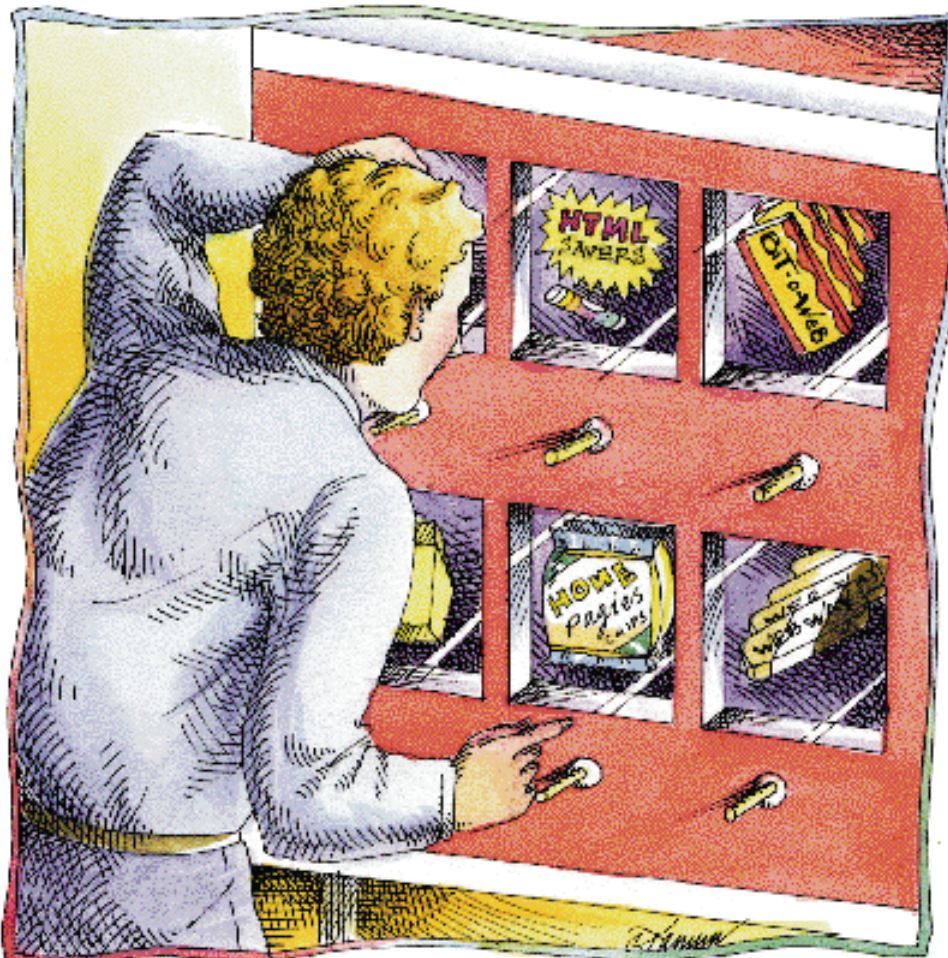


# Selections for Web Publishing

By Don Dugdale

As the market booms for tools to create HTML pages, it can be difficult to choose one that suits your taste. Plenty of options are available, and they're changing with every passing moment.



The act of creating and publishing pages on the World Wide Web is fast outgrowing the domain of the programmer and is arriving full-blown on the screens of millions of computer users around the world. Formerly restricted to those who had learned the somewhat arcane Hypertext Markup Language (HTML) that defines Web page formats, page creation now can be handled with more intuitive graphical tools. Some of the newest tools offer drag-and-drop functions and integration with the Web browsers used to access those pages. Many of them make the insertion of HTML tags transparent, so the author never has to deal with HTML syntax.

"The creation of Web sites has been left to a techie person," says Mary Beth Smartt, product manager for Interleaf's Cyberleaf document conversion tool in Waltham, MA. "Now other people are saying this stuff is not that hard to do if you have the right tools." In particular, the integration of HTML editor and Web browser is in demand, for reasons of convenience and transparency of use.

The automated tools aren't for everyone. Larger organizations that want an extensive Web presence still require various tools suited to software engineers who understand the mechanics of HTML and Web server functions. This is especially the case when continuous updating of content is required. "There is no magic tool that does everything I need it to do," says Mike Knowles, senior technical staff member for corporate information development at IT vendor Amdahl Corp. in Sunnyvale, CA. "We use a combination of Cyberleaf, QuarkXpress extensions, FrameMaker 5, a couple of free-ware HTML editors and basic text editors. None alone is adequate to give us Web-ready output."

Smaller organizations may be the best customers for the sophisticated what-you-see-is-what-you-get (WYSIWYG) tools, because they are less likely to have trained personnel to devote to their Web site, according to Lydia Dobbins, vice president and general manager of Navisoft, a Vienna, VA, company that makes Web server and publishing software. The larger the company, the more likely it is to hire a firm to do the work or to have programmers who will put together their own toolset to create pages and administer the site. Companies' motivations also have evolved, Dobbins says.

“The early adopters were looking to develop commercial activities, thinking everybody’s going to get rich [by selling on the Web]. That’s gone past its first bloom, because there are a host of issues around commerce that are going to take time to work out. The more likely early drivers now are those who want a corporate presence on the Web as an information center for customers and prospects.”

For whatever reasons, users can feel like kids in a candy store when they get into Web publishing and its associated activities. Rather than sampling every one, however, it is better to try to determine which choices are good for you. The following is a survey of some available brands. Keep in mind, though, that this market is in rapid flux.

## Ways to Create Documents

HTML documents are created using three basic methods: a simple text editor to write the words and HTML tags manually; HTML converters and filters to convert existing documents to HTML format; and a program or script to create the HTML file.

Many Web page authors get started simply by copying someone else’s formatted HTML file into their own text editor, changing the words to suit their own purpose and sending that file to be loaded onto the Web server. It’s a quick, clean way to get a page on the Web but not very flexible. If you have taken the time and trouble to learn HTML tags, however, a Unix-based text editor such as vi, elm, or emacs will allow you to create the same product as do the more advanced WYSIWYG authoring tools.

The obvious disadvantage is having to type in all the tags by hand. It’s easy to get a tag wrong or misspell a word, because most text editors lack automatic spelling or tag checkers (although separate HTML syntax checkers are available). Also, there’s no mechanism for enforcing HTML integrity and structure, so getting it right may involve a lot of trial and error. A text editor works for creating a few pages, but almost everyone who does more than that acquires tools that make the job easier and faster.

Some Web authors power up their favorite text editor into a customized HTML text editor. For example, an editor configuration file, .exrc (available free at <http://www.cosy.sbg.ac.at/www-doku/html/dot.exrc.bin>), turns vi into an HTML editor, employing abbreviations

Method	Tagging Process	Advantages	Disadvantages
1. <b>Text editor</b>			
A. Write or import text.	Key in HTML tags.	Flexible. Latest technology available.	Requires HTML knowledge. Impractical for large projects.
B. Copy another HTML file and insert new text.	Use existing tags.	Easy.	Inflexible.
C. Use WYSIWYG editor .	Graphical inter face.	Easy.	May not include latest technology .
2. <b>HTML converter or filter</b>			
Use existing text from word processing or publishing program.	Automatic HTML tag insertion.	Large documents converted quickly . Convenience of using existing text format.	Inflexible. May not include latest technology .
3. <b>Automatic content creation</b>			
Use a program or script.	Tags inserted by program automatically .	Information easily or automatically updated. Latest data included on Web page.	Requires HTML and programming knowledge.

The three basic methods for creating Web documents offer different advantages and degrees of difficulty.

and macros that generate the markup tags.

The task of converting existing documents into HTML format can be simplified by using a converter application. These utilities take a file formatted in some word processing or publishing program and automatically insert the appropriate HTML tags. They also provide access to the convenience of the formatting and spell-checking features of the word processor.

One of the first converters came out all of a year ago. Cyberleaf converts documents in FrameMaker, Microsoft Word, and WordPerfect formats, as well as Interleaf documents, to HTML format and CompuServe’s Graphics Interchange Format (GIF). The user doesn’t have to know HTML and gets to use a graphical user interface (GUI).

Some companies that have a lot of documents to convert have opted for Cyberleaf. “Once you set it up and match styles to HTML tags, it’s pretty much a self-eating watermelon,” says Amdahl’s Knowles. “Cyberleaf is good for us because we have hundreds of thousands of pages in Interleaf.” Amdahl not only maintains product information for the public on its external Web server but, like many other companies, keeps extensive documentation on internal Web sites for its own employees. One of its projects is to make its technical manuals available on the internal Web.

Another converter is WebWorks Pub-

lisher from Quadralay of Austin, TX, which works only with FrameMaker (which is now owned by Adobe Systems of Mountain View, CA). In fact, version 5 of FrameMaker itself, released last summer, contains a trimmed-down version of WebWorks Publisher called WebWorks HTML Lite. The lite version does not contain features such as handling of book files and graphics conversion, which are included in the full-blown product. Like Cyberleaf, WebWorks translates formatted files into HTML and GIF, handling text, graphics and hyperlinks through a GUI. It also supports input file formats such as WordPerfect, Microsoft Word, and Microsoft’s Rich Text Format (RTF).

The European Laboratory for Particle Physics (known by its French acronym, CERN), birthplace of the Web, distributes a shareware converter of FrameMaker documents called WebMaker. It requires installation of four other public-domain programs (gawk, ghostscript, pbmplus and xisp), which are included with the distribution. WebMaker runs on most Unix platforms, as do Cyberleaf and WebWorks Publisher, which also support Windows. Quadralay promises a Macintosh version of WebWorks.

Another public-domain tool is rftohtml, which, as the name implies, converts RTF documents to HTML. RTF is a format for interchanging documents between Microsoft Word and other word processing packages and is supported by

FrameMaker, Interleaf and other packages on PC, Macintosh, Next and Unix platforms. An extension called rftoweb adds extra formatting features.

### Programmed Updates

The third way to create an HTML file for the Web is to let an application or a script do the work—once you have found the application and learned to use it. These applications can be used in two ways to create dynamic content for Web pages. The first is by programming the Web server to do automatic, periodic updates of Web pages. For example, if you keep product information in a database and want your Web pages always to reflect the latest database changes, you could write a script that would go into the database, pull out certain data and regenerate the Web pages periodically (daily, weekly or quarterly). The script retrieves exactly the information it needs, then uses it to create fresh Web pages. This is the method UniForum uses to create periodic updates of the online version of its *Open Systems Products Directory*.

Perhaps the most popular scripting language is Perl, a public-domain language available from a number of FTP sites. Designed for database management and especially good for handling text files, Perl scripts search for strings in the database, then perform some function on the strings. Most public-domain programs for generating HTML documents are written in Perl.

The second way to make Web pages dynamic is to use Common Gateway Interface (CGI) programs to generate pages on the fly as requests come into the server from browsers. CGI programs are often used to respond to information entered on an HTML form in a browser. More dramatically, they can take a browser request for some Web page, enter a relational database through a gateway, pull out up-to-the-second information and supply it to the browser on the fly for every hit that comes into the server. In that way, updates must be posted only to the database, and the Web page stays as current as the database without actually changing the HTML page. Each of the major RDBMS vendors maintains a set of toolkits to handle such requests, so programmers don't have to write the source code from scratch. These libraries of routines usually are available via FTP.

One company using this method is the Internet Shopping Network (ISN) of Palo Alto, CA, which sells everything from disk

drives to daisies via the Web, though most of its business is computer-related. Branching out from the ISN home page (<http://shop.internet.net>), shoppers can retrieve product information and prices, then place an order. In most cases, changeable data such as pricing comes directly from a database as the browser contacts the server.

To construct their Web pages, ISN engineers use mostly text editors such as BBEdit, along with Perl scripts and C scripts to integrate database information, Wide Area Information Server (WAIS) indexing and other resources. "If you know HTML, it's just as fast to type in the tags as it is to do it in some text editors," says Robert Boucher, until recently a senior software engineer with ISN.

Ironically, the principal disadvantage of most Web publishing tools is that the devices that make it easy to compose HTML pages also limit the power of the language by restricting its flexibility. For example, ISN likes to use several columns of varying widths on its Web pages—something not allowed by automated tools. In addition, an authoring tool that came out only months ago probably lacks some advance in HTML or the state of the art that an engineer would want to employ right now.

### Authoring and Publishing Tools

Three basic types of Web authoring and publishing tools are available: shareware in the public domain, which is available free or for a nominal charge; professional

## Where to Learn More

Here are the Web and FTP sites for tools mentioned in this article.

### For Document Creation

**.exrc**  
<http://www.cosy.sbg.ac.at/www-doku/html/dot.exrc.bin>

**Cyberleaf**  
<http://www.ileaf.com>

**WebWorks Publisher**  
<http://www.quadralay.com>

**WebMaker, gawk, ghostscript, pbmplus and xlip**  
<http://www.cern.ch/WebMaker/AboutWebMaker.html>

**rtftohtml**  
[ftp://ftp.cray.com/src/WWWstuff/RTF/rtftohtml\\_overview.html](ftp://ftp.cray.com/src/WWWstuff/RTF/rtftohtml_overview.html)

**rtftoweb**  
<ftp://ftp.rrzn.uni-hannover.de/pub/unitlocal/misc/rtftoweb/html/rtftoweb.html>

### For General Purposes

**Arachnid HTML**  
<http://rhwww.richuish.ac.uk/resource.html>

**BBEdit HTML Tools**  
<http://www.york.ac.uk/~ld11/BBEditTools.html>

**BBEdit HTML Extensions**  
<http://www.uji.es/bbedit-html-extensions.html>

**FrontPage**  
<http://www.vermeer.com>

**Home Page Wizard and Publishing Wizard**  
<http://www.compuserve.com>

versions marketed by software companies, ranging in price from \$50 to over \$1,000; and word processor add-ons, made available by the software vendors. Each has its pros and cons.

Numerous *shareware programs* are available now. (For a rundown of them, see Mag's Big List of HTML Editors, <http://sdg.ncsa.uiuc.edu/~mag/work/HTMLEditors>.) Some of the most popular include:

**Arachnid HTML.** This editor for Windows is in version 0.5a and includes advanced features for use by Netscape browsers.

**BBEdit HTML Tools and BBEEdit HTML Extensions.** These are free extensions to BBEEdit, a text editor that already contains support for HTML editing.

**HotMetal and HotMetal Pro** from Softquad Corp. of Toronto are WYSIWYG editors for Unix, Windows and Macintosh. HotMetal is the unsupported freeware version, now in version 1.0+. It features document templates, forms support, rules checking and cleanup of existing documents that have bad markup. The commercial version, HotMetal Pro (\$195), supports most Netscape and HTML 3.0 extensions.

**HTML Assistant.** This editor for Windows also comes in free and commercial versions.

**HTML Writer.** Web authors like this editor because it allows editing of any size file, unlike many Windows HTML editors. It's available for a donation.

**Web Wizard: The Duke of URL.** This

home page builder for Windows 3.1 and Windows 95 appeals to authors who want a user-friendly interface. Those who want advanced HTML features should look for another tool. It's available for \$10.

*Professional Web publishing tools* include, in addition to those already mentioned:

**PageMill.** From Adobe Systems, this authoring software (\$99) enables WYSIWYG Web page writing and editing in a word processor-like environment, though the author can apply only styles available in HTML. An integrated preview browser, image handling and forms creation are included.

**Home Page Wizard and Publishing Wizard.** Since last November, CompuServe makes these tools available to its subscribers as part of their membership. Home Page Wizard offers drag-and-drop editing, templates, and image insertion to help design personal home pages. Publishing Wizard sends the completed page to CompuServe's Web server.

**NaviPress and NaviServer.** NaviSoft, a subsidiary of America Online, released its first two Web publishing and maintenance products in mid-1995. NaviPress (\$99) is a WYSIWYG authoring and browsing tool for Windows, Macintosh and Motif. It allows the author to publish on a server maintained by NaviSoft and test and review the page as content is developed. Version 1.1 was expected to be released early this year. NaviServer is a Web site management system that sells for \$5,000 on Unix platforms and \$1,495 on Windows NT.

**Navigator Gold.** This product from Netscape of Mountain View, CA (in beta test near the end of 1995), combines version 2.0 of Netscape Navigator, the most popular browser on the Web, with a WYSIWYG editor for creating HTML pages. New features include the display of multiple, independently scrollable frames on a single browser page; seamless viewing of multimedia content with plugins such as Adobe Acrobat; support of Java applets, allowing secure, two-way, real-time interaction over the net; and Netscape Livescript, a programmable application programming interface that allows the page designer to program events such as sounds and image changes in response to mouse clicks and other actions in the browser.

**WebAuthor 2.0.** Released by Quarterdeck of Marina Del Rey, CA, in November (\$49.95), it supports HTML 3.0

#### HotMetal

<http://www.sq.com/products/hotmetal/hm-ftp.html>

#### HotMetal Pro

<http://www.sq.com/products/hotmetal/hmp-org.html>

#### HTML Assistant

<http://cs.dal.ca/ftp/htmlasst/htmlafaq.html>

#### HTML Writer

<http://lal.cs.byu.edu/people/nosack>

#### Internet Assistant

<http://www.microsoft.com/Msoffice/Word/is/default.html>

#### Navigator Gold and Livewire

<http://www.netscape.com>

#### NaviPress and NaviServer

<http://www.navisoft.com>

#### PageMill

<http://www.adobe.com/Apps/PageMill>

#### WebAuthor 2.0

<http://www.quarterdeck.com>

#### Web Wizard: The Duke of URL

<http://www.halcyon.com/webwizard/welcome.html>

#### WordPerfect Internet Publisher

<http://wp.novell.com/elecpub/intpub.html>

### Internet News Groups

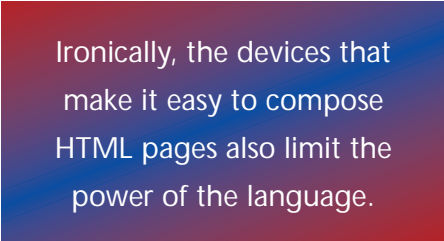
For keeping current on Web publishing tools and other Web technology, the following news groups feature running commentary:

- [comp.infosystems.www.announce](mailto:comp.infosystems.www.announce)
- [comp.infosystems.www.providers](mailto:comp.infosystems.www.providers)
- [comp.infosystems.www.users](mailto:comp.infosystems.www.users)
- [comp.infosystems.www.misc](mailto:comp.infosystems.www.misc)

and Netscape formatting extensions, so Web page developers can create pages that use columns, tables and flow text. It's both an authoring tool and a converter, keeping word processing files intact as they are converted to HTML documents. It supports backgrounds, centering, image maps, direct keyboard access and direct formatting from the MS Word toolbar. With the addition of WebImage from Group 42, Inc., a multimedia company based in Milford, OH, the user can convert images to and from popular Web formats, including GIF, JPEG and PNG.

**FrontPage.** This first product (\$695) from Vermeer Technologies of Cambridge, MA, was introduced in October. It runs on Windows and Macintosh systems for creating and maintaining interactive Web sites. Software extensions are available that enable FrontPage-developed sites to reside on Web servers running Unix, Windows NT, Windows 95 and Windows 3.1. FrontPage's technical innovations include

Web Wizards, which are smart templates that guide authors and designers through the development process; and WebBots, drop-in objects that add interactive functions to a Web site without programming. The application comes with 12 WebBots for adding such functions as forms, dis-



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cussion groups, surveys and text searches. FrontPage also includes Web site management functions and support for geographically dispersed, multiple-user Web development teams.

In the category of *add-ons to word processors*, the best-known examples are Microsoft Internet Assistant and Novell's WordPerfect Internet Publisher. Internet

Assistant is companion software for Word 6.0 for Windows. Internet Publisher is a free add-on to WordPerfect 6.1 and includes Netscape Navigator. Both are reported to create functional HTML pages without many frills.

In considering the world of Web publishing, it's useful to remember that the only thing that can be counted on is constant change. New tools and updates of old ones are ever in the works—so much so that to be on the leading edge, a Web publisher has to make consistent use of products in their beta-test state. Taking full advantage of the latest offerings in the world of Web technology requires technical acumen and knowledge of the market. But a place in that world is becoming available for ordinary computer users whose purposes go beyond the technology for its own sake. **IT**

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