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BEST, WILLIS D., international union official; b. Gas City, Ind., July 8, 1923; s. Walter and Lillian Opal; m. Belva Jane Cook, Dec. 13, 1947; children: Kathleen Diane, Steven W., Kevin Dale, Theresa Jane. Student, Miss. State Coll., 1943, Wright Jr. Coll., Chgo., 1963-64, George Meany Ctr. Labor Studies 1969, 71-72, 76-78, 80-83. Signalman Pa. R.R., 1941-63; grand lodge rep. Brotherhood R.R. Signalman, Mt. Prospect, Ill., 1963-69, dir. rsch., 1969-73, v.p., 1973-77, sec., treas., 1977-88, sec., treas. emeritus, 1988-; mem. Labor/Mgmt. Com.'s Task Force on Rail Transp., 1972-; trustee Ill. Coun. Econ. Edn.; mem. labor rsch. adv. com. Bur. Labor Stats., Dept. Labor. With USAAC, 1943-45; ETO, NATOUSA. Mem. ACLU, Am. Legion, Rotary, Masons. Democrat. Office: Mt. Prospect IL 60056-4276.

BRIGHTMAN, SARAH, singer, actress; b. London; d. Grenville and Paula (Hall) Brightman; m. Andrew Lloyd Webber (div. 1990). Student, Elmhurst Ballet Sch., Arts Edn. Sch., London. Stage appearances include (musicals) *I and Albert*, 1973, *Cats* (original cast), 1981, *Nightingale*, 1982, *Song and Dance*, 1984, *Phantom of the Opera*, 1986 (Drama Desk award), *Aspects of Love*, 1990, (requiem) *Andrew Lloyd Webber's Requiem*, 1985 (Grammy nomination), (operattas) *Pirates of Penzance*, 1983, *Merry Widow*, 1985; dancer, singer (dance group) *Hot Gossip*, 1978 (#1 record 1978). Avocations: singing, driving, swimming, writing. Office: Britannia House, 1-11 Glenthorne Rd. London W6 0LF, England*

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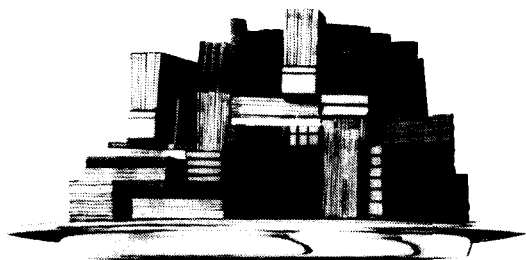
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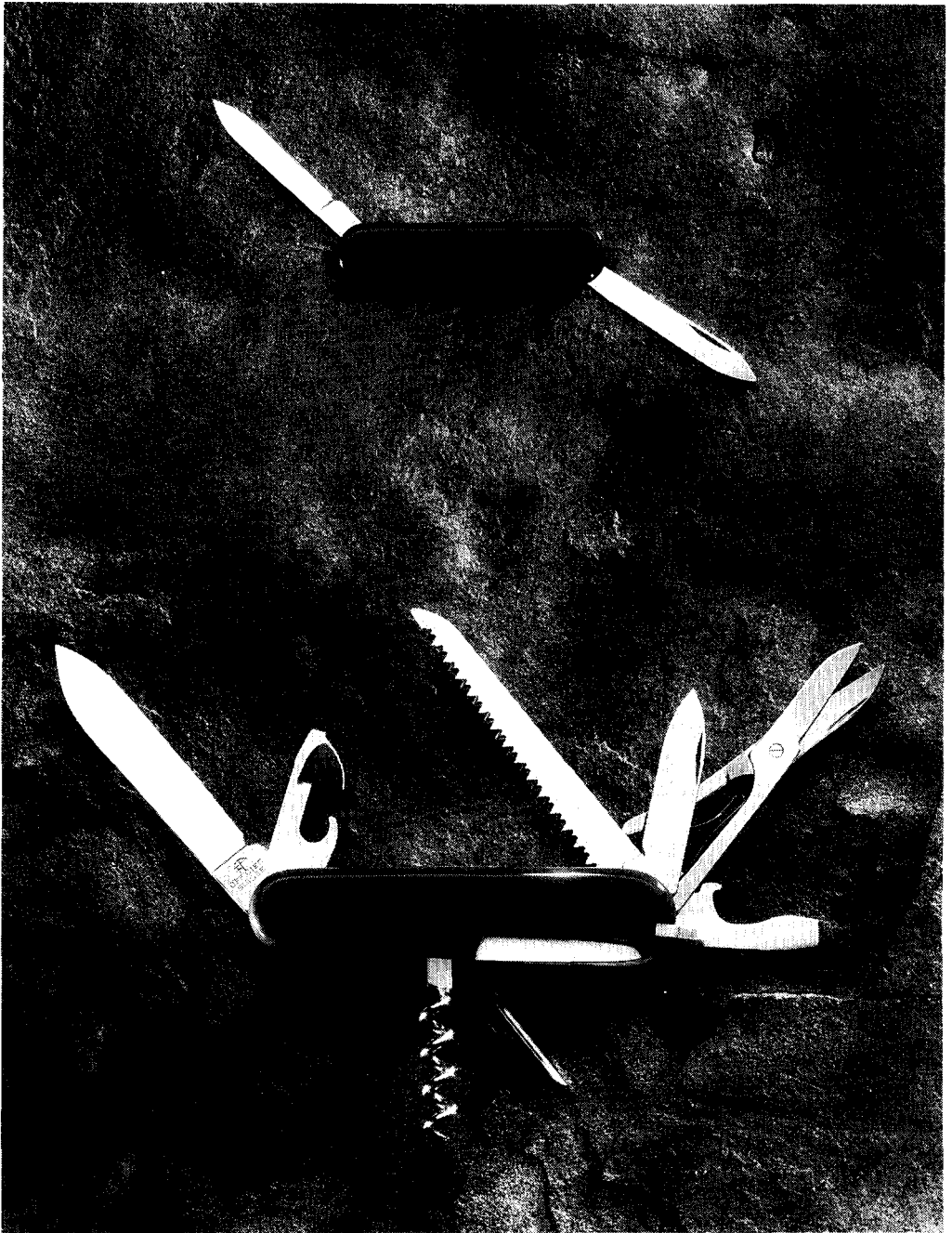
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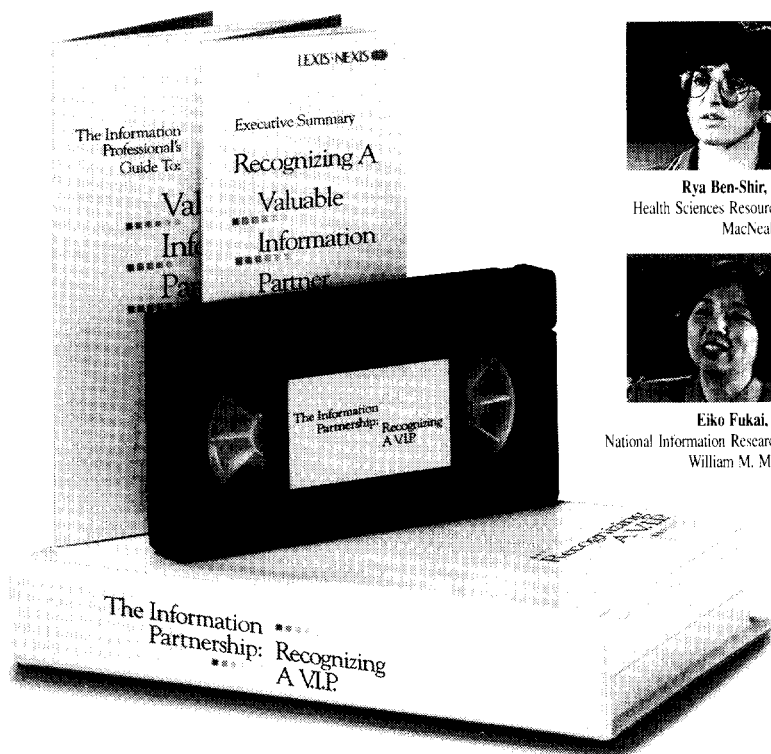
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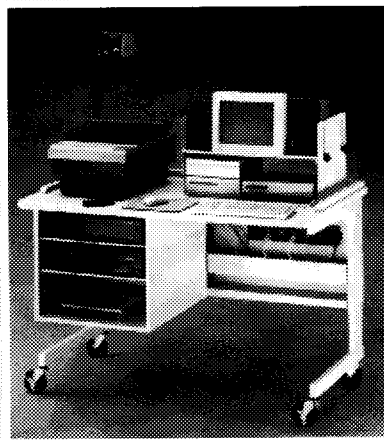
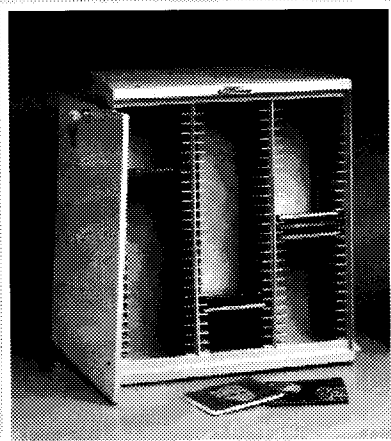
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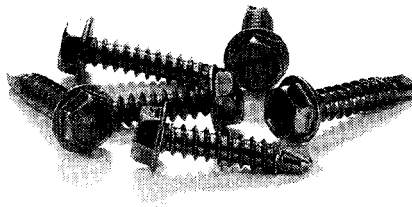
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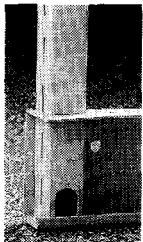
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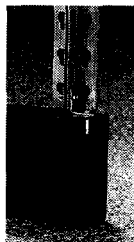
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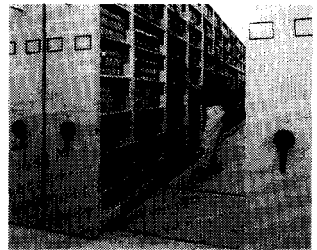
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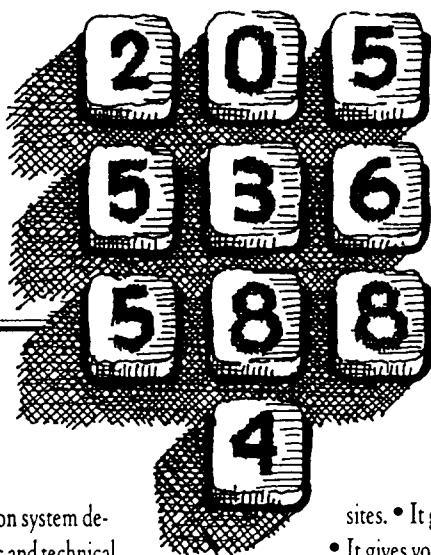
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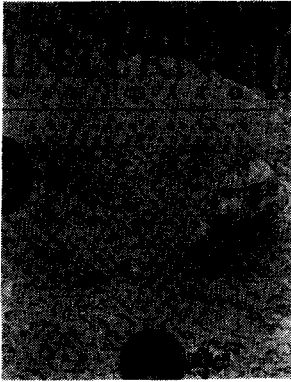


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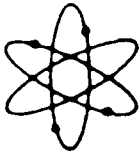
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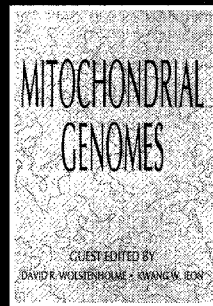
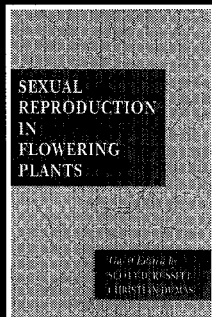
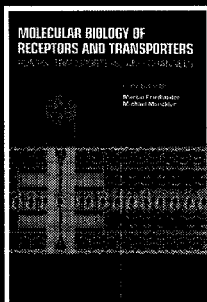
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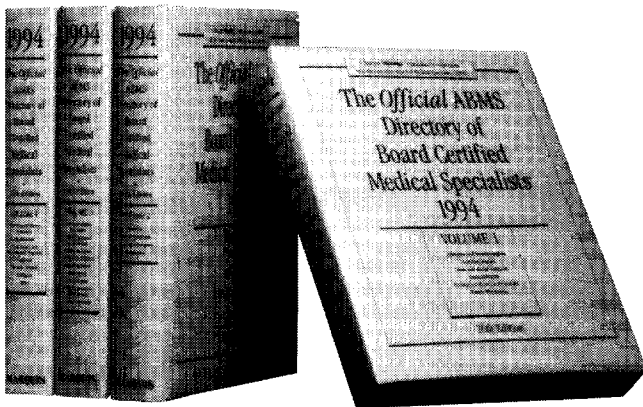
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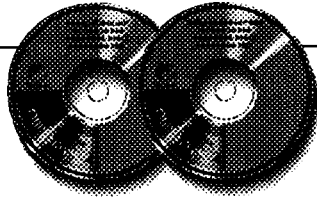
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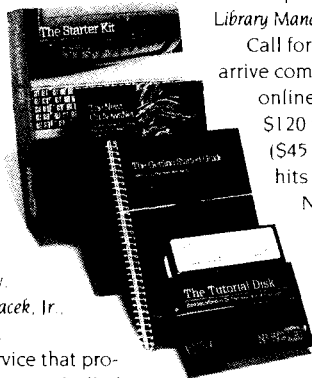
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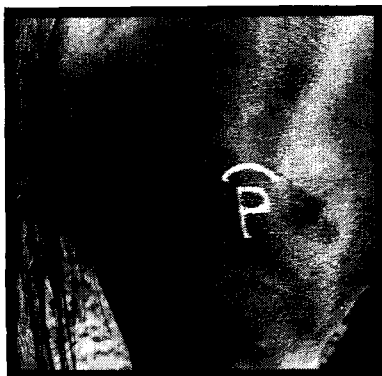


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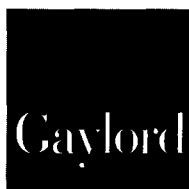
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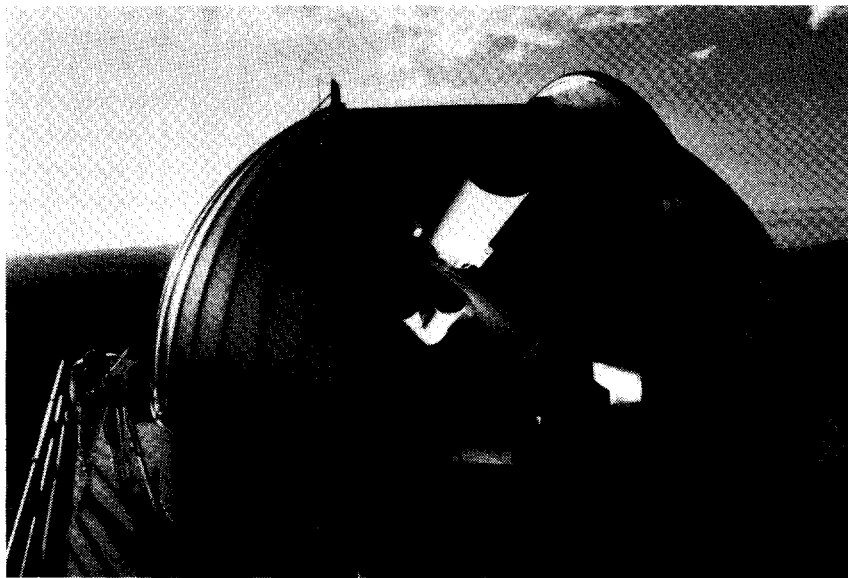
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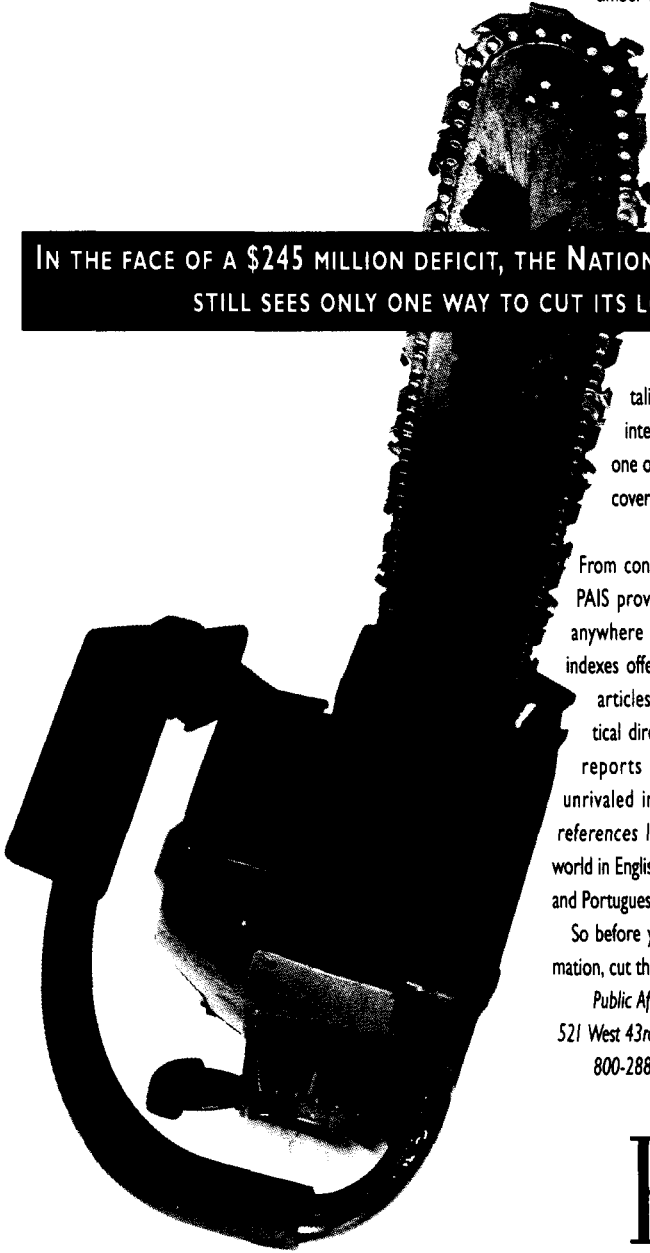
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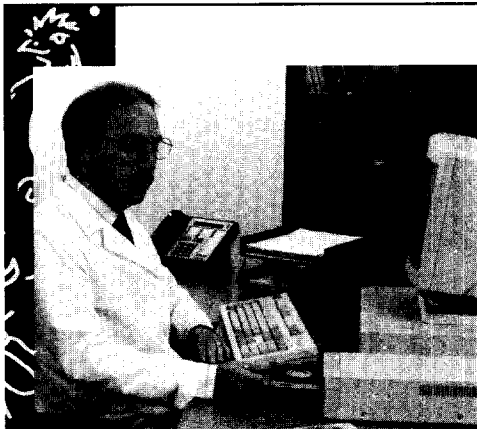
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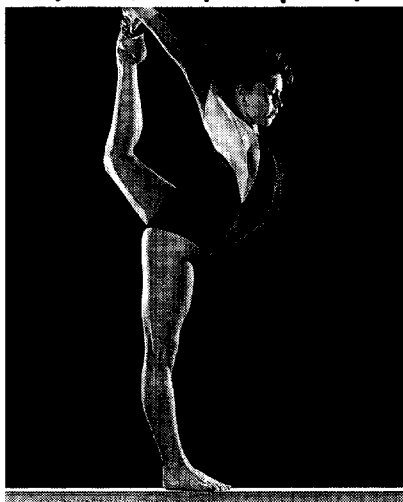
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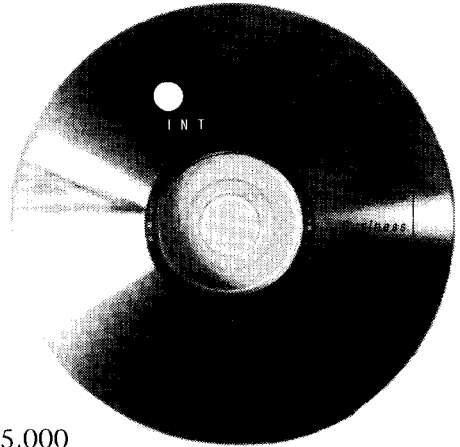
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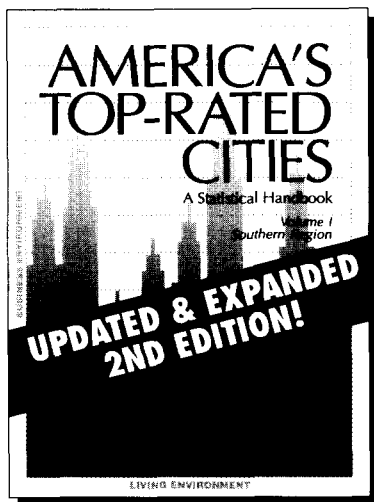
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Standing in the Future: Why a Special Issue?

by *Jane I. Dysart*

In the words of others:

“You can’t be what you must be by being what you have been.”

—**Jim Clemmer**, *Firing on All Cylinders*, Business One Irwin, 1992.

“He who is not prepared today will be less so tomorrow.”

—**Ovid**, Roman poet

“I do not believe you can do today’s job with yesterday’s methods and be in business tomorrow.”

—**Nelson Jackson**

The idea for this issue was conceived by Stephen Abram, past-Chair of the Library Management Division of Special Libraries Association. He recognized that we, as special librarians, have to change the way we do things if we are to be successful in the future. As he so aptly said in *Library Management Quarterly*, Summer 1992:

“We must move from being transactional librarians towards being transformational librarians. We have largely earned our respect through the effective and efficient delivery of information transactions (ILLs, reference questions, information cataloguing, etc.). But transactions are among the most simple things to automate...remember what happened to your local bank teller when the automated tellers came in? Those transactions have now been disintermediated by automation.”

But even if we know that we must change the way we do things, that we need to focus

more on transformations rather than transactions, HOW DO WE DO IT? One way is to “stand in the future”—to pretend we are in the future, in 2005. In the future of 2005, how do things look? What is happening around us? The authors of this special issue have created a number of visions of the future in 2005 to stimulate your thoughts about the future, and about how our libraries might look 12 years from now. No one knows for sure what the future holds for us, but we hope that this issue of *Special Libraries* will help you consider some of the opportunities and challenges we may face in 2005.

The Virtual Library

What is it? Does it exist now? Our writers address these and other issues with a general overview of the topic followed by a description of a library which may soon be considered “virtual.”

Technology in the Future

Technology is an important facet of our information world and our “virtual libraries.” Sometimes technology even drives our world. I interviewed some of our leaders to see what technology they think the year 2005 will bring and what impact that technology will have on information management. Here is a look at their visions for 2005:

Nancy Gershenfeld, User Services Librarian at Microsoft, and 1992 winner of SLA/Meckler Innovative Technology Award:

“The key issues for us today—the de-

livery mechanism/process and managing the information overload—will disappear in the future with all-in-one-place or one-stop information shopping. Clients will be able to search from their desktop, or set up automated profiles to do regular searches, using one interface to reach thousands of systems worldwide. When appropriate sources are found, by clicking on an icon, the searcher will go directly to the host server for the actual information whether it is full image, graph, text, or video. E-mail, with sophisticated word processing software embedded in it, will allow a much more streamlined downloading and delivery process to enhance the sharing of information.”

Betty Eddison, founder and Chairman, InMagic Software and Director, Special Libraries Association:

“Seamless interfaces, which connect the many sources of information available today, are the way of the future. When our clients view the screen, they will be able to access, in a consistent format, online services, in-house databases—in fact, any electronic information important to them. Products which make access to telecommunications, databases, imaging, and multimedia seamless, will be the winners in 2005. How will we get there? Library managers will work with their customers and lead them creatively “to the information they want in the form they want it.” Librarians will customize a basic service so that lawyers, engineers, or business people will easily obtain the information they need through seamless connections to sources critical to them. Naturally, some organizations will have more resources than others to achieve results. However, special librarians who utilize a strategy of starting small or piloting to the key decision-makers (the CEO and the strategic planners) will be much more successful in gaining support for full implementation.”

Marjorie Hlava, founder and President of

Access Innovations, President of the American Society for Information Science:

“Today, tons of information in many languages and character sets is available in electronic format. Wading through all this information to find the useful, valuable kernels of knowledge is a real challenge.

In the 1940s, there was a tremendous push on indexing and abstracting to allow access to the explosion of scientific and technical publishing at that time. Today, there is another explosion of information available along electronic highways. Much of it is not relevant or useful to most researchers and there is very little quality control.

Moving towards 2005, information specialists and information managers will need to focus their skills on these electronic highways—weeding, sorting, collating, organizing—to allow greater access and use of relevant, key information. Rather than recycling mainframe ideas (string searching) to PCs and networks (hypertext), in 2005 there will be a new turn in the organization of information. Perhaps it will be the next generation of machine-aided indexing of machine translation where a document now published in one language can be used by researchers in eight other languages. It will definitely be some kind of computer filter and I hope my company is at the forefront of its development!”

Some of the writers in this issue suggest that information should drive technology rather than technology drive the way we handle and manage information. Certainly technology is an important tool for harnessing the multitude of information resources available today and it will certainly impact our future. But what is really critical to our success as librarians in the future?

Managing Change and Relationships

“The 20th century will be seen as a revolution—from seeing the world as one primarily made of things to one that is fundamentally made up of relationships.”

—Peter Senge, *Globe & Mail*, May 4, 1993.

“The question that faces the strategic decision-

maker is not what his organization should do tomorrow. It is: What do we have to do to be ready for an uncertain tomorrow.”

—Peter Drucker

“In a world awash with forecasts, opinions, theories, seminars, consultants, and concepts, many companies have come to the conclusion that the only oracles worth listening to are their customers.”

—Ronald Henkoff, “How to Plan for 1995,” *Fortune*, December 31, 1990.

Relationships, particularly with our customers—our clients—are critical to our success now and in the future. In an information world in which everything is changing—the institutions and organizations for whom we work, the suppliers we need, the systems and technology we use—we must learn to effectively manage

change as well as our key relationships with decision-makers and suppliers.

Relationships with staff are also important in managing change and meeting the future successfully. Our writers present some interesting perspectives regarding the challenges and opportunities for staff, the competencies and skills required, new titles for special librarians, and new methods of learning in the future.

Our writers offer some very creative future scenarios and visions of managing change and building relationships. You may not agree with their ideas, but an open, enquiring mind (as special librarians certainly possess) will give serious thought to the possibilities and realities suggested in this issue. We encourage all our members to respond and share more ideas of the future so that we may all benefit and learn. In the words of our founding members, let’s continue “putting knowledge to work.”

Formerly Manager, Information Resources, Royal Bank of Canada, Jane I. Dysart is now a principal with Dysart & Jones Associates, a consulting firm specializing in library and information management.

The Virtual Library: Prospect and Promise Or Plus ça Change, Plus C'est la Même Chose

by D. Gail Stahl

In this issue of *Special Libraries*, we examine the concept of the library without walls or the virtual library from the vantage point of the year 2005. What were the concerns and issues in the 1990s during the evolution of the virtual library, and how did the special librarian participate in the process? The virtual library, whatever the definition, presents an exciting variety of choices and decisions impacting library services and functions.

One hundred years ago, as librarianship was evolving as a recognized profession, Corinne Bacon described these qualities as essential to the reference librarian: "...approachableness, omniscience, tact, patience, persistence, accuracy, knowledge of one's tools, knowledge of one's town, and familiarity with current events..." Bacon's concept of *town* is now better described as the "immediate environment" or project team or user base, and *tools* most certainly applies to a wider variety of equipment and communications channels. Her characterization of a librarian's essential qualities is valid today and provides insight into the success of special librarians during changes in tools and technology.

In 1970, Shera wrote, "The object of the library is to bring together human beings and recorded knowledge in as fruitful a relationship as it is humanly possible to be." Whether the

issue is india-inked cards vs. type-written, or groupware vs. custom databases, the focus of the technical debates was, and must remain, the library's users. Special librarians continue to ponder the same basic questions, although described in different terms, as did our predecessors a century ago.

Issues and Concerns

Perhaps the one true statement about special libraries is that every one is slightly different due to its users. With every library there is a different solution to the issues related to the virtual library. As special librarians in the 1990s, we share the following concerns about the impact of the virtual library on the future of our library and all libraries:

- How can we guide the development of the virtual library to avoid the creation of a synthetic library? Where is the balance between "ease of use" that pleases end-users and allows them to feel they have effectively found all the information they seek—and encouragement to utilize our expertise in locating appropriate information? Whatever your style of providing reference assistance, it is our challenge to be involved in the "touch and feel" of the

virtual library for users with multiple levels of information sophistication.

- In the time period between the 1990s and society-wide access to virtual libraries, how do we manage the transition for our users? Increased cooperation between all types of libraries could allocate maintenance of special collections beyond the research and academic setting. However wonderful, do we want to unwittingly convert all paper to all virtual documents? The 1990s is the time to make these alliances and plan for a successful transition. What importance should be placed on the ability to browse a physical collection?
- How do we revise our concept of the virtual library from science fiction and what LaRue calls “technolust” to keep our focus on the fundamental mission of our own library and our profession? Perhaps Ranganathan’s Five Laws of Library Science are still valuable as a general philosophy:
 - Books are for use;
 - Every book its reader;
 - Every reader his book;
 - Save the time of the reader;
 - A library is a growing organism.
- How do we maintain and enhance the role of the librarian in a virtual library environment? This offers the promise of the perfect opportunity to enhance the profession beyond *keeper of information to information expert*. The balance between knowledge of information sources and technical skills will be vital in order to enhance librarianship as a growing and adapting profession.
- Are special library services only defined in the context of one physical location? Any online searcher of the 1980s or 1990s would argue against that definition. Libraries survived the deep budget cuts and downsizing of the 1980s and 1990s by widening the scope of resources beyond one physical library. Even if the only technological tool available to a downsized library is corporate e-mail for delivery of online searches,

this one tool facilitates communication and saves librarians’ time by cutting out the delivery work of printing and mailing an online search.

- How do we rethink our education and habits to shift our management of libraries from *shelf* access to *wherever* access of information? The answer will differ in each special library, but it will certainly be a different answer than a decade ago. Basic to these paradigm shifts is the concept that we have the opportunity and challenge to be directly involved in this transformation of information flow and communication.
- Will control of access to information be totally shifted to end-users? With this new universe of sources it becomes more important to have an information guide through the maze of files and databases.
- There will be several phases of reorganization and restructuring of work flow and responsibilities in the transition between traditional library functions and technology-driven functions. Will technology continue to help us make faster mistakes? Or will the Total Quality Management programs of the 1990s reinforce periodic reviews, or re-engineering, of what we are doing and why we are doing it?
- The virtual library environment will place increasing demand on the flexibility of the skills, capabilities, and continuing education of library staff. It will also require communication and technological skills that are much more sophisticated than in past years, as well as constant training and development of all library staff members.
- Long-range plans for libraries will become more flexible and attempt to be technology-independent. The constant changes in technology will require constant reviews of the balance of budget items.
- The commitment to increasing the size of a book or paper-based collection will be

refined to support that specific audience. More of the budget will be used to support access than acquisition.

Are We There Yet?

Gapen's conclusion that the library is librarians, not books, is also the key to the future of special librarianship. In the early 1990s, there are libraries that maintain only a small shelf of reference materials and access all other information from other locations and in a variety of media (paper to electronic image), as needed and when appropriate. On the other hand, there exist many small collections of books that would not answer the needs of the users if these books were not in paper format. The important choice is the answer to the question: "What best matches the users' needs?"

Although few of us would deny that recent technological advances have made it possible to create a less collection-dependent special library than a few years ago, we do not share a common definition of a virtual library. In 1993, some would say that we now have *electronically assisted*, not *virtual* libraries. LaRue would expect a true virtual library to offer more than just simulated library functions, however nifty and convenient. His "true"

virtual library would offer the sensory experience also—perhaps to the extent that a patron could interact with other virtual patrons? Perhaps this sounds more like *Star Trek: The Next Generation* than Captain James T. Kirk's voice-commanded computers with flashing colored lights, but can YOU imagine a true virtual library without the mediation of special librarians?

Conclusion

An important quality of special librarians is our dedicated commitment to continuously update our skills and increase our professional knowledge to serve the mission of our specific library setting. In 1993, special librarians are faced with the challenge of shaping the impact of virtual library technology. Although written in 1904, Ida Rosenberg continues to challenge librarians today: "All reference work should have one unvarying end and aim: to furnish to each and every applicant, the readiest, easiest, and surest method of obtaining any information sought." The prospect of the virtual library promises to refresh and support Rosenberg's mission and enliven the special library profession. Have we really reached the potential of the virtual library? I hope not!

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The Virtual Library: Almost There...

by Sylvia E.A. Piggott

■ Technological as well as economic changes have made it clear that the familiar role of librarians as information intermediaries must undergo immense change if librarians are to avoid being displaced by a variety of contenders. We will not be far into the 21st century before the librarian's role in the information retrieval process disappears in the face of perfected end user access. At the Bank of Montreal, librarians are responding to this challenge by implementing prototypes of the "virtual library" and developing user self-sufficiency as information products and costs lend themselves to this concept.

The rapid developments in computer technology as well as economic changes have made it clear that the familiar role of librarians as information intermediaries must undergo immense change, if librarians are to avoid being displaced by a variety of contenders. The imminent arrival of virtual reality, that is, the receiving of images, enabling interaction with the information, will force librarians to re-educate themselves to meet this digital challenge, because technology is changing not only research methods as we know them today, but will also change the kinds of questions that are posed. In addition, with vendors placing the emphasis on perfected end user access, by the early 21st century the librarian's role in the information retrieval process can be expected to change in a very radical way, if this role does not disappear entirely.

Librarians have recognized that multimedia digitized information, when stored electronically, manipulated at will, and distributed to users in a form that allows them to control the learning experience, will enhance the productivity of users. The user is the key to the success of the virtual library because the *raison d'être* of the virtual library is to satisfy the information needs of the user. The system must be designed to help even the most naive

users so that they succeed with initial interactions and are willing to try again for subsequent needs.

To facilitate this process requires that the technological infrastructure and communication patterns we create are aligned with the thought processes and learning styles of the people they bring together. That is, the pattern of human thought must be matched to the pattern of the organization of knowledge. This may require some collaboration of computer scientists to design the hardware and software, neuroscientists to give input into the mental mapping of users, and library scientists to give input into the organization of knowledge. Without this match, technology will not bring about the dramatic increases in productivity that we expect, because the learning process will be hampered by the sheer volume of information through which the user must maneuver to find relevant, precise answers.

The Virtual Library

The virtual library concept has been written about widely in both the library literature and the computer science literature. D. Kaye Gopen (1992) defines the virtual library as "the concept of remote access to the contents and services of libraries and other information

resources, combining an on-site collection of current and heavily used materials in both print and electronic form, with an electronic network which provides access to and delivery from, external worldwide library and commercial information knowledge sources." We may see this happening first in the entertainment arena, where you will be able to dial your local video store and download your video for viewing.

There are three elements necessary for the virtual library concept to work effectively: the user, information in digital format, and the computerized network. Some information providers are successfully incorporating all three elements. However, one major inhibitor is that digitized video consumes large quantities of computer power as each minute of digital video represents a large repository of data. The good news is that storage capacity is expected, in the near future, to be in the one- to five-gigabyte range and the price is dropping. In addition, it is estimated that computing speeds and density double every 18 months. In other words, every 18 months we can buy a computer that is twice as fast and has twice as much memory for the same cost. Computer memory is about 150 million times more powerful today—for the same unit cost—than it was in 1950 (Kurzweil, 1992). There are also great strides being made in digital compression technology.

Today's library then is very much a work in progress and is largely driven by the available technology. However, although some libraries are embracing the new technology as rapidly as it becomes available, others are lagging behind and it may be years before most libraries are fully electronic. It has been predicted that by the end of the decade, all information in some disciplines will be available electronically, at which time the virtual library in its fullest form will be a reality.

Librarians will have, by then, assumed the role of knowledge managers, and will increasingly be involved in the development of instructional strategies which will facilitate the productive use of the virtual library. In other words, the librarian will assume more of a management role than an operational role.

Despite all the ongoing challenges to be met

in implementing the virtual library in its fullest form, some organizations have taken the lead in implementing prototypes in the form of desktop libraries. One such organization is the Bank of Montreal in Canada.

Bank of Montreal

The Bank of Montreal is an international corporation employing over 33,000 people worldwide, operating across a number of time zones. So libraries without walls or the virtual library which can serve up instant information to its clients regardless of location or time zone are very attractive to the Bank.

In addition, the Bank must serve its staff in the two official languages in Canada—English and French. To meet this challenge, there are two libraries in two cities, Toronto and Montreal, which carry out the function of providing information services to Bank staff worldwide.

The libraries' strategy is to aggressively seek out and exploit electronic replacements of hard copy sources which serve the Bank's goals and objectives, at any given time. The ultimate outcome of this strategy is that Bank staff will be able to work anywhere and, through their computers, easily use and share information products which make up the Bank's information collections. We believe that this is the economical way of providing for the information requirements of the Bank's staff without increasing staff or physical space.

The libraries therefore, employ leading edge technologies to identify, gather, interpret, filter, manipulate, enhance, and deliver information to meet corporate requirements. Staff are connected to this information through the corporate communication network which includes local area network (LAN) technology, as well as mainframe electronic e-mail, and facsimile machines. In addition, the libraries have access to hundreds of computerized databases covering all subjects germane to the Bank's business, including an extensive collection of CD-ROM databases.

In recent months, the libraries have acquired access to the Internet as a means of searching the major university catalogs of the world and

to partake in the relevant discussion forum on the system. So the libraries have the basic requirements for desktop delivery of information.

Desktop Libraries

Utilizing LAN technology and pcANY-WHERE/Remote communication software, the libraries provide a selection of electronic services to a significant number of the Bank staff in North America, who have the requisite electronic configuration to access these services.

Some of the library products which are delivered to the desktops of over 1,000 staff members are described below.

Execunews

This service was implemented in 1989 and consists of pull-down menus providing access to four services which were deemed useful to the executives as well as some senior managers.

The Execunews system is fully automated, in that search strategies which include pre-selected topics are programmed to run automatically at various times throughout a 24-hour period, against a number of external online systems. The first run takes place at about 4:00 a.m. each day to pick up the Newsgrid which provides international coverage of business and industry, and thereafter, as each newspaper or service becomes available online, the database is updated to include new information.

The system has been programmed to automatically remove extraneous codes and fields so that the final text is easy to read. The system is made available to users when they arrive at work each morning, and the day's information is purged at night and replaced by more up-to-date information. The Execunews service consists of:

- Newswatch—a newsclipping service that monitors topics on a daily basis;
- Dailyrates—daily market rates compiled by the Economics Department of the Bank of Montreal;
- NewsAnalysis—an analytical research service which provides analyses on various topics written by staff in the Bank's

Economics Department. Commentaries and weekly bulletins are included. The analyst responsible for the work appends his/her name to the bottom of each topic so that anyone interested in further information has a contact.

CustomNews—a customized information tracking service that monitors topics of interest to specific banking groups on demand.

Newswatch accesses the current business day's news worldwide, from online external databases. Specific sources accessed are the major Canadian newspapers, such as the *Globe and Mail*, *Financial Post*, *Vancouver Sun*, *Calgary Herald*, *Montreal Gazette*, and the *Halifax Daily News*. In addition, news wires such as Canada News Wires (CNW), UPI, Reuters, Agence France Associated Press, Koydo, and PR Newswire are also accessed. These sources are updated at various times during the day.

Within the Newswatch database, the topics are arranged as follows:

- World News
- World Business
- *Globe & Mail* Front Page
- International Financial
- Canadian Financial
- Bank of Montreal

In order to ensure that copyright is respected, a note is appended to the system which reads: "All news items are copyright protected. Redistribution of information contained in Newswatch is not permitted. Copyright permission has been granted for display purposes only." Users are instructed to call the libraries to obtain print copies.

CD-ROM

The libraries subscribe to a significant number of CD-ROM products. However, only a selection of these products are contained in the electronic desktop library. The CD-ROMs delivered to the desktops of over 1,000 staff are:

- Computer Library
- Canadian Business & Current Affairs
- Disclosure Canada

- ABI/Inform
- Grolier's Encyclopedia
- Maclean's Magazine

The end user accesses these services with minimal help from the library staff. The library staff is, of course, called to provide up-to-date information to supplement this service, as necessary.

Newsedge

The Newsedge service is a product of Desktop Data in Waltham, MA. The Newsedge installation at the Bank of Montreal allows each individual on the system to access his own custom-monitored news alongside the other business information inputs on which he/she relies.

Newsedge captures and combines live news from over 100 different newswires delivered by satellite to the Bank's premises. Specifically, this product provides the Bank's executives and other officers with:

- Incoming stories that match pre-selected topics;
- Current headlines which arrive from multiple newswires;
- Full text of news stories;
- Profile capability for setting up pre-defined search strategies;
- Search capability for any topic in the database;
- Print, save, and archive capability;
- NEWSVIEW to monitor headlines while working with other DOS applications.

Although there are multiple newswires available on the Newsedge system, the Bank has chosen to use only some of the services, namely: *Globe & Mail*, DowVision, Reuters Money News, the *Financial Post*, the Canadian French newspaper package, and the Southam Locals (regional newspapers across Canada).

The services chosen are considered the most relevant to the clientele served.

The Internet

The libraries as well as several departments access the Internet on a regular basis. The libraries retrieve and distribute relevant infor-

mation electronically to the desktops of several clients.

Research Stations

There are some Research Stations installed throughout the Bank from which end users can access the electronic library products. From these Research Stations, end users perform simple research activities such as looking at the Execunews databases or querying the CD-ROM services. Newsedge is available from these Research Stations, but only to those who have a need and are prepared to be charged-back for the services. In addition to these shared-access Research Stations, individuals can also access the desktop library products from their workstations.

The research staff also send research results to the individuals' workstations when this is feasible, instead of sending hard copies. The electronic transmission of research results has contributed to improved productivity of both the research staff and the end user. End users can manipulate the data received to produce desired reports without having to re-key the information.

Effects of the Electronic Library on Library Staff

The library, like all other areas in the Bank, is going through a paradigm shift—one where continuous improvement, teamwork, and shared resources are encouraged and valued. With the shift from paper to electronic forms, the library staff have had to evaluate their future in this highly technological environment. It became clear that traditional library skills had to be enhanced to allow for effective exploitation of the technology in keeping with the Bank's strategy for information delivery. The competencies of the staff had to be reviewed and training had to be identified and provided where necessary. In addition, the libraries had to form alliances with groups which have the necessary technical skills to allow for implementation of the technology in a cost-effective manner.

One sobering effect has been that the human touch is still required. As Kurzweil (1993)

said, "the virtual library is still an institution and clearly will require administration. As with all institutions, computers will continue to facilitate the efficiency of administration, but this human-directed function will not go away." Indeed, the experience of the librarians has been that with the roll-out of the electronic library, end users are beginning to ask for more and more in-depth research as their curiosity is peaked by what is available in the desktop library packages.

It seems, therefore, that until such time as computers are capable of matching human intelligence, and until such time as all the information required by a user is delivered at his/her desktop at an affordable price, the role of the librarian in the process of managing and imparting knowledge will remain central. In the external arena, the library staff has initiated discussions with information providers in order to work with them to develop electronic information services in a format which meets the Bank's specifications.

Another positive effect of the electronic library is that the librarians are also seen as experts in selecting, evaluating, and implementing, in a timely manner, the electronic information sources.

In addition, some of the library staff are providing technical as well as information retrieval support to the end users, thereby increasing the value of the librarian's skills to the organization. The library has also become the central technological platform for external information.

The pressure to do more with the technology has resulted in the reduction of human resources necessary to serve the staff. Despite this, the library has been able to improve services in one of its key activities—providing timely answers to a larger group of staff—while meeting the human resources challenges set by the organization.

Those who remain in this electronic world are finding that the new dimensions to their jobs are exciting and rewarding as they are utilizing leading edge technology in their daily work and are marketing state-of-the-art services to the Bank staff at all levels. The opportunity to evaluate the latest electronic informa-

tion products is an added positive dimension to the jobs as well.

Effects of the Electronic Library on End-Users

The acceptance of electronic access and delivery of information by end-users has been mixed. In the areas where technology has been commonplace for sometime, the electronic library is accepted as part of the normal activities of the unit. In areas where technology is just being introduced, there will be extensive training to help staff become comfortable with using the electronic library, so that they can become as self-sufficient as possible and find a significant amount of the information required to do their jobs.

The long range plan is to have a significant number of the libraries' clientele become user self-sufficient, thus freeing the librarians to provide consultation, evaluation, and training to staff as necessary. In addition, the library staff will be able to participate in some high profile Bank projects. The extensive roll-out of electronic services will also allow the librarians to serve a larger clientele both within North America and overseas.

Towards 2005

The Bank of Montreal is progressing towards a fully functional electronic library service. We visualize a future at the Bank where staff will consider the electronic library as the normal way to access information products.

As the technology continues to improve and miniaturize, we see a future where staff will eventually travel with their PIDs (Personal Information Devices), or PDAs (Personal Digital Assistants), work in transit, and then upon entering the office, slip the device into the base station and continue to work via voice, video, and keystrokes, accessing colleagues' electronic calendars, or being alerted to stock portfolio performance, or retrieving any other relevant information.

That is, instead of today's passive productivity tools, computers will become active collaborators—searching for information, con-

necting with other companies and individuals, making suggestions and even pointing out interesting news—all in a multimedia format.

Elaborate data networks, in combination with super-CPUs using photonic processors (machines that process pulses of light) operating at super computer speed, will drive this system. Portable machines with wireless communications will enable employees to create virtual offices wherever they go.

Personal Digital Assistants (PDAs) with built-in wireless communications and advanced handwriting recognition and intelligent software, will, in the near future, allow staff to get facts and figures wherever they go. The PDA will radio the desktop computer back at the office, which will then scan the corporate database or search external databases to find the right answer.

In other words, the PDA will allow staff to execute job responsibilities and personal affairs from anywhere at any time.

This is the future of information management and delivery and it will bring about massive improvements and challenges to the librarian's job over the next decade.

However, before this transformation to virtual reality takes place, there is much to be done. For example, we need to create electronic information systems that match individuals' patterns of thinking and learning in order to produce the kind of productivity expected. In addition, before productive user self-sufficiency can be achieved, several areas of information creation and delivery must be addressed, namely:

- consensus among electronic publishers as to search syntax and protocol;
- collaboration among providers of elec-

tronic information in providing information as a package, rather than as individual systems requiring separate negotiation for usage;

- computer programs which reason like library users do; for example, building into the computer reasoning and judgment as carried out by human beings. This requires that systems be designed with computer icons which facilitate the human mind's genetic predisposition to pick up certain visual cues, thereby simulating the mental map of the user;
- building in data literacy or familiarity with how data or text behave inside a data bank;
- handling both novices and experts in the same system; and
- negotiating favorable copyright access and use of electronic information.

These are some of the challenges facing the librarian, the user, the information provider, and the technologists who are responsible for producing the electronic equipment and software to facilitate the virtual library.

One final thought—last October's *Business Week*, in its cover story "Virtual Reality," noted that Carnegie Mellon University's Joseph Bates has created animated characters that exhibit emotions based on theories of human behavior. The next step: virtual worlds filled with creatures that humans can interact with as they would another person. These "artificial life" creatures may be the librarians' future challenge as they may one day play the role of librarian in your organization. A rather blurry vision for the moment, but the research into "artificial life" is progressing!

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[This paper was adapted from a presentation to the Financial Institutions Roundtable at the 1993 SLA Annual Conference in Cincinnati, OH.]

Sylvia E. A. Piggott is Manager of the Business Information Centre at the Bank of Montreal in Montreal, Canada and is a lecturer in Library Automation at Concordia University, Library Studies Program and a regular invited speaker in the McGill University Library & Information Studies graduate program. She is a Director of the Special Libraries Association.

Sydney Claire, SLA Professional Award Winner 2005: Transformational Librarianship in Action

by *Stephen Abram*

Sydney Claire is an information coach with The Triad Group. In this position, she carries a client load of about 10 self-managing work teams at a time. Her role is to use her highly-developed information skills to leverage decision making at Triad. The Triad Group, a global corporation operating in all three world triad partners (the Americas Bloc, the Pacific Rim and the EEC), exists as a core decision support organization (DSO, these were called holding companies many years ago) for investments undertaken by itself and its partners to build value for its shareholders.

The date is June 1, 2005—just before the SLA conference in Toronto, ON, Canada, but available for the first time to all SLA members through the newly-arrived Satellite Interactive Connection System, colloquially called the Virtual Conference. Her mind is distracted by notes she is dictating to her personal assistant (PA) in order to create a interactive multimedia presentation for her panel discussion on the use of electronic client profiling as a means of predictive service delivery. She is interrupted by a client call on her video screen, which automatically puts her personal assistant on “call monitor/record” to deal with this higher priority function.

The client call from Zachary Jared, a team facilitation specialist in Vienna, Austria, is

automatically translated into English. Sydney is able to respond to him in English through her Kurzweil translator. He needs to consult with her on how to formulate a query over the Internet to assure maximum response with the fewest false drops. Zachary also wanted advice on how to add this information effectively to his PA in order to integrate the information automatically with other information collected internally and externally by his work team and with their meeting notes. They were on a deadline and were just about to ask the PA to analyze the data and report on any holes in their work patterns and information search to date.

Sydney was able to counsel Zachary through his Internet queries, and she also used the opportunity to transfer some of her skills to Zachary. She located a little-used utility on the global network that would reprocess his search result and enable him to add it more quickly to his work team’s shared files. And finally, Zachary’s account was debited automatically for Sydney’s services.

As Sydney prepared her presentation, she thought back to her first SLA Conference and how things had changed in 20 years. She considered how large a role SLA had played in providing the leadership her chosen profession needed to develop the skills, behaviors,

and attitudes that were now required for success in the many jobs information professionals now held. Indeed, she first fully understood the term “information professional” at an early SLA Conference. In fact, the SLA President’s Task Force on the Value of the Information Professional is now regarded as a turning point in helping special librarians understand the true worth of information service.

Sydney well remembers the turbulence in the profession in the ’90s as information became the only remaining success lever for business. Some of her colleagues were unable to make the transition from effective library manager to transformational librarian, and SLA’s leadership struggled through the ’90s to understand and redefine the image of the information professional and to further research the value equation for information. All of this accelerated at the 1994 Conference with the announcement of a new vision for the future of SLA and the profession. The vision—rooted in the values first espoused by John Cotton Dana and shared throughout the history of the profession—provided the touchstone needed to focus on the key competencies required for success in the future. Sydney remembers being excited by the vision at first, then skeptical that the profession could really embrace the vision without the information parade passing it by, and then being thrilled at how her Association implemented it.

Sydney recalled the national education program for all SLA members delivered throughout the ’90s in preparation for the Millennium. SLA members were proud to see the leadership of their Association held up as a model of active paradigm shifters, ahead of many industries who struggled to embrace the ever more rapidly changing environment. The nub of the program was to add certain core competencies to the profession that it would sorely need for success in the information age—competencies that were not entirely understood or appreciated when the majority of Sydney’s colleagues received their professional education. These training opportunities were based on the premise that the future would require four key competencies:

True information literacy—Not merely technological or computer literacy, not the entry-level skill of numeracy or language literacy or just research and communication skills—but the ability to combine a deep understanding of information dynamics with advanced interpersonal and empathy skills to deliver answers that support client decisions.

Selling skills—not just marketing ability. Since information was now the commodity that drove the economies of the Triad, it was now essential that leaders in the information industry be completely at ease with pricing and closing the sales of information transactions.

Affiliative abilities—how things had changed through the ’90s with respect to what used to be clear competition among corporations. Alliances among companies were now the norm, especially after it became clear that acquisitions did little to build wealth and much to churn money without adding value. The ability to construct on-the-fly temporary, and sometimes long-term, alliances between information industry players (including vendors, intellectual property creators, copyright owners, libraries, etc.) was essential to create the multimedia, multi-dimensional packages clients now demanded.

Strategic thinking—Sydney’s corporation was not unique in that it had adopted the biological model of organization, meaning that its structure more closely resembled a model of an organic molecule with pieces allying and breaking off as needs demanded. Indeed, with few exceptions, nearly all “units” were shared with other organizations and the lines had blurred over the years so that one organization ended where another began. This meant that certain core competencies were valued more highly than others. The organization now placed much lower value on traditional managerial and supervisory skills and higher value on analytical and critical thinking skills, advanced networking and teamwork abilities, independent work styles, informa-

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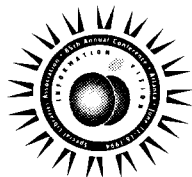
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tion handling skills, and communication skills that went beyond the “excellent oral and written communication skills” cliché of Sydney’s early career.

All of these training opportunities were colored by the belief that the ’90s and beyond would feature accelerated change on all fronts and that truly successful information professionals could take the dimension of time into account in their research and produce information packages that were so proactive that their content would be largely predictive. The information professionals who most fully developed this skill were in the highest demand. Many organizations lived by the precept that “If you cannot think about the future, you cannot have one” and understood that to be truly ahead of the competition they had to live in the future for almost all decisions—and that the only proven reducer of risk for this strategy was effective use of information.

Sydney thought back to when she got her MLS in 1989. In those halcyon days she had looked forward to working her way up to running a large banking library or perhaps in another business information center. Now she thought of her colleagues and how few of them actually worked in what could be called “traditional” special library environments. Indeed, few organizations even had those kind of libraries anymore, although they almost always had more “librarians” than they did in the past. She remembered all those unproductive debates about calling her profession “librarianship” and how many of colleagues declared that they were no longer “librarians” as soon as they were promoted out of the “library.” Her colleagues noticed that CPA’s didn’t declare themselves “no longer CPA’s” when they became bank presidents and professional engineers were still engineers when they led the big oil companies. In the dawn of the information

age, Sydney began to think that being a professional librarian wasn’t such a bad thing.

Sydney had learned in an SLA course how to really communicate effectively with the numbers people. At library school she learned the importance of statistics. Unfortunately, the drill hadn’t included what to do with all of these wonderful stats! SLA focused on the importance of measurement—measuring the right things, using these measurements to communicate to management, measuring value, measuring success, and measuring the relationship of the library functions to the organization’s mission and goals. Learning the real purpose of statistics—to measure success, and not to use them as a defensive tactic to ward off downsizing initiatives from management—had freed Sydney to re-evaluate what her library should do and not just defend what it did. Sydney was ready to tackle the future.

This reflection upon her roots gave Sydney the energy she needed to get back to her presentation. She worried, as she had for 20 years, that there were always librarians who knew more than she did about her topic. Was she really a so-called “expert”? She worried how she would look on the monitor across the world and how she would sound in simultaneous translation—they hadn’t quite perfected the emotionless voices of the translators, which made using humor chancy. Then she felt a quick rush of anxiety when she realized that in 10 years the SLA conference speakers might be projected as three dimensional holograms, too!

Her reverie ended as her PA called with another assignment. She glanced at the plaque over her kitchen table and read Triad’s motto...

Information not books
Answers not information
Decisions not answers.

Formerly Director of Information and Marketing Resources for the Hay Group in Canada, Stephen Abram is Publisher, Electronic Information for Carswell, Thomson Professional Publishing. He is the immediate Past Chair of SLA’s Library Management Division.

Buzzwords for 2005

January 1, 2005.

The editors have developed the annual list of words that are essential for the modern, “with it” transformational librarian. If you are caught using the words on the left...

IN

Transformation
Organize
Surrogate
Sell
Measurements
Standards
The Batch of “One”
Customization
Educate
Communicate
Profit Center
Anywhere
Seamless
Just-in-Time
Proactive
Think
Partner
Support
Personal Technology Assistant
Review
Research
Vendor Alliance

Quality Guarantee
Counsel
Flexible
Facilitate
Package
Deliver
Analyze
Personalize

OUT

Transaction
Catalog
Lend
Free
Statistics
Rules & Regulations
Mass Production
One-Size-Fits-All
Train
Tell
Expense Budget
Library Facility
Stand-Alone
Just-in-Case
Responsive
Calculate
Employee
Service
Technology as a Tool
Inform
Reference Questions
Inter-Library Loans &
Document Delivery
Information Liability
Advise
Library Policies
Point
Photocopy
Send
Provide
Uniform Service Levels

— by *Stephen Abram*

The Path to CIO

by Alan King

Making the climb from corporate librarian to chief information officer was anything but an easy process. Destroying stereotypes, reeducating customers and management, playing politics, and doing the job better than any two other people were all prerequisites for the position. A good healthy dose of self-confidence and an unflinching commitment to the value of information rounded off the requirements.

From the very beginning of my career, the image of librarians and librarianship offered both advantages and obstacles. Most potential competitors within the company underestimated my abilities and ambitions, giving me the element of surprise and the opportunity to navigate the political seas unchallenged. However, those in authority had difficulty comprehending that the skills I possessed as librarian could also have value outside the library. It was my responsibility to enlighten them.

I worked to develop a new definition for myself and my department that put us squarely in the business of supporting the company and not just the library. We became major players in low profile projects that we knew had the potential to become high profile projects. An executive information system that had languished in the imagination of a few individuals for many years became a reality when my department provided the practical information framework for its integration into the company. The success of this project led directly to the creation of a corporate information highway, of which we were in charge.

We asked simple questions that served to measure the positive impact of our function on the corporate bottom line and our customer's satisfaction with our services. We asked our customers about the quality and accuracy of our research and how much time that research had saved them. This amount was then multiplied by a corporate average wage figure to yield a believable and powerful statistic on the value of our function. And, in addition, we listened intently to what our customers had to say—positive and negative.

We forged alliances and partnerships with other departments that extended our grasp and more fully integrated us into the fiber of the company. We constantly surveyed the internal and external environment for opportunities and threats and made certain we had the resources to react appropriately. When legislation changed to increase competition in our industry, our department developed a successful plan for establishing a competitive intelligence function at our company. And above all else, we made our message consistent—that information, not technology, was really the strategic resource.

Slowly, attitudes changed and opportunities for advancement increased. When the company created the position of CIO, it was logical that the only two candidates should come from the library and information services departments. It was also logical that the job should go to the person who could best advocate the role of information in corporate success—the librarian.

Alan King is Director of Information Management at the Central Maine Power Company in Augusta, ME. He is also the founding Director of the Center for Energy Information, a for-profit information brokerage.

Transformational Librarians and Entrepreneurial Librarians: Are They Different?

by Larry X. Besant

Entire forests have been destroyed to publish the answers to Abraham Zoleznik's classic question, "Managers and Leaders: Are They Different?" (Zoleznik, 1977). Too bad. Wouldn't generations of MBA's have been satisfied (even empowered?) with the classic answer, "Managers are people who do things right and leaders are people who do the right thing." (Bennis and Nanus, 1985, p. 21).

For that matter, why do librarians *care* whether MBA's are satisfied or empowered or not? Why do librarians—especially special librarians—organized, networked, working smarter, putting knowledge to work, wonderful Katharine Hepburn smarter—than—the—computer special librarians keep sticking their fingers into the electric sockets of business school management fads?

What good has it done? If special librarians are catalysts to corporate and sci/tech progress, why don't we ever see anything about librarians or information managers in Drucker, or Peters and Waterman, or Tichy and Devanna, or even Lee Iacocca's books? Why not? Well, it's because we haven't gotten up a good run on either transformational or entrepreneurial librarianship yet. That's why not. But look out! They'll be teaching librarianship, or maybe cybrarianship, at the business schools before it's over.

And you better believe that your transformationals and your entrepreneurial librarians are different. Let one of your fancy megatrend-following, California-talking, high-rent management consultants try and slip up on an in-control entrepreneurial librarian and just see if the fur doesn't fly. We're talking piece-of-the-action initiative plus risk-taking autonomy here. If old Ranganathan could come back and take control as an information entrepreneur, he sure would add a new law—the right book, at the right time, for the right reader—at the right price. Up close and personal—and profitable. That's the bottom line for entrepreneurs, whatever game they're in. They're mavericks and loners, but they love the action and just keep coming back for more.

Transformational librarians would also go all out helping the blue chip management consultant get his or her latest book on the management bandwagon bestseller. But not for personal gain, nosirree. No bean-counting tit-for-tat for transformational librarians. This would be more a shared vision with some charisma stirred in. The transformational librarian readily recognizes the need for revitalizing the client's access to information. The vision of a rich, but focused information future is shaped from the top down. And that shared or collective action "empowers and elevates"

both the client and the librarian. Ultimately, the transformation institutionalizes the mutually improved information-seeking environment for the "good of the cause."

Whichever route they take, special librarians are jumping on the high road they've been aiming for since John Cotton Dana first offered specialized service from a specialized collection to a specialized clientele.

Standing in the future in the year 2005 we may see the validity of Allen Veaner's prediction:

"It is the mind's capacity to deal with uncertainty and ambiguity—precisely the strength of the human spirit—that we require to lead our libraries into the unknowns of the twenty-first century. The

beacon of human judgment outshines the brightness of any formula or vogue methodology, however attractive at the moment. As librarianship advances into that realm of high-technology light industry, Shapero's second law may become recognized as the foremost principle of effective, flexible administration: 'No matter how you design a system, humans make it work anyway.'" (Veaner, Allen B. *Academic Librarianship in a Transformational Age: Program, Politics, and Personnel*. Boston: G.K. Hall, 1990; and Shapero, Albert. *Managing Professional People; Understanding Creative Performance*. New York: Free Press, 1985).

Larry X. Besant is Director of Libraries at Morehead State University in Morehead, KY. He has worked in special libraries at Chemical Abstracts Service and Linda Hall Library and believes that academic libraries may be an endangered species without more transformational leadership.

Paradox, Paragon, or Paralysis? Three Organizations in 2005

by Eunice Hogeveen and Rebecca Jones

■ How will libraries be functioning in 2005? It depends on the paradigms and principles they choose. Paradox: Will they embark upon a totally new venture that seems slightly absurd compared to their current role? Paragon: Will they establish new paradigms themselves, becoming a model of excellence? Or will they be paralyzed, losing any role or position for themselves? The authors have drafted each of these potential situations, set in the year 2005.

Management gurus have developed brand-new visions of how companies should be organized and managed to survive the future. A predominant school of thought suggests the principles which have driven structure and management of work in the twentieth century will not be appropriate for the next century. "America's business problem is that it is entering the twenty-first century with companies designed during the nineteenth century," observed Michael Hammer and James Champy in their book *Reengineering the Corporation*. What are some of these principles which will drive corporate organization and management? And specifically, what can we envision for special libraries of the future, if we apply these principles to library and information services? While there are many new paradigms and principles being experienced and forecast for the future, our scenarios focus on three: the paradigms of venturing, process orientation and positioning.

Venturing

Zenas Block and Ian MacMillan define a venture as an activity which is new to the organization, involves a higher risk of failure, is characterized by greater uncertainty and

which is undertaken for the purpose of increasing sales, profit, productivity or quality. Let's look at an example of venturing with a university library...

Overview

In 1991 the University Graduate Research Library (GRL) began investigating ways to recover costs and entrench its services for students, alumni and the surrounding community. Budgets were declining and it was painfully obvious that without an influx of revenues and a secure client base, the GRL would have to reduce services, staff, serials and overall spending. Rather than choosing to cut services—one of the most conventional options—GRL embarked on a new venture as it expanded services. The GRL Manager felt that the 1990s were presenting new challenges, which called for new solutions, not conventional solutions.

By late 1992, GRL had aligned itself with two local corporations, supplying their information research and document delivery services for a fee. Many academic libraries had been offering fee-based online and research services to businesses, but it was unique for an academic library such as GRL to contract with companies to provide all information services, such as journal routing, SDI's or current aware-

ness tracking, and document delivery, which were traditionally offered by an internal corporate library. This change of direction for GRL headed it for where it is today: the "Information to Knowledge Advisory Centre" (InfoKAC, as many call it). InfoKAC operates as an independent unit, fully recovering all of its costs. Its clients include students, whose fees are included in their tuition, and corporate and personal accounts, which are charged at a competitive rate.

Facilities

Although no one would have believed it 14 years ago, the InfoKAC is still in the same facility today that it was in 1991. And, although the space was cluttered and cramped then, it is sufficient today. The bays of periodicals, cabinets of vertical files, cumbersome and finicky photocopiers and most of the shelves of paper-based reference materials are gone. In their place are several carrels with terminals or notepad/notebook docking stations. Clients use either the terminals or their own notepad/notebook to access the university network. The network is their pathway to both university and commercially-produced databases of electronic information and knowledge pools.

Organization & Staffing

The InfoKAC Manager has a dual reporting relationship to both the Dean of the Graduate School and the Vice-Chancellor of Information & Knowledge Management. The InfoKAC Team, comprised of an Information Resource Coordinator, Services Delivery Coordinator, Networking Coordinator and five Information Editorial Advisors reports, as a team, to the InfoKAC Manager.

Two of the Information Editorial Advisors are responsible for working with students to help them understand the paths, gateways and collections most applicable for their specific needs. The other three Advisors work with assigned corporate and personal accounts, either preparing reports and studies for them, developing customized services and products or advising and training them on the paths and information stores they need to use.

The Information Resource Coordinator manages the InfoKAC collection. "Collection" has, of course, an entirely different composition today. It includes all information sources accessible to the InfoKAC, including traditional paper products, those contracted for online, and those on the university network. Constantly tracking what's new in the area of information paths and stores, the coordinator works with the advisors to contract with source suppliers, manages these contracts and copyright, and determines the media required for various information sources (paper, online, voice, wan-based, multimedia)—both for new sources and existing sources that may need to be converted. This Coordinator also oversees the organization and automatic indexing of all sources in the system, ensuring subject integrity.

The Services Delivery Coordinator manages the delivery of all InfoKAC documents, products and customized services. Together with the Networking Coordinator, he/she ensures that the interfaces, networks and electronic delivery routes are operating efficiently and that the advisors have the technology to provide what their clients need. Since some sources are still "physical" (paper, cd's, cassettes, videos, etc.), Services Delivery also manages the automatic check-out to loan these materials or the "discmans" or "information readers" to students who don't have the technology themselves to scan in the sources they need to take home with them.

The Networking Coordinator manages all of the equipment and electronic pathways or systems used to access sources. This coordinator works closely with the university systems network coordinators, who are still wrestling with conversions and failing, archaic systems.

One of the venturing techniques which has proven invaluable for GRL has been to partner with software suppliers and publishers to beta test new products. The result? GRL has been able to obtain the latest in software and information sources. With these resources, they have created some highly innovative customized services for clients. Tiny microphones and video cameras perch on the top of their terminals as part of the integrated communication collaborative system.

GRL has also been a test-site within the university for human resources management policies and procedures. Because the InfoKAC is a cost-recovery unit, the InfoKAC Manager received approval for the Centre to operate **independently**, in the true sense of the word, so long as it meets its organizational and financial goals. Always a proponent of teamwork, the InfoKAC Manager is a “manager” in title only, functioning as facilitator and coach to the team.

The effects of extensive teamwork skills training are readily apparent and the team admits that it is functioning better than any of the members thought possible five years ago. They often begrudged the extra load this training placed on their schedules and were uncomfortable with the uncertainty surrounding their individual responsibilities. However, it was evident that traditional work structures were incompatible with a non-traditional venture and, slowly but surely, the uncertainty began to make sense. Two years ago, the last pieces of the traditional structure were dismantled; today there are no job levels and compensation relates directly to contribution.

The team and manager jointly evaluate each other’s performance. Individual contribution evaluations (previously known as performance appraisals) encompass team input, client input, individual input and take into consideration the following areas:

- revenue generation for InfoKAC;
- specific contribution towards InfoKAC’s goals;
- ability to cover for other team members; and
- skills enhancement and skills application.

The team schedules itself automatically. There are core hours a few times per week when everyone is in and a schedule is made to ensure that the right mix of skills are always available for clients at the Centre. Two of the advisors are rarely in InfoKAC, so they share office space. Both find it more productive to work on-site with some of their larger clients or from their home offices. The technology also allows other team members to work from

wherever is most productive for them. They can, after all, function totally (communicate, create and develop products, share and enhance ideas, evaluate reports, etc.) electronically, with each other and with their clients.

Their vision for InfoKAC? InfoKAC franchises in universities across the country.

Process Orientation

A process is a set of activities that, taken together, produce a result of value to a customer. A process orientation thus demands a focus away from tasks, jobs, people or structure (Hammer & Champy). Transporting ourselves to 2005, we envision how a process orientation has transformed the information centre of a global management consulting firm.

Overview

In the early nineties, the information center was heavily utilized. After overhead cost cutting reduced the professional staff by 25 percent, the remaining staff was finding itself increasingly stretched to meet tight deadlines for both proposal and report contributions, to turn raw data into useable information, to examine international sources for benchmarking and leading edge experiences, and on and on. Demands and appetite were high, resources were scarce and rework was a key frustration. Client demands were sometimes communicated inadequately, and were often subject to change and redefinition. With request volumes on the increase, quality and depth of services were seriously threatened. By the mid-nineties, the information center manager had joined forces with the national firm management team. They had a common challenge, as all areas of the firm suffered similar stresses. They were to look at their processes of adding value to their customers. No longer was it useful to look at the task of SDI, document delivery, etc. No longer were presentations for additional head count being received, even if they were documented with impressive statistics around service volumes.

Today there is no structure known as an information center. Today there are informa-

tion process consultants, who join 'case teams' structured for particular client situations. Today there are also 'process teams' for such ongoing needs as business development. These teams are composed of subject experts, process experts, participants from other disciplines for creativity, sometimes outside suppliers and sometimes clients.

Facilities

With only a few private offices remaining, the firm operates with nodes of shared office and meeting space. As many professionals operate either from their homes, their client sites or their cars, the office space requirement is handled by booking of the shared space. The exclusive organization around teams has led to heavy reliance and integration of software support tools for all aspects of group activities such as scheduling, decision-making, brainstorming, and information creation.

Organization & Staffing

The firm is organized to build, deliver and maintain the business by continual formation of needed case teams and the existence of process teams for recurring processes. The team adds value to its customer by consolidating all the skills required to creatively and effectively complete the client assignment for each case. Case teams are created to include those professionals who are best able to help the client define the problem, develop the problem solving approach, brainstorm, examine the options, and recommend the solution. Consultants bring their information gathering expertise, experiences, and facilitation skills to the team. Information process specialists are selected for most client assignments, and they are finding that the skills which matter most in the environment are process skills, communication skills and knowledge/data synthesis and editing. The most desirable attitude is one of openness to learning.

For peak load situations, the firm maintains relationships with several qualified, independent information specialists. Information specialists are evaluated by their teams and they are also part of the evaluation of other team members. They, as the rest of the team, are

compensated on the bases of performance and contribution. (Did the team win new business? Did the information process component add significant value to the final product?) A key part of the team evaluation is skills transfer. (Did the subject expert learn more about information sources? Did the information consultant become a better facilitator?)

These contributions to learning are a critical evaluation factor. Evaluations occur religiously upon completion of all assignments, and in the case of more substantial assignments, they occur at critical milestones throughout the project. Team leaders are responsible for the administration of the evaluation and compensation systems, and they obviously find themselves in the roles of facilitator, coach and/or enabler. An underpinning of all teams is the belief that the customer, not the team leader, is the true boss.

A critical success factor of the management consulting firm is their approach to technology. They have adapted Hammer's and Champy's principle of applying technology inductively, not deductively. In the eighties and nineties, information specialists were oriented to look at and for technology from the perspective of automating information tasks and services. In the current inductive scenario, new technology is first recognized as a powerful solution and then the search begins for problems it might solve—problems which the firm may not even recognize it has.

Positioning

Definitely not new for the millennium, but with still many applications, is the concept of positioning. Positioning, as defined by Trout and Ries, relates to the place the product, service, country or institution etc. holds in the prospect's or client's mind.

Positioning is the exercise of finding and establishing the desired positioning in the mind of the customer or prospect. Ineffective positioning strategies in advertising have obvious consequences. What consequences might the lack of positioning strategies have for a library/information service unit of an organization?

Overview

Twelve years ago, in 1993, the Corporate Library, as it was then known, experienced its first significant downsizing. The budget was reduced 20%; staff was cut from 12 to 10. Following a merger with another large corporation, the new chairman of Meegler Electronics embraced the *service and value continuous improvement process*. During the next 2-3 years, every unit at Meegler, including the Library, completed service and value audits, developing and implementing stringent standards and measures. Organizationally, the Library came within the Information Management Services Department, reporting to the Chief Information Officer. In 1995 the Library changed its title to Information Sources Unit.

The audits, standards and measures were, perhaps, the first visual stumbling blocks which caused Information Sources to trip and irrevocably lose its position. But de-positioning can never be attributed to only one factor. Among the contributing factors in this case were Information Sources':

- inability to clearly define its position, or role, its vision and strategy;
- problems in transferring skills and services into those required in the new environment;
- inertia and near paralysis caused by fear and misunderstanding of this new environment;
- difficulty in communicating with the CIO, with peers in the Department and with the audit and measurement committees; and
- isolation from other information groups and suppliers.

Information Sources was perceived as the "library," in the traditional sense. Consequently, when the department unveiled its corporate-wide electronic mail and employee information system (EIS), the Information Sources Unit was identified as a source of "physical information: books, paper documents, audio-visual sources and photocopying." A new unit, "Information Capability Services," was created to advise and connect employees with the knowledge access path-

ways, like Internet, and databases (internal and external) they needed.

Today, in 2005, Information Sources retains responsibility for the internal corporate and commercially-produced physical information products and participates in the conversion of these to the electronic full-media system. The unit has three staff and has been integrated into Information Capability Services. It is this latter group that is managing the conversion project and the electronic full-media system.

Facilities

The Unit moved from its 10,000-square-foot facility in 1995 to a 1,000-square-foot room with open office concepts for the staff and shelving for the physical products. Equipment includes high speed scanners for the conversion and notepads for each staff, which are fully connected to the corporate "integrated interactive desktop work system." This system has replaced the telephone, individual workstations, faxes, etc. and connects employees to all internal and outside databases and gateways.

Organization & Staffing

With only three members, Information Sources no longer requires a Unit Coach. Instead, the team reports to the Counsellor for Information Capability Services. The Unit is comprised of the Information Sources Specialist and two Document Organization Technicians. Together they function as an autonomous unit, and rarely interact with the rest of Information Capability Services.

The specialist completes research for the marketing groups and other employees who justify using an internal intermediary for their requests. Their justification is that their research demands a multimedia mix of information sources and an interpretation of these sources and data. Most other employees rely on the EIS, feeling that what they obtain there is probably sufficient and that, with the intuitive front-end interface of the EIS, neither the sources nor data warrant interpretation. For intensive intelligence gathering or "knowledge compilation and editing," some employees contract with an independent information

economist and advisor. They are unaware that Information Sources could also do this work.

The specialist graduated with a MLIS in 1989, honing research and electronic searching and delivery skills. The Information Capability Services team recently agreed with the specialist's proposal that she be involved in training employees to access and interpret the myriad of electronic sources both on and beyond the EIS. Had her role not been expanded in this way, she would be increasingly concerned about her job security.

The Document Organization Specialists share similar concerns. One holds an MLIS and, until 1994, supervised indexing and cataloging. The other has a Technician's Diploma with strong records management skills. They are jointly responsible for coordinating the physical products conversion project and for managing the EIS thesaurus and its application. The conversion project completion date, however, is within sight. And the thesaurus

management and application is so automatic now that it can be incorporated into the workload of the Information Capability Services team. The Document Organization Specialists recognize that they have the skills required for many functions performed by Information Capability Services, but that core team is at full membership and acquires its additional help from just-in-time agencies.

Two former Information Sources staff did move into the Information Capability Services team a few years ago. Today, that team manages all knowledge-based services, including customized electronic scanning of all internal and external information and the management cycle of all corporate knowledge in full media.

It was the Information Capability Services team Counselor who recognized the importance information and knowledge management would have within the corporation several years ago and has successfully pursued a strategy for attaining and retaining this critical position.

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What Will They Call Us in the Future?

by *Marydee Ojala*

In the future when you hand, e-mail, or telepathically transmit your business card to someone, what will it say? Obviously it will have your name. It will have an address of some sort, probably both physical and electronic. There will be the need for only *one* electronic address on the card since in the future all e-mail systems will be compatible. Perhaps business cards won't be called "cards" at all.

But what will your title be? Will it still say "librarian"? What about "information professional"? If libraries and information centers become virtual and we are floating in cyberspace to manage them, what will our titles be? Will we be virtual librarians? Or will the term librarian, with its book collection connotations, disappear as a job title? Will our function be more toward navigation and less the bibliofile?

Cybrarians

Michel Bauwens, who presently bears the title Information Officer at BP Nutrition in Antwerp, Belgium, is justifiably proud of the virtual library he has created there. He recently won the BP Star Prize for innovative applications in information technology.¹ By doing everything on his personal computer, including searching, sending faxes, downloading information and re-transmitting to BP employees, creating informational newsletters, and conferencing, Bauwens replaced the paper-based library BP had and eliminated library employees. Bauwens' preferred title: Cybrarian. He published his *Cybrarian Manifesto* on the listserv PACS-L. It's an ambitious

vision of the future. Yet, in many ways, it is an electronic extension of the cooperation that has been the experience of the special libraries community for decades.

Management guru Tom Peters, author of such business best sellers as *In Search for Excellence*, *Thriving on Chaos*, and *Liberation Management*, agrees with Bauwens. In a recent syndicated column, he praised Bauwens for inventing the term "cybrarian" and for making information widely available throughout BP.²

Peters is a strong advocate of the empowering capabilities of information. He talks of enterprises instead of companies, network collaboration instead of pyramid organizations, and electronic highway systems as a mechanism for creating a sharing business environment. Since global coordination adds value to a business, Peters suggests titles such as "Director of Conversations" or "Internal Talk Show Host" and mentions one title already in existence at McKinsey and Company—"Director of Knowledge Management." He goes on to suggest that librarians, or more specifically, cybrarians, are the perfect people to fill these roles.

In a Library Management Division Poster Session held June 8, 1993, at the 1993 SLA Annual Conference in Cincinnati, OH, SEMATECH librarians Barbara Denton and Marilyn Redmond explained the "reinvention" of the way their company obtains and uses information. They titled their session "Librarian to Cybrarian: Reinventing our Profession." Crucial to the title of Cybrarian is the notion that there are other cybrarians existing in a network. "The role of the corporate librarian is

evolving from information intermediary to facilitator of a network of 'cybrarians' throughout the organization," they said. "This transformation is possible because of a variety of emerging information technologies, and is essential because effective retrieval, use, and management of information can spell success or failure for a company."³

Titles We've Liked in the Past

Ten years ago Betty Eddison uncovered position titles that might still have validity in the future. "Information czar, corporate information manager, information resource manager, information architect, information control officer—these are titles some people have who lead integrated information management systems in business organization," she said.⁴

Harvard University Graduate School of Business Assistant Professor Jane Linder suggests that we have moved from the Collection Era to the Era of Access and are entering the Era of Intelligence. Her preferred title for the librarian of the future: Corporate Intelligence Professional.⁵ However, this may have applicability only in the world of business. It's hard to see how librarians in today's technical and scientific libraries could become Corporate Intelligence Professionals, even if their science libraries became totally virtual.

Moving to a much broader view, the title for the librarian of 2006 as promulgated by Frank Spaulding, a former president of SLA, is Knowledge Counselor.⁶ The work of the Knowledge Counselor "will be much more intellectual, requiring much more skill at selecting, analyzing, and synthesizing information. It will be broader, and it will be more rewarding to society," he said. Spaulding sees the role of the Knowledge Counselor as an empowerer of people who need and use information. Partnerships with users, awareness of technology, vision regarding information synthesis, and insight into user needs define the Knowledge Counselor.

This is pretty heady. Perhaps more down to earth is Barbara Quint's view of the future corporate library. Her protagonist's title is Chief Information Officer. Technical Research

and Market Research both report to the CIO. "The 'traditional view' of a librarian as 'custodian of a collection of books' has begun to vanish. Libraries have become whatever librarians do, wherever they do it," she said.⁷ Quint also mentions the title Cybrarian but suggests InfoPro might do as well. She further suggests that library schools will be re-named Information Professional Institutes and Online Users Groups will become Knowbot/Searchers International. The Chief Information Officer Society will join SLA as a Division in 2003, according to Quint's crystal ball.

Futurists View Librarians' Titles

Roger Selbert, the Santa Monica, CA-based editor of *Future Scan* and a former corporate futurist for Security Pacific National Bank, is not so sure we should give up the title "librarian."⁸ He believes that librarians have the skill, ability, and technical know-how to access the wide range of available information, culling out that which is good, useful, and right for clients. "It's a 500 channel world. Even the uninformed know too much." Selbert sees librarians as being aware of the differing ways in which information is presented and knowing how to acquire it for clients. "The responsibilities are expanding, as is the need for speed. If it's findable, librarians will find it," he said. "The term 'librarian' will imply someone with their finger on where and what information is available. It will not necessarily imply books."

At the Institute for the Future in Menlo Park, CA, Paul Saffo sees a world of information overload that threatens to sink us. "If information is a wave about to engulf us, the solution is to surf. It's no good trying to manage 21st-century information overload with 19th century intellectual skills."⁹ Switching metaphors wildly, Saffo, in his presentation at the American Library Association's mid-Winter conference in Denver, CO in January 1993, described librarians as being in the eye of the information hurricane, personal computers as horseless carriages, and electronic information as being inside the thin crust of paper. He did not suggest a new title for librarians. And,

as a job title, Information Surfer doesn't sound too professional.

Interestingly, Raymond Kurzweil, who writes extensively about the Virtual Library and the Virtual Book and was a keynote speaker for SLA's 1993 Conference, always uses the term librarian to describe the people managing cyberspatial information. He can envision a totally electronic information center, but he can't get beyond the title "librarian." Maybe he's got a point.

The View From the Virtual Stacks

What do practicing special librarians think? I asked a few SLA members. Replied Liz Bibby, Head Librarian/Coordinator for Labat Anderson, who is presently managing the Region 4 EPA library in Atlanta, GA, "Traffic Director?" Think of the huge computer grids that control a nation's truck or train traffic, and you begin to see where Bibby is going. She also stresses that librarians will manage more diverse groups, people not only with library backgrounds, but also technical and business professionals. Guiding people to information sources and to people with expertise in the subject will be a crucial skill. It seems to me, however, that the Coordinator portion of Bibby's own title is appropriate. Information Coordinator might be a valid future title.

Linnea Christiani of Information Access Company in Foster City, CA, thinks along similar lines. "We have to navigate the information highways. We're the drivers. Well, Driver isn't a very spiffy title. Maybe it should be Information Engineer. Or Information Navigator. We have to be skillful at managing the information highways and avoiding detours." Christiani envisions the future manager as one who builds and maintains access to internal and external information. She sees this as a map making and design function. With this in mind, her other suggested titles include Information Designer and Information Architect.

At one time, Apple Computer, Inc. employed "Library Evangelists." Now, however, they use the more mundane title "Information Scientist." Monica Ertel, Manager of the Apple Library and Information Center in Cupertino, CA, believes

the role of the staff will change from providing information to managing information. "We will act more like information consultants in the future, helping people to get their own information rather than doing everything for them," she said. Although Ertel's title is hardly futuristic, she also possesses an unofficial title which is displayed on a banner in her office: Our Lady of Perpetual Information.

A few other suggestions for a title to put on that future business card: Information Wizard, Library Goddess, Information Oracle. Come to think of it, maybe the original Delphic Oracle simply had a good research library and consummate information center backing her up. I found an article entitled "Robo-Librarian" but it described IBM's new tape library dataserver. A bright yellow industrial robot retrieves tape cartridges and mounts them in readers. I don't think this is the image we seek, as it is basically a mindless procedure.

Yesterday and Today

My very first library job title was "page." I was a teenager working at my local public library. My job duties were to shelve books and stamp date due cards at the circulation desk, and my father wanted to know when I would be promoted to "chapter." The notion of the virtual library was simply not present. Even the concept of electronically available information was way ahead of us. Job titles I've had since then included Library Assistant, Catalog Librarian, Manager of Library Services, and Assistant Vice President. Yet regardless of the job title, I always considered myself a librarian. Job titles may or may not reflect the actual work people do. That's true today and will probably remain true in the future.

It strikes me that generic job titles such as Vice President, Officer, and Manager will probably not disappear, not even from virtual libraries. Information managers, information specialists, and information officers will doubtless remain in the lexicon. As long as we recognize the importance of information, both internal and external, and stress the interconnectedness of both people and infor-

mation, the title may not be so important. The function, however, will become more and more critical to corporate success.

So what will we put on the business card we send through cyberspace, announcing our connection with the virtual library? It needs to convey the fact that we manage information, identify relevant sources, analyze data, network among experts, have technical expertise, understand information highways, and are comfortable in cyberspace. I doubt that one title can be found to satisfy everyone. Titles will change and evolve, but settling on one ultimate and ideal title will not happen. Cybrarian

has a real ring to it, but not everyone will accept it.

One parting shot: After we've concluded the encounters that began with the business card exchange, will we say, "See you later, Info-Navigator?" Or, will it be, "After a while, Bibliofile?"

[Author's note: A version of this article will be published by DIALOG Information Services in a forthcoming issue of Open Dialog. The author appreciates DIALOG'S willingness to allow Special Libraries to publish this version.]

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Core Competencies for Special Library Managers of the Future

by Marydee Ojala

As special libraries change to meet the challenges of the future, so must those of us who manage them. This is hardly a new or striking observation. Successful managers, whether they manage libraries or other functions, tend to be flexible and willing to change. They recognize that fundamental upheavals require radical changes, and these are times of fundamental upheavals in both the business and the library worlds.

When I attended the University of Pittsburgh's Graduate School of Library Science, the core courses included management, reference, cataloging, automation, and communication. You had to take those courses (and pass them) to receive your MLS. When we graduated, my class expected to work in a physical environment called a library. Those of us who planned to work in the corporate world knew that our physical environment might not look like a traditional library. It might be a series of cubicles, or it might be collections housed in various places within the company. But we expected something we could see and touch. Back then a company was well-defined, and we knew the corporate library was there to provide information to support the company's overall goals and objectives.

Then came the revolution. The information revolution, that is. Or more specifically, the electronic information revolution. The funny thing about this revolution is that everybody seems to have embraced it. When *Business Week* (February 8, 1993) can speculate about the virtual corporation in a cover story, when *Time* magazine can create consumer CD-ROMs, when *Fortune* (May 17, 1993) can look at work in the Year 2000 and spotlight a

major money manager living and working in Boseman, MT, then the notion of the virtual library serving the virtual corporation doesn't seem quite so far-fetched. All around us, corporations are being rightsized, downsized, re-engineered, and reinvented. Special libraries are evolving to meet the needs of these dramatically new entities.

Hiring for the Virtual Library

If you are hiring a librarian today, what do you look for? Is it DIALOG search training, knowledge of MARC for cataloging, or understanding of the subject field? Will the core competencies for the professional staff of tomorrow's special libraries be different from those of today? Just what are the requirements for managing the library of the future? If the library of the future will be virtual—without walls—and if library patrons (or information services clientele, if you prefer) will expect the library to come to them rather than them going to a physical place, clearly the core competencies for library/information services staff will change significantly and abruptly.

Try this scenario on for size: It's 2005, the 21st century. You've taken the post of Cybrarian for Virtual Company Inc. (VCI). If you're not absolutely sure about the definition of Cybrarian, check the accompanying article in this issue of *Special Libraries* titled "What Will They Call Us in the Future?" on pages 226-229. You are the information focal point for VCI. Your first questions revolve around what VCI does, and how it is organized, which you post on an e-mail network—the preferred communication channel at VCI. Since your

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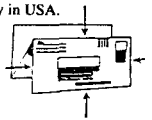
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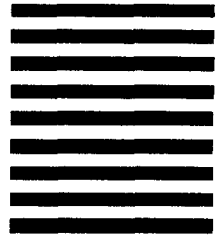
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entire job interview process was done electronically, you have never had a face-to-face meeting with any VCI employee.

VCI creates products based on customer demand. They find out what customers want, and then create it. They concentrate on shortening cycle times so that customers get what they want faster. The organization chart looks like a spider web, and it's always in flux because the company operates through an ever-changing series of work groups.

The work groups address specific problems, such as new product development in a specific area, upgrading a product already in existence, or meeting new quality standards. Upon task completion, the work group dissolves and new teams are created with new team leaders. The group members are chosen based on their individual abilities in relation to the problems. Thus, people are flexible and are used to working with others.

In addition, these temporary networks often operate as partnerships with consultants and outside firms, including the suppliers to VCI. These alliances and joint ventures exist for the life of a project and, like the internal work groups, are then disbanded. VCI thus lowers its costs, since they are shared; shortens development time, and effectively uses the skills of those both inside and outside VCI.

In fact, the work environment at VCI proves that the six trends *Fortune's* Keichel saw as reshaping the workplace have come true. They are:

- Companies becoming smaller, employing fewer people;
- Hierarchical organization charts giving way to networks of specialists;
- Technicians replacing manufacturing operatives;
- Horizontal division of labor replacing vertical;
- Paradigm of business shifts from making product to providing service; and
- Redefinition of work to include constant learning, high-order thinking, and less nine-to-five work.

VCI succeeds because it is an agile company and because it maximizes its use of computer

technology. The Cybrarian must be equally agile and adept at information acquisition and networking. Luckily, post-graduate training in information management and organizational administration has prepared the VCI Cybrarian for this challenging position.

Information Management Competencies

Core competency #1: Cybrarians possess a solid understanding of information sources and the ability to access them. Fundamental to information management competency is the ability to acquire information on an as-required basis. This information may be external or internal to the company, and will probably not be physically housed within the company. Instead, the Cybrarian must access electronic and print sources, know navigation skills for all networks, facilitate exchanges with other Cybrarians, identify outside experts, and recognize pockets of undiscovered data.

Core competency #2: Cybrarians deliver information in any form desired by the customer. Clients may want information structured in a particular way, to fit a particular project's requirements. They may want to have it on their home computer as well as their office computer, or they may want it dumped into an infobase or a remote printer. Cybrarians know the intricacies of these technologies so they can meet their customers' requirements. They assess technology for information delivery.

Core competency #3: Cybrarians evaluate the quality of the information sources. Quality can be intrinsic to the source. It should be accurate, timely, and complete when the Cybrarian acquires it. Quality also shows in the format, which must be matched with the customer's need. Quality can also be extrinsic to the source. Even though it is accurate, timely, and complete, it may not be relevant to the information needs of the client. The evaluation of quality is a primary example of how the Cybrarian adds value to the information gathering process.

Core competency #4: Cybrarians organize information so that it is usable. This may include traditional indexing and abstracting, but it can also mean adding data to a corporate bulletin

board or an enterprise-wide information database. It can mean creating the knowledge base for the networked company, or it can mean interpreting the meaning of the information within the context of corporate mission and customer desires. Organizing information does not equate to cataloging and shelving. Rather, it systematizes information to construct customized knowledge.

Core competency #5: Cybrarians anticipate the information needs of the customer. This entails an intimate knowledge of the goals and objectives of the company and its suppliers, partners, customers, and distributors. This requires constant monitoring of events at all levels of the company. Since Cybrarians are valued members of high-level corporate teams, gaining access is merely a matter of listening to conversations. Virtual corporations do much of their normal business electronically, simplifying the task of information anticipation. Still, it is necessary for the Cybrarian to spend the time to electronically “manage by walking around.”

Core competency #6: Cybrarians connect disparate pieces of information to originate new information. The notion of information intermediary takes on new importance in the virtual corporation. They are creators, not simply people who sit between end users and machines. They use technology vectors to connect.

Core competency #7: Cybrarians know when, how—and whether—to store information. Basic to these decisions is a just-in-time approach to information rather than a just-in-case approach. The objective is not to build the best collection but to provide linkages to the best sources of information. In the majority of instances, information will not be stored. Instead, the routes to the information will be recorded so that the path can be traced again.

Organization Administration

Core competency #1: Cybrarians thoroughly understand the environment in which they work, including the changes it undergoes on a regular basis. The environment in which a virtual corporation operates is not restricted to the company itself. Cybrarians also understand the environment of the company’s alliance partners, includ-

ing suppliers, customers, and distributors. They are technically proficient but not so specialized that they miss the big picture.

Core competency #2: Cybrarians are experts in the dynamics of team management and human dynamics in an online environment. They establish trust and accountability, inspiring all members of the team to accomplish their assigned tasks. They coordinate activities within the team, ensure harmony among other teams, sub-contract when required, motivate team players, confirm the usefulness of the work being done, and make the work meaningful.

Core competency #3: Cybrarians communicate effectively in a variety of media throughout the network organization. Some communication will be electronic, but meetings and casual encounters still occur without the benefit of computers. Communication without face-to-face contact is quite different than personal communication. Misunderstandings occur more frequently and must be carefully guarded against. Plus, team management means that the person who is in charge today may not be in charge tomorrow. Tact, consideration for others, and general civility are in demand. Sharing information widely, even information considered somewhat confidential, facilitates the communication process.

Core competency #4: Cybrarians market and sell information products. They promote the benefits of information in the context of the organization’s values, vision, and culture. Communicating cybrarians’ capabilities via online newsletters, real-time conferences, and comments on bulletin boards is quite effective. Negotiating with outside vendors and accepting them as partners in the marketing process is also practical.

Core competency #5: Cybrarians provide leadership and vision. It is to the Cybrarian that the virtual company turns for advice, guidance, and counsel on matters pertaining to information. In these evolved companies, most functions and products pivot around information. The Cybrarians are plugged in to the accumulated knowledge of the organization as well as external sources of information; therefore, they play a highly visible and widely respected role.

Go Boldly Into the 21st Century

Core competency #6: Cybrarians are client-centered and customer-driven. They empower their customers rather than acting as information gatekeepers. They routinely check to see that their customers are satisfied, and they constantly assess their needs, asking them what information they don't have and how they would use it if they had it. Cybrarians play consultative roles, suggesting information sources and taking the initiative to guide customers to alternative information items they didn't even know they needed.

Core competency #7: Cybrarians recognize that providing access to information is not enough. Forcing information to permeate the organization, creating infobots that find people who need information, facilitating implementation of knowbots to empower individuals to find their own information, and highly valuing the information function exemplify excellence in virtual libraries.

The Cybrarian at VCI is going boldly, competently, and confidently where no one has gone before. So, of course, is VCI. This is a company in which you do not climb the ladder of success, but navigate the spider webs of information, constantly learning as you go. In an information-intensive future, the role of Cybrarian is critical. Not only can this person identify, provide, analyze, organize, categorize, and disseminate information, this person can create information and make success happen for VCI. Remember, the job description is to be the focal point for information. That is both diffuse and specific. Moving adroitly among technologies and integrated into the fabric of the company, the VCI Cybrarian exemplifies the very best of what used to be known, in the 20th century, as a special library manager.

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Relationships of the Future: Vendors and Partners

by Stephen Arnold

At the National Association of Broadcasters meeting in 1993, the hot concept was *convergence*. The technologies of broadcasting, telecommunications, and computers appear to be moving toward one another at a rapid pace. Visualize three particles rushing toward one point in space and time. What will result? Only by observation will we be able to tell, and even then the effects of the impact may be almost impossible to disentangle. The shock will ripple through the environment with results that are difficult to predict.

In response to the fusion of three different types of information businesses, strategic partnerships have proliferated with a rapidity that is difficult to follow. Regional Bell Operating Companies (RBOCs), hardware manufacturers like IBM and Apple computer, and cable giants like TCI in Denver, CO, have linked with publishers, motion picture production companies, and sprawling media giants like Time-Warner. No one, it seems, can go it alone.

In the somewhat less rarefied atmosphere of library information services, similar movements are underway as well. University Microfilms International has struck a relationship with NOTIS, a unit of Ameritech (let it be noted that Ameritech is one of the RBOCs). R. R. Bowker has extended its relationships with publishers so that information may flow electronically from publishers to the various versions of Books in Print to the benefit of all libraries, bookstores, and readers. Knight-Ridder, the parent of Dialog, has encouraged the *San Jose Mercury-News* to initiate its own online service, offered via America Online.

Small publishers are rushing to make deals with Apple Computer with the notion that Apple somehow has the right stuff to survive its collapsing margins and the Windows juggernaut.

In the midst of this highly visible and somewhat frenetic partnering, it may be time to step away from the individual deals and consider the issues of partnering from a different, more objective vantage point.

Convergence is Not a Surprise

The blurring of lines between information technologies is a fundamental attribute of computerization. The application of digital technology to any business makes certain types of activities difficult to categorize.

Consider motion picture production companies. These organizations consist of a loose federation of people with highly specialized skills. Over the years, the computer has become a more welcome visitor to the hallowed halls of wheeling and dealing. The computer could keep the books and manage some of the less artistic aspects of the business.

But within the last five years, the computer has gained in speed and graphics capability. Slowly at first and now with a locomotive's momentum, the computer and graphic software tools can create images which put audiences in theaters. The principal "star" of *Jurassic Park* is not the story. The script is secondary to the digital dinosaurs' frolicking.

The key point is not that the computer is a slick new technology. The driving idea is that the computer enables the motion picture business to get the result it wants faster and with

considerably less cost for changes. Flipping bits takes great skill, but it is of a different kind than is required to sweet talk a temperamental star into a reshoot.

In addition to the new ways of making images, the electronic devices lend themselves to a parallel development—the audience's hunger for the images in a wide range of media.

It is a small leap from the power Silicon Graphics workstations to the video game versions of the motion picture. One can almost hear the studio executives saying, "So what's the big deal. A computer is a computer, right? Get me a dinosaur game fast. What's for lunch?"

At every point in the information manufacturing process, computers and ever more capable software facilitate reprocessing and reuse of the digital information. As recently as 1980, motion pictures were made the way they had been since the first silent films. No longer. The world of electronic information has expanded the scope of the concept of motion picture.

Motion picture companies have understood cable for many years. If cable and telecommunications companies work through the technical glitches, a blockbuster like *Jurassic Park* would be viewable for a premium price in millions of homes. If the interactivity that many technologists predict becomes a reality, individual viewers will pay money to change the outcome of pivotal scenes.

The motion picture companies don't want to be left out of this potential Mississippi River of money. One sure way to be included is to form partnerships.

Forget the technology. The key is distribution channels and the ability to switch data flows. The motion picture wizards don't know a Silicon Graphics workstation from a Commodore 64. But they do know one thing: If they are excluded from the distribution channel, someone else will get more money than they will.

To put this case in perspective, the technology convergence is an enabler. It is environmental. The real driver for partnerships, deals, strategic relationships—or whatever one chooses to call the linkages—is fear.

Both parties to the agreement are afraid of something. The telecommunications companies are afraid that they will have bandwidth and switches but no homes wired. The cable companies have homes wired together but no switches. And neither the telecommunications companies, the cable companies, or the hardware manufacturers have information products.

One does not have to be a genius in finance to figure out that without all the pieces to the puzzle, it is hard to make money. Executives in a number of formerly arm's length business sectors are cozying up to one another.

The objective of the relationship is to cover one's bets—and reduce the uncertainty that accompanies having only one piece of a complex puzzle.

Libraries and Information Centers

On the surface, there seems to be little relationship between an academic or public library and the motion picture industry. The comparison, one might conclude, is absurd.

However, large academic libraries are beginning to behave in new and interesting ways. In Canada, for example, resource sharing has become a way of life. In a number of provinces, libraries share the cost of an important database. Those who pay a fee can have access to the electronic information.

In short, libraries are beginning to look like a commercial timesharing service. The resemblance is deceiving. The libraries offering access to electronic information represent a new type of distribution channel. The timesharing company does not lose the library as a customer.

The library that undertakes shared access to a commercial or for-fee database must form a web of relationships to make the electronic access a reality. A library has neither the hardware, software, nor technical resources to launch and sustain an online service alone.

The library must involve a number of constituencies. The database producer is an early partner. This organization must have the business acumen to grasp that unless it cuts a deal with a library, the library will look for an

alternative database to buy. Whether the database producer likes the new arrangement is irrelevant. Both parties must cooperate.

The library must have access to a computer system, software, and technical expertise. Many libraries have technologists; fewer have communications facilities, CPUs, storage, and programmers and systems managers to make the service a reality. The library, therefore, has no choice but to form partnerships with departments or organizations with these needed resources.

Most importantly, the library must have a relationship with people. There are the users, of course. Within the last three years, library users (customers) have become increasingly vocal in their demands for richer, more responsive electronic information services. Another constituency exists as well—other libraries.

In a resource sharing environment, a lead library must form a web of relationships with other libraries. Tacit approval and financial support are required to move the shared access from idea to reality.

It is evident that the library director who wishes to do more than offer an online public access catalog from terminals in a single facility has to build strategic and tactical relationships. Ten, even five years ago, such an undertaking was rare. It is not rare today, nor will it be rare in the future.

Relationships are the consequence of technological convergence. Rapid developments in hardware, software, text retrieval tools, interfaces, and machine-readable sources of information have combined to alter the library world irrevocably.

Fear operates to an extent, as it does in the frenzy of the motion picture high-rollers. A more fundamental force is operating as well: survival. Many libraries and information centers cannot survive unless they figure out ways to stretch existing funds, increase services, and demonstrate value to their constituencies.

Technology, as in the motion picture example, drops into the background. It is simply an environmental factor, an enabler. The real action is in the application of human ingenuity to the threat of continued funding cuts and, in some cases, extinction.

The Principal Changes

In academic, law, medical, public, research, and special libraries, different factors and organizational pressures operate. Each of these libraries share some core characteristics:

Customer responsiveness. The literature bursts with articles, studies, and exhortations for information professionals to become more attuned to the needs of their patrons, clients, or customers. Effective responsiveness demands working in a cooperative, constructive way with these constituencies and individuals. In order to provide what the customer wants, libraries must listen and build positive relationships with their markets. Effective customer responsiveness is a strategic partnership.

New services and new products. Libraries cannot become publishers, timesharing companies, or multimedia production companies. They can, however, work closely with particular organizations with the information, expertise, or products and services the patrons, clients, and customers demand. Because information technology brings considerable fluidity to data, libraries must work closely with certain organizations to obtain the products or services patrons, clients, and customers demand. Some suppliers will be downright suspicious or fearful of some library proposals. The only way to allay these fears is to form win-win relationships with these organizations. Without a partnership, the library will not have what its customers demand.

Peer relationships. One of the most unusual attributes of electronic information is its scalability. In this context, "scalability" refers to ease with which electronic information services can be offered to patrons, clients, and customers in a large, geographically-distributed service area. An individual library rarely has the funds necessary to finance, support, and publicize electronic information services. It may be trivial to add a single CD-ROM to a public library reference room. It is far from insignificant to provide remote access to ABI/

Likely Library Partnerships in the Future

<i>Partner</i>	<i>Purpose</i>	<i>Upside</i>	<i>Downside</i>
Database Publisher	License to load one or more machine-readable databases on a network	Gain access to desirable databases	Can be locked into one vendor after data are loaded
Local Publisher	Provide access to local/regional information in electronic form	Increase information available on system	Costs for preparing and maintaining data may be difficult to control
Government Entity	Distribute information produced or compiled by the entity	Provide access to a wide range of information	Storage costs may grow more rapidly than system capacity
Online Public Access Catalog Vendor	Obtain access to databases available via the OPAC's network	Leverage the relationships the OPAC vendor has	Lose freedom to choose
Timesharing Company	Reduce costs for certain databases; expand access to seldom-used databases	Have access to important online services	One person on the staff must be expert in the system which requires special training
Local / Regional Bulletin Board (BBS)	Provide greater information access to those in the BBS's service area	Facilitates access to grassroots and community information	Creates a potential for liability with regards to pirated software, viruses, etc.
CD-ROM Reseller	Obtain technology and license necessary to provide network access to information on CD - ROMs distributed by the reseller	Facilitate network access to certain CD-ROMs	Creates a capital - intensive hardware environment that cannot be easily upgraded or modified
Software Company	Gain access to the functions offered by a specific package or group of packages	Allows customized interfaces	May require the library to develop certain technical skills at the expense of other needed skill sets
Hardware Company	Reduce costs for hardware and maintenance	Reduces some capital costs	Can lock the library into hardware which may become obsolete
Television / Motion Picture Company	Obtain access to educational or customer - requested information produced by the company	Makes the library part of the video-enabled distribution chain	Places additional stress on task of deciding what materials to provide to customers
Textbook Publisher	Provide electronic versions of adopted texts	Opens opportunities for on-demand publishing of study aids	Adds a new, complex information environment to the library
Vocational Education Organization	Offer at-home or alternative learning options to customers	Expands the library into a skills training niche	Adds a new, complex information environment to the library
Information Broker / Consulting Firm	Create a revenue stream for the library	Allows the library a way to obtain revenue from for-fee services staff cannot directly support	Requires an account management system to handle commissions from referrals
Other Libraries	Gain access to funds, licensed information, or collections suitable for document delivery	Allows pooling of collections, particularly some databases, serials, and certain books	Places a premium on relationship and financial management skills

INFORM over a multi-site academic library or a five-city network of public libraries. Without the involvement of one or more peer libraries, the expanded services are not likely to become a reality.

We can see that libraries have little choice but to form closer relationships—partnerships, if you will—with customers, product and service providers, and other libraries.

End of the Rainbow

We all know that the pot of gold at the end of the rainbow is falsehood. Many information professionals believe that everyone with whom they deal or wish to work with will share their vision of the benefits of partnerships.

I assure you that in each constituency there will be far more doubters than believers. Customers will not believe that libraries will provide them with what they want and need. More and more libraries are launching for-fee services or instituting special charges to help offset the costs of some new information technology. Well-known vendors of CD-ROMs offer for-fee mechanisms so libraries can charge for print outs or full-text documents printed from the storage device.

A more serious factor, however, is the challenge of meeting diverse information needs. Many libraries cannot provide the information their patrons, clients, and customers want. If a consortium of cable television operators and databases provide low-cost online access via the television, libraries may have to struggle to remain at their present level of funding.

Some libraries have great difficulty providing print source materials in the principal language of the users. Electronic information services are simply not feasible in the present budget and management climate.

The new services and products present challenges as well. Many of the information providers have sold to libraries because that's where the customers were. With new distribution channels opening up, the library may no longer be a desirable partner. The information company may want to cover its bets by competing with the library for customers. It seems unthinkable that

libraries would not be able to buy the information its customers need. Some information vendors have all but withdrawn from the library market. Investext is one example.

Other libraries may prove reluctant brides. A peer may be jockeying for a grant or to grow at the expense of a smaller, less well-funded or less innovative library. In New York, a number of law firms have investigated pooling their library budgets in order to provide a well-funded, centrally-located legal information resource. Smaller or less well-regarded firms are not invited to participate in such a consortium.

In short, creating partnerships requires a business plan, excellent implementation skills, and salesmanship. Without any one of these key ingredients, the library's goals are likely to be difficult, if not impossible, to reach.

Relationships of the Future

If we look into the future, libraries will continue to exist. They are important containers of knowledge, culture, and learning.

However, it is not at all clear that the library will be defined as a place in which information in the form of books, magazines, journals, photographs, and other physical materials reside.

The hot concept is to provide access to information, not a collection of artifacts. The table on page 238 presents a range of likely services and partnerships that seem feasible in the next five or 10 years.

Some of these future relationships are inevitable. Libraries, regardless of type, have little choice but to respond to the economic and customer climate. The advantages for a change-oriented library are:

- Increased opportunities to position itself as a provider of much needed products and services;
- Closer integration into the fabric of the user constituencies; and
- Practical applications of advanced technology that yield visible benefits, not hidden capabilities.

Disadvantages exist as well. They include:

- Managers and staff must be able to manage technology efficiently in order to

have time for the people management tasks change requires;

- Financial management skills will become more important because trade off analyses must be accurate in order to pay for new information services and make appropriate purchase-lease-share decisions with regard to acquisitions and services; and
- Decision cycles will become shorter because the overall effect of rapid change in technology requires fast reactions and clear decisions under pressure.

Are libraries ready for the partnerships that will be a part of the landscape in the next few years?

The answer, of course, is, "Some libraries are ready for change. Some are not." The task becomes one of setting a strategic direction for products, service offerings, funding options, and technologies. Each of these key issues will have a direct influence on the nature of the relationships the library will nurture.

No library or information center is immune from budget pressures and increasing customer demands. Libraries that do not have a strategic vision of where they want to be will be at considerable risk. Partnering provides one way to reduce this risk to some degree. The partner may provide new ideas, necessary reinforcements, or some other type of expertise. The result is that the partnership strengthens those involved.

Stephen Arnold is an independent consultant specializing in technology assessment and information engineering. He provides professional services to a wide range of organizations, ranging from government agencies to diversified corporations worldwide. In 1989, he received the New Jersey ASIS/Rutgers Distinguished Lectureship in Information Science Award and is the author of three books, of which the most recent is *Investing in an Information Infrastructure: An Overview of Japan's Network Services* (Inforonics: 1993).

SLA and the Future of Librarianship: Issues and Opportunities From SLA's Visioning Committee

by William Fisher

Discover Our Vision!" With these words, Kitty Scott, now Past President of SLA, began her term as President of the Association. By then Kitty had already assembled the President's Visioning Committee, which was charged with the task of supervising the process and working with the membership to identify and articulate our Vision. (The complete committee roster is included at the end of this article). This article will briefly look at visioning as a concept and then look at the current status of our visioning effort and what we have learned thus far.

What is Visioning?

Visioning is an attempt to focus an organization's attention on its underlying values and purposes. Because of the way vision statements are often developed and phrased, they are usually associated with strategic planning. While these concepts are related, it is important to remember that one is not a substitute for the other. Visioning is our dream of what we want to be—what we hope to accomplish. Our strategic plan is the methodology for realizing that dream. We must never forget that dreams are very important for all of us.

After the big strategic planning "binge" of the early-to-mid 1980s, a lot of organizations fi-

nally got around to reading their plans and found that their strategic plans were out of synch with the purpose of the organization. In the for-profit sector, companies had become so diversified that it was difficult to clearly pinpoint what their primary lines of business were anymore. Strategic plans based upon outdated visions don't do anyone any good. One example I'm familiar with is a leading tobacco company which today derives only 25 to 30 percent of its revenues from tobacco products. The bulk of its remaining revenue comes from the food and beverage industries. A strategic plan based solely upon a vision of the tobacco industry will most certainly lead this company in the wrong direction financially.

While changes that non-profit organizations undergo may not be quite so dramatic, the values and purposes of organizations like SLA are changing along with those of other professional associations. Today the Association is comprised of a more diverse membership than a few years ago, we are involved with more and more issues, and we are taking on new roles, especially in the legal and legislative/political arenas.

This is all well and good; however, much of this change has come from the top down—from the Board, from previous cabinets and committees, and from Association staff. And this, in and

of itself, isn't necessarily bad, but it doesn't automatically make it good either. Over the past few years, in attending local Chapter activities, attending Conferences and Winter Meetings, and networking with SLA members throughout the Association, I have a sense that many members at the grass roots level are losing their sense of purpose for belonging to the organization. Our aim is to infuse SLA with new energy, direction, and deeper member commitment. The process of visioning helps us get in touch with our sense of purpose.

The magnetism of a vision is generated from an integration of the individual's and the organization's sense of purpose, values, uniqueness, and interaction with the physical, social, business, and political environments in which they operate. A shared vision brings people together. Shared visions are expressions of what people have in common, of what they as a community are committed to accomplishing. People with shared visions are more likely to take responsibility and challenge the bounds of convention.

Visioning is an opportunity to renew our enthusiasm for the Association, for the profession, for ourselves, and for our individual jobs. This is vital for volunteer organizations, especially an organization as geographically diverse as SLA and an organization with a significant number of "solo" members, who may feel isolated from their profession. Visioning is an opportunity to challenge long-standing beliefs and assumptions to see if they are still valid in our world today. Visioning is also an opportunity to redefine the Association, its purpose, and our own roles within it. Visioning is an opportunity to not only see beyond the trees, but to also see beyond the forest to the whole environment and reassess our place in that environment.

The Committee's Activities

To date, the Visioning Committee has focused its efforts on establishing the core values and purposes of the Association as identified by the members. Input has been gathered from the committee itself, from the Board of Directors as comprised in October 1992, and from Chapter, Division, Committee, and Caucus leaders at the

January 1993 Winter Meeting. More importantly, input has also been gathered directly from members at both the Chapter and Division levels. The input gathering process addressed the Association's strengths, opportunities for the future, and potential barriers to achieving that future. This input will help identify the shared values of the members and with this as a base, a vision statement can be created.

This information-gathering stage of the process will just be completed as this issue comes out; however, opportunities for involvement still remain. As with any undertaking of this nature, the responses have been very thought-provoking, diverse, and far too overwhelming in their present format. The Committee's next task will be to find some consensus among the responses. Once the Committee has identified what we feel are the core values expressed by the members, we will make this information available to the Association and again ask the members for help in confirming those core values.

Issues and Opportunities

There is still a good deal of work to be done with the visioning process, so it would be rather premature at this stage to predict how the vision statement itself will read. What we can begin to do, however, is look at the areas identified as opportunities for the Association, since one of the primary benefits of the visioning process is the identification of opportunities for the organization to pursue. (But first, a disclaimer—while the areas to be presented have been identified to date by those members providing input into the visioning process, the discussion of those areas is strictly my individual interpretation and analysis of them. These comments should not be viewed as the Association's, the Board's, or the Committee's "official" position.)

From the many responses in the category of opportunities, I have selected nine areas where most of the consensus was centered. Virtually all of these areas are interrelated. The fact that one area is seen as an opportunity leads to the identification of the next opportunity. The first two issues discussed are at the core of all the opportunities listed; if you "buy into" these two, everything else should fall into place.

- Information has, does, and will continue to play an increasingly important role in society, both as a commodity and as a public good. As information professionals, opportunities are there for us to identify the value of the information for our clients and/or to add value to information our clients already have. This leads to further opportunities in developing information policies within our own organizations, at the national level, or even at the international level.

- We can no longer take an American, or even North American, view of the world. Everything must be done with a thought toward the international scene. We live in a "global village" that is a result of our current focus on information and technology. The impact and application of new ideas, which used to take months or even years to move from one country to another, now takes days and sometimes only hours. The implications for us as information professionals is that any opportunity we see should be viewed as having both local and global applications.

- By taking advantage of our opportunities in the "information society," we also have the opportunity to take a leadership role in how information is obtained, organized, utilized, preserved and/or discarded. For some this will mean "reclaiming" our roles as information managers from MIS or data processing people, to whom some organizations had turned for information management as more and more technology was applied. For others, this will mean reaffirming our roles as information managers and being more proactive with our information management skills.

- Our opportunities as information leaders will develop from the opportunities provided by new information technologies. These opportunities include bringing appropriate technologies into our organizations, staying as current as possible with the use of these technologies to increase our

effectiveness, educating our clients about this technology, whether they wish to use it themselves or whether they want us to use it for them; and finally, there is always the opportunity to help develop the next generation of technology by analyzing what the current systems can't do as well as what they can do.

- As we begin to take a more active role in all four of the areas already mentioned, we will have the opportunity to develop alliances with other information-related organizations. These alliances will emphasize our global perspective and maximize the resources currently available to us. In realizing these opportunities, we must use a flexible definition of "other information-related organizations," to avoid missing opportunities due to semantic differences. This is especially important on the international scene, where other cultures and customs prevail.

- One way we can begin to realize the opportunities ahead of us is through the pursuit and support of research. This research effort will help validate some of the opportunities available to us and identify new areas of opportunity to pursue. As individual members of SLA, we should be encouraged to pursue research that will be of professional value, and as an organization, SLA should be encouraged to support research efforts that will provide the Association and the profession with useful information.

- Another result of the activities previously mentioned will be the realization that, as a profession, the way we have conducted business in the past will not necessarily be the way we'll conduct business in the future. New career tracks will be developed for those of us in the information professions. For some of us, this will simply mean a reorientation of how we do things in the workplace. For others, this will mean major changes in the attitudes and skills needed in the workplace, if not

major changes in the workplace itself. And for others still, who are not yet in the profession, this will mean changes in their approach to and preparation for entry into the information professions.

- This last issue mentioned clearly leads into the opportunities in the areas of education and professional development. As changes begin to occur that impact how and where we do our jobs, those changes will need to be reflected in the educational programs which prepare people for entry into the profession. At the same time, those of us already in the profession will need continuing education opportunities to keep current with those changes and the future demands of the workplace.
- Finally, as we begin to make progress in all eight of the areas mentioned above, we will also be realizing opportunities for positive public relations efforts. Our involvement in all these areas will help us gain visibility from our other professional colleagues, from our own organizations, and from society in general. The public relations aspects of realizing our other opportunities will “add value” to those efforts and will make some of those opportunities more obtainable.

Summary

While these are not the only areas of opportunity identified, these nine topics do represent something of a consensus on the part of SLA members who provided input into the visioning process. The first thing one might realize in looking at this list is that as an organization, Special Libraries Association is already involved to some degree in all these areas. The second thing one might realize is as individuals, SLA members are heavily involved in all these areas. In other words, some of the groundwork for

turning these opportunities into accomplishments is in place, and as an organization, SLA seems to be addressing those areas that will be important for the future of the profession, the Association, and all of us.

In conclusion, there is one other aspect of the visioning process we need to consider. For any vision statement to be worthwhile, it should have an unlimited horizon. The areas identified above all meet that criteria. They are issues without a specific beginning in most instances, and they are certainly issues without a definitive ending. While we may be able to anticipate what our jobs will be like in the year 2005, that process doesn't stop in 2005 and we find that we were either right or wrong in our predictions. There are no “quick fixes” or “sure things” with regard to the future (except, of course, that someday the future will be now). In many regards, the future is like information—we can all partake of it simultaneously and we can never use it up completely. The future is information and it is up to all of us to add value to it.

President's Visioning Committee (1992-1994)

Stephen Abram
Hope Coffman
Lynn Ecklund
William Fisher, Chair
Nick Mercury
Ellen Mimnaugh
Marilyn Stark
Lynn Tinsley
Lois Webster
William Woodruff

(Alternates)

Carolyn Hardnett
Bob Isaacs
Charles Missar
Jeanette Mueller-Alexander

(Consultants)

Joseph Becker
Paul Klinefelter
Jim Olsen
Thomas Pinelli

William Fisher is a professor at the School of Library & Information Science at San Jose State University in San Jose, CA and Chair of the President's Visioning Committee.

1993 Salary Survey Update

To assist special librarians in determining competitive salaries, the Special Libraries Association conducts an in-depth salary survey biennially. For the intervening years between full membership surveys, a random sample of 25% of the membership is polled to collect updated salary data. These results provide an overview of special librarians' salaries and a measure of annual increases since the most recent in-depth survey.

During April 1993, survey forms were mailed to a random sample of 2,864 SLA members and associate members. A total of 1,532 valid responses were received. This represents a 53% valid return rate from both the United States and Canada combined.

This is a very high response rate for a mail survey. The level of response has several implications for its results:

- 1) It indicates a high degree of interest and involvement of the part of SLA members in their organization generally, and in SLA's efforts to obtain their input;
- 2) It provides a high degree of confidence that the results of the survey will be indicative of the membership groups as a whole; and
- 3) It provides a smaller margin of error in any statistical estimates which may be made of the membership population based on the sample data.

Table 1 reports changes in both mean and median salaries from April 1, 1992 to April 1, 1993 within nine U.S. Census Divisions, the overall United States, and Canada. Mean and median salary figures are included for both 1992 and 1993 along with the percentage change.

Overall U.S. mean salaries increased by 1.6% between April 1, 1992 and April 1, 1993, while Canadian mean salaries increased by a slight .46% for the period ended April 1, 1993.

Both median and mean salaries showed increases for a majority but not all Census Divisions in the United States. Increases in median salaries ranged from 13.1% in the East South Central to 1.6% in the Middle Atlantic. The Pacific Division showed a decrease in median salaries by 1.4%. Mean salary increases ranged from 11.9% in the East South Central to .86% in the South Atlantic.

Table 2 depicts salaries in rank order of median salary by Census Division within the United States and for Canada and the United States overall.

While the Middle Atlantic maintained its rank as number one, there was movement in ranking as New England and the Pacific Divisions reversed their positions from 1992 and became second and third respectively. The South Atlantic retained its rank as fourth, but the East South Central moved up to fifth from its 1992 rank as seventh. The East North Central dropped from fifth to sixth, while the West South Central dropped from sixth to seventh. The West North Central and Mountain Divisions retained their respective rankings as eighth and ninth.

Tables 3 and 4 reflect salaries by job title for both the U.S. and Canada. All positions have a wide range for salaries, which is indicative of the diversity in the size of the libraries and job tenure of the individuals covered by the survey.

Unemployment

Out of 115 valid Canadian responses six or

13% indicated they were either unemployed or had been unemployed during the period April 1, 1992 through March 31, 1993. The average number of months unemployed was six.

For the United States there were 1,329 valid responses on employment status, out of which 111 or 8.3% had been unemployed for some portion of the year ending March 31, 1993. The average number of months employed was six.

Table 1

1993 Mean and Median Salaries by Census Division in Rank Order of Percentage of Change in Median from 1992 to 1993 including National Overall Figures

Census Division	Median %			Mean %		
	1992	Change	1993	1992	Change	1993
East South Central	35,000	13.1%	39,600	34,807	11.9%	38,962
West South Central	35,000	10.0%	38,500	37,069	12.2%	41,638
Mountain	34,155	8.6%	37,100	35,806	2.5%	36,734
West North Central	34,980	6.2%	37,150	37,019	5.9%	39,223
New England	40,000	5.2%	42,100	42,441	2.0%	43,308
East North Central	38,000	2.5%	38,983	39,668	1.1%	40,138
South Atlantic	39,000	2.5%	39,979	41,923	0.86%	42,284
Middle Atlantic	42,754	1.6%	43,467	45,801	(0.07%)	45,767
Pacific	42,000	(1.4%)	41,400	43,649	(2.1%)	42,738
Overall United States	39,749	0.96%	40,133	41,673	1.8%	42,444
Canada*	45,450	0.22%	45,550	46,901	0.46%	47,120

* Salaries reported as of April 1, 1993 in Canadian dollars. The exchange rate on April 1, 1992 was approximately Canadian \$1.19–United States \$1.00. On April 1, 1993 the exchange rate was Canadian \$1.25–United States \$1.00.

Table 2**Geography Salary Distribution in Rank Order of 1993 Median**

Census Division	Average Lowest		Median		Average Highest		Number	Mean
	10%	25%	50%	75%	10%	10%		
Middle Atlantic	27,205	35,825	43,467	52,275	71,595	291	45,767	
New England	29,048	36,038	42,100	48,375	67,955	99	43,308	
Pacific	24,953	35,033	41,400	49,025	64,995	202	42,738	
South Atlantic	24,370	31,250	39,979	48,950	74,990	224	42,284	
East South Central	22,080	29,800	39,600	42,000	56,420	26	38,962	
East North Central	23,980	31,200	38,983	46,800	62,035	226	40,138	
West South Central	26,970	32,950	38,500	48,250	65,030	64	41,638	
West North Central	22,780	30,038	37,150	45,800	60,420	66	39,223	
Mountain	20,625	30,325	37,100	42,475	55,575	35	36,734	
Overall United States	25,002	33,475	40,133	48,989	67,028	1,233	42,444	
Canada*	30,020	39,200	45,550	53,750	66,410	128	47,120	

* Salaries reported as of April 1, 1993 in Canadian dollars. The exchange rate on April 1, 1993 was approximately Canadian \$1.19—United States \$1.00. On April 1, 1993 the exchange rate was Canadian \$1.25—United States \$1.00.

Table 3**1993 Salary Distribution by Job Title—United States**

Job Title	Average Lowest		Median		Average Highest		Number	Mean
	10%	25%	50%	75%	10%	10%		
Manager	31,213	39,075	46,488	55,588	78,025	485	49,317	
Asst./Section Head	24,023	35,050	41,150	48,017	60,140	144	41,772	
Libr./Info. Specialist	24,180	30,004	36,030	42,400	54,020	566	37,031	
Support Staff	16,935	19,975	23,900	27,025	37,965	17	25,206	

Table 4**1993 Salary Distribution by Job Title—Canada**†**

Job Title	Average Lowest		Median		Average Highest		Number	Mean
	10%	25%	50%	75%	10%	10%		
Manager	38,010	47,200	53,000	59,250	71,790	52	54,248	
Asst./Section Head	29,630	38,300	45,650	54,300	66,370	16	47,144	
Libr./Info. Specialist	29,230	36,100	41,000	45,350	54,970	56	41,552	

** Salaries reported as of April 1, 1993 in Canadian dollars. The exchange rate on April 1, 1993 was approximately Canadian \$1.19—United States \$1.00. On April 1, 1993 the exchange rate was Canadian \$1.25—United States \$1.00.

† Job Title categories with a response rate of 5 or less have been dropped from the table.

Association Insights: Compensation Administration

by *Miriam A. Drake*

Background

At its January 1993 meeting, the Board of Directors, at the request of the Chapter Cabinet, instructed the Association Office Operations Committee to consider making specific and full disclosure of the Association's executive compensation to the membership at large and to report back to the June 1993 Board meeting.

The motion as referred to the Board by the Chapter Cabinet was as follows:

Revising membership dues is a sensitive issue as stated in document A93-61. Members' need for information rises significantly and is governed by the ultimate need to make a "yes" or "no" decision on increasing their dues. Since a portion of the membership dues is used for compensation of the Association's executives, it is appropriate that the membership have complete information on the level of executive compensation now being paid before any potential dues increase is considered in the current economic climate, and in light of the preliminary report seeking a membership dues increase—Board document A93-61 prepared by the Special Committee to Review Association Finances. I move that the Chapter Cabinet

request the Board of Directors make specific and full disclosure of the Association's executive compensations to the membership at large before any dues increase is proposed.

Association Finances—The Big Picture

Executive salaries account for less than 10% of the Association's expenditures. While this is a worthwhile percentage to study, it should not be viewed as any more or less important than the other 90%. The following is a breakdown of all of the Association's expenditures and income.

Since the last dues increase in January 1986, the Association has been able to implement a great number of new or expanded services. In 1986 the Association did not have formal or staff-supported government relations, public relations, or research programs. The *Who's Who in Special Libraries* was 186 pages compared to today's expanded, more useful directory of 380 pages including new indices, fax numbers, and E-mail listings. *Specialist* was a four-page bulletin and now is a 16-page newsletter. The education area was without executive education, career services, and self-study programs. The Association Information Resources Center was a small room with a scanty collection handling hundreds of calls per year compared to the current level of hundreds per

Expenses

(Program expenses include direct costs as well as the salaries allocated to the program.)

Program	Cost per Member
Professional Development	\$22.00
Research	11.35
Information Resources	7.60
Public Affairs (Gov't Relations & Public Relations)	29.75
Allotments to Chapters, Divisions, Student Groups, and Caucuses	16.45
<i>Special Libraries</i>	15.85
<i>SpeciaList</i>	14.55
<i>Who's Who</i>	7.10
Annual Conference	42.45
Student/Retired Member Subsidy	10.75
Membership Recruitment/Retention	16.70
Marketing	9.95
Leadership Services	30.65
Career Services	2.50
Administration	3.65
Fund Transfers	14.40
Scholarship/Grants	2.15
NSP Program	14.45
Total	\$272.30

Income

Program	Cost per Member
Membership Dues	\$62.25*
Membership Fees	6.10
Exhibits	53.29
Advertising/Sponsorships	29.45
Mailing List Rental	11.28
Interest	13.87
Miscellaneous (incl. property income)	3.80
Subscriptions	7.93
Registrations	59.24
Product Sales	19.46
Contributions	.56
Other income	5.07
Total	\$272.30

* \$62.25 reflects the average dues paid by all categories of membership.

month. State-of-the-Art Institutes, World Wide Conference, International Special Librarians Day, and leadership training were just dreams. These dreams are now realities, and these dreams cost money.

In this same period, the cost of dues has not changed—in fact, the average dues paid per member has decreased due to greater participation by those in lower dues categories. Since 1986, annual dues income has increased by \$44,000 to \$859,000. In this same time period, SLA has been greatly successful in increasing non-dues income, increasing by 1.5 million dollars to 2.9 million dollars per year. In recent years the growth in non-dues income has leveled off dramatically; the Association is fortunate that it has not declined in this recessionary economy.

The dilemma we as members of the Special Libraries Association and the profession face is: If we are going to push the profession to the next level of recognition and respect, how are we going to pay for these efforts? Can we afford to pay the bills? Can we afford **not** to pay the bills? Can we forego the needs of individuals and use funds to improve the standing of the profession? Can the members do the work themselves and not hire competent staff? Can we, and should we, expect the members to invest in the future of the profession? These are all questions that need to be addressed when thinking about the current financial position of the Association.

SLA Salaries—How They Compare

In 1990 and in 1993, personnel consultants were hired to review the entire salary program as well as the specific salaries paid to individuals at the executive level of the Association. For the purpose of these studies, the executive level was defined as five positions: the Executive Director, Associate Executive Director, and Assistant Executive Directors. In the 1990 study the consultant expressed concern about the ability of SLA to hire and retain good employees given the salaries being offered. The consultant recommended several alternatives to the then-current salary program. It was decided by AOC, Finance Committee, and the Board of Directors

that SLA could not afford to implement any of the suggested programs. As an alternative, the Board decided to try to put together a plan that would help SLA improve its competitive position in the area of salary. This was done by increasing the salary budget each year for three years by an additional 2.5%, for a total each year of approximately 7%. A portion of this money was to be used for performance-based increases and a portion of the funds were to be used to adjust salaries that were lagging behind.

In the 1993 review, it was indicated that SLA had made some gains in its salary administration but, at best, salaries being paid by SLA were average (and many were below average) as compared to similar associations in the Washington area. A more complete review of individual executive salaries indicated that all salaries paid to the top five individuals were below average.

The 1993 study was performed by Cordom Associates, a Washington, DC-based personnel consulting firm specializing in the Washington association sector. Cordom has collected and analyzed the association salary trends for 18 years. Cordom compared the salaries of the executive level staff within SLA to those who hold similar positions in Washington, DC professional (individual based membership) associations with similar budget and staff size. Their findings indicated that SLA's pay level is below average in all categories at an average of 11%. The total salaries paid to the top five staff at SLA is \$395,000, or an average of \$79,000 per executive. Cordom indicated that through his survey and research of 94 similar associations, the total average compensation for the same five positions would have been \$436,000, for an average of \$87,000 per employee. The study also indicated that if SLA were to pay in the third quartile, the total salaries would be \$535,600 or an average of \$107,000 per executive.

The Cordom survey indicated that the average salary being paid to the executive staff of comparable associations is greater than that paid to executive staff of SLA.

As a result of these findings and other ongoing salary reviews by AOC, Finance Committee, and the Board it is apparent that SLA's salary program at best is a conservative one.

	Comparable Average	SLA	Variance
Executive Director	\$150,363	\$136,924	10%
Associate Executive Director	\$94,033	\$87,510	7%
* Assistant Executive Director, Professional Growth	\$60,267	\$59,500	1%
Assistant Executive Director, Information Services	\$59,906	\$57,300	5%
Assistant Executive Director, Financial Services	\$71,863	\$54,000	33%

* The position of Assistant Executive Director, Professional Growth was eliminated effective April 1993, reducing executive salaries to \$335,734 or 9% of total budget.

SLA Salary Paygrade Schedule and Researched Market Ranges

The following is a salary comparison of all positions at SLA to suggested market salaries as developed using information from Cordom Associates and Hubbard Revo-Cohen, Inc., a personnel consulting firm which was hired by the Board of Directors in 1990 to conduct an employee attitudinal survey.

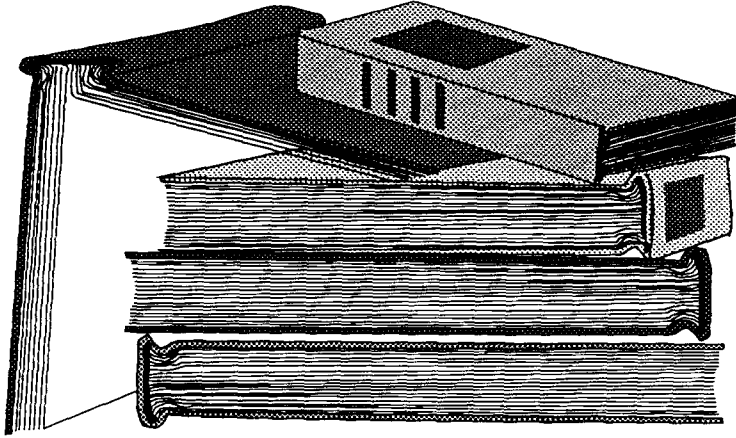
Pay Grade	Number in Position	Market Range	Paid by SLA
Unclassified (Executive Director)	1	\$117,000– \$182,000	\$136,924
10 (Associate Executive Director)	1	\$71,632– \$114,620	\$87,510
9 (Assistant Executive Directors)	3	\$53,330– \$85,333	\$56,933*
8 (Directors)	4	\$42,862– \$68,583	\$41,000*
7 (Managers)	12	\$28,983– \$46,305	\$30,000*
6 (Secretary A)	4	\$18,544– \$27,500	\$24,000*
5 (Secretary B)	6	\$17,435– \$24,412	\$20,500*
4 (Clerk)	2	\$17,100– \$23,944	

* The figures represent average salaries of all positions in this pay grade.

The actual salaries paid by SLA fall below the mid-point in all ranges.

Miriam A. Drake is Dean and Director of Libraries at The Georgia Institute of Technology Library and Information Center, and she is President of Special Libraries Association.

Book Review



***Preservation of Electronic Formats & Electronic Formats for Preservation*, by Janke Mohlhenrich. Fort Atkinson, WI: Highsmith Press, 1993. 144p. ISBN: 0-917846-17-6.**

This is a collection of six papers which were presented at a 1992 conference of the Wisconsin Preservation Program (WISPPR). The papers reflect the research in progress at the time of the conference in the areas of electronic scanning, the storage of textual, numeric and graphic data; and network access to electronically reformatted materials.

WISPPR is an adjunct committee of the Council of Wisconsin Libraries. It was established in 1987 and its membership is representative of the different types of libraries in the state with the exception of school libraries. It has assumed the task of presenting education programs, conferences, and workshops, and distributing print materials on the preservation of library collections.

The six papers describe the use of various electronic formats, digital imaging, and magnetic tape and optical media for the preservation of library materials and the preservation of the electronic formats themselves. The authors of the papers were selected for their involvement in

projects which applied electronic formats to solve preservation problems.

Anne Kenney, Assistant Director for Preservation at Cornell University, describes the cooperative project for the University and Xerox Corp. using digital image technology to solve the brittle paper problem. In the second paper, Michael Pate, Assistant Director of Public Services at Marquette University, describes the start-up phase of the project at Marquette to scan archival collections for digital storage and transmission. Included in this description is a discussion of the early decision process, the preparation of application grants, the development of a prototype project, and the possible impacts of the project. Fynnette L. Eaton, Branch Chief of the Technical Services Branch at the National Archives and Records Administration, discusses the use of magnetic tapes to store records, as well as the physical and intellectual preservation of electronic files. Basil Manns, Physical Scientist for the Library of Congress, discusses the technical consideration one needs for choosing electronic formats for preservation. Mark Arps, Marketing Manager of the CD-ROM 3M Optical Recording Department, compares the different types of optical media: CD-ROM, WORM, and R/W and their applications to preservation of library materials. Finally, Don Willis, Direc-

tor of Advanced Technology at the University of Michigan, proposes the use of a hybrid technology combining imaging and high resolution microfilm to preserve materials. Also included in the book are the preface and the conclusion, which are both written by the editor, Janice Mohlhenrich, and a forward by Louis A. Pitschman, Chair of WISPPR.

In addition to the text of the papers, several include short bibliographies and all are followed by the contents of the question and answer periods that followed the presentation of each paper at the conference. These reflect the concerns of the attendees about using electronic formats for preservation and also point out the need for much more education of librarians and information specialists in this area.

The papers are all well-written, informative, and easy to understand. Line drawings through

the text help to explain the technology of the electronic formats used in the various projects. Also included in the book are several very helpful appendices. Appendix A is an annotated bibliography on electronic preservation compiled by Karen L. Hanus, Reference Librarian of the Medical Colleges of Wisconsin. The entries are current and the annotations are detailed. Of the 59 entries in the bibliography, eight percent were published between 1980 and 1984, 51 percent between 1985 and 1989, and 41 percent after 1990. Another appendix is a glossary of technical terms used in the text of the papers.

This is a good introductory book for anyone who is considering the possibility of using an electronic format for preservation of library materials.

Dr. Lucille M. Wert is an Emeritus Professor at the University of Illinois at Urbana/Champaign.

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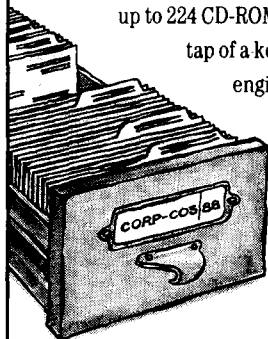
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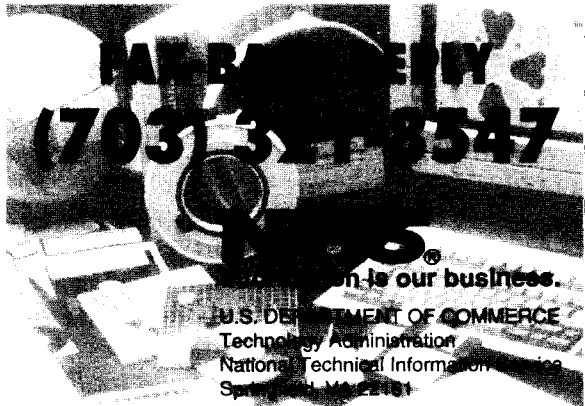
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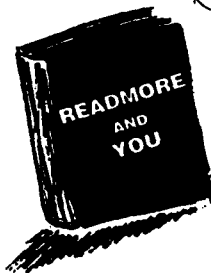
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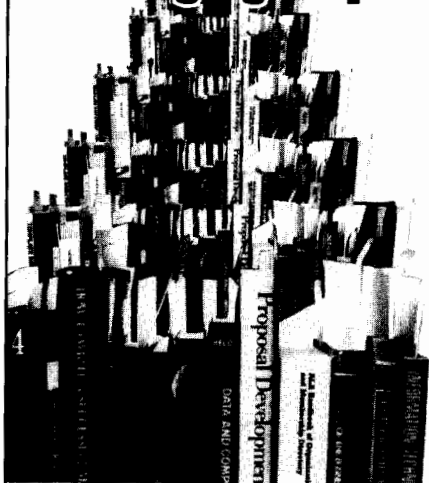
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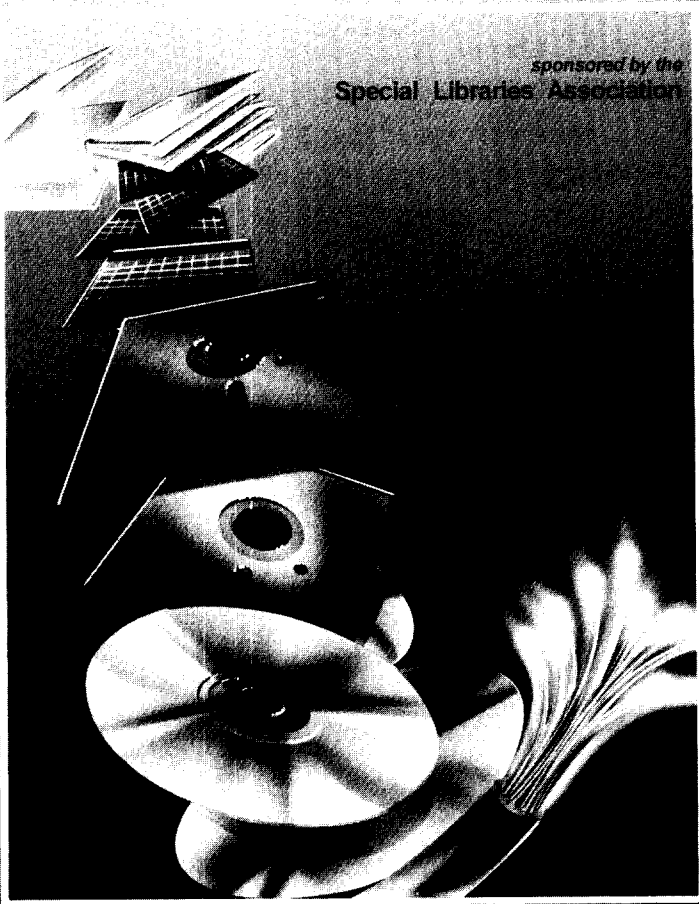
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