USABILITY MUSINGS

"Many Web and Intranet information sites are crazy quilts of whimsical design, patches of disjointed content, and jumbles of color."

—Alison J. Head

This section outlines simple and complex usability testing methods and defines the concepts that make a Web site more valuable based on usability studies performed in the past. Usability and especially user-centered design have taken center stage in designing Web sites and services. Simply put, usability in Web design necessitates an interface that is immediately intuitive and workable—can the user *use* the site?

Jakob Nielsen, usability guru and former head of Human Factors Research at Sun Microsystems, has written—and continues to write—voluminously about the Web, user-centered design, and usability. Putting things simply is his mantra.

Nielsen calls for a change from dazzling people with the novelty of a new medium to satisfying users' needs (Nielsen, p.4). In many ways, libraries seem uniquely poised to take advantage of the trend toward better usability. Libraries are not only classically antidazzle, but they excel at focusing on users' goals. On the other hand, libraries are also behind most technological curves. The challenge lies in avoiding the dazzle and skipping straight ahead to service, which has always been the library's primary function.

Historical Perspective

Libraries started simply. Most saw the promise the Web offered but waded slowly into the water. Libraries' first sites were typically lists of hours, some collections of links, and perhaps even a link to the telnet online catalog. History always teaches and the history of library Web design might look like this:

1994-1995: Dawn of the Web

Keep it simple: during this era, sites featured flat pages with a few links. One person in the library was likely doing all the coding, possibly the person who was good with WordPerfect, WordStar, or even Zardax, word processors that enabled style markup with the use of beginning and ending tags.

Many Web publishers probably had first HTML experiences similar to those of this author: marking up the ASCII text versions of bibliographic instruction materials, using an HTML 1.0 guide, an eve editor, and verifying code with a Lynx browser. Some libraries began converting Gopher pages to HTML, sure that it would be the next big thing.

1996: A Cautious Embrace

The new library interface designers began to add graphics; some designers did so with deep trepidation. This is about the same time that *bandwidth* entered the professional vocabulary. High-bandwidth user and low-bandwidth user became euphemisms for *in the library* and *outside the library*. Some libraries and vendors, convinced that the Web was here to stay, began increasing their volume of electronic versions of print documents; the idea of the Web as a content delivery medium began to take hold.

1997: Battle Lines

By 1997, frames and animated gifs came to the fore. The HTML standard took hold, and its development had libraries constantly considering change. With or without change, the development of mutually exclusive fields of thought on Web site design began. By this time, those designing for the Web were all sure of the best way in which the Web should be used.

1998: The More Are Merry, the Few Become Snobs

Two related trends occur in this era that affected the library profession and ultimately had an impact on usability. First, the new prevalence of WYSIWYG (What You See Is What You Get) HTML editors, such as Dreamweaver, a wealth of content, and a profession with growing technical expertise created the beginnings of the patchwork quilt. What other organization would allow so many of its members to contribute content to a single medium of communication without an authoritative editorial process? But by then these communities of developers would be too late for the careful usability engineering that the Web both needed and deserved.

The second occurrence was an immediate backlash to WYSIWYGs by those who witnessed the dawn of HTML. Raw code designers, forced to differentiate themselves from those who now had the power to create content easily (this must have been how the monks felt after the printing press), embraced any Web technology they could lord over their raw-code-challenged colleagues. Designers poured this technology into their sites at every opportunity, often regardless of its potential impact, such as frames, javascript, Dynamic HTML, and so on. In this environment, usability fell by the wayside.

WYSIWYG stands for What You See Is What You Get.

This era and its aftermath also represented the most dangerous enemy of usability in libraries: an emphasis of style over content.

1999-2000: Retrenchment

The 1999-2000 era represented an important shift for many libraries, bringing the first real redesigns of library Web sites and services. For those who waited to redesign, this era signaled a recognition that the fun elements of the Web were giving way to the professional necessities of creating a real, persistent, and useful Web presence.

By this time, reference professionals were in the trenches with the techies, no longer dabblers in what was originally perceived as another gadget for the systems. As the Web became content-driven, even the most computer-phobic librarians were forced to address the Web, both as users

and content creators. This full force of Web technical designers, content purveyors, and users was now fully capable of taking the Web into a new era of testing and methodology that would lead to increased, more efficient use.

Today: Calling All Service Professionals

A new danger looms for Web service purveyors in libraries. The past two years have proven that the Internet cannot escape the laws of economics. But as those in the not-for-profit segment of libraries know, if the bottom line were libraries' bottom line, they would have been out of business long ago.

Libraries have watched with horror as fee-for-service, advertising-driven, and pseudo-professional information firms have subtly introduced competition to the library captive market. Though these models generally fail, it is the business, and not the model that falls short.

In a restaurant, the cook, the food, and the wait staff must all be good for the restaurant to be popular, but the business must be sound for the restaurant to succeed. Library staffs must keep from patting themselves on the back too quickly as the *business* models based on their *service* models begin to fail.

Despite failing or falling revenues, libraries should benefit from the private sector's forays into usability engineering and Web site design. The Web will remain an important tool for conducting business (even library business) for a long time.

Moreover, the 21st century could host a renaissance of library Web services—an opportunity to set things right. By following the most basic or sophisticated methods of usability testing, best practices, and design enhancements, library Web services will not only be widely used, they will be widely praised.

Basic Questions

What?

Let's go back to the beginning. What is usability? **Usability is the quantitative and qualitative measure of a user's experience when interacting with a service or system.** Note the distinction between usability engineering and usability testing: Though different methods of usability testing exist, they are all part of usability engineering, a more systematic and methodical approach to creating a Web service. Usability engineering includes gathering data, development, testing, evaluation, and redesign. At some point soon, singling out usability engineering will be a redundant exercise, since it will become part of all Web service implementation.

When?

Usability did not surface with the Web, but it took on new importance when the medium of display left the control of software engineers and developers. Unlike traditional graphical user interfaces, as Nielsen points out, much of the control is now out of the hands of the designer: platform, monitor size, resolution, fonts (Nielsen, p. 25). On the Web, the user con-

trols navigation through pages, taking paths that the designer may never have intended. This fact alone necessitates testing an interface. When to actually perform usability engineering—that is, at which stage to start using it—will be discussed later.

Who?

Two common misconceptions about usability experts seem to have taken hold in libraries: first, that usability experts exist merely to determine trouble spots on Web sites, and, second, that usability experts are required to perform usability studies. Libraries fail to grasp that they themselves can perform basic usability studies of their own services. Moreover, the *users* are the ones that will tell you what is wrong with the sites. The real questions are: Are you asking users? Are you listening?

Why?

There is no manual for how to use the Web (although librarians have tried to devise one). Users must grasp the functionality of a site almost instantly or they will flee in search of something more accessible. Before the Internet, a library's primary competition was ignorance; with the advent of the Web, libraries now compete with misinformation, lack of authority, and instant access to alternative information sources that may or may not be within a library's realm of control or description.

Nielsen says, "The Web is an attention economy where the ultimate currency is the users' time. What do they look at, where do they decide to stay, and where are they going to return at a later date?" (Nielsen, p.160) The Web offers overwhelming choice, and a library's audience is no longer a captive one.

Many usability experts realized early that to prove the necessity of usability engineering, they had to prove its cost savings. Weinschenk Consulting is one of many sites that puts this theory to the test. Using any number of cost-benefit calculators, usability testers can attach real dollar figures to time-saving applications and interfaces. Depending on software complexity, help desk calls can cost anywhere from $30 to $100 per call (Nielsen, p.10). Making interfaces easier to use means making them easier to support. But most librarians can already tell you that their job is just what S. R. Ranganathan said it was to save the time of the user.

www.weinschenk.com

Ranganathan's five laws of library science, rewritten for the Web:

1. *The Web is for use.*
2. *Every surfer his Web page.*
3. *Every Web page its surfer.*
4. *Save the time of the Web user.*
5. *The library and the Web are growing organisms.*

Becoming a Usability Engineer

The phrase *user-centered design* is redundant. For whom did designers design before the user? If an online or electronic product or service had too

much of the programmer in it (or too much of the company president), that would be poor user-centered design, just plain bad design. The method of designing interfaces has actually changed little over time; the user has changed. Think of improved design as a design that recognizes the user. Regardless of the semantics, designers design for the user—so only using the actual user can you test your site effectively.

One common misconception about usability testing is that you must be a master of design, HTML, or psychology to conduct testing. This is not true. Only time, commitment, and a little space are required. As usability expert Jeffrey Rubin warns, however, "start slowly with small simple studies, until you gain the necessary experience and confidence to expand further." (Rubin, p. xx).