

## The Catalog vs. the Home Page? Best Practices in Connecting to Online Resources\*

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*Connecting users to the best available sources of legal information is one of the traditional functions of the law library. These sources now include Web sites, electronic journals, and subscription databases. This article explores the best way to bring these useful Internet resources to the attention of users, concentrating on the pros and cons of using the catalog or the home page.*

¶1 Historically, librarians have had clear guidelines on how to provide the best access to their library collections. Library leaders from the early days of library science, such as Dewey<sup>1</sup> and Cutter,<sup>2</sup> as well as current law library leaders like Melody Lembke and Rhonda Lawrence,<sup>3</sup> and the many librarians who devised MARC<sup>4</sup> and AACR<sup>5</sup> have documented the path to good organization and access. If librarians followed the rules established or interpreted by their predecessors and leaders, they knew they were using the best practices available for accessing their collections. Librarians felt confident in their knowledge of how best to organize and disseminate information for maximum benefit to patrons.

¶2 However, in the past five years librarians' lives have been turned upside down. Library collections and services have changed so rapidly with the development of the World Wide Web that the standard tools of librarianship are insufficient

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1. See MELVIL DEWEY, *A CLASSIFICATION AND SUBJECT INDEX FOR CATALOGUING AND ARRANGING THE BOOKS AND PAMPHLETS OF A LIBRARY* (1876).

2. See CHARLES AMMI CUTTER, *RULES FOR A PRINTED DICTIONARY CATALOGUE* (1875).

3. See MELODY BUSSE LEMBKE & RHONDA K. LAWRENCE, *CATALOGING LEGAL LITERATURE* (1996).

4. Machine-readable cataloging formats are standards for the representation and communication of bibliographic and related information in machine-readable form. The current version for bibliographic information is MARC 21 FORMAT FOR BIBLIOGRAPHIC DATA: INCLUDING GUIDELINES FOR CONTENT DESIGNATION (1999).

5. JOINT STEERING COMM. FOR REVISION OF AACR, *ANGLO-AMERICAN CATALOGUING RULES* (Michael Gorman & Paul W. Winkler eds., 2d. ed., 1998 rev.).

for the task.<sup>6</sup> Also, many of the standard legal resources in libraries are no longer solely available in print or on Westlaw or LexisNexis. They are now available in multiple formats, often including several versions on the Web. Another complication is that “the Internet, digital electronic resources, and database technology have transformed the way people search for information.”<sup>7</sup> Access may be easier from a library Web site or an efficient search engine than from a library’s online public access catalog (OPAC). Moreover, the tools used by librarians to catalog, organize, and disseminate information evolve slowly and take time to move throughout the library world. Once the rules are established, it takes even longer for best practices to become common practice. For all these reasons, the rules librarians treasure no longer rule omnipotently nor are they infallible!

¶3 Brian Smith describes today’s situation well: “The Information Age has washed over us like a tidal wave. If we’re not drowning, we are at least drenched and treading water. Many of us wish we could clone our most skilled and productive colleagues.”<sup>8</sup> Especially our most technologically savvy colleagues. This is an unsettled time for librarians who miss the clear guidelines of the past.<sup>9</sup> It is also a difficult time for anyone to remain abreast of the latest technology and all the acronyms and jargon that come with it.<sup>10</sup> Yet, it is comforting to know that librarians are end users of the technology and constantly strive to make the best use of it for their library patrons.

¶4 The following often-heard comments illustrate the chaotic times librarians are experiencing: “students prefer the Web to the library”; “administrators don’t think libraries will be important in the future”; “librarians will be replaced by Google”; “business, including legal practice, has been revolutionized by the Internet”; “the Web can’t be controlled by AACR2 and MARC any longer”; and “paper products will be replaced by digital products.”

¶5 Much of the chaos and uncertainty derives from the abundant availability of information resources in digital format,<sup>11</sup> including many so-called “free”<sup>12</sup> resources on the Web. In addition to this proliferation of resources, librarians now

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6. For example, the AACR2 rules for seriality have been under revision for several years and are still not universally accepted. See, e.g., JEAN HIRON, REVISING AACR2 TO ACCOMMODATE SERIALITY: REPORT TO THE JOINT STEERING COMMITTEE FOR REVISION OF AACR (1999), available at <http://www.nlc-bnc.ca/jsc/ser-rep0.html> (“recommending changes . . . to accommodate new forms of bibliographic resources and to better address the description of serials and other resources that exhibit seriality”).

7. Mary E. Jackson, *The Advent of Portals*, LIBR. J., Sept. 15, 2002, at 36, 36.

8. C. Brian Smith, *In Search of Blessed Bots*, LIBR. J. NETCONNECT, Spring 2002, at 34, 34.

9. The title of a recent column in *Library Journal* is eloquent evidence of the uncertainty surrounding what were once the clear guidelines of a generation of librarians. Roy Tennant, *MARC Must Die*, LIBR. J., Oct. 15, 2002, at 26.

10. Examples include XML, SFX, SQL, SGML, XSL, CSS, XHTML.

11. For example, at the end of 2001, 64% of the journals indexed in *Social Science Citation Index* were available online and 75% of the journals indexed in *Science Citation Index* were electronic. *E-Journals Proliferate*, LIBR. SYS. NEWSL., June 2002, at 4, 4.

12. Librarians understand that the costs of cataloging and maintaining access to so-called “free” resources make them not so free!

have multiple alternatives for creating access to electronic information resources. Some include:

- Place an icon for the resource on the computer terminal or desktop
- Place a link for the resource on the library home page
- Place a link on the library OPAC's front page or nearby
- Catalog the electronic resource with a hotlink
- Catalog each item of an aggregator database<sup>13</sup> with a hotlink
- Create a list of electronic resources arranged by some criterion—for instance title, subject, or jurisdiction—and put this either on the library's home page, OPAC front page, or both

¶6 How is a librarian to know which of these alternatives is the best practice when there are no guidebooks or codes to turn to? Unfortunately, research into this area is at the early stages and much needs to be done. Additionally, it is not easy to follow the research literature of this area because much of it is in the fields of computer science and informatics—arenas in which librarians are not always comfortable or knowledgeable. However, the alternatives available boil down to two general areas in which librarians are comfortable and knowledgeable: public services (often responsible for the library Web site), and technical services (responsible for the library catalog). This article will explore access via both these alternatives, identifying the pros and cons of each method and offering examples and advice.

## **Access via the Catalog**

### ***Pros of Using the Catalog***

#### *Cataloging Provides Many Access Points*

¶7 Although Cutter's *Rules for a Printed Dictionary Catalogue*<sup>14</sup> is more than a hundred years old, its principles still influence the creation of catalogs—and thus, individual bibliographic records within catalogs—today. Briefly, these rules may be paraphrased as:

- enable the patron to find all books by an author;
- enable the patron to find any book by title;
- enable the patron to find all editions of a book; and
- enable the patron to find all books on a given subject.

¶8 Although Cutter only envisioned using these rules to provide access to the *books* owned by a particular library, librarians over the years have expanded their

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13. Aggregator databases index, abstract, and collect full-text electronic content from a wide variety of publishers on a wide variety of subjects. Examples include Gale's *LegalTrac* and EBSCO's *Academic Search Premier*.

14. CUTTER, *supra* note 2.

scope to include providing access to information in other physical formats owned by their libraries, and ultimately, to online resources available to their patrons remotely. Thus, Cutter's rules are more broadly interpreted today as guidelines for providing access to a wide range of "works" rather than only to "books." This broader interpretation justifies many librarians' views that patrons "should be able to find remotely accessed items in the library catalog in the same way they find items held in physical formats."<sup>15</sup>

¶9 Thus, cataloging individual online resources is quite consistent with Cutter's rules for creating access to information. For example, the cataloging for any work will provide detailed descriptive information as well as subject access via controlled vocabulary. Indeed, using controlled vocabulary to catalog online—or any other—resources eliminates "what [Michael] Gorman calls the 'noise' (the retrieval of irrelevant materials) that comes from relying on keyword searching alone."<sup>16</sup> In addition, classification, authority control, cross references, and uniform headings also help patrons access and retrieve materials in the catalog.<sup>17</sup> In comparison, links on a Web page are typically only available via very general subject-oriented lists or alphabetical title lists. Multiple access points are rarely provided for each individual resource.

#### *Online Resources Enhance the Collection*

¶10 The catalog provides access to materials collected by a particular library for its patrons. However, useful materials are no longer available only in hard-copy formats. Many unique and valuable resources are now available online, either exclusively or in addition to the hard-copy formats. Expanding the scope of items a library catalogs strengthens the collection and increases the chances the library will meet patrons' information needs. By choosing to catalog online resources, the library can become "a quality filter for the Internet."<sup>18</sup>

#### *Creating "One Stop" Access for All Library Resources*

¶11 By cataloging online resources, a library can provide comprehensive "one stop shopping" for its entire collection. Patrons can discover selected, high quality online resources in relationship to other items in the collection,<sup>19</sup> and thus more easily weigh the options available to them. Conveniently, this access to a variety

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15. Pamela Simpson & Robert Seeds, *Electronic Journals in the Online Catalog: Selection and Bibliographic Control*, 42 LIBR. RESOURCES & TECHNICAL SERVICES 126, 130 (1998).

16. Mellissa J. Hinton, *On Cataloging Internet Resources: Voices from the Field*, 5 J. INTERNET CATALOGING 53, 54 (2001).

17. *Id.*

18. *Id.* (quoting Pamela Simpson & Patricia Banach, *Finding the Missing Link: How Cataloging Bridges the Gap Between Libraries and the Internet*, SERIALS LIBR., 1997, no. 1–2, at 245, 246).

19. Thomas Mann, *Discussion Paper: Is Precoordination Unnecessary in LCSH? Are Web Sites More Important to Catalog than Books? A Reference Librarian's Thoughts on the Future of Bibliographic Control*, in PROCEEDINGS OF THE BICENTENNIAL CONFERENCE ON BIBLIOGRAPHIC CONTROL FOR THE NEW MILLENNIUM: CONFRONTING THE CHALLENGES OF NETWORKED RESOURCES AND THE WEB 87, 89 (Ann M. Sandberg-Fox ed., 2001).

of resources is provided by performing just one search in just one database—the library’s catalog. Indeed, the Nashville State Tech Library began cataloging online resources “in 1996 when it was noted that students were using the library’s home page to locate electronic materials, thus ignoring the library’s physical collection. Including electronic resource records in the OPAC [helped] to bring users back to the collections for which the library [had] already spent revenues by leading them to electronic and traditional (print, media, etc.) resources simultaneously.”<sup>20</sup> Ideally, the library’s catalog “can be a centralized resource that library users turn to for concise searching of a well-selected collection of resources in all formats.”<sup>21</sup>

¶12 Anecdotal evidence and studies both show that patrons do not want to search in different places to find information. As an analogy, consider the separate catalogs used to access government documents in years past. Studies show a surge in use of government documents when their bibliographic records were integrated into the library’s main catalog.<sup>22</sup> This situation has obvious parallels to discovering and using online resources. If a cumbersome separate database or crowded home page is the only access to online resources, those resources will probably be underutilized.

¶13 For example, at the June 2002 NASIG (North American Serials Interest Group) Conference, librarians at the University of Tennessee at Knoxville, declaring that “the report of the death of the catalog is greatly exaggerated,” reported usage of their electronic journals doubled after a brief bibliographic record for each title was added to the catalog.<sup>23</sup> On the other side of the country, librarians at Oregon State University’s Valley Library noted the search habits of their patrons and concluded that the patrons expected to access *all* information via the library’s catalog, rather than through multiple home pages.<sup>24</sup>

¶14 These observations lead to the final advantage of using the catalog.

#### *Patrons Do Use the Catalog to Access Online Resources*

¶15 The users of the libraries at the University of Tennessee and Oregon State University are not the only patron populations who rely on the catalog to access online resources. Other studies also confirm this point.

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20. Hinton, *supra* note 16, at 55.

21. *Id.* at 54–55.

22. Selma V. Foster & Nancy C. Lufburrow, *Documents to the People in One Easy Step*, in *NEW HORIZONS FOR ACADEMIC LIBRARIES* 453, 455 (Robert D. Stueart & Richard D. Johnson eds., 1979); Naomi V. Kerze, *Separate vs. Integrated: The Disappearing Debate Over the Organization of United States Government Publications in Depository Libraries*, 16 *GOV’T PUBLICATIONS REV.* 439, 442–43 (1989).

23. See Maribeth Manoff et al., *The Death of the Catalog is Greatly Exaggerated*, 43 *SERIALS LIBR.* (forthcoming 2003) (2002 NASIG Conference Proceedings issue).

24. See Kyle Banerjee, *Challenges of Using Metadata in a Library Setting: The Collection and Management of Electronic Links (CAMEL) Project at Oregon State University*, 24 *LIBR. & COLLECTIONS, ACQUISITIONS, & TECHNICAL SERVICES* 217, 222–24 (2000).

¶16 A recent OCLC White Paper found that 57% of responding college students used the catalog to find information the last time they logged onto their library's Web site.<sup>25</sup> In addition, a 1997 study of first-year students at Duke University<sup>26</sup> found that 77% of the respondents answering the question "What can the library do to facilitate your use of the Web?" felt the best way for libraries to encourage patrons to use Web resources was to "[p]rovide *reliable*, live links between the library's catalog and *selected* Web resources."<sup>27</sup>

### *Cons of Using the Catalog*

¶17 With all of these advantages, why would librarians *not* want to provide access to online resources via the catalog? Predictably, there are disadvantages, and a discussion of four of them follows.

#### *Increased Workload for the Technical Services Staff*

¶18 There are many ways that cataloging electronic resources can create extra work for the technical services staff.

¶19 AACR2 and other cataloging standards for electronic resources are both complex and still evolving. For example, AACR2's chapters nine and twelve were revised in 2002 to better accommodate cataloging electronic resources, and MARC's 856 field (which contains an online resource's URL or PURL) has experienced coding changes over the years. This situation means that today's catalogers must be "self-taught," learning on the job and "learning by doing" when it comes to cataloging electronic resources.<sup>28</sup>

¶20 In addition, policies and procedures must be established. For example, will access be via the single-record or multiple-record approach? What local practices will be used? For example, will special location codes, genre terms, and classification numbers be used? When all of these decisions are finally made, the resulting policies and procedures must be documented and implemented consistently. Unfortunately, however, policies and procedures for cataloging online resources can become perpetual "works in progress." As circumstances change (increased or decreased staffing levels, new national cataloging standards, etc.), a library's policies and procedures must change to reflect these new circumstances.<sup>29</sup>

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25. OCLC ONLINE COMPUTER LIBRARY CTR., OCLC WHITE PAPER ON THE INFORMATION HABITS OF COLLEGE STUDENTS 6 (2002), available at <http://www2.oclc.org/oclc/pdf/printondemand/informationhabits.pdf>.

26. John Lubans, Jr., How First-Year University Students Use and Regard Internet Resources (April 8, 1998) (unpublished manuscript, available at <http://www.lubans.org/docs/1styear/firstyear.html>), cited in G. Margaret Porter & Laura Bayard, *Including Web Sites in the Online Catalog: Implications for Cataloging, Collection Development, and Access*, 25 J. ACAD. LIBRARIANSHIP 390, 392 (1999).

27. Lubans, *supra* note 26 (responses to question 10f).

28. Hinton, *supra* note 16, at 58.

29. Karen Selden, *Linking Globally, Coping Locally: Cataloging Internet Resources at the University of Colorado Law Library*, 92 LAW LIBR. J. 439, 443, 2000 LAW LIBR. J. 37, ¶ 11.

¶21 Although quite a few bibliographic records for Web sites were added to the OCLC database via OCLC's CORC project,<sup>30</sup> and more continue to be added through the new OCLC Connexion service,<sup>31</sup> good MARC copy for particular Web sites may not be available, forcing unsure catalogers to attempt original records.

¶22 Established workflows and workloads may change as electronic resources are added to the mix of materials being cataloged, creating a potentially stressful situation for some technical services staff and adding strain to already busy departments. While budget constraints keep the acquisition of physical items to a finite level each fiscal year, freely available electronic resources can be suggested for cataloging in infinite numbers. Indeed, "[i]f the library broadens its concept of the 'holdings' that should be made available to its users through the catalog (and for remote users, that would be as many full-text sources and quality Web pages as the library can acquire or identify), then the catalogers will be overwhelmed by the magnitude of their new cataloging responsibilities."<sup>32</sup>

¶23 These are some of the ways cataloging online resources can be a labor-intensive and stressful undertaking, especially for any technical services staff that is already feeling the strain of being understaffed.

#### *Link Checking and Maintenance of URLs and PURLs*

¶24 URLs, and even PURLs, can and do change over time. Thus, any library that chooses to catalog electronic resources must commit to checking the URLs and PURLs in their bibliographic records regularly.

¶25 Although some vendors, such as Innovative Interfaces, provide link-checking software as part of their integrated library system (ILS) software packages, a staff member still has to take the time to regularly run the software and manually investigate and correct broken links. Link checking and maintenance has the potential to be a complicated process (especially if a library's ILS does not provide link-checking software) as well as a time-consuming commitment.

#### *Limitations of the MARC Format*

¶26 Links on home pages can easily be enhanced with such features as commentary, annotations, or directions for use, as well as special fonts and formatting, because HTML and other Web page editing languages lend themselves to presenting information in a textual format. However, creating user-friendly bibliographic

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30. OCLC's CORC (Cooperative Online Resource Catalog) project began in January 1999 as a "project to explore the cooperative creation of a catalog of Internet resources." Thomas B. Hickey, *CORC—Cooperative Online Resource Catalog*, in *ANNUAL REVIEW OF OCLC RESEARCH* (1998), at <http://www.oclc.org/research/publications/arr/1998/hickey/corc.htm>.

31. On July 1, 2002, OCLC's CORC service was merged with several other OCLC cataloging services and functions to form the OCLC Connexion service. See OCLC Connexion, at <http://www.oclc.org/connexion/> (last visited Jan. 31, 2003).

32. Donnelyn Curtis, *Presenting the Virtual Library*, in *ATTRACTING, EDUCATING, AND SERVING REMOTE USERS THROUGH THE WEB: A HOW-TO-DO-IT MANUAL FOR LIBRARIANS* 51, 52 (Donnelyn Curtis ed., 2002).

records that include these useful features is difficult, if not impossible, when using the MARC bibliographic format.

*Patrons Won't Use the Catalog to Access Online Resources*

¶27 Despite the earlier contention that patrons do use the catalog to access online resources,<sup>33</sup> some will counter that, in fact, many do not. Their view is based on the idea that we live in an era of instant gratification. In this “post-Google world,” patrons feel retrieving useful information is just a matter of typing a few keywords or clicking on a preselected link on a home page. Indeed, in this context, online catalogs can be hard for patrons to use. Patrons “now expect search interfaces to be simple and intuitive. The fact that library catalogs have for the most part migrated to the Web does not make them automatically easy to use.”<sup>34</sup> In addition, patrons who know exactly what they are looking for or those who will be satisfied with the first source of information they encounter often search the home page for useful links.<sup>35</sup> Once satisfied, these patrons may return to the home page time and again and, out of ease and habit, forsake the catalog.

¶28 We have asked many practitioners about their experiences providing access to online resources. One colleague offered the following cautionary experience from her law school. The library subscribed to some expensive online resources at the request of one of the institution's faculty members. The cataloger was asked to “make these available ASAP.” She obliged by cataloging all the individual resources in the OPAC. A couple of weeks later one of the reference librarians asked how the project was progressing. She replied that the resources were cataloged and in the OPAC, ready for use. The reference librarian replied, “Oh, the faculty will *never* find them in the catalog—put the links on the home page, where they'll be sure to see them.”

¶29 This story may verify what some librarians have experienced in their libraries, it may be frightening, or it may be both; but in any case, it is thought-provoking.

*Recommendations for Using the Catalog to Provide Access*

¶30 What can be gleaned from identifying these pros and cons of providing access to online resources via the catalog? Here are five suggestions:

¶31 **Know your patrons and do what's best for them.** As illustrated by the pros and cons, some patrons prefer catalog access and some prefer home page access.

¶32 **Remember that providing access to online resources does not have to be an either/or proposition.** Access solutions vary across a wide spectrum—

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33. See *supra* ¶¶ 15–16.

34. Curtis, *supra* note 32, at 53.

35. E-mail from Angela Murphy-Walters, Senior Cataloger, Children's Literature Team, Library of Congress, to Karen Selden, Catalog Librarian, University of Colorado Law Library (June 25, 2002) (on file with author).

possibly a combination of catalog and home page access is best for your patrons. For example, you can provide a link to the home page of an aggregator database, such as Hein-On-Line, on the library home page. In addition, you can add hotlinks that lead to specific Hein-On-Line journals to the bibliographic records for those individual journal titles in your catalog. In other words, use the home page to provide access to the entire database, and use the catalog to provide access to specific titles within the database. One library that provides such dual access to Hein-On-Line journals is Loyola Law School's William M. Rains Library.<sup>36</sup> In a 2002 survey about providing access to Hein-On-Line journals, twenty-five of the twenty-seven respondents provided some form of dual access to Hein-On-Line journals by using both the library Web page and the catalog.<sup>37</sup>

¶33 On a broader scale, a recent analysis of the resource descriptions provided for a set of seventeen commonly licensed online databases and full-text journals at seven of the largest Association of Research Libraries (ARL) libraries in the United States found that all of the libraries provided for discovery and access of these resources through both the catalog and the library Web site.<sup>38</sup>

¶34 Of course, the obvious advantage of providing access in more than one place (the catalog and the home page) is that it increases the chances that the resources will be found and used.

¶35 **Consider your staffing situation when making access decisions.** The strains that cataloging online resources can place on the technical services staff have already been discussed in detail. In addition, when considering the addition of "free" online resources to library catalogs, librarians must remember the lesson learned by accepting donations of "free" hard-copy items for the collection—there is never any such thing as a "free" resource in a library. The library may not pay to own or access an item, but the time, effort, and expertise of the technical services staff who must catalog, process, and maintain these "free" items are certainly valuable resources that must be allocated wisely.

¶36 **Try creative solutions.** Examples of creative access solutions are discussed later in this article.<sup>39</sup>

¶37 **Finally, don't be overwhelmed.** Try to view providing access to online resources as a challenge and not an overwhelming obstacle.

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36. See Marlene Bubrick, *Making the Most of Your Online Catalog*, in *CREATING CONNECTIONS: EDUCATIONAL PROGRAM HANDOUT MATERIALS*, AMERICAN ASSOCIATION OF LAW LIBRARIES 95TH ANNUAL MEETING AND CONFERENCE, SUNDAY JULY 21 & MONDAY JULY 22, 2002, at 117, 117–19 (2002).

37. Posting of Jessie Tam, Cataloging Librarian, Barco Law Library, University of Pittsburgh, tam@law.pitt.edu, Hein Online Survey, to ts-sis@aallnet.org (June 14, 2002) (copy on file with author) (summarizing results of survey posted to AALL Technical Services Special Interest Section discussion list in March 2002).

38. Karen Calhoun, *Redesign of Library Workflows: Experimental Models for Electronic Resource Description*, in *PROCEEDINGS OF THE BICENTENNIAL CONFERENCE ON BIBLIOGRAPHIC CONTROL FOR THE NEW MILLENNIUM: CONFRONTING THE CHALLENGES OF NETWORKED RESOURCES AND THE WEB* 357, 362 (Ann M. Sandberg-Fox ed., 2001).

39. See *infra* ¶¶ 61–76.

### Access via the Home Page

¶38 Information access—and the *expectations* of library users about information access—have changed dramatically since the Internet and the World Wide Web blossomed in the mid-1990s. The writing is on the wall: information seekers expect to find everything they need by conducting unsophisticated searches on one Web site. Google is the standard against which every other information resource is measured, and most library Web sites suffer by comparison.

¶39 The catalogs and indexes that librarians have built and maintained through the decades are still tied to the limitations imposed by print. For years reference librarians have provided “bibliographic instruction” to teach users to think like librarians, to understand the differences between library catalogs and periodical indexes, to value controlled vocabularies and authority control, and to organize the research process around types of information resources. Librarians call it BI; users think it’s BS. They just want the information they want; distinctions among treatises, popular works, scholarly articles, government publications, encyclopedia entries, dissertations, research reports, and the like are far less important to users than to librarians.

¶40 “Resistance is futile.”<sup>40</sup> Librarians must understand user expectations and assumptions and then design their institutions’ Web sites and other information tools—including library catalogs—accordingly.

#### *Pros of the Home Page*

##### *Location, Location, Location*

¶41 The home page is the single most visited page on any library’s Web site. It is the point of entry for most users and their launching pad into the library’s services and resources. This valuable “unreal estate” should be used to efficiently and effectively connect visitors to the library’s most frequently requested and used materials. Prominent and descriptive links to full-text journal collections will ensure a high rate of return on the library’s investment in these resources.

¶42 A well-designed home page is built around the needs, interests, and searching habits of the library’s users, using navigational terms that they understand. The surest route to the underutilization of expensive electronic resources is to bury information about them in the online catalog, on pages deep within the Web site, or under meaningless headings or library jargon. “[U]sers want simplified access to the known information they are seeking, and they want logical organization of the information they might not know exists.”<sup>41</sup>

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40. Phrase uttered by members of the Borg Collective, an alien species appearing in several episodes of *Star Trek*. See *Borg Culture*, The Official Star Trek Web Site, at <http://www.startrek.com/library/borg/default.asp> (last visited Jan. 14, 2003).

41. Andrew Pace, *Optimizing Library Web Services: A Usability Approach*, LIBR. TECH. REP., Mar.-Apr. 2002, at 1, 1.

¶43 An emerging “best practice” is the use of goal-directed headings, such as “Find a book” or “Find an article.”<sup>42</sup> These phrases focus on tasks that users want to accomplish when visiting the library home page. Another practical method is to cluster sources by subject on the home page and in topical research guides or pathfinders. Subject terms are specific and immediately understandable. Many issue-oriented online services encompass a variety of information categories, combining statutes, cases, commentary, indexes, news, and other discrete materials under one umbrella.

*React, Revise, Remodel*

¶44 Rapid change is an intrinsic trait of Web sites (and a notorious characteristic of the Internet as well). A library home page can be quickly modified to reflect changes in policies, services, and resources. Refining a navigation bar, expanding a description, and inserting additional links take home page editors mere moments (although planning for change may take time<sup>43</sup>). Improving the home page may occur by evolution (incremental changes) or revolution (full-scale reorganization).

¶45 The impetus for change may come from several sources, including user surveys, usability tests, anecdotal reports, and planned reviews. Home page changes should always be made in the interests of users.<sup>44</sup>

¶46 Regardless of the scope of change, altering a Web site is more straightforward and manageable than changing international cataloging rules and practices. Which vessel can reverse course more quickly: a two-person inflatable dinghy or an aircraft carrier involved in a multinational peace-keeping operation? The number of parties involved multiplied by the elaborateness of the decision-making and implementation processes determines the ease and speed with which desired change can be accomplished. Another key factor is local control. Although the library or parent institution may impose standards on the home page, no outside entities need be consulted.

¶47 Certainly, library managers should not commit to massive Web site restructuring in haste. Even modest revisions merit careful consideration. Who will be affected? Will the change be easy for users to understand? For library staff to implement? Will the change streamline access to materials, removing unnecessary steps or hurdles between the user and the information? Does the change solve a problem, eliminate an obstacle, or otherwise clear the path that leads the user to the information he or she seeks? Is the change consistent with the library’s mission? With the Web site’s purpose?

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42. See *infra* ¶¶ 74–75 for examples of the use of goal-directed headings.

43. See generally Bonnie Shucha, *The Circle of Life: Managing a Law Library Web Site Redesign Project*, 95 LAW LIBR. J. 47, 2003 LAW LIBR. J. 2.

44. *Id.* at 50, ¶¶ 14–15. “Failing to adequately consider your users will likely result in a librarian-centric design rather than one that is based on user needs and perceptions. Remember that the more attuned to the user your site becomes, the more successful it will be.” *Id.*, ¶ 15.

*Multiple Choices, Multiple Chances*

¶48 In crafting a library home page to anticipate the ways users look for information, creative librarians take advantage of the genre's versatility and flexibility by providing multiple opportunities for users to find links to valuable content. For example, LegalTrac is both an index to law reviews and legal periodicals and a full-text source for selected articles. A home page with separate headings for periodical indexes and full-text collections should include LegalTrac under both headings because of its dual purpose. Online services that cover various subjects or categories of information may also be cross-listed. LexisNexis Academic might be included under topical lists for business, health and medicine, and tax information and under source lists for articles, cases, directories, news, regulations, and statutes.

¶49 Users benefit from the multiple listing approach because it increases their chances of discovering relevant resources. Home pages with database-driven lists of resources<sup>45</sup> have an especially easy time constructing lists. Information about the subject coverage and categories of material offered by online services is added once to a database and then populated throughout the Web site. When the resource expands coverage or the library cancels its subscription, the database modification automatically distributes the updated information.

*Personalize, Customize*

¶50 The ultimate service for catering to users' needs and interests is the customizable library home page. Following the personalization trend of MyYahoo (<http://my.yahoo.com>), MyWeather (<http://my.weather.com/myweather/preferences>), MyFindLaw (<http://my.findlaw.com>), and others,<sup>46</sup> many libraries offer users the ability to create a customized page.<sup>47</sup> By allowing users to select elements of the library home page specific to their interests, a MyLibrary feature helps to reduce information overload, provides a context for the information, saves time for the user, and improves the quality of the user's experience. With these goals in mind, several academic libraries already offer personalization, including Cornell University (<http://mylibrary.cornell.edu>), the University of Michigan (<http://www.lib.umich.edu>), and the University of Washington (<https://www.lib.washington.edu/resource/help/MyGateway.html>).<sup>48</sup>

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45. See generally Gary Roberts, *Designing a Database-Driven Web Site, or, The Evolution of the InfoGuana*, *COMPUTERS IN LIBR.*, Oct. 2000, at 26.

46. See generally Chris Payne, *Everything You Need to Know About Personalization*, Web Developer's Virtual Library, at <http://wdvl.internet.com/Authoring/ASP/Personalization/> (Nov. 22, 2000); Richard Dean, *What Is Personalization?*, Builder.com, at <http://builder.cnet.com/webbuilding/pages/Business/Personal/ss01.html> (June 2, 2000).

47. See generally *Special Issue: User-Customizable Library Portals*, 19 *INFO. TECH. & LIBR.* 166 (2000) (containing seven articles on the topic); Eric Lease Morgan, *Personalized Library Interfaces*, *EXPLOIT INTERACTIVE* (No. 6, June 2002), at <http://www.exploit-lib.org/issue6/libraries/>; *MyLibrary Interface*, University of Leicester Library, at <http://www.le.ac.uk/li/distance/eliteproject/elib/mylibrary.html> (last visited Jan. 14, 2003).

48. For lists of libraries providing MyLibrary features, see *Other MyLibrary Projects*, Virginia Commonwealth University Libraries, at <http://www.library.vcu.edu/mylibrary/cil99.html> (last visited

***Cons of the Home Page****Library Jargon*

¶51 Most library home pages are developed by librarians, committees of librarians and library staff, or both, all of who are steeped in the peculiar language of the profession. “[L]ibrary interfaces are designed for librarians rather than users”<sup>49</sup> Users are bewildered by the jargon, acronyms, procedures, and distinctions of the library world. “A consistent problem cited across studies [of library Web sites] is excessive use of library terminology. Although not a new issue in the field, the use of highly technical language and jargon in library Web sites frequently poses difficulties for users. . . .”<sup>50</sup>

¶52 A short list of terms that confuse, mystify, and frustrate users includes databases, electronic journals, Internet resources, licensed (or subscription) databases, online databases, and reference resources.<sup>51</sup> Acronyms are even more obtuse (i.e., EBSCO/host, JSTOR, OPAC, ProQuest, etc.), but library Web sites are littered with them. Users do not care about the aggregator’s name or whether the library subscribes to or licenses a collection of electronic journals. They do care about getting to relevant information as quickly as possible.

¶53 Until library home pages are free of jargon, vague headings, and meaningless terms, they will not fulfill their potential as a means to effectively connect the user to needed information.

*Boxes and Blinders*

¶54 Rampant use of library jargon is only part of the problem evident at many library home pages: they are too library-like. Why must a library Web site mirror the physical model? No rule requires it, but the library mindset is hard-wired in its practitioners. We know too much about how information is published, distributed, indexed, and organized and, after all, we are the experts. Even when presented with evidence that users find the home page difficult to navigate, “librarians cite an extreme reluctance to change an interface with which they have become familiar.”<sup>52</sup>

¶55 But have you ever tried to solve a software problem by reading the manual? When you can’t even find an index term relating to your problem, you know that the manual has been written by programmers who knew too much about the program. Their level of knowledge so far surpasses that of the novice that the

Jan. 14, 2003); *Examples, Education*, Infomotions, at <http://www.infomotions.com/portals/examples-education.shtml> (last visited Jan. 14, 2003).

49. Maryellen Allen, *A Case Study of the Usability Testing of the University of South Florida’s Virtual Library Interface Design*, 26 ONLINE INFO. REV. 40, 40 (2002).

50. Susan Augustine & Courtney Greene, *Discovering How Students Search a Library Web Site: A Usability Case Study*, 63 C. & RES. LIBR. 354, 355 (2002).

51. See, e.g., John Kupersmith, *Library Terms Evaluated in Usability Tests and Other Studies*, at <http://www.jkup.net/terms-studies.html> (updated Dec. 13, 2002).

52. Allen, *supra* note 49, at 52.

programmers can no longer imagine the rudimentary questions and difficulties a beginner might encounter.

¶56 “Think outside the bun!” is not just a catchy Taco Bell slogan, but the rallying cry for librarians<sup>53</sup> dedicated to designing home pages that students, faculty, and other researchers understand. User-centered, task-oriented home pages increase users’ success in connecting to relevant resources.<sup>54</sup> As Leo Klein explains:

The point . . . is to increase the transparency of our resources. We can do this by speaking the same language as our users and by making the access and arrangement of our materials as simple and intuitive as possible. The things we have to offer—most notably articles and books—should be advertised as articles and books. . . . Emphasize things over concepts and simple concepts over complicated, convoluted, or institutionally centered ones.<sup>55</sup>

¶57 User surveys and usability tests are valuable techniques for revealing how regular library customers experience the home page. Jakob Nielsen,<sup>56</sup> Jared Spool,<sup>57</sup> and others<sup>58</sup> have written generally on Web site usability testing. Librarians are also beginning to conduct usability tests.<sup>59</sup> The following steps in the process are typical:

- Decide what to test
- Develop a list of questions or tasks
- Pretest the test
- Solicit volunteers from representative user groups
- Conduct the test and observe the volunteers
- Record the test results
- Ask open-ended questions at the end of the test

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53. “Bunhead” is slang for a stereotypic librarian. “A meeting of what the world once lumped together as bunheads in sensible shoes is called to order. . . .” Sherry Stripling, *Making Sense of the Info Nation Beyond “Sshh”*: Superstar Librarian Mike Eisenberg Is Teaching the UW’s Doctors of Data Overload How to Recognize What’s Valuable, SEATTLE TIMES, Apr. 9, 2000, at L1, available at 2000 WL 5529946.

54. See, e.g., Barbara J. Cockrell & Elaine Anderson Jayne, *How Do I Find an Article? Insights from a Web Usability Study*, 28 J. ACAD. LIBRARIANSHIP 122, 130 (2002).

55. Leo Richard Klein, *The Web Is Not Your Library*, LIBR. J. NETCONNECT, Winter 2001, at 36, 37.

56. JAKOB NIELSEN & MARIE TAHIR, *Homepage Usability: 50 Web Sites Deconstructed* (2001); JAKOB NIELSEN, *Designing Web Usability: The Practice of Simplicity* (2000); useit.com: Jakob Nielsen’s Web site, at <http://www.useit.com> (last visited Jan. 2, 2003).

57. JARED M. SPOOL, *Web Site Usability: A Designer’s Guide* (1999).

58. E.g., *Design by People for People: Essays on Usability* (Russell J. Branaghan ed., 2001); STEVE KRUG & ROGER BLACK, *Don’t Make Me Think: A Common Sense Approach to Web Usability* (2000); TOM BRINCK ET AL., *Usability for the Web: Designing Web Sites That Work* (2002); MARK PEARROW, *Web Site Usability Handbook* (2000).

59. See, e.g., ELAINA NORLIN & C.M. WINTERS, *Usability Testing for Library Web Sites: A Hands-On Guide* (2002); Susan McMullen, *Usability Testing in a Library Web Site Redesign Project*, 29 REFERENCE SERVICES REV. 7 (2001); Brenda Battleson et al., *Usability Testing of an Academic Library Web Site: A Case Study*, 27 J. ACAD. LIBRARIANSHIP 188 (2001); Ruth Dickstein & Vicki Mills, *Usability Testing at the University of Arizona Library: How to Let Users in on the Design*, 19 INFO. TECH. & LIBR. 144 (2000).

- Analyze the test results
- Redesign the test and repeat the process, especially to obtain reactions to home page changes

¶58 Results of home page usability tests are remarkably successful at uncovering the difficulties and uncertainties users face. The lessons learned and insights gained are well worth the time and effort. With blinders removed and released from captivity in their “library box,” home page managers can retool their online presence to put the user first.

### ***Recommendations for Using the Home Page to Provide Access***

¶59 Library home pages that fail to speak the language of their users not only frustrate them, they risk alienating users completely. An unfathomable home page is the online equivalent of a surly “I don’t know and I don’t care” response from an unfriendly reference librarian. But a well-designed, jargon-free, user-centered home page embodies the core value of librarianship: the desire to help people find the information they need. To achieve a truly effective Web site:

- Focus on the needs, wants, and information-seeking practices of your users.
- Use headings and navigational terms that are meaningful and descriptive to users.
- Devote prominent home page territory to the most frequently used resources or research tasks.
- Give users multiple opportunities for locating the information and tools they need to conduct their research.
- Conduct user surveys or usability tests to identify and correct home page weaknesses.

¶60 Remember that great librarians (and their Web sites) are never still or satisfied; anticipating and responding to the changing demands of their users is their first priority.

### **Examples of Best Practices**

¶61 Some libraries have adopted creative solutions to providing access to online resources. These methods vary in the amount of technological savvy required, so one does not necessarily need to be a technological whiz—or even have one on the library staff—to provide access to online resources.

#### ***Los Alamos National Laboratory Research Library***

¶62 The librarians at the Research Library at the Los Alamos National Laboratory created a procedure to automatically generate a set of electronic journal Web pages from information contained in their catalog’s MARC bibliographic records. These

Web pages include an alphabetic title listing and subject listings (see figure 1).<sup>60</sup> The goal is to provide multiple access points to electronic journals while using a minimal amount of staff time. The librarians use a specially formatted 956 tag in their MARC records and some special programs, including cgi scripts, to harvest and convert the data into Web pages.<sup>61</sup>

¶63 The Los Alamos librarians also plan to develop a “lower tech” alternative to access online resources. Their plan is to implement limits by format in their catalog so that patrons can limit searches to just electronic resources.<sup>62</sup>

#### *University of Tennessee Libraries, Knoxville*

¶64 As mentioned earlier,<sup>63</sup> the librarians of the University of Tennessee at Knoxville announced to the world at the June 2002 NASIG meeting that “the report of the death of the catalog is greatly exaggerated.” They also reported that their electronic journal usage doubled after brief bibliographic records for these items were added to the library’s catalog. These brief bibliographic records were created by using cgi scripts to “harvest” title, coverage, and other related data from lists provided by the University of Tennessee Libraries’ aggregator databases. This data is then used to populate the catalog with brief bibliographic records until full cataloging can be accomplished.<sup>64</sup>

¶65 Figure 2 displays one of these automatically generated brief bibliographic records from the University of Tennessee Libraries, Knoxville catalog.<sup>65</sup> In this brief bibliographic record for the journal *Modern Healthcare*, note the basic information that is provided automatically: journal title; URL; usage restrictions; database coverage (as opposed to publication dates found in bibliographic records for hard-copy journals); and, interestingly, the lag time between publication of an issue in print format and online access. While this brief record lacks information one would expect to find in a full bibliographic record, such as subject headings, classification, or prior or related title history, it does provide some basic access points, and these are generated automatically.

¶66 This project offers an interesting contrast to the Los Alamos project. While the latter harvests data from MARC records to create Web lists, the University of Tennessee Libraries, Knoxville project harvests data from database lists to create MARC records.

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60. Los Alamos Nat’l Lab. Research Library, *Electronic Journals*, at <http://lib-www.lanl.gov/ejournals/ejournals.htm> (last visited Feb. 1, 2003).

61. For details of these procedures, see Frances L. Knudson et al., *Creating Electronic Journal Web Pages from OPAC Records*, ISSUES IN SCI. & TECH. LIBRARIANSHIP (No. 15, Summer 1997), at <http://www.library.ucsb.edu/istl/97-summer/article2.html>.

62. E-mail from Kathy Varjabedian, Information Specialist, Web Team, Los Alamos National Laboratory Research Library, to Karen Selden, Catalog Librarian, University of Colorado Law Library (June 25, 2002) (on file with author).

63. See *supra* ¶ 13.

64. Manoff et al., *supra* note 23.

65. Univ. of Tenn. Libraries, at <http://www.lib.utk.edu/> (last visited Feb. 1, 2003).

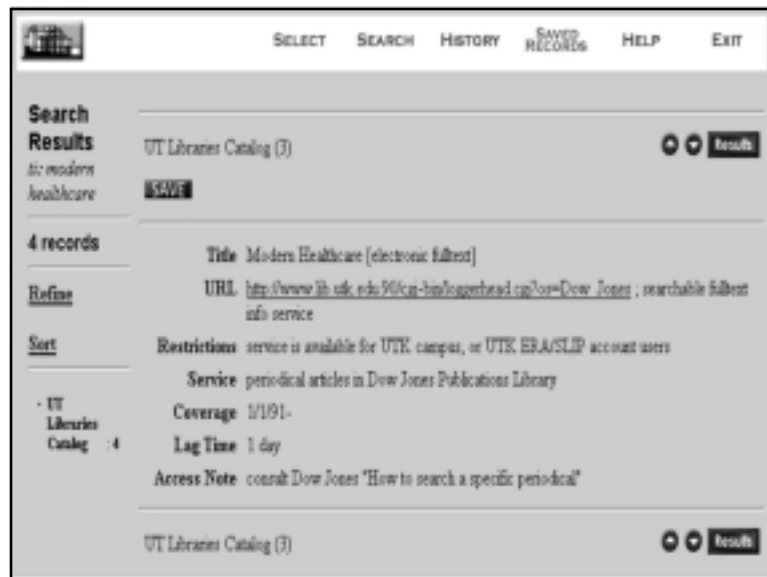
Figure 1.

Example of Automatically Generated List of Journals by Subject



Figure 2.

Example of Automatically Generated Brief Bibliographic Record



*jake2marc*

¶67 The librarians at Simon Fraser University's W.A.C. Bennett Library also generate brief MARC bibliographic records for electronic journals from a local electronic journals database.<sup>66</sup> However, their project led to the development of *jake2marc*, a free "utility that creates simple USMARC records for the full-text journals in any of the databases listed in the *jake* (Jointly Administered Knowledge Environment) project. . . . *jake2marc* uses the MARC.pm Perl module to generate MARC records from *jake* title lists."<sup>67</sup> The *jake2marc* Web site includes a great deal of useful information about the service and how to use it. In addition, *jake2marc* users are welcome to submit questions and comments to the *jake* users' list.<sup>68</sup>

*University of California, San Diego Libraries*

¶68 The University of California, San Diego, Libraries offer patrons dynamic subject lists of online resources. By clicking on special links on the home page for the UCSD Libraries Electronic Journals, Newsletters, etc. Subject Collections<sup>69</sup> (see figure 3), patrons are taken directly to a list of journals in a particular subject area in ROGER, the UCSD Libraries' online catalog.

¶69 To create these dynamic subject lists,<sup>70</sup> librarians at the UCSD Libraries use specialized local subject headings in the MARC 690 field of specified electronic journals. A subject search for special local subject headings is coded into the appropriate html hotlinks on the UCSD Libraries Electronic Journals, Newsletters, etc. Subject Collections home page. Whenever someone clicks on one of these hotlinks, a search for the appropriate local subject heading is automatically initiated in the OPAC, and the results of that search are displayed to the patron.

¶70 For example, if a patron wanted to find electronic journals about physics, he or she could click on the "Physics (via ROGER)" link found in figure 3. This would take the patron directly to a hit list of appropriate items in ROGER. A close look at figure 4 shows that a search for the subject heading "electronic journals physics" was executed to retrieve these bibliographic records. "Electronic journals physics" is obviously one of the local subject headings catalogers at the UCSD Libraries assign to enable the creation of dynamic subject lists.

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66. Posting of Mark Jordan, Acting Coordinator of Library Systems, W.A.C. Bennett Library, Simon Fraser University, Burnaby, British Columbia, Canada, Re: Minimal Records for Electronic Journals, to eril-l@listserv.binghamton.edu [Electronic Resources in Libraries] (Aug. 9, 2002) (copy on file with author).

67. Simon Fraser Univ. Library, *jake2marc intro*, at <http://jake.lib.sfu.ca/jake2marc/> (last visited Nov. 18, 2002) (citation omitted).

68. The list address is [jake-list@lists.sourceforge.net](mailto:jake-list@lists.sourceforge.net). For subscription information, see *jake*—jointly administered knowledge environment, *jake mailing lists*, at <http://www.jake-db.org/docs/lists.php> (last visited Feb. 1, 2003).

69. Univ. of Cal. San Diego Libraries, *Electronic Journals Newsletters etc.*, at <http://gort.ucsd.edu/ejournal/index.html> (last updated Oct. 20, 1999).

70. For additional details on creating dynamic subject lists, see DONNELYN CURTIS ET AL., DEVELOPING AND MANAGING ELECTRONIC JOURNAL COLLECTIONS 153–57 (2000).

Figure 3.

Example of Dynamic Subject Lists of Online Resources

UCSD Libraries

Electronic Journals Newsletters etc.

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**Subject Collections**  
 Note: some of these links take you a list of journals in that subject in ROGER, our online library catalog. Others take you to a list prepared by one of our librarians.

- [Biomedical & Health](#)
- [Chemistry \(via ROGER\)](#)
- [Computer Science \(via ROGER\)](#)
- [Engineering \(via ROGER\)](#)
- [Film & Video](#)
- [Latin America](#)
- [Mathematics \(via ROGER\)](#)
- [Music](#)
- [Physics \(via ROGER\)](#)
- [Scopus Institution of Oceanography](#)
- [Social Science and Humanities - for additional projects, see:](#)

**General Browsing**

[Electronic journals listed by subject](#) at UCSD in the ROGER online library catalog. There are over 5000 e-journals listed in over 50 different subjects, from Aerospace Engineering to Theatre and Dance.

**Electronic journals beyond UCSD**

[What's New](#) (file size: 3 K)  
 Lists of new e-journals, including [NewJour](#)

[WWW Directories and collections](#) (file size: 23 K)  
 Directories, links, collections.

Figure 4.

Example of Search by Local Subject Heading

ROGER

Entire collection excluding slides

ABOUT ROGER HELP FOR LIBRARIANS HOME

[\(Repeat search in The Circuit\)](#)

(Search History)

SUBJECT  All collections except Slides

Num	Mark	SUBJECTS (1-12 of 412)	Year
<b>Electronic Journals Physics</b>			
1	<input type="checkbox"/>	<a href="#">Abstracts Of The Papers Communicated To The Royal Society Of London</a>	1854
2	<input type="checkbox"/>	<a href="#">Abstracts Of The Papers Printed In The Philosophical Transactions Of The Royal Society Of London</a>	1843
3	<input type="checkbox"/>	<a href="#">Anonstus Research Letters Online ARLO / [Electronic Resource]</a>	2000
4	<input type="checkbox"/>	<a href="#">Anonstus Research Letters Online ARLO / [Electronic Resource]</a>	2000
5	<input type="checkbox"/>	<a href="#">Advanced Materials (Deerfield Beach, Fla)</a>	1989

**Figure 5.**

*Example of Electronic Resources Organized by LC Subject Heading*



¶71 The advantages of dynamic subject lists are several. For one, the results are truly dynamic and current. A new subject search is run each time someone clicks on the hotlink. In addition, once an item is cataloged, it is immediately available for retrieval by one of these subject searches. Another significant advantage with dynamic subject lists is that there is no need to maintain URLs and PURLs on both the home page *and* in the catalog. URLs and PURLs only need to be maintained in the catalog.

¶72 But dynamic subject lists are not without some problems. One disadvantage is that local subject headings for these resources must be selected. And these local subject headings must be used *correctly and consistently*.

#### *University of Saskatchewan Library*

¶73 The University of Saskatchewan Library provides an example of an interesting “lower tech” access solution. It is a very nice variation on the “access by subject list” theme. Instead of using a general subject list, the librarians at the University of Saskatchewan organized their subject list to electronic resources by Library of Congress subject headings<sup>71</sup> (see figure 5). This subject arrangement is a nice way to educate patrons about Library of Congress subject headings. Such exposure could encourage patrons to use these subject headings to access other materials in the catalog.

71. Univ. of Saskatchewan Library, *Electronic Journals by LC Subject Heading*, at <http://library.usask.ca/ejournals/subjects.phtml> (last visited Feb. 1, 2003).

### ***University of Minnesota Libraries***

¶74 The University of Minnesota Libraries' home page features links to "Books and More" and "Articles and More" as the first and second links.<sup>72</sup> When the cursor hovers over these links, descriptive sidebars using plain language appear to further explain the purpose of the links: "Find books, journal titles, videos, maps, music, and more in MNCAT and other library catalogs" and "Use indexes, databases, electronic journals, and news sources to help you find articles and other documents." Pages at the next level briefly detail approaches to finding information. The Web site focuses on research tasks in language that makes sense to users.

### ***University of St. Thomas Law Library***

¶75 The first two selections offered by the University of St. Thomas Law Library's home page are "Search the Library Catalog (to Find Books and Journal Titles)" and "Find an Article in a Legal Periodical."<sup>73</sup> Following the "Find an Article" link takes the user to a page describing Hein-On-Line, LegalTrac, and the Index to Legal Periodicals and Books.

### ***Ohio State University Libraries***

¶76 The Ohio State University Libraries' home page offers three options for finding articles: "Find Articles by Subject Research Tools," "Find Journal and Journals (Online)," and "How Do I . . . Find an Article."<sup>74</sup> Is this duplication redundant, repetitive, and unnecessary, or have the Web site developers determined that each option strikes a responsive chord with distinct user groups? The multiple avenues for locating articles and the subject clusters provide ample opportunities for even first-time researchers to be successful.

## **Summary and Conclusions**

¶77 Some librarians may understandably expect their library automation system to solve the dilemma of the best way to make Internet resources available for their patrons. Most automation vendors are working on multiprotocol gateways that will allow users to search multiple resources through one interface.<sup>75</sup> One vendor advertises itself as "the complete solution for accessing all the resources of your library and your campus."<sup>76</sup> This means that between Z39.50, XML, SQL, SFX,

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72. Univ. of Minn. Libraries, *Lumina Digital Library Gateway*, at <http://www.lib.umn.edu/> (last visited Feb. 1, 2003).

73. Univ. of St. Thomas Law Library, at <http://www.stthomas.edu/libraries/law/> (last visited Feb. 1, 2003).

74. Ohio State Univ. Libraries, at <http://library.ohio-state.edu/> (last visited Feb. 1, 2003).

75. For example, Innovative Interfaces Inc. offers Millennium Access Plus, Endeavor offers ENCompass, and Ex Libris offers ALEPH.

76. Endeavor ENCompass Solutions, *What is ENCompass Solutions?* at <http://encompass.endinfosys.com/whatis/whatisENC2.htm> (last visited Feb. 1, 2003).

and HTTP, patrons should be able to make one search to access local OPACS, remote OPACS, digital collections, electronic databases, electronic books, and electronic journals. According to the “2002 Automated System Marketplace” issue of *Library Journal*: “The OPAC has effectively been transformed into a portal, or content-enhanced web OPAC.”<sup>77</sup> Already one widely offered feature is the ability to display book jackets, table of contents, abstracts, and reviews. “[M]anagement of digital assets is becoming a huge worldwide market.”<sup>78</sup> Whether a librarian understands “metadata harvesting” or the “Open Archives Initiative,” their OPAC might soon provide “reference linking” and “intelligent navigation” from citations to full text, automatically. Future librarians might not need to decide on the best practice for connecting to electronic resources as their automation system might make the decision for them.

¶78 The guiding criterion for deciding what to do to make electronic resources available is whether patrons can find the information they require. Hopefully, the productivity and satisfaction of patrons can be improved by making library catalogs serve as portals to the world. The top priority for librarians may become making portals as easy to use as possible. Librarians are the intermediaries between patrons and the glut of information that is available to them. It is their task to present the middle ground where patrons won’t be overburdened with too much information, nor harmed by not having enough information or not being exposed to the diversity of information on a given issue. Further, librarians should always ask themselves: “How quickly can patrons get to this middle ground; how many key strokes does it take for them to get what they need?”

¶79 Here are ten summary points to consider:

1. Library patrons want simplified, efficient, and logical access to the information they need—sometimes described as fast access beautifully.
2. What’s best for each library depends on the particular situation and particular patrons. Each library has a culture that must be considered in all decision making.
3. Sometimes, where and how a resource is presented will be determined by the available technology or the license with the vendor.
4. There are no right or wrong answers and few clear-cut best practices at present. Indeed, at least for now, a hybrid approach may be the best solution. This is not a straightforward, either/or proposition. Peggy Jobe, reference librarian at the University of Colorado, says, “Cataloging has its advantages—patrons are led to physical and electronic forms of information. Whereas, a well-designed homepage can be a surrogate librarian—providing context and suggestions on how to use a resource, in addition to a simple description of the

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77. Marshall Breeding, *Capturing the Migrating Customer*, *LIBR. J.*, Apr. 1, 2002, at 48, 51.

78. *Id.* at 50.

resource. Both are worthwhile, given the time and other resources needed to provide both options.”<sup>79</sup>

5. Best practices are just beginning to emerge; librarians are currently responding to trends—trends that are constantly changing.
6. Redundant means of connecting users to information is a good thing. Such redundancy is already common in legal research and it improves users’ chances of getting to the information they need.
7. The catalog and the home page share a common purpose: to connect users to information. However, the differences in flexibility and functionality of these two types of access must be recognized and used appropriately.<sup>80</sup>
8. The multitude of clearly defined rules that exist for cataloging (with authority control, uniform description of elements, classification systems, etc.) stands in contrast to the relative lack of rules for home page content and design. This dichotomy actually benefits users by increasing the number of paths leading to information.
9. There is considerable competition for the minds of library users. If librarians don’t do this well, they could lose the loyalty and trust of their users.
10. Constant change requires librarians to be creative and flexible, and to take advantage of every opportunity to present information to users as seamlessly as possible.

¶80 Librarians are doing the best they can for their library patrons with what they have available. They realize they cannot wait until the research is all in before decisions are made. Librarians are part of an evolving field. Patrons need access to electronic resources, and librarians will provide that access as well as they can—and when in doubt, librarians will probably provide as many access points as possible. For us, the current situation is similar to that of fifteen to twenty years ago when card catalogs and circulation practices needed to be automated. It was accomplished by the seat of the pants, hoping for the best.

¶81 Lastly, Bob Berring recently wrote, “The challenges of technology have outpaced our ability to cope. . . . You can look at this two ways. One is that we are facing a pile of hurt. The other is that we are in the middle of one of the most exciting periods in history. . . . We are building the airplane as we fly it. We are information buccaneers.”<sup>81</sup> We agree with Bob, especially when he says, “These are the glory days, folks. It is all on the line and we are in control of our fate.”<sup>82</sup> We think we are coping pretty well, even though one of our bosses says, “The library home-

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79. E-mail from Margaret Jobe, Associate Professor, University of Colorado Norlin Library, to Georgia Briscoe, Associate Director and Head of Technical Services, University of Colorado Law Library (Feb. 13, 2002) (on file with author).

80. Hinton, *supra* note 16, at 64.

81. Bob Berring, *Making It Up As We Go*, LAW LIBR. IN THE NEW MILLENNIUM, Jan.-Feb. 2002, at 3, 3.

82. *Id.*

page and OPAC will eventually merge and then we'll all be berserk!"<sup>83</sup> We have faith that librarians will continue to participate in the evolution of the best practices for connecting their patrons to electronic resources. We don't view this as the catalog *versus* the home page; we think they can happily and beneficially coexist!

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83. Interview by Georgia Briscoe with Barbara Bintliff, Director and Professor of Law, University of Colorado Law Library, Boulder, Colo. (May 2002).