# The Information Highway: Will Librarians Be Left by the Side of the Road?

David R. Bender

*Special Libraries Association*

The age of Aquarius is over. Welcome to the age of the Internet. In a matter of only a few years, we have become a "wired" world:

- *The click of keyboards combines with the clink of silverware in several San Francisco coffeehouses that have coin-operated computer terminals built into their tables. Using the Internet, customers can communicate with colleagues across the street or across the ocean.*
- *At local bookstores, the number and diversity of publications about the Internet is constantly increasing. One can select from dozens of provocative titles, such as* The Internet Guide for Dummies *or* Zen and the Art of Internet.
- *An ever-increasing number of newsletters are now being disseminated electronically. An article in the* Washington Post *last summer noted that if someone were tired of watching reruns, he or she could turn to the Internet, where there was always something new (Williams, 1994).*
- *The Internet was the number one concern of executives polled in the first quarter of 1994 by Find/SVP, a research and information-gathering firm. The Internet topped a diverse list of topics that included everything from coffee to construction forecasts and from medicine to Mexican trade (Anonymous, 1994).*

As the Internet has transcended its defense industry roots and information industry boundaries, it has become an international pop phenomenon. It is now regularly used not only for communication and the exchange of information, but also for marketing, investing, shopping, and dating.

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People are hooking up to the Internet in droves. In fact, according to one article, if the pace continues, everyone on earth will be connected by 2001 (Tetzeli, 1994). Organizations are rushing to claim electronic mailbox addresses at such a rapid rate that InterNic, the registry that dispenses them, has been having difficulty keeping up. Even Congress and the White House have jumped on the Internet bandwagon. President Clinton, Vice President Gore, and many members of Congress have acquired Internet addresses already, and more have requested access.

The use of the Internet has become so widespread that *USA Today* published an article on Internet etiquette—complete with a list of "do's" and "don't's" (Landis, 1994). In fact, the Internet is becoming such an integral part of society that one Washington, D.C. columnist wrote that *Time* magazine should have named the Internet as its "Person of the Year" (Schrage, 1993).

Today, the Internet is more than a technology. It is more than a community. It is a culture.

## Information Access

Similarly, the information highway is becoming both a reality and a part of the mainstream:

- *The Library of Congress has announced plans for a massive effort to convert a substantial portion of its collection to digital form. Such a formidable project will take years and cost millions of dollars. It will require private as well as public funding. In addition, the Library of Congress hopes to have a leading role in the coordination of the efforts of other digital libraries. Its dream is to create a National Digital Library network that would be the most extensive resource on the information superhighway.*
- *Information Age Park is being created in Paducah, Kentucky. This 600-acre office park will have fiber optic transport systems, in-park digital switching, access to a supercomputer, and other state-of-the-art telecommunications and computer facilities. It claims to be the first such park outside of a major metropolitan area, and it reflects the rapid expansion of a new information infrastructure.*
- *The editor of a new* Washington Post *magazine on entertainment and computers already has become so tired of information highway puns that he sponsored a contest for readers to suggest an alternate word or phrase (the winner was "the cyfiway").*

The development of the information highway and the growth of the Internet have the potential to bring an infinite quantity of information within the reach of special librarians. To achieve this, the Special Libraries Association (SLA) supports the establishment of a new national information infrastructure that can provide universal access to all segments of society. In fact, the association joined with more than 60 very diverse public interest groups to found the Telecommunications Policy Roundtable.

In a study prepared for the Clinton/Gore Administration, the SLA stated that the U.S. needs an information strategy "to address issues relating to the development of an information infrastructure, including guaranteed access to government information for all citizens through libraries, distribution programs, community learning centers, and the information highway." Therefore, SLA is pleased that the Administration reports that it has a goal of hooking up every public library, school, and hospital to the information highway by the year 2000. However, the association is concerned that too much attention is being focused on the technology to the detriment of the facilities from which the technology is to be accessed.

How can someone get information in a public library if the library is closed because of budget cuts? Or how can a student use a school computer if the school is closed because the school system failed to comply with fire safety regulations? In all of the excitement about paving the information highway, one must not forget about the necessity of having a solid foundation.

Even more troubling is the tendency of some in Washington, D.C. to focus on public libraries and entirely overlook special libraries when mapping out the future of the information highway. Certainly, members of the special libraries profession will be primary providers and users of information on the network.

## Information Issues

SLA has also reminded the Administration and Congress that attention must be given to the quality and integrity of the information that is being carried by the new networks as well as to the telecommunications systems themselves. One cannot focus solely on the process and take the integrity of the information on the system for granted.

Information flowing over the networks can potentially be altered. A book with torn out pages can be easily spotted, but how will someone know when electronic information is cut and pasted with a few keystrokes?

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Privacy is another issue that is becoming increasingly complex in a networked world. Some members of Congress have called for safeguards to prevent computer-literate private investigators from illegally accessing private information.

Similarly, copyright and intellectual property laws take on a new dimension in cyberspace. When information appears on a computer screen, it is often difficult to know what belongs to whom and whether it is or is not copyrighted.

Bruce Lehman, Assistant Secretary of Commerce and Commissioner of Patents and Trademarks, reported at the 1994 SLA State-of-the-Art Institute that the Administration's Working Group on Intellectual Property Rights has held public hearings and is seeking additional input prior to issuing a final report.

Another critical copyright question is: Who is responsible if there is infringement? Already, there are a couple of lawsuits in which operators of electronic bulletin boards are being held responsible for copyright violations on them.

Also, online services like Compuserve and America Online are concerned that they will be held liable for the misdeeds of their subscribers. If that could happen, is the day far away when information professionals are forced to become copyright cops who must look over the shoulders of computer users?

## Information Transformation

Clearly, the information highway and the Internet are profoundly impacting the information profession. Just as the fairy godmother in "Cinderella" turned a pumpkin into a coach, the development of the Internet and the information superhighway will transform libraries from a finite collection of books, periodicals, and documents stored on shelves and in drawers to an infinite collection of information stored in bytes.

Computers have grown in efficiency more than 1,000,000-fold during the past 30 years, and fiber optics has enhanced the efficiency of telecommunications as much as a 1,000,000-fold. Today, information can be transmitted at a rate of 6.6 gigabits per second. That is the equivalent of 60,000 books per minute.

The challenge is whether the members of the information profession will fully take advantage of this new technology and increase the ability of users to access and effectively utilize information for their professional or personal benefit.

Some librarians, however, when confronted with this technological revolution, have succumbed to "future shock"—the condition described by author Alvin Toffler as the disorientation caused by change or the prospect of change. These alarmists believe that the proliferation of computers and computer networks will result in librarians becoming little more than antique dealers of outdated knowledge and curators of dusty books in an electronic age. Who needs a librarian, they ask, when end users in a company—or even in some library branches—can dial up Dialog or look up Lexis?

I strongly believe, however, that the careers of librarians are not in jeopardy. In response to the naysayers, I have a few questions of my own.

- *How many people have the training and time to become knowledgeable about the countless databases that exist today, so that they will know which ones are the most relevant, timely, accurate, and complete?*
- *How many people have the training and time to learn a dozen different database protocols so that they will be able to conduct thorough but cost-effective searches?*
- *And most importantly, how many people have the expertise to evaluate, analyze, organize, and package raw data—transforming it into meaningful information that can be put to work?*

The answer to all three of these questions is *not many*, and the explanation is quite simple. As management expert Peter Drucker wrote in a column for the *Wall Street Journal*, there is a big difference between being computer literate and being information literate (Drucker, 1992).

Drucker explained that for data to become useful information, it must be organized for a task or applied to a decision. He contended, however, that few people are adept at determining exactly what information they need to do their jobs, when they need the information, and where they can get it.

## Enhanced Information Professionals

That is why anyone who predicts that librarians will die off like dinosaurs is *dead* wrong. Although the evolution of computer and telecommunications technology *is* changing forever the role of the information professional, it is creating the opportunity for them to *enhance* their role—and that is what they are doing.

First, information professionals are becoming proactive. Today, they cannot wait for users to come to them. They must become involved in setting the vision, values, and goals of their organizations and in determining how their patrons are to be served. They must anticipate the information needs of their patrons and help them meet both their personal and professional objectives.

For example, at *Newsday*, the members of the corporate library staff do not stay at their desks waiting for reporters to call. They attend editorial staff meetings. They make themselves part of the reporting teams.

Anticipating needs involves more than just knowing one's organization, however. It also means knowing one's industry and its issues. For librarians to gain the confidence of management and enhance their roles and responsibilities, they must demonstrate an understanding of the external forces that are shaping their industries. For example, it is essential to know where and how to access information on the competition, government regulations, and economic conditions.

The second way that the traditional role of special librarians is changing is that they are learning to add value to information. They no longer just collect information and pass it on. Instead, they constantly evaluate the vast quantity of sources available to them. For example, the number of online databases has grown from hundreds to thousands, and an important responsibility of information managers is determining which databases are best for their particular users.

As a vital part of the collection process for a particular request, they also must evaluate the information. They must examine it for timeliness and assess its accuracy, based on their own knowledge of the field.

Then, the required next step in adding value to the material is arranging it to increase its ease of use. Sometimes it will even be important to arrange identical material in several ways for the various users' benefit.

At an American Library Association conference a few years ago, Michael Malinconico of the University of Alabama library school noted that new technology enables librarians to refine information into the most useful form to users. He explained that this transforms librarians from passive catalysts to information resource experts who create information products on demand.

As Peter Drucker stated, quality in a service is not what you put into it, it is what the client gets out of it. A special librarian's ultimate objective is to convert data into information and then convert that information into knowledge that will benefit their patrons.

When special librarians take this proactive approach to their jobs and add value to information, they are performing essential functions that computers cannot. In this way, they are enhancing their role. Information managers must refuse to sit on the sidelines, because no one is impressed with the win–loss record of a spectator.

## Information Marketing

However, another important facet of this new initiative is marketing. It is not enough for librarians to improve their skills and value to their users. They have to toot their own horns—something that information professionals have not been doing very much or very well in the past. At the White House Conference on Library and Information Services a few years ago, panelists representing various fields of librarianship concurred strongly on one point—librarians must know their constituents, understand their needs, and then let them know how their information resource centers can help meet those needs.

One other new role is also being adopted by some information managers—that of trainer. In those libraries where a large number of employees or patrons are given direct access to electronic information, one of the most valuable services that can be provided is instructing the end users to operate the technology properly.

Special librarians can help end users, whether corporate executives or college students, increase their awareness of what is available over the networks and work with them to improve their information retrieval skills. They can teach their patrons how to use the information highway off-ramps that go places other than to Hollywood or the shopping networks.

Robert F. Kennedy once said just because we cannot see clearly the end of the road, that is no reason for not setting out on a journey. Unless we move with change, we will become its victims. Similarly, information professionals must not be afraid to venture on to the Internet and the information highway. Although we cannot see clearly where this new technology will lead us, we intend to be leaders in the new information society—not to be left by the side of the road.

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## About the Author

*David R. Bender has been Executive Director of the Special Libraries Association, an international organization with more than 14,000 members, since 1979. Prior to this appointment, he held positions in numerous school, public, and special libraries. He holds a B.S degree from Kent State University, an M.S. in Library Science from Case Western Reserve University, and a Ph.D. in Curriculum and Higher Education Administration from the Ohio State University. He can be reached at SLA at 1700 18th St., N.W., Washington, DC 20009; Tel: 202-234-4700, ext. 612.*

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