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# Indiana Libraries

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**Editor:** Judy Dye, Indiana University

**Managing Editor:** Raquel Ravinet, Indiana Library Federation

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## **Advertising and Subscription Offices:**

Indiana Library Federation  
6408 Carrollton Avenue  
Indianapolis, IN 46220  
Phone: (317)257-2040  
Fax: (317)257-1393

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# Indiana Libraries

## Volume 14, Number 2

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### New Technologies in Indiana Libraries

**Note:** The Volume 14, Number 1, issue of *Indiana Libraries* was a special edition. Volume 14, Number 2, is the first regular issue of the year. Volume 14, Number 3, will be published in December

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# **Indiana University School of Library and Information Science Library: New Faces and New Directions**

*by*

*Stephen P. Harter, Professor, School of Library & Information  
Science and former Chair, SLIS Library Steering Committee*

*Judith Dye, Librarian, School of Library and Information  
Science Library*

*Geoffrey McKim, Manager of Technology, School of Library  
& Information Science*

*Indiana University, Bloomington, IN*

## **Introduction**

During Fall Semester 1992, an Indiana University School of Library and Information Science (SLIS) Library Review Committee was appointed by Indiana University Libraries Dean James Neal as the first of a planned series of reviews of university libraries and departments. The Review Committee was chaired by Patricia Steele, associate dean of libraries. Members of the committee included SLIS faculty members, university librarians, and SLIS students. The committee undertook a wide range of information-gathering activities. Input into the review process was solicited from SLIS students and faculty, Indiana University librarians and staff, and others. Open forums and meetings with small numbers of SLIS faculty and librarians were held. Several existing data sources were consulted, and questionnaires solicited additional information from interested groups. The committee submitted its report to Dean Neal on December 21, 1992.

The purpose of this article is to summarize the findings of the Review Committee and to discuss changes in the SLIS Library that were wholly or in part motivated by the committee's report. Particular attention will be given to the library's new collaborative facility, the Center for Information Technology Experimentation and Development (CITED).

## **Review Committee Findings and Recommendations**

The committee commented on the many changes taking place in the

direction of SLIS and its faculty, which themselves reflect developments in technology and the profession. In particular, the committee noted an ongoing shift in SLIS, and in librarianship more generally, from paper-based to electronic modes of storage and access. The report also stressed the importance of the SLIS Library to the teaching and research activities of SLIS. The Review Committee noted that the library should be a model of branch library service for the university and for the profession, especially in applications of information science and technology. It should serve as a laboratory for the school and the profession in these areas.

The Review Committee made several recommendations for changes in the SLIS Library. Some of these were:

- \* A large, multi-use room with networked workstations should be included to accommodate a laboratory component in the library.

- \* The monograph collection should be moved from the SLIS Library to the Indiana University Research Library stacks. The vertical file should be eliminated in its present form. A core collection of journals, reference materials, and reserves should remain in the library.

- \* The serials and monograph collections should be reviewed to align these more closely with curricular shifts in SLIS.

- \* A technological infrastructure, including connections to external databases and LANs, productivity tools, group decision support software, and other appropriate resources, should be created in the SLIS Library.

- \* Network manager expertise should be available in the SLIS Library.

- \* An advisory committee of faculty, staff, and student representatives should be formed to implement changes.

With the release of the Review Committee's report, the process of planning and implementation began. The report served as a rough model for the changes that have been made and the new directions that have been taken.

### **Developments in the SLIS Library**

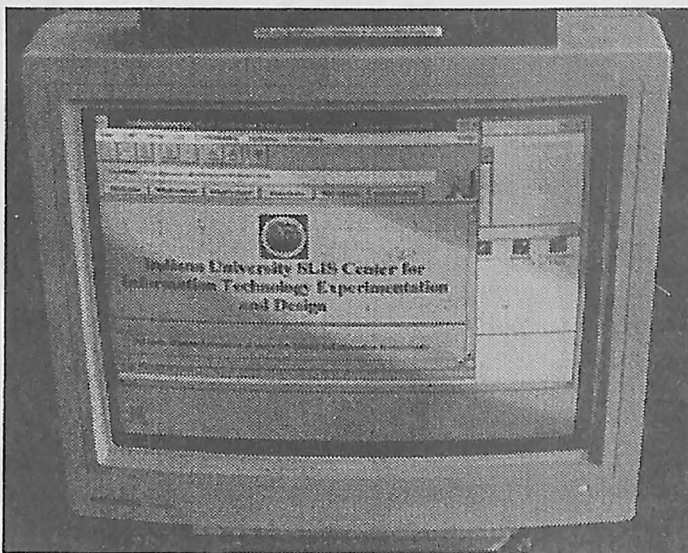
Anyone returning to the School of Library and Information Science during Fall 1994 or Spring 1995 would have noticed a significantly different look and feel to the SLIS Library. Various changes have been implemented. As noted by



the SLIS Library Review Committee, these developments were planned to better align the library with the goals, new directions, and faculty interests of the school.

A major and noticeable change is the absence of the circulating book collection. During June of 1994, the entire circulating collection was transferred to and integrated into the Research collection of the Main Library. Three-fourths of the SLIS collection went to the 11th floor where the "Z" classification is located, and the other fourth was scattered throughout other appropriate floors. Reference books, journals, and reserve materials remain in the library. After the removal of the circulating collection, the library replaced the old, worn carpet with new carpet of an attractive color. Worn sofas were replaced with attractive contemporary easy chairs.

The impetus for moving the circulating collection was to make room for an electronic classroom or other electronic facility. However, since there was not enough money to fund a fully-developed classroom, the available money was



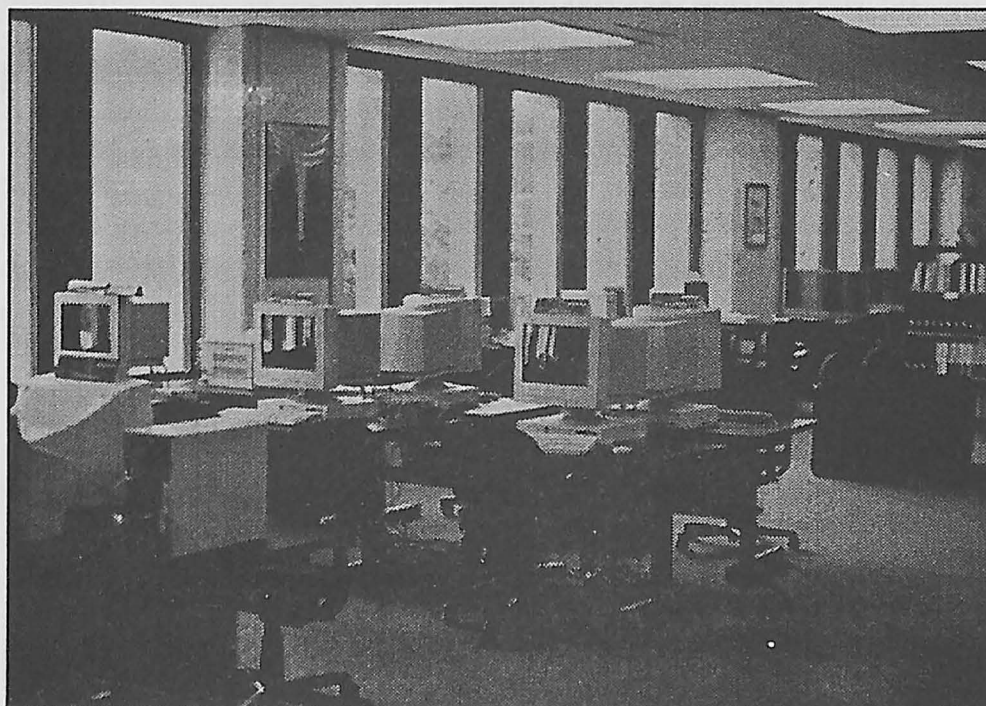
used to fund a collaborative work area consisting of ten workstations and two laser printers. In addition, a high-end scanner and accompanying workstation was made available. This area of the library and its network is called the Center for Information Technology Experimentation and Development

(CITED). The computers in CITED are not reference workstations. Nor are the CITED computers intended for the kinds of functions such as e-mail and word processing that are found in conventional computer laboratories such as the SLIS Computer Laboratory. The purposes and functions of CITED will be discussed later.

Previously, the library had only two stand-alone workstations that were used to access ten CD-ROM databases. The presence of the ten new CITED

workstations allowed the three most-used library and information science CD-ROM index databases (*Library Literature*, *Library and Information Science Abstracts*, and *Information Science Abstracts*) to be put on a local area network (LAN). Each database can be used by up to four users at a time. The remaining SLIS databases can be accessed either through the main library's LAN or on stand-alone machines. Other databases and programs available on the new workstations will be described later.

Because of the heavy use of the new collaborative area, four additional workstations were set up in a separate area to provide library reference users (who typically perform quick searches to locate book titles) with more convenient access to electronic reference materials. These reference workstations are



connected to the Main Library's Reference LAN, which offers access to Indiana University's OPAC (On-line Public Access Catalog) as well as many CD-ROM indexes to journals, covering titles in the humanities, social sciences, and sciences, as well as *Dissertation Abstracts* and *Books in Print*. The principal SLIS reference databases (*Information Science Abstracts*, *Library and Information Science Abstracts*, and *Library Literature*) are only available from the CITED workstations. In the back of the library, two dedicated OCLC workstations remain in their former places. They are used solely for OCLC searching in support of the school's cataloging courses.



Since the collaborative work area has sometimes proved to be fairly noisy — as to be expected from a facility of this kind — the library is exploring the transformation of a conference room into a quiet study room when not needed for conferences or other official purposes. The room currently holds a space-wasting configuration of tables, and there are plans to replace it with more efficient tables. The room may also contain lounge chairs, lamps, tables, and carrels; its design is still in the planning stages. Another noise problem in the library was created by the copy machine. The library installed sound-deadening panels around the copier to help alleviate some of this noise.

These are just the beginning of the improvements in the SLIS Library. Many other changes are planned. For instance, the library hopes to install new attractive shelving to hold current issues of periodicals. This shelving will be in a convenient location and will make the issues more accessible to users.

Another future goal is to begin scanning reserve articles into a database that can be accessed on the CITED workstations. This will alleviate some of the waiting for reserve articles and the long lines at the copy machine. Under this plan, students will be able to call up articles for various courses while sitting at a workstation. However, before this can be implemented, several copyright issues still need to be addressed.

Staffing is of great concern to the library, and it is hoped that additional staff can be hired to provide help with some of the more technical questions that arise related to computer hardware and software. SLIS Library student employees are being trained to assist with some of the more basic and repetitious questions asked.

One issue in better aligning the library with changes in the school, which has seen several retirements and many new faculty members during the past few years, is making appropriate changes in the collection. The collection development policy is being updated. In addition to purchasing monographs to support the curriculum, the journal titles held by SLIS were reevaluated. Several questionnaires were circulated to faculty and students during Spring Semester 1994 concerning journal needs. Responses to these questionnaires continue to be used to help make purchasing and deacquisition decisions.

Since the Library Review Committee's report, some program changes have taken place in the school. New SLIS programs at two other Indiana University campuses, IUPUI and South Bend, have come into being. Both locations have pledged to support SLIS on their campuses, and this brought about the excit-

ing possibility of coordinating library resources, thus increasing the availability of resources as well as possibly saving some funding for all concerned. The SLIS librarian is working actively with the libraries and schools at those locations to provide the best resources for SLIS students statewide.

With all of these changes, it is important that the needs of people working in more traditional libraries continue to be addressed, that the library provide appropriate assistance and collections for all of its users.

One of the recommendations of the SLIS Library Review Committee was that a library advisory committee of students, faculty, and staff be formed to help implement some of the recommended changes. A SLIS Library Steering Committee was appointed by SLIS Dean Blaise Cronin immediately following the release of the Review Committee's report, and it has played an important role in the developments thus far. The changes in the SLIS Library were made to support the future directions of the school. The library has become more integrated with the school, and that integration will foster the involvement of the library with the curricula of the school. Internships are being planned to give students hands-on experience in management, designing databases, and administrative and technical skills that they can use as future librarians and information specialists in this new technological age. The nature of the library will encourage group problem solving and planning, collaborative meetings with professors, and experimental applications using technology. We intend it to be a model and resource for the University Library as well as other interested parties in the community. A fundamental vehicle for achieving these goals is the Center for Information Technology Experimentation and Development (CITED).

### **Introduction to CITED**

CITED is part of a comprehensive attempt to integrate technology into the SLIS curriculum in a fundamental and useful way. Its mission is:

To provide a laboratory environment for designing, constructing, managing, and evaluating tools for access to information in the most appropriate form, based on the needs of the user.

CITED is a "cyber-sandbox", a laboratory for students and faculty to practice their craft, to become familiar with real-world tasks in information management and software development. It reflects the changing role of information professionals to a more active involvement in the development, sup-



port, use, and evaluation of electronic information management tools. The following is a short list of basic functions that CITED is intended to provide and support:

1. Software development tools
2. Information/data management tools, including database management, bibliography, and reference management
3. Tools for the provision, management, and use of networked information
4. Tools for the development and evaluation of human-computer interfaces
5. Technology to support collaboration and collaborative computing
6. Hardware and software to support digital image management
7. Access to network-based information resources to support the SLIS curriculum
8. Access to the latest on-line databases and other strategically important digital resources

In its completed form, CITED consists of hardware, software, and human expertise, all integrated into the SLIS curriculum.

## Hardware

Currently CITED consists of eleven computer workstations -- six 486 PCs running DOS and Microsoft Windows and five Power-PC Macintoshes. All of the Macintoshes have CD-ROM drives attached, as does one of the Windows workstations. All workstations have high-resolution 17-inch color monitors. One of the Windows workstations is attached to a Fujitsu scanner with a document feeder and *OmniPage* Optical Character Recognition (OCR) software. Two of the Macintoshes and the Windows workstation with the scanner have Syquest removable cartridge drives. Finally, all computers are connected to a Novell server, the campus network, the Internet, and a CD-ROM server.

### Macintosh Workstation Specifications and Software:

5 Power-Macintosh 6100/60's running System 7.5  
CD-ROM drives  
*Appletalk* and TCP/IP Networking  
*Netscape for Macintosh* Internet Browser  
*TurboGopher*  
*Adobe PhotoShop* (image manipulation software)  
*FoxPro* database  
*WordPerfect 3.0*

*ProCite for Macintosh* (reference management software)

*PowerPoint*

*GraphicConverter*

Apple LaserWriter Printer

#### **Windows Workstation Specifications and Software:**

5 486-66Mhz PCs

1 CD-ROM drive in one of the workstations

*Novell* and TCP/IP Networking

*HGopher*

*DesignCad*

*HyperTies Author*

*SPSS*

*Lexis/Nexis*

*Netscape for Windows* Internet Browser

*Microsoft FoxPro* (database)

*Microsoft Access* (database)

*Information Science Abstracts* (ISA) CD-ROM database

*Dialog Discovery Disk* CD-ROM database

*Library and Information Science Abstracts* (LISA) CD-ROM database

*Library Literature* CD-ROM database

*ProCite for DOS* (reference management software)

*Adobe PhotoShop* (image manipulation software)

*Wordperfect 6.1*

*Visual C++*

*Galileo*

*Lotus Notes*

*Research Assistant*

*FoxPro for Windows*

*Group Systems for Windows*

Hewlett-Packard HP4SI/MX Laser Printer

#### **Scanning Workstation Specifications and Software:**

1 486-66Mhz PC

Fujitsu scanner with document feeder

*Adobe PhotoShop* (image manipulation software)

*OmniPage Professional* (Optical character recognition and scanning software)

Manuals for the software installed on the CITED workstations have been



collected and are housed together on shelves adjacent to the CITED area of the library.

### **Human Expertise**

At the moment, SLIS Computer Laboratory consulting staff are available to work with those doing projects in CITED. However, in the near future it is hoped that there will be a SLIS doctoral student assigned to work with CITED, who will be able to provide more in-depth consulting for those wishing to do projects. This support will be critical to the long-term development of CITED. Any SLIS student or faculty member interested in doing a project using CITED or just exploring possibilities can schedule consulting services by sending an e-mail message to [SLISCITED@INDIANA.EDU](mailto:SLISCITED@INDIANA.EDU).

### **How is CITED Being Used?**

The bulk of the use of the CITED facility so far has been in SLIS Professor Thom Gillespie's three-term sequence of courses: Introduction to Computer Programming and Text Management, Data Structures for Bibliographic Communication, and On-line System Design. These courses include the study of object-oriented programming using the C++ programming language, MARC records, HTML and Perl programming for World Wide Web design. Following are two examples of student produced web design projects. These can be viewed using a web browser such as *Mosaic* or *Netscape*. The projects and URLs where they can be found are:

\* Pop-up Books

<http://bronze.ucs.indiana.edu:80/~bdunn/dirgalleria/SeventhPage.html>

\* Finding Pictures

<http://nickel.ucs.indiana.edu:80/~buechlem/>

### **Future Developments**

CITED is a work in progress. There will be considerable development over the coming semesters in the information resources and software available through the workstations and in the consulting services offered to students and faculty.

A major current SLIS initiative is to develop a usability laboratory for the observation of human-computer interaction, in partnership with the Indiana University Libraries and the University Computing Services department. If successfully implemented, this laboratory, to be located in the SLIS Library, will provide experience for students, faculty, library staff, and other members of the university community in all phases of user-centered design as well as

opportunities for research and development.

As change is an integral property of the emerging electronic information environment (and the library and information professions more generally), CITED will be changing continuously. It will and must also be developed in conjunction with the changing curriculum of SLIS, and with the needs of students and faculty in mind. To help students and faculty keep up with the changes in CITED, lists of available resources and changes will be available electronically. And finally, the Indiana University School of Library and Information Science home page can be reached using the following URL: <http://www-slis.lib.indiana.edu/>.

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Comments about the developments discussed in this document or about the SLIS Library more generally are welcome. They may be directed to:

Judith Dye, (JDYE@INDIANA.EDU)

Geoffrey McKim, (MCKIMG@INDIANA.EDU)

Steve Harter, (HARTER@INDIANA.EDU).

## Duplicates On-line: Using the Internet for Materials Exchange

*by Rebecca House Stankowski  
Technical Services Librarian  
Purdue University Calumet, Hammond, IN*

Libraries are very adept at finding ways to stretch their limited resources, and one of the more successful strategies to this end has been the cooperative exchange of duplicate materials. For the most part, these exchanges are comprised of single journal issues which are used to replace lost, stolen, or mutilated items which create gaps in a library's holdings, but books and hard-to-locate materials are also often included. Many exchange programs have sprung up over the years -- the American Association of Law Libraries formed what may have been the first duplicate exchange committee in 1906<sup>1</sup> and that program has been joined by a Christian colleges periodical exchange list<sup>2</sup>, ALA's ALCTS Duplicates Exchange Union (formerly RTSD/RS Gifts and Exchange), and many other programs developed by various library associations and academic institutions scattered across the world from Pennsylvania to New Delhi. The popularity of duplicates exchange programs isn't hard to understand. Many studies analyzing the costs associated with duplicates and exchange programs (which usually include only staff time and postage) have concluded that the cooperative exchange of materials is very cost effective.<sup>3</sup>

Traditionally, exchange programs have followed a simple plan of action. First, a group of interested libraries agree to participate in the program, and each one prepares a list of the materials they have available for exchange. Then they duplicate their lists and mail them to the other members. The recipients read through the lists, mark items they need, and return them by mail to the originating libraries, which in turn, fill the requests. Usually postage is reimbursed. Transaction completed.

While this plan is simple, it is also time-consuming and not very efficient. Preparing the list for mailing takes time, so each participant will probably send out only two or three lists a year. Members of large cooperatives will receive many lists. Going through a list takes time, and going through a lot of lists takes a lot of time and becomes mind-numbing relatively quickly. Many items will be requested soon after receipt of a new list, out-dating the list rather



quickly -- thus time is wasted on requesting items that have already been taken. Even so, the benefits still far outweigh these disadvantages.

### **The Advantage of the Electronic Age**

Even though the described process is time-consuming and inefficient, there is little doubt that cooperative collection-building through duplicates and exchanges will continue in libraries for some time to come. The good news is that in recent years several innovative programs involving electronic mail, on-line programs, and the Internet have been developed to make the process much easier and more effective. Progress is occurring every day, and as more and more libraries incorporate computers and Internet access into their operations, they can take advantage of many opportunities available electronically. Today there are a number of options available, some more sophisticated than others. Many are free, while others like Faxon's *SerialsQuest* involve fees. These alternatives allow libraries to choose programs suited to their level of "electronic sophistication" and their budgets. As these change, library staff can easily switch to another option that is more suited to their needs.

To access any of the following on-line options, a library needs access to the Internet (through any one of a variety of means), but that's all. You don't need to be a computer programmer or have a great deal of electronic expertise. If you can use an e-mail software package, you can participate in duplicates and exchanges on-line.

### **What Does E-mail Have to Do With Duplicates?**

One of the easiest ways to access some of the on-line programs is to subscribe to an Internet "list" via e-mail. An Internet list is sort of like an interactive on-line bulletin board. These lists are given names that indicate the subjects they deal with -- *Autocat* (library cataloging), *Serialst* (library serials), *Travel-L* (travel), etc. People interested in a given subject -- be it libraries, gardening, duplicates and exchange, or almost anything else -- can "subscribe" to a list about that subject by simply sending an e-mail message to the computer that "houses" the list. After subscribing, those with questions or opinions about the subject need just send an e-mail message to the list, and it is then distributed to all other subscribers to that list. After reading the initial message/question, others can answer or give opinions by responding with another e-mail addressed to the list. Some lists are completely open to anyone and everyone, while others are "owned" by human beings (list administrators or list owners) who moderate the list to some extent.

You may wonder why some messages are addressed to a computer rather

than to a person or a list. Several software programs have been developed so that the general "housekeeping" duties of the list -- adding names to the mailing list, taking names off, postponing mail, etc. -- can be handled automatically by a computer rather than requiring a person's attention. These programs are known as "listserv" or "listproc" and thus you send subscription requests to the listserv address, while messages intended for general distribution are addressed to the name of the list.

### ***BACKSERV***

One very popular option is an on-line Internet list called *BACKSERV* (the Back Issues and Duplicate Exchange List).<sup>4</sup> It is hosted by Readmore, Inc., and the list administrators are Marilyn Geller and Amira Aaron. To subscribe to *BACKSERV*, address an e-mail message to `LISTSERV@SUN.READMORE.COM`. Leave the subject line blank. In the body or text of the message simply say: subscribe *BACKSERV* yourfirstname yourlastname, i.e.: subscribe *BACKSERV* Hillary Clinton. Then send the message. Soon the computer will reply with a welcome message from *BACKSERV*.

*BACKSERV* is a list devoted exclusively to the informal exchange of serials back issues and books among libraries. The list provides a forum for the listing of both available and desired serial issues and books in all subject areas. Once you have subscribed to this list, you will begin to receive messages through e-mail from other members. Most of the messages are rather informal and say things like, "We have the following journals available:" or "We need the journals below to complete our holdings," and are accompanied by a short list of titles with volumes and dates. While the list was originally intended as a forum for serials exchange, requests and offers for monographs appear with some regularity, and books have recently been officially added to the scope of the list. As the messages arrive you can scan them to see if you either need or have any of the listed titles and issues. If so, simply reply to the sender and make a request or an offer. If you want to post a message for the other subscribers to read, address an e-mail message to the list: `BACKSERV@SUN.READMORE.COM` and then write the text of your message as usual. Note that you address the listserv (or computer) when you subscribe or do any other housekeeping duties, but you address the name of the list, *BACKSERV*, when you want to distribute a message to the other members.

*BACKSERV* is easy to use, and with almost 500 members it is a busy list. During a seven-day period in late January 1995, seventy messages offering or

requesting items were distributed to the list. Some participants report exchanging hundreds of titles per year. However, *BACKSERV* is not a moderated list, i.e., the list administrators don't monitor any of the message traffic. The welcome message states that "it is meant purely as a communication vehicle for librarians and library staff offering or seeking back issues of serial titles or books." Therefore, in many ways *BACKSERV* merely automates the traditional paper process that duplicate exchange sections in libraries have been using for many years, although communication is much quicker and turn-around time is shortened considerably. However, there is another option that uses even more of the powerful tools that the electronic age provides.

### ***DEU-L***

*DEU-L* (Duplicates Exchange Union List) began as an on-line pilot project that was approved by ALA's Association for Library Collections & Technical Services DEU Committee in early 1994. It is now maintained at Sam Houston State University (SHSU) and is managed by Janice Lange at SHSU. To subscribe to *DEU-L*, send an e-mail message to [LISTSERV@SHSU.EDU](mailto:LISTSERV@SHSU.EDU). Leave the subject blank and the text of the message should read: subscribe DEU-L yourfirstname yourlastname. As you can see, the process for subscribing to *DEU-L* is identical to subscribing to *BACKSERV* (except for address and list name).

However, the similarities between the two lists end there. While *BACKSERV* serves as a busy, informal, unstructured means of communication, *DEU-L* has very little traffic. Other than basic instructions, occasional questions, and notices that new lists have been received, *DEU-L* carries few messages. Instead, the heart of this project lies in the indexed DEU files located on the SHSU gopher.

What is a gopher? Basically, a gopher is a collection of databases (and perhaps other electronic products) that a site such as a university, a commercial enterprise, or a branch of the government maintains for its users. To access these various databases, the site creates a subject menu that a user uses to simply pick and choose items. The top, or main, menu often leads to submenus, which lead to yet other choices. It provides an easy route of access. Many universities (and other sites) have gopher servers that are available for public use.

Sam Houston State University maintains a gopher that includes the DEU project as one of its options. You can access the SHSU gopher several ways. You can follow this gopher route: Choose: All the Gopher Servers in the World --



North America -- USA -- Texas -- Sam Houston State University. Or, if you have a World Wide Web browser such as Mosaic or Netscape, use the URL (Uniform Resource Locator) `gopher://niord.shsu.edu`. Once you've accessed the SHSU gopher, choose the DEU Library Prototype Demonstration Area. Here you will find several choices -- names and addresses of participants, individual lists you may scan, and, best of all, a searchable index which allows you to search all of the available lists at the same time.

The DEU project works differently than do most duplicate exchange programs. A participant uses a word processing program to prepare a list of titles and issues available, then sends the list to the DEU manager, either on disk or via e-mail. The manager then posts that list to the SHSU gopher and indexes it along with all of the other lists. Since all of the lists are in one index, the user only has to enter a search for a specific title once in order to check all lists available. Gone are the days of flipping through pages and pages of list after list looking for that one issue of *Sports Illustrated*! One search will retrieve all instances of the desired title; if the right issue appears, simply contact the originating library to request it. The only costs involved are postage reimbursements.

The lists posted to *DEU-L* can also be more current, thereby creating a more accurate and useful database. When exchanges are made or new issues become available, editing the list with a word processing program is an easy task. Since the newly edited list doesn't have to be printed or prepared for mass mailing, it can easily and quickly be forwarded to the DEU manager for updating. The *DEU-L* project is still young, and as of February 1995, there were only fourteen members. Since the success of any duplicates exchange program depends on the number of institutions participating, the true efficacy of the system can't be judged until more interest is generated in this exciting new program.

### Other Options

Other duplicate exchange options available on the Internet target specific interest groups. Faxon's *SerialsQuest* deals primarily with medical journals and at present generally serves only members of the Medical Library Association. This is a fee-based service that operates on the centralized database concept. Members submit lists of titles offered and/or titles wanted. The software looks for matches and e-mails or faxes lists of matches to the requesters. Libraries are charged for issues received and credited for issues provided.<sup>5</sup> For libraries with engineering collections, the Engineering Libraries Division of the American Society for Engineering Education also operates an on-line duplicate exchange

mailing list called ELDNET-L. This list doesn't use listserv or listproc software to automatically distribute mail to subscribers; instead libraries submit lists to the project coordinator who then redistributes them via e-mail to current members of the exchange.<sup>6</sup> An average of two lists per week are distributed to the 150 members and the lists are also posted to *BACKSERV*.

### Conclusions

This is an exciting time for libraries. Increasingly, our everyday operations are enhanced and made more efficient by new applications made possible by developments of the "electronic age." It is noteworthy that one of the oldest methods of collection development, duplicates exchange, has been so greatly influenced and improved by the use of the Internet. And while someday, maybe, electronic journals will replace print, that day is still a long way off. In the interim, this is an example of the future touching today.

### Endnotes

1. Tim J. Watts, "A Preliminary Examination of the AALL Exchange of Duplicates Program," *Law Library Journal* 81 (spring 1989): 293.
2. A list of participating libraries can be found in "Periodicals Exchange," *The Christian Librarian* 36, no. 2 (1993): 64-66.
3. Lynn Branche Brown, "Serials Duplicates Exchange Programs: Costs and Benefits," *The Bottom Line* 6, no. 2 (1992): 28.
4. Quotes from *BACKSERV* welcome message distributed to participants upon subscribing are used with permission from the list administrators.
5. For further information on SerialsQuest, contact Glenn Jaeger at Faxon; E-mail: GJAEGER@FAXON.COM.
6. Questions about the ASEE/ELD Duplicates Exchange should be directed to Orion Pozo, coordinator; E-mail: ORION\_POZO@NCSSU.EDU.

# The Electronic Library and Full-Text Titles: View From a Technical College

*by Kristine Burgart Junik*  
*Librarian, Ivy Tech State College*  
*Kokomo, IN*

The information superhighway, the library without walls, the electronic library, the virtual library: all are terms that librarians are familiar with and use often. Changing technology has provided librarians with more alternatives for accessing information than ever before; however, librarians must first decide what will best serve the needs of their patrons. In small academic settings, the challenge is great. How can the library stay within its budget and provide its patrons with needed materials? The options and choices utilized by one of the branches of a statewide technical college are among the topics to be discussed in this article.

At the Ivy Tech State College library in Kokomo, Indiana, one of the formats-of-choice has become the full-text CD-ROM database. Many reasons are behind the decision to go this route, among them space and money. As is true with many colleges that have fewer than 3,000 students enrolled, the library is housed in the same building in which classes are taught. In Kokomo, Ivy Tech's library is located in the Learning Resource Center (LRC) where tutoring takes place. There are twenty-one computers available for word-processing, desktop publishing, creating spreadsheets, or using CD-ROMs. To increase the collection size, something has to go. Expansion of the library is always an option, but it is not one that occurs quickly. In the short term, the goal is to provide students with access to as much information as possible without taking space away for studying. To fully understand the options available, background information is presented here on the emergence of the electronic library, full-text article databases, and the technical college.

## Rising Journal Prices

At Ivy Tech, the academic focus is primarily on technology and medicine. While basic-skills (where necessary) and general-education courses are the core of all certificate and degree programs offered at Ivy Tech and other technical colleges, typically there is only one humanities or social-science class offered in each subject area. Since degrees are only granted in technical, business, or



health-related areas, most materials in the library collection are of a technical nature. As a result, skyrocketing publication prices have an even stronger effect on technical colleges than they do on universities or four-year liberal arts institutions.

As noted in a 1995 article in *Change*, "prices of books in the sciences, technology, and medicine tended to increase at a faster rate than the average, whereas the prices of books in the humanities and social sciences were considerably more stable . . . the same distinction also holds for serials."<sup>1</sup> The article continues, noting that the subscription prices of some science-related serials have increased five or six times in price over a twelve-year period. In general, academic journals are increasing in price at a rate of approximately 20 percent.<sup>2</sup> At present, journals published just in the area of science and technology number more than 60,000. Institutions of higher education are recognizing the impracticality of providing students access to hard-copy versions of all periodicals. With such increases in price and number, it is nearly impossible for the two-year technical college to provide all the materials necessary for its students. Even now, publishers and telecommunications companies are clamoring to grab a section of a market being created: a virtual library that can be visited by anyone, anywhere. All that will be needed is a computer and a modem. Until the virtual library has arrived, post-secondary educational institutions will have to learn how to effectively utilize what is available now.

### Interlibrary Loan

While interlibrary loan is a viable option for obtaining access to materials not owned by the borrowing library, ethical questions are raised when information needs are met by excessive borrowing from other libraries. In addition, information needs are met in a more timely fashion when immediate access to information can be provided on site. By working with other libraries in a geographical area, collections can be developed cooperatively; for example, if one area library carries issues of *Time* magazine for the years 1945 to 1969 and 1975 to present, then one of the other area libraries should consider carrying the missing years (1970 to 1974). Although such collaboration still relies on another's library collections, it is an arrangement which will benefit both libraries and patrons. An alternative to interlibrary loan is to provide modem access to other libraries within driving distance of the college.

The collections at Indiana University-Kokomo and Kokomo-Howard County Public Library are both searchable via modem at the Ivy Tech library. However, only a few (perhaps ten each year, representing about .1 percent of the total student population) patrons take advantage of the modem access. The

main reason cited for not using modem access (when provided) is lack of time to go to another location to obtain materials. As students continue to discover what they can find via modem, it is anticipated that their attitudes will change. Until then, students will continue to prefer using what is readily available on-site.

Although statistics are not available, reference interactions indicate that at least 40 percent of all Kokomo Ivy Tech students are primary breadwinners for their families; of those, perhaps 50 percent are heads of single-parent households. The majority are from Kokomo, but a percentage come from nearby cities or towns. Time available to attend class, do homework, and conduct research, is often quite limited. In Kokomo, 45 percent of the 196 students taking the Ivy Tech entrance-assessment examination during the Spring 1995 school year said they definitely would be attending college as full-time students. In addition, 69 percent of those said that they would be working more than sixteen hours per week while attending classes. About 66 percent are under thirty years old.<sup>3</sup>

### Drinking From a Firehose

Full-text databases are of particular benefit to the above-identified students, because a large amount of information is readily available for immediate printout or downloading to disk. The task of going to paper indexes to find references to articles that may or may not be available is becoming a thing of the past, thanks to full-text databases. Looking just at the number of full-text journal titles available from three different on-line vendors (IAC's *TRADE & INDUSTRY ASAP*, UMI's *Business Dateline*, and *DIALOG*), the total number of titles available jumped from 675 in 1987 to 3,623 in 1993.<sup>4</sup> They continue to increase as more retrospective scanning of articles takes place. However, there is a danger of encouraging full-text use without providing adequate bibliographic instruction. A bibliographer at Virginia Tech said, "those who don't mind drinking from a firehose will find it will be possible to call up just about any lame idea or poorly done study."<sup>5</sup>

Along with providing increased access to information is the responsibility of training users how to conduct searches that will result in finding information that is relevant to their topic. Always present is the inherent danger of overwhelming the student with so much information that the more pertinent materials are overlooked in the process. Herbert S. White at Indiana University raised the question, "are we communicating a flood of information that we measure in quantity rather than quality?"<sup>6</sup> Students must be trained to prioritize information that is found and perhaps how to reformat their original

search for better results.

While discussing library education centers at the University of Arizona (UA), the assistant dean of Library Information Systems emphasized the need for universities to establish the library as the foundation for all undergraduate education, as a way to make sure that the necessary skills are taught. The same applies to the technical college. With effective instruction in how to use the electronic library, "skills needed by students to compete effectively in the global, information-based economy of the twenty-first century are developed effectively."<sup>7</sup> Such is the reason that in the past five years, Ivy Tech-Kokomo has added twenty CD-ROM titles to its collection and the faculty have incorporated library assignments into much of the curricula. Among the most heavily used resources are three full-text CD-ROM databases: *InfoTrac Health Reference Center*, *EBSCO Academic Abstracts Full Text Elite*, and *SIRS* (Social Issues Resource Series) *Researcher*, which are the primary focus of this article. (These databases will be referred to as *Infotrac*, *EBSCO*, and *SIRS* in the discussion that follows).

### Medical Full-Text Database

The *InfoTrac*, which allows subject searching of more than 130 full-text journal articles, was determined by the Ivy Tech librarian in Kokomo to best meet the needs of both the nursing students and other students pursuing degrees or certificates in the medical field. Students taking general-education courses find *InfoTrac* of some use as well. *InfoTrac* was originally developed for use in hospitals to provide information to patients who wanted information about a disease or disorder of which they had been recently diagnosed. It includes full-text of articles from publications such as *Journal of the American Medical Association*, *RN*, *Lancet*, and *New England Journal of Medicine*. *InfoTrac* also includes articles from 500 other journals, pamphlets, and dictionaries that have been abstracted or indexed by subject heading.

Dictionary and reference book definitions are provided for a wide variety of topics and disorders. Citations sometimes go back as far as six years. Pamphlets are on *InfoTrac* in full-text format, but they too, are sometimes a bit old. However, in general, information in *InfoTrac* is less than three years old. Nothing can replace pictures, charts, and other visuals available in the paper version of a journal, and this is where inter-library loan plays a useful role. Journals not available on site that are frequently requested (five to ten times per year) are noted and considered for purchase. Since most of the nursing-oriented articles available on *InfoTrac* are only abstracted or indexed (as opposed to being full-text), students have found they can save some time by using *InfoTrac* to identify



articles.

Although keyword searching is available on *InfoTrac*, keywords are assigned by article authors, and are not necessarily based on words from the text. Its producers anticipate a change in the format within the next year, whereby keyword searching from the text will be made available. In addition, *InfoTrac* began adding more nursing and allied-health journals to the database last year that better meet the needs of technical colleges with such programs.

### **Academic Full-Text Database**

*EBSCO* allows author, title, subject, and keyword searching of 180 full-text journal articles and 800 abstracted journal articles. It allows keyword searching of the entire text, and searches can be field-specific as well. Its name implies an academic focus, but most of the full-text articles come from popular magazines which would not be identified as academic. Virtually no computer-oriented journals are available in full-text. The primary focus of *EBSCO* appears to be humanities and social-science related, at least in full-text format. Since *EBSCO* anticipates being comprised entirely of full-text articles within the next year, it will be interesting to see if their emphasis changes. Examples of a few of its full-text journals are: *Compute*, *Ebony*, *Forbes*, *Kiplinger's Financial Report*, *Men's Health*, *Sports Illustrated*, and *Time*. It is updated monthly and provides CD-ROM access to articles dating back as far as ten years; however, full-text is not as readily available for articles older than five years.

### **Social Issues Full-Text Database**

*SIRS*, unlike the other two databases, is comprised entirely of full-text information from more than 800 domestic and foreign magazines, newspapers, journals, and US government documents. Although it allows author, title, subject, and keyword searching, the keyword searching feature has good and bad points. Its truncation feature is one of its good points because a list of words available with the truncation symbol pops up to allow the user to select which words to include in the search. Unfortunately, words cannot be truncated if the user wants the word to appear in proximity to another word. The order in which words can be searched affects the outcome of the search. Still, screen prompts and help screens make *SIRS* among the most user-friendly CD-ROMs. Many local high school libraries are using *SIRS* because of its relative ease of searching and its feature of containing all full-text articles.

Since social issues are the focus of the titles on *SIRS*, students doing research for basic-skills or general-education classes find its ease of use particularly attractive. Recently, it began offering graphics that, while often difficult to

create in readable printout form, often include useful information not necessarily found in the text of the article or document. Some of the material is not as recent as that found on the two CD-ROMs discussed earlier, as it is updated only twice a year. Information contained goes back approximately seven years.

All full-text information found on the above three CD-ROMs can either be saved directly to disk (in ASCII format) or printed on a printer. Of the three, only *SIRS* provides the user with the option of saving to either drive A or drive B; the others, *EBSCO* and *InfoTrac*, require that the library computer programmer select one of the two drives as a default. For computers with dual 5.25 inch and 3.5 inch drives, the most frequently used drive is the best one to select as the default — and hope that no one wants to download to the other drive. *EBSCO* has an administrative feature where the disk drive selection can be easily changed, but it entails exiting out of the library patron's search to do so. Unfortunately, information that is not on *EBSCO* in full-text format must be sent to a printer and cannot be downloaded. For computers without printer attachments, sheets of scrap paper should be kept close by!

Since all of the CD-ROMs discussed above rely on scanning for much of their text, users must be warned in advance to watch for possible errors. For example, an "e" can sometimes scan improperly and become an "o", "rn" can run together and be scanned as an "m." Also be advised that these CD-ROM products discussed are constantly changing, and for up-to-date information on the journals available, vendors should be contacted directly (all have 800 numbers).

## Conclusion

As discussed previously, making CD-ROMs available to students is not enough. Students must also be taught how to evaluate, prioritize, and interpret the information that they find. Without necessary critical thinking skills, bibliographic tools cannot be used effectively. Students graduating with the skill to access, interpret, and utilize information are the ones that will successfully comprise the workforce of tomorrow.

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## Automated Resources at Ruth Lilly Medical Library

*by James Jay Morgan*  
*Automation Librarian, Ruth Lilly Medical Library*  
*Indiana University School of Medicine*  
*Indianapolis, IN*

The Ruth Lilly Medical Library (RLML) has undergone a great change in the availability of on-line resources in the past seven years. In 1987 there was no on-line catalog, and subject access to RLML's vast medical journal collection was limited to book indexes and customized on-line searches by reference librarians. These access services were available within the library and over the phone.

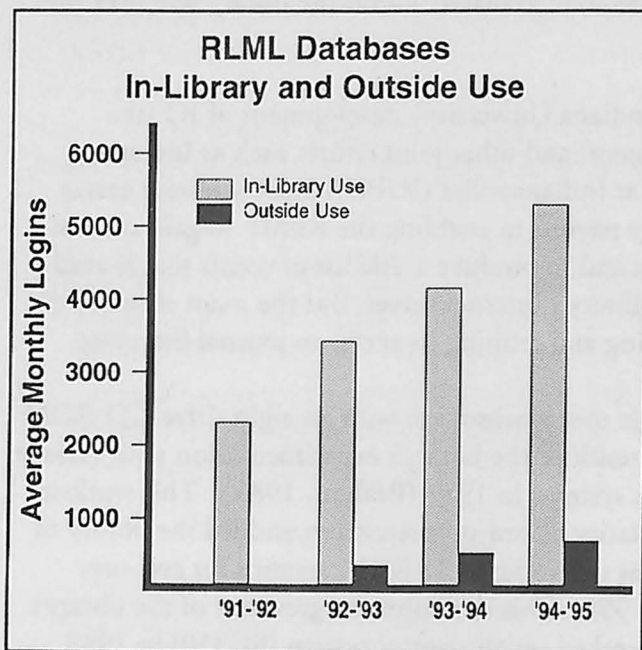
The library took part in Indiana University's development of IO (the NOTIS integrated on-line system) and other joint efforts such as Indiana University Purdue University at Indianapolis's (IUPUI) ILIRN library access system. These efforts had large payoffs in enabling the RLML to gain control of its book and serial holdings and to produce a title list of serials that is available in a booklet and on the library's Internet server. But the main effort of the library has gone into developing and refining its access to journal literature.

The first effort was a single user workstation with an eight drive CD-ROM tower in 1988. This was the result of the library's experimentation with various CD-ROM MEDLINE search systems in 1987 (Brahmi, 1989). This workstation quickly proved the popularity of end-user searching and led the library to install one of the country's first networked CD-ROM systems for end-user searching in 1989 (Morgan, 1990). This development grew out of the library's experience with OCLC's networked serials control system (SC350) in 1988 and the appearance on the market in 1989 of several vendors offering networked CD-ROM towers.

This early implementation of a CD-ROM network put the library in good stead, but by 1992 the library's users had stretched the capability of the CD-ROM network to its capacity. The library had two possibilities for expansion: to rework the CD-ROM network into a faster configuration or to migrate the entire system to a Novell server hard disk configuration. The library's chosen

software vendor, CDPLUS (recently renamed OVID), had just introduced such a turnkey networked system, and the library installed this new system in 1992.

While slightly different methods of measurement have been used over the years, figures demonstrate great jumps in patron use. On-line searching for patrons by reference librarians has remained relatively constant over the years, but use of the networked database system has grown by leaps and bounds. The growth in searching has been largely a function of the number of stations that the library has made available for public use. The CD-ROM based network supported seven to eight stations from 1990 to 1992, and use peaked at just over 2,000 users per month. The Novell networked system provided faster software and supported a larger number of stations (up to fourteen) in 1995, allowing greatly increased growth and permitting the library to offer twenty-four-hour access to campus users. The improved accessibility within and



outside the library led to a constant increase in the number of users, with the number of logins reaching as high as 7,000 a month in 1995 (See graph).

Despite this increase, there were still many barriers to outside access. The library's efforts to support use outside the library began in 1992, but due to various barriers, outside use has not yet exceeded 1/7 of the logins.

As soon as the faster system was available, the library provided access to faculty and to the Medical Educational Resources Program (MERP) student laboratory. Use in the lab has not amounted to 100 logins in any month, leading us to assume that students chiefly are interested in a ready reference tool for use while they are in the library, rather than a remote access research tool. In addition, the MERP lab is close to the library, and most students on a library research trip have no reason to detour to the lab. Use in the lab is presumably limited to students already in the lab for other purposes.

Faculty use began a slow growth in the Fall of 1992 but was hindered by slow campus network speeds and lack of the hardware necessary to run the software. In 1993 the new version of OVID software required three megabytes of RAM, a hard disk, and an IBM-PC compatible computer with a 286 or higher level processor. This effectively disenfranchised faculty without computers, those with older computers, and those with specialty brands of equipment (Macintosh and UNIX workstations).

Aside from the substantial equipment requirements, access also required a campus network connection. While the Indianapolis campus has made great strides in network wiring over the past few years, faculty access is not yet a given. Much of the hospital computer wiring is of an older type that will not permit a LAN (local area network) connection.

In addition, the library is responsible for supporting medical faculty and students in eight regional Centers for Medical Education around the state at three other IU campuses (Bloomington, NorthWest, and Ft. Wayne), and five other universities. We were able to supply access over the network to Bloomington, but the slow speeds greatly restricted use. Access to other campuses has been impossible.

In 1994 the demand had grown so large that the library purchased eight dial access units to support outside access to the Novell server. While not a long-term solution, dial access met the immediate needs of the users in the regional centers, home users, and users with insufficient equipment. This resulted in an immediate increase in the number of registered outside users from just over 100 to more than 300. The dial access options proved especially popular with students.

In 1994 the library reached an agreement with the IUPUI University Libraries to provide access to *MEDLINE* and the *Science Citation Index* databases in exchange for access to the IUPUI library system's databases. This improved the availability of the data at IUPUI, and in 1995 we expect to add the support of the School of Nursing computer lab.

In another development, the library began looking at supplementing the ILIRN system with an Internet server to provide information about the library and the medical school. We mounted a gopher server in 1993 (GOPHER.MEDLIB.IUPUI.EDU). The purpose of the library's gopher server is to provide easy access to medical and scientific resources on the Internet.



These resources include National Institutes of Health servers, genetics data from the Genome project, and information from other medical libraries.

The gopher server also provided connections to the university's library catalog, and provides local medical library information. This local information includes the descriptive information about the library, a copy of the library's list of current serials, a searchable version of the *School of Medicine Bibliography*, and a list of faculty publications from 1986 to date. In 1994 the library added a World Wide Web page (URL <http://www.medlib.iupui.edu>) to provide the same services to web users.

In 1994 the Indianapolis Foundation awarded the library a grant to move the medical databases from the Novell server to a UNIX server. This grant will enable the library to provide much more complete and faster Internet and dial-access service. The user will be able to access the system with any machine attached to the Internet and with any machine able to dial into the university network. It will also enable users of other university computing systems to connect to the library's databases, thus integrating our library services with their computing resources.

This new server will be installed in 1995, and will enable the library to integrate its Internet services. When the installation is complete the users of the library's web and gopher server will find a seamless connection to the library's medical databases.

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## Lake County Public Library Keeps in Step with Technology

*by Kathleen Berda, Lake County Public Library  
Merrillville, IN*

Since 1959 the Lake County Public Library (LCPL) has been committed to harnessing technology to provide the best possible information service to its service area consisting of thirteen incorporated communities. These communities comprise a present population of 200,000 people. To meet this goal, LCPL has cooperated with other libraries and educational, cultural, community, and governmental agencies, and institutions. The library's catalog of holdings has been available to those outside the library through the generations, through book, microfiche, and automated catalogs.

Staff training has been an important part in the introduction of new technologies. Reference staff are trained in on-line searching, and all staff are trained in DYNIX searching. Classes are held twice a month to train patrons to use DYNIX and CD-ROM products. Internet training for both staff and the public is planned for the near future.

Through the years, the Lake County Public Library has produced holdings of its periodical and audio visual collections, a directory of organizations, and a directory of human resources, all in print form for use by school teachers, community organizations, businesses, and social service and governmental agencies. These organizations are contacted annually for update information and informed of the availability of products.

From the library's beginning, technology was used to provide the broadest possible access to information. From the first production of a widely distributed book catalog of library materials, to a recent state-of-the-art upgrade of the automated system, the Lake County Public Library has considered its role to be information provider utilizing national on-line databases and building local databases of community information. The first step was the production of the book catalog. This catalog was produced for twenty years using IBM punched card equipment. The catalog was transferred to microfiche in 1980, and again, widely distributed.

Early communication between the thirteen branches was via teletypewriter.

This device provided an efficient method of reserving books to be delivered to other branches for patron pick-up. In 1980 that technology was replaced by an on-line automation system, which also freed the staff from labor intensive functions like typing overdues and filing cards. Automated circulation of library materials also began in 1980.

In 1976 LCPL began cataloging titles on OCLC, and began retrospective conversion of its catalog to machine-readable form. The conversion of titles via OCLC made the collection heavily accessible to Indiana borrowers and libraries throughout the nation. In addition, LCPL began searching computerized databases on-line in 1984 in order to increase access to information. Computerized ordering of library materials began in 1986. Personal computers were installed in the Central Library Children's Department and in LCPL branches in 1985. Funding for these was made possible through Friends gifts. A system-wide literacy program was established in 1986, and through other donations and grants, all branches have computers for literacy self-instruction.

Four *INFOTRAC* computers were installed in 1988, and through networking, *INFOTRAC* and *Health Index* are available system-wide. In 1989, each branch had telefacsimile machines installed to speed delivery of materials to patrons. Also that year, school records were indexed, and that was made possible through an Indiana Heritage Research grant. Other technological strides have included the installation of a television satellite receiver in 1982 to provide individual and group access to international programming. Teleconferences have been held for area library staff members and businesses. A KU-Band satellite dish was installed in 1994 in order to receive courses via satellite within the state.

The 1995 upgrade of the library's computerized system rendered access to the library's catalog, some former CD-ROM databases, the *Community Resources Directory*, and LCPL's index to the largest local newspaper, all on the same computer terminals utilizing a commonality of search terms and methods. This provides greatly improved ease of use for library patrons, both from within the libraries and from homes and offices. In addition, the Lake County Public Library is now offering *HELPLINK*, an on-line information and referral system that networks human services agencies and organizations serving the county. *HELPLINK* provides electronic communication among member agencies and organizations, twenty-four hour access to the library's database of more than 900 social, educational, municipal, and health agencies and organizations, as well as up-to-date information about human services providers and their specific services. Grant funds from the Lake County Step Ahead Council



are being used to underwrite the first year's costs. During that year, *HELPLINK* will be available at no cost to subscribers. Thereafter, subscribers will be assessed a nominal fee per year.

Several high schools are linked to the Lake County Public Library through *DIALPAC*. *DIALPAC* enables students to browse the library's catalog and list of reserve books from the convenience of their school library. Students gain access to LCPL by dialing in via modem, then logging on to *DIALPAC*. Funded through a grant from the Library Services and Construction Act, modems and software were purchased for the eleven high schools in the Lake County Library District. The schools provided the computers. *DIALPAC* is also available to patrons at home, and businesses that have a microcomputer and modem. Information available to students and patrons includes titles of books, recordings, video and audio cassettes, compact discs, and periodicals, as well as the community information module.

The Lake County Public Library has also acquired equipment to support other services the library provides, including reading machines and assistive devices for persons who are hard-of-hearing or visually impaired. The Q Solution Bar Code Reading Machine that aids literacy students in reading was purchased with a gift from the Altruse Club of the Indiana Dunes. A light pen scans bar codes under the text in a book and the machine "reads" the words back to the student. Another similar piece of equipment, the Reading Edge, scans printed material including books and newspapers and in a matter of seconds converts print into a computerized voice for the visually impaired.

This year, LCPL will provide Internet access to all appropriate staff. In addition, the library is cooperating in forming a community network in which LCPL is a major component. These plans, and a program for distance learning, will keep the Lake County Public Library in step with technological advances in an ever changing world.



## Enhancing Library Instruction for At-Risk Students with Multimedia Presentations

*by Rosanne M. Cordell  
Head of Library Instruction  
Indiana University South Bend  
South Bend, IN*

Library instruction has been a significant activity of the Reference Department at Indiana University South Bend (IUSB) for years. The five librarians involved in instruction activities meet regularly to discuss methods and content, attend workshops designed for them by the faculty development officer, tailor their instruction sessions to the needs of students for particular assignments, and attempt to involve students actively in the instruction. The development of a multimedia presentation for use in instruction sessions by librarians Rosanne Cordell and Brian Schuck evolved from these previous activities and the concern for keeping sessions updated and interesting, as well as relevant to student needs.

George Hubbard has stated that "the term 'multimedia' is one of those terms, like 'hi-tech', that can mean whatever you want it to mean..."<sup>1</sup> "Multimedia" has been used to describe the use of several formats (and types of equipment) in a single presentation, a single format that presents multisensory information, a slide-show with sound, or a computer program that uses a CD-ROM. In 1993 Cordell and Schuck attended a presentation that made use of a multimedia computer program that could integrate images from photographs, text, sound, and video into a single presentation. It is this type of multimedia presentation that seemed to have tremendous potential for enhancing the library instruction sessions at the IUSB Schurz Library, and we decided to produce such a presentation.

### The Project

Library instruction sessions at Schurz Library typically involved the use of print sources, CD-ROM and on-line periodical indexes, the on-line catalog, and numerous handouts to present such information as a basic search strategy, a brief Library of Congress classification system, or a step-by-step approach to



locating journal articles in Schurz Library. Librarians were using an increasing amount of equipment, including two overhead projectors with separate screens, a networked computer connected to a CD-ROM drive and an LCD (liquid crystal display) panel, a chart, blackboard, and light pointer. The use of these separate pieces of equipment increased the complexity of the presentations as well as the risk of equipment failure at critical times. Add to this the usual rate of failure to connect to on-line databases, and the technical difficulties involved in current library instruction begin to be apparent.

We recognized that the use of a multimedia presentation with "canned" on-line sessions would save librarians time during instruction sessions; time that had been used in transferring from one type of equipment to another, connecting to databases, waiting for CD-ROM's to load, etc. The time saved could be used to cover the information needed by students, and the entire session would run more smoothly. In addition, such presentations might make it possible to highlight information on-screen more effectively and give even textual information greater visibility.

We began investigating various programs available to create presentations, including *Harvard Graphics*, *Multimedia ToolWorks*, *Action*, *PowerPoint*, and *WordPerfect Presentations*. *Multimedia ToolWorks* was a program provided free of charge to Cordell at a teleconference on its use. *WordPerfect Presentations* was available on our campus network, and ultimately, we chose to purchase a copy of this program for loading on the hard drive of the computer in our instruction room. Although *WordPerfect Presentations* is the program we chose to create our presentation, *Multimedia ToolWorks* has some excellent features that we continue to use.

We decided to base our first production on the instruction sessions given for a one-credit course for at-risk students, University Life Seminar U205. While not a required course, U205 is recommended for students who may be at-risk, are provisionally admitted, or who are uncertain of their commitment to earning a college degree. Ten to fifteen sections of U205 are taught each semester at IUSB, and students are required to have library instruction before completing a "Treasure Hunt" assignment. The unique element of this arrangement is that librarians, not instructors, wrote the assignment. Thus, all sections of the course have identical assignments and receive very similar instruction from librarians. By focusing our efforts on this course, we could create a presentation that could be used repeatedly by all instruction librarians.

We were advised that anyone considering presentation production should

begin with a clear concept of what they wished to accomplish, rather than what was available in software. Typically, multimedia creation programs offer far more options than you will have use for, and your presentation should reflect your own vision rather than serve to market the program. We decided that our presentation should be designed to enhance library instruction rather than replace it. Thus, our presentation would require the presence of a librarian to explain the various concepts and sources shown. Another consideration was that Schurz librarians attempt to involve students in discussions or activities that will illustrate concepts concretely, and we wished to retain as much interactivity in the instruction sessions as possible. With these principles decided, and with the Treasure Hunt assignment as our outline, we were ready to begin developing the presentation.

### **The Finished Presentation**

Our presentation consists of an introduction, a section on the reference collection and interpreting Library of Congress call numbers to locate items in Schurz Library, a section on searching our on-line catalog, a section on the use of periodical indexes and locating journals and newspapers, a section on accessing information available in microformats, and a conclusion with a reminder to complete and turn in the assignment feedback sheet. Each section corresponds to part of the assignment students will be required to complete on their own after the instruction session. The examples used to illustrate each step were chosen to correspond closely to the assignment questions without duplicating them.

For the introduction, we borrowed a digital camera to photograph our library building. The photograph was uploaded to Schuck's Macintosh computer, where he was able to import it into *Color It* and *Aldus Digital Darkroom* to adjust the image clarity, tone, etc. This same procedure was used to photograph: periodicals in various formats, a microfilm reader/printer, the front page of a newspaper, and a student studying in the library. Digital cameras can be purchased for less than \$1,000 and may already be available in your school system's media centers or journalism classes. Although we used black-and-white photographs, color cameras are also readily available on the market.

A screen capture feature available on our OPACs (on-line public access catalogs) allowed us to capture the on-line catalog screens as bitmaps and import them into our presentation. We were able to choose the background color and modify the text fonts, size, and color using features of *WordPerfect Presentations*. Maps of the library were available as graphics files, and Schuck converted them on his Macintosh to a format our PC program could import. I

converted them on his Macintosh to a format our PC program could import. I had previously made *WordPerfect* files of periodical index entries and our periodical holdings list for handouts, and these files were easily imported into *WordPerfect Presentations*. We used the graphics creating features of *WordPerfect Presentations* to add background or highlight color and make banners in the corners of screens on which to place questions. Shuck used the more sophisticated graphics programs available on his Macintosh to create screens depicting a pot of gold and rainbow for the introduction, and to edit one of the digital photographs for our ending slide. The flexibility given us by having access to both Macintosh and PC programs made up for the fact that we had few funds for buying new programs.

Each of the sections relating to assignment questions has a series of questions and answers appearing on successive slides to facilitate the librarians' oral presentation of information. By using special slide transitions, we were able to simulate books being moved to a lower shelf, one picture merging with another, the turning of a page, and other eye-catching effects that simulate movement even without the use of video.

### **Evaluating Multimedia Computer Software**

In the course of trying out various multimedia computer software packages, we became aware of the many considerations that might be relevant in choosing which program to purchase and use. The following features might be examined for their relevancy to the project you plan.

1. Ease of programming. You are actually programming a computer slide show when you create a multimedia presentation, and the transparency of the program commands varies considerably among software packages. *Multimedia ToolWorks*' programming utilizes a series of characters to represent commands, and Shuck and I tired of trying to create slides in this manner very quickly. *WordPerfect Presentations* allows you to create most types of visuals on the screen with simple word processing or graphics creation commands. I have never found *Harvard Graphics* to be user-friendly, although several professors on our campus use it regularly. Which program you are most comfortable with is very much an individual decision, but do be aware that software varies considerably.
2. Conversion, especially of graphics. The more sophisticated programs will allow you to import files in a variety of formats, but when you are importing existing files from a number of sources and platforms, the



ability to convert from one format to another may save you time that would have been spent remaking some files. *Multimedia ToolWorks* has a conversion feature that will import and export a number of common formats with considerable ease, making it invaluable to our project. *WordPerfect Presentations* will allow import of *WordPerfect* files, although considerable editing is necessary in the *Wordperfect Presentations* program. If you want to use graphics from other sources, check to see whether the program you are considering will either import the format in which you have files or allow you to convert them.

3. Ease of importing files. This is related to the conversion features available in the software. If the program allows you to import a number of file formats directly without their needing considerable editing, you will save time, effort, and frustration.
4. Quality of the graphics program included in the software package. Some PC graphics programs are quite rudimentary and awkward to use compared to Macintosh products. If you plan to create many slides entirely on your own, access to programs that allow you to refine imported images (such as the brightness of a digital photograph), create pleasing backgrounds, or clip around portions of images for import into another file are quite helpful. We found it necessary for Schuck to create some slides on his Macintosh to be imported into our presentation in order to achieve the effects we were looking for.
5. Import of video and sound clips. Although we do not currently use videos in our instruction sessions, publishers are beginning to produce training videos for their electronic sources which might be worthwhile. We have upgraded our projection equipment to a type that will project video and sound, in anticipation of using clips in future presentations. Having a program that will allow us to incorporate video clips permits us to plan and create more sophisticated programs as we develop our skills.
6. Ability to make hyperlinks. Macintosh *HyperCard* users have long been familiar with hyperlinks, allowing branching into other files with a simple click on an icon, but this feature is not as commonly available in PC programs. Being able to load library maps, for instance, as a file readily available from any slide of the presentation would make it possible to answer directional questions whenever they occur, without requiring exiting the program or moving to an overhead projector to

display maps.

7. Exiting at any point, and returning to a particular slide. Students frequently ask questions about previous screens, and the ability to return to the slide in question allows you to be responsive to student needs. Most of the programs we examined allowed you to go back to the previous slide, but not to a particular slide without reversing through all slides in sequence. Whether the necessity of reversing through several slides is an acceptable compromise is a decision that is made in light of the types of presentations you will be creating.
8. Stand-alone capability. If you would like to make your presentation available for students or colleagues to use on their own, the ability to make a version of the presentation that does not require a special program to run it is quite useful. *WordPerfect Presentations* allows you to make a "runtime" version of presentations that can be run from Windows and does not require the use of *WordPerfect Presentations* itself. Instructors, in particular, find this a worthwhile feature.
9. Creation/playback differences. Some presentations look significantly different when played than they did when created. It can be frustrating to spend time getting images "just so" and then discover that in playback mode it is distorted in color, clarity, font size, or some other significant element. Checking the playback version of created slides frequently will allow you to anticipate such differences, but the differences would be minimal for the software to be useful.

These features of the multimedia software packages should be considered in light of your planned projects and your personal preferences in program features. We did not find one "perfect" computer program and doubt that one exists, but we were able to find one Schuck and I were both comfortable using and which gave acceptable results.

### Technical Considerations

When choosing among software packages, several technical factors may effect your decision on which to purchase or use. These include the following items.

1. Computer limitations. If you intend to use hardware you already own, you must be careful about the requirements of the software. Some packages require Windows, which would be an additional (large)

expense if you don't already own it. Some packages list the requirement for a 386 speed or higher, but run significantly better on a 486. You may need to have Super VGA monitor capabilities to make the best use of the software's potential. Checking out the requirements, and the software itself, should be considered an absolute necessity.

2. Display unit limitations. When we began our project, we had an LCD panel to project the images which did not allow us to project video, and which had a limited color range. These factors effected our overall plan as well as the specific choices we made for the design of individual slides. The differences between the finished presentation on a monitor and through the LCD panel convinced our administrators of the need for replacing the projection unit, which will allow us greater scope in the future.
3. Availability of help. Help screens included in software vary greatly in their usefulness, even among top name products, and manuals vary just as much. If neither of these types of sources is extensive enough, having a colleague with considerable experience with the same software may suffice to get you to the point of being able to experiment and teach yourself. Another source of help is training videos from the software producer or a third party producer. This kind of help was used by a group of faculty on our campus who had chosen *PowerPoint* software to create classroom presentations. Third party manuals are not widely available for multimedia software, but may be in the future.
4. Costs. Costs to consider might include any of the software, computer hardware, or projection equipment needed to produce and utilize multimedia presentations. However, lack of significant funding should not prevent you from getting started. You may be able to "make do" with your current hardware, and some free or inexpensive software is available: *Multimedia ToolWorks* was given to us free of charge for attending a teleconference on its use. Seeing a finished, polished, and useful production might convince your administrators of the need for investment in this area, as it did for our administrators.

### Plans for the Future

This project convinced us of the usefulness of multimedia software as yet another teaching tool for presenting information to students. Such presentations, like other media, do not replace the instructor or librarian, but can facilitate the presentation of information in much the same way that overhead



projectors or blackboards did in the past. We plan to create short presentations on such topics as the Library of Congress classification system and interpreting LC call numbers; using periodical indexes; the differences between scholarly and popular literature; and search strategies in various on-line databases to be used as backups when live demonstrations are not possible. These types of presentations can be used in library instruction for many courses, making the time invested well worthwhile. To facilitate future production of presentations, we have set up a subdirectory on our local network for instruction librarians to share handouts that they have created electronically. These can be easily imported into presentations and edited as needed. Such cooperation with other librarians would be possible even if you did not work in the same library and must exchange disks. The presentations themselves could be shared if you coordinate your hardware and software.

It is the authors' belief that the use of multimedia computer software can greatly enhance library instruction if the librarians approach this medium as an instruction tool and have a clear vision of their purpose in using it. Erwin K. Welsch stated that, "there's a place for [computer assisted instruction] . . . yet it should not be used as a substitute for human-to-human teaching; rather it needs to be utilized as a supplement or as a means of mastery learning/testing..."<sup>2</sup> The presentations are visually interesting and can help accommodate various student learning styles by allowing information to be presented in more than one medium simultaneously. The electronic format allows for easy editing and customization to the needs of particular groups of students in ways that other formats do not. Multimedia presentations may well be the "blackboard" of the future in library instruction.

### Endnotes

1. George Hubbard, "Multimedia," *School Library Media Quarterly* 22, no.1 (fall 1993):45.
2. Erwin K. Welsch, "Technology and Library Instruction: The Potential of the Audio Visual Connection from IBM," *OCLC Micro* 6, no. 3 (June 1990):27.

### Software Discussed

*Action!*

Optimized Systems Software, Inc.  
1220 Rock Street  
Rockford, IL 61101

Phone: (815)968-2228

*Aldus Digital Darkroom*

Aldus Corp. (Consumer Div.)

5120 Shoreham Place

San Diego, CA 92122-5936

Phone: (619)558-6000

*Color It!*

Timeworks, Inc.

625 Academy Drive

Northbrook, IL 60062

Phone: (708)559-1300, (800)535-9497

*Harvard Graphics*

Software Publishing Corp.

49 Kessel Court

Madison, WI 53711

Phone: (608)274-6813

*Multimedia ToolWorks*

(Producer Information Not Available)

*PowerPoint*

Forethought, Inc.

P.O. Box 32

Sunset, SC 29685

Phone: (608)274-6813

*WordPerfect Presentations*

WordPerfect Corp.

1555 North Technology Way

Orem, UT 84057-2399

Phone: (801)225-5000, (800)451-5151





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