1996 FLICC Symposium on the Information Professional
Dangerous Liaisons?
Partnering With Computer Professionals to Create Digital Information Services
Speakers:
Morning Session:
Keynote: Jose-Marie Griffiths, University of Michigan, Information Technology Division
Steve Hufford, EPA
Gerri Michael-Dyer, Agency for Health Care Policy and Research
Phyllis Christenson, General Accounting Office
Kenneth Thibodeaux, National Archives and Records Administration
Afternoon Session:
Keynote: Howard Harris, RMG Associates
Mike Handy, Library of Congress, Information Technology Services
Sybil Bullock,Redstone Scientific Information Center
Debora Cheney, Pennsylvania State University Library
Jane Bossert, Library of Congress, National Digital Library Program
Judith Zidar, National Agricultural Library

More and more often, federal librarians are creating digital reference products related to the special collections of their libraries. In order to produce web pages, CD-ROMs or database systems, librarians must combine their subject, reference, and cataloging expertise with the skills of their agency's Information Resource Management (IRM) staff.

Such partnerships can be difficult to negotiate. On September 24, the 1996 FLICC Symposium on the Information Professional--entitled "Dangerous Liaisons? Partnering With Computer Professionals to Create Digital Information Services"--brought representatives from libraries and IRM departments together to share partnership strategies.

Jose-Marie Griffiths, Executive Director and (Chief Information Officer) CIO of the University of Michigan's Information Technology Division, presented the morning's keynote speech, an overview of librarians' role in the digital environment.

"Our ability to create liaisons is based on our ability to define our role," said Griffiths. Despite common fears that online searching will replace library functions, she finds such liaisons exciting rather than dangerous.

"Librarians are the people who manage, understand, collect, and disseminate information," she said. "We have true user focus [and therefore should] mediate the interface between people and resources." Such mediation involves using tools to create, capture, organize, present, store, retrieve, analyze, deliver, and preserve information. Librarians must also be prepared to design, build, and structure systems and interfaces for electronic publishing and information delivery.

Griffiths predicted that intellectual organization, analysis, packaging, user education, end-user searching, and the creation of user-friendly interfaces will take on more importance for librarians in the digital age. Librarians should work to "provide order to the randomly generated mass of electronic information." Functions that will shrink in importance include collection building, physical proximity to collections and users, and circulation.

However, the rise of the digital library does not mean the death of the traditional one. Griffiths defended researchers' need to see materials in their original form. "There is a tremendous knowledge in seeing the tools that people used to create. In a perfect world we wouldn't convert everything. We can't ever give up the role of

providing access to the original."

Griffiths debunked the notion of an "all-digital world" for other reasons. She warned that seemingly simple interfaces mask extremely complex functions that may easily be misunderstood by users. "The scarcest resource people have is time. A trusting relationship between client and librarian is crucial," she said.

She compared the concerns of librarians to the concerns of IRM professionals:

IRM Organizations deal with Library/Information Organizations deal with
Computing infrastructure Knowledge resource management
Insides of computers User needs and advocacy
Network architecture Tools and technologies such as classification, indexing, and information retrieval and storage
Computers and network operations Mediation and providing access
Providing technological infrastructure Providing information literacy

These roles are complementary. For IRM professionals in the days of the mainframe, "the customer was the computer," explained Griffith. "They cared for, nurtured, and protected the computer from the user." In contrast, librarianship involves user-orientation--and experience in finding out what information people are actually looking for.

The "ideal team" for any digital publication project would include a librarian (or "knowledge manager"), an IRM professional, and an end-user, Griffiths suggested. "To stay in relative isolation is not good for the organizations or the users," she said. "That's why I believe the liaison isn't dangerous."

Our Skills--Their Projects
The morning panel--entitled "Our Skills--Their Projects"--featured agency IRM and information professionals who recognized that librarians' skills were needed to improve on projects ranging from the creation of a Government Information Locator Service (GILS) to the electronic preservation of government records.
Steve Hufford, IRM Director of the Environmental Protection Agency (EPA) and Chair of the EPA Government Information Locator System workgroup, explained the role of EPA's librarians in the creation of the agency's GILS. In addition to librarians, the GILS workgroup included records managers, information resource stewards, public affairs and FOIA staff members, and IRM staff members.

"At EPA the librarians have a much better grasp on the information than the rest of us," said Hufford. Librarians' contribution to the project included the identification of relevant information resources, confirmation of system requirements, creation of descriptive records, and the assignment of controlled vocabulary terms. EPA librarians also respond to user requests for additional assistance in finding EPA information. They will be responsible for maintaining the GILS service, expanding links to automated EPA information resources, and further organizing the EPA web site.

Gerri Michael-Dyer, Electronic Dissemination Advisor for the Agency for Health Care Policy and Research (AHCPR), described her move into digital librarianship. "I love books...and I'm mechanically disadvantaged," claimed Michael-Dyer, who oversees a web site (http://www.ahcpr.gov/) which offers agency information, research reports, consumer health information, a GILS service, and a topical index. "If I can do it, anyone can."

Dyer compared using the Internet as a research tool to air traffic control over O'Hare. "Somebody has to manage, navigate, and distill information," she said. "For this, librarians are uniquely qualified." The systems

administrator at AHCPR handles the technical aspects of web administration; Michael-Dyer is responsible for creating the contents, links, and design.

In addition to the web site, the AHCPR Information Resources Center offers access to online data retrieval systems and CD-ROM subscriptions on the agency's LAN; an electronic bulletin-board; and electronic access to AHCPR documents through the NLM full-text retrieval system. Anticipated products include interactive presentations and the development of a prototype AHCPR intranet.

Michael-Dyer suggested that librarians should be included in the planning of all agency projects, as they can bring insights into available resources. She urged librarians to be proactive, to "investigate, incubate, insinuate, infiltrate, and integrate," projects.

Phyllis Christenson, Director of the General Accounting Office (GAO) Information Service Center, has presided over the agency library's evolution into a digital information service center. "I'm wildly excited about what's happening," said Christenson. "I love the techies. We work extremely well together."

Three years ago, the library was threatened with extinction. Christenson's efforts and the arguments of both library and agency staff convinced GAO managers that the library's services were crucial to the completion of the agency's tasks. The Information Services Center is now under the management of the GAO Chief Information Officer, and includes publishing, information services (see http://www.gao.gov), telecommunications, networks, and software functions.

How did this change happen? Christenson explained:

She had a "seat at the table," and influenced GAO management to combine library and technical functions.
She claimed the distribution of GAO reports for the library.
She claimed the GAO GILS for the library.
She pursued records management responsibilities.
She had librarians work on bringing Internet access into the agency.
She redesigned the library so that it looked efficient and modern.
"Downsizing was devastating, but it focused attention on library functions," Christenson said. Librarians understand information, she explained. They are committed to helping, they are articulate, and have technical and managerial skills. They are also more interested in providing information than acting as gatekeepers. "Granted, information is power," she said. "But we are the people who want to give it away."

Christenson stressed the importance of valuing technical staff people. "Appreciate their jargon, because we have a jargon of our own...and if you can, get technical people on your staff; they bring a wonderful perspective." Above all, she entreated librarians, "please embrace change."

Kenneth Thibodeaux, Director of the Center for Electronic Records at the National Archives and Records Administration (NARA) discussed the electronic conversion of government documents. An historian by profession, Thibodeaux is very concerned about retaining both the meaning and the context of records.

"Our most important clients won't be born for 100 years," he said. "The fundamental thing we can't fail in is ensuring that the original records are available." Generally accepted levels of error that are introduced when a document is converted from paper to electronic format are not acceptable from an archivist's standpoint. Because of this, Thibodeaux stressed, "the archivists need to tell tech people what needs to be done . . . . The technology should help us, not lead us."

He explained that IRM staff members tend to play their technological strong suit, and may be resistant to change. “They are very much in the trees and branches--they need someone to help them see the forest.”

Their Skills--Our Projects

The topic for the afternoon sessions was “Their Skills--Our Projects.” Howard Harris, Vice President of RMG Associates, presented the afternoon’s keynote speech. He described a number of large-scale paradigm shifts which are influencing library services and projects:

A change in the world economic and political order which has created a more open and volatile global market.
A new organizational paradigm which places emphasis on information strategy, quick responses to change, teamwork, and re-engineering to enhance productivity and the quality of products and services.
New information technology which is based on a convergence of the computer, communications, content, and consumer electronics industries. It is characterized by networking as a model for thought, open systems and standards, standards-based integration of systems and services both within and beyond the organization. Because library technology is often at “the edge of the curve,” it influences the development of international standards.
The rise of the “New Business,” in which traditional companies and industry groups reshape themselves in response to the above changes. “New Businesses” must face increased competitive forces that encourage them to merge with other companies or change their focus to address more specialized audiences.
Harris explained that libraries will have to shift their focus from “library automation” to “information strategy” in order to keep up with these large-scale changes. For example, libraries need to plan acquisitions and services in connection with the information needs of their core users, creating information products which are “just in time” and “just for me.” They need to create budgets and schedules which allow ongoing purchases to facilitate technological improvement and electronic acquisition. They need to work on integrating systems and services rather than purchasing discrete systems which may conflict with emerging software and language standards. They need to move from analog to digital resources, catalogs, and document delivery.

Harris listed services which might appear as a result of these “information strategies”:

a library system, including OPAC;
abstract and index subscriptions;
local full text/image multimedia;
an electronic reserve system;
subscription and pay-per-view databases;
network information serving;
Union Catalog services;
an Internet resources indexing mechanism;
interactive video and conference capability;
agency-wide information services.

Because of the convergence of information professions, Harris suggested, it is not always easy to tell if a team project is “ours” or “theirs”--if it falls under the purview of an agency’s library or IRM staff. “How can we tell?” he asked.
Certain questions help to clarify the situation. Are team members’ goals for the project shared or in conflict? Who is funding the project? How visible is the project within the organization, and is the potential for recognition causing friction between departments? Who has the power to delegate tasks? Who is accountable for the success or failure of the project? Whose skills are most crucial to the project’s completion? In order to work together successfully, it helps to answer these questions early in the life of the project.

“All of us are going to have to learn a great deal to work on a team,” concluded Harris.

Mike Handy describes himself as “a migrator.” Group Leader of the User Support Group at the Library of Congress division of Information Technology Services, he is a librarian by training who is now in charge of an 8,000 line PBX, a 5,000 node TCP/IP Network, maintenance of all LC workstations, and the future development of LC networks.

“I manage us-and-them’ relationships all day long,” said Handy. He provided a set of “gross generalizations about good technical people” which librarians might find helpful:

Good technical people prefer to talk details and precision.
They want to hear how a system works, and must be given time to consider and assimilate what they’ve learned. This may seem irksome, but can save you a great deal of trouble. They also will bring the conversation down to details in an instant, and take any/all sidetracks “This may them lead off into interesting directions,” said Handy “You have to make a choice--will you go with them?”
Good technical people dislike doing things for the wrong reason.
They don’t like to implement technology in order to solve political or personnel problems. Handy advised that the best way to handle such situations is to acknowledge the problem, and try to get on with things. They also place great value on standards, and balk at creating systems which aren’t up to par. Handy confessed that this used to bother him, but that he has become “a standards bigot of the worst order” because he’s learned how much simpler it makes later processes.
Good technical people dislike being told what the answer is.
Try to tell them what the problem is, not what you think the solution is. Try to avoid ambiguous or broad statements, like “your mainframe is down!” or “when will I get my LAN?” They need to know exactly what you are trying to accomplish before they can help you.
Good technical people delight in the beauty of elegant solutions.
Because of this, they may devise “overkill” solutions, writing complex programs to perform simple tasks. This can produce new opportunities through serendipity, but in general, needs to be managed. They may also have a favorite programming language that they’ll try to apply to every project. “They’re like the little boy with a hammer to whom everything is a nail,” said Handy.
He offered other recommendations:

Put things in writing.
Quantify where possible.
Ask lots of questions.
Meet with them one-on-one instead of in groups.
“Co-opt them for your projects--but keep their manager informed.”
Sybil Bullock, Director of the Redstone Scientific Information Center (RSIC), manages a 4,000,000 item library which serves both government agencies and contractors. She has worked on several digital information products, including the conversion of over 300,000 pages to 12 standalone CD-ROMs and the creation of a full text web-accessible RSIC database of reports, books, and manuals (https://rsic.redstone.army.mil/).

Bullock defines the “virtual library” as “a library that uses virtually every tool available to provide virtually every service imaginable.” However, she advised librarians, “don’t get so bogged down in technology that you don’t serve your customers.”

In order to create successful digital information services, Bullock suggested, you should work to both know your customers and find new customers. Most importantly, however, “maintain motivated, trained, visionary,

risk-taking staff that's allowed to make mistakes."

In the future, she expects that RSIC will expand its information consulting, implement a complete electronic publishing system for its parent organization, and create and package requested information.

"Our bread and butter will continue to be based on developing information products for customers," Bullock concluded.

Debora Cheney, Head of the Documents/Maps Section of Pennsylvania State University Library, related some of the power struggles which may occur when librarians team up with IRM professionals.

"What is missing in the partnership rhetoric," she suggested, "is the discussion of internal partnerships within an organization." Management style, politics, the available resource base, terminology, and the type of organizational service may all skew internal partnerships.

In 1995, Cheney was working to link her department to the GPO Access system so that the Pennsylvania State University Library could serve as a Federal Depository Library gateway. To do so, she had to rely on the library's Computer Services department to establish dial-up access. GPO provided little programming, hardware, or connection support.

The only "carrot" that she had to offer the Computer Services department was the fact that they would be creating one of the first university library gateway systems in the US. At that time, GPO required depository libraries to use SWAIS, which the Computer Services staff members did not want to work with. Computer Services staff also protested that the gateway project--which by mandate had to be accessible to the entire congressional district--would block access to computers by staff and students. Cheney's project also competed with other department initiatives and external partnerships. Because the head of Computer Services had a direct channel of communication to the Dean of Libraries, Cheney found it difficult to move the project forward.

Although the gateway was finally created, Cheney was frustrated by the process. The bottom line? "Centralized computing can hinder partnerships," she said, between both internal and external entities.

Jane Bossert, a Digital Conversion Specialist at LC's National Digital Library Program, outlined the interactions of different internal and external partners who have contributed to the National Digital Library Program (for an example, see the American Memory Collections at http://lcweb2.loc.gov/ammem/ammemhome.html).

The program involves a collaboration between LC, other major research institutions, educational organizations, and telecommunications and imaging partners. Internal LC departments involved include Information Technology Services, Automation Planning and Liaison Office, Network Development and MARC Standards Office, and the curatorial divisions. Coordinating the requirements and cultures of the many external and internal partners is an extremely complex venture.

Internally, the library and computer professionals have both shared and separate responsibilities for this project. "The librarians provide context," said Bossert. The responsibilities of the librarians and collection curators include:

selecting materials to be digitized;
creating interpretative digital resources such as texts, images, and audio and video texts;
providing descriptive metadata for indexing and retrieval;
developing presentation and access points;

keeping the information updated.
On the other hand, the responsibilities of the computer professionals include:
establishing and maintaining the system infrastructure;
maintaining the indexing and retrieval system;
maintaining the storage system;
providing programming support for the creation of utilities;
providing file format conversion support;
providing system statistics;
determining the approach for creating a repository for text and images.
Librarians and computer professionals both share responsibilities for:
developing project plans;
determining appropriate digital formats;
developing the user interface;
testing the system.
The task of development is further complicated by the difficulty of determining the user base. Designers of the American Memory collections try to make them accessible for K-12 education, but complex enough to retain the interest of lifelong learners.
Bottlenecks have arisen at LC as library and computer professionals collaborated on the National Digital Library project. Bossert offered suggestions to improve communication and workflow. It is very important, she said, to communicate with all levels of staff members working on the project, on a one-to-one basis if possible. Project plans should be jointly developed and should set achievable goals. It is helpful to form working groups to address particularly complicated or sensitive tasks. Finally, it may be helpful to publicly announce goals--such as the National Digital Library Program goal of digitizing 5 million items by the year 2000--in order to motivate project participants.

Judith Zidar, Head of the Imaging and Conversion Unit of the National Agricultural Library (NAL), was the day's final speaker. "This is a topic near and dear to my heart," said Zidar. "Working with computer professionals is really an adventure."

Zidar coordinates the National Agricultural Text Digitizing Program (NATDP), a cooperative effort between the NAL and 45 land grant libraries which uses optical scanning and text recognition technologies to convert printed agricultural materials to data stored on CD-ROMs. The twin goals of the project are the preservation and distribution of this data; in 1995 the NATDP became the focal point for NAL's electronic preservation effort.

Because NATDP was designed specifically to capture reference materials, users were asked to participate in system design along with system managers, vendors, and SGML coordinators. Zidar credited much of the program's success to the input from multiple levels of users. She identified other features of good partnering, including: a clearly defined, shared goal, constant communication between all parties, mutual respect, and mutual benefit.