Academic library Web sites

From public relations to information gateway

by Norm Medeiros

Academic library Web sites have come a long way. Early sites generally consisted of a few pages containing minimum content. A large heading or banner usually greeted those who stumbled across the library's splash page. These initial sites sought little more than a presence on the Web. A homepage was seen mostly as inexpensive advertising for the library and its parent university.

While creators and users struggled to learn the hypertext medium, issues such as navigation and data structure were passed over during the Web's infancy. In short, the primary catalyst for early library Web development was public relations.

Many of today's developers understand the Web's expanded mission. A quick look at Web books published since 1994 exemplifies the trend towards more cohesive, navigable, content-rich sites.

Web development books in the current market address "information architecture" and "knowledge management." This transition can be considered *second generation Web design*; that is, a move from reactive to proactive site design, from a concern for attention to a focus on the user's information needs.

Java, XML, and plug-in applications push the limits of what is capable on the Web. Over the last five years, we have seen technological and ideological waves, which have spurred the library Web site from a mere advertising agent to the information epicenter of academic libraries. Although Web sites have assumed this prominent role slowly, there is no denying the importance librarians bestow upon these information gateways today. Reliance by librarians on their own Web sites is driving this change.

The early vision

The University of Minnesota Gopher system was created in 1991 in response to an information need. The university wanted to develop a networked, multi-platform application capable of delivering information resources throughout the campus community.[1]

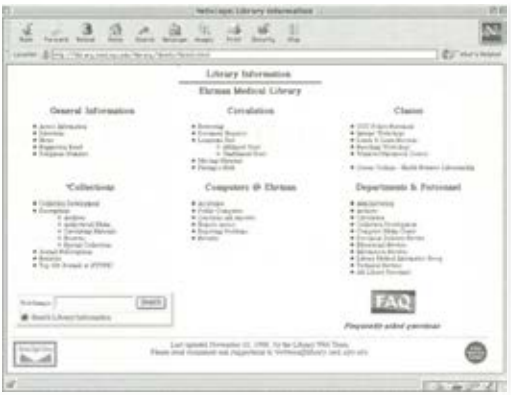
Since Gopher was predominantly a character-based system, the emphasis from the beginning was on content. A typical Gopher menu looked like this:

1. Gopher at New York University
2. More about Gopher (Documents & Navigation Tools)/
3. Keyword Search of Titles in NYU's Gopher <?>
4. About New York University/
5. NYU Campus Events/
6. News & Weather/
7. Phone Books & Other Directories/
8. Information for the NYU Community/
9. Computing & Technology Services/
10. Libraries/
11. NYU Services & Facilities/
12. Outreach / Extension / Community Affairs/
13. Network & Database Resources/[2]

About the author

Norm Medeiros is technical services librarian at New York University School of Medicine, e-mail:medein01@library.med.nyu.edu

Since graphical expression was limited in Gopher, the only aesthetic decisions involved the order and wording of the options. The Web's graphical user interface and glitz factor stymied this menu-based system. Nonetheless, the principles that guided Gopher development during its short-lived reign have manifested themselves in today's second generation Web design.

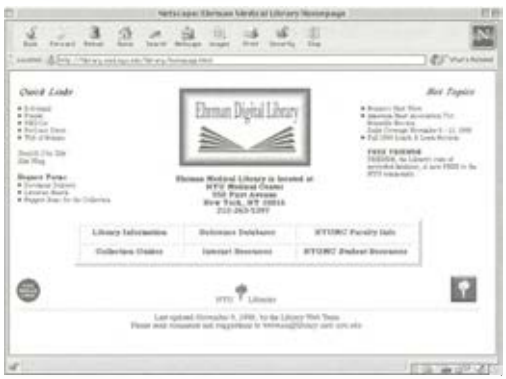


A flatly designed, second-level page that offers navigation aides, a section-specific search engine, and immediate access to a broad spectrum of resources.

Second generation Web design

One of the most telling signs of the new development principles is the move towards library Web committees. Initial Web-page creation was often an ad hoc effort by one or two enthusiastic librarians.[3] Since time and abilities were limited, early Web development lacked breadth and objectiveness.

The creation of Web teams solves much of this problem. Library staff members representing various departments ensure a sufficient number of hands to contribute to the effort. Moreover, a greater objective view of the Web site's mission, theoretically at least, is realized through a small group rather than a person or two. As a result of the team approach, Web committees generally perform the task of site design in a more holistic and proactive manner than a sole Webmaster.



The splash page of a second generation Web site at NYU's Ehrman Medical Library.

Beyond this broader scope and commitment is a concern for the orientation of users. Flatter structures that offer quick, logical navigation throughout the site have replaced traditional sites that layer information into deep, chasm-like sections. Additionally, site maps, search engines, and other navigation aides offer today's user a mode by which to hasten resource discovery.

Page design has also been simplified. In today's best-designed library Web sites, graphics are used with discretion and only as enhancements. A common "look" predominates throughout the site, with similar page layouts and concise strings of text to promote easy online reading.

Most importantly, content reigns in second generation Web design. We must know which resources to make available before worrying how best to express them.

Creators as users

"*Don't these Web site architects ever use their own sites?*"[4]

During the Web's early years, the answer was no. Yet today's content-rich academic library Web site is an oft-used information resource by patrons and staff alike. At many institutions, including my own, the splash page greets users of most library computers. It is the point from which many reference questions are asked and answered. It provides the gateway to all networked resources, and is the library's presence beyond its physical walls. Most importantly, library staff are as dependent on it—if not more so—than our users. The need for a quality site has never been greater, and it will only continue to increase as online resources proliferate.

A detailed look at successfully deployed Web-based services within academic libraries

Early developers could never have imagined the many uses that would develop for their Web sites. Do we have any idea what lies ahead?

would highlight interlibrary loan modules, electronic reserve collections, and delivery of electronic journals.[5]

A more complex utilization of the Web involves bibliographic instruction. Pathfinders, "how to" guides, and interactive tutorials have all found a niche within some progressive library environments.[6]

Clearly the library's reliance on its Web site as a provider of these services has propelled the devotion of human and financial resources to this endeavor. Early developers could never have imagined the many uses that would develop for their Web sites. Do we have any idea what lies ahead?

Resource discovery on the Web

Relevancy of information retrieval on the Web is at an all-time low. Despite the efforts of academic librarians to provide access to credible Internet resources via Web pages and online catalogs, search engines are still heavily used by our patrons. The frustration of countless "false drops" has affected each of us.

Metadata, the catalyst for a third generation of Web development, promises to bring some sanity from the Web's psychosis. Large-scale projects, such as the Dublin Core (DC) Metadata Initiative, are paving the way to enhanced information retrieval on the Web. The effectiveness of this standard has yet to be established. Nevertheless, a move towards standardized data input within Web pages and through contributed metadata records should help boost relevant retrieval considerably.

Metadata as savior

Metadata cover stories have graced some of the profession's leading periodicals.[7] Only recently, however, has metadata been strongly considered a "must do" by library Web developers. The ineffectiveness of existing search engines, coupled with the growing amount of scholarly content available on the Web, has forced the issue. Using metadata to locate information resources is not a new idea. As Jessica Milstead and Susan Feldman note, "Metadata [is] cataloging by any other name."[8]

Although competing standards exist, media promotion of DC, and OCLC's involvement in it, has powered efforts to deploy metadata on a wide scale. But will DC, and metadata initiatives in general, live up to the hype?

The players

There are many players in the metadata game. In February 1999, the World Wide Web Consortium (W3C) officially recommended a Resource Description Framework (RDF) designed to accommodate embedded metadata.[9] This metadata framework allows a measure of interoperability among metadata schemes. RDF's base encoding construct consists of Extensible Markup Language (XML), an SGML derivative that is malleable by definition. In short, RDF and XML provide a flexible structure for the inclusion of one or many metadata schemes within online documents.

Content providers also hold a key. Will they embed descriptive metadata within their documents? If so, will they follow the RDF construct and/or use a documented standard such as DC? Clearly those interested in promoting the discovery of their resources would be inclined to deploy a strict and robust standard.

Perhaps the biggest wildcards are the existing search engine proprietors. What incentive do they have to adopt the W3C RDF? Do they have interest in the *quality* of resources their users retrieve or just the *quantity*?

A glimpse of the future?

If embedded metadata proves not to be the great panacea, OCLC is covering its bets with the Cooperative Online Resource Catalog (CORC), an OCLC research project aimed at using metadata record surrogates to enhance scholarly resource discovery on the Web.[10] CORC houses MARC and DC metadata records from contributing project sites. These records describe what is presumed to be quality Internet resources and allow users to search specific fields within these records. At its best, CORC could provide searchers a means of using controlled subject vocabularies and

(continued on page 561)

• *Archives:* to create a guide to existing archives.

• *Cataloging:* to study library catalog screens and their display of Greek-language and transliterated Greek authority records; possibility for standardization of Greek automated systems; potential cooperative cataloging projects; and study other existing problems.

• *Thomas Jefferson-Adamántios Koraïs Correspondence:* to bring together LC and Hios Library holdings and to consider how, when, and where to exhibit materials.

• *Interlibrary Loan:* to establish a consortium of American and Greek libraries that will lend and borrow Greek-language materials free of charge among themselves.

• *Periodicals:* to create a union list of Greek-language periodicals, including data such as ISSN, price, and publisher; to document American holdings of these periodicals; and to strategize the acquisition of missing issues.

• *Greek-American Holdings:* to create a guide to existing holdings and to assess cataloging and acquisition problems.

Each group will analyze the existing problems and offer suggestions for improvement. Reports will be submitted in September 1999 to the mail list, then plans will be made for a follow-up conference next year in Athens, where the reports will be discussed and projects subsequently implemented.[2]

Notes

1. The conference included attendees who did not present papers.

2. For further information about the conference or about the Modern Greek Collections Working Group, contact Beau David Case, Ohio State University Libraries, Language & Area Studies Department, 1858 Neil Avenue Mall, Columbus, OH 43210, USA; phone: (614) 292-2594, fax: (614) 292-1918; e-mail: case.42@osu.edu. ■

("Academic library . . ." cont. from page 529)

authorized name headings to locate credible information on the Web.

Conclusion

Today's academic library Web site has matured measurably from its early days. Worthwhile content and ease of navigation are becoming commonplace. As we move towards another generation of Web development, our polished and robust Web sites offer a solid infrastructure from which to build. We should be proud of our efforts.

Notes

1. Rich Wiggins. "The University of Minnesota's Internet Gopher System: a Tool for Accessing Network-Based Electronic Information," *Public-Access Computer Systems Review*, v. 4, no. 2 (1993): 4–60. Available on the Internet at: http://info.lib.uh.edu/pr/v4/n2/wiggins1.4n2.

2. Ibid.

3. Bruce Connolly and Gail M. Golderman. "Schaffer Library Home Page: Structured Access to Library and Internet Resources." *Library Hi Tech*, v. 15, no. 3/4 (1997): 90–100.

4. Louis Rosenfeld and Peter Morville. *Information Architecture for the World Wide Web.* (Cambridge: O'Reilly, 1998).

5. Beth Evans and Wilma Lesley Jones. "Demonstrating the World Wide Web as an academic research tool." *Journal of Computing in Higher Education*, v. 9, no. 2 (1998): 113–134.

6. Corinne Y.C. Laverty. "Library Instruction on the Web: Inventing Options and Opportunities." *Internet Reference Services Quarterly*, v. 2, no. 2/3 (1997): 55–66.

7. *American Libraries*, v. 30, no. 1 (Jan. 1999) and *Online*, v. 23, no. 1 (January/February 1999).

8. Jessica Milstead and Susan Feldman. "Metadata: Cataloging By Any Other Name." *Online*, v. 23, no. 1 (January/February 1999): 24–31.

9. Stuart Weibel. "The State of the Dublin Core Metadata Initiative." *D-Lib Magazine*, v. 5, no. 4 (April 1999). Available on the Internet at http://www.dlib.org/dlib/april99/04weibel.html.

10. The Cooperative Online Resource Catalog is available on the Internet at http://corc.oclc.org/. ■