your partner will find the file in her My Documents→My Received Files folder. She can change the folder location for file deposits by choosing Tools→Options, clicking the Preferences tab, and then clicking the Browse button in the File Transfer section.)*

Add features

As time goes by, Microsoft adds new features to Windows Messenger without telling you. You can already send short text messages to your friends' cellphones, see how many new Hotmail email messages are waiting for you, create and edit your own online profile, and so on—but only by first going to the Microsoft Add-In Web page and downloading the necessary software modules.

To do so, choose Tools→Add-In Web Site. Your browser opens to a Microsoft Web site that lists whatever new modules are available; click "Click here to download this add-in!" to add them to your copy of Windows Messenger. (Windows: It's not just an operating system—it's a lifestyle!)

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Service Pack 2 Installation Checklist

If SP2 came preinstalled on your PC, smile and turn to a more interesting page.

If you're installing it over a previous Windows XP installation, you might get lucky, and the process may take between 45 minutes and several hours.

If you're less lucky, you may be in for a troubleshooting sabbatical, as your existing software's portholes to the network get sealed shut. Glitchiness seems to be especially prevalent in corporations, where, according to one study, one PC in 10 runs into trouble.

Microsoft has posted a list of several dozen common foundering programs—and ways to fix them—at *http://support.microsoft.com/default.aspx?kbid=842242*. A number of popular games and utilities are listed there.

But there may be worse problems. Some people can't even start up their PCs after installing the service pack.

The best way to avoid problems is to be slow and methodical *before* you install SP2. Then proceed through the following checklist with all the care of an archaeologist unearthing a skeleton:

1. **Check your hard drive for free space.**

   You need at least 500 megabytes of free space, or SP2 won't even install. (For the speediest installation, *defragment* your hard drive first, as described on page 457.)

Tip: If your PC is your life—or your job, at least—you may want to take one additional, advanced step: Install a *second copy* of Windows XP, using the sort of dual-booting scenario described on page 561. Then install SP2 on the duplicate copy and test your most essential programs. This way, you'll know about any potential crises before committing your "real" copy of Windows to SP2.

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2. **Remove spyware.**

   Use a program like Ad-Aware or Search & Destroy to make sure your PC is free of these programs.

5. **Visit the Web page of your PC manufacturer.**

   Search for information regarding SP2. It may turn out that your PC won't work with Service Pack 2 unless you first update your BIOS (basic input output system, the built-in software that controls your keyboard, screen, disk drives, communications, and so on). In that case, you would find, at *www.dell.com* or *www.gateway.com* (for example), a BIOS updater program that you're supposed to download and run.

6. **Back up your stuff.**

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To start a voice "call," begin a chat as described above. But once the window is open, click the Start Talking tab in the task pane at the right side of the window. (The very first time you do this, Windows will ask you to test the quality of your microphone and speakers.)

Your friend sees a typed invitation to join you in a spoken voice conversation ("Fishbone would like to have a voice conversation with you. Do you want to Accept [Alt+T] or Decline [Alt+D] the invitation?"). If she clicks Accept (or presses Alt+T), the two of you are in business: Simply begin talking—even if you're in San Francisco and she's in Turkey. Clearly, phone company executives aren't thrilled with the development of this technology (at least, not until they go home at night and fire up Windows Messenger themselves).

During the conversation, each participant can adjust the microphone or speaker levels using the sliders, or "hang up" by clicking Stop Talking.

PC as Videophone

The videophone feature requires that you and your online chat partner each have a video camera (some cheap Webcam will do just fine) and corresponding software already installed. By the way, "video" is a generous term: You may find that the picture is extremely jerky and grainy, more like a series of still images than a TV broadcast.

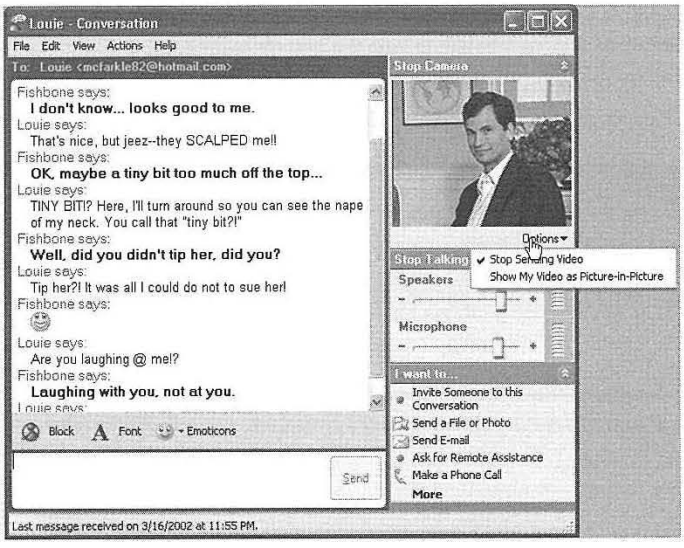


Figure 11-15: *During the video conversation, don't miss the Options drop-down menu. Use the Stop Sending Video command when, for example, you'd like to pick your nose in privacy. Turn on Show My Video as Picture-in-Picture if you want to see your own image in the lower-right corner of the larger one, in order to see both participants at once.*

(Obviously, a high-speed connection like a cable modem or DSL is extremely helpful in this regard.)

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Click the Start Camera button (Figure 11-15) to begin transmitting; click Stop Camera when you've had enough. (If only one of you has a video camera, no problem—only one of you receives a video picture. The other person just hears the sound.)

It's crude, sure, but there are times when a little video goes a long way—when you're on the road with your laptop for three weeks and miss seeing the kids, for example; or when you want to show a prototype to a client without having to buy a plane ticket.

Sharing a Program

Amazingly enough, the other person in your little online meeting can use *your programs*—editing one of your Word documents, typing numbers into your Excel spreadsheet, and so on—even if he doesn't have Word or Excel on his machine.

It works like this:

1. **Launch the program you want everyone to use. Then click the Start Application Sharing link in the task pane at the right side of the window (Figure 11-16).**

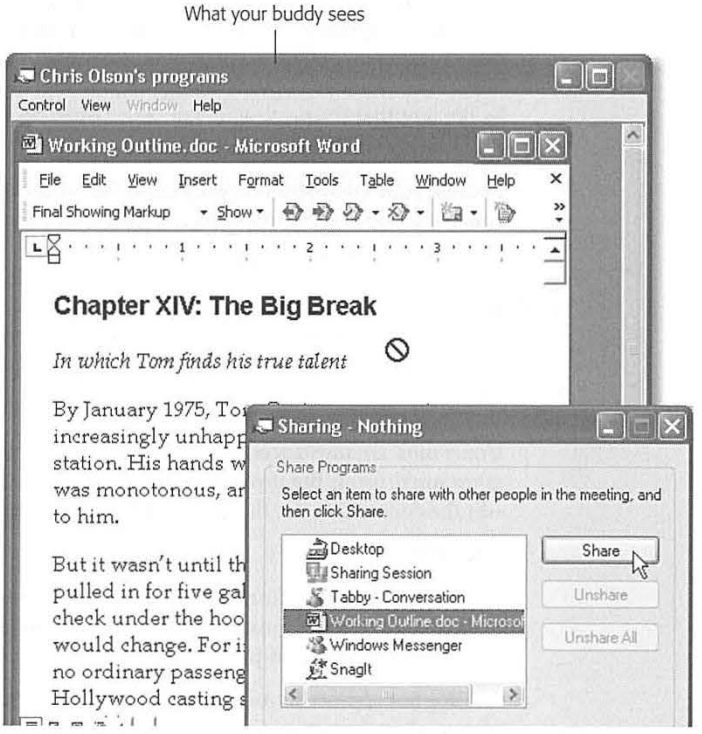


Figure 11-16: *Lower right: The Sharing window, where you specify which programs you want your comrade to see, and even control.*

Back left: Until your chat partner has been given control, she can see precisely what you see–but can't edit it or touch it in any way. The slashed-circle cursor should tell her as much. Asking for permission to take over the driver's seat, however, is as easy as choosing from the Control menu (top left).

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Your recipient sees a message that says: "Fishbone is inviting you to start using Application Sharing. Do you want to Accept (Alt+T) or Decline (Alt+D) the invitation?" Obviously, your colleague should click Accept (or press the corresponding keystroke).

Now a little palette appears at the upper-left corner of both screens to keep you posted on the status of the sharing feature. It says "waiting," and then says "connecting;" finally you see the list of programs shown in Figure 11-16.

2. **Click the name of the program or document you want to share, and then click Share.**

   Note, in particular, the desktop, which is always listed in the Share Programs window. If you share it, then everybody else in the meeting can see what you see as you work in Windows. As far as Windows Messenger is concerned, the desktop is simply another program that you can share. (This effect is essentially the same thing as the new Remote Assistance feature described on page 135, except that it's slower and lets you limit what your comrade sees. Otherwise, it's equally effective for securing troubleshooting help from some guru elsewhere on the Internet.)

   Shortly after you click the Share button, something strange and weird happens: A new window appears on your conversation partner's screen, showing exactly what you see in *your* copy of the program. When you move your cursor, it moves on her screen; when you open a dialog box, she sees it, too; and so on. (This means, by the way, that your colleague can see *all* open documents in whatever program you're using—not just the front one.)

   Because your microphone is working at the same time, you can use this feature to collaborate on documents, to teach somebody a new program, to help somebody troubleshoot a PC, and so on.

Note: If your correspondent sees a bizarre checkerboard pattern superimposed on the shared document window, there's no need to worry. That simply means that the program you're sharing is partly covered up by a window from some other program. (The likeliest culprit: the Sharing dialog box itself, shown in Figure 11-16.)

Under most circumstances, the other people in the meeting can just *look* at the program you're using. But if you'd like the other person to *control* the application—to edit the documents, use the menus, and so on—then proceed like this:

3. **Click Allow Control.**

   Just clicking the Allow Control button, however, is not enough to transfer control of a program to one of your collaborators. He must also choose Control→Request Control from his shared-program window, and you must grant permission.

   A dialog box appears on your screen, saying: "Harry Potter would like to take control of your shared programs." (Actually, it probably says, "*default* would like to take control." Your collaborator's actual name rarely shows up, because Windows Mes-

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senger displays whatever name appears in the Options dialog box of a completely different program—NetMeeting. See page 370 for details.)

4. Click Accept.

   Only now can your colleague edit your documents, manipulate your desktop, and so on. Conversely, *you* can't do anything in that program. Moving the mouse doesn't even move the cursor in that program. It may take you some time to get used to this effect—a process psychologists call *learned helplessness.*

   If the feelings of helplessness become overwhelming, you can reclaim control by clicking the mouse or pressing any key on your keyboard. In fact, by pressing the Esc key, you resume control *and* prevent your colleague from attempting to take any further control.

   If you've shared your desktop, by the way, relinquishing control means that other people can even manipulate your computer files and folders! They can open folders, rename files, make backup copies, delete files, and so on, from wherever on the Internet they happen to be.

Tip: If you're truly collaborating, you'll probably want to turn on "Automatically accept requests for control," so that your collaborator won't have to request control (and you won't have to grant permission) over and over again during the work session. On the other hand, turn on "Do not disturb with requests for control right now" if you don't want to be interrupted by even your collaborator's requests for control. The answer is always no.

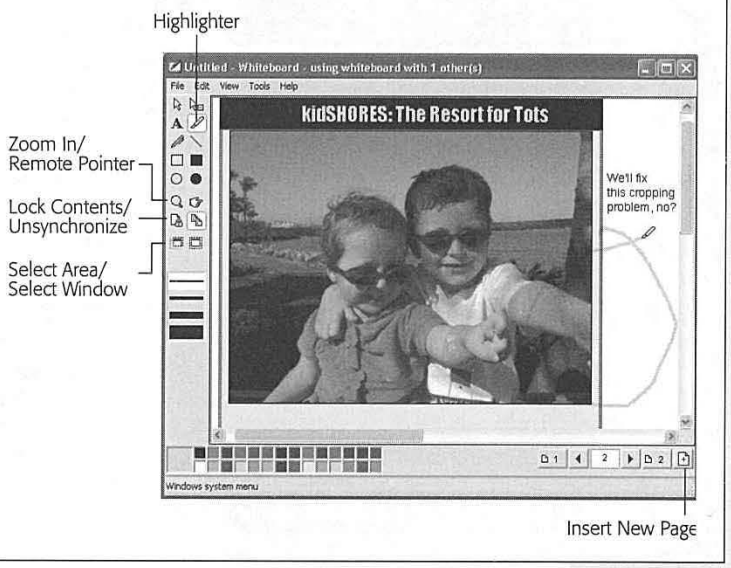


Figure 11-17: *The Whiteboard lets you and a colleague mark up a diagram, sketch, or anything else you can paste into this window. It's a lot like Paint, except that you're not editing individual pixels–it's a* drawing *program. Each shape, text box, or line you draw, and each object you paste in, remains a distinct object that you can drag around, independent of the background. You can also make objects go in front of or behind the other ones using the Bring to Front and Send to Back commands in the Edit menu, and you can edit text at any time.*

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It's worth noting, by the way, that all of this controlling and sharing requires Windows to shuttle an enormous amount of data over the wires. As a result, the cursor may seem jerky, and everything will feel very slow. That's normal, especially if you're connecting via standard dial-up modem.

Whiteboard

When you click the Start Whiteboard link in the task pane, Windows Messenger opens up a graphics window (Figure 11-17) that looks, at first glance, like the Paint program described in Chapter 6. The difference: Anything you draw or paste into this window appears instantly on your colleague's screen—and vice versa. Using the various graphics tools and colors, you can draw maps for each other, propose design changes, or just play tic-tac-toe.

Note: Application Sharing and Whiteboard cannot be used at the same time. In fact, you can't start one without first quitting the other. You should also note that closing the tiny Sharing Session window terminates both features.

NOSTALGIA CORNER

Microsoft NetMeeting

Windows Messenger is all the rage, but it's not the only videoconferencing game in town. In previous versions of Windows, its functions were assumed by something called Microsoft NetMeeting. And as we all know, Microsoft never actually takes away a feature—it only adds new ones. As a result, NetMeeting is still available in Windows XP.



In many ways, Windows Messenger is a superior program. For example, Windows Messenger looks better, is easier to figure out, and is better integrated with Windows.

Still, in its own obsolete way, NetMeeting has its charms. For example, it's the only way you can carry on voice or videoconferencing sessions, collaborate on documents, or use the whiteboard feature with people who don't have Windows Messenger. Furthermore, you need NetMeeting if you want to use the whiteboard or program-sharing features with more than two people—Windows Messenger's limit.

To fire it up, choose Start→Run. In the resulting dialog box, type *conf* and press Enter. During the NetMeeting startup wizard, you'll be asked for your name, email address, and connection speed. The wizard also offers to create a shortcut for NetMeeting on your desktop and on your Quick Launch toolbar, so that you won't have to use that Start→Run business in subsequent sessions.

Once the program is running, click the little phone book button near the upper-right corner to see your list of Windows Messenger contacts. To begin a chat session, click somebody's name in the Contacts Currently Online. (NetMeeting no longer uses the Internet Locator Service used by previous versions.) Your colleague's copy of Windows Messenger intercepts the invitation and fires up his own copy of NetMeeting. Now you're ready to begin.

Windows Messenger also assumes the duties of the old Phone Dialer program. Once again, however, that program is still around—and remains the only way to carry on voice or videoconferencing sessions involving more than two people. You can open it by choosing Start→Run, typing *dialer*, and pressing Enter—or by locating (and making a desktop shortcut of) its icon in the My Computer→Local Disk (C:)→Program Files→Windows NT folder. It's called *Dialer.exe*.

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Here are a few of the special collaboration tools that you won't find in Microsoft Paint:

- **Highlighter.** Draws over whatever is there with transparent "ink"—exactly like a felt-tip highlighting marker.
- **Remote Pointer.** As you move this hand around the screen, your buddy sees exactly what you're pointing to. Because he can also hear what you're saying (thanks to your microphone), this is a great way to comment on something—say, a photo you've pasted into this window.
- **Lock Contents.** Freezes the picture as it is right now, so that nobody can alter it (at least until you click the same button again to unlock it).
- **Unsynchronize.** In general, if your collaborator "turns the page" by clicking one of the page buttons, you see the page change, too. To unlink your screen, so that it's no longer tied to what your colleague sees, simply click this button. (Click again to restore synchronization.)
- **Select Area.** When you click this tool, a message invites you to drag across an area of the screen—even outside of the Whiteboard window. You can use this feature, for example, to capture an error message, tool palette, or some other element of Windows or one of your programs. As soon as you release the mouse, Windows pastes the area you covered into the upper-left corner of the Whiteboard window, ready for comment and annotation by your partner.
- **Select Window.** This tool is exactly like the Select Area tool except that it grabs an entire window (from some other program, from the desktop, or whatever) elsewhere on your screen for pasting into the Whiteboard window.

Tip: This tool never captures the *title bar* of the window you click–only the parts of the window beneath it. If you want to capture the complete window, click the title bar instead of inside the window.

- **Insert New Page.** Click this button to create a new page for further annotations. Once you've created several pages, you can move among them using the arrow buttons.

EX 2009

EX 2009

CHAPTER
12

Outlook Express 6

Email is a fast, cheap, convenient communication medium; these days, it's almost embarrassing to admit that you don't have an email address. To spare you that humiliation, Windows XP includes Outlook Express 6, a program that lets you receive and send email messages and read *newsgroups* (Internet bulletin boards). (Incidentally, don't confuse Outlook Express with Outlook, a far bigger and more complex corporate email program that's sold as part of the Microsoft Office software suite.)

Note: Outlook Express doesn't work with online services like America Online or Prodigy. Instead, you're supposed to check and send your email using the software you got when you signed up for these services.

To use Outlook Express, you need several technical pieces of information: an email address, an email server address, and an Internet address for sending email. Your Internet service provider or your network administrator is supposed to provide all of these ingredients.

Setting Up Outlook Express

The first time you use Outlook Express (which you can open from the Start menu), the Internet Connection Wizard appears to help you plug in the necessary Internet addresses and codes that tell the program where to find your email.

Note: If you used the New Connection Wizard (page 300) to establish your Internet account, then your settings are probably already in place. In that case, you probably won't see this Internet Connection Wizard; skip to the next section.

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Click Next on each wizard window to step through the process, during which you'll provide the following information:

- **Display Name.** The name that will appear in the "From:" field of the email you send.
- **Email Address.** The email address you chose when you signed up for Internet services, such as *billg@microsoft.com.*
- **Mail Servers.** Enter the information your ISP provided about its mail servers: the type of server, the name of the incoming mail server, and the name of the outgoing mail server. Most of the time, the incoming server is a *POP3 server* and its name is connected to the name of your ISP, such as *popmail.mindspring.com.* The outgoing mail server (also called the *SMTP server*) usually looks something like *mail.mindspring.com.*
- **Logon Name and Password.** Enter the name and password provided by your ISP.

UP TO SPEED

POP, IMAP, and Web-based Mail

When it comes to email, there are three flavors of accounts (not counting America Online Mail, which is a mutant breed and not something that Outlook Express can talk to): POP (also known as POP3), IMAP (also known as IMAP4), and Web-based. Each has its own distinct feeling, with different strengths and weaknesses.

POP accounts are the most common kind. A POP server transfers your incoming mail to your hard drive before you read it, and then deletes its Internet-based copy. From now on, those messages are stored on your computer, and it's up to you to save them, back them up, or delete them. (You can configure Outlook Express not to delete the messages from the server, but most ISPs don't give you much disk space. If your mailbox gets too full, the server may begin rejecting your incoming messages.)

IMAP servers are newer than, and have more features than, POP servers, but as a result they don't enjoy as much popularity or support. IMAP servers are Internet computers that store all of your mail for you, rather than making you download it each time you connect, so you can access the same mail regardless of the computer you use. IMAP servers remember which messages you've read and sent, too.

One downside to this approach, of course, is that you can't work with your email except when you're online, because all of your mail is on an Internet server, not on your hard drive. Another is that if you don't conscientiously manually delete mail after you've read it, your online mailbox eventually overflows. Sooner or later, the system starts bouncing fresh messages back to their senders, annoying your friends and depriving you of the chance to read what they had to say.

Free, Web-based servers like Hotmail also store your mail on the Internet. You can use a Web browser on any computer to read and send messages—or, if it's Hotmail, Outlook Express (because both are Microsoft products). They're also slower and more cumbersome to use than "regular" email accounts.

EX 2009

If you wish, turn on "Remember password," so that you won't have to enter it each time you want to collect mail. (But turn on Secure Password Authentication [SPA] only if instructed by your ISP or network administrator.)

Click the Finish button to close the wizard and open Outlook Express.

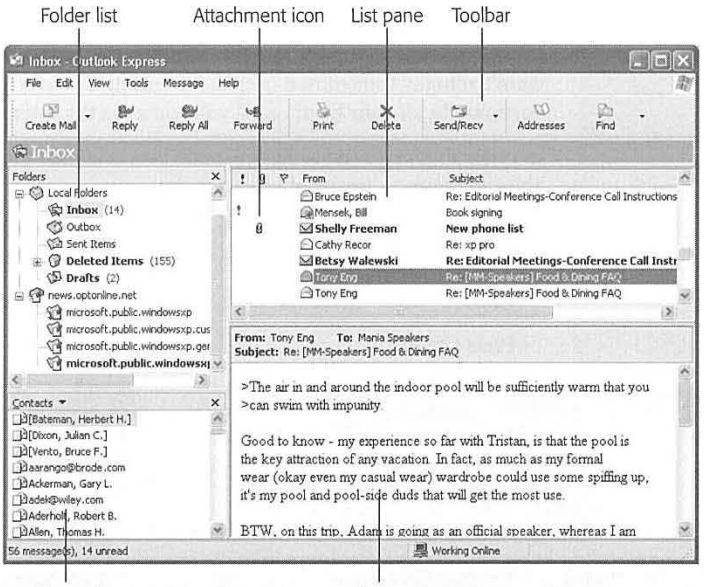


Figure 12-1: *The four panes of Outlook Express. Click a folder in the upper-left pane to see its contents in the upper-right pane. When you click the name of a message in the upper-right pane, the message itself appears in the lower-right pane.*

Lower left: your list of MSN Messenger Service "buddies," as described in the previous chapter.

GEM IN THE ROUGH

Checking a Specific Email Account

You don't have to check *all* of your email accounts whenever you want to get mail. Suppose, for example, that you want to send a message to *yourself*–from your work account to your home account. In that case, you'd want to send/receive mail only from your office account. (If, in the same pass, Outlook Express also downloaded messages *from* your home account, you'd wind up with the same message in your office PC's copy of Outlook Express, defeating the whole purpose of the exercise.)

Excluding an account (or several accounts) from the "Send and Receive All" routine is easy enough. Open the Accounts window (Tools→Accounts), double-click the account's name, turn off "Include this account when receiving Mail or synchronizing," click OK, and close the Accounts window.

Now suppose you *usually* want to check all accounts, but *occasionally* want to check only one of them. On such an occasion, choose that account's name from the drop-down list that appears when you click the down-arrow black triangle beside the Send/Recv button. (Alternatively, choose the account name from the Tools→Send and Receive submenu.)

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Tip: If you want to add a second email account for someone else who uses this PC (assuming you're *not* using the User Accounts feature described in Chapter 16), choose Tools→ Accounts in Outlook Express. In the resulting dialog box on the Mail tab, click Add→Mail; the Internet Connection Wizard will reappear.

Sending Email

When you finally arrive at the main Outlook Express screen, you've got mail; the Inbox contains a message for you. The message is a welcome from Microsoft, but it wasn't actually transmitted over the Internet; it's a starter message just to tease you. Fortunately, all your future mail will come via the Internet.

In order to receive and send new mail, you must use the Send & Receive command. You can trigger it in any of several ways:

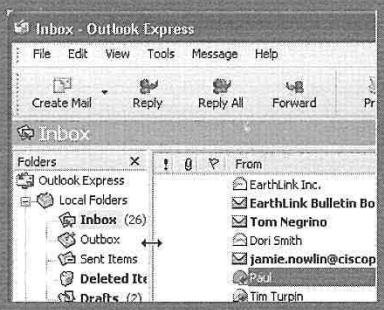
- Click the Send/Recv button on the toolbar. (It's identified in Figure 12-1, which depicts Outlook Express after you've been living in it for a while.)
- Choose Tools→Send and Receive→Send and Receive All.
- Press Ctrl+M.

POWER USERS' CLINIC

The Mighty Morphing Interface

You don't have to be content with the factory-installed design of the Outlook Express screen; you can control which panes are visible, how big they are, and which columns show up in list views.

To change the size of a pane, drag its border to make it larger or smaller, as shown here. You can also hide or show the toolbar, folder list, or preview pane using the View→Layout command. For example, to hide the toolbar, choose View→ Layout; turn off Toolbar; and click OK.



The View→Layout command also lets you control where the preview pane appears: under the message list, as usual, or to its right—a great arrangement if you have a very wide screen.

Outlook Express lets you decide what columns are displayed in the list pane; for example, if you don't particularly care about seeing the Flag column for your email, you can hide it, leaving more space for the Subject and Received columns. To switch columns on or off, choose from the list in the View→ Columns dialog box.

You can also *rearrange* the columns, which can be handy if you'd rather see the Subject column first instead of the sender, for example. Just drag the column's name *header* horizontally and release when the vertical dotted line is where you want the column to wind up. To make a column wider or narrower, drag the short black divider line between column names horizontally, much the way you'd resize a folder window list-view column.

EX 2009

Tip: Outlook Express can be set up to check your email accounts automatically according to a schedule. Just choose Tools→Options. On the General tab, you'll see the "Check for new messages every __ minutes" checkbox, which you can change to your liking.

Now Outlook Express contacts the mail servers listed in the account list, retrieving new messages and downloading any files attached to those messages. It also sends any outgoing messages and their attachments.

In the list on the right side of your screen, the names of new messages show up in bold type; folders containing new messages show up in bold type, too (in the Folders list at the left side of the screen). The bold number in parentheses after the word "Inbox" represents how many messages you haven't read yet.

Finally, after messages are downloaded, Outlook Express applies its *mail filters*—what it calls *rules*—to all new messages (to screen out junk mail, for example). More on rules on page 389.

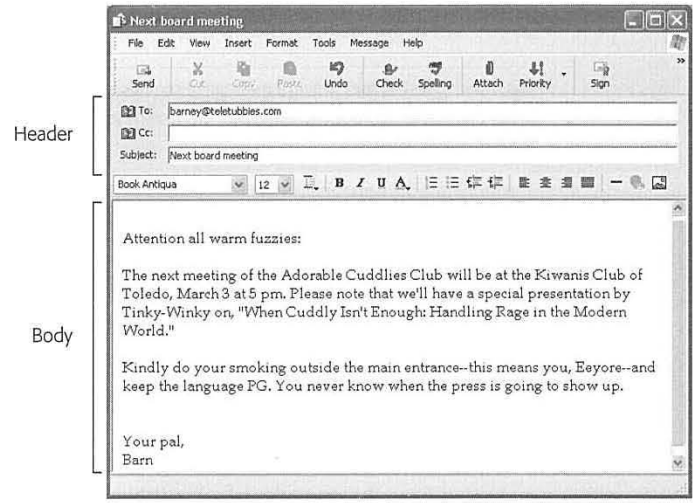


Figure 12-2: *A message has two sections: the* header, *which holds information about the message; and the* body, *which contains the message itself. In addition, the Outlook Express window has a menu bar and a toolbar, which you can use to access other available features for composing and sending messages.*

Mail folders in Outlook Express

Outlook Express organizes your email into *folders* at the left side of the screen. To see what's in a folder, click it once:

- **Inbox** holds mail you've received.
- **Outbox** holds mail you've written but haven't sent yet.
- **Sent Items** holds copies of messages you've sent.

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- **Deleted Items** holds mail you've deleted. It works a lot like the Recycle Bin, in that messages placed there don't actually disappear. Instead, they remain in the Deleted Items folder, awaiting rescue on the day you retrieve them. To empty this folder, right-click it and choose "Empty 'Deleted Items' Folder" from the shortcut menu (or just choose Edit→Empty 'Deleted Items' Folder).

Tip: To make the folder empty itself every time you exit Outlook Express, choose Tools→Options, click the Maintenance tab, and turn on "Empty messages from the 'Deleted Items' folder on exit."

- **Drafts** holds messages you've started but haven't finished—and don't want to send just yet.

You can also add to this list, creating folders for your own organizational pleasure—Family Mail, Work Mail, or whatever. See page 386.

Composing and sending messages

To send email to a recipient, click the Create Mail icon on the toolbar (or press Ctrl+N, or choose Message→New Mail). The New Message form, shown in Figure 12-2, opens so you can begin creating the message.

Tip: Another way to start writing a message to someone, new in version 6, is by finding that person's name in the Contacts list at the lower-left side of the screen (see Figure 12-1). (Scroll directly to a name by typing the first couple of letters.)

Then right-click the name and choose Send E-Mail from the drop-down list. A blank, outgoing piece of mail appears, already addressed to the person whose name you clicked.

Composing the message requires several steps:

1. **Type the email address of the recipient into the "To:" field.**

   If you want to send a message to more than one person, separate their email addresses using semicolons, like this: *bob@earthlink.net; billg@microsoft.com; steve@apple.com.*

   There's no need to type out all those complicated email addresses, either. As you begin typing the person's plain-English name, the program attempts to guess who you mean (if it's somebody in your address book)—and fills in the email address automatically, as described in the next section. If it guesses the correct name, great; press Tab to move on to the next text box. If it guesses wrong, just keep typing; the program quickly retracts its suggestion and watches what you type next. (You can also double-click somebody's name in your address book.)

   As in most Windows dialog boxes, you can jump from blank to blank in this window (from the "To:" field to the "CC:" field, for example) by pressing the Tab key.

2. **To send a copy of the message to other recipients, enter the additional email address(es) in the "CC:" field.**

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CC stands for *carbon copy*. There's very little difference between putting all your addressees on the "To:" line (separated by semicolons) and putting them on the "CC:" line; the only difference is that your name in the "CC:" line implies, "I sent you a copy because I thought you'd want to know about this correspondence, but I'm not expecting you to reply."

Once again, use the address book to quickly type in these names, and be sure to separate email addresses with semicolons. Press Tab when you're finished.

3. **Type the topic of the message in the "Subject:" field.**

   Some people, especially those in the business world, get bombarded with email. That's why it's courteous to put some thought into the Subject line (use "Change in plans for next week" instead of "Hi," for example).

   Press the Tab key to move your cursor into the large message-body area.

4. **Choose a format (HTML or plain text), if you like.**

   When it comes to formatting a message's body text, you have two choices: *plain text* or *HTML* (Hypertext Markup Language).

   Plain text means that you can't format your text with bold type, color, specified font sizes, and so on. HTML, on the other hand, is the language used to create Web pages, and it lets you use formatting commands (such as font sizes, colors, and bold

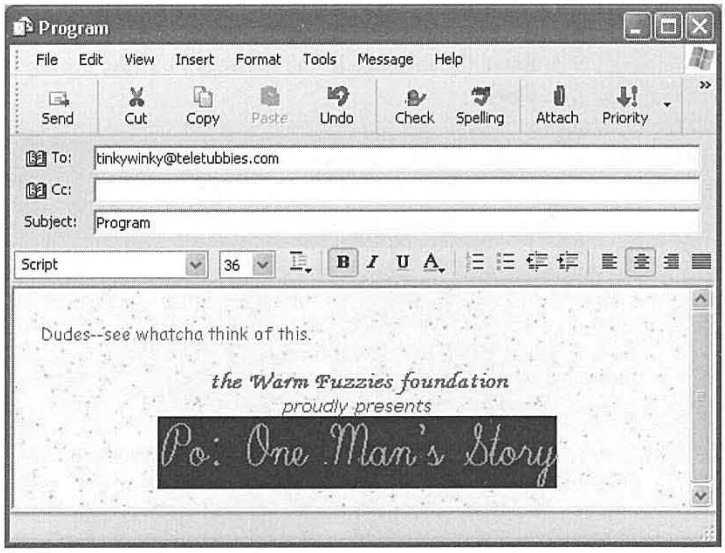


Figure 12-3: *HTML-based email lets you exercise some control over the layout of your email messages, including text colors, font selection, and text alignment. The HTML toolbar looks and acts like a toolbar that you might find in a word processing program. With it, you can turn plain-Jane email into an HTML-formatted wonderland.*

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or italic text). But there's a catch: Some email programs can't read HTML-formatted email, and HTML mail is much larger, and therefore slower to download, than plain-text messages. (For that reason, it really irritates many computer pros.)

So which should you choose? Plain text tends to feel a little more professional, never irritating anybody—and you're guaranteed that the recipient will see exactly what was sent. If you send an HTML message to someone whose email program can't handle HTML, all is not lost—your message appears in a friendly, plain-text format at the top, and then again at the bottom, cluttered with HTML codes.

To specify which format Outlook Express *proposes* for all new messages (plain text or HTML), choose Tools→Options. Click the Send tab. Then, in the section labeled Mail Sending Format, choose either the HTML or Plain Text button, and then click OK.

No matter which setting you specify there, however, you can always switch a particular message to the opposite format. Just choose Format→Rich Text (HTML), or Format→Plain Text.

If you choose the HTML option, clicking in the message area activates the HTML toolbar, whose various buttons control the formatting, font, size, color, paragraph indentation, line spacing, and other word processor–like formatting controls.

One thing to remember: Less is more. If you go hog-wild formatting your email, the message may be difficult to read. Furthermore, since most *junk* email is formatted using HTML codes, using HTML formatting may route your message into some people's Junk Mail folders.

5. **Enter the message in the message box (the bottom half of the message window).**

UP TO SPEED

Blind Carbon Copies

A *blind carbon copy* is a secret copy. This feature lets you send a copy of a message to somebody secretly, without any of the other recipients knowing. The names in the "To:" and "CC:" fields appear at the top of the message for all recipients to see, but nobody can see the names you typed into the BCC: box. To view this box, choose View→All Headers.

You can use the "BCC:" field to quietly signal a third party that a message has been sent. For example, if you send your co-worker a message that says, "Chris, it bothers me that you've been cheating the customers," you could BCC your boss or supervisor to clue her in without getting into trouble with Chris.

The BCC box is useful in other ways, too. Many people send email messages (containing jokes, for example) to a long list of recipients. You, the recipient, must scroll through a very long list of names the sender placed in the "To:" or "CC:" field.

But if the sender used the "BCC:" field to hold all the recipients' email addresses, you, the recipient, won't see any names but your own at the top of the email. (Unfortunately, spammers—the miserable cretins who send you junk mail—have also learned this trick.)

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You can use all standard editing techniques, including Cut, Copy, and Paste, to rearrange the text as you write it.

Tip: If Microsoft Word is installed on your PC, you can also spell-check your outgoing mail–just choose Tools→Spelling (or press F7) in the new message window.

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6. **Add a signature, if you wish.**

   Signatures are bits of text that get stamped at the bottom of outgoing email messages. They typically contain a name, a mailing address, or a Monty Python quote. (In fact, some signatures are longer than the messages they accompany.)

   To create a signature, choose Tools→Options, click the Signatures tab, and then click the New button. The easiest way to compose your signature is to type it into the Edit Signatures text box at the bottom of the window. (If you poke around long enough in this box, you'll realize that you can actually create multiple signatures—and assign each one to a different outgoing email account.)

   Once you've created a signature (or several), you can tack it onto your outgoing mail for all messages (by turning on "Add signatures to all outgoing messages" at the top of this box) or on a message-by-message basis (by choosing Insert→Signature in the New Message window).

7. **Click the Send button.**

   Alternatively, press Alt+S, or choose File→Send Message. Your PC connects to the Internet and sends the message.

If you'd rather have Outlook Express place each message you write in the Outbox folder instead of connecting to the Net each time you click the Send button, see "Send tab," on page 392. There you'll discover how to make Outlook Express quietly collect your outgoing mail—until you click the Send/Recv button on the toolbar, that is.

The Address Book

Accumulating names in an address book—the same one described on page 190—eliminates the need to enter complete email addresses whenever you want to send a message. Click the Addresses button on the toolbar; then, to begin adding names and email addresses, click New.

Tip: Outlook Express offers a convenient timesaving feature: the Tools→Add Sender to Address Book command. Whenever you choose it, Outlook Express automatically stores the email address of the person whose message is on the screen. (Alternatively, you can right-click an email address in the message and choose "Add to Address Book" from the shortcut menu.)

Attaching files to messages

Sending little text messages is fine, but it's not much help when you want to send somebody a photograph, a sound recording, a Word or Excel document, and so on.

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Fortunately, attaching such files to email messages is one of the world's most popular email features.

To attach a file to a message, use either of two methods:

- **The long way.** Click the Attach button on the New Message dialog box toolbar. When the Insert Attachment dialog box opens, navigate the folders on your drive to locate the file and select it. (In the resulting navigation window, Ctrl-click multiple files to attach them all at once.)

  When you click the Attach button, the name of the attached file appears in the message in the Attach text box. (In fact, you can repeat this process to send several attached files with the same message.) When you send the message, the file tags along.

Note: If you have a high-speed connection like a cable modem, have pity on your recipients if they don't. A big picture or movie file might take you only seconds to send, but tie up your correspondent's modem for hours. If you intend to send a photo, for example, use the technique described on page 213, and take advantage of XP's offer to scale down the image to emailable size before sending it.

- **The short way.** If you can see the icon of the file you want to attach—in its folder window behind the Outlook Express window—then attach it by *dragging* its icon directly into the message window. That's a handy technique when you're attaching many different files.

Tip: To remove a file from an outgoing message before you've sent it, right-click its icon and choose Remove from the shortcut menu—or just left-click it and then press the Delete key.

Reading Email

Just seeing a list of the *names* of new messages in Outlook Express is like getting wrapped presents; the best part is yet to come. There are two ways to read a message: using the preview pane, and opening the message into its own window.

To preview a message, click its name in the list pane; the body of the message appears in the preview pane below. Don't forget that you can adjust the relative sizes of the list and preview panes by dragging the gray border between them up or down.

To open a message into a window of its own, double-click its name in the list pane. An open message has its own toolbar, along with Previous and Next message buttons.

Regardless of your viewing preference, any attached pictures, sounds, or movies *also* appear in the body of the message; what's more, these sounds and movies can be played in the email message itself.

Once you've read a message, you can view the next one in the list either by pressing Ctrl +right arrow (for the next message) or Ctrl +U (for the next *unread* message),

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or by clicking its name in the list pane. (If you're using preview mode, and haven't opened a message into its own window, you can also press the up or down arrow key to move from one message to the next.)

Tip: To mark a message that you've read as an *unread* message, so that its name remains bolded, right-click its name in the list pane and choose Mark as Unread from the shortcut menu.

Here's another timesaver: To hide all the messages you've already read, just choose View→Current View→Hide Read Messages. Now, only unread messages are visible in the selected folder. To bring the hidden messages back, choose View→Current View→Show All Messages.

How to Process a Message

Once you've read a message and savored the feeling of awe brought on by the miracle of instantaneous electronic communication, you can process the message in any of several ways.

Deleting messages

Sometimes it's junk mail, sometimes you're just done with it; either way, it's a snap to delete a message. Just click the Delete button on the toolbar, press the Delete key, or choose Edit→Delete. (You can also delete a batch of messages simultaneously by highlighting the entire group and then using the same button, menu command, or keystroke.)

Either way, the message or messages don't actually disappear, just as moving a file icon to the Recycle Bin doesn't actually delete it. Instead, these commands move the messages to the Deleted Items folder; if you like, click this folder to view a list of the messages you've deleted. You can even rescue some simply by dragging them into another folder (such as right back into the Inbox).

Outlook Express doesn't truly vaporize messages in the Deleted Items folder until you "empty the trash." You can empty it in any of several ways:

UP TO SPEED

Selecting Messages

In order to process a group of messages simultaneously–to delete, move, or forward them, for example–you must first master the art of multiple message selection.

To select two or more messages that appear consecutively in your message list, click the first message, then Shift-click the last. Known as a *contiguous selection*, this trick selects every message between the two that you clicked.

To select two or more messages that *aren't* adjacent in the list (that is, skipping a few messages between selected ones), Ctrl-click the messages you want. Only the messages you click get selected–no filling in of messages in between, this time.

After using either technique, you can also *deselect* messages you've managed to highlight–just Ctrl-click them again.

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- Right-click the Deleted Items folder. Choose "Empty 'Deleted Items' Folder" from the shortcut menu.
- Click a message, or a folder, within the Deleted Items Folder list and then click the Delete button on the toolbar (or press the Delete key). You'll be asked to confirm its permanent deletion.
- Set up Outlook Express to delete messages automatically when you quit the program. To do so, choose Tools→Options. On the Maintenance tab, turn on "Empty messages from the 'Deleted Items' folder on exit." Click OK.

Replying to Messages

To reply to a message, click the Reply button in the toolbar, or choose Message→Reply to Sender, or press Ctrl+R. Outlook Express creates a new, outgoing email message, preaddressed to the sender's return address.

To save additional time, Outlook Express pastes the entire original message at the bottom of your reply (complete with the > brackets that serve as Internet quoting marks); that's to help your correspondent figure out what you're talking about. (To turn off this feature, choose Tools→Options, click the Send tab, and turn off "Include message in reply.") Outlook Express even tacks *Re:* ("regarding") onto the front of the subject line.

Your cursor appears at the top of the message box; now begin typing your reply. You can also add recipients, remove recipients, edit the subject line or the message, and so on.

Tip: Use the Enter key to create blank lines within the bracketed original message in order to place your own text within it. Using this method, you can splice your own comments into the paragraphs of the original message, replying point by point. The brackets preceding each line of the original message help your correspondent keep straight what's yours and what's hers.

Note, by the way, that there are three kinds of replies, each represented by a different icon on the toolbar:

UP TO SPEED

About Mailing Lists

During your email experiments, you're likely to come across something called a mailing list—a discussion group conducted via email. By searching Yahoo *(www.yahoo.com)* or other Web directories, you can find mailing lists covering just about every conceivable topic.

You can send a message to all members of such a group by sending a message to a single address—the list's address. The list is actually maintained on a special mail server. Everything sent to the list gets sent to the server, which forwards the message to all of the individual list members. That's why you have to be careful when you think you're replying to *one person* in the discussion group; if you reply to the list and not to a specific person, you'll be sending your reply to every address on the list—sometimes with disastrous consequences.

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- A **standard reply** goes to the sender of the message (click the Reply button). If that sender is a mailing list (see the sidebar box below), then the message gets sent to the *entire* mailing list, which has gotten more than one unsuspecting novice PC fan into trouble.
- **Reply Group** (available only when you're reading newsgroup messages) creates a reply intended for the entire Internet—that is, everyone who reads this newsgroup. (By contrast, click Reply to shoot a private note to only one person: the person who typed the message.)
- The **Reply To All** button addresses a message to all recipients of the original message, including any CC recipients. This is the button to use if you're participating in a group discussion of some topic. For example, six people can simultaneously carry on an email correspondence, always sending each response to the other five in the group.

Forwarding Messages

Instead of replying to the person who sent you a message, you may sometimes want to *forward* the message—pass it on—to a third person.

To do so, click the Forward button in the toolbar, choose Message→Forward, or press Ctrl+F. A new message opens, looking a lot like the one that appears when you reply. Once again, before forwarding the message, you have the option of editing the subject line or the message itself. (For example, you may wish to precede the original message with a comment of your own, along the lines of: "Frank: I thought you'd be interested in this joke about Congress.")

All that remains is for you to specify who receives the forwarded message. Just address it as you would any outgoing piece of mail.

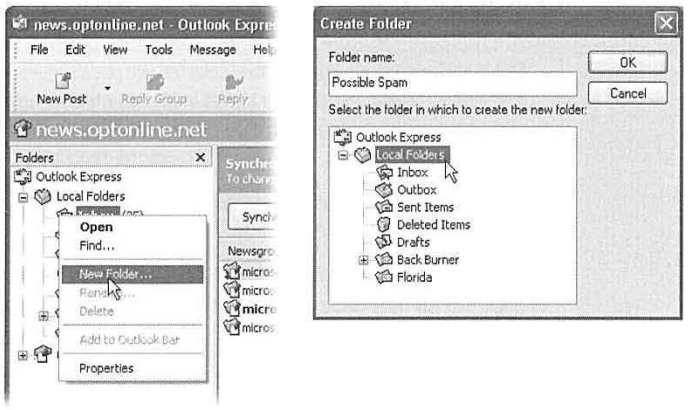


Figure 12-4: *Before you click OK, be sure to click the name of the existing folder that you want to contain your new one. Most of the time, you'll probably want to click the Local Folders icon before creating the new folder.*

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Printing Messages

Sometimes there's no substitute for a printout of an email message—an area where Outlook Express shines. Just click the Print button in the toolbar, choose File→Print, or press Ctrl+P. The standard Windows Print dialog box pops up, so that you can specify how many copies you want, what range of pages, and so on. Finally, click the Print button to begin printing.

Filing Messages

Outlook Express lets you create new folders in the Folders list; by dragging messages from your Inbox onto one of these folder icons, you can file away your messages into appropriate storage cubbies. You might create one folder for important messages, another for order confirmations when shopping on the Web, still another for friends and family, and so on. In fact, you can even create folders *inside* these folders, a feature beloved by the hopelessly organized.

To create a new folder, choose File→Folder→New, or right-click the Local Folders icon (in the folder list), and choose New Folder from the shortcut menu (Figure 12-4, left). Either way, a Create Folder window appears, providing a place to name the new folder (Figure 12-4, right).

Tip: To rename an existing folder, right-click it and choose Rename from the shortcut menu.

To move a message into a folder, proceed like this:

- Drag it out of the list pane and onto the folder icon. You can use any part of a message's "row" in the list as a handle. You can also drag messages en masse onto a folder.
- Control-click a message (or one of several that you've highlighted). From the resulting shortcut menu, choose Move to Folder. In a dialog box, the folder list appears; select the one you want, then press Enter or click OK.

Tip: When you click a + button in the Folder list, you see all folders contained within that folder, exactly as in Windows Explorer. You can drag folders inside other folders, nesting them to create a nice hierarchical folder structure. (To drag a nested folder back into the list of "main" folders, just drag it to the Local Folders icon.)

You can also drag messages between folders; just drag one from the message list onto the desired folder at the left side of the screen.

This can be a useful trick when applied to a message in your Outbox. If you decide to postpone sending it, drag it into any other folder; Outlook Express won't send it until you drag it *back* into the Outbox.

Flagging Messages

Sometimes, you'll receive an email message that prompts you to some sort of action, but you may not have the time (or the fortitude) to face the task at the moment. ("Hi

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there… it's me, your accountant. Would you mind rounding up your expenses for 1993 through 2001 and sending me a list by email?")

That's why Outlook Express provides the Flag commands, which let you *flag* a message, positioning a little red flag in the corresponding column next to a message's name. These little red flags are simply visual indicators that you place for your own convenience, meaning whatever you want them to mean. You can bring all flagged messages to the top of the list by choosing View→Sort By→Flag.

To flag a message in this way, select the message (or several messages) and choose Message→Flag Message. (Use the same command again to clear a flag from a message.)

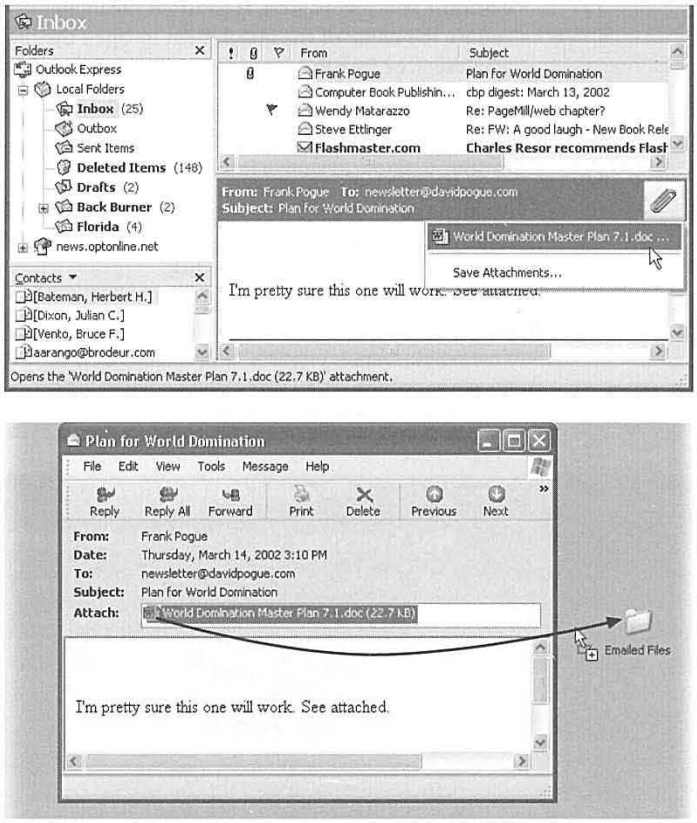


Figure 12-5:
Top: One way to rescue an attachment from an email message is to click the paper clip icon and choose Save Attachments.

Bottom: Dragging an attachment's icon onto your desktop takes the file out of the Outlook Express world and into your standard Windows world, where you can file it, trash it, open it, or manipulate it as you would any file.

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Opening Attachments

Just as you can attach files to a message, people can also send files to you. You know when a message has an attachment because a paper clip icon appears next to its name in the Inbox.

Outlook Express doesn't store downloaded files as normal file icons on your hard drive. All your messages *and* all the attached files are part of one big, specially encoded mail file. To extract an attached file from this mass of software, use one of the following methods:

- Click the attachment icon (Figure 12-5), select Save Attachments from the shortcut menu, and then specify the folder in which you want the file saved.
- Click the attachment icon. A shortcut menu appears, from which you can either choose the name of the attachment to open the file directly (in Word, Excel, or whatever), or Save Attachments to save it to the disk.
- If you've double-clicked the message so that it appears in its own window, then drag the attachment icon out of the message window and onto any visible portion of your desktop, as shown in Figure 12-5.
- Again if you've opened the message into its own window, you can double-click the attachment's icon in the message. Once again, you'll be asked whether you want to open the file or save it to the disk.

Note: Whenever you open an attachment directly from within the email (rather than saving it to the disk first), *use the File→Save As command* to save the file into a folder! Otherwise, you won't be able to open the file again except from within Outlook Express–and any changes you make to that document will appear only when you open it from within Outlook Express, too.

FREQUENTLY ASKED QUESTION

Not Everyone Has the Same Software

People send me documents in Microsoft Word, but I use WordPerfect. I write back and tell them to paste the text into the email message itself, but they don't like to do that. Do I have to buy tons of software I don't want just to open attachments?

No. There's often a way to open attachments even if you don't own the program used to create them. Microsoft Word documents, for instance, automatically open in WordPad if you don't have Microsoft Word on your system.

Word processors and spreadsheet programs can usually *import* documents created by other applications, complete with formatting. To try this approach, open the email message that contains the attachment. Then right-click the icon for the attachment. From the shortcut menu, choose Save As and save the file in a folder (the My Documents folder is a good choice).

Finally, launch your own equivalent application (word processor, spreadsheet program, or whatever), and then choose File→Open or File→Import. Locate the file you moved into your My Documents folder. You'll be pleased at how often this trick opens a document that was created by a program that you don't have…using a program that you do.

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An important reminder: If the Save As shortcut menu is dimmed, or if you see a "This attachment has been blocked" message, it's because Outlook Express is protecting you from an attachment it believes might contain a virus. See page 334 for details and workarounds to this Service Pack 2 feature.

Message Rules

Once you know how to create folders, the next step in managing your email is to set up a series of *message rules*. Message rules are filters that can file, answer, or delete an incoming message *automatically* based on its subject, address, or size. Message rules require you to think like the distant relative of a programmer, but the mental effort can reward you many times over. In fact, message rules can turn Outlook Express into a surprisingly smart and efficient secretary.

Setting up message rules

Now that you're thoroughly intrigued about the magic of message rules, here's how to set one up:

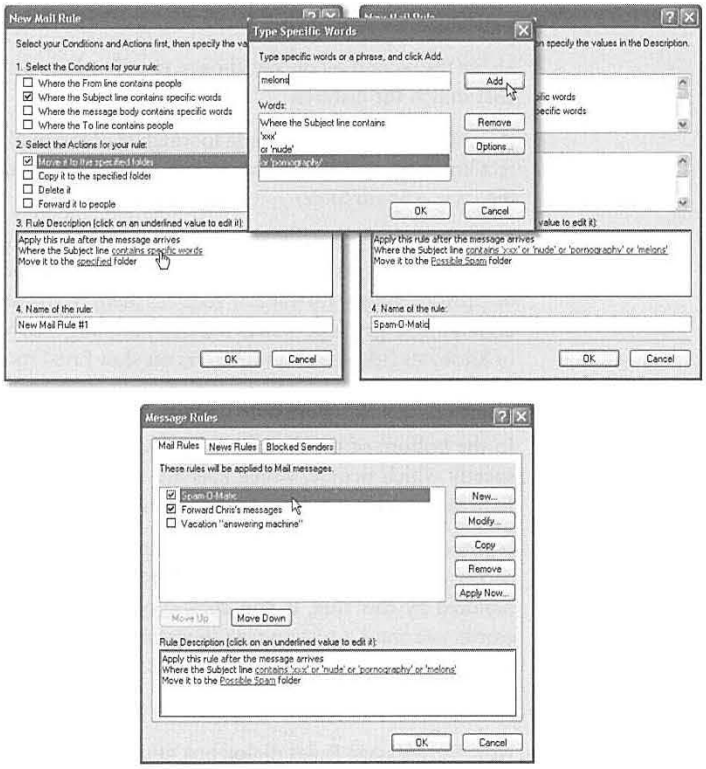


Figure 12-6: *Top left: Building a message rule entails specifying which messages you want Outlook Express to look for—and what to do with them. By clicking the underlined words, as shown here, you specify what criteria you're looking for.*

Top middle: Let the rule know which words it's supposed to watch for.

Top right: The completed message rule (note the summary at the bottom).

Bottom: All mail message rules you've created appear in the Message Rules dialog box. Select a rule to see what it does, and use the Move Up and Move Down buttons to specify the order in which rules should be run. Double-click a rule to open the Edit Rule dialog box, where you can specify what the rule does.

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1. **Choose Tools→Message Rules→Mail.**

   The New Mail Rule dialog box appears, as shown in Figure 12-6 at top left.

2. **Use the top options to specify how Outlook Express should select messages to process.**

   For example, if you'd like Outlook Express to watch out for messages from a particular person, you would choose, "Where the From line contains people."

   To flag messages containing *loan, $$$$, XXXX, !!!!,* and so on, choose, "Where the Subject line contains specific words."

   If you turn on more than one checkbox, you can set up another condition for your message rule. For example, you can set up the first criterion to find messages *from* your uncle, and a second that watches for subject lines that contain "humor." Now, only jokes sent by your uncle will get placed in, say, Deleted Items.

   (If you've set up more than one criterion, you'll see the underlined word and at the bottom of the dialog box. It indicates that the message rule should apply only if *all* of the conditions are true. Click the and to produce a little dialog box, where you have the option to apply the rule if *any* of the conditions are met.)

3. **Using the second set of checkboxes, specify what you want to happen to messages that match the criteria.**

   If, in step 2, you told your rule to watch for junk mail containing *$$$$* in the Subject line, here's where you can tell Outlook Express to delete or move the message into, say, a Spam folder.

   With a little imagination, you'll see how these checkboxes can perform absolutely amazing functions with your incoming email. Outlook Express can delete, move, or print messages; forward or redirect them to somebody; automatically reply to certain messages; and even avoid downloading files bigger than a certain number of kilobytes (ideal for laptop lovers on slow hotel room connections).

4. **Specify *which* words or people you want the message rule to watch out for.**

   In the bottom of the dialog box, you can click any of the underlined phrases to specify which people, which specific words, which file sizes you want Outlook Express to watch out for—a person's name, or *XXX,* in the previous examples.

   If you click contains people, for example, a dialog box appears in which you can access your address book to select certain individuals whose messages you want handled by this rule. If you click contains specific words, you can type in the words you want a certain rule to watch out for (in the Subject line, for example; see Figure 12-6, top). And so on.

5. **In the very bottom text box, name your mail rule. Click OK.**

   Now the Message Rules dialog box appears (Figure 12-6, bottom). Here, you can manage the rules you've created, choose a sequence for them (those at the top get applied first), and apply them to existing messages (by clicking Apply Now).

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Tip: Outlook Express applies rules as they appear–from top to bottom–in the Message Rules window; if a rule doesn't seem to be working properly, it may be that an earlier rule is intercepting and processing the message before the "broken" rule even sees it. To fix this, try moving the rule up or down in the list by selecting it and then clicking the Move Up or Move Down buttons.

Two sneaky message-rule tricks

You can use message rules for many different purposes. But here are two of the best:

- **Create a spam filter.** When a spammer sends junk email, he usually puts your address on the "BCC:" (blind carbon copy) line, to prevent you from seeing who else received the message. This characteristic makes it easy to screen out such mail, and create a message rule that looks for messages where the "To:" or "CC:" line contains *your* address—and files them into the Inbox as usual.

  But then create another message rule for "For all messages" that puts messages into a folder that you've created—called, for example, Possible Spam. Because the second rule doesn't kick in until *after* the first one has done its duty, the second rule affects only messages in which your name appeared on the "BCC:" line (which is almost always spam). Once a week, it's wise to look through the Possible Spam folder in case a legitimate message found its way there.

- **The email answering machine.** If you're going on vacation, turn on "For all messages" in step 2, and then "Reply with message" in step 3. In other words, you can turn Outlook Express into an email answering machine that automatically sends a canned "I'm away until the 15th" message to everyone who writes you.

Tip: Be sure to unsubscribe from, or turn off, any email mailing lists before you turn on "For all messages"; otherwise, you'll incur the wrath of the other Internet citizens by littering their email discussion groups with copies of your auto-reply message.

Configuring Outlook Express

Outlook Express has enough features and configuration options to fill a very thick book. You can see them for yourself by choosing Tools→Options from the Outlook Express window (see Figure 12-7). Here's an overview of some of the features you'll find.

General tab

Most of the controls on the General tab govern what Outlook Express does when you first launch it. Take note of the options for configuring automatic connection to your ISP. You can select the option to check for messages every few minutes, and then use the drop-down list to tell Outlook Express how, and whether, to connect at that time—if you're not already online.

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Read tab

Use these options to establish how the program handles messages in the Inbox. One of these options marks a message as having been read—changing its typeface from bold to non-bold—if you leave it highlighted in the list for five seconds or more, even without opening it. That's one option you may want to consider turning off. (This is also where you choose the font you want to use for the messages you're reading, which is an important consideration.)



Figure 12-7:
The Options dialog box has ten tabs, each loaded with options. Most tabs have buttons that open additional dialog boxes. Coming in 2007: Outlook Express Options: The Missing Manual.

Receipts tab

You can add a *return receipt* to messages you send. When the recipient reads your message, a notification message (receipt) is emailed back to you under two conditions: *if* the recipient agrees to send a return receipt to you, and *if* the recipient's email program offers a similar feature. (Outlook Express, Outlook, and Eudora all do.)

Send tab

The options on the Send tab govern outgoing messages. One option to consider turning *off* here is the default option, "Send messages immediately." That's because as soon as you click the Send button, Outlook Express tries to send the message, even if that means triggering your modem to dial. All of this dialing—and *waiting* for the dialing—drives some people crazy, especially in households with only one phone line.

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If you turn this option off, then clicking the Send button simply places a newly written message into the Outbox. As you reply to messages and compose new ones, the Outbox collects them. They're not sent until you choose Tools→Send and Receive (or click Send/Recv on the toolbar, or press Ctrl+M). Only at that point does Outlook Express command your modem to dial the Internet. It then sends all the waiting outgoing mail at once.

Tip: To see the messages waiting in your Outbox, click the Outbox icon at the left side of the screen. At this point, you can click a message's name (in the upper-right pane of the screen) to view the message itself in the *lower*-right pane, exactly as with messages in your Inbox.

Don't bother to try *editing* an outgoing message in this way, however, since Outlook Express won't let you do so. Only by double-clicking a message's name (in the upper-right pane), thus opening it into a separate window, can you make changes to a piece of outgoing mail.

The Send tab also includes features for configuring replies. For example, you can disable the function that puts the original message at the bottom of a reply.

Finally, the "Automatically put people I reply to in my Address Book" can be a real timesaver. Each time you reply to somebody, his email address is automatically saved

FREQUENTLY ASKED QUESTION

Canning Spam

Help! I'm awash in junk email! How do I get out of this mess?

Spam is a much hated form of advertising that involves sending unsolicited emails to thousands of people. While there's no instant cure for spam, you can take certain steps to protect yourself from it.

1. Use one email account for online shopping, Web site and software registration, and newsgroup posting; use a second one for person-to-person email.

   Spammers have automated software robots that scour every public Internet message and Web page, automatically locating and recording email addresses they find. These are the primary sources of spam, so at least you're now restricting the junk mail to one secondary mail account.

2. Whenever you receive a piece of junk mail, choose Message→Block Sender from the Outlook Express toolbar. Outlook Express will no longer accept email from that sender.

3. When filling out forms or registering products online, always look for checkboxes requesting permission for the company to send you email or share your email address with its "partners." Just say no.

4. When posting messages in a newsgroup, insert the letters NOSPAM somewhere into the email address you've specified in the News Account dialog box (page 396). Anyone replying to you via email must manually remove the NOSPAM from your email address, which is a slight hassle; meanwhile, the spammers' software robots (which aren't very bright) will lift a bogus email address from newsgroup posts.

5. Create *message rules* to filter out messages containing typical advertising words such as *casino, Rolex, herbal,* and so forth. (You'll find instructions in this chapter.)

6 Buy an anti-spam program like SpamAssassin or IHateSpam.

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in your address book, so that the next time you want to write him a note, you won't need to look up the address—just type the first few letters of it in the "To:" box.

Compose tab

Here's where you specify the font you want to use when writing messages and newsgroup messages.

This is also the control center for stationery; it houses custom-designed templates, complete with fonts, colors, backgrounds, borders, and other formatting elements that you can use for all outgoing email. Needless to say, sending a message formatted with stationery means that you're using HTML formatting, as described earlier, complete with its potential downsides.

To choose a stationery style for all outgoing messages, turn on the Mail checkbox and then click the Select button. You're offered a folder full of Microsoft stationery templates; click one to see its preview. You can also click the Create New button on the toolbar, which launches a wizard that walks you through the process of designing your own background design.

Tip: You don't have to use one particular stationery style for all outgoing messages. When sending a message, instead of clicking the Create Mail button on the Outlook Express toolbar, just click the tiny down-arrow triangle *next* to it. Doing so opens a window that lists several stationery styles, letting you choose one on a message-by-message basis.

Signatures tab

As noted earlier in this chapter, you use this tab to design a *signature* for your messages. By clicking the New button and entering more signature material in the text box, you can create several *different* signatures: one that's for business messages, one for your buddies, and so on. (Outlook Express calls them Signature #1, Signature #2, and so on. To rename a signature, click its name and then click the Rename button.)

To insert a signature into an outgoing message, choose Insert→Signature, then choose the one you want from the list that appears.

Spelling tab

The Spelling tab offers configuration options for the Outlook Express spell-checking feature (which requires that you have Microsoft Word). You can even force the spell checker to correct errors in the *original* message when you send a reply (although your correspondent may not appreciate it).

Security tab

This tab contains options for sending secure mail, using digital IDs, and encryption. If you're using Outlook Express in a business that requires secure email, the system administrator will provide instructions. Otherwise, you'll find that most of these settings have no effect.

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Tip: One of these options is very useful in the modern age: "Warn me when other applications try to send mail as me." That's a thinly veiled reference to virus programs that, behind the scenes, send out hundreds of infected emails to everybody in your address book. This option ensures that if some software—not you—tries to send messages, you'll know about it.

Connection tab

You change options for making and sustaining the connection to your ISP in the Connection tab. For example, you can tell Outlook Express to hang up automatically after sending and receiving messages (and reconnect the next time you want to perform the same tasks). As noted in the dialog box, though, Outlook Express otherwise uses the same Internet settings described in Chapter 9.

Maintenance tab

This tab is your housekeeping center. These options let you clear out old deleted messages, clean up downloads, and so on.

Newsgroups

Newsgroups have nothing to do with news; in fact, they're Internet bulletin boards. There are at least 50,000 of them, on every conceivable topic: pop culture, computers, politics, and every other special (and *very* special) interest; in fact, there are several dozen just about Windows. Use Outlook Express to read and reply to these messages almost exactly as though they were email messages.

Furthermore, Outlook Express lets you use multiple *news servers* (bulletin-board distribution computers), subscribe to individual newsgroups, filter messages in your newsgroups using rules, and post and read messages complete with attachments.

Note: If a news server (not an individual newsgroup) is selected in the Folders list, then the rightmost portion of the Outlook Express interface displays a list of newsgroups available on that server.

UP TO SPEED

Newsgroups Explained

Newsgroups (often called *Usenet*) started out as a way for people to conduct discussions via a bulletin-board-like system, in which a message is posted for all to see and reply to. These public discussions are divided into categories called newsgroups, which cover the gamut from miscellaneous photographic techniques to naval aviation.

These days, Usenet has a certain seedy reputation as a place to exchange questionable pictures, pirated software, and MP3 files with doubtful copyright pedigrees. Even so, there are tens of thousands of interesting, informative discussions going on, and newsgroups are great places to get help with troubleshooting, exchange recipes, or just to see what's on the minds of your fellow Usenet users.

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Setting Up an Account

Setting up a new news account is similar to setting up a new email account; the adventure begins by contacting your Internet service provider and finding out its *news server address,* along with your user name and password.

Next, choose Tools→Accounts; click the News tab, click the Add button, and then click News.

Now a wizard steps you through the process of creating a news account in Outlook Express; it involves entering your email address and the address of your news server. (Sometimes you get newsgroup access with your regular Internet account. If your ISP doesn't provide newsgroup access, you'll have to subscribe to a news service. The price depends on how much you download each month; visit *www.easynews.com, www.supernews.com,* or *www.newsguy.com* for more information.)

Download the List of Newsgroups

When you're finished with the wizard, Outlook Express invites you to download a list of newsgroups available on your server. Click the Yes button, and then wait patiently for a few minutes.

Outlook Express goes to work downloading the list, which can be quite long—more than 50,000 entries, in many cases—and takes several minutes if you connect to the Internet with a dial-up modem. Once that's done, though, you won't have to do it again.

You wind up with the dialog box shown in Figure 12-8. (You can always get to this master list of newsgroups by choosing Tools→Newsgroups, or by pressing Ctrl+W.)

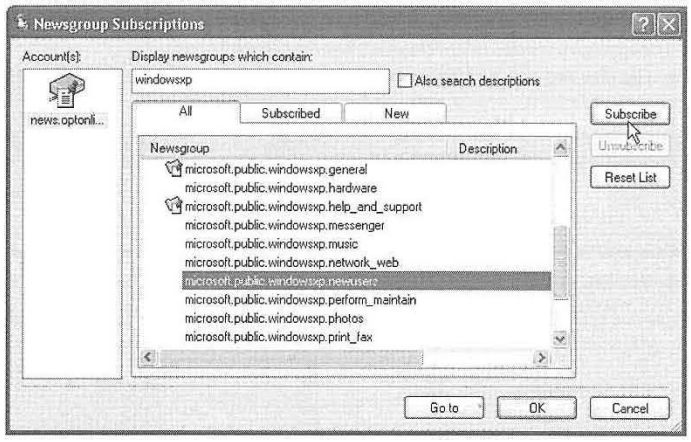


Figure 12-8: *In the text box at the top, enter the text you want to look for in the newsgroup's title (such as* windowsxp, *as shown here—in cyberspace, there are no spaces between words). If you turn up an appealing-sounding topic in the gigantic list beneath, click its name and click the Subscribe button to* subscribe *to it. Now Outlook Express will download the latest messages on that topic each time you connect.*

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Finding Newsgroups and Messages

If you're looking for a particular topic, such as Windows XP, you can view a list of matching discussions by typing a phrase into the text box that's labeled, however ungrammatically, "Display newsgroups which contain" at the top of the window. Outlook Express hides any newsgroups that *don't* match that text (see Figure 12-8).

Reading Messages

Once Outlook Express has downloaded a list of available newsgroups, it's up to you to sift through them and select the discussions you want to monitor.

Fortunately, Outlook Express makes it easy to follow the raging Internet discussions with a feature called *subscriptions*. To subscribe to a newsgroup, select its name in the list, and then click the Subscribe button. When you click OK, an icon for that discussion topic appears under the server's name in the Folder list, acting as though it's a nested folder.

The next time you connect to the Internet, Outlook Express downloads all of the message summaries in the discussions to which you've subscribed. (There may be just a few messages, or several hundred; they may go back only a few days or a couple of weeks, depending on the amount of "traffic" in each discussion and the amount of storage space available on the news server.) These are not the messages themselves, just the *headers*—the author's name, the subject, and the date the message was sent.

To read the actual messages in a newsgroup, either click an entry in the list of messages to download the contents of the message and display it in the preview window (Figure 12-9), or double-click an entry to open the list of messages in a new window.

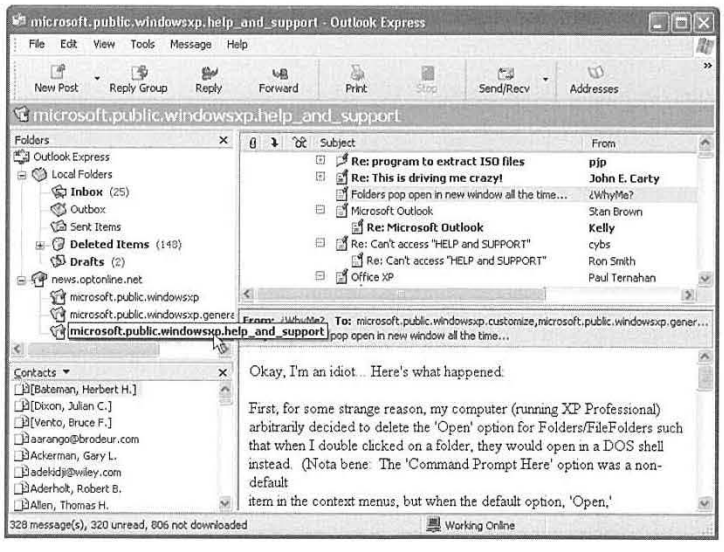


Figure 12-9: *If you've been using Outlook Express for email, the newsgroup portion of things should look familiar. It uses the same three-pane view: The Folders pane lists news servers to which you've subscribed, the top-right pane lists the names of messages in a selected newsgroup, and the bottom-right pane displays the actual text of the message you've highlighted in the message list. (If a newsgroup name is too long to see in its little panel, point to it without clicking, as shown here.)*

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Some particularly large attachments in newsgroups are automatically divided into multiple segments, in part to accommodate those with slow Internet connections. If you're having trouble saving a multipart attachment to your hard drive, make sure that you've selected the message that contains the *first* part. (Even then, you may find that joining multipart newsgroup messages isn't one of Outlook Express's strongest features.)

Tip: You can set up message rules to screen out messages from certain people, messages with certain phrases in their Subject lines, and so on. It works exactly like the message rules for email, as described earlier in this chapter.

Replying, Composing, and Forwarding Messages

Working with newsgroup messages is very similar to working with email messages, except that you must be conscious of whether you're replying to the individual sender of a message or to the entire group. Otherwise, you can reply to messages, forward them, or compose them exactly as described earlier in this chapter. As with email, you can use plain text or (if you don't mind annoying the other Internet citizens) HTML formatting, and include file attachments, too (use the Attach toolbar button, for example).

Tip: Aside from posting advertisements and HTML-formatted messages, the best way to irritate everyone on a newsgroup is to ask a question that has already been answered recently on the newsgroup. Before asking a question, spend five minutes reading the recent newsgroup messages to see whether someone has already answered your question. Also consider visiting the Groups tab at *www.google.com,* a Web site that lets you search all newsgroups for particular topics.

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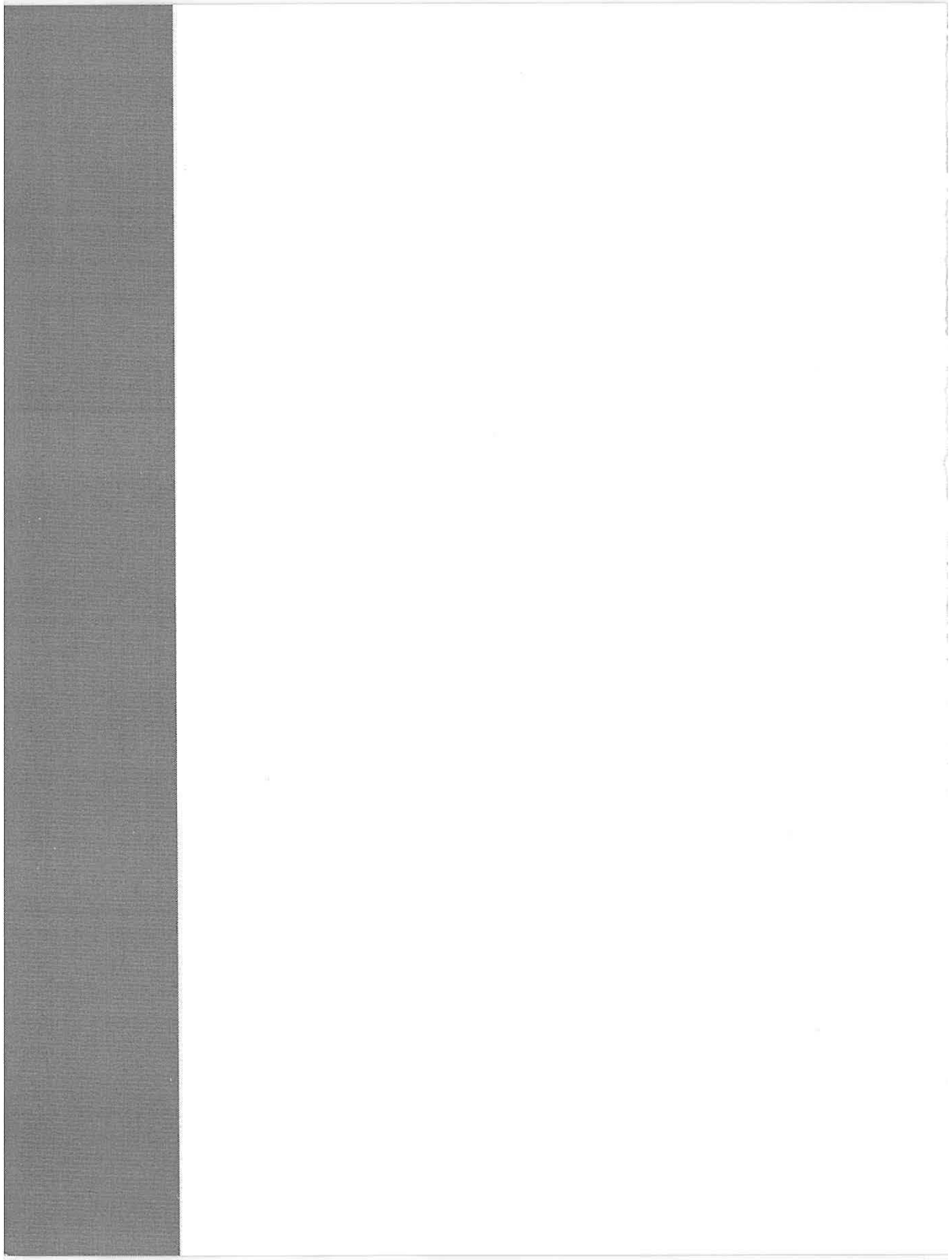
4

Part Four: Plugging into Windows XP

Chapter 13: Printing, Fonts, and Faxing

Chapter 14: Hardware

Chapter 16: Maintenance, Backups, and Troubleshooting



CHAPTER
13

Printing, Fonts, and Faxing

Technologists got pretty excited about "the paperless office" in the eighties, but the PC explosion had exactly the opposite effect: Thanks to the prolifera-tion of inexpensive, high-quality PC printers, we generate far more printouts than ever. There's not much to printing from Windows XP, so this is a short chapter.

Installing a Printer

A printer is designed to follow computer instructions called *printer codes* from your PC. These codes tell the printer what fonts to use, how to set margins, which paper tray to use, and so on.

But the codes aren't identical for every printer. Therefore, every printer requires a piece of software—the printer driver—that tells the printer how to interpret what it "hears" from your computer.

Windows XP comes with hundreds of printer drivers built right in; your printer also came with a set of drivers on a CD or floppy. You can often find more recent driver software for your printer on the manufacturer's Web site, such as *www.epson.com* or *www.lexmark.com,* or from a central driver repository like *www.windrivers.com.*

Existing Printers

Did you upgrade your PC to Windows XP from an earlier version—one that worked fine with your printer? In that case, Windows XP automatically notices and inherits your existing settings. If it's a fairly recent printer with a fairly recent driver, it'll probably work fine with Windows XP.

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But if the printer is especially elderly, the printer software may be incompatible with Windows XP. In that case, your first activity after dinner should be to search the printer company's Web site for an updated version, or check Microsoft's master Windows XP compatibility list at *www.microsoft.com/hcl*.

If you just bought a new computer or a new printer, however, you'll have to hook it up yourself and install its software. In general, there's not much to it.

Note: Only people with Administrator accounts can install a new printer to a Windows XP machine (see Chapter 16).

USB Printers

If you're like most people at home these days, you use an inkjet printer that connects to your PC's USB (Universal Serial Bus) port. As a technology, USB has lots of advantages: USB gadgets are easy to connect and disconnect, are very fast, conserve space, can be plugged and unplugged while the PC is running, and so on.

Just the act of connecting a USB printer to your PC, for example, inspires Windows XP to dig into its own bag of included driver modules to install the correct one (Figure 13-1). See Chapter 14 for more on this process.



Figure 13-1:
You got lucky. Windows recognizes your printer, has the appropriate driver, and has put the software into place. Let the printing begin.

Network Printers

If you work in an office where numerous people on the network share a single laser printer, the printer usually isn't connected directly to your computer. Instead, it's elsewhere on the network; the Ethernet cable coming out of your PC connects you to it indirectly.

In general, there's very little involved in ensuring that your PC "sees" this printer. Its icon simply shows up in the Start→Control Panel→Printers and Faxes folder. (If you don't see it, run the Add Printer Wizard described in the following section. On its second screen, you'll be offered the chance to look for "A network printer, or printer attached to another computer." That's the one you want.)

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Parallel, Serial, and Infrared Printers

Although USB printers are the world's most popular type today, there was, believe it or not, a time before USB. In those days, most home printers fell into one of these categories:

- **Parallel.** Before USB changed the world, most printers connected to PCs using a printer cable or *parallel cable.* The cable connects to your PC's parallel port, which Microsoft's help screens call the LPT1 port—a 25-pin, D-shaped jack. (On many PCs, this connector is marked with a printer icon on the back panel.)
- **Serial.** Other older printers use a cable connected to one of your computer's *serial* (or *COM*) ports, the connectors that often accommodate an external modem. The primary advantage of a serial connection is the extended cable length: Parallel cables must be no more than nine feet long, while serial cables up to 50 feet long work fine.

Tip: To protect its innards, turn off the PC before connecting or disconnecting a parallel or serial cable.



Figure 13-2: *Top: As the note explains, use the Add Printer Wizard only if your printer doesn't connect to your USB or FireWire (IEEE 1394) port.*

Bottom: In this window, try the "Automatically detect and install my Plug and Play printer" option first, as shown here. If Windows can't automatically detect the brand and model of the printer you've attached, return to this screen and turn off this option. You'll wind up in the dialog box shown in the next illustration.

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- **Infrared.** Certain printers from HP, Canon, Citizen, and other companies print using *infrared* technology—that is, there's no cable at all. Instead, if your PC has an infrared lens (as many laptops do), it can communicate with the printer's similar lens wirelessly, as long as the printer and PC are within sight of, and relatively close to, each other.

If the technology gods are smiling, you can just connect the printer, turn on your Windows XP machine, and delight in the "Found new hardware" message that appears on your taskbar. You're ready to print.

But if Windows doesn't "know about" the printer model you've hooked up, it can't install its drivers automatically. In that case, the Add Printer Wizard appears (Figure 13-2)—or you can always open it. (Choose Start→Control Panel→Printers and Faxes; click the Add Printer link.) Click Next to walk through the questions until you've correctly identified your printer and installed the appropriate software.

Here are the guidelines for using the next screen:

- Try the "Automatically detect and install my Plug and Play printer" checkbox first (see Figure 13-2 at bottom). If it doesn't succeed in locating your printer and installing the software, run the wizard again, this time turning that option off.
- If the "Automatically detect" option didn't work, you'll be asked to specify which PC port your printer's connected to. You'll then be asked to indicate, from a gigantic scrolling list of every printer Microsoft has ever heard of, your exact brand and model (Figure 13-3).

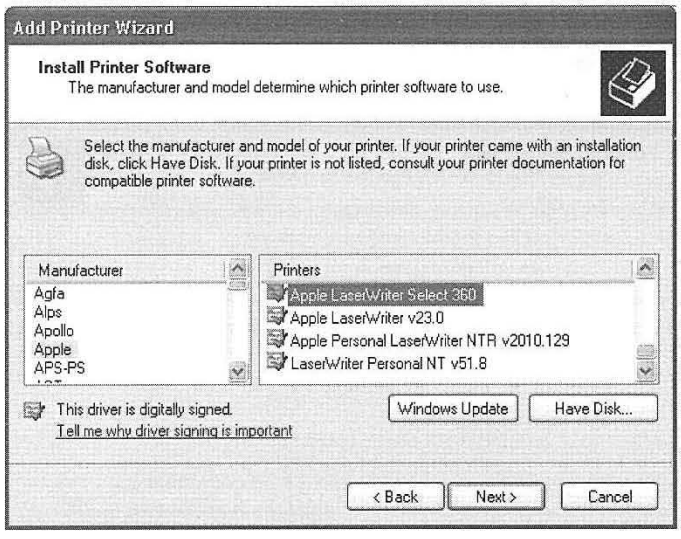


Figure 13-3: *The left pane lists every printer manufacturer Microsoft has ever heard of. Once you've selected your printer's manufacturer, a list of all the printer models from that manufacturer (that Windows XP knows about) appears in the right pane. Click the Have Disk button if your printer's driver software is on a disk supplied by the manufacturer.*

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