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Providing information online has become a critical communication strategy for several reasons.¹ Once text is printed it remains the same for as long as the paper or the disk it was printed on lasts. If the text needs to be updated, a new (and costly) print run has to be made. At the same time, printed copy takes up space and costs money to distribute. But information that is saved on a server and delivered fresh to each user upon request takes up negligible physical space, can be updated for only the cost of the labor, and can in fact be updated automatically, without direct human intervention. Moreover, one can be relatively confident that only the most current information is circulating.

Writing for online delivery is a complex topic and one that ceaselessly changes as the technologies used to deliver it change. Writing online requires regular training and a wide range of skills including visual rhetoric, information design, and computer-human interaction, or usability. It is primarily a collaborative activity, often involving content providers, information architects, graphic designers, computer programmers, and marketers. Nevertheless, especially in small businesses and nonprofit organizations, online writing often becomes the responsibility of the communications person.

This chapter introduces types of electronic documents essential to the workplace and the basic technologies of online writing.

ONLINE DOCUMENTATION

People who use computers in their jobs need instructions and training for operating the systems and understanding their equipment's many features. Online documentation is designed to support specific tasks and provide answers to specific questions.

Although computers come with printed manuals, the computer itself is often the preferred training medium. In computer-based training, on-screen documentation explains how the system works and how to use it. Examples of online help:

- error messages and troubleshooting advice
- reference guides to additional information or instructions
- tutorial lessons that include interactive exercises with immediate feedback
- help and review options to accommodate different learning styles
- link to software manufacturer's Web site

Instead of leafing through a printed manual, users find what they need by typing a simple command, clicking a mouse button, using a help menu, or following an electronic prompt.

Special software such as *RoboHelp*[™] or *Doc-to-Help*[™] can convert print material into online help files that appear (a) as dialog boxes that ask the user to input a response or click on an option, or (b) as pop-up or balloon help that appears when the user clicks on an icon or points to an item on the screen for more information. (Explore, for example, the online help resources on your own computer.)

Research indicates that users—especially inexperienced users—often prefer printed manuals over their online counterparts. Also, users in general prefer having both printed and online options available (Smart, Whiting, and DeTienne 291, 301).

However, the cost of producing and distributing printed materials makes online documentation attractive to software producers. Also, because most business software is sold on a subscription basis, with a new version coming out every sixteen months or so, providing paper documentation becomes increasingly cost prohibitive. (See Chapter 22 for more on online documentation.)

HYPERTEXT

In 1965, Ted Nelson coined the term “hypertext” to describe a kind of writing that would enable multidimensional reading strategies. The word has taken on a life of its own, most notably in referring to descriptions of the World Wide Web, a result that greatly irritates Mr. Nelson
<<http://ted.hyperland.com/buyin.txt>>.

There is, however, nothing necessarily electronic about hypertext. In a paper document, indexes, page numbers, section headings, cross-references, and other typographical conventions help readers navigate the text in multiple dimensions: in other words, they are able to jump from place to place searching for the specific thing they need. The reader’s purpose often has a greater effect on how something gets read than the medium employed. For example, a dictionary from circa 1900 is multimedia and hypertextual because it has drawings as well as text and because it has cross-references. There are novels, Julio Cortazar’s *Hopscotch* (1965) for instance, which are printed on paper and look like any other novel but which consist of chapters that can be read in different sequences, creating different “stories” out of the same material. Newspapers and magazines aren’t meant to be read linearly, either. At the same time, it is possible to create online text that has no links and so can be read sensibly in only one direction, linearly.

Nevertheless, because multidimensional reading is typical of information-seeking readers, hypertext serves as a research and reference tool. In a hypertext system, a topic can be explored from any angle, at any level of detail. Assume, for instance, that you are using a hypertext database to research the AIDS epidemic. The database contains chunks of related topics organized in a network (or web) of files linked electronically (Horton, “Is Hypertext” 22), as in Figure 19.1.

After accessing the initial file (“The AIDS Epidemic”), you can navigate the network in any direction, choosing which file to open and where to go next, thereby customizing the direction of your search. The files themselves might be printed words, graphics, sound, video, or animation.

MARKUP

Any document, whether typeset, served over the Web, or even handwritten, has a structure that can be labeled. With a letter, for example, the markup would consist of DATE, ADDRESSEE, RETURN ADDRESS, SALUTATION, BODY, CLOSING, SIGNATURE. At the moment, information designed to be presented online, whether on disk or over the Web, is marked up in Hypertext Markup Language (HTML). HTML consists of a set of tags used to label the structure of a document and so make it theoretically possible for a document to be read in the same format on any computer regardless of operating system or browser.

A Web browser’s default style sheet represents labels such as those in Figure 19.2 as visual cues. H1 is printed to the screen as text roughly two-and-a-half times the size of normal and three times as dark, for example. This default style sheet varies slightly from Web browser to Web browser and so what looks one way in one browser will look different in another, a fact that adds to the complexity of designing information for electronic delivery.

There are several WYSIWYG (“what you see is what you get”) software packages for HTML, *DreamWeaver*TM being the current industry standard. While such packages enable a writer to do much more much more rapidly, it is a good idea to learn to recognize the basic tags so that if problems arise they can be dealt with. Learning to code by hand, using the tags directly, may also improve one’s proofreading skills. For more on HTML, visit <http://www.w3schools.com>.

BEYOND HTML

Over the years computer equipment has become more visually oriented, and electronic texts have reached a far wider

audience than was originally imagined. Because HTML was never intended as a layout tool, it offers the designer very little control over the appearance of text. In the late 90s, Web designers solved this problem by using *Photoshop*[™] to create visually impressive images and then slice those images into small sections that would transfer quickly over the Web. The problem with this solution, however, was that whenever business (or fashion) required a change, the entire image had to be redone. Most Web sites today are dynamic in the sense that they are constantly receiving new content from several sources, from news-feeds as well as from contributing editors. It is far more efficient to regularly update or replace text than it is to update pictures. Cascading Style Sheets (CSS) enables text-based layouts that are nearly as visually sophisticated as graphics-based layouts but far more flexible. (For more on CSS, go to <http://www.w3schools.com/css>.)

Changes in online information systems are inevitable: prices change, products come and go, new information becomes available, and so on. Static Web “pages,” that is, information whose appearance is outdated or which seem to have been posted and then abandoned, do not inspire confidence.

Text Versus Images: Current Preferences

People have come to expect fresh content and up-to-date designs. Compare a current site from its predecessor of only a year or two ago and you will see how things have changed: In the earlier version of the EPA site (Figure 19.3), there is very little text, and images provide access to the content. Drop-down menus provide navigation. In the current version (2004), there is more text and navigation is provided by embedded links (Figure 19.4). The current version is somewhat like a newspaper, with freshness of content taking primary place over visual appeal.

The traditional advice regarding writing for online delivery is to use as few words as possible because people don't like to read from a computer screen, the premise upon which the earlier version of epa.gov seems to have been based. The prevalence today of Web sites like the current epa.gov suggests that the traditional advice may no longer apply. If the content is interesting and fresh, people will read online.

As technologies change, online writing changes. But not always in ways one would assume. Five years ago, when more people had slow dial-up connections, graphics were prevalent. Today, when more people have faster connections, graphics are less prevalent. At the same time, animations like those made possible by software packages such as *Flash*[™] have also become popular. These image-intensive virtual movies would be impossibly slow over a modem connection. Change is so prevalent on the Web that it is important for technical communicators to become students of the Web, to notice trends and possibilities made possible by new technologies, to develop practices that can be adapted and abandoned on a moment's notice.

THE WEB

Like a CD-ROM or electronic database, the Web offers a collection of electronic documents and multimedia. But hypertext enables the Web to link information in nonlinear patterns, providing countless routes to be explored—worldwide—according to the user's particular needs (Hunt 377). Some unique characteristics of the Web (December 371–72):

- *The Web is interactive.* Each user constructs his/her own hypertextual path through the material and often can respond/add to the message.
- *The Web allows reciprocal use.* Besides getting information, users often also provide it.
- *The Web is porous.* A Web document can be entered at various points because a Web site usually offers multiple files, which are linked.
- *The Web is ever changing.* A Web page or site is “a work in progress”—not only in its content but also in the technology itself (software, hardware, modems, servers). Unlike paper, software, or nonrewritable CD-ROM, the Web has no “final state.”

These features allow Web users to discover and create their own connections among an endless array of information.

NOTE *Keep in mind that Web pages, like all online screens, take at least 25 percent longer to read than paper documents. One possible solution: high-resolution screens, as readable as paper copy, should be available and affordable within a decade (Neilsen, “Be Succinct”).*

ELEMENTS OF A USABLE WEB SITE

Although more diverse than typical users of paper documents, Web users share common expectations. Following are basic usability requirements for a Web site.

Accessibility

Users expect a site to be easy to enter, navigate, and exit. Instead of reading word for word, they tend to skim, looking for key material without having to scroll through pages of text. They look for chances to interact, and they want to download material at a reasonable speed (roughly 8–12 seconds per page).

Worthwhile Content

Users expect the site to contain all the explanations they need (help screens, links, and so on). They want material that is accurate and constantly up-to-date (say, product and price updates). They expect clear error messages that spell out appropriate corrective action. They look for links to other, high-quality sites as indicators of credibility. They look for an email address and other contact information to be prominently displayed.

Sensible Arrangement

Users want to know where they are, and where they are going. They expect a recognizable design and layout, with links easily navigated forward or backward, back links to the home page, and no dead ends. They look for navigation bars and hot buttons to be explicitly labeled (“Company Information,” “Ordering,” “Job Openings,” and so on).

Instead of a traditional introduction, discussion, and conclusion, users expect the punch line right up front. Because they hate to scroll, users often read only what is on the first screen, “above the fold.”

Good Writing and Page Design

Users expect a writing style that is easy to read and error-free. They look for concise pages that are quick to scan, with short sentences and paragraphs, headings, and bulleted lists. Instead of having to wade through overstatement and exaggeration to “get at the facts,” users expect restrained, impartial language

(Nielsen, “Be Succinct” 2). Figure 19.5 illustrates the effect of good writing on usability.

Good Graphics and Special Effects

Some users look for images or multimedia special effects—as long as they are neither excessive nor gratuitous. Since other users often disable their browser’s visual capability (to save memory and downloading time) they look for a prose equivalent of each visual (*visual/prose redundancy*). They expect to recognize each icon and screen element—hot buttons, links, help options, and the like.

Figure 19.6 is an updated version of an award-winning Web page designed for usability. Figure 19.7 shows a highly simplified but usable design.

PRIVACY ISSUES IN ONLINE COMMUNICATION

Information sharing between computers makes the Internet and World Wide Web possible. For instance, when someone visits a site, the host computer needs to know what browser is being used. Also, for improved client service, a host site often tracks the links visitors follow, the files they open or download, and the pages they visit most often (Reichard 106). This user information is captured via “cookies” (files the Web site sends to any computer that has connected to the host site), which record that person’s usage data. Too often, however, more information gets “shared” than the user intended (James-Catalano 32). Commercial U.S. sites routinely share customer information with other companies.

Servers and sites often display privacy notices explaining how usage patterns or transactions are being recorded, collected, and used. But even the most stringent privacy policies offer only limited protection. Any Internet transaction is routed through various browsers and servers and can be intercepted anywhere along the way.

In the U.S. workplace, electronic monitoring of employees is becoming standard practice. Some types of workplace monitoring presumably have legitimate purposes. Page 402, for example, lists arguments for monitoring of workplace email. Employers claim they have valid reasons for monitoring workplace Web sites as well:

- *Troubleshooting.* Monitoring software (*AlertPage*,™ *Net.Medic*™) can scan a company site for broken links, and identify server glitches, software bugs, modem problems, or faulty hardware connections (Reichard 106).

- *Productivity.* Companies track intranet use for the number of queries per employee, types of questions asked, by whom, and the length of time required for employees to find what they need. These data help Webmasters decide whether the search mechanism (user interface) can be improved or whether online documents can be organized or written more clearly (Cronin, “Knowing How Employees Use the Intranet” 103). Monitoring can also reveal software bugs or recurring errors made by employees who might benefit from further training.
- *Security.* Software can track employees’ visits to other Web sites, as well as files opened for recreational or personal use, email sent and received, and can even provide snapshots of an employee’s computer screen (Karaim 73). Access to unauthorized Web sites can be denied and the employer can be informed about the employee’s attempt. Such monitoring can be a justifiable precaution against employee theft, drug abuse, security violations (such as publishing trade secrets on the Internet)—or wasted time. For example, U.S. businesses lose an estimated 26 million worker hours yearly to computer game-playing by employees (Hutheising 369).

Beyond these legitimate uses, monitoring also carries potential for the abuse of personal privacy.

- Employers have more freedom to violate employee privacy than the police (Karaim 72). Andre Bacard, author of *The Computer Privacy Handbook*, notes that supervisors can “tap an employee’s phones, monitor her e-mail, watch her on closed-circuit TV, and search her computer files, without giving her notice” (qtd. in Karaim 72).
- Some companies notify their employees that their electronic transactions are subject to monitoring, but many do not.
- Even face-to-face transactions are subject to monitoring: An electronic “Active Badge” tracks employees as they move about their work site, recording how much time they spend in the bathroom or at the water cooler and who they talk to during the work day (Karaim 72).

INDIVIDUAL OR COLLABORATIVE PROJECTS

1. Consult the previous checklist and evaluate a Web site for usability. You might select a site at your school or place of employment. You might begin by deciding on specific information you seek (such as “internship opportunities” or “special programs” or “campus crime statistics” or “average SAT scores of admitted students”) and use this as a basis for assessing the site’s accessibility, content, arrangement, and so on.

Complete your evaluation and report any problems, or suggest improvements in a memo to a designated decision maker. (Your instructor might ask different class groups to evaluate the same site and to compare their findings in class.)

2. Download and print pages from a Web site. Edit these pages to improve their layout and writing style. Submit copies to your instructor.
3. Examine Web sites from three or four competing companies (say, computer makers IBM™, Apple™, Gateway™, Dell™, and Compaq™—or automakers, and so on). Which site do you think is the most effective; the least effective; why? Report your findings in a memo to your classmates.
4. Think of a specific procedure for which you might need help as you prepare a document (say, positioning text and graphics on a page or creating a table). Compare your word-processing software's online help information on this topic with the information in the paper manual. Which version is easier to use? In which can you find the help you need more quickly? Write a short report comparing the two media. Illustrate your comparison with hard copy examples and printouts of online examples.
5. Locate Web sites that originate from three different areas of the globe (say, Europe, East Asia, and the Middle East). In addition to different languages, what other differences seem to stand out in terms of a given site's content, arrangement, design, and special effects? Consider, for example, politeness of tone, ratio of text to visuals, use of colors and type styles, privacy policies, and relative ease of navigation.

Summarize your main points, bookmark each site, and be prepared to discuss and illustrate your findings in class, preferably via interactive demonstration on the computer. If this is impossible, distribute printouts.

6. Return to Figure 19.6 and make a list of the specific features that make this an award-winning Web page. Discuss and illustrate your findings in class by using printouts or via interactive demonstration on the computer.

SERVICE-LEARNING PROJECT

Working in groups, offer to design or redesign a Web site for your school or for a community service organization.

Advantages of providing information online
The complexities of writing for online formats
Types of online documentation

¹My thanks to Professor George Pullman, Georgia State University, for revising and updating this chapter.

19.1

To see examples
of *RoboHelp* visit
<[www.ablongman.com/
lannonweb](http://www.ablongman.com/lannonweb)>

What users prefer

Why businesses prefer online documentation

The origin of "hypertext"

A hypertext document can exist on paper as well as online

Hypertext accommodates inquiry in various directions

FIGURE 19.1 Topics (or Files) in a Hypertext Network Are Linked Electronically

How markup language works

How HTML tags work

FIGURE 19.2 A Sampling of HTML Commands

What users expect in a Web page

The differences three years make

FIGURE 19.3**The 2001**

Version of the EPA Site Notice the high ratio of images to text.

Source: U.S. Environmental Protection Agency.

<www.epa.gov/enviro>.

FIGURE 19.4 The 2004 Version of the EPA Site

In this version, content takes primacy over visual appeal.

Source: U.S. Environmental Protection Agency.

<www.epa.gov/enviro>.

How the Web differs from other media

CONSIDER THIS Web Sites Enhance Workplace Transactions

The Web is a tool for advertising, learning about new products or companies, updating product information, or ordering products (Teague 236, 238). Each organization advertises its services and products via its own *home page*, a type of electronic billboard that introduces the organization and provides links to additional pages.

Specific Benefits

- ℓ *Visibility.* A Web site attracts business by establishing a presence in markets worldwide.
- ℓ *Access.* A Web site is accessible twenty-four hours a day.
- ℓ *Customer relations.* Through enhanced customer service and support and rapid response, a Web site increases customer satisfaction and enhances a company's caring persona (Hoger, Cappel, and Myerscough 41).
- ℓ *Efficiency.* Two-way, real-time communication allows sudden problems, errors, or areas of danger to be broadcast rapidly. The audience can control the viewing of messages and respond immediately. On-screen instructions (say, for installing a modem) can be enhanced with high-resolution, 3-D graphics; parts can be color coded for assembly; and material can be updated instantly (Dulude 49–60).
- ℓ *Economy.* The cost of an Internet/Web bank transaction drops from over \$1 to roughly 1 cent; the cost of processing an airline ticket drops from \$8 to \$1 (IBM). By radically reducing printing, mailing, and distribution costs, a site can facilitate mass publishing. Also, an advertiser can embed deeper and deeper levels of product details, without using extra page space. Ultimately, as the cost of business transactions drops, so does the number of required employees.
- ℓ *Data gathering.* Tracking software provides customer data by recording who uses the Web site, how often they use it, and exactly where they go. Employees access reference materials from journal and trade magazines, as well as addresses of researchers, and the latest information about legal issues and government regulations (Ritzenthaler and Ostroff 17–18).
- ℓ *Information sharing.* Intranets and extranets (Chapter 8) increase the flow of ideas up and down, and from outside to inside the company and vice versa. Knowledge audits identify who knows what and this information is then listed in the company intranet directory ("yellow pages").
- ℓ *Collaboration.* Company sites help reduce the length of and need for face-to-face meetings. And people who do meet are well prepared because they have shared information beforehand.

Web Applications in Major Companies

- ℓ For training employees in rapidly changing job skills, companies rely on distance-learning programs offered by colleges and universities. Such programs include email correspondence with faculty, online discussion groups, assignments and examples downloaded from the school Web site, and searches of virtual libraries (for special training or MBA work, etc.).
- ℓ General Electric is saving hundreds of millions in operating costs by using the Internet for all sorts of transactions, including purchasing and marketing (Reinhardt 130).
- ℓ NASA posts requests for proposals (RFPs) on an engineering Web site, to which bidders and contractors can respond via email—thereby speeding the whole process, eliminating fax, phone, and copying time (Machlis 45).
- ℓ The Volvo Corporation is connecting all its branches, warehouses, and truck dealerships in Sweden and the United States via a global network to keep track of parts, specifications, and

product updates, and to allow authorized employees worldwide access to company databases so that “all data will be available anywhere” (Hamblen 51+).

FIGURE 19.5 The Effect of Good Writing on Usability

SOURCE: FROM “HOW USERS READ ON THE WEB” BY JAKOB NIELSEN, COPYRIGHT © 1997 BY JAKOB NIELSEN. ALL RIGHTS RESERVED. REPRINTED WITH PERMISSION FROM JAKOB NIELSEN’S ALERTBOX AT <WWW.USEIT.COM>.

Figure 19.6 AN AWARD-WINNING WEB PAGE THE PREVIOUS VERSION OF THIS HOME PAGE RECEIVED AN AWARD OF EXCELLENCE FROM THE SOCIETY FOR TECHNICAL COMMUNICATION. NOTICE THE PROMINENCE OF THE SEARCH FEATURE AND THE DOMINANCE OF TEXT OVER GRAPHICS.

Source: U.S. Bureau of Labor Statistics, Office of Occupational Statistics and Employment Projections <http://www.bls.gov/oco/>.

FIGURE 19.7 A Simplified Design Typical visitors to this site are seeking direct access to legal information, without design frills. All the links, therefore, are grouped under topic headings, as one would find in the index of a book. *Source:* U.S. Equal Employment Opportunity Commission <www.eeoc.gov>.

CONSIDER THIS Web Site Needs and Expectations Differ Across Cultures

Despite its U.S. origins, the Internet has rapidly become international and cross-cultural. Yet, countries vary greatly in their level of “Internet maturity.” With the exception of Scandinavian countries, much of the world lags behind the United States. An effective international Web site therefore addresses a broad range of needs and expectations.

Cost

High phone rates in many countries affect Internet costs. In Japan, for example—whose Internet use ranks second to that in the United States—monthly cost for one hour daily online is more than double the U.S. cost for unlimited access (Nielsen, “Global”). A usable site therefore omits graphics that are slow to load.

Clarity

To facilitate access and avoid misunderstandings, international communication via the Internet incorporates measures like these:

- ℓ *Sites often provide home page versions in various languages (or links to a translation package).*
- ℓ *Time zones, currencies, and other units of measurement differ (10 A.M. in San Francisco equals 6 P.M. in London, 7 P.M. in Stockholm, or 3 A.M. in Tokyo). In arranging real-time interaction (say, an online conference), the host specifies the recipient’s time as well as the home time (Nielsen, “International”).*
Because the value of a “dollar” in countries such as Australia, Canada, Singapore, or Zimbabwe differs from the value of the U.S. dollar, businesses specify “US \$12.50,” and so on. Also, offering payment options in the culture’s own currency helps avoid currency-exchange ambiguities (Hodges 28–29).
- ℓ *A date listed as “6/10/98” might be confusing in other cultures. It would be preferable to say “10 June 1998” or “June 10, 1998.”*
- ℓ *Temperature measurements are specified as “Fahrenheit” or “Celsius.”*

Privacy

Commercial U.S. Web sites routinely collect and sell to other companies personal information about a visitor’s purchasing habits, product preferences, types of sites most often visited, and so on. (See page 475.) But the European Union’s Data Privacy Act prohibits companies from collecting personal information without permission and gives individuals the right to easily change or remove such information. This law applies to any companies from any country who do business with a

country in the European Union. Insofar as possible, a U.S. company Web site with a global audience should adjust its privacy policy to respect the laws of specific cultures (Gurak and Lannon 119).

Cultural Sensitivity

A site that is truly “international” in ambiance—and not only “American”—enables anyone anywhere to feel at home (Nielsen, “Global”). For example, it avoids sarcasm or irreverence (which some cultures consider highly offensive), and exclusive references or colloquialisms such as “bear markets,” “the Wild West,” and “Super Bowl.”

GUIDELINES for Creating a Web Site

NOTE *Organizational Web sites are generally developed by a Web team: content developers, graphic designers, programmers, and managers. Whether or not you are an actual team member, expect a collaborative role in your organization’s site development and maintenance.*

Planning Your Site

1. *Identify the site’s intended audience.* Are they potential customers seeking information, people purchasing a product or service, customers seeking product support or updates or troubleshooting advice (Wilkinson 33)? Will different audiences be seeking different material?
2. *Decide on the site’s purpose.* Is the purpose to publish information, sell a product, promote an idea, solicit customer feedback, advertise talents, create goodwill? Should the site convey the image of a “cool” cutting-edge company (or individual), displaying skill with the latest Web technologies (animation, interaction, fancy design)? For specific ideas, find and examine other sites that display the features you are considering.
3. *Decide on what the site will contain.* Will it display only print documents or graphics, audio, and video as well? Will links be provided and, if so, how many and to where? Will user feedback be solicited and, if so, in what form: survey questions, email comments, or the like?
4. *Decide on the level of user interaction.* Will this be a document-only site, offering no interaction beyond downloading and printing? Will it offer dynamic marketing (Dulude 69): online questions and answers, technical support, downloadable software, online catalogs? Will users be able to download documents, software, or documentation? Will an email button be included?

Laying Out Your Pages

1. *Visit other sites for design ideas.* When you find a site that looks good and navigates easily (or vice versa) analyze what works or doesn’t work in terms of type style, color, layout, graphics, highlighting, and overall design (Fugate, “Wowing” 33). For a good look at award-winning Web sites of all types, go to the *Webby Awards* site at <www.webbyawards.com> (Figure 19.8).
2. *Design your pages (Chapter 15) to guide the user.* Highlight important material with headings, lists, type styles, color, and white space. Remember that too much white space causes excessive scrolling. Prefer sans serif fonts (page 353). Use storyboards (page 227) to sketch the basic elements of each page. Limit page size to 30K, to speed downloading.

3. *Use graphics that download quickly.* Avoid excessive complexity and color, especially in screen backgrounds. Keep maximum image size below 30K. Create an individual file for each graphic and use thumbnail sketches on the home page, with links to the larger images, each in its own file. One expert suggests saving on download time by using tables for graphic presentation (Fugate 33).
4. *Include text-only versions of all visual information.* Roughly 20 percent of users turn off the graphics function on their browsers (Gannon 22–23).
5. *Make the content broadly accessible.* Some people may want to choose how the content of your site appears on their screen: for example, people with limited vision or people who use hand-held devices or older Web browsers. To create these options, consult the *World Wide Web Consortium's Content Accessibility Guidelines 1.0* at <www.w3.org/TR/WAI-WEB-CONTENT>.
6. *Provide orientation.* Structure the content to reflect its relative importance and frequency of use. Place the material that is most important to users right up front and create links to more detailed information. Date each page to announce the exact time of each update—or include a “What’s New” head, so readers can keep track of changes.
7. *Provide navigational aids.* Keep links logical and always link back to the home page. Don’t overwhelm the user with excessive choices. Label each link explicitly (for example, use “Product Updates,” instead of merely “Click here”). Also, use the color blue for denoting links not yet visited and red for links already visited by that user (Fugate 34).
8. *Include an alternate, printer-based style sheet or a link to a printable version of the content.* Use a PDF (Portable Document File) if the content needs to appear exactly like the original paper document (page layout, type style, graphics, color). Also, provide a link for downloading the free Adobe *Acrobat Reader*™ that enables users to view and print the document in its original format.
9. *Define and shape the content.* Use hypertext to chunk information into subtopics, each in a digestible node, and link the nodes—but remember that hypertext takes longer to download and print (Nielsen, “Be Succinct”). Structure each hypertext node as an “inverse pyramid,” in which you begin with the conclusion (Nielsen, “How Users Read”). The inverted pyramid works like a newspaper article, in which the major news/conclusion appears first (say, “The jury deliberated only two hours before returning a guilty verdict”), followed by the details (Nielsen, “Inverted Pyramids”). Last but not least, use restraint: Give users the opportunity to receive *less* information (Outing). Think hard about what users need and give them only that.
 To identify academic and research sites that offer excellent content, go to the *Internet Scout Project* at <www.scout.cs.wisc.edu/about> (Figure 19.9).
10. *Sharpen the style.* Make the online text at least 50 percent shorter than its hard copy equivalent. Try to summarize (Chapter 11). Use short sentences

and paragraphs. Avoid “marketese” or promotional language that exaggerates (“breakthrough,” “revolutionary,” “cutting edge”).

Checking, Testing, and Monitoring Your Site

1. *Check your site.* Double-check the accuracy of numbers, dates, data, and such; check for broken links; and check for correct spelling, grammar, and so on.
2. *Attend to legal considerations.* Have your legal department approve all material before you post it (Wilkinson 33). Obtain written permission before linking to other Web pages or borrowing any graphic element from another site. Display a privacy notice that explains how each transaction is being recorded, collected, and used. To protect your own intellectual property, display a copyright notice on every page of the site (Evans, “Whose” 48, 50). For more on Internet legal issues (copyright, fair use, privacy, and so on) go to <www.publaw.com>.
3. *Test your site for usability.* Test for usability with unfamiliar users (beta testing) and keep track of their problems and questions. What do users like and dislike? Can they navigate effectively to get to what they need? Are the icons recognizable? Is the site free of needless complexity or interactivity? Test your document with various browsers to be sure it can be downloaded.
4. *Maintain your site.* Review the site regularly, update often, and redesign as needed. If the site accommodates email queries, respond within one business day (Dulude 117).

NOTE *These guidelines scratch only the surface of Web site design issues. For detailed advice consult these resources: The Yale CAIM Style Guide at <www.info.med.yale.edu/caim/manual> or IBM's Web Design Guidelines at <www.-3.ibm.com/easy/eou/>.*

19.2

For more on Web collaboration visit <www.ablongman.com/lannonweb>.

19.3

For more models of interactive sites visit <www.ablongman.com/lannonweb> (continues)

Guidelines (continued)

19.4

For more on usability testing visit <www.ablongman.com/lannonweb>

FIGURE 19.8 Listing of Award-Winning Sites

The Webby Awards are the equivalent of the Oscars for Web sites. This site includes archives of previous winners, offering a revealing chronicle of the evolution of Web design.

Source: *The Webby Awards*. <www.webbyawards.com/main>, 2003. Reprinted with permission.

FIGURE 19.9

A Listing of Sites That Offer High-Quality Content

Based at the University of Wisconsin-Madison, the *Internet Scout Project* publishes its weekly *Scout Report*, providing reviews and links to top Web sites in Science and Engineering, Social Sciences and Humanities, and Business and Economics.

Claims in support of monitoring workplace Web sites

Privacy abuses in workplace monitoring

◆ CHECKLIST for Usability of Web Sites

(Numbers in parentheses refer to first page of discussion.)

Accessibility

- ◆ Is the site easy to enter, navigate, and exit? (466)
- ◆ Is required scrolling kept to a minimum? (468)
- ◆ Is downloading speed reasonable? (466)
- ◆ If interaction is offered, is it useful—not superfluous? (468)
- ◆ Does the site avoid overwhelming the user with excessive choices? (474)

Content

- ◆ Are all needed explanations, error messages, and help screens provided? (468)
- ◆ Is the time of each update clearly indicated? (475)
- ◆ Is everything accurate and up-to-date? (475)
- ◆ Are links connected to high-quality sites? (468)
- ◆ Does everything belong (nothing excessive or superfluous or needlessly complex)? (474)
- ◆ Is an email button or other contact method prominently displayed? (468)
- ◆ Does the content accommodate international users? (472)

Arrangement

- ◆ Is the key part of the message on the first page? (474)
- ◆ Are navigation bars, hot buttons, help options, and links to PDF files clearly displayed and explicitly labeled? (474)
- ◆ Are links easily navigated—backward and forward—with back links to the home page? (474)

Writing and Page Design

- ◆ Is the text easy to scan, with short sentences and paragraphs, and do headings, lists, timesteps, and color highlight important material? (473)
- ◆ Is overall word count roughly one-half of the hard copy equivalent? (475)
- ◆ Is the tone reasonable and restrained—free of overstatement and “marketese”? (475)

Graphics and Special Effects

- ◆ Is each graphic easy to download? (468)
- ◆ Is each graphic backed up by a text-only version? (468)
- ◆ Is each graphic or special effect necessary? (474)

Legal Considerations

- ◆ Does the site display a privacy notice that explains how the transaction is being recorded, collected, and used? (475)
- ◆ Does each page of the site display a copyright notice? (475)

- ◆ Has written permission been obtained for each link to other sites and for each graphic element borrowed from another site? (475)
- ◆ Has all posted material received prior legal approval? (475)