



Editorial: The Digital Librarian

In the lead article in this issue, Deanna Marcum discusses how the digital library differs from the traditional collection-oriented library. She wrestles with issues relating to the collections of traditional libraries. In this editorial, I make seven points about what librarians will do in a digital environment, and then I note briefly some barriers to the success of the digital library.

SEVEN RESPONSIBILITIES OF DIGITAL LIBRARIANS

1. Partners in Book Production

Many believe that some humanities monographs, conceived as books meant to be read by as few as six other scholars, cannot be produced in the current system. They are not cost effective. Some librarians will specialize in publisher-related skills, such as editing, layout, and mark-up languages, to produce electronic versions of these low-readership titles. Librarians will arrange for peer review and work with authors through the process of revision. Libraries will sell either access to the electronic book on a per use basis or electronic copies for other libraries to mount for unlimited use. Ross Atkinson has explored this concept in an editorial in *College & Research Libraries* and in other publications.¹

Scholarly publishers question whether librarians can perform these roles more economically than the publishers already do, and they note that the costs of physically producing a monograph are lower than the costs of preparing the first copy. In the end, the humanities scholarly community may have to choose between having electronic monographs and not having any monographs at all. My experiences as a scholarly editor indicate that the greater contribution to quality comes through the refereeing and attendant substantive revision. The expensive process of copy editing often adds little to the essence. Certainly, the aesthetics of an electronic monograph will probably not compare favorably with those of fine press books, but the content will become available to writers in the humanities.

2. Browser Development

Librarians will also be involved with the development of search engines and browsers. The World Wide Web (Web) is extensive, estimated to include 150 million pages (containing 50 or 60 billion words) by the end of 1996. Its usability and popularity have been vastly increased by several Web browsers. One of these, *Infoseek Guide*, claims to run seven million searches a day doing as many as 175 searches a second during peak time. Results from search engines are not comparable; they differ greatly in relevance of materials retrieved and in comprehensiveness of materials retrieved. A recent test of search engines rated some of the major ones, finding *Infoseek Guide* the best at understanding phrases and finding relevant information and *AltaVista* the best at finding obscure bits of information.²

This is librarian/indexer territory, but the Web search engines ignore the basics of the library catalog and the published index. They neither use a controlled vocabulary nor pull together related items under a single heading, as in an index. The result is a mixture of relevant, somewhat relevant, and irrelevant materials. Nevertheless, browsers have made the Web popular with the public, the scholarly community, and the business world.

3. Metadata Creation

Librarians response to these browsers has been the creation of the concept of metadata, which is data about data. Metadata expands on existing cataloging standards to encompass broader conceptions of document-like objects and non-document-like objects. Metadata records will be able to be mapped to cataloging records and indexes. Metadata attempts to mediate between the machine creation of indexes (the Internet browsers) and the manual creation of expensive catalog records.

4. New Instructional Agendas

Teaching information access will be increasingly important. The rise and increased importance of the Internet create a new instructional environment: student writers have to learn to use

material that has not been through scholarly publishers, i.e., has not been refereed, edited, or published. Students need to be taught how to evaluate these resources to discern the worthy from the unworthy.

Librarians will have to learn to provide assistance remotely, for the scholarly author who is working outside the library. Very probably, libraries will partner together to begin to provide more comprehensive help, both in hours of coverage and in depth of expertise. Internet telephone links may be used, "See you, See me" technologies which have video connections, and software that allow individuals to see screens of the person seeking help need to be developed and tested.

5. Archiving

Preserving and archiving will continue to be librarian/library activities. Librarians will keep materials that are seldom wanted, they will be using digital technologies to preserve materials, and they will still collect one of a kind manuscripts and collections of papers. Perhaps, nationally, they will be storing fewer copies of items seldom used. Frequently-used and nationally-important materials will be digitized for use by larger audiences. Because the machine environment changes so rapidly, care must be given to best practices for refreshing digital archives and transferring them as necessary to new platforms. Librarians must be as scrupulous in their commitment to maintaining the electronic record as they have been to maintaining the paper one.

6. Collection Decisions

As in the past, librarians will be guessing about what to pay for local use, what to contract to use as needed, and what to plan on borrowing (and thus paying for through barter). In discussions about the value of the access paradigm, we have often questioned how the great collections of the past will be built when we focus on satisfying immediate needs. Libraries will have to take responsibility for their areas of strength knowing that they may be the ones preserving and archiving those subject areas on behalf of the entire international scholarly community.

Some publishers are now selling access, not ownership, to their databases, electronic journals, and electronic files. Many questions about the archiving of materials to which the library only has a license need to be resolved. Certainly, librarians need to be aggressive in their attempts to ensure that an archive will exist for such materials. The archive issue should perhaps be a feature that librarians insist on in contracts with electronic publishers.

7. Fair Use Guardians

The 1996 version of the copyright law for the electronic environment did not confirm the principle of fair use. The library community generally lobbied for a more explicit statement of how fair use will work as more and more information

becomes available electronically. Librarian agendas must focus on maximizing scholarly access to digital collections for teaching and learning, archiving them for future generations, and minimizing incremental charging among libraries. The rights of the scholarly authors whose reading in the digital library produces new intellectual property must be guarded. While each university's community has a variety of interests to be protected by copyright law, librarians should provide leadership in discussion of these interests and in convincing the university to retain its rights to its intellectual property. The National Digital Library Federation recommends such strategies as: encouraging faculty to grant only partial copyright, requiring scholars to retain their copyright, asking scholars and universities to share copyright, and encouraging scholars to assign to publishers only five years of rights with the rights to revert to the scholar/university/consortium.

BARRIERS TO THE SUCCESS OF THE DIGITAL LIBRARY

Much will have to be overcome for the digital library to be as successful as the paper library has been. This brief list summarizes some key concerns:

- Reading from the screen continues to be unacceptable to most scholars;
- Work at the remote scholar workstation will be solitary;
- Potential for plagiarism and imprecise attribution increases;
- The digital library is difficult to conceptualize and plan;
- Librarian roles will change dramatically; and
- The costs will be enormous.

CONCLUSION

The digital library will enhance the ability of scholars and students to create new intellectual works with better information and more convenient methods for accessing and incorporating it. Although the digital library will be located in a variety of places, librarians will assist in addressing the above-mentioned responsibilities. Although many critical difficulties exist in the creation of the digital library, librarians believe it will allow them to serve traditional library patrons and the authors of works in the scholarly communications system more efficiently and conveniently.—GSt.C.

REFERENCES

1. Ross Atkinson, "The Coming Contest" (Editorial), *College & Research Libraries* 54 (November 1993): 458.
2. Gus Venditto, "Search Engine Showdown," *Internet World* (May 1996), pp. 78-86.