CHAPTER 21

GETTING YOUR PAGES ON THE WEB

Because your browser can display documents right from your hard drive (in other words, you can view them locally), you do not need an Internet connection to create web pages. However, eventually, you'll want to get them out there for the world to see. That is the point, right?

Putting a page on the Web is easy... just transfer your files to your web server and *ta da*—you're on the Web! But what if you don't have a web server? This chapter will tell you where to look for one (you might even have server space and not know it). You might also want your own domain name. For example, I have littlechair.com and several others.

This chapter tells you what you need to know about registering a domain name and getting a server for your web site. We'll also look at the steps involved in the typical web publishing process, including how to use FTP programs to transfer files.

IN THIS CHAPTER

Registering your own domain name

Finding a server to host your web site

The general web publishing process, step-by-step

Using FTP to upload files

www."YOU".com!

Your home page address is your identity on the Web. If you are posting a just-for-fun page and want to save money, having your own personal corner at some larger domain (such as *littlechair.tumblr.com* or *littlechair.wordpress.com*) might be fine. More likely, you'll want your own domain name that better represents your business or content. For a small yearly fee, anyone can register a domain name.

What's in a name?

A domain name is a human-readable name associated with a numeric IP address (the "IP" stands for Internet Protocol) on the Internet. While computers know that my site is on a server at Internet point 66.226.64.6, you and I can just call it "littlechair.com." The IP address is important, though, because you'll need one (well, two, usually) to register your domain name.

Registering a domain

Registering a domain name is easy and fairly inexpensive. There are two ways to go about it: have your hosting company do it for you or get one directly from a registrar.

It has become common for companies that provide web hosting to register domain names as part of the process of setting up an account. They offer this service for your one-stop-shopping convenience. But be sure to ask specifically—some still require you to register your domain on your own.

You can also register one yourself directly from a domain name registrar. Domain name registries are regulated and overseen by ICANN (Internet Corporation for Assigned Names and Numbers). ICANN also makes sure that domain names are assigned to a single owner. There used to be just one domain name registrar, Network Solutions, but now there are hundreds of ICANN accredited registrars and countless more resellers.

You'll have to do your own research to find a registrar you like. To see the complete list of accredited registrars, go to *www.internic.net/regist.html*. Some of the most popular are Network Solutions (*www.networksolutions.com*), the original domain registrar; Register.com (*www.register.com*), which has also been around a long time; and NameCheap (*www.namecheap.com*).

All registrars in the U.S. can register domain names ending in *.com*, *.net*, or *.org*, while some offer newer and international extensions (see the sidebar, Dot What?).

A domain registration company will ask you for the following:

- An administrative contact for the account (name and address)
- A billing contact for the account (name and address)
- A technical contact for the account (generally the name and address of your hosting service)
- Two IP addresses

If you don't have IP addresses, most domain registry services will offer to "park" the site for you for an additional fee. Parking a site means that you have reserved the domain name, but you can't actually *do* anything with it until you get a real server for the site. Basically, you're paying for the privilege of borrowing some IP addresses. Be sure to shop wisely. In addition to the $35 per year registration fee, do not spend more than $35 to $50 per year to park a site. As mentioned earlier, some domain registration companies also offer basic hosting services.

How Much Does a Domain Cost?

While it may seem overwhelming to choose from all the competing domain name sellers, the up side is that it has resulted in lower prices. The base price for registering a domain is about $35 per year; however, there are usually deep discounts for registering for more than one year. The longest any domain can be secured is 10 years.

There are domain registries that offer rock-bottom rates, but you may pay the price of being bludgeoned with advertising for their other services, such as web hosting.

There are also optional additional fees to be aware of. For instance, registrars now offer a service in which they keep your contact information private for about $10 a year (as of this writing). Without that service, the information you provide (including your address) is accessible to the public.

TIP

Because there are so many sources for domain names, it is easy to end up with domains registered with several different companies. While there is no rule against this, people who maintain multiple domains find it more convenient to have all their names registered at the same place. This makes it easier to handle billing and keep up with expirations and renewals.

Is it available?

You might have already heard that the simple domain names in the coveted *.com* top-level domain are heavily picked over. Before you get too attached to a specific name, you should do a search to see if it is still available. All of the domain name registration sites feature a domain name search right on the front page. This is the first step for setting up a new domain.

If "your-domain-name" at ".com" is not available, try one of the other top level domain suffixes, such as *.org*, *.info*, or *.us*. You may also try variations on the name itself. For example, if I found that *jenrobbins.com* wasn't available, I might be willing to settle for *jenrobbinsonline.com* or *jenniferrobbins.com*. Some registrar sites will provide a list of available alternatives for you.

If you have your heart set on a domain name and a budget to back it up, you might offer to purchase the domain from its owner. To find out who owns a domain name, you can do a WhoIs search on that domain. The WhoIs database lists the name and contact information for every domain (unless the owner paid extra to keep the contact information private). You can find a WhoIs search function on most registrars' sites.

Finding Server Space

For your pages to be on the Web, they must reside on a web server. Although it is possible to run web server software on your desktop computer (in fact, every new Mac comes with web server software installed; the same is true for almost all GNU/Linux distributions and to some extent Windows), it's more likely that you'll want to rent some space on a server that is dedicated to the task. Looking for space on a web server is also called finding a host for your site.

Fortunately, there are many hosting options, ranging in price from free to many thousands of dollars a year. The one you choose should match your publishing goals. Will your site be business or personal? Will it get a few hits a month or thousands? Do you need services such as e-commerce or streaming media? How much can you (or your client) afford to pay for hosting services?

If you are working as a freelancer, your clients will probably assume the responsibility of setting up server space for their sites. Smaller clients may ask for your assistance in finding space, so it is good to be familiar with the available options.

In this section, I'll introduce you to some of the options available for getting your web pages online. This should give you a general idea of what type of service you need. However, you should still count on doing a fair amount of research to find the one that's right for you.

NOTE

With hosting services offering to register domain names, and domain registrars offering hosting services, the line has really blurred between these two services. But be aware that getting your domain name and finding a server for your web site are indeed separate tasks. It is fine to get hosting from one company and your domain from someone else.

Dot What?

The majority of web sites that you hear about end with *.com*, but there are other suffixes available for different purposes. These suffixes, used for indicating the type of site, are called top-level domains (or TLDs). The most common top-level domains in the United States are the original six generic TLDs established in the 1980s:

.com	commercial/business
.org	nonprofit organization
.edu	educational institutions
.net	network organizations
.mil	military
.gov	government agencies

Since then, additional TLDs have been added, including .aero, .biz, .cat, .coop, .info, .int, .jobs, .mobi, .museum, .name, .pro, .travel, plus scores of two-letter country code TLDs.

To view the current complete list of TDS, see *www.icann.org/registries/top-level-domains.htm*.

ISPs vs. Hosting Services

There are two types of Internet services, and they are easily confused.

An ISP (Internet Service Provider) is the company you go to if you want access to the Internet from your home or office. You can think of an ISP as a provider of a pipeline from your computer to the worldwide network of the Internet via dial-up, DSL, cable modem, or ISDN connections. In this chapter, we're talking about hosting services. Their business is based on renting out space on their computers. They take care of the server software, keeping the lines working, and so on. They also provide email accounts and may also include special features such mailing lists or e-commerce solutions for your site. There are thousands of hosting services out there.

The slightly confusing part is that many ISPs also give you some space on a server to host your personal pages. If you put your pages here, you will be stuck with the ISP name in your URL. In other words, they generally don't host other domain names; you need a hosting service for that.

Professional hosting services, however, do not tend to offer Internet access. They expect you to take care of that yourself. In most cases, you'll need both an ISP and a hosting company.

In your own backyard

You may not need to shop around for hosting at all. If one of these scenarios describes you, you may have server space there for the taking.

Student account. If you are a student, you may be given some space to publish personal pages as part of your school account. Ask the department that gives you your email account how to take advantage of web space.

Company servers. If you are working as an in-house web designer, it is likely that there will be a server connected to your company's network. If this is the case, you can just copy your files to the specified server machine. Web design firms usually have servers for testing purposes.

Professional hosting services

If you are working on a serious business site, or if you are just serious about your personal web presence, you will need to rent server space from a professional hosting service. What you're paying for is some space on one of their servers, an amount of bandwidth per month over their Internet connection, and technical support. They may also provide such additional services as mailing lists, shopping carts, and so on. The hosting service is responsible for making sure your site is online and available around the clock, 24/7.

Hosting companies usually offer a range of server packages, from just a few megabytes (MB) of space and one email address to full-powered e-commerce solutions with lots of bells and whistles. Of course, the more server space and more features, the higher your monthly bill will be, so shop wisely.

Advantages:

Scalable packages offer solutions for every size of web site. With some research, you can find a host that matches your requirements and budget.

You get your own domain name (for example, *littlechair.com*).

Disadvantages:

Finding the right one requires research (see the Shopping for Hosting Services sidebar).

Robust server solutions can get expensive, and you need to watch for hidden charges.

Shopping for Hosting Services

When you set out to find a host for your web site, you should begin by assessing your needs. The following are some of the first questions you should ask yourself or your client:

Is it a business or personal site? Some hosting services charge higher rates for business sites than for personal sites. Make sure you are signing up for the appropriate hosting package for your site, and don't try to sneak a commercial site onto a personal account.

Do you need a domain name? Check to see whether the hosting company will register a domain name for you as part of the package price. This saves you a step and the extra charge for domain registration somewhere else.

How much space do you need? Most small sites will be fine with 10 MB or 15 MB of server space. You may want to invest in more if your site has hundreds of pages, a large number of graphics, or a significant number of audio and video files that take up more space.

Do you need a dedicated server? Most hosting plans are for shared servers, which, as it sounds, means that your site will share space on a computer with many other sites. For most sites, this is fine, although it is important to be aware that excessive traffic to another site on the server may impact your site's performance. Some larger commercial sites where performance is critical opt for a dedicated server so they can take advantage of the full processing power of that machine. Dedicated server plans tend to be significantly more expensive than shared plans, but it may be money well spent for processing-intensive sites.

How much traffic will you get? Be sure to pay attention to the amount of data transfer you're allowed per month. This is a function of the size of your files and the amount of traffic you'll get (i.e., the number of downloads to browsers). Most hosting services offer 5–10 gigabytes (GB) of throughput a month, which is perfectly fine for low- or moderate-traffic sites, but after that, they start charging per megabyte. If you are serving media files such as audio or video, this can really add up. I once ran a popular site with a number of movies that turned out to have over 30 GB of data transferred a month. Fortunately, I had a service with unlimited data transfer (there are a few out there), but with another hosting company I could have racked up an extra $500 per month in fees.

How many email accounts do you need? Consider how many people will want email at that domain when you're shopping for the right server package. If you need many email accounts, you may need to go with a more robust and higher-priced package.

Do you need extra functionality? Many hosting services offer special web site features—some come as part of their standard service and others cost extra money. They range from libraries of spiffy scripts (for email forms or guestbooks) all the way up to complete, secure e-commerce solutions. When shopping for space, consider whether you need extra features, such as shopping carts, secure servers (for credit card transactions), a streaming media server (for streaming audio and video), mailing lists, and so on.

Do you feel comfortable with their level of technical support? Take a look at the hosting company's policies and record on technical support. Do they provide a phone number (preferable), live online chat with technicians, or just an email address for customer service? It is important to know that your hosting company will be there to answer your questions promptly.

Will they do regular backups? Ask whether the hosting company does regular backups of your data in case there is a problem with the server.

Do you want to be a reseller? If you run a web design business and anticipate finding server space for multiple clients, you may want to become a hosting reseller. Many hosting companies have programs in which they provide multiple server plans at discount prices. You can pass the savings along to your clients or mark up the price to compensate yourself for the administrative overhead.

Once you've identified your needs, it's time to do some hunting. First, ask your friends and colleagues if they have hosting services that they can recommend. There's nothing like firsthand experience from someone you trust. After that, the Web is the best place to do research. The following sites provide reviews and comparisons of various hosting services; they can be good starting points for your server shopping spree:

CNET Web Hosting Reviews
www.cnet.com (look for Web Hosting under Reviews)

HostIndex
www.hostindex.com

TopHosts.com
www.tophosts.com

The Publishing Process

So, you've got your domain and your hosting all lined up... what now? This is a good time to review the typical steps involved in creating and publishing a site to the Web. Not every site follows these exact steps, but this will give you a general idea of the process.

NOTE

On the Web, it is more appropriate to use the terms "directory" and "subdirectory" rather than "folder" and "subfolder." This is due to the fact that servers have come to be discussed using UNIX terminology, whereas folders are a convention of operating systems with graphical interfaces, such as Windows or MacOS.

1. **Create a directory (folder) for the site on your computer.** This will be your local root directory. "Local" means it resides on your hard drive, and "root" is the technical term used to refer to a top-level directory for site. This is where you save all of the documents that make up the site and will be transferred to the actual web server. Additional files related to the site, such as layered Photoshop files, raw content documents, and other miscellaneous development documents should be kept in a separate directory. In Figure 21-1, I named my local root directory *jenskitchen*.
2. **Create the web page(s).** This is the step that takes all the hard work, as you know from reading the rest of this book. It's important to note that all the HTML and image files for this simple site have been saved in the local root directory, *jenskitchen*.
3. **Check the page locally.** Before making the page live, it is a good idea to check the page in a browser while it's still on your own machine. Just launch your favorite browser and open the (X)HTML file for the page from your hard drive, as shown in Figure 21-1. If it needs some adjustments, go back and edit the (X)HTML and/or CSS files and save them. You must save the files in order to see changes in the browser (be sure to save it in the same directory so it overwrites the old version). Now click Refresh or Reload in the browser to see how it looks.

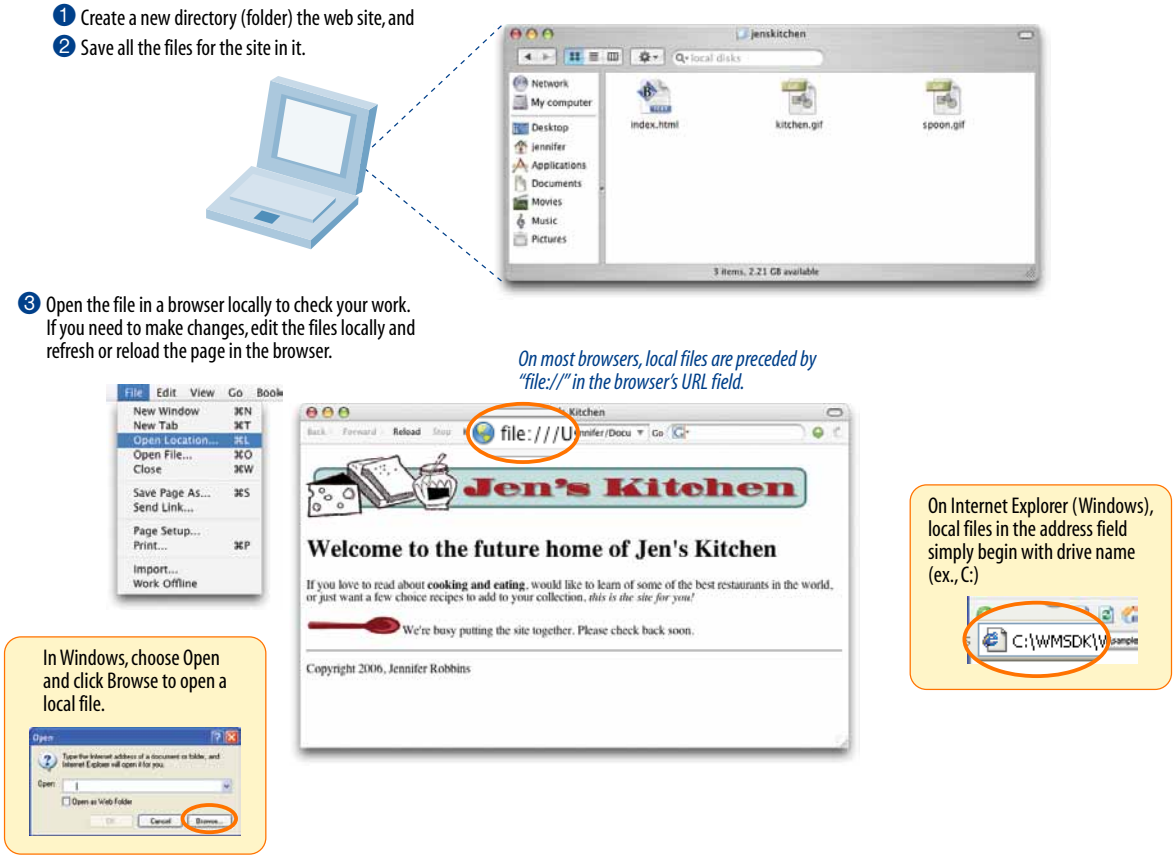


Figure 21-1. Create and test your web page on your own computer.

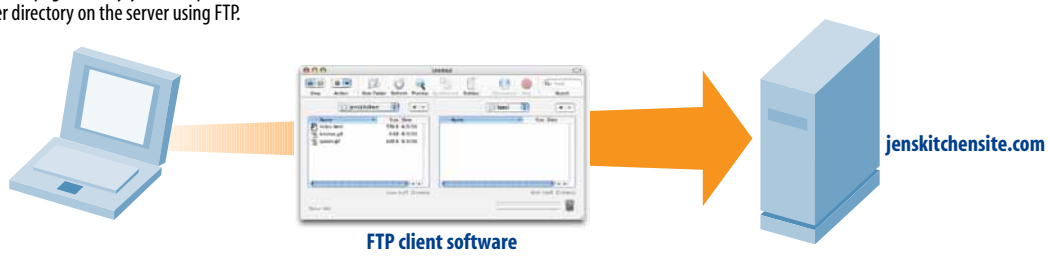
❹ **Upload the files.** When everything looks fine in the browser, you're ready to upload the page to the remote server that is hosting your site (Figure 21-2). Use a file transfer (FTP) program to upload your files (we'll go over the ins and outs of FTP in the next section). Just be sure to put all the files in your site's root directory on the server. The hosting company or server administrator will tell you the name of your site's root directory when you set up the account.

NOTE

If you have organized your local files into subdirectories, the same subdirectory structure will need to be set up on the remote root directory as well (see the sidebar Organizing and Uploading a Whole Site).

❺ **Check it out live on the Web.** Once all the files have been transferred to the server, you (and anyone else) can see it by typing your URL in the browser. Tell your friends!

4 When the page is ready, you can upload it to the proper directory on the server using FTP.



5 Once the files are on the web server, you can open the web page using its URL.

Figure 21-2. Uploading and viewing a page from the remote server.

Testing on the Server

In the example in this chapter, the web page was tested locally and became "live" as soon as it was moved to the server. As another option, web developers may create a special test site (also called a *development* or *staging* site) on the server. The advantage is that the site can be tested on the actual server and tweaked before it is made live to the public. Staging sites are also useful when the site is being created and tested by a group of developers, because the whole team has access to it.

The staging site might be in a separate directory or in a subdomain (for example, *dev.jenskitchensite.com*). When the site is ready to go, all the files can be moved to the root directory on the server.

Transferring Files with FTP

Most likely, your server will be in a remote location, accessible via the Internet. Files are transferred between computers on the Internet via a protocol called FTP (File Transfer Protocol). You may also hear "FTP" used casually as a verb, as in "I'll FTP those files by this afternoon."

NOTE

If you are in an office or at a school that has a web server as part of its network, you may be able to move the files directly over the network without using FTP.

You'll need some information handy to transfer files with FTP:

The name of your web server (host). For example, *www.jenware.com*.

Your login name or user ID. You'll get a login name from the server administrator when you set up your server account, often via an email. If you're a freelancer, you'll need access to your client's login.

Your password. This will also be provided by the server administrator or client.

The directory where your web pages reside. Your server administrator may also tell you which directory to use for your web pages, in other words, the name of the root directory for your site. Often, it's www or html. It is also possible that your server is set up to send you to the correct directory automatically when you log in, in which case, you won't need to enter a directory name. Again, get directions from the administrator.

The type of data transfer. In most cases, you will use FTP for uploading, but some hosting services require SFTP (see sidebar). This information will be provided to you with the login and FTP instructions for your account.

FTP software

Because FTP is an Internet protocol, you need to use special FTP software (called an FTP client) designed specifically for the job of transfering files.

The better WYSIWYG web-authoring tools such as Dreamweaver from Adobe, Microsoft Expression Web, and the open source Nvu (pronounced N-view) have FTP clients built in. This is a great feature, because you can build your pages and upload them all in one program.

If you haven't yet invested in one of these tools, there are a number of stand-alone FTP client utilities with simple interfaces that make file transfer as easy as moving files around on your own computer. For the Mac, Transmit, Fetch and Interarchy allow "drag and drop" transfers. On Windows, WS_FTP, CuteFTP, and Filezilla are quite popular. You can download these programs at CNET's *www.download.com*.

Two-way Street

Although this section focuses on uploading files to a server, FTP can be used to download files from the server to your local computer as well. FTP clients use the terms "download" or "get," or may provide down-arrow icons for downloading.

TERMINOLOGY

SFTP

SFTP, or SSH File Transfer Protocol, is a network protocol that offers more secure file transfer than ordinary FTP. It uses the SSH, Secure Shell, protocol that establishes a secure line between a local and remote computer. SFTP also allows basic server management such as deleting remote files and creating and naming remote directories.

ONLINE RESOURCE

FTP Clients

For a comprehensive list of FTP clients sorted by platform and protocol support, see the "Comparison of FTP Clients" page at Wikipedia (*en.wikipedia.org/wiki/Comparison_of_FTP_clients*).

Organizing and Uploading a Whole Site

We uploaded only one document in this example, but chances are your site will consist of more than one page. If your site contains more than a dozen or so documents and graphics files, you should organize your files into directories and subdirectories. This requires some work and careful planning, but it makes site management much easier in the long run.

One common convention is to keep all of the graphic files in a directory called *images* or *graphics*. In most cases, the overall directory structure is based on the structure of the site itself. For instance, if you have a "News" category on your site, there would be a corresponding news directory for those files.

The good news is that you can upload an entire site in one go. When you select a directory to be FTP'd, it will upload *everything* within that directory—leaving the subdirectory structure intact. Follow the FTP instructions in this section, but select the directory name instead of a single filename for upload.

The FTP program checks the format of each file and selects text or raw data/binary as appropriate during the upload.

It is a good idea to set up your site directory structure as you want it on your local hard drive first, then upload everything to the final server once it is ready.

Using FTP, step by step

FTP clients have slightly different interfaces and use different terminology, but they essentially work the same. Again, these steps should give you the general picture.

Step 1: Make sure you are online. You may have a network or cable connection that is always online, but you may need to dial in over a modem. You can launch your FTP program before or after getting online.

Step 2: Open a connection to the server and enter your information. This is usually the point at which you are asked to enter the server name, login, password, and the optional settings mentioned earlier. Some FTP programs allow you to save the settings and give the connection a name to make it easy to connect later. Your tool may call this process setting up a new "site" or "connection." The window at the top of Figure 21-3 shows the server settings in Transmit, but your tool may use a multiscreen "wizard" process for collecting and saving site settings.

Step 3: Navigate to your local and remote root servers. Many FTP clients feature two windows: one gives you a view of the files on your local hard drive, the other is a view of the files on the remote server (Figure 21-3). The windows typically also provide methods for navigating through the directories. Some clients, such as Fetch, show a view only of the remote server. Whatever tool you use, make sure that the root directory on your server (or the appropriate directory within the root) is selected.

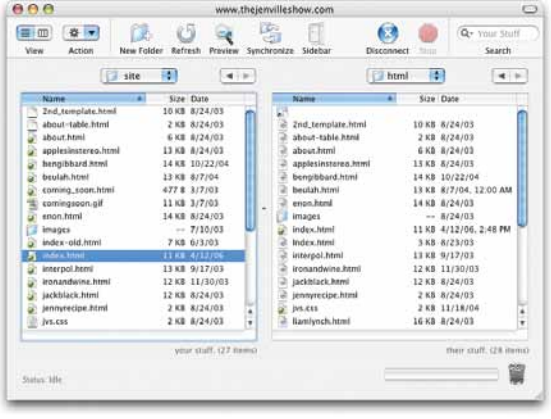
Step 4: Select the file on your local hard drive and upload it. FTP programs vary on how the upload option is presented once your file is selected, but it's usually fairly intuitive. Some ask you to select Upload, Send, or Put from a menu or push-button; others use an up arrow or right arrow to indicate the transfer direction from your computer to the remote server. You may also be able to drag and drop the file from the local window to the server window to start the upload.

NOTE

Some FTP clients, such as Fetch, may also ask you to indicate the format or type of file being transferred. HTML documents should be sent as Text or ASCII. For images and other media, choose Binary or Raw Data. Many FTP clients choose the format for you automatically.

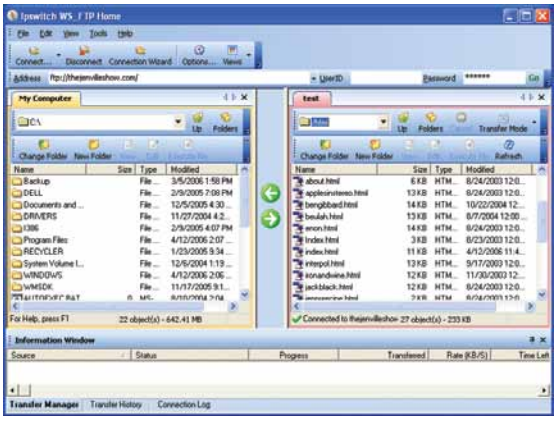
Step 5: Watch it upload. Once you click the Upload button or arrow, your file starts whizzing over the lines and onto the server. Your FTP client will probably provide some sort of feedback that shows the progress of the upload. When the file shows up in the file list in the remote server window, and the file size matches that shown on your local computer, you know that it has arrived.

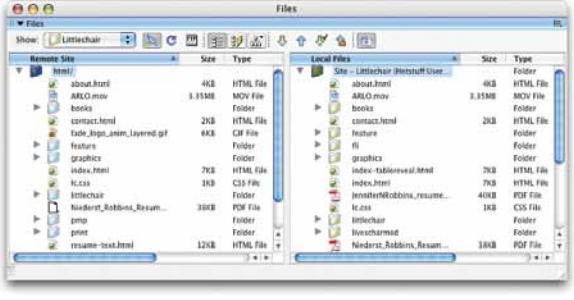
When you open a new connection, you will be asked for your server settings (shown here in the Transmit FTP client for the Mac).



When you are connected, you can see the contents of your local hard drive and the remote server. Use the navigation tools to make sure the proper directories are selected.

To upload in Transmit, select File > Upload or drag the file from the local window to the remote window. Other tools may provide arrow buttons for moving files between computers.





WS_FTP (left) and Dreamweaver site manager (right) also provide side-by-side windows.

Figure 21-3. Three popular FTP client interfaces.

Step 6: Check it in a browser. Now the document is officially on the Web. Just to be sure, check it with a browser. Open a browser and enter your URL, and there it is! If you need to make changes, do so on the local document, save it, then upload it again.

Test Yourself

Before we move on, let's see if the important parts of this chapter have been uploaded to your brain. Answers appear in Appendix A.

1. There are basic services that you need if you want to get yourself and your own site online. Match the following services with the companies that provide them. Note that some services may have more than one answer.

   A. Hosting company B. ISP C. Domain registrar

   Get connected to the Internet _____

   Find out if yourname.com is available _____

   Get yourname.com for 3 years _____

   Get space on a web server _____

2. Name two ways in which servers are identified on the Internet.

3. What does it mean to look at a page locally?

4. What three pieces of information are required to FTP files to a server? What else may you need to know?

5. What format should you select to upload a graphic file? An audio file? An HTML file?

6. How do you upload a whole directory of files at once?