

INFORMATION ARCHITECTURE, BRIEFLY

In the late '90s, information architecture was called Web design. Something changed around the same time people started calling homepages portals. The rising attention given to information architecture has done much to convert the grassroots nature of Web site building into an exercise that requires care and a more professional approach to presenting information.

The change represented a welcome shift to many librarians who knew they had the power all along. Although market downturns and cyclical refocusing on style over substance have hurt firms that focus on architecture as part of design, such changes should not adversely affect libraries. More altruistic and self-sustaining by nature, libraries should put their information expertise to work locally to build better information organization, presentation, and delivery.

Look at Louis Rosenfeld's and Peter Morville's *Information Architecture for the World Wide Web* for a detailed treatment of Web information architecture. Rosenfeld and Morville are information scientists, a.k.a. librarians. This designation does not mean their book has a purely librarian bent, but unlike others (including and especially Nielsen), libraries are not completely ignored as online information spaces. With so much attention paid to the commercial and advertising-driven applications of the Web, examples that profile libraries and corporate Intranets are a refreshing and applicable change of pace. Their book is a guide of good practice for the beginner; for the practiced, it focuses perspective on what good Web site design and maintenance can achieve.

Web Site Building

Rosenfeld and Morville start their book with an important distinction between Web sites and Web pages. At some dangerous juncture, someone decided the homepage was cool, and focus on the Web site as a whole was lost for some time. Refocusing attention on the site as a whole and how it is organized not only makes a Web site easier to use but also makes the site easier to maintain.

Proper planning and design assists any group to build or redesign a Web site. Defining the project is the first step. Doing so must take place in the context of time frame and budget. Define who is responsible and provide clear communication among all stakeholders in the organization.

The almost immediate tendency for libraries is to begin with either a reporting hierarchy or departmental structure. This tendency is especially strong, given the grassroots nature of most library Web sites. Yaping Peter Liu summarized in his Association of Research Librarians (ARL) survey of library Web sites, "Creating Web services has been added to the responsibilities of existing staff, often on a volunteer basis and without adequate training." (Liu, *Web Page Development and Management*, SPEC Kit 246).

A good place to start—or restart—is at the top of the hierarchy; not the

organizational hierarchy, but the service hierarchy: define the major areas of information that need to be organized. A formal focus group might be a good idea if you are starting from scratch. Without a focus group, a basic approach can be summarized like this: do not structure the site to reflect the way the library is structured, physically or organizationally. The site should reflect users' tasks and their expectations of the information space. This concept is given more concrete treatment in this report's section on optimizing specific library Web services.

"The intelligence quotient of any meeting can be determined by starting with 100 and subtracting 5 points for each participant."

—Dogbert's Group IQ Formula, Scott Adams

Web sites placed in even the ablest hands of a practiced designer run two other risks: the designer who creates for his or her own pleasure, or worse yet, his boss' pleasure (Nielsen, p.11). Striking a balance between these two methods—perhaps aided by formal usability engineering—represents a particular challenge but is also combated by the cyclical nature of iterative Web design. New players, new staff, new service providers, and a constant focus on the needs of the end user result in a site built for periodic maintenance, not one built to last.

One of the most dynamic challenges in creating or redesigning a Web site is doing so by committee. Though it is practically cliché to make fun at the inertia of committee work, in reality, this is how many organizations, especially libraries, design their services—via committee. Overzealous efforts at equal representation, prolonged discussion of minutiae, and altruistic attempts to please all users all the time represent some of the general challenges facing a Web design group. Clear leadership, clearly defined roles, and expert opinion, however, can make the group dynamic an enriching experience for library staff and a rewarding experience for the end-user.

Most importantly, a successful team approach requires both the support of library administration and the library staff that the team represents. The entire library organization must trust the group to deliver a successful and usable Web site. Depending on the size of the library staff, a Web design team might not always be practical; in fact, many libraries still rely on one or two primary Web developers and content creators.

Web Site Maintenance

"Our Web sites must be redesigned periodically—tended and changed almost constantly—by a group of people bringing different needed skills to the process."

—Pat Ensor, "What's Wrong with Cool?" *Library Journal NetConnect*

If building not to last is the ironic goal of Web design, then maintenance becomes an even more important role for libraries. Outsourcing Web design to an outside firm for a one-time delivery of a new site represents an exercise in planned obsolescence unless the outsourcing focuses equally on the site architecture and the aesthetic appeal of the homepage. The same is

true of a library that throws temporary or already busy staff at designing a new Web site or service. Without a long-term maintenance plan, any such design could be doomed for a short life. Whether requiring minimal maintenance or constant upkeep, the extensibility of the design and flexibility of a site's architecture ultimately saves the library time, money, hassle, and user frustration.

Constant change might seem daunting, but change is the nature of the Web. A close look at the homepages and online catalog pages of the top 10 ARL libraries reveals some interesting dynamics. Forty percent undertook major Web site revisions in the 12-month period between January 2001 and January 2002 (Columbia University, University of Toronto, UCLA, and Yale). Some of the changes are sweeping, others are slight but distinct. Change can be difficult at a research library, so the level of change is indicative of sophisticated users' expectations at a university library. You might even expect more change from the remaining 60% of ARL's top 10.

Two of the best examples of the constant state of change on the Internet are dot-com powerhouses Amazon.com and Travelocity.com. Constant updates and revision of their sites have been a cornerstone of their success and not a source of consumer confusion. Change is not only easily accepted on the Web, it is expected. A site that does not change periodically is considered stale and behind the times.

Any library will tell you that change must be embraced with cautious moves forward. Users, librarians argue, do not like change foisted on them without warning. This wisdom may be true of library hours or the location of the circulation desk, but the same rule doesn't hold true for Web interfaces.

For example, consider enhancing your college library's Web interface to include self-renewal for patrons; the software and Web pages are ready to go, but it's the middle of October, a month and a half before the supposed safe time to introduce this new interface. Now explain to that student or faculty member that he or she understands the interface better in January than in October. The argument does not make sense. Partly to test this theory, but mostly because the changes were ready to go live, the last two major changes to the catalog interface at North Carolina State University (NCSU) Libraries took place in October 2000 and March 2001. Not only were the enhancements well received at best and not mentioned at worst, but the business of the library went on without missing a beat.

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In 12 months, the Amazon site shows some major redesigns to deliver a lot of the same content. DVDs are a new service component and highlighted accordingly. Features previously offered in two separate navigational bars on the left and right hand sides are redistributed with the major content on the left, and "Special Features" moved to the bottom. Important functions remain unchanged or have only minor modifications: the shopping cart, the search box, and the customer service section. Note that these changes were not incorporated into an annual site redesign but took place over the entire course of the year.

Library Technology Reports

www.techsource ala.org

March - April 2002

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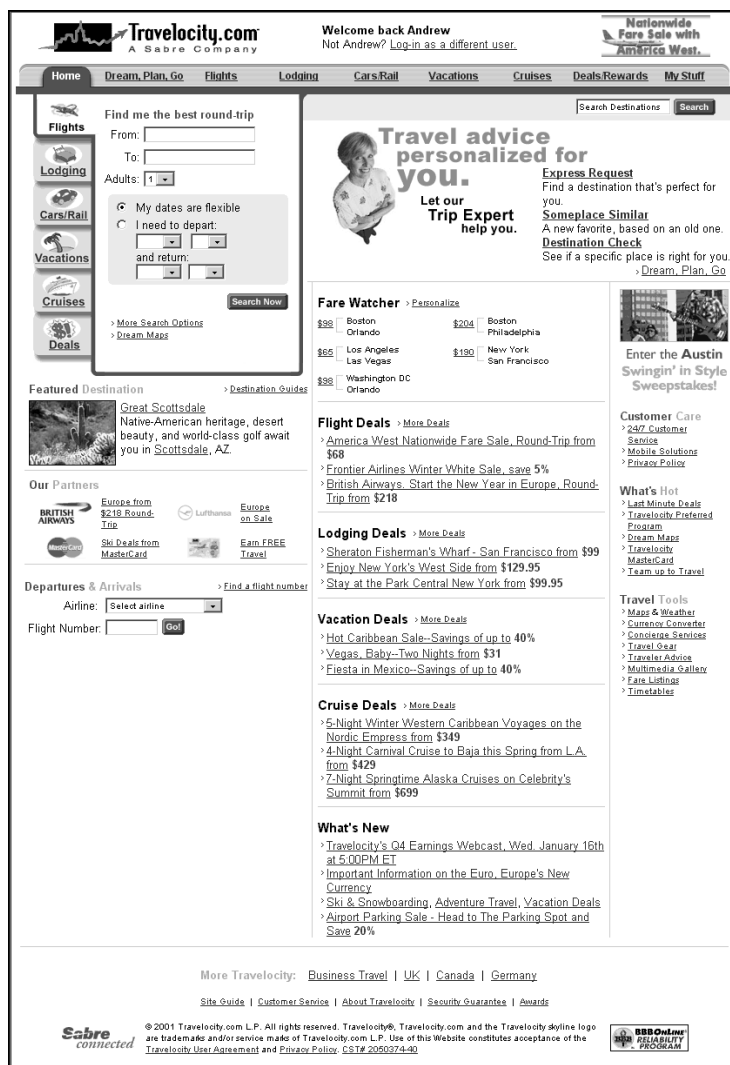
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Search Engines and the Primacy of Metadata

Librarians have had a lot to say about metadata in the last few years—from rising fears that some new standard might replace MARC, to mocking disdain for technological newcomers who think they have stumbled across something new that could solve all the problems surrounding the organization of information. Why has the profession not done more with its own information spaces to turn fear into action and disdain into enviable practice? While search engines battle over the search algorithm that will obviate the need for content description, libraries could be building those descriptions to enhance the results of the searchers who stumble on their pages.

A good look at your search engine logs shows that users rarely qualify searches. Unlike the precision required and (arguably) expected from an online catalog, Web search engines do not expect users to search in certain fields or with proprietary qualified search syntax.

Making several changes of the course of a year, Travelocity incorporates some major changes for its users. The quick-search for flights is enhanced and highlighted; navigation for various service areas is moved from the top of the screen to the left-hand side. Although delivering the same amount of information, the new design appears less cluttered and the information is better organized. Important and most-used information remains above the fold, while less-used resources are do not dominate the top and center of the screen.

Controlled vocabulary:
An authoritative term used to describe like items so the item terms can be described in a similar fashion and grouped together for retrieval.

Library of Congress
Subject Headings is
abbreviated LCSH.

Likely Web Searches

agriculture
tax forms
"North Carolina State"
book and electronic and birds

Unlikely Web Searches

s=agriculture
Tax IN TITLE
North W2 State
book+birds and mt=eb

Despite the unlikely sophisticated Web searcher, including metadata in the content that such a search might retrieve serves a purpose. Use the online catalog as an analogy. A failed subject search might lead a user to a successful controlled vocabulary search.

Take this series of screen shots as an example of what might happen with a user of the online catalog, under the best of circumstances.

You searched Subject Heading causes of the civil war in NCSU Libraries Search

[Revise Search](#) [New Search](#) [Help](#)

NO MATCHES were returned for your search for: Subject: causes of the civil war

Tips for Subject Heading – the Library of Congress Subject Headings are a specialized vocabulary used to group titles together on certain subjects. You can ask a librarian for assistance in using proper subject headings, or look for one in a title and click it to perform a search for that subject. You can also [get online help](#) for performing subject searches.

If you are not sure which subject to use, you can try a keyword search. You can limit your keyword search to just the subject field by adding 'su' before your search terms. See more [tips on field searching](#).

[Repeat Search as Keyword](#)

OR

[Browse Nearest Subjects](#)

1) User does a subject search for 'causes of the civil war.'

1. [The debate on the American Civil War era / Hugh Tulloch.](#) Published: c1999.
Series Title: Issues in historiography
Author: Tulloch, Hugh.

Location	Call Number	Volume	Material	Status
DH Hill Library	E468 .5 T85 1999	c.1	Book	Not Checked Out

2. [Causes of the civil war in America / by John Lothrop Motley.](#) Published: 1861.
Author: Motley, John Lothrop, 1814-1877.

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DH Hill Microforms Room	mf 143	c.1	Microfiche	Check Shelf

2) Fuzzy matching offers the user an opportunity to repeat the search as a keyword search, if use of controlled vocabulary use is not desired.

Author: [Motley, John Lothrop, 1814-1877.](#)
Title: Causes of the civil war in America / by John Lothrop Motley.
Published: London : Manwaring, 1861.
Edition: 2d ed.
Subject(s): [United States--History--Civil War, 1861-1865--Causes.](#)
Material: 30 p. ; 21 cm.
Notes: Microfiche. Sanford, N.C. : Microfilming Corp. of America, 1980. -- 1 sheet ; 11 x 15 cm. -- (Slavery : Civil War and slavery ; CW 516)
Other ID no:
System ID No: A/JN-5990

3) A little luck and careful reading of the bibliographic record will lead the user to the controlled vocabulary of LCSH.

Only the shortcomings of integrated library system online catalogs have made these short leaps harder than they need to be. But imagine the same circumstance with a Web search. The initial hit list for a keyword might contain the controlled vocabulary that would lead a user to similarly described Web pages. This lateral searching—or system-suggested searching—cannot operate effectively without a concerted effort to describe local Web pages.

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Library cataloging & classification
Academic & research libraries
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Archive & records management
Machine-Readable Cataloging (MARC)

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63% - Directories & Lists: Metadata. Projects. We are participants in the following projects which relate to resource description: CURL Exemplars in Digital ARchiveS, High Level Thesaurus, An architecture and ... 06/29/2001
Educational site: <http://www.ukoln.ac.uk/metadata/>
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3. **Metadata Guidelines**
61% - Directories & Lists: as well as, and sites are provided. Arthur has recently moved from The Getty Information Institute to the Center for Cultural Technology at the Information ... 05/31/2001
Non-profit site: <http://coloradodigital.coalliance.org/access.html>
[More results](#) from this site

This example from the Northern Light search engine typifies the immediate gratification of metadata presentation. The folders on the left give the user an opportunity to narrow or broaden a search based on the content of the sites included in the search results.

Now imagine that colleges, universities, business, and public libraries are responsible for describing the Web content of their campuses, businesses, cities, and counties. The outcome, local content, described locally, rewards both the local user and the nonlocal user with better organized information.

The Browsable Web

"To enable a person to find a book of which either is known: author, title, or subject." So states Charles Cutter's first rule of the library catalog. The same rule updated and turned on its head should state: to find a title about which nothing is known, hence the popularity of online browsing.

Nearly 100 years after Cutter, and still tied to the search mechanism, most library interfaces stick with Cutter and his notion of finding known things. After all, this system is how the card catalog worked for a century, so why change? Moreover, the addition of keyword capabilities was so exciting (and ultimately traumatic) that little attention was addressed to a collection of books whose surrogate records were no longer browsable.

Nielsen and co-author Mona Tahir go so far to state, "In reality, search is one of the most common, and one of the least successful ways that users look for things on the Web" (Nielsen and Tahir, p. 46). Search engines designers, too, thought that fancy algorithms and a single white box would suffice.

Now look at Google and Alta Vista. Learning from the success of Yahoo, both have added subject category browsing; others are doing the same, mostly care of dmoz, the creators of Open Directory Project, a cooperative classification project for Internet resources. True browsing means no keyboard is required, allowing users simply to click their way through a request for information.

www.dmoz.org

Sensible URLs

The most simple factors can make a tremendous difference in the setup and system architecture of a site. Whether a library leases Web space, depends on a local Systems or MIS department, or creates and maintains its own servers, carefully consider simple server configuration. Keeping server names simple and memorable for increased usability (simple aliases, enterprise server preferences, or directory tricks like symbolic file linking) can increase usability behind the scenes and without user effort.

Good URLs

www.library.university.edu

<http://databases.library.org/findingaids>

www.library.edu/staff/ejones

Confusing URLs

<http://server146.tc-lib.college.edu>

http://library.university.edu/documents/cataloging/forms_new/toc/toc.html

http://arakaban.staff.lib.edu/private/~emily_jones/

Simple URLs aid in marketing materials, delivering URLs over the phone or via an e-mail message, and might even be easy enough for a user to remember at a later time.

Publishing a Web address requires the simplest possible URL (for example, dropping trailing slashes or the redundant "index.html"). But remember to always include trailing slashes in the anchored link of your HTML document (for example, <http://www.library.edu/hours/>); doing so shaves milliseconds of server response time since the trailing slash defines a directory rather than a simple file.