Chapter 7

Testing and Publishing Mobile Web Sites

In This Chapter

▶ Understanding your mobile testing solutions
▶ Installing add-ons to Firefox
▶ Testing your site
▶ Choosing your mobile domain
▶ Publishing a mobile Web site
▶ Finding and fixing broken links and missing images
▶ Testing your work with the Dreamweaver Site Reporting feature

You don’t want your initial visitors to send you messages like, “Is it supposed to look like someone threw random pages of clip art into a blender?” That’s why testing your site before you publish it live on the mobile Web is important.

The bad news is that just as designing for the mobile Web is more painstaking and demanding, so too is it tougher to reliably test your pages to make sure they look good on every possible mobile device, under every conceivable set of circumstances.

The good news is that mobile developers and designers have been aware of this problem for a long time and have gradually chipped away at the problem. At least four levels of mobile testing are available right now, and this chapter explains the testing methods you can choose from, ranging from free and open source on the low end, to an expensive and complex device farm (an array of mobile devices, all activated with data plans and connections to the mobile Web) on the high end. You find an introduction to the online testing tools, including the ones provided by the World Wide Web Consortium (WC3) for testing your site’s code (which tests how the code works under the hood rather than how the page looks in different devices). You find steps that walk you through checking links with Dreamweaver. And when you complete all the rigors of testing, you also find steps for publishing your site using Dreamweaver’s built-in File Transfer Protocol (FTP) tools as well as an introduction to other popular FTP options.
Comparing Mobile Testing Solutions

The most important principle to understand when testing your mobile Web site can be summed up in one well-worn aphorism: “In theory, there is no difference between theory and practice — but in practice, there is.” Just so is it with the mobile Web. Although the simulators and emulators we include in this chapter approximate how various devices will display a Web page, in the real world of mobile devices and carriers lurk all sorts of variables, quirks, and oddities you can’t replicate with even the best mobile simulators on your desktop computer.

No matter how accurate the emulators or browser add-ons you use to make the computer on your desktop act like a mobile phone, they can’t factor in all the variables of local wireless carriers. Wireless carriers have a lot of power and they can cause real problems by, for example, deciding that video gobbles up too much bandwidth and putting a cap on usage. No matter how much work you’ve put into optimizing your mobile video Web site, the ultimate performance of your pages will depend on the wireless connection and any...
number of things a carrier might do to your pages before they get to a user’s mobile device (including blocking large video files).

For example, in September 2007, Vodafone UK (one of the big mobile carriers in the United Kingdom) decided to start stripping out the user agent from the HTML headers coming in from mobile devices (find more on user agents in the nearby sidebar “Understanding user agents and user agent switchers”). Overnight, mobile sites all over England stopped working properly because the detection scripts on Web servers could no longer recognize whether visitors to sites were using mobile devices or desktop computers, which meant they couldn’t direct mobile visitors to the mobile version of a Web site (more on how detection scripts work in Chapter 6). Usually, when a Web site isn’t working properly for your audience, you look for problems on either end of the chain — that is, either the site on the server is poorly designed or the implementation on the device in the user’s hand is breaking down. But in this case, the problem occurred somewhere in the middle, in a place completely outside the view or control of mobile Web designers. Fortunately the company reversed its decision and things are working well again in England, but it’s a good example of how even the best mobile simulators aren’t perfect because you can’t test all of the variables in mobile design unless you factor in wireless carriers.

This is why — in practice — there simply is no substitute for pulling out a mobile device, firing up the browser, and loading the Web page you’ve just designed on real devices, on each of the carriers your visitors are likely to be using. However, before you go out on a crazed shopping spree to amass your own collection of the 8,000 (and growing!) mobile devices that can access the Web, there are some easier and far cheaper means by which to test your site that will give you a good idea of how your pages will work on mobile devices.

Here are the three main methods for testing mobile Web designs:

✓ Browser add-ons or plug-ins
✓ Mobile emulators and simulators
✓ The actual device(s)

We examine each one of these in detail in the following sections.

Installing Mobile Add-Ons for Firefox

The quickest (and cheapest) way to see whether your mobile Web designs are at all functional is to use add-ons in Firefox to impersonate a mobile device requesting a page. One of the most useful add-ons for mobile Web designers is the User Agent Switcher described in detail in this section. This add-on makes it possible for you to control the HTTP request header and user agent that
Firefox sends to a Web server, tricking the server into identifying your computer as a mobile device so that sites that use device detection will send back the mobile version of a Web page rather than the desktop version.

Combining the User Agent Switcher with other add-ons that cause Firefox to render Web pages in a narrow window can give you a rough approximation of how mobile Web pages will display. Most Firefox add-ons are free, although some developers ask that you donate money if you like how they work. We encourage you to support their efforts.

Although these add-ons are constantly improving, there are some very basic ways in which a desktop browser, no matter how it’s configured, will never match the behavior of a mobile device. Because processor speed, memory, storage, and connection reliability are so much better in the desktop environment, any emulator you use on your computer can give you a false sense of confidence.

Although there are add-ons for Safari and Internet Explorer, they’re nowhere near as extensive and up to date as the stuff created by the vibrant open-source community that develops for Firefox. If you want to browse through the entire list of add-ons for the Firefox browser, go to the Firefox add-on home page at https://addons.mozilla.org/en-US/firefox.

To install any Firefox add-ons, including the ones that we describe specifically in the following sections, follow these steps:

1. **Using the Firefox Web browser, navigate to the page on the Firefox site that features the add-on you want to add to your browser.**
   
   One of our top recommendations is the User Agent Switcher, described in more detail in the following section. You can find that add-on at https://addons.mozilla.org/en-US/firefox/addon/59 or you can search for the title of the add-on using the search box on the Firefox add-on home page.

2. **Click the Add to Firefox button.**
   
   A window pops up, asking whether you’re certain that you want to install this add-on and warning you to install add-ons only from developers you trust.

   Meanwhile, a little countdown timer runs while the add-on loads, until finally the Install button is no longer grayed out.

3. **Click the Install button.**
   
   Another window opens, and a progress bar shows that the add-on is installed. After the add-on is installed into Firefox, you’re prompted to restart Firefox.

4. **Restart Firefox after each add-on.**
   
   Alternatively, you can install a bunch of add-ons at once and then restart to activate them all.
Chapter 7: Testing and Publishing Mobile Web Sites

The following sections highlight some of our favorite add-ons for doing mobile Web testing using your desktop computer.

**User Agent Switcher**

The User Agent Switcher is one of the most useful add-ons we’ve found for basic mobile testing. As you might suspect from the name, the User Agent Switcher (https://addons.mozilla.org/en-US/firefox/addon/59) allows you to change the identifying string of code that your browser sends to a server to introduce you (for more on user agents, read the sidebar, “Understanding user agents and user agent switchers” earlier in this chapter).

Without the User Agent Switcher, Firefox sends its default user agent code in the HTTP request header, and you will have a hard time viewing many mobile-optimized Web pages because many sites automatically redirect visitors to the mobile version of a site based on the information in the request header. The User Agent Switcher (see Figure 7-1) comes with an eclectic mix of about a dozen browsers and devices that you can set your Firefox browser to impersonate. After you install the add-on, you can add more user agents, so you can test your Web site designs across a broader spectrum of devices.

To activate the User Agent Switcher, in Firefox, choose Tools->Default User Agent->Browser You Want to Emulate. Then reload the page in Firefox to see the new version.
To install more user agents:

1. After you install the User Agent Switcher, covered in the previous section, open the Firefox Web browser and navigate to "http://mobiforge.com/developing/blog/user-agent-switcher-config-file".

   At the end of the blog post is a link to a text file containing user agents for a wider variety of phones and mobile browsers.

2. Right-click (Ô-click on a Mac) the "useragentswitcher.xml_txt" link and choose Save Link As.

   The Enter Name of File to Save To dialog box opens.

3. Navigate to the folder on your local hard drive where you want to save the file.

4. In the File Name field of the Enter Name of File to Save To dialog box, you need to change the name of this file by deleting the _.txt from the end of the filename.

   This is a little clumsy, we know — but the file must end with .xml not .txt for it to be recognized by the User Agent Switcher when you import it in the steps that follow. Fortunately, the solution is easy. Just delete the _.txt off the end so that the filename is shortened to useragentswitcher.xml. (If you prefer, you can delete the .txt extension from the filename after you save the file; just make sure you do it before you move on to Step 6.)

5. Click the Save button.


   The User Agent Switcher Options dialog box opens to allow you to import other user agents.

7. Click the Import button.

   The Import User Agents dialog box opens.

8. Navigate to where you saved the useragentswitcher.xml file, click the file to select it, and then click the Open button.

   The Import User Agent dialog box closes and returns you to the User Agent Switcher Options dialog box, which now displays a longer list of browsers and devices because it includes all of the user agents from the .xml file (as shown in Figure 7-2).

9. To activate any of these new user agents, choose Tools » Default User Agent and select the user agent you want to emulate.

   If you want to add more devices to the list, do a Google search for user agent .xml files and repeat the steps in this section.
Figure 7-2: With the User Agent Switcher add-on, Firefox can impersonate a variety of Web browsers and mobile devices, including the iPhone.

Small Screen Renderer

The Small Screen Renderer add-on (https://addons.mozilla.org/en-US/firefox/addon/526) displays Web pages in a very narrow columnar format in Firefox. Used in conjunction with the User Agent Switcher add-on, this can give you a pretty good visual approximation of what a Web page might look like on the small screen of a mobile device.

To activate the Small Screen Renderer, choose View ➪ Small Screen Rendering. You can use the Small Screen Renderer without the User Agent Switcher. However, if you don’t have the User Agent Switcher activated and set to a mobile device, all the Small Screen Renderer will do is display the desktop version of a Web site in a very narrow columnar format. We encourage you to use these two add-ons together for best results.

For example, ESPN devotes significant resources to making their Web presence as mobile-friendly as possible, but you won’t be able to see the mobile versions of the site by entering www.espn.com into a Web browser on a desktop computer unless you use the User Agent Switcher (covered in the previous section). Combine the User Agent Switcher add-on with the Small Screen Renderer, and you can get a pretty good idea of how a site like ESPN will look in a variety of different mobile devices. Figure 7-3 shows the ESPN site as it appears in Internet Explorer 8 on a desktop computer. Compare that to Figure 7-4, which shows how the ESPN site displays in Firefox on a desktop computer, when the Small Screen Renderer add-on is used with the User Agent Switcher set to impersonate a Nokia N70 mobile phone.
146  Part II: Following Mobile Web Standards

Figure 7-3: ESPN.com as it appears in Internet Explorer 8 on a desktop computer.

Figure 7-4: ESPN.com displayed in Firefox using the User Agent Switcher and Small Screen Renderer add-ons.
**XHTML Mobile Profile**


**wmlbrowser**

The wmlbrowser ([https://addons.mozilla.org/en-US/firefox/addon/62](https://addons.mozilla.org/en-US/firefox/addon/62)) runs in the background to allow Firefox to display mobile Web pages designed in Wireless Markup Language (WML). Most Mobile Web designers don’t use WML anymore, but there are still many old Web pages on the Internet that were created this way. For more on WML, see Chapter 5.

**Using Mobile Emulators**

You can preview mobile designs and get a pretty good idea of how they will look on many different mobile devices by using mobile emulators (also called simulators). We offer more detailed descriptions in the section that follows, but here are three general categories of mobile testing options that simulate mobile Web browsers, operating systems, and the limitations of mobile devices:

- **Mobile emulators that work within a desktop Web browser:** You’ll find many Web sites that offer mobile emulators. These are the simplest but most limited options for testing how Web sites will appear on mobile devices.

- **Emulators you download and install on your computer:** Many device manufacturers offer emulators of their devices, as well as more complete SDKs (software development kits) that can be downloaded and installed on your computer.

- **More advanced options:** It’s difficult to categorize all of the testing options in the ever-changing world of mobile Web design, so we’re lumping several high-end services (including our favorites) into this category.
Testing with online mobile emulators in a Web browser

Although they offer the simplest option for testing mobile Web designs, most emulators that work within a Web browser suffer from two big limitations. First, they are running on your computer, which almost certainly has a much faster processor and many other capabilities you won’t find on mobile phones, and second, unless you’re using the User Agent Switcher described in the “Installing Mobile Add-Ons for Firefox” section earlier in this chapter, all you’re doing is opening the desktop version of a site in a small window within a Web browser.

**iPhone**

Although you may be tempted to test your pages in the online emulators at www.iphonetester.com or www.testiphone.com, beware that they can be very misleading if your goal is to see what your site will look like on an actual iPhone. For example, we tested both of these online tools by entering the URL of a site we know includes files created with Adobe Flash. If you know much about the limitations of the iPhone, you know that the iPhone doesn’t support Flash. But, despite that well-known limitation, both of these iPhone emulators displayed the Flash files perfectly. We consider that rather misleading and have to give them low marks as a result. Like many online emulators that work within a Web browser, these services do little more than show you how your pages will look within the limited screen size of a mobile phone.

**Opera Mini**

If you want to see how your mobile Web page looks on some of the most limited, low-end mobile devices on the market, you can test with the Opera Mini demo site (www.opera.com/mini/demo), which does a pretty good job of showing how a page will display within the limited functionality of the Opera mini Web browser. This emulator is especially useful if you are targeting the vast international market that is more likely to use the Opera browser than most mobile phone users in the United States. **Tip:** For best results, use this emulator in combination with the User Agent Switcher described in the “Installing Mobile Add-Ons for Firefox” section earlier in this chapter.

**dotMobi**

The dotMobi site features an emulator at http://mtld.mobi/emulator.php, which simulates how Web sites look on some of the most basic mobile devices, including the Sony K750 and the Nokia N70 (see Figure 7-5). Although the selection is very limited, and like other options in this category it works best when used with the User Agent Switcher described in the “Installing Mobile Add-Ons for Firefox” section earlier in this chapter, the service can give you an idea of what your mobile site may look like in some of the most limited phones still in use today.
The dotMobi site also includes a code-testing engine similar to the testing services on the W3C Web site (see the “Testing Your Site Code with the W3C Tools” section, later in this chapter). The dotMobi code-testing engine checks your mobile code for conflicts or errors that might have slipped past you. To use this service, navigate to http://ready.mobi/index.html and enter the URL of any site that you want to test.

**Downloading mobile emulators and SDKs**

Although it takes more time and effort to download, install, and use Mobile emulators and SDKs, these tools generally do a better job of simulating how a mobile device will work on a desktop computer than most of the emulators you’ll find on the Web. These tools are most often used by programmers creating applications for mobile devices, but they can also be useful to mobile Web designers.

**Phones that run Android**

The Google Android operating system is being used in an ever-growing list of mobile devices. You can download the Android SDK, which includes a mobile device emulator, by visiting http://developer.android.com/guide/developing/tools/emulator.html.
The Android emulator, as shown in Figure 7-6, is a little tricky to manipulate using a desktop computer. Be careful when clicking on the screen to use the directional buttons (also known as a “D-Pad”) when you move around pages because they can cause the screen to keep moving long after you stop.

**BlackBerry**

The profusion of BlackBerry devices, which come in many different screen sizes and with different versions of the browser and operating system, make designing for BlackBerry phones especially demanding. To help manage these variations, you can download emulators for a wide range of BlackBerry devices at [www.blackberry.com/developers/downloads/simulators/](http://www.blackberry.com/developers/downloads/simulators/). You must sign up for an account with BlackBerry before you can download the emulators, but they are available for free.

As you can see from the menu shown in Figure 7-7, BlackBerry offers emulators for dozens of BlackBerry phones, used on a variety of carriers. Once you have decided which BlackBerry emulator you want to download, double-click the name of the device, and follow the instructions on the BlackBerry Web site to install the emulator on your computer.

![Figure 7-6: The Android Emulator.](image)
Testing and Publishing Mobile Web Sites

Chapter 7: Testing and Publishing Mobile Web Sites

151

Figure 7-7: You can choose from a wide range of BlackBerry emulators.

**iPhone**

Apple offers an extensive developer program, but you have to pay $99 to participate and gain access to Apple’s SDKs, simulators, and other support services.

**Testing with more sophisticated services**

If you have the money and you work on a project in which it’s critical that your mobile Web site be tested across a wide variety of devices, the high-end services may be worth the cost.

**DeviceAnywhere**

Our favorite option for testing mobile designs on a wide variety of devices using a desktop computer, DeviceAnywhere (www.deviceanywhere.com) allows you to access more than 1,500 handsets and test them as they would perform on carriers in the United States, Canada, England, Spain, Germany, France, and Brazil.

The electronic innards of all the devices are wired into long racks connected to the Internet; when you sign up for the service, you can choose a device (see Figure 7-8 for an idea of the line-up of available devices) and then use your computer mouse and keyboard to manipulate it. For example, you can type a URL into a browser on any phone directly to see how it will display in
that phone’s Web browser, on its operating system, as it should be delivered by the carrier you selected. You can also click a simulated keypad to send a Short Message Service (SMS, or “text”) message, and even connect a microphone and speaker to your computer to test audio-related features, such as listening to music or using the microphone to leave a short voice message.

To use DeviceAnywhere, you first sign up for an account and then download and install their special software on your hard drive. After you launch their program, you access the DeviceAnywhere service using their program over the Internet where you can access a wide variety of mobile devices.

After you open the DeviceAnywhere service, you scroll through a list of available phones, as shown in Figure 7-8. Sometimes devices are busy or out of commission, but after extensive testing, we found the service to be remarkably reliable. When you find a device you want to use, right-click (Ô-click on the Mac) to select and open the device.

After a device opens on your screen, you can use your mouse to click the buttons on the image of the phone to interact as if you were pressing the keys on the phone’s keypad. It can take a little trial and error to figure out how to use some devices, especially limited feature phones that you may never have used before, but DeviceAnywhere includes a few special tools to help you enter URLs and interact with each phone.
The first three hours of testing are free (albeit limited to eight of the most popular devices), but after that, the testing packages can get expensive. The time spent testing the devices is measured in 6-minute (1/10 of an hour) increments, and the devices have a built-in fail-safe mechanism that shuts them down and disconnects you if you forget and leave one running in the background for 30 minutes. Additional testing hours cost about $16/hour, with package deals reducing the cost.

The quickest way to run through your minutes is to get carried away with the cornucopia of devices that are available to play with at DeviceAnywhere. Always right-click (on a Mac, ⌘-click) to disconnect the device as soon as you’re done testing.

**Keynote**

Keynote ([www.keynote.com](http://www.keynote.com)) offers a high-end service that includes testing your mobile Web sites, applications, and other services for you. Keynote serves big companies and is a premium (by that, we mean not cheap) service that provides testing and monitoring using real devices on a broad range of mobile carriers all over the world.

**Services from device manufacturers**

Some device manufacturers provide support services for designers and developers of mobile Web sites and applications, although you may have to pay hefty fees for such special help. For example, Research in Motion (RIM), the maker of the BlackBerry line of smartphones, might set up a server and custom-built emulator to help a large bank test its mobile banking site across a variety of BlackBerry phones. Check with device manufacturers for more information on their custom services if you need this kind of high-level support.

**Testing with Adobe’s Device Central**

If you use Adobe Dreamweaver, bundled along with it is the Device Central application that makes it possible for you to see your designs on some mobile devices. The initial selection is quite limited, but you can add new phone profiles. The functionality of the devices is still somewhat less accurate than in high-end emulators like DeviceAnywhere, but if you use Dreamweaver, this is a quick way to at least get an idea of how your site will display on a variety of devices. While much of Device Central focuses on empowering you to test Flash Lite applications on mobile devices, you can test any Web page on your hard drive using this program.

Follow these steps to preview your pages with Device Central:

1. Open a Web page that you want to preview in Dreamweaver, choose File ➪ Preview in Browser, and select Device Central from the list of options.
The page opens in Device Central, which displays the page in one of the
many mobile emulators installed in the program.

2. In the Test Center panel on the left, choose My Devices. Then in the
panel in the middle, select any device.

The page you’re previewing displays in that device. You can choose any
of the available options (indicated by a green circle) in the list of devices
in the center panel to view the page in different devices.

3. Study the page carefully and test all the links, rollovers, and any other
special effects to make sure that the page appears the way you want it
to on this mobile device.

You navigate around a Web page using these devices, much like you
would if you had the real phone. For example, use your mouse to click
the navigation arrows just above the keypad to scroll up, down, left,
and right.

4. Close Device Central and return to Dreamweaver to make any neces-
sary changes to the page.

You can add more devices to Adobe Device Central on a Windows computer
by choosing Devices > Download Device Profile, but your computer must
be connected to the Internet for this feature to work. On a Mac, choose
Devices > Add to Test Devices.

**Testing with the Actual Devices**

Every mobile designer worth his salt admits that you can only do so much
with tools on a desktop computer to simulate what users do in the real world
with your carefully crafted mobile Web pages. For instance, the following are
just some of the problems that could arise when you view your Web designs
the way mobile phone users see them:

✔ Your color scheme is unreadable under harsh daylight conditions.
✔ Your multimedia files are too large to work on the limited processor of a
mobile device.
✔ Clicking on your navigation links is frustrating, or even impossible, given
the limited interface options of a mobile device.
✔ Scrolling through long pages of data is exceptionally tedious.
✔ Having your page open for 15 minutes completely drains the battery.

You can’t know these things sitting in a comfy chair in a safe, air-conditioned
office with all of the power of your desktop computer and the interface
options of a mouse and keyboard.
True mobile gurus say the best option is to have shelves, drawers, or closets overflowing with mobile testing units, but most settle for a representative sampling of the 3 to 10 most common devices. If you don’t have the resources to keep multiple mobile phones on hand for testing, consider these options:

- **Use the friends and family plan.** That is, reach out to all your friends and family members, ask them what kinds of phones they use, and then enlist them as testers for your site(s).

- As your needs grow, you may find that you need to add more handsets to your roster of supported testing platforms (after all, you can’t expect your friends to rush out and buy the latest, greatest mobile gizmo just because you need to see how your images resize). The next stage in assembling an ad-hoc mobile testing network is to start reaching out to people through social-networking sites, such as Facebook, Twitter, MySpace, or LinkedIn. Simply ask via these networks whether people can check out your mobile site and leave you a note about what they think and what device they used to access the site.

- **Join professional associations,** such as Mobile Monday (www.mobilemonday.net), or any group of Web designers, and attend (or organize) gatherings where you get together and test each other’s sites.

- **Make frequent trips to electronics and cellphone stores** (rotating the stores so that the clerks don’t get sick of your incessant questions), and even stop people on the street or in shopping malls to ask them whether they can help.

### Testing Your Site Code with the W3C Tools

Before you take that last fateful step and hit the button to make your mobile Web site finally go live, do one last check (dubbed *an idiot check*) to make sure that you haven’t missed something obvious.

Testing your Web designs with the W3C validation tools has always been a good idea, but it’s even more important for mobile Web design. Desktop Web browsers, including Internet Explorer, Firefox, and Chrome, are surprisingly forgiving of common errors in XHTML code. Mobile Web browsers are not. That’s because mobile Web browsers are much smaller applications than their desktop counterparts and don’t have the capacity to handle even the most common mistakes in coding.

The W3C, long revered for its work on developing and encouraging the use of standards on the Web, has a new mobileOK Checker (see Figure 7-9) that checks for known issues on mobile phones (http://validator.w3.org/
Part II: Following Mobile Web Standards

mobile). The tester runs through your site, checking your code for known conflicts and errors, and then returns a report on what you need to do to clean up things.

While you’re at it, test the markup language on your site at http://validator.w3.org/ and then test the CSS (Cascading Style Sheets) on your site at http://jigsaw.w3.org/css-validator/.

Your pages work better in Web browsers when they’re error-free, and search engines will like them better, too.

Figure 7-9: The W3C mobileOK Checker can be a bit of an ego-deflator, but it gives you all the stats you need to make any last-minute fixes on glaring errors.

Choosing a Mobile Domain

You can upload your mobile Web page files to your Web server using FTP, just as you would upload the files of any desktop Web site (as you learn in the section that follows). The real challenge is deciding where to put your mobile version. At least eight (at last count) domain variations are commonly in use for mobile Web sites. Some mobile Web designers publish their mobile sites to a new domain with the .mobi domain ending. Many other designers are using subdomains, a version of a regular domain that shares the same basic address.

Table 7-1 demonstrates some common subdomains and shows some examples of what the full URL would look like.
Table 7-1: Common Mobile Subdomains

<table>
<thead>
<tr>
<th>Subdomain Prefix</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>iphone</td>
<td>iphone.slightlyusedcats.com</td>
</tr>
<tr>
<td>m</td>
<td>m.slightlyusedcats.com</td>
</tr>
<tr>
<td>mobile</td>
<td>mobile.slightlyusedcats.com</td>
</tr>
<tr>
<td>pda</td>
<td>pda.slightlyusedcats.com</td>
</tr>
<tr>
<td>xhtml</td>
<td>xhtml.digitalfamily.com</td>
</tr>
<tr>
<td>wap</td>
<td>wap.arterianmedia.com</td>
</tr>
<tr>
<td>wml</td>
<td>wml.hardnewsinc.com</td>
</tr>
<tr>
<td>wireless</td>
<td>wireless.sipsfromthefirehose.com</td>
</tr>
</tbody>
</table>

Some mobile designers prefer to use folder names to add a mobile address. In this case, you simply upload the mobile version of your site to a special folder with a name such as /m, /mobile, /i or /iphone, /gmm, /portable, or /wireless. If you set this folder up at the main root directory level of your site, and name the home page of your mobile site index.html, the URL would look something like this: www.digitalfamily.com/m/.

Our testing has shown that on low-end feature phones, it is often difficult to enter the “/” character. If you are designing a site for such basic devices, you might want to consider setting up a subdomain that uses a prefix, such as those included in the Table 7-1, rather than a folder name.

After you set up your mobile site (or sites) at one or more special URLs, you can link directly to those addresses and promote the addresses in your advertising. If you want to route the traffic from mobile sites directly to these addresses, you have to use some kind of mobile detection and redirection system. For more on this subject, please see Chapter 6.

**Publishing Your Mobile Web Site**

After you create and test your Web site so that it’s ready to publish on the Web, you can use Dreamweaver’s publishing tools to upload your site to your Web server. Which features you use depends on the kind of Web server you use. If you use a commercial service provider, you most likely need Dreamweaver’s FTP features, which we cover in detail in the following section. (If you prefer to use your own FTP program, see the nearby sidebar, “Using a dedicated FTP program.”)
Part II: Following Mobile Web Standards

You need the following information from your Web hosting service before you can configure Dreamweaver’s FTP features. Most service providers send this information in an e-mail message when you sign up for an account. If you don’t have this information, you need to contact your service provider for it because it’s unique to your account on your Web hosting service. Here’s what you need:

- **The FTP hostname:** A hostname is basically a human-readable nickname used by the Internet to locate a particular server. For example: ftp.domainname.com.

- **The path to the Web directory (optional but highly recommended):** The path looks similar to /web/htdocs/slightlyusedcats.

- **Your FTP login or username:** This is your personal username, which you created or was assigned to you when you established your Web hosting account.

- **Your FTP password**

- **Any special instructions from your server:** For example, you may need to use Passive FTP or any of the other advanced settings covered in the section that follows. This varies from server to server, so you need to ask your Web hosting service. (If you’re having trouble connecting

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**Using a dedicated FTP program**

If you prefer to use a dedicated FTP program instead of Dreamweaver’s built-in features, you can download FTP programs for the Mac and PC at the following Web addresses:

- **http://fireftp.mozdev.org:** FireFTP is a nifty little FTP program that’s an add-on to Firefox and a great alternative to Dreamweaver’s FTP features. Ideal for fixing things when you’re on the road and don’t have Dreamweaver handy or when you just want to view the files on your server without using Dreamweaver, this program can be added to any version of Firefox (for free).

- **http://filezilla-project.org:** FileZilla is a popular open-source option that works on computers running Windows, Mac, and Linux operating systems.

- **www.ipswitch.com:** A popular FTP program for the PC, WS_FTP is such a sophisticated FTP program that many Web designers will pay for the cost of this program, which offers a free trial version.

- **www.cuteftp.com:** A popular Windows program, CuteFTP, can be downloaded from the Web site.

- **www.fetchsoftworks.com and www.panic.com/transmit:** If you use a Macintosh computer, popular options are Fetch, available for download at the former Web address, and Transmit, available for download at the latter address.

- **http://cyberduck.ch:** Web designers working on the Mac platform are singing out the freeware program Cyberduck for praise because it works not just with FTP programs, but also for managing Amazon S3 cloud-based sites.
and you're not sure about these options, you can always experiment by selecting and deselecting these options to see whether a setting enables you to connect.)

Setting up Dreamweaver’s FTP features

After you gather all your FTP information, you’re ready to set up Dreamweaver’s FTP publishing features. This process can seem daunting and often takes a few tries to get right, but the good news is that you have to do it only once. (Dreamweaver saves these settings for you so you don’t have to set them up every time you want to upload new pages to your site.)

Follow these steps to set up Dreamweaver’s FTP features and publish files to a Web server:

1. Open Dreamweaver and choose Site➪Manage Sites.
   The Manage Sites dialog box opens.

2. In the list of defined sites, select the site you want to publish and then click the Edit button.
   The Site Setup dialog box opens. If your site isn’t listed in this dialog box, you haven’t set up your site.

3. Select Servers from the categories listed in the left panel of the Site Setup dialog box.
   The server list appears. If you haven’t set up any Web servers in Dreamweaver, this list is blank, as shown in Figure 7-10. Any servers you have set up properly are listed in this dialog box.

Figure 7-10: Click the small plus sign at the bottom of the Site Setup dialog box to open the Basic server configuration window where you can enter your FTP information.
4. Click the small plus sign at the bottom left of the server list area, as shown in Figure 7-10.

The Basic tab opens in the Servers dialog box and FTP is selected automatically, as shown in Figure 7-11. (If you need to use an option other than FTP, look ahead to the list at the end of these steps.)

![Figure 7-11: Enter all the information from your Web hosting company, including your name and password, in the Basic Server Setup dialog box.]

5. Enter a name in the Server Name field.

You can name your server anything you like. Choose a name that lets you easily choose among the servers you've set up. (If you only use one Web server to host your site, this doesn't matter as much as if you host your site on multiple sites, which is generally done only by very large or international sites.)

6. Enter the FTP address for your Web server account.

Again this information depends on how your Web server is set up, but most use one of the following: ftp.servername.com, ftp.yourdomainname.com, or simply yourdomain.com without anything at the beginning of the domain.

7. In the Username and Password fields, type your username (or login name) and password, respectively.

Again, this information is unique to your account on your Web server.
8. Select the Save check box to the right of the Password field if you want Dreamweaver to store your access information.

   This is handy because you can then automatically connect to the server anytime you want to upload or download pages. However, selecting the Save check box could enable anyone with access to your computer to gain access to your Web server.

9. Click the Test button to make sure you’ve entered everything correctly.

   Making a mistake is so easy, so the ability to test the connection and make any needed adjustments before you close this dialog box is helpful. If you connect without any problems, Dreamweaver responds with a box saying Dreamweaver connected to your Web server successfully. (Note: You must save the password to use the test feature, but you can deselect the Save box after you test if you prefer not to save the password in the program.)

   If you have trouble connecting to your site, skip ahead to Step 11 for a few advanced options that may help.

10. In the Root Directory (also known as the local site folder) field, type the directory name of the remote site in which documents visible to the public are stored.

   The root directory usually looks something like public_html/ or www/htdocs/. Again, this depends on your server.

   If you upload your files to the wrong directory on your server, they aren’t visible when you view your site through a browser.

11. Click the small arrow to the left of More Options.

   You may not need to change any of these settings, but if you have trouble connecting to your server and are sure you’ve entered your username, password, and FTP address correctly, adjusting these settings may enable you to connect.

   Select and deselect each of these options and then click the Test button after each change to see whether any of these adjustments make the difference and enable you to connect to your server.

   A little experimentation with settings before waiting on hold with tech support is usually worth the effort. But if you’re really having trouble establishing a connection with your server, call or e-mail the tech support staff at your Web server. The only people who can help you are those who run your Web server because the settings are specific to your service provider and can vary dramatically from one hosting company to another. We’ve done our best to give you the most common options here, and with a little trial and error, the suggestions here should help you connect to most Web hosting companies. If you’re really stuck though, ask for more help from the people who run your server.
12. After you fill in everything, click the Test button; if you successfully connect to your server, click the Save button to save your settings.

Dreamweaver saves all your FTP settings (assuming you opted to save the password). The beauty is that you never have to enter these settings again after they work properly, and you can access your Web server from the Files panel in Dreamweaver, as you can read about in the next section.

Dreamweaver provides five access options. If you work at a large company or university, you’re likely to use one of the following options rather than FTP. The options available from the Connect Using drop-down list (see Figure 7-11) are as follows:

- **FTP**: Provides basic File Transfer Protocol connection and transfer features.
- **SFTP**: Provides a more secure FTP connection. If you can use a secure connection, it’s definitely the preferred choice, and it’s required by some Web servers to maintain higher levels of security.
- **Local/Network**: Select this option if you’re using a Web server on a local network, such as your company’s or university’s server. For specific settings and requirements, check with your system administrator.
- **WebDAV**: Select this option if you’re using a server with the WebDAV (Web-based Distributed Authoring and Versioning) protocol, such as Microsoft IIS.
- **RDS**: Select the RDS (Rapid Development Services) option if you’re using ColdFusion on a remote server.

**Publishing files to a Web server with FTP**

You can upload pages to your server and download pages from your server using the built-in FTP capabilities of Dreamweaver.

To transfer files between your hard drive and a remote server (after you’ve successfully set up the FTP features we cover in the preceding section of this chapter), follow these steps:

1. **Make sure the site you want to work on is selected in the Files panel in Dreamweaver.**
2. **In the top left of the Files panel, click the Connects to Remote Host button (which looks like a blue electrical cable plugging into itself).**

   If you’re not already connected to the Internet, the Connects to Remote Host button starts your Internet connection. If you have trouble connecting this way, establish your Internet connection as you usually do to
check e-mail or surf the Web, and then return to Dreamweaver and click the Connects to Remote Host button after you’re connected. When your computer is online, Dreamweaver should have no trouble automatically establishing an FTP connection with your host server.

If you still have trouble establishing a connection to your Web server, refer to the preceding section, “Setting up Dreamweaver’s FTP features,” and make sure that you specified the server information correctly.

3. **After you establish a connection between your computer and your Web server, click the Expand/Collapse button (which looks like stacked horizontal lines at the far right of the top of the Files panel).**

When you click this button, Dreamweaver displays both the local folder with your site on your hard drive and the remote folder with the site on your server. We prefer this dual view because seeing both folders side by side makes moving files from one place to another easier. This dual view also helps us visualize the structure of the site on the server.

You can also view your local site folder by choosing Local View from the drop-down list at the top right (see Figure 7-12). Or choose Remote View to see only the files on the server.

4. **To upload (or transfer from your hard drive to your Web server) a file, select the file from the Local View panel (which displays the files on your hard drive) and click the Put Files button (the up arrow) in the Files panel.**

The files are copied automatically to your server when you transfer them. You can select multiple files or folders to be transferred simultaneously.
After you upload files to your server, test your work by using a Web browser to view them online. Sometimes things that look and work fine on your computer (such as links) don’t work on the server.

5. To download (or transfer from your Web server to your hard drive) files or folders, select the files or folders from the Remote View panel (which displays the files on your server) and click the Get Files button (the down arrow) in the Files panel.

The files are copied automatically to your hard drive when you transfer them.

When you copy files to or from your server, the files you transfer overwrite the files already at the destination. Dreamweaver notifies you about the overwriting if it notices you’re replacing a newer file with an older one, but it can’t always correctly assess the proper time differences. Take note of these warnings but keep in mind that you can get warnings that aren’t always accurate when they’re based on the age of a file, especially if you use more than one computer to work on your Web site.

When the transfer is complete, you can open the files on your hard drive.

6. To close this dual-panel dialog box and return to Dreamweaver’s main workspace, simply click the Expand/Collapse button again.

Finding and Fixing Broken Links

If you’re trying to rein in a chaotic Web site or if you just want to check a site for broken links, you’ll be pleased to discover Dreamweaver’s Link Checker. You can use this feature to verify the links in a single file or an entire Web site, and Link Checker can automatically fix all the referring links at once if a link is broken.

For example, assume that someone on your team (because you would never do such a thing yourself) changed the name of a file from new.htm to old.htm without using the Files panel or any of Dreamweaver’s automatic link update features. Maybe this person changed the name using another program or simply renamed it in Explorer (Windows) or Finder (Mac). Changing the file-name was easy, but what this person may not have realized is that if he didn’t change the links to the file when the file was renamed, the links are now broken.

If only one page links to the file that your clueless teammate changed, fixing the broken link isn’t such a big deal. As long as you remember which file the page links from, you can simply open that page and use the Property inspector to reset the link the same way you created the link in the first place.

But many times, a single page in a Web site is linked to many other pages. When that’s the case, fixing all the link references can be time-consuming, and forgetting some of them is all too easy. That’s why Link Checker is so helpful.
Chapter 7: Testing and Publishing Mobile Web Sites

If you’re working on a dynamic, database-driven site or if your site was altered with programming that was performed outside Dreamweaver, Link Checker may not work properly. Link Checker works best for sites with static HTML pages and sites created using DWT Dreamweaver templates.

You must have the entire site on your hard drive and you must have completed the site setup process for Link Checker to work properly.

Checking for broken links

To check a site for broken links, follow these steps:

1. In the drop-down list on the left at the top of the Files panel, select the site you want to work on.

   If you already have the site open in Dreamweaver, you can skip this step.

2. Choose Site | Check Links Sitewide.

   The Link Checker tab opens in the Results panel at the bottom of the page, just under the Property inspector, as shown in Figure 7-13. The tab displays a list of internal and external links as well as any pages, images, or other items not linked from any other page in the site — dubbed orphans. Unused images can waste space on your server, so this list is handy if you want to clean up old images or other elements you no longer use on the site.

   Most service providers limit the amount of space on your server and charge extra if you exceed that limit. You can save valuable server space by deleting unused files, especially if they're image or multimedia files. But just because you delete them from your hard drive doesn’t mean they’re deleted from the server. Make sure you remove them from the Remote Site window in the Files panel as well as the Local Site panel.

Figure 7-13: The report can be organized by broken links, external links, and unused files.
Fixing broken links and missing images

Broken links are one of the worst problems you can have on a Web site. After you identify a broken link in a site, fix it as soon as possible. Nothing turns off visitors faster than clicking a link and getting a File Not Found error page, especially if they’re looking for information fast on a mobile device. Fortunately, Dreamweaver makes it simple to fix broken links or detect when images are missing by providing quick access to files with broken links and automating the process of fixing multiple links to the same file.

After using the Link Checker tab described in the preceding section to identify broken links or missing images, follow these steps to fix them by using the Results panel:

1. With the Results panel open at the bottom of the page, double-click a filename that Dreamweaver identifies as a broken link or missing image.

   The page and its corresponding Property inspector open. The Results panel remains visible.

2. Select the broken link or missing image on the open page.

3. In the Property inspector, click the Browse button (which looks like a folder) to the right of the Src text box to fix an image. To fix a link, click the Browse button next to the Link text box.

   If you’re fixing an image, the Select Image Source dialog box appears, where you can select the image file you need. However, if you’re fixing a link, you see a slightly different dialog box, where you need to browse for the file in your site folder.

4. Click to select the file you need and then click OK.

   If you replace an image, the image file reappears on the page. The link automatically changes to reflect the new filename and location.

   If the link that you correct appears in multiple pages and you fix the link using the broken link’s Results panel, Dreamweaver prompts you with a dialog box asking whether you want to fix the remaining broken link references to the file. Click the Yes button to automatically correct all other references. Click the No button to leave the other links unchanged.
Testing Your Work with Dreamweaver’s Site Reporting Feature

If you’ve used Dreamweaver to build your mobile Web site, you can check your work using the Dreamweaver Site Reporting feature. This feature allows you to create a variety of reports and even customize them to identify problems with external links, redundant and empty tags, untitled documents, and missing alternate text. You can easily miss things — especially when you work on a tight deadline — and common problems in Web design are magnified on the mobile platform.

Follow these steps to produce a site report of your entire Web site:

1. In the drop-down list at the top left of the Files panel, select the site you want to work on.

   If you already have the site you want to test open in Dreamweaver, you can skip this step. **Note:** Your site appears in the Files panel list only if you’ve completed the site setup process. See “Setting up Dreamweaver’s FTP features,” earlier in this chapter, for more on this.

2. Make sure any documents you have open in Dreamweaver’s workspace are saved by choosing **File ➪ Save All.**

3. Choose Site ➪ Reports.

   The Reports dialog box appears (see Figure 7-14).
4. **In the Report On drop-down list, choose Entire Current Local Site.**

We most commonly use this feature to test an entire site just before publishing it to the Web, but you can choose to check only a single page by opening the page in Dreamweaver and then choosing Current Document in the Report On drop-down list. You can also run a report on selected files or on a particular folder. If you choose Selected Files in Site, you must first click to select the pages you want to check in the Files panel.

5. **In the Select Reports section, select the check boxes for the reports you want.**

You can select as many reports as you want. Table 7-2 demonstrates some of the reports that you can generate.

6. **Click the Run button to create the report(s).**

If you haven't already done so, you may be prompted to save your file, set up your site, or select a folder.

The Results panel appears, as shown in Figure 7-15, displaying a list of problems found on the site. To sort the list by category (such as filename, line number, or description), click the corresponding column heading.

7. **Double-click any item in the Results panel to open the corresponding file in the document window.**

The file opens, and the error is highlighted in the workspace.

You can also right-click (Windows) or Control-click (Mac) any line of the report and choose More Info to find additional details about the specific error or condition.

8. **Use the Property inspector or another Dreamweaver feature to correct the identified problem and then save the file.**

For more on how to maintain a site and fix problems in the design, please consult a book on Web design, such as *Dreamweaver CS5 For Dummies.*
### Table 7-2 Site Report Options

<table>
<thead>
<tr>
<th>Report Name</th>
<th>What It Does</th>
</tr>
</thead>
<tbody>
<tr>
<td>Checked Out By</td>
<td>Lists files checked out of the site and identifies the person who checked them out. This feature is used only if you’ve set up the site to also work with Adobe Contribute.</td>
</tr>
<tr>
<td>Design Notes</td>
<td>Lists design notes used in the site.</td>
</tr>
<tr>
<td>Recently Modified</td>
<td>Lists files that have been edited within a specified time period. You can set the time period for the report by selecting the Recently Modified check box and then clicking the Report Settings button at the bottom of the dialog box.</td>
</tr>
<tr>
<td>Combinable Nested Font Tags</td>
<td>Lists all instances where you can combine nested tags. For example, <code>&lt;font color=&quot;#000000&quot;&gt;&lt;font size=&quot;2&quot;&gt;Great Web Sites You Should Visit&lt;/font&gt;&lt;/font&gt;</code> is listed because you can simplify the code by combining the two font tags into <code>&lt;font color=&quot;#000000&quot; size=&quot;2&quot;&gt;Great Web Sites You Should Visit&lt;/font&gt;</code>.</td>
</tr>
<tr>
<td>Missing Alt Text</td>
<td>Lists all the image tags that don’t include alt text. Alt text is a text description for an image tag included in the HTML code as an alternative if the image isn’t displayed. Alt text is important to anyone who uses a special browser that reads Web pages.</td>
</tr>
<tr>
<td>Redundant Nested Tags</td>
<td>Lists all places where you have redundant nested tags. For example, <code>&lt;h1&gt;Good headlines &lt;h1&gt;are harder to write&lt;/h1&gt; than you might think&lt;/h1&gt;</code> is listed because you can simplify the code by removing the second <code>&lt;h1&gt;</code> tag to make the code look like this: <code>&lt;h1&gt;Good headlines are harder to write than you might think&lt;/h1&gt;</code>.</td>
</tr>
<tr>
<td>Removable Empty Tags</td>
<td>Lists the empty tags on your site. Empty tags can occur when you delete an image, text section, or other element without deleting all the tags applied to the element.</td>
</tr>
<tr>
<td>Untitled Documents</td>
<td>Lists filenames that don’t have a title. The title tag is easy to forget because it doesn’t appear in the body of the page. The title tag specifies the text that appears at the very top of the browser window and also the text that appears in the Favorites list when someone bookmarks a page. You can enter a title for any page by entering text in the Title field just above the work area or in the Title field in the Page Properties dialog box.</td>
</tr>
</tbody>
</table>