OPTIMIZING LIBRARY WEB SERVICES

> *"No Web team, no matter how good, can create a Web site that really works if the rest of the company is mired in the physical world and unwilling to put the Internet first in all aspects of virtually all projects."*
>
> —*Jakob Nielsen,* Designing Web Usability

The Basics

Like the early days of links to hours and locations, most library Web sites seem to have settled into a comfortable presence on the Internet. Libraries are complacent with the level of service the Web site provides, but endanger their sites with benign neglect. Here are some of the most basic services that users expect from a library Web site.

MyAccount

Nearly omnipresent on business portions of the Web, customer service hardly seems complete without some level of access to one's account information. Differing levels of technological capabilities, or lack of development by a chosen library vendor might complicate a link to library account information, but users should at least be able to inquire about their accounts online, even if this means requesting book renewal by e-mail.

More sophisticated systems allow users to perform various functions beyond traditional renewals, such as paying fines, placing or canceling requests, or updating personal information. Taken a step further, library patron records could be used to push information, such as passwords for databases, or current awareness bulletins that broadcast the arrival of new titles in the user's area of interest.

Requests

Whether the function is a hold, a recall, or a request for delivery, users expect to perform the function online, especially if the material is searched for and located via an online catalog. The notion of needing to go to a separate section of the Web site to place requests for materials is indicative of site architecture based on a library's organizational structure and does not represent how a user wants the site to work. Much has been written in library literature about single points of service and structural reorganizations of physical space; the online environment allows libraries to experiment with restructuring without moving a single desk. Many libraries, however, even those who have restructured their physical interface, have not done so in the online environment.

Ask a Librarian

Thankfully replacing the word reference on many library homepages, an increasing number of libraries use Ask a Librarian. Like MyAccount, the level of access that this service provides might include a list of phone numbers, e-mail question submission forms, or even real-time chat. Whatever the level of service, its presence on a library Web site should be prominent and omnipresent.

Online chat and e-mail will affect a librarian's working hours, but remote access to reference services is likely to prove more popular than online renewal of library books and will change the nature of the profession. The hope of all in libraries should be that the focus will shift from the technology that makes the service available to the user who appreciates its accuracy, low cost, and efficiency.

An online chat session with the NCSU Libraries "Ask a Librarian LIVE" Virtual Reference Service. The simple question "When was the IFLA founded" produces a quick, simple response, and the IFLA homepage is pushed to the patron. Using this software, provided by Library Systems and Services LLC (LSSI), and other packages like it, librarians can chat with users as well as co-navigate pages and push information to the browsers of end-users.
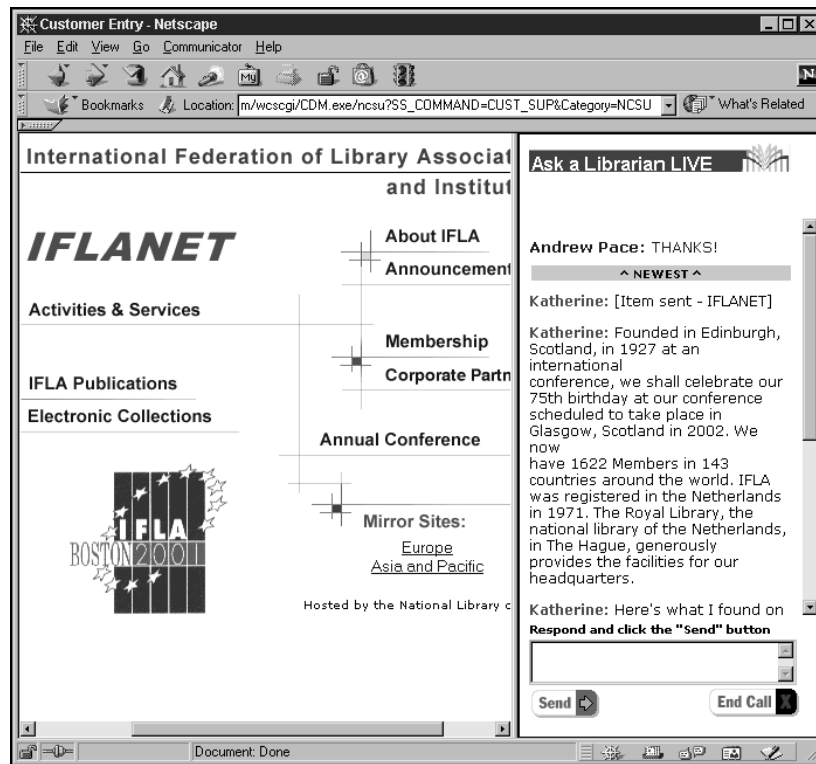
Course Reserves

Though course reserves apply mostly to academic libraries, public and special libraries can think of this service as analogous to materials or space booking. Course reserves were once destined to remain the last microcosm of library operations—often not given enough consideration until the materials themselves became electronically available. With their own dedicated staff, stacks, administrative procedures, and circulation, these library islands might have run parallel to the rest of the library forever had

users not demanded instant gratification and integration with the resources already being used in the library.

The service should be prominent and easy to use. Moreover, links to course reserves should not be available only on the online catalog Web pages; users should not be expected to make a connection between the course reserves catalog and the online catalog, even though libraries and the vendors that provide such integration do so without thinking.

Workshops

Libraries provide such vast resources for instruction and direction that letting the availability go so unnoticed by users is shameful. Pushing technology, or even e-mail list subscriptions, might go a long way toward informing users about a library's services. Cutting-edge libraries are already experimenting with virtual instruction, capable of reaching many more users than traditional visits to the library might hope to instruct.

Help, Help, Help

Every service on a library Web site should be rephrased in the form of the question "how do I..." One school of thought advises not using the word help, as it makes the user admit an inability to accomplish a task without it. "How do I..." services not only put the user in a different context from requesting aid but also allow the library to put the services provided into terms that all users can understand.

What Makes a Good Library Web Site?

In a recent posting to the Web4Lib discussion list, librarians were asked to describe a good library Web site in one sentence. The replies were interesting in their consistency and creativity.

"Good library Web site design is mindful of audience (patrons), content (resources), infrastructure (bandwidth, server capacity), sustainability (upkeep), functionality (three-click rule), and accessibility (W3C recommendations); characteristics all balanced with creativity and curb appeal, summed up in a three-word phrase: fast access beautifully.

Sarah Blake
Systems Coordinator, Torreyson Library
University of Central Arkansas

"A good library Web site is one that the patrons think is functional regardless of the bells and whistles you might be tempted to include."

Gerald Bohnet
Reference Librarian, Joseph F. Smith Library
Brigham Young University-Hawaii

"A good library Web site needs to be as clear as possible in conveying where the user needs to go next to get to the information he needs, while at the same time making it simple for the user to get there."

Catherine Cox
Electronic Resources Librarian
Mission College Library

"No scrolling left to right even in less than full screen; three clicks or less to any page or link; based on needs of users not the needs of the library."

Wilfred (Bill) Drew
Associate Librarian, Systems and Reference
SUNY Morrisville College Library

"The two most important components of a great and user-friendly Web site are: 1) an internal search engine and 2) a site map."

Brad Eden, Ph.D.
Head, Bibliographic and Metadata Services
University of Nevada, Las Vegas

"A good library Web site convinces the casual Web visitor that libraries are still a vital center of the community, tech savvy, and user-aware, while also providing the quickest, cleanest access to basic library information such as catalog, hours and locations, and services."

Margaret Escherich
Senior Librarian/Webmistress
Oakland Public Library

"Good library design would lead a patron to say 'Well...maybe I will make this my homepage'."

Steve Garwood
Customer Education Librarian
Camden County Library, N.J.

"Good library Web design keeps the user in mind and arranges the content—language and design—for the audience that's being served."

Caroline Geer, MA, MLIS
Coordinator of Information Resources, Margaret Estes Library
LeTourneau University

"A good library Web site leads patrons fast to most of what they were looking for and to enough of what they should have been looking for."

Heinrich C. Kuhn
Seminar fuer Geistesgeschichte der Renaissance
Ludwig-Maximilians-Universitaet Muenchen

"A good library Web site is one which nonlibrarians will use without prodding."

Sheilah O'Connor
Librarian
Toronto Public Library

"A good Web site helps you get the job done: it gets you where you need to be and is considerate of the user; it is intuitive, accessible, usable, and functional, with judicious use of images, scripts, applets, and plug-ins."

Beth Tang

"A good library Web site aims...'to provide clear and up-to-date access to library products and services for the library's user community.' [The original charge to the Caltech Library System Web Committee at its inception in 1996]."

Louisa Toot
Reference Librarian, Sherman Fairchild Library
California Institute of Technology

The online catalog is the center of the database universe. How libraries provide access to the online catalog—the link to collections—shapes the way they provide access to the books on the shelf and the electronic resources on the desktop.

Since catalog homepages are often completely separate from library homepages, catalog homepages deserve separate and special treatment. Libraries' dependence on the products of various integrated library systems (ILS) vendors for these interfaces remains an important factor, but demands of usability and interface improvement must come from libraries themselves.

The Search Box

"For sites where search is a primary access mechanism, it makes sense to include an actual search box right at the top of the homepage." (Nielsen, p. 168) This statement should make any librarian wonder whenever he or she encounters a library homepage that takes more than three seconds to find the online catalog.

Whether a user recognizes that a library is more than a pile of books, the primary function of the library is access to its collection by means of a catalog. Libraries should go beyond merely providing a clear link to the catalog from the homepage; libraries should provide the search box itself right up front. If libraries borrow only one feature from Amazon.com, this is it.

Amazon.com started just a short time ago—relative to the age of MARC—with nothing more than the Books in Print database. Amazon has added more value to that content in five years than libraries have in 20. Moreover, if Amazon can learn from libraries—note that they recently added Library of Congress Subject Headings to their metadata—then libraries should certainly learn from Amazon.

In this vein, library vendors have been working frantically to add value to the aging MARC record: tables of contents, jacket covers, summaries, and author biographies are showing up in bibliographic record displays. Companies such as Syndetic Solutions are streaming content based on ISBN/ISSN, and all the major integrated library system vendors are pursuing various avenues of linking to this sort of value-added content that users have come to expect from for-profit sites.

www.syndetics.com

The Browsable Catalog

Browsability was discussed earlier as a proven desire of Web surfers. Why, then, is the catalog not browsable?

Libraries have come to think of authority searching (author, title, subject) as browse indexes, but each browser still starts with a search. Library online catalogs should, at the least, provide a mechanism for canning catalog searches and should locate the entire search and retrieval function into a single hotlink.

Library Web pages that classify and organize various electronic resources are essentially already performing this function, so why not extend

the practice to browsability of the traditional library collection? So-called "Kids Catalogs" also offer this browsable catalog through use of graphics that represent searches of the online system, empowering the most Net-savvy segment of the population, rather than those who need more assistance in constructing searches.

Here are examples of two kids' catalogs at NCSU Libraries.
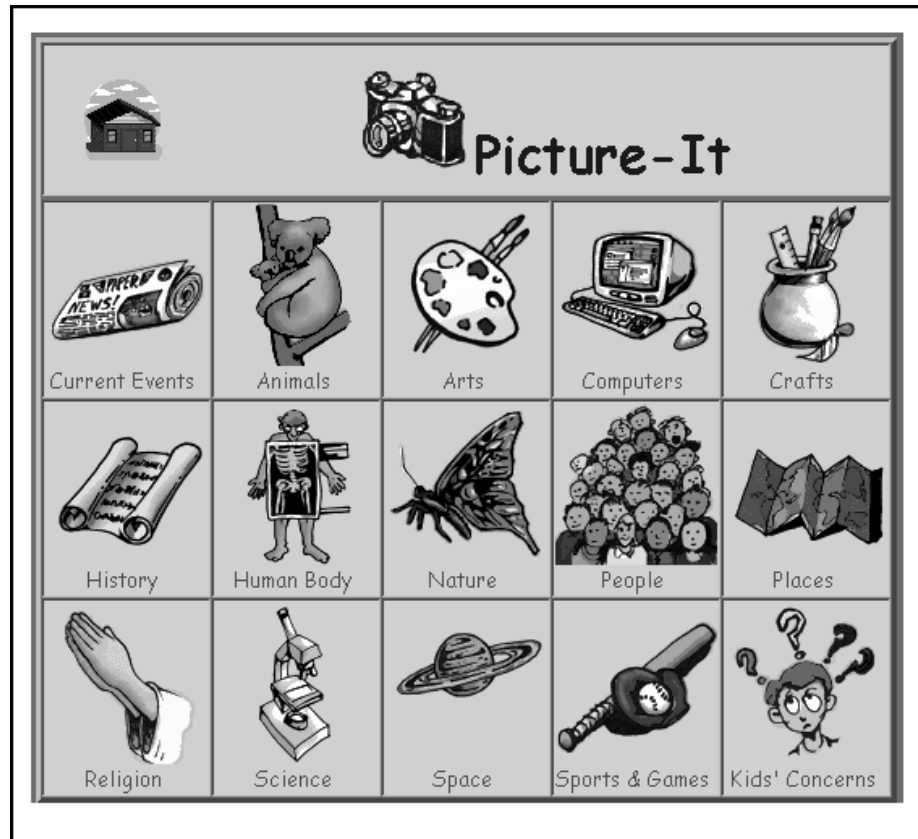
Innovative Interfaces KidsOnline browsable subject product. © 2001 Innovative Interfaces Inc. All rights reserved.
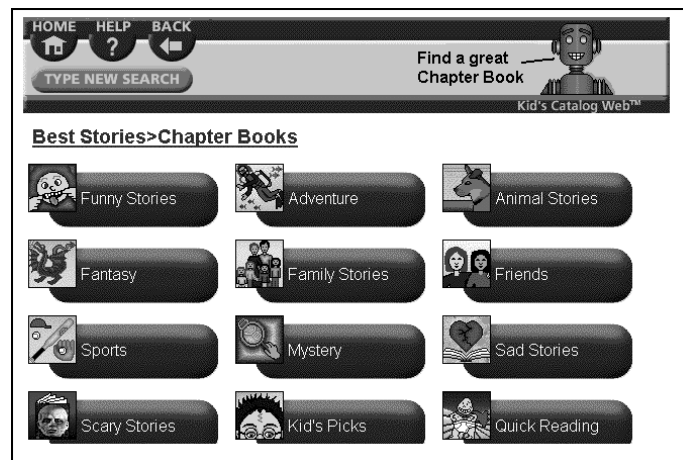
CARL's Kids Catalog Web, a browsable subject product using subject hierarchies. ©2001 The Library Corp. All rights reserved.

The Shopping Cart

Another service users have come to expect is the online shopping cart. Much time will likely pass before the catalog goes as far as Amazon.com and delivers the item to your door (libraries should aspire to offer this service someday). The idea of adding books and citations to a cart that can be exported, e-mailed, or reformatted for further use is an essential catalog tool that should be developed.

Libraries should also look carefully at bookstores. In the past, bookstores have not offered patrons access to their catalogs, but now large bookstores are adding user-friendly interfaces to their collections. Their data isn't as complete as that found in a library OPAC, but the consumer-friendly interface begs imitation, or at least scrutiny.

Optimizing Others' Content

A challenge for libraries, and one that nonlibrary Web usage studies never address, is that libraries are at the mercy of third-party content. Like the online catalog interfaces, libraries must play the hands dealt by vendors, and most vendors have spared no expense in optimizing Web interfaces for access to the vendor's own vast collections.

For smaller libraries, this access might mean learning a few interfaces and adjusting bibliographic instruction or reference handouts to match the continual (and, too often, unexpected) interface upgrades. For large libraries with several index, abstract, and electronic journal providers, these constant updates can mean a never-ending quest for the Holy Grail of electronic resources—a single interface for everything, fully integrated with catalog holdings and links to full-text.

This point stresses the need for cooperation. Vendors cannot be all things to all people, but like libraries, they have infrastructure for feedback and requests for improvement. As vendors' largest customers, libraries should leverage their collective weight to receive more bang for their buck. The notion that vendors are not receptive to client input should be dispelled. Libraries will find themselves working more and more closely with third-party content providers as their resources become more and more available.

Some aspects of determining vendor cooperation and flexibility should take place during vendor selection and acquisition. In a 1999 survey of ARL Libraries (68 respondents of 121, or 56%), 93% of respondents said they had resources available only through the library's Web site, up from 69% in 1996. When asked whether the library had an official electronic collections development policy, only 37% answered yes (Liu, SPEC Kit 246, 1999). Libraries' dependence on online-only and digitally born materials is clear, but the plan of how to collect and provide unified access to these materials is not.

Despite what seems like a unified plan of action, libraries have not lost their singular focus on the end user. Frustrated by a barrage of constantly changing interfaces, libraries have rekindled interest in Z39.50 clients and servers, and in new vendors who promise protocol harmonization or the single search interface. Whether libraries are trading in old magic bullets for new ones remains to be seen. That renewed interest in these areas is on the rise only adds credence to the notion that third-party vendors—as well as libraries—need to pay attention to usability issues.

Many vendors have shifted their concentration from adding content to creating feature-rich interfaces geared toward ease-of-use. Each vendor does this with either the idea that theirs is the only interface worth using, or with the belief that any Web interface is usable in and of itself. Neither belief is true.

Despite vendors' new attention to interface and the end-user, libraries still focus their negotiations with third-party providers on issues of content, coverage, and fair use. Although libraries should not abandon these negotiations, dependence on third-party interfaces necessitates ensuring these interfaces are well-tested, usable, and constantly improved.

Portals, Vortals, and Information Spaces

A portal was once called a homepage. Homepage personalization, however, gave rise to increased use of portal as a personalized gateway to information. To further distinguish *portals* from personalization, the vortal—or vertical industry portal—came to either rescue or confuse librarians' already complicated vocabulary.

Semantics aside, the notion of personalizing information spaces is firmly rooted in the Web culture. The popularity of everything from MyYahoo to MySchwab is not lost on libraries, and several vendors and groups have entered the fray to create the perfect library portal. NCSU Libraries, an early adopter, and developer of the only open source software solution for libraries, has been live with its MyLibrary@NCState interface for over two years.

Libraries should not enter lightly into the decision to personalize access (Pace, p. 1). MyLibrary@NCState evolved from focus groups conducted by NCSU Libraries' Department for Digital Library Initiatives. The goal, in a nutshell, was to create a customizable, interactive, and portable library interface. MyLibrary@NCState was not designed to replace the online catalog, and it was not designed to replace the NCSU Libraries Web site. The MyLibrary movement in general can be described as a concerted effort on the part of library selection and description to reduce information overload and assist in discipline-focused research.

The library portal can serve important functions in optimizing library Web services to those focused enough to create their own customized interface. A few of the features of MyLibrary@NCState, by no means unique to that software, go a long way to further optimization. Whether these features are offered through a library portal or via the homepage itself does not affect the service.

First, portals should offer some sort of current awareness manager, allowing users to regularly receive lists of new titles added to the library's collection—or perhaps using Library of Congress call numbers established in user profiles, or favorite authors, or even favorite subject headings. Second, based on the user's selected discipline, libraries might display the actual name and contact information for the appropriate librarian and collection manager who specializes in the given subject area.

Finally, a portal allows a library to craft custom messages for select groups of users, keeping patrons abreast of local development issues, major new acquisitions, and special announcements (Pace, p.1). Eric Morgan, one of the lead developers of MyLibrary@NCState, points out,

"the model is active and not passive; direct human interaction, computer mediated guidance and communication technologies, as well as current awareness services all play indispensable roles in this system" (Morgan, http://hegel.lib.ncsu.edu/development/mylibrary/paper/).

Keep in mind, library portal development is not a solution that supplants some antiquated service model of the library. Portal development is a different sort of work, but it is also more work for subject specialists, more work for systems librarians, and more work for library marketers. A portal will not stop the flow of traffic to the reference desk or allow libraries to close down circulation services for an extra two hours at lunch.

Two questions guide a library's decision about offering personalization options in the library. First, do users need it? If a library subscribes to five databases and 10 e-journals, or your college supports three areas of study, then probably not. In such cases, the degree of separation between the library Web site and the personalized portal is unnecessary; the library should concentrate its efforts to make a better site overall and obviate the need for a portal. But if library users are seeking this sort of discipline-specific personalization from other Internet resources, or if using the wealth of resources on the library site is like drinking water from a fire hose, a library might seriously consider whether it should support the same sort of service.

Second, can the library support the level of personalization that distinguishes a MyLibrary site from a simple list of bookmarks or a portal-in-a-box? How many users will have the name and e-mail address of a subject specialist in their discipline? How many users will come to expect a refreshed "Message From My Librarian?" How will library portals keep pace with their dot-com counterparts such as MyYahoo? Answers to these questions can dramatically change the way a library provides service (Pace, p. 1).

From Projects to Products

Libraries might do well to take another cue from the private sector, applying corporate product management models to handle various projects. Projects seem constantly in danger of having no end—and often no defined goals. Simply thinking of a service as a product can shift this notion considerably and add new focus. Some libraries might not want to liken themselves to business, but considering the recent rise in competition of an information-based economy, the trend is worth attention.

Clearly defined library products also aid in product testing and enhancement, and they allow libraries to focus on the service aspect of site architecture. Sometimes optimizing a library Web service can mean doing away with the service. Libraries wisely perform this task with great trepidation, but if the product has outlived its usefulness, like any product you buy in the store, it should be discontinued so effort can be focused elsewhere.