Setting Up a Web Site

Building the look and feel of a web site is only a part of the entire project. We also need to consider how to purchase a domain name and select a web hosting provider.

Setting up a Domain Name

When you purchase a domain name, what you are really purchasing is an alias, a *virtual* name if you will, that will be automatically forwarded to your actual, physical server. Say, for instance you purchase www.web-design-aesthetics.com. You inform the organization that sells you the domain name that any time someone enters www.web-design-aesthetics.com into his or her browser, the browser should be routed to a subdirectory under the *physical* server, in this case, www.cs.niu.edu/~mcintire/main/index.html. You can even set up sub-domain forwarding, such that www.*webbook*.web-design-aesthetics.com goes to www.cs.niu.edu/~mcintire/webbook/index.html, and www.*consulting*.web-design-aesthetics.com goes to www.grics.net/~pmcintire/index.html, on a completely different server. Figure 1 shows an example of such domain names and how they route to their associated servers and their subdirectories.
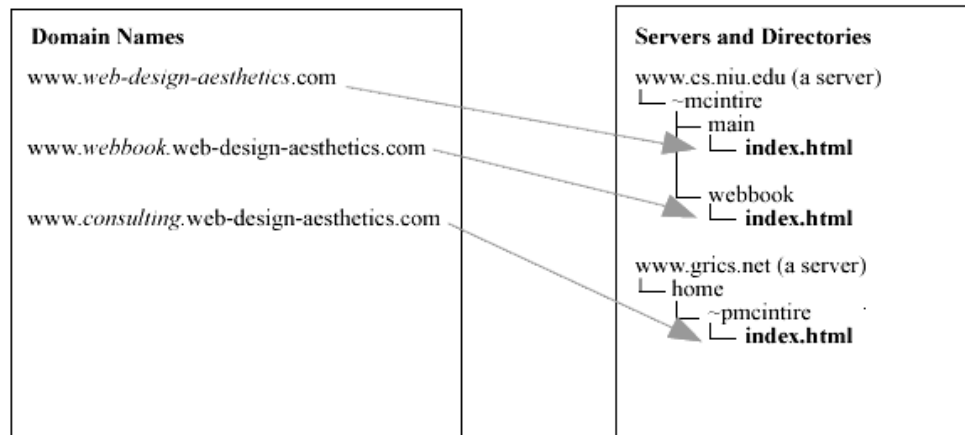
Figure 1, Routing Sub-domains

The slick thing about this whole system is that if tomorrow you decide to move your site to a different physical server, all you have to do is notify the site where you purchased your domain name of the new physical server address, and within a few minutes all requests for your alias will be automatically routed to that new server.

The first step in setting up a web site is buying the domain name from a domain name provider. There are many such providers that provide varying levels of service at varying costs. Two popular, reliable, and easy-to-use providers are www.domaindirect.com and www.register.com.

Here, we'll look at the process of purchasing a domain name from www.domaindirect.com. First, enter the domain name in the search field, such as in Figure 2.
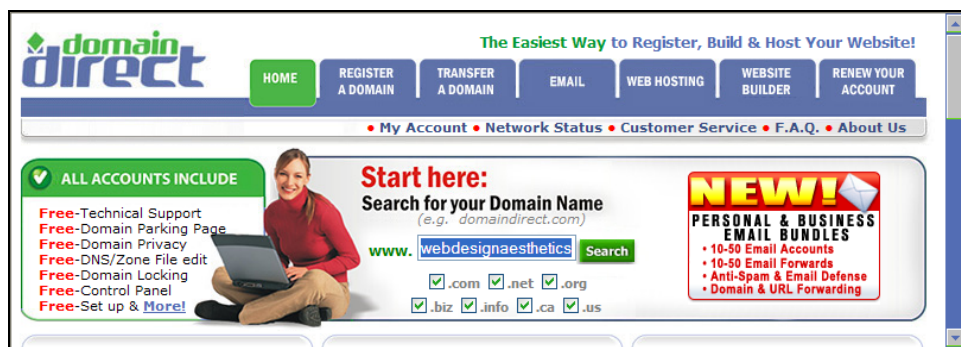

Figure 2, Domain Direct Homepage—Searching for a Domain name

If the domain name isn't yet assigned, a screen much like Figure 3 comes up.
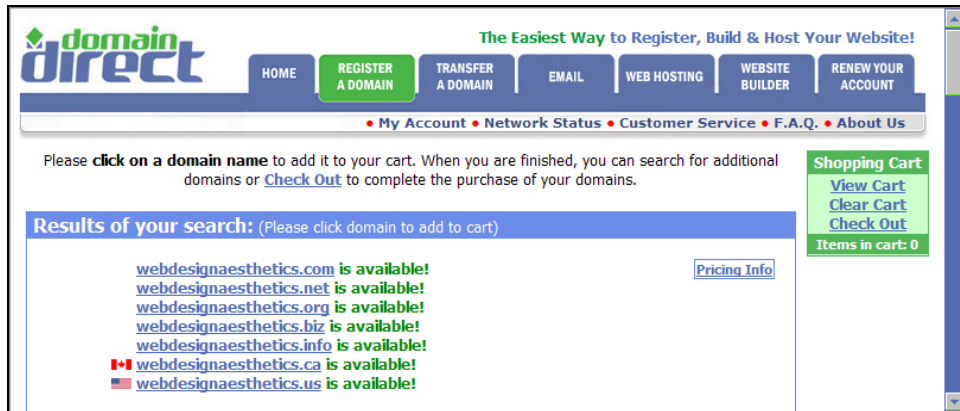
Figure 3, Results of Domain Name Search

Click on the name you requested, which then brings up a screen like Figure 4 that allows you to choose a level of service.
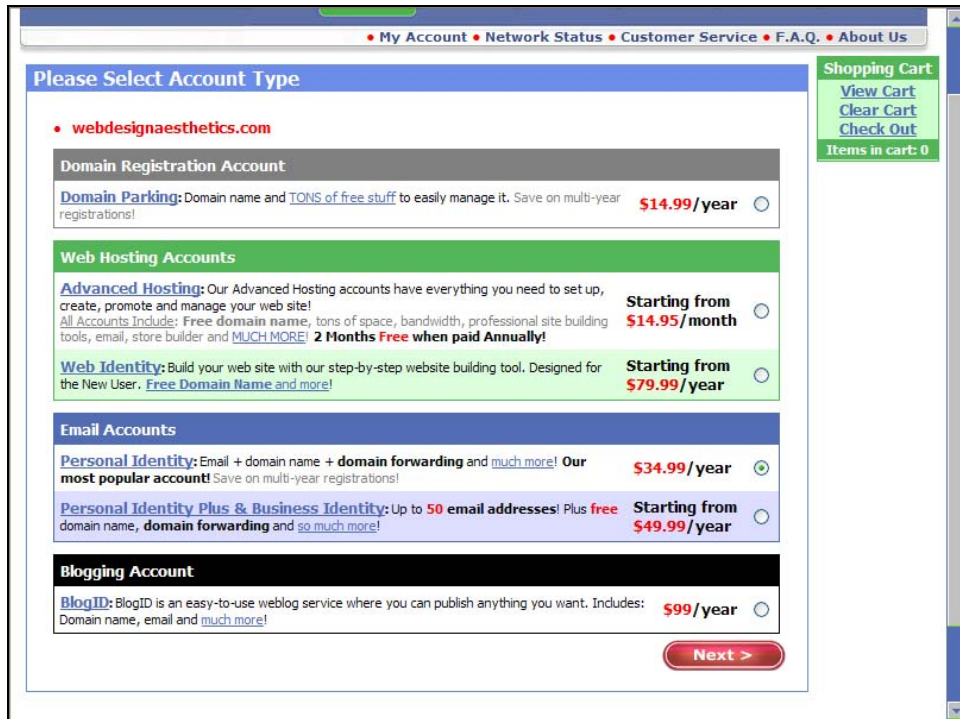

Figure 4, Account Options

If all you need for the moment is to reserve the name for your future use, but not yet use domain or email forwarding, choose "Domain Parking." On the other hand, a full-service account that includes domain forwarding and email is called a "Personal Identity Account" on this site, but may go under other names at other sites. Other, more expensive, levels of service might include web site hosting, additional email accounts, and online HTML editors geared to beginners.1

Regardless of which level you choose, make sure it includes a sufficient quantity of both sub-domain and email address forwards for your current use. For instance, if you plan to have two sub-accounts, www.webbook.web-design-aesthetics.com and www.consulting.web-design-aesthetics.com (as shown in Figure 1), you'll need to make sure your level of service includes at least two subdomains. You can upgrade to accounts with additional features at any time.

Figure 5 shows the top-level window for setting up (and later maintaining) your account.
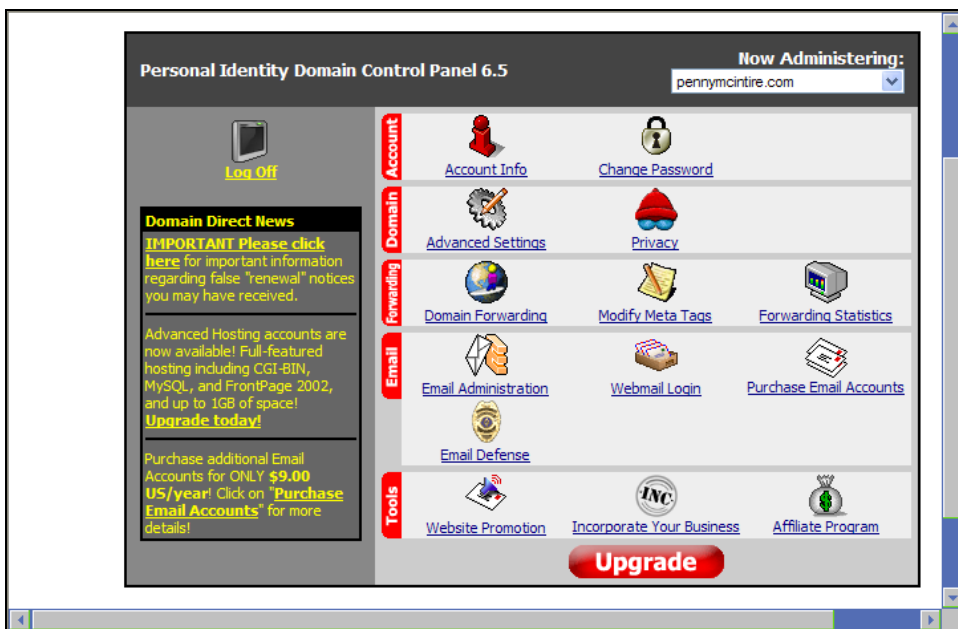

Figure 5, Account Maintenance

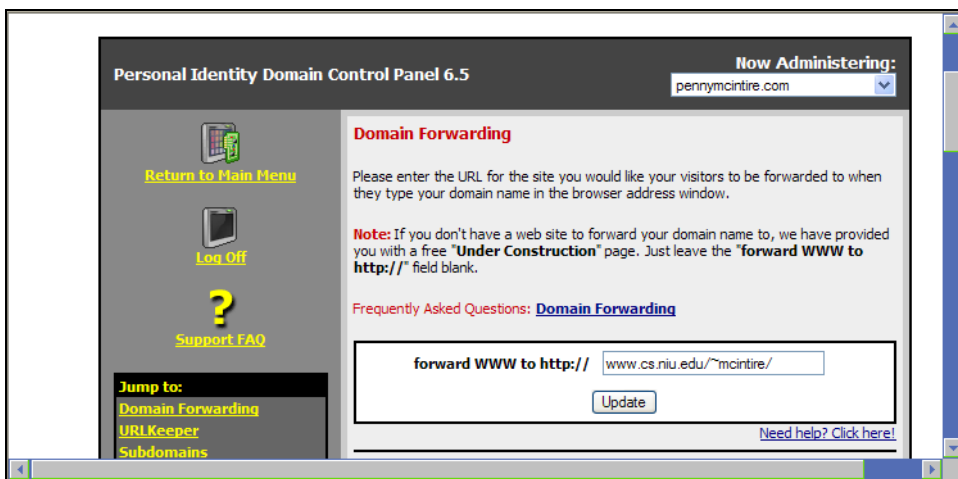Click "Forwarding" to enter the server information for your top-level domain, as in Figure 6.

Figure 6, Forwarding to the Physical Server

Sub-domains can be forwarded independently of the top-level domain. For instance, let's look at how the subdomains for www.pennymcintire.com are organized, as shown on Figure 7.
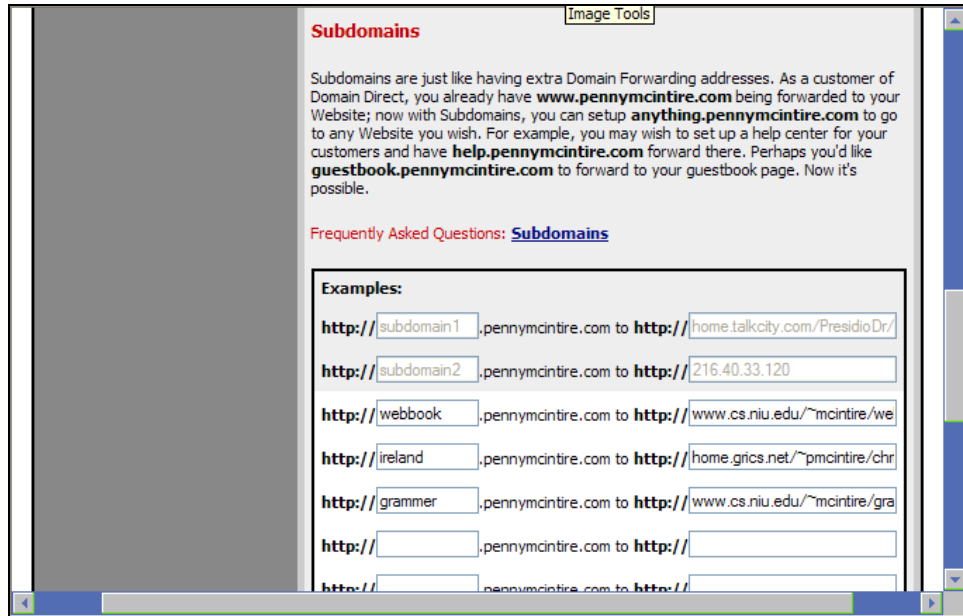

Figure 7, Sub-domain Forwarding

This top-level domain currently includes the following sub-domains:

- www.*webbook*.pennymcintire.com, which forwards to www.cs.niu.edu/~mcintire/webbook.

- www.*ireland*.pennymcintire.com, which forwards to http://home.grics.net/~pmcintire/christmaswebsite.

- www.*grammer*.pennymcintire.com, which forwards to www.cs.niu.edu/~mcintire/grammer.

Note from the different main domains that the sub-domains don't have to be forwarded to the same physical servers as either the top-level or other lower-level domains.

Another available feature for domain forwarding is URL hiding, called "URLKeeper" on Figure 8. Enabling URL hiding effectively obscures the site's physical URL from visitors, instead substituting your virtual URL alias. For example, even though www.cs.niu.edu/~mcintire is the physical URL for the virtual address www.pennymcintire.com, if URL hiding were enabled, only www.pennymcintire.com will ever show in a visitor's browser address line regardless of which page in the site a visitor opens.
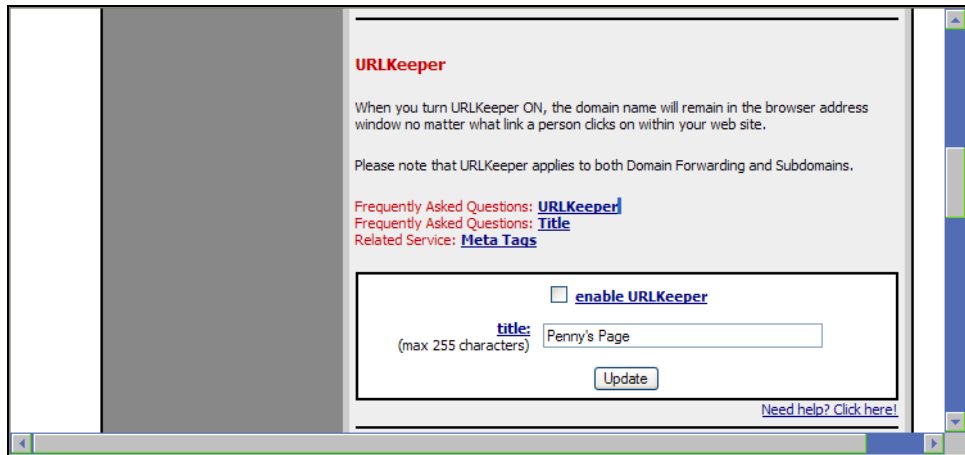
Figure 8, URL Hiding

Although URL hiding can make your site appear more professional, there are several potential "gotchas". First, any external pages (that is, pages belonging to another site) opened from within your own site will appear to be from your URL unless you remember to include "target=_top" to turn off URLKeeper for those links. Additionally, any bookmarks a visitor saves for your site will refer back to your home page, not to the lower-level pages the visitor actually bookmarked. There are a few other problems associated with URLKeeper as well, such as security issues and incompatibility with some web hosting sites; read the documentation of your domain name provider as well as your web hosting provider to see if any of these issues affect your site.

As mentioned earlier, you might want to set up forwarding for email accounts as well as for domains. In this way, you can route emails to the appropriate person in the organization, whether by name, like penny@pennymcintire.com, or by function, like info@pennymcintire.com. Setting up forwarding email accounts to go along with your domain name works in much the same way as domain forwarding, as you can see in Figure 9. Once again, the names here are aliases for the "real", physical email addresses.
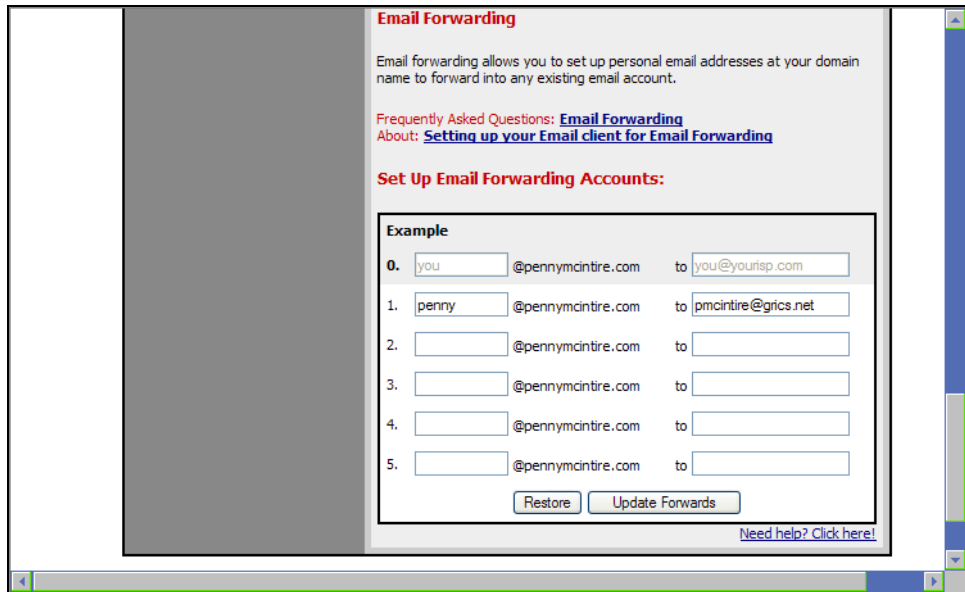
Figure 9, Emain Forwardding

You might want to consider purchasing similar names or frequent misspellings to your chosen domain name. After all, potential visitors might be guessing at your domain name, or might be bad spellers. For instance, www.randmcnally.com also owns the misspelled version, www.randmcnalley.com, which routes to the site just as if it were spelled properly. Rand McNally could also consider buying www.rand-mcnally.com and www.rand_mcnalley.com, if they aren't already owned by another organization.

All the discussion so far has been on purchasing a domain name that isn't currently owned by anyone. But what if you discover that the domain name you want is already spoken for? Figure 10 shows the screen that includes expiration date and contact information for a reserved domain name.

```
Domain ID:D528476-LROR
Domain Name:W3C.ORG
Created On:07-Mar-1997 05:00:00 UTC
Last Updated On:07-Oct-2005 22:09:05 UTC
Expiration Date:08-Mar-2006 05:00:00 UTC
Sponsoring Registrar:Go Daddy Software, Inc. (R91-LROR)
Status:CLIENT DELETE PROHIBITED
Status:CLIENT RENEW PROHIBITED
Status:CLIENT TRANSFER PROHIBITED
Status:CLIENT UPDATE PROHIBITED
Registrant ID:GODA-012390427
Registrant Name:J William Semich
Registrant Organization:The Florida Keys Publishing
Company
Registrant Street1:600 White St.
Registrant Street2:
Registrant Street3:
Registrant City:Key West
Registrant State/Province:Florida
Registrant Postal Code:33040
Registrant Country:US
Registrant Phone:+1.3052926112
Registrant Phone Ext.:
Registrant FAX:
Registrant FAX Ext.:
Registrant Email:bill@kwmag.com
Admin ID:GODA-212390427
```

Figure 10, Unavailable Domain Name

If your intended domain name is already owned by another organization, you don't necessarily have to abandon that URL. You could instead contact the owner of the domain name and offer to buy it. Of course, if a website is already active under that name, it's probably not for sale at all, or if it is, you'd probably have to pay an exorbitant price for it.

On the other hand, if the URL is currently owned but not actually in use, perhaps the owners have abandoned the site or have changed their minds about building a site. You can either wait for the domain name to expire, on the hopes that then you can snap it up at the standard rate, or, again, you could contact the owners to see if they want to sell it. Although it's still a seller's market (after all, the sellers know you're seriously interested or you wouldn't have contacted them), an unused domain name is often cheaper than one that's in active use.

Choosing a Web Hosting Provider

A larger organization will often host its own web site on its own server. In this case, your only task is to ask the web server administrator where on the server your site will be hosted and what server privileges you're allowed.

Individuals and smaller organizations usually don't want the administration hassles of hosting their own site. Instead, they use a web hosting provider. Free web site hosting is often included with email and internet service from an internet service provider, and it's also offered for free from some big portals like www.yahoo.com or www.geocities.com. For larger web sites, though, such space may be neither large enough nor powerful enough in terms of how fast the server delivers pages or how many hits it can process. In such cases, you'll need to go shopping for a web hosting provider. Many domain name providers can also supply web hosting (as you might have noticed on one of the tabs on Figure 2), or you can enter the term "web site hosting" into a search engine to find others. (Google currently lists 213,000,000 results for this query term, however. Good luck sorting out the good ones from the bad!)

The most important considerations when choosing a web are:

- Cost.

- Capacity: Will it easily handle the number of hits you hope to get?

- Speed: How fast can it serve up pages? And how badly does the speed degrade as the number of hits increases?

- Average downtime: How often does the server go down? If visitors can't access your web site because the server is out of commission, they might assume your site has been taken down permanently, and they might not bother to check back later.

- Technical support: Is tech support available 24 hours a day, seven days a week, in case problems arise?

- FTP access: Can you use your own editor and FTP for upload? Some web hosting providers force you to use their proprietary online web editors, which are uniformly awful.

- Server-side technologies: If you plan to use server-side programming, does the provider support the technologies you need – PHP, ASP, JSP, ColdFusion, etc.?

- Visitor statistics: Does the site provide web server logs that can tell you how many visitors have hit your site, what pages they're hitting the most, what browsers and operating systems they're using, and what web sites or search engines forwarded visitors to your site?

In any case, once you've set up a host, you can then notify your domain name provider of the physical addresses for your domains, sub-domains, and email addresses.

Uploading to the Server

File transfers are usually done using and FTP (File Transfer Protocol) program, as shown in Figure 11. Many FTP programs are downloadable for free, or you can use the FTP features built into most HTML development programs. Once you've entered FTP mode, you will usually have a split screen, with local files on one side and web server files on the other. You can then select which files you want to transfer, either uploading from your local development machine to the web server, or downloading from the server to your local machine. If you want to transfer only files that have been changed recently, you can usually click on the top of the "date" column to sort files in order of the date of last update, thereby making it a simple task to choose only recently updated files.
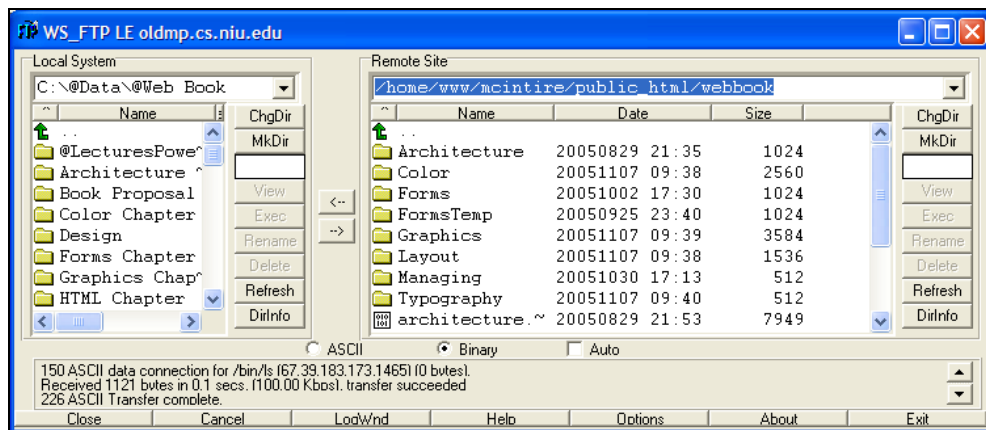

Figure 11, FTP

Always allow plenty of time to test and debug after moving a site out to the web server, because links that may very well work locally may break when they're out on the server. For instance, perhaps your local machine is oblivious to capitalization in file names, while the server is case-sensitive. Or perhaps your local machine accepts blanks in file names, while the server doesn't. Or perhaps you unwittingly altered the directory structure when uploading the files. Any of these issues can break links that worked just fine when the site was on your local development machine. The lesson is, don't assume that because the site worked on your local machine, it will work on the server; allow plenty of time to test and debug if the site breaks.