



70 Assists for a Winning Site

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By [Edward Mendelson](#)

Even Michael Jordan needs assists from his teammates to score points. When you're building a Web site, the arena is different, but the idea is similar: All-star applications such as Macromedia's Dreamweaver, Microsoft FrontPage, and NetObjects Fusion can really excel with help from other players. Specialized, single-purpose tools can fine-tune and enhance your site until it stands out from the thousands of sites that blend into the crowd.

We've selected a whopping 70 utility programs, application packages, and online services that can help you build a site that will draw new visitors and keep them coming back. And almost everything in our tool-kit gives you a free throw: Most of the online services and products we review offer a free version.

A few of the products work as add-ins that assist Dreamweaver, FrontPage, or Fusion, but most work with any Web-building software. Wherever possible, we've tried to present generic equivalents for tools that work with a specific authoring package.

We review themes, templates, and graphics that spice up your site's appearance, along with HTML-checking and link-validating tools that make your site perform as you intend, as well as file-transfer programs for fast and secure uploads and synchronizations between your development machine and your server. We also cover JavaScript and Dynamic HTML (DHTML) script archives and add-ins for Dreamweaver, FrontPage, and NetObjects Fusion that enhance your pages and extend the authoring programs.

Image optimizers and other graphic tools are essential in any Web builder's toolbox. Cascading Style Sheet editors let Web builders easily enforce consistency of design across a site. We look at all these, and at PCMag.com, you'll find a bonus section on miscellaneous software and services, such as accessibility tools, log analyzers, and text editors.

Utilities and services give you power, but knowledge is power. Our sidebar of book reviews, "Hitting the Books", will set you up for a slam dunk on the Internet.

Theme and Template Libraries

For Web authors who don't want to get their hands dirty hand coding Cascading Style Sheets (CSS), the essential way to build a coherent Web site is by using the themes and templates. Themes are graphical designs for headers and navigation in Microsoft FrontPage, NetObjects Fusion, and other automated site-building applications. Templates, used by virtually all site-editing programs, are page layouts that provide the underlying structure for one or more pages on a site.

A template can consist of a basic layout for an entire site or a set of layouts for page types, such as product listings or contacts. In authoring programs that support both themes and templates, you can apply different themes to the same template. When you change a theme, the basic page structure of headers, navigation bars, footers, columns, and tables remains the same, but the colors, typefaces, and other graphical elements change.

FrontPage ships with a generous set of themes and layout templates: You have certainly seen them throughout the Web. But many site builders need more customized looks. If you don't know how to modify an existing theme or build a new one, you might consider buying third-party themes and templates online. Most range in price from \$10 to \$45, but a few sites offer access to dozens of templates for a single price, and many are available free through the links at **(1) The Free FrontPage Themes Guide** (<http://freethemes.hypermart.net>). Some of the templates here come with their own themes; others use FrontPage's ability to embed one page inside another as a Web component.

Commercially available themes and templates range from elaborate, sophisticated designs to awkward, homespun designs that are probably worse than what you could do on your own. A few sources of eye-catching design stand out from the crowd. **(2) PixelMill** (www.pixelmill.net) is a clearinghouse with over 20 developers and a combined catalog of more than 1,000 themes and templates. **(3) themesets.net**, with work by a dozen artists, specializes in artistic, graphics-intensive themes. **(4) The Template Store**

(www.thetemplatestore.com) offers about 50 templates, some equipped with themes. **(5) FrontPage World** (www.frontpageworld.com) sells large-scale templates with as many as 16 related page types per site. **(6) A+ Templates** (http://www.shalltech.com) sells a \$15.95 membership that lets you download any of the site's 100-plus templates, many with Flash animations.

One problem with FrontPage themes is that you can't easily apply one to a site that did not use a theme when it was originally built. If you want to apply a FrontPage theme to an existing nonthemed site, you must create an entirely new site based on the theme and then manually copy and paste your existing content onto the new site.

An impressive work-around is the \$15 **(7) Super Themes Browser** (www.frontlook.com), an add-in for FrontPage that lets you apply themes to an existing site. The Super Themes Browser works only with themes created or modified to be compatible with it. Some Super Themes are available at **(8) FrontLook.com**, many of them in wraparound style with prebuilt borders. More Super Themes will be available from themesets.net and other theme sites.

Dreamweaver's templates are more flexible than FrontPage's templates and themes but are harder to learn. When you change or remove an element in a Dreamweaver template, the element changes everywhere on all the pages that are based on that template.

Among the most elegant are the free-sample multipage **(9) Macromedia Dreamweaver Templates** (www.macromedia.com/software/dreamweaver/download/templates). **(10) SiteBuilder** (www.sitebuilder.ws) sells packs of visually striking templates. **(11) EZProTemplate.com** specializes in \$10 e-commerce templates, including some with PayPal links built-in for instant payments.

(12) keli e templates (www.kelietemplates.com) offers dozens of well-designed categorized templates you can license for \$25 or buy out-right for \$150.

TheTemplateStore has 50 commercial templates matching the site's FrontPage offerings. The free and low-cost templates at **(13) Nutnbolt** (www.nutnbolt.co.uk) won't win design awards, but they're simple and usable. **(14) Templates2go** (www.templates2go.com) sells \$79 CDs with 30 templates each and a wide range of homegrown-looking designs.

Clip-Art and Stock Photo Libraries

There's no shortage of stock photos and clip art on the market. The hard part is choosing the few images that belong on your site. Broderbund's **(15) ClickArt 250,000** (\$29 — [Check Prices](#), www.broderbund.com) comes with 100,000 images in Web format; the other 150,000 images in the package are vector graphics and photos that you can convert for the Web with the bundled image editor or your Web editor's imaging tool. A keyword index helps you find the image you need.

Even with a slow Internet connection, you may prefer to download the few images you really need. Microsoft's free **(16) Design Gallery Live** (http://dgl.microsoft.com) offers a rich collection of keyword-searchable drawings and photos in funky, sophisticated styles. A commercial site offering downloadable buttons and Web page widgets, **(17) ArtToday.com** claims 1.5 million downloadable images (we haven't counted), with a subscription plan ranging in price from \$7.95 per week to \$153.40 per year with all the downloads you can manage. **(18) GifArt.com** has a mere 25,000 downloadable images, but they include animated GIFs, all for \$39.95 per year. **(19) GraphicMaps.com** offers a selection of free clip-art maps in addition to clip art you pay for.

You can download thousands of free clip-art images from sites listed on search engine directories. Google lists an enormous range of sites under Computers > Graphics > Clip Art, but the quality of most free images confirms the adage that you get what you pay for.

Site-Checking Tools

Your site looks terrific in your Web editor and the latest version of Internet Explorer, but how does it look on a five-year-old version of Netscape Navigator? All the links on your site were working when you designed your pages six months ago, but how many of them produce "File not found" errors when visitors try to use them? HTML-verification and link-checking tools test your site for the kind of problems that make your visitors vow never to return.

Don't count on your Web page editor to create pages that work on all browsers. If you insert a graphic next to a FrontPage theme's banner, the resulting page may suffer from overlaps and other display faults when viewed in Netscape. Dreamweaver's pages are less prone to cross-browser problems but aren't entirely immune. Because HTML verification software doesn't detect many compatibility problems, the only guaranteed solution is to test your pages on as many platforms as possible.

Serious Web developers will want to check multiple browser versions on their own machines. All Netscape versions can coexist on the same system, and all versions since 2.0 can be downloaded from www.netscape.com/download/archive.html. Different Internet Explorer versions cannot coexist on the same system, so the best way to test multiple IE versions is with virtual-machine software such as **(20) VMware Workstation** (download, \$299; boxed, \$329 — [Check Prices](#); www.vmware.com) or **(21) Connectix's Virtual PC** (\$199 — [Check Prices](#), www.connectix.com). After installing one of these utilities, you can set up multiple sessions of Windows 95 or 98 on a Windows 2000 or XP system, with each virtual machine running

a different Internet Explorer version. You can easily find older IE versions through Internet search engines.

The virtual-machine method won't help you test a site on Macintosh or WebTV browsers, but the **(22) Browser Photo** service at NetMechanic (annual subscription, \$135; trial one-time use, \$15; www.netmechanic.com) can do the job for you. This service creates images of your Web site in 16 browser versions that run on the Macintosh, WebTV, and Windows.

(23) NetMechanic's HTML Toolbox service verifies links, checks your code for HTML compliance and cross-browser compatibility, and displays clear reports that spell out the steps required to fix most coding problems. These checks cost \$50 per year for a site with up to 100 pages or frames, or \$200 per year for one with up to 400 pages or frames. There's custom pricing for larger sites.

A more limited free service, **(24) Web Site Garage** (www.websitegarage.com), now part of Netscape Netcenter, performs a more basic HTML-compatibility and compliance check on a single page, without offering NetMechanic's convenient display of your actual code with suggested changes. For free online validation of individual pages, the World Wide Web Consortium (validator.w3.org) and the **(25) Web Design Group** (www.htmlhelp.com) also offer a free HTML-compliance checker for single pages.

Software tools for HTML compliance and compatibility checking include the powerhouse **(26) CSE HTML Validator** (htmlvalidator.com). For \$129, the professional version 5.0 gives you a detailed tree-structured list of problems and solutions keyed to the type and seriousness of the errors. The freeware version 3.0 provides a more basic set of reports suitable for personal Web sites.

Dave Raggett's free, open-source **(27) HTML Tidy** validator (tidy.sourceforge.net) also provides all the checking most Web authors need. It works as a plug-in and is built into **(28) Chami.com's free HTML-Kit** (www.chami.com) and other software listed at the HTML-Tidy site.

If you want visitors to come back to your site, working links are just as important as valid code. FrontPage automatically checks your site's internal links and optionally checks external ones. Dreamweaver can verify only internal links, so you'll need a separate tool to test external links.

You can choose between link-checking programs that run on your system and services that run over the Web, and then either display or e-mail the results. Link-checker applications are easier to customize and manage, but their speed is limited by the speed of your Web connection. The services can test large sites without using any of your bandwidth or CPU cycles, but they tend to be expensive.

The fastest link-checking software is **(29) Tilman Hausherr's freeware called Xenu's Link Sleuth** (home.snafu.de/tilman/xenulink.html), which churns out a list of verified and broken links at a startlingly high speed. Its only weakness: If it finds a link to Amazon.com for an item that's no longer in the catalog, the broken link is reported on Amazon's site, and you have to figure out for yourself which page on your site has the broken link.

(30) REL Software's Web Link Validator (\$27.00, www.relsoftware.com) is almost as fast as Xenu's, has a more informative interface, and isn't stymied by Amazon links. But it can't display all the broken links on a single page of a large site.

A more elaborate alternative with a built-in editor for fixing links is **(31) BiggByte Software's shareware InfoLink Link Checker** (\$49.95, www.biggbyte.com). Unfortunately, this program reports all Amazon links as invalid, whether or not they are actually broken. For \$295, you can buy **(32) Watchfire's ultraflexible Linkbot Personal Edition** (tetranetsoftware.com), which has no trouble with Amazon links and offers a variety of warnings about slow and old pages as well as defective HTML.

(33) Expandable Language's ChangeAgent (\$199, www.xlanguage.com) eases the task of fixing broken or defective links in an entire site by identifying multiple internal dead links and replacing all of them with a good address at once. But for external links, you may be better off buying a copy of FrontPage and using it to check external links and correct them throughout your site.

Specialized link-checking sites include **(34) Link Alarm** (www.linkalarm.com), which verifies links on a 100-page site once a week for an annual fee of \$52, sends you an e-mail when the results are ready, and displays all problems on organized pages that you can download to your own computer for viewing in your browser. **(35) The Web Design Group's Link Valet** (www.htmlhelp.com) link-checks a whole site at no charge but reports all Amazon links as errors.

File-Transfer Programs

After building a site on your local machine, you need to upload the files to your server and then maintain the site by uploading updates. All Web authoring software comes with built-in tools for publishing files or whole sites to a server, but for full control over file transfers you need a standalone FTP (File Transfer Protocol) client.

Most servers support the traditional FTP, but some require or allow the newer SCP (Secure CoPy) protocol, which works inside the encrypted SSH (Secure SHell) protocol. All of today's advanced file-transfer programs include synchronization features that let you bring remote sites up to date in a few keystrokes. They can serve as file managers for both your remote site and your local machine and handle file permissions, directory creation, and other file management tasks as easily on Unix servers as on Windows servers.

For traditional FTP transfers with smaller sites, **(36)** Rhino Software's **FTP Voyager** (\$39.95, www.rhinosoft.com) offers an ideal balance of power and ease of use. The interface consists of a four-panel display of folders and files on your local machine and the server, plus clear graphs showing upload progress and a window for messages sent between the server and client. Efficient keyboard navigation contributes to the program's effortless feel. You can create and add custom FTP commands to the menu or specify a series of commands to be sent automatically after connecting to a site, but there's no scripting language, which would be useful for enterprise-scale sites. FTP Voyager allows more than one open connection at a time, with each session in a separate window.

For file transfers that use virtually every current security feature, including X.509 certificates and ASCII file transfers under SFTP (Secure FTP), you can't do better than **(37)** VanDyke Software's **SecureFX** (\$59.95, www.vandyke.com). Beginners won't find wizards or other hand-holding, but experienced Web authors will admire the no-nonsense interface and well-organized access to an enormous range of features. Each session is displayed as a two-pane window, with local files in one pane and files and messages from the remote server in the other.

When you open multiple sessions, each one appears in a child window inside the program window, reducing desktop clutter and letting you arrange or separate sessions in tiles. You can also use SecureFX as a compact, powerful client for regular FTP, as well as for transferring files between remote sites as effortlessly as between your local machine and the server.

A high-powered alternative to FTP Voyager is **(38)** GlobalScape's **CuteFTP Pro** (\$59.95, www.globalscape.com), which supports elaborate scripting control (based on the Windows Scripting Host) and multiple secure transfers over SSL and SFTP. The tabbed interface makes it easy to move files between your local system and several remote systems at once. A wizard interface helps beginners set up connections to remote sites, and a customizable keep-alive feature periodically sends commands to the remote sites to maintain an open connection. A few quirks got in the way of perfect performance: Transfers between two remote sites often failed on our tests, and when we switched between remote sites on the right pane, the list of local files on the left pane did not switch between the local directories that we had defined as defaults for those sites.

A less powerful version, CuteFTP (\$39.95 — [Check Prices](#)), has an easy-to-use two-pane interface and the same helpful wizard but lacks the security and automation features of the Pro version.

You don't need to spend money for a well-designed FTP client. **(39)** Alan Chavis's **FTPx** (www.ftpx.com) is free for personal use. It displays a single Explorer-style window that allows drag-and-drop transfers of files to and from Windows Explorer. A new version hasn't appeared for five years, but the clean, simple design still feels up to date.

For free, secure file transfers using the SCP protocol, try **(40)** Martin Prikryl's **WinSCP** (winscp.vse.cz/eng). This offers a choice between an Explorer-style display of the server and a two-panel list of files on local and remote machines. If you remember DOS-era file managers like Norton Commander, you'll feel comfortable with the program's function-key shortcuts—F5 to copy and F6 to move, for example. The display of local files doesn't give you access to your local network, but the program's security features approach those of commercial products.

When you need to get a file to or from a remote site at top speed and you don't want to wait for a GUI-based client to update its file listings, just open a **(41)** **DOS command prompt**, and run Windows' built-in text-mode FTP command, which has essentially the same syntax as the FTP command used on Linux and Unix sites.

JavaScript Collections

JavaScript is the most efficient way to automate your Web site, with or without Dynamic HTML. The JavaScript language is simple enough for nonprogrammers to learn the basics, but even the basics can perform spectacular feats. Many Web-editing programs, notably Dreamweaver, automatically insert complete JavaScript code for image rollovers, dynamic menus, and time- or date-customized images. You can also use JavaScript to validate forms and redirect users to different pages, depending on their browser versions. The best way to learn JavaScript is to study existing scripts, and thousands of ingenious scripts are available at no cost.

JavaScript libraries aren't the hotbed of activity they were a few years ago, but many sites maintain up-to-date and well-organized collections of scripts and explanatory material. Most sites display scripts in a form that you can copy and paste directly into your code.

A good starting point is **(42)** Webmonkey's **JavaScript Code Library** (http://hotwired.lycos.com/webmonkey/reference/javascript_code_library). It has a well-chosen collection of general-purpose scripts that you can easily adapt to your own purposes. Some scripts offer features every Web author needs. For example, one script works around a bug in Netscape 4.0 that causes Cascading Style Sheets (CSS) to disappear when a page is resized.

Other scripts provide building blocks for your own scripts. For instance, you can use a script from Webmonkey's library to change the targets of links on a page, depending on whether visitors identified themselves as beginners or experts. Layout-related scripts on your site can change the size of fonts according to the width of the browser window so that your site is as legible on large screens as it is on small

ones.

(43) Dynamic Drive (www.dynamicdrive.com) stands out for its extensively tested JavaScript and Dynamic HTML scripts, usable in virtually all browser versions, including the notoriously recalcitrant Netscape Navigator 6. In some cases, the site automatically generates the script you need when you enter requirements in a wizard. An especially elegant example is the wizard that builds code for creating pop-up windows.

One user-friendly script lets a visitor enter a search string in a form field, and then it instantly highlights all matching text on the page. Bandwidth-saving scripts include a splash page that seems to display multiple pages in rapid sequence but is in fact Dynamic HTML on a single page. When you're tired of serious coding, you can install one of the site's many well-designed mouse-trail scripts for some cool effects.

The script library at **(44) Builder.com** (<http://builder.cnet.com/webbuilding/0-7600.html>) offers a range of simple and elaborate scripts, all with lucid instructions, demos, and downloadable script files. One script uses a cookie to save data entered into a form on your site and restores that data the next time a visitor returns. One ingenious special-effects script shines a spotlight on a circular region surrounding the mouse pointer while leaving the rest of the page dark. A hotkey script lets you define letters and numbers as links so that a visitor can simply press H to go to your home page or C to go to the contact page.

Netscape invented JavaScript, and **(45) Netscape's DevEdge** site contains some of the most advanced JavaScript routines available (<http://developer.netscape.com/tech/javascript>). One script builds a bar graph on your page using JavaScript functions to replace bandwidth-intensive graphics. A JavaScript calendar pop-up helps users enter dates in forms. Under the heading "Determining browser version," this site offers the only continually updated script that reliably identifies virtually all browser versions, including those such as Opera, which can identify itself as another browser. This script is indispensable for any author whose site displays different DHTML and JavaScript according to a visitor's browser and operating system.

The script archive at **(46) Internet Related Technologies** (<http://tech.irt.org/articles/script.htm>) provides dozens of scripts in all standard categories such as rollovers and pop-ups, but it stands out for its in-depth treatment of complex scripting problems. Many JavaScript sites offer a simple script designed to force a page into a frame, but they don't warn you that the script won't work in many browser versions. The script on this site handles almost any imaginable situation with aplomb. Similar depth and care go into the scripts used for other complex problems, such as maintaining control over pop-up windows in older browser versions that can't close pop-ups by themselves. Even though the script archive is no longer updated, this is the site to visit when you can't find the answer to a JavaScript problem anywhere else.

Browser Extensions

Dreamweaver, Microsoft FrontPage, and NetObjects Fusion are extensible programs that make adding features to menus and toolbars easy for developers. Dreamweaver extensions are the most widely supported: More than 500 free, user-contributed extensions (or behaviors) are available from **(47) Macromedia Exchange for Dreamweaver** (www.macromedia.com). When you install an extension (using the Extension Manager downloaded from Macromedia's site), you add a command to Dreamweaver's menu. The new command typically inserts complex JavaScript and DHTML code into a page when you choose options from a dialog box.

One popular extension on Macromedia's site inserts a table of contents that uses the anchors or headers in the file as the topic headings. Others automatically format and create a calendar, suppress the dotted lines Internet Explorer displays around a selected link, and hide the toolbar that Microsoft Internet Explorer 6.0 superimposes on images. An encoded e-mail link behavior (a prepackaged script that saves you from writing the actual script and manually inserting it) converts e-mail addresses into obscure HTML codes to hide them from address-trawling robots used by spammers. Many behaviors insert a code that works around display bugs in Netscape Navigator 4.

Even though some of the many available behaviors insert relatively simple code, it's always easier to use the menu than to type in the code by hand. The Macromedia Exchange site tends to be slow, so take some time to read user comments on behaviors before you download them.

Some of the most impressive-looking behaviors may not work as well as you expect. For instance, the extension for checking external links consistently crashed our site during testing. Extensions listed with a user rating of 4 or 5 (out of 5) are almost always worth the download.

(48) Macromedia's free Accessibility Starter Kit (www.macromedia.com) is an essential download. It has documents and extensions that help make your site navigable and accessible to users with disabilities, in accordance with the guidelines of Section 508 of the 1998 Rehabilitation Act. (For other accessibility tools, see the Odds and Ends section at PCMag.com.)

Most extension developers submit their work to Macromedia's site, but you can get quicker access and more information if you visit the developers' own sites. **(49) Massimo's Corner** (www.massimocorner.com) has superb code for removing letters, numbers, or spaces from form entries and for validating almost any kind of form field, including Social Security numbers and filenames. **(50) Dreamweaver Fever** (www.dreamweaverfever.com) has a behavior that displays a thank-you page when a user sends an e-mail. This doesn't even require a CGI or other script running on the server.

Most Dreamweaver extensions are free, but a few are worth paying for. **(51) Project Seven Development's**

Snippets Panel extension (\$45, www.projectseven.com) adds a palette on which you can store code fragments and insert them into a file by clicking an icon. Other useful fragments such as one that inserts an HTML comment are also included.

Another Project Seven offering, **(52) Jazz** (\$89.95), creates stunning fly-out and pop-up menus that work on all browsers of version 4 or later and aren't disrupted when a user resizes the browser.

FrontPage add-ins aren't as numerous as Dreamweaver extensions, but some are worth searching for. Start with **(53) Microsoft's HTML Tools** (free, <http://office.microsoft.com/downloads>), which adds a toolbar to the FrontPage interface for inserting HTML tags that FrontPage doesn't support directly. It also has buttons for modifying existing tags. If you don't want a line break between two words, for example, just select the words, click on the tag icon, and enter NOBR in the pop-up dialog and HTML Tools automatically inserts the opening and closing tags for you.

The dozen FrontPage add-ins available from **(54) Jimco Add-ins** (free, www.jimcoaddins.com) include a case-changing command that lets you capitalize or lowercase selected text, an auto-save feature, a tool for inserting Flash animations, a control for detecting whether Flash is installed, and a tool for removing the tags FrontPage inserts to identify itself as the creator of the files. A free Jimco Publisher utility sits in your system tray, and at scheduled intervals you can have it automatically recalculate links, back up a site, or publish a site to a server.

(55) Enborne Computing's MenuPlus (for home use, \$21; for business use, \$65; www.enborne.com) is a FrontPage add-on that extends the built-in navigation bar and table-of-contents features with additional customizing and formatting options, such as separator lines and font settings.

(56) FrontLook.com's FrontLook FX (\$39.95, www.frontlook.com) lets you insert splash-screen effects, page effects like falling leaves, and cursor effects like tiny images that follow the cursor at a respectful distance. Whether or not your users will be grateful or annoyed depends on their predilections.

NetObjects Fusion developers can download add-in components that extend Fusion's capabilities with JavaScript and HTML features, including rollover images, pop-up windows, and multimedia. The NetObjects' site offers **(57) SpamFree** (free, <http://workbench.netobjects.com>), which translates e-mail addresses into HTML codes to foil spammers searching for addresses.

The **(58) Apollon Project** (free, www.apollon.de) gives away 20 components that can create pop-up windows, quick polls, and more. One adds automated downloading to a page, in which the download begins a few seconds after the user opens the page. The 50 components available at **(59) Coolmaps.com** (up to \$30, <http://club.coolmaps.com>) include faux graphics that build images from text characters and CSS settings, tool-tip-style effects, and a basic or scientific calculator.

Image Optimizers and Color Tools

Visitors lose patience with pages that take a long time to load, and high-bandwidth graphics can drive them away even before the images appear. To create graphics files that keep visitors at your site, you need the right balance between quality and file size.

You can shrink a GIF or JPEG's file size by reducing its color depth. The JPEG format also lets you specify compression, which sacrifices fine image details for a smaller file size. Unless you have a strong reason to retain fine details in your images, you should compress every graphic. The PNG image format supports lossless compression, but older browsers can't display PNG files without plug-ins, so you should avoid them unless you're certain that your visitors use the latest browsers.

FrontPage includes the Microsoft Office imaging tools, which can change the contrast, brightness, and compression levels of JPEGs but can't optimize GIF files. Full-featured image editors such as Adobe Photoshop or Jasc Software's Paint Shop Pro give you total control over all compression and color depth, but you can find basic optimization and enhancement in lower-priced programs such as **(60) ACD Systems' fast ACDSee 4.0** (\$49.95 — [Check Prices](#), www.acdsystems.com). This program lets you apply filters and color adjustments and adjust compression when you save an image as a JPEG file. For even faster image viewing, with basic JPEG file compression options, the earlier (but still available) release, ACDSee Classic (\$34.95), is unbeatable, but it lacks the image enhancement tools in Version 4.0.

JPEG compression gets your images down to size, but for the best results, you should compress only the unimportant parts of an image and leave crucial sections such as faces or product details with the highest possible detail.

(61) Ulead Systems' Smart Saver Pro (\$59.95, www.ulead.com) is the ultimate in GIF, JPEG, and PNG optimization. You can choose simple compression settings for one or more images or fine-tune compression to achieve a specific file size. Masking tools let you adjust the quality in some sections of an image separately from the rest. An image-slicing tool lets you divide a large picture into seamless tiles, with an option to replace one or more tiles with other images or animations in response to user actions such as mouse clicks.

For a less expensive tool good at fine-tuning images, try **(62) xat.com's Image Optimizer** (\$39.95, www.xat.com). It has simple slider controls for compressing GIF, JPEG, and PNG files and lets you convert files from most standard formats. JPEG Optimizer (\$29.95) is a JPEG-only version.

We couldn't find a freeware GIF optimizer utility with enough control over the output to be worth downloading, but the online **(63) GIFWorks** service (free, www.gifworks.com) lets you upload GIF files one by one, optimize them for color depth, and adjust them to a Web-safe color palette. After several seconds, multiple copies of the image appear with different optimization levels, and you can save one or all of them to disk. Waiting for the images to be processed, however, may make you want to spend money on a program instead.

If you want your site to look its best everywhere, limit your color selections to the 216 Web-safe colors that display correctly on all browsers. Full-featured authoring programs include Web-safe palettes from which you can choose colors, but standalone color pickers are useful when you're using a less powerful authoring tool and need to make a quick correction in Notepad. Don't spend money on a color picker; the best ones are free and tiny, so you can download a few and choose the one you like best.

(64) Jafar Communications' **Advanced Color Selector** (free, www.jafar.com) lets you use sliders and lists of standard color names to select colors. It also saves your color schemes and generates HTML tags or complete files to use as the basis for your own files. **(65)** KOY Software's **Color Selector** (free, koysoftware.hypermart.net) offers sliders, palettes, and a draggable crosshair tool to select colors but doesn't generate HTML code.

(66) Datastic's compact **Color Cop** (free, www.datastic.com) has an eyedropper tool, a screen magnifier to make the eyedropper more precise, and a snap-to-Web-safe-colors option. **(67)** AI-Software's **SmartColor** (free, ai-software.hypermart.net) also has an eyedropper tool and an ultracool interface, dominated by a true-color palette, but it doesn't export HTML code.

Style Sheet Editors

The Cascading Style Sheets (CSS) specification is the Web's most compact, efficient, and powerful instrument for consistently formatting pages. By linking all the pages on your site to a single CSS file, you can transform the entire site's appearance at once by making changes in the style sheet.

Advanced CSS authoring lets you create stunning effects with a few lines of code, simply by combining commands for positioning items, drawing boxes, and formatting fonts. All current Web editors let you use Cascading Style Sheets, but none support them with WYSIWYG tools.

Choosing a CSS editor is easy, because **(68)** Bradsoft's **TopStyle Pro** (\$49.95, www.bradsoft.com) so towers over the competition that the author of another CSS editor stopped distributing his program and recommended that his users switch to TopStyle. With TopStyle, you can edit CSS pages in three ways: by navigating and editing a tree-structured list of style elements, by choosing options in a spreadsheet-style inspector panel, or by editing CSS code directly. At the foot of the editing screen, you can preview changes in panes that display any HTML file as it appears in Internet Explorer, Mozilla (Netscape), or both.

TopStyle's palette editor displays all the colors in your style sheet, so you can coordinate them easily with buttons that darken or lighten one or all of the colors and a command to snap all colors to the nearest Web-safe or standard color. You can access multiple style sheets through a tabbed interface and easily copy and paste them from one to another. A link to **(69)** the World Wide Web Consortium's (W3C) **CSS Validator** (<http://jigsaw.w3.org/css-validator>) guarantees that your style sheet matches W3C standards.

TopStyle doesn't have full support for CSS Positioning (CSS-P) features, which let you specify the location of elements on a page with the same precision that desktop publishing programs use for positioning graphics and text on printed output. CSS-P is more compact and reliable than HTML tables—and far easier to edit and maintain—but it's fully supported only in Internet Explorer 6 and Netscape 6.

For a glimpse of the future of CSS editing, download a copy of **(70)** Price Media's experimental **Cascade DTP** (free, www.price-media.demon.co.uk/cascade.html), in which you use sliders to position boxes containing text and graphics at their exact locations on the page and then export the result as an HTML page. Pages created with CSS-P look like pages loaded with bandwidth-hungry graphics or Adobe Acrobat files, but they can startle visitors to your site by snapping almost instantly into their browser.

Hitting the Books

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By [Edward Mendelson](#)

The best way to understand how a Web site works is to build one by hand. When you want to make your site do things the cookie-cutter tools in FrontPage or Dreamweaver can't, you need to modify or create pages manually. The most patient, knowledgeable coaches you can find are the hundreds of books on HTML and JavaScript.

For the basics of Web authoring at top speed, follow the step-by-step instructions in Elizabeth Castro's *HTML 4 for the World Wide Web* in the Visual Quickstart Guide series (\$19.99 list, Peachpit Press). Using Notepad or any other text editor, you start with basic page formatting and work your way up through forms, multimedia, and style sheets. Concise tips at the end of every chapter save you from common mistakes.

Move onward to *HTML & XHTML: The Definitive Guide*, by Chuck Musciano and Bill Kennedy (\$34.95,

O'Reilly, www.oreilly.com), with lucid, in-depth descriptions of the behavior of every HTML tag on every major browser and platform, plus enough dry humor to make the book a pleasure to read.

To glean the powers and pitfalls of CSS study *Cascading Style Sheets: The Definitive Guide*, by Eric A. Meyer (\$34.95, O'Reilly), which explains why the page you designed in Internet Explorer for Windows won't work in Netscape for the Mac. And it's brave enough to say that no one understands some parts of CSS specification.

When you're ready for serious JavaScript, start with the Visual Quickstart Guide *JavaScript for the World Wide Web*, by Tom Negrino and Dori Smith (\$19.99, Peachpit Press), which walks you through the code needed for rollover effects, form validation, sliding menus, and visual effects such as glowing text.

For unmatched depth in beginning and advanced JavaScript, the only choices are *JavaScript Bible, Fourth Edition*, by Danny Goodman (\$49.99, Hungry Minds, www.hungryminds.com), or an edition with an additional 500 pages, *JavaScript Bible, Gold Edition* (\$69.99). The same author's *Dynamic HTML: The Definitive Reference* (\$39.95, O'Reilly) tells all about combining DHTML with JavaScript.

A Grab Bag of Tools

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By [Edward Mendelson](#)

Online Extra

Dozens of tools can help you refine and automate your Web site or understand how well it works. This section lists software that you don't absolutely need but that will benefit most Web authors.

Hosting services often provide graphs and tables that analyze visits to your site by time, browser, operating system, and more, but you can get detailed results with a log-analyzing program. **(71) Mach5's FastStats Analyzer** (\$99, mach5.com) lives up to its name with startlingly fast processing and an option that uses reverse DNS to look up your visitors' domain names. **(72) ZY Computing's 123LogAnalyzer** (\$129, www.123logalyzer.com), another high-speed performer, uses a convenient wizard for setting filtering options. **(73) Stephen Turner's freeware Analog** (www.analog.cx) doesn't have the graphics and formatting features of commercial products but provides all the basic analysis you need.

If your service provider doesn't give you access logs, or if you want a quick check of recent activity on your site, use the free **(74) Nedstat Basic service** (www.nedstat.com), which lists site statistics, domain names of recent visitors, and search engines and links that brought recent visitors to your site.

If your hosting service gives you shell access to your site (which means you can log on to the remote site using a terminal program and manage and edit files from a command prompt), you can use the basic telnet program that ships with all Windows versions, the HyperTerminal program supplied with some Windows versions or, preferably, the more powerful free program, Hilgraeve's **(75) HyperTerminal Private Edition** (www.hilgraeve.com/hpte).

For automated log-ons, fast file transfers, logged sessions, and other refinements, you need an advanced terminal program. And some hosting services now require that you log on with the SSH (Secure SHell) protocol instead of the standard telnet protocol. For experienced users, the most compact and powerful terminal programs are **(76) VanDyke Software's CRT** (\$34.95, www.vandyke.com) without SSH support and its SSH-enabled sibling, SecureCRT (\$99). For less expert users who probably don't need SSH, **(77) Hilgreave's HyperAccess** (\$69.95 — [Check Prices](#), www.hilgraeve.com/hyperaccess) provides a graphical interface and recordable log-on scripts.

If you create sites for a federal agency, you're required to follow Section 508 accessibility standards, and if you want as many visitors as possible to use your site, you'll follow those standards voluntarily. The free **(78) APrompt** (aprompt.snow.utoronto.ca) is a stand-alone tool for analyzing a page or site for multiple accessibility levels. It's liable to crash if you don't install it in its default directory, but it's also the most complete freeware available. The Web-based validator **(79) Bobby** (free, www.cast.org/bobby), provides free online validation of sites already posted on the Web and a downloadable version (\$99) for testing complete sites.

When you don't want to fire up a full-scale Web editor to make a quick change, you can always use Notepad, but it's more efficient to use an editor with HTML syntax highlighting and FTP capability. **(80) IDM Computer Solutions' UltraEdit** (\$35, www.ultraedit.com) is lightning-fast, highly customizable, and lets you record and play back macros that download files from your remote site and then reupload them. **(81) ESComputing's EditPlus** (\$30 www.editplus.com) includes a built-in HTML previewer that uses Microsoft Internet Explorer, but its interface is more cluttered than UltraEdit's, and its keystroke recording is less flexible.

Searching and replacing text or codes in multiple HTML files is best performed in a full-scale Web editor, where you can review changes as you make them. But for those who want to get the job done in a snap, **(82) Andromeda's freeware Search & Replace 98** (www.htmlworkshop.com) lets you confirm some, all, or no replacements as it processes files at top speed.

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