

---

---

# The Virtual Library: A Selective Bibliography for Exploration

by Elaine J. Christian and Marilyn Hastings

*What are we talking about here? What is a virtual library? No single consensual definition exists; rather, various definitions abound, all of which include the concepts of remote electronic access to your library's resources and electronic access to resources that are not physically available in your library. See the **Visions** section below for more elaborate definitions which venture far beyond questions of access. Clearly, the concept of a virtual library gives us much to think and dream about.*

*Librarians are pushed and pulled to think about virtual libraries. They are pushed by problems: overwhelming quantities of information, inadequate funding, increasing expectations. They are pulled by opportunities: computing power grows more affordable; networks become more accessible, easier to use, and offer constantly expanding information. Meanwhile, questions that libraries had previously resolved appear once again as a result of technological changes: intellectual property rights need to be protected in order to promote the production of new information resources; competition arises from other information sources (as networks proceed to dissolve distance); cataloging rules need to be stretched to include online information that may change without clear notice. See the **Issues** sections below for consideration of these questions as well as a consideration of **Special Issues by Library Type** (school, public, academic, and special).*

*Powerful organizations are now interested in the potential of information via networks. Librarians need to become politically active if libraries are not to be trampled in this "dance of the elephants" as more powerful groups join the struggle to define information policy and grab what they want. See the **Policy and Politics** section for consideration of these questions.*

*Finally, to monitor issues and trends regarding the virtual library, see the **For More Information** section. We hope that exploring the virtual library intrigues and excites you as it does us.*

---

## Visions

Browning, John. "What Is the Role of Libraries in the Information Economy?" *Wired* 1 (1) (1993). Also available electronically (via e-mail): Send the following text (in the body of the message): **get 1.1/features/libraries**, via e-mail to: **info-rama@wired.com** (Internet address).

Browning provocatively considers the implications of technological change for information use and compares how several great national libraries are responding.

Hawkins, Brian L. "Planning for the National Electronic Library." *Educom Review* 29 (May/June 1994): 19-29.

To meet the economic problems facing libraries, as well as the challenges of the information explosion, Hawkins proposes a model for the creation of a shared electronic library.

King, Hannah. "Walls Around the Electronic Library." *The Electronic Library* 11 (June 1993): 165-74.

Should the vision of the electronic library drive library budgets and strategic planning? King takes a critical look at popular conceptions of the electronic library in light of social and economic realities limiting user access to information. She suggests the need for new roles for librarians, presents models to guide the management of information resources and services, and proposes an action agenda.

Lynch, Clifford A. "Visions of Electronic Libraries." In *The Bowker Annual: Library and Book Trade Almanac*, compiled and edited by Filomena Simora, 75-82. New Providence, NJ: R. R. Bowker, 1991.

Lynch presents more exciting visions of electronic libraries, including the collaborative concept where access to information, research tools, and colleagues is combined in a single information environment.

Malinconico, S. Michael. "Information's Brave New World." *Library Journal* 117 (May 1, 1992): 36-40.

According to Malinconico, new electronic technologies will either displace librarians or magnify their importance. Librarians are familiar with the tools that users need to make sense of the vast array of resources available. It is up to librarians to make users aware of their skills in information management.

Penniman, W. David. "The Library of Tomorrow: A Universal Window Serving Independent Problem Solvers." *Library Hi Tech* 10 (4) (1992): 23-26.

Penniman argues that the library of the future requires a revised mission: to help citizens become independent problem solvers who can use information from the library to address their challenges. He considers barriers to this vision and what the Council on Library Resources is doing to promote progress toward it.

Saunders, Laverna M. "The Virtual Library Revisited." *Computers in Libraries* 12 (November 1992): 51-54.

Saunders discusses implications of the virtual library for users.

## Issues

---

Brugger, Judith M. "Cataloging the Internet." *MC Journal: The Journal of Academic Media Librarianship* 1 (1993). Available electronically (via e-mail): Send the following text (in the body of the message): `get brugger mcj01006`, via e-mail to: `listserv@ubvm.cc.buffalo.edu` (Internet address).

Brugger outlines problems inherent in cataloging the variety of information sources found on the Internet.

Graham, Peter S. "Intellectual Preservation in the Electronic Environment." In *After the Electronic Revolution, Will You Be the First to Go?*, edited by Arnold Hirshon, 18-38. Proceedings of the 1992 Association for Library Collections & Technical Services President's Program. Chicago: American Library Association, 1993.

How can information be preserved when technology allows interaction with it? This question and others are addressed here and some strategies are outlined.

Hoffert, Barbara. "Books into Bytes." *Library Journal* 117 (September 1, 1992): 130-35. Hoffert explains the move by publishers into electronic publishing and how this development will affect libraries.

Kurzweil, Raymond. "The Future of Libraries, Part 3: The Virtual Library." *Library Journal* 117 (March 15, 1992): 63-64.

In the earlier parts of this series, Kurzweil recognizes the common life-cycle pattern of several technologies and predicts the obsolescence of books. Here he considers what this obsolescence means for libraries.

Lowry, Anita. "Landlords and Tenants: Who Owns Information, Who Pays for It, and How?" *Serials Librarian* 23 (3) (1993): 61-71.

Lowry considers current restrictions on ownership and use of information in electronic form compared to traditional library ownership of information in print form and questions the constraints these developments put on library missions.

Lynch, Clifford A. "Networked Information: A Revolution in Progress." In *Networks, Open Access and Virtual Libraries: Implications for the Research Library*, edited by Brett Sutton and Charles H. Davis, 12-39. Urbana-Champaign, IL: Graduate School of Library and Information Science, 1992.

Lynch argues that the information revolution is a true revolution, in the sense that power will shift. He considers developments that are the source of this revolution and the implications for different library types. Although pessimistic about the future of libraries, Lynch is optimistic for the next avatar of librarians: information specialists.

McClure, Charles R., Mary McKenna, William E. Moen, and Joe Ryan. "Toward a Virtual Library: Internet and the National Research and Education Network." In *The Bowker Annual: Library and Book Trade Almanac*, edited by Catherine Barr, 25-45. New Providence, NJ: R. R. Bowker, 1993.

McClure, McKenna, Moen, and Ryan present a good introduction to the impact that the Internet is having on different types of libraries: academic, special, public, school.

Veron, Ilyse J. "Nation's Library Maps Route to the Electronic Age." *Congressional Quarterly Weekly Report* 51 (March 15, 1993): 1201-4.

Veron considers the electronic dreams and wonders of the Library of Congress (LC) and the problems LC is having with opposition from interest groups as well as with securing funding for innovations.

von Wahlde, Barbara, and Nancy Schiller. "Creating the Virtual Library: Strategic Issues." In *The Virtual Library: Visions and Realities*, edited by Laverna M. Saunders, 15-46. Westport, CT: Meckler, 1993.

The creation of an electronic library is seen as an evolutionary process requiring changes in our thinking about the nature of information, intellectual property, copyright, publishing, libraries, and librarians. Many issues that library administrators must deal with are considered. Although all examples are from academic libraries, von Wahlde and Schiller contend that other types of libraries will have similar concerns.

## Special Issues by Library Type

### School

---

Butterworth, Margaret. "The Concept of the Virtual School Library." *Australian Library Journal* 41 (November 1992): 247-56.

Butterworth explores the possibilities of the virtual library concept in a school setting and describes Campus 2000 in Britain and NEXUS in Australia, two school-oriented online information services. She discusses examples of classroom activities using commercial online databases and e-mail. She also comments on the role of the librarian in the virtual school library.

Kilian, Crawford. "2005: A Virtual Classroom Odyssey." *Educom Review* 29 (May/June 1994): 17-18.

Kilian forecasts the impact of technology on education. Students in the electronic classroom of the near future will still require guidance, advice, and encouragement in the use of instructional resources.

Mancall, Jacqueline C. "The Changing Library Landscape: Impact on Student Instruction and Use." In *School Library Media Annual*, edited by Carol Collier Kuhlthau, 66-75. Englewood, CO: Libraries Unlimited, Inc., 1993.

Mancall considers how media specialists can help students become information literate.

## Public

---

LaRue, James. "The Library Tomorrow: A Virtual Certainty." *Computers in Libraries* 13 (February 1993): 14-16.

LaRue makes the case that books and public libraries will remain vital parts of the community in spite of the enormous steps toward the virtual library. He manages to overcome his declared "technolust" to acknowledge this reality.

McClure, Charles R., Joe Ryan, and William E. Moen. "The Role of Public Libraries in the Use of Internet/NREN Information Services." *Library and Information Science Research* 15 (Winter 1993): 7-34.

McClure and his colleagues present findings from a national study of key issues affecting public library use of the Internet. They encourage libraries to be active participants in electronic communities so that their users have access to the information riches of the networks. North Carolina's experience in launching the North Carolina Information Network (NCIN) is cited.

The complete report is: McClure, Charles R., et al. *Public Libraries and the Internet/NREN: New Challenges, New Opportunities*. Syracuse, NY: Syracuse University, School of Information Studies, 1992.

## Academic

---

Peters, Paul Evan. "Is the Library a 'Place' in the Age of Networks?" *Educom Review* 29 (January/February 1994): 62-63.

Peters considers the opportunities and threats presented to higher education by networking.

Rooks, Dana. "The Virtual Library: Pitfalls, Promises, and Potential." *The Public-Access Computer Systems Review* 4 (5) (1993): 22-29. Also available electronically (via e-mail): Send the following text (in the body of the message): **get rooks prv4n5**, via e-mail to: **listserv@uhupvm1.hu.edu** (Internet address).

Rooks envisions the virtual library as another tool to assist users, discusses some of the problems involved in full implementation, and presents a brief overview of selected virtual library projects.

## Special

---

Bauwens, Michel. "What Is Cyberspace?" *Computers in Libraries* 14 (April 1994): 42-48.

Bauwens categorizes cyberspace into levels, from the conceptual space one occupies when using basic computer connections, to the promise of multisensorial virtual environments that will engage all of our senses. Progress toward the virtual special library and speculations on future developments, including possible roles for "cybrarians," are discussed.

Piggott, Sylvia E. A. "The Virtual Library: Almost There . . ." *Special Libraries* 84 (Fall 1993): 206-12.

Piggott describes prototypes of virtual library service at the Bank of Montreal and the effects on staff and users. This article appears in a special issue devoted to the virtual library.

## Policy and Politics

---

Billings, Harold. "Supping with the Devil: New Library Alliances in the Information Age." *Wilson Library Bulletin* 68 (October 1993): 33-37.

Billings proposes that libraries supplement existing relationships with new alliances with information organizations in the academic community and the private sector to help meet the challenges of rising costs and new technologies. He cites examples of some of these partnerships and describes their current projects.

Mitchell, Maurice, and Laverna Saunders. "The National Information Infra-Structure: Implications for Libraries." *Computers in Libraries* 13 (November/December 1993): 53-56.

Mitchell and Saunders give background on the National Information Infra-Structure (NII). Librarians are urged to take an active political role in defining national information policy.

## For More Information

---

Drabenstott, Karen M. *Analytical Review of the Library of the Future*. Washington, DC: Council on Library Resources, 1994. Also available electronically (via FTP): Connect via FTP to: **sils.umich.edu** (Internet address), log in as an anonymous user, and retrieve the appropriate file(s) from the directory: **/pub/papers/CLR**

Drabenstott's analytical review of the literature of the last decade on the digital library includes an extensive annotated bibliography (almost 400 entries).

King, Lisabeth A., and Diana Kovacs, comps. *Directory of Electronic Journals, Newsletters and Academic Discussion Lists*. 4th ed. Washington, DC: Association of Research Libraries, Office of Scientific and Academic Publishing, 1994.

This directory contains entries for nearly 1,800 discussion lists and over 400 electronic journals and newsletters with instructions for electronic access to each publication.

Rheingold, Howard. *The Virtual Community: Homesteading on the Electronic Frontier*. Reading, MA: Addison-Wesley, 1993.

Rheingold presents interesting illustrations of communities that flourish in electronic space and examines the implications of the information revolution for the larger society—much more than libraries are involved.

Rinne, Teri Andrews, ed. *Current Cites*. Available electronically via e-mail, as a subscription to an e-journal: To begin a subscription to this e-journal, send the following text (in the body of the message): **sub cites <your name>**, via e-mail to: **listserv@library.berkeley.edu** (Internet address).

*Current Cites* is a monthly, classified, online, and annotated bibliography of current articles about electronic information technology and libraries which includes both print and online articles.

Saunders, Laverna M. "Exploring Library Resources on the Internet." *Internet World 4* (November/December 1993): 44-49.

Saunders explains how to locate library-related information using the Internet.

Scott, Ralph Lee. "Wired to the World." *North Carolina Libraries*.

Since its inception in 1993, Scott's regular column in *North Carolina Libraries* informs and instructs on different Internet topics.

Tuss, Joan. "Roadmaps to the Internet: Finding the Best Guidebook for Your Needs." *Online 18* (January 1994): 14-16, 18-22, 25-26.

Tuss's review compares and recommends Internet books available as of January 1994. [See the next entry for guides available online.]

\_\_\_\_\_. "Easy Online Access to Helpful Internet Guides." *Online 17* (September 1993): 60, 62, 64.

Tuss presents a comparative review of guides to the Internet available online, with explicit instructions on how to get them via FTP. [See previous entry for guides available in print.]

