

Navigating Some of the Library Highways with Your Modem

by Eric Morgan

This article describes a myriad of non-traditional information sources accessible with your computer and modem. These descriptions proceed from the least expensive source (ISAAC) to the most expensive (CompuServe). In between are descriptions about the North Carolina Information Network, regional online catalogs, bulletin board systems, The Well, ALANet, Prodigy, and America Online. Each source is described in terms of its scope and ease of use. This paper provides brief instructions on how to access these sources. (It does not describe how to use your communications software.) It then demonstrates how these sources can be used to provide better library service and facilitate professional development. Finally, this paper encourages librarians to think of a computer as the primary tool of the profession.

ISAAC

The following quote comes directly from ISAAC. "ISAAC, the Information System for Advanced Academic Computing, provides information for IBM users about software and hardware for instruction and research in higher education. ISAAC is funded by IBM and operates at the University of Washington. Access is free to all faculty, staff, and students currently affiliated with an institution of higher education. It is possible to access ISAAC via modem or via the Internet computer network."

Using ISAAC (and many of the other services listed here) is much like going to a special-interest group meeting at ALA. It provides the means for discussing common problems; it's an incarnation of the "two heads are better than one" philosophy.

ISAAC is divided into many conferences (or discussions). Some of the conferences of particular interest to librarians include the following:

- Campus networking
- Education
- Humanities
- Institutional research
- Languages and linguistics
- Learning disabilities
- Libraries
- Multimedia technologies
- Social sciences
- Telecommunications technical exchange
- Instructional computing
- Instructional technology transfer centers

Within the Libraries section, there are a number of interesting topics being discussed:

- VTLS
- IBM librarian software
- OCLC EPIC price
- Developing library skills
- Copy of NREN BILL in HOUSE
- Mini-library needs help
- ELECTRONIC CLASSROOM
- opac
- CD-ROM Network

- Freshman year conference
- Collection development software
- Info wanted on how your library decides what to order
- NOTIS systems announcements
- 1991 ALA Annual Conference
- Dynix announces two new innovative modules
- Internet addressable journal search systems
- Computerized grant sources, Looking for

ISAAC (like the other services listed here) is an information gold mine, although it is not a traditional library information source. The information found in these discussions is the sort you encounter when talking to a person face to face. It typically contains names, addresses, telephone numbers, citations, opinions, hardware and software reviews, questions and answers, meeting announcements, calls for papers, etc.

The difficult thing about ISAAC is that it is not searchable; browsing will be the only way to retrieve something of interest. For this reason ISAAC is not a good source for reference information.

ISAAC is better suited for professional development. Visit as many conferences as you want. Pose questions to the other readers. Read what other people have to say. Offer your opinion. This process will help solidify and polish your professional goals and objectives and at the same time contribute to library/information science.

To access ISAAC, simply use your communications software and dial 1-800-237-5551. Once connected you can register by typing "register" in lower case as your access code. Contact the ISAAC office if you have questions at (206) 543-5604.

North Carolina Information Network (NCIN)

The North Carolina Information Network (NCIN) is a conduit for many of the information services that the North Carolina Division of State Library provides. It "is a link between widespread sources of information and local libraries of all types, using the latest computer telecommunication technologies."

Once logged onto NCIN you are presented with the following menu options:

- View a bulletin board on the screen
- View information stored in a data base
- State Library Dynix Catalog
- State Archives MARS finding aids
- Download a bulletin board
- Display your user information for verification
- Electronic mail system

Some of the bulletin boards contain full-text "articles," others are lists of data. These bulletin boards are not used to exchange ideas with fellow telecommunicators; they are intended to disseminate information about libraries and the state government. (See Appendix A for a detailed description of the bulletin boards.) The bulletin boards are updated regularly and at this writing include:

- State government vacancies
- Listing of all state contracts in selected areas
- Calendar of events
- Listing of state construction bids
- Statistical information in 12 general subject areas
- Listing of Department of Transportation highway contracts
- Local government programs
- Listing of professional librarian positions
- Information for children's and young adult librarians
- General summary of changing news about NC libraries
- Library management information
- Summary of events in the NC General Assembly

NCIN also hosts a state calendar database and a state job-opening database. These databases are searched by filling out an electronic form and submitting the query. The results are then displayed.

Another unique aspect of NCIN is MARS. MARS was developed by the North Carolina State Archives as an automated finding aid system to materials held by the State Archives. MARS is a system for record location and retrieval rather than information retrieval. Its purpose is to direct you to records that contain information you are seeking rather than to present the information itself. For example, when looking for information about Zebulon B. Vance, MARS will report fifty-six items in the Samuel A'Court Ashe Papers that contain references to Vance or are in some way associated with him and will indicate the locations of those items.

MARS includes archival information in the following categories:

- Account Books
- Audiovisual/Iconographic Collection
- Bible Records
- Cemetery Records
- Church Records
- County Records
- Federal Records
- Foreign Archives
- Map Collection
- Military Collection
- Miscellaneous Collection
- Municipal Records
- Newspaper Collection
- Organization Records
- Plans and Drawings
- Poster Collection

Don't forget the electronic mail capabilities of NCIN.

Anyone who has used electronic mail knows its benefits: fast response time, elimination of postage costs, elimination of "telephone tag". Since every institution that uses NCIN has an electronic mailbox, you can send electronic mail to most libraries in the state.

There is no cost for most libraries to use NCIN (public school libraries are the exception). Since each institution is different, the best way to learn how to access NCIN is to contact the State Library for more information

Online catalogs within North Carolina

Besides the North Carolina Division of State Library, there are a number of other library catalogs you can access. Dialing another library's catalog has many potential uses: (1) to find the title and then look it up in your own collection; (2) to use as an alternative to OCLC for ILL purposes; (3) to use as a collection development tool; (4) to create a useful bibliography of obtainable books; and (5) to compare or resolve cataloging difficulties.

In North Carolina, there are basically two ways to connect to remote online catalogs with your modem. The least expensive is through LincNet. LincNet is a communications network run by UNC Educational Computing Services (ECS). Most, if not all, post-secondary educational institutions across the state have a LincNet node. Many institutions have their own LincNet number and many have their own policies concerning public access. Call the nearest institution and ask their computer operations center about their policies and procedures concerning LincNet. If you can gain access to LincNet this way, use the command "dir ?" to get a list of available services. Then use the command "connect" to access these services.

The other, more expensive way to connect to remote online catalogs in the state is to call them directly. Below are the telephone numbers of some online catalogs across the state and instructions on how to log on. A word of caution is in order. Use these telephone lines with discretion. The libraries have a limited number of dial-up ports which are primarily intended for the libraries' immediate clients. As a matter of courtesy, do not stay on the line too long. (Unless otherwise noted, your communications setting should be set at 8 character-bits, 1 stop-bit, and no parity.)

Triangle Research Library Network (TRLN) is made up of the libraries of Duke University, North Carolina State University, and UNC-Chapel Hill. They each maintain individual catalogs, but they are searchable simultaneously. Together, they form one of the largest collections in the nation. There are several numbers you can dial to access TRLN. Choose the one most convenient to you: (Your communications setting must be set at 7 character-bits, 1 stop-bit, and even parity; enter "bye" to exit and manually hangup.).

- dial (919) 515-3980 and at the "enter dest" prompt enter "lib*".
- dial (919) 549-8211 and at the # prompt enter "lib" press return a number of times until you get the "?" prompt and begin.
- dial (919) 962-9911 (300 or 1200 baud) or (919) 962-9921 (2400 baud) or (919) 962-9931 (9600 baud) and at the # prompt enter "lib" press return a number of times until you get the "?" prompt and begin.

UNC- Charlotte is accessible only at 1200 baud. Dial (704) 547-3200 or (704) 547-3300. When asked for a connec-

tion enter "c aladdin" and you will connect to the online catalog. Enter ^b^c (control-b control-c) to exit and manually hangup.

Dial (919) 395-3700 to log onto UNC-Wilmington. At the "Select Service," prompt enter "lib". You will get a "connected" message. Enter "?" and you will be asked for a terminal type. Choosing vt100 is a safe bet.

There are other accessible catalogs across the state, including those at North Carolina A&T, the Public Library of Charlotte and Mecklenburg, and UNC-Greensboro.

Bulletin board systems (BBSs)

Bulletin board systems (BBSs) represent another fruitful and non-traditional source of information underutilized by librarians. Libraries and librarians can use BBSs to store, organize and disseminate information as well as retrieve information.

Typically, an individual or organization has set up an "electronic bulletin board" for the purposes of discussing issues related to the parent organization. This electronic bulletin board usually consists of a microcomputer, a modem, and BBS software. It is relatively inexpensive to set up. Just about any computer and modem will do, and some of the most popular BBS software programs are shareware.

There are a many BBSs sponsored by libraries, and the number is growing all the time. A good beginning source for library-oriented BBS telephone numbers is the "Directory of Electronic Bulletin Board Systems in Libraries and Related Organizations" sponsored by the American Society for Information Science and edited by Audrey N. Grosch. A few of the BBSs from this list are described below:

The first is ALF, the Agricultural Library Forum. "The National Agricultural Library Bulletin Board provides a channel of communication to librarians, technical information specialists, extension workers, researchers, scientists, and others on agricultural information activities." Call (301) 344-8510.

Another is Wellspring. "Wellspring is sponsored by the Biomedical Library of the University of California-Irvine, and is free of charge to all University of California students, staff, and faculty, and the general public. The main areas of focus are health and medicine, computer viruses and badware, personal computer education and communication." Call (714) 856-7996 or (714) 856-5087.

Wellspring and ALF both use BBSs to disseminate information about their parent institutions. They would both be good places to post reference questions. Neither is a good place to discuss librarianship.

The Library User Network BBS is sponsored by Metropolitan State University. It is "a bulletin board dedicated to the search for information in libraries, online catalogs, and other indexes of all sorts. It is intended to be an open forum for discussions, guest editorials, reviews, specialized bibliographies, and short articles or stories by BBS users." Call the Library User Network BBS at (612) 772-7635.

On the other hand, "The HI Tech Tools BBS has been established specifically for librarians who are involved in implementing current technology in their libraries. This includes, but is not limited to: automated circulation and catalog systems (particularly Follett's Circ Plus and Cat Plus), CD-ROM database applications, and online database searching (e.g. DIALOG's Knowledge Index). Portland

(Oregon) metropolitan area teachers and students are also welcome, with areas established especially for them." This BBS is an excellent place to discuss library related issues especially since it "echoes" its library discussion with other BBSs across the country.

The HI Tech Tools BBS files section contains two particular categories of interest to librarians: (1) The Future of Information Access, and (2) Files for Librarians. Each of these sections contain long lists of text files (full-text articles) you can download, including the following:

- RIGHTS.ALA – Library Bill of Rights
- ACCESS.ALA – Regulations, policies, and procedures affecting access to library resources and service: An Interpretation of the Library Bill of Rights
- FAVLIB.TXT – Favorite online numbers for librarians
- OIS7.TXT0 – Online information sources
- CDROM.TXT – Networked CD-ROMS by Judy Koren
- WAIS.TXT – Wide Area Information Services interface
- NREN272.TXT – 1991 Senate Bill 272, Computing, education and libraries

To access HI Tech Tools simply use your modem to call (503) 245-4961.

The Cleveland Free-Net is a service with a lot more money and consequently offers a greater variety of services. (It isn't really a BBS, but since there is no cost to use the service except a long-distance telephone call, I put it here.) This is how Free-Net describes itself:

"For the past five years, Case Western Reserve University has been experimenting with free, open-access, community computer systems as a new communications and information medium ... Running on the machine is a computer program that provides its users with everything from electronic mail services to information about health care, education, technology, government, recreation, or just about anything ... Anyone in the community with access to a home, office, or school computer and a modem can contact the system any time, 24 hours a day. They simply dial a central phone number, make connection, and a series of menus appears on the screen which allows them to select the information or communication services they would like. All of it is free and all of it can easily be accomplished by a first-time user ... the system is literally run by the community itself. Everything that appears on one of these machines is there because there are individuals or organizations in the community who are prepared to contribute their time, effort, and expertise to place it there and operate it over time. This, of course, is in contrast to the commercial services which have very high personnel and information-acquisition costs and must pass those costs on to the consumer ... With this in mind, in September of 1988 the Community Telecomputing Laboratory was established at Case Western Reserve University."

Once you're logged onto the Free-Net, you are provided with a number of menu choices. Of particular interest to librarians are The Library, headlines from the newspaper *USA Today*, the weather, and full-texts of a few books, poems, essays, and speeches.

The Library is a link to the the public library system around Cleveland, but it is also a link to library systems

around the country. With the Cleveland Free-Net, it is possible to access and use the online public access catalogs (OPACs) of Colorado Alliance of Research Libraries (CARL), MELVYL at the University of California, and Boston University.

You can also use The Library to choose the *Electronic Bookshelf*. It contains the full-text of the *Bible*, *Holy Koran*, *The Book of Mormon*, *The World Factbook*, and *GAO Reports*. These texts are searchable so you don't have to download the whole thing.

Other full-text sources come from a sections called the Freedom Shrine. It contains more than a few poems, essays, speeches, legal documents, and other historical documents that are not copyrighted. Again these documents are searchable so you do not have to download the entire thing.

The Cleveland Free-Net also contains news. It is supplied directly from *USA Today* in our own Greensboro, North Carolina. Each story consists of one headline and one paragraph. These services are only the tip of the iceberg. To use the Cleveland Free-Net call (216) 368-3888.

Prodigy

Prodigy is a service you have probably seen advertised on television. It is a popular service in the sense that its greatest appeal is to the public. Like AOL and CompuServe, Prodigy provides access to the latest news, weather and sports. Like AOL with its graphical user interface, Prodigy is easy to use and requires Prodigy software. It is also inexpensive; it costs \$7.95 per month plus .30¢ for every message sent beyond the 30th message. It also has a copy of *Grolier's Encyclopedia* online. That is where the usefulness of Prodigy stops.

If you use Prodigy on a Macintosh, you will lose the use of Macintosh's best features. Prodigy takes over your entire computer; it eliminates the menubar. Consequently, you can not use the otherwise ever-present cut, copy, and paste functions. Nor can you use MultiFinder to switch from application to application. Be forewarned: Prodigy runs on a Macintosh but it is not a Macintosh program.

Another problem with Prodigy is there is no way to save information. It does not capture text as it scrolls off the screen. You can't even save the news articles except by doing a screen capture. To add insult to injury, just about every screen is one quarter filled with advertising.

About a year ago Prodigy was having problems because the software was inadvertently "stealing" information from users' disks. This has given Prodigy a bad name, but I believe they have cleared the problem up.

Prodigy is an "okay" service for the consumer but not particularly useful to the librarian. This is especially true when it is compared to the other resources listed in the article.

If you are interested in Prodigy then call or write:

Prodigy Services Company

P. O. Box 791

White Plains, NY 10601

1 (800) 776-3449

The Well

The Well (Whole Earth LECTronic Link) is an electronic conferencing service located in California, but accessible from just about anywhere. Like ISAAC, The Well hosts discussions on a number of topics, but The Well is closer to CompuServe in its variety. Everything from computers to gardening, sports to politics, and business to the Grateful Dead is up for discussion on the Well.

Of particular interest to librarians is Apple Library User's Group (ALUG) Online. It hosts discussions on any and all issues concerning libraries and librarianship. Some of the more interesting discussions include:

- Libraries and Internet
- Hypermedia
- True Tales From Chicago ALA
- Information about ALUG
- Apple Telecom programs
- Accessing AppleShare from remote sites
- Computer novices seeking help
- AI in Libraries
- Multi-media in libraries
- Help for teaching writing?
- Public Access Computers
- What Libraries are producing CD-ROMs
- Libraries and politics
- Librarianship in the 90's and BEYOND
- News From the Nets
- ALA in Atlanta June 1991
- Macintosh Text-Retrieval Software
- Library Automated Systems (non-Apple)
- Patron privacy versus the historian
- Checking out the FidoNet messages on K12Net - Internationally
- Copyright law and the 21st century library
- What online catalogs do you use or have created?

Another interesting discussion to visit is INFO, a conference about communication systems, communities, and tools for the information age. This conference is more active than ALUG Online. It has discussions like the future of books and publishing, online searching, expert systems, television, and the Internet.

A significant difference between The Well and most of the services previously listed is that The Well is searchable and consequently, could be used as a reference source as well as a serial. For example, I wanted to know what had been written in ALUG Online about BBSs. So I visited the conference and entered find "BBS". The Well responded with a very long list of topic, response, and line numbers containing "BBS". After perusing this pseudo-index and choosing a particular topic and response, I navigated to that topic and response, displayed the information, and logged off. The result was a clean and neat listing of BBSs across the country. The same technique could be used for many reference queries. For example, suppose you wanted to locate people's opinions about a particular software program. You could use The Well's directory listing and choose a conference. (The conference is like a database.) Navigate to the conference, issue a find command, view the results, and download individual items. The technique is the same as traditional online searching except the medium is less structured and it contains non-bibliographic information.

The best way to connect to The Well is through the CompuServe Information Network. Call (800) 848-8990 and navigate the automated answering service to retrieve a local CompuServe number. Call the retrieved number with your modem. Once connected enter "well" at the "Host Name:" prompt and follow the instructions to register. The Well charges you \$10/month for membership + \$2/hour for connect time + \$4 to \$12/hour to use the CompuServe network. (People who like long-distance bills can call The Well directly at (415) 332-6106.)

ALANet

ALANet, an electronic service no longer sponsored by ALA, is mentioned here only because you may have heard about it and didn't know what it was. ALANet's purpose was to foster electronic communication between libraries, librarians, information vendors of all types. Unfortunately it was rather expensive, and not heavily used. Because of these problems and competition from other communications links (the Internet, Bitnet, commercial information services) ALANet ceased to exist February 29, 1992.

America Online (AOL)

Of all the services described here, America Online (AOL) is by far the prettiest and easiest one to use. Like The Well and CompuServe, AOL is a commercial enterprise providing information. Its greatest strength is the ease in which a person can retrieve the latest ephemeral information: news, sports, and weather. It also hosts technical support from many software vendors and contains plenty of shareware and public domain software files.

To access AOL, you need their free communications software, available from:

America Online
8619 Westwood Center Drive
Vienna, VA 22182
(800) 827-6364

The logon procedure is simply a matter of clicking a few buttons and entering your password. It would be difficult to make a simpler interface. Once logged on, you are presented with the Welcome screen. From here you can navigate to:

- current news to create a personalized newspaper,
- textual or graphic weather forecasts,
- airline reservations,
- a simple encyclopedia
- a "post office" to mail notes and files to others subscribing to AOL,
- discussion groups on just about any topic imaginable,
- stock and business reports,
- editorials, and
- libraries of shareware, demonstration, and public domain software.

I particularly like the news and weather services. With AOL I can browse their list of news articles, download them at the speed of my modem, save them to my hard disk, and read or edit them at my leisure. The weather maps are just as easy to retrieve and are as reliable as any other published weather forecast since they all come from the same source, the National Weather Service.

AOL is fairly inexpensive. You are billed \$6 every month, even if you do not use the service. Each month the first hour used is free. After that the rates are \$12/hour between 7 AM to 6 PM and \$6/hour between 6 PM and 7 AM. Time spent uploading files is free.

CompuServe Information Service (CIS)

The CompuServe Information Service (CIS) is the granddaddy of conferencing services. It reaches around the globe, hosts conferences on just about any topic imaginable, and is a standard location for the latest shareware and public domain software.

CIS is accessible with your simple communications software or their Information Manager programs. If you use

your communications program, you will have to navigate CompuServe with its command language or menus. The command language is your best option, but learning it takes practice.

The alternative is to use their Information Manager for DOS or Macintosh computers, a graphical user interface (GUI). It does work, but it's not as elegant as AOL's and not nearly as fast. In many cases the Information Manager only adds to your online time.

CompuServe contains information not found in many other information services except DIALOG or BRS. For example, vast amounts of financial and business data can be retrieved from CompuServe at the drop of a hat.

(CompuServe is owned and operated by the H&R Block Company.) For example, CompuServe can give you access to an electronic ValueLine, S&P Index, Dun & Bradstreet's Market Identifiers, InvesText, and the Thomas Register. It also offers demographic reports, reports on mutual funds, and brokerage services. All of these services are surcharged.

A unique database CompuServe provides is the PHONEFILE. This database allows you to search the white pages of almost any telephone book in the country.

CompuServe also provides a window to the databases in DIALOG, BRS, Vu/Text, and NewsNet via a service called IQuest. Through a series of menus, a search strategy is formulated. The database is searched and the first ten citations are returned. The minimum charge for these first ten citations is four dollars. The advantage of this approach is that you do not have to know searching command language, nor do you have to have an account with any of the database vendors. On the other hand, you retrieve only the last ten citations entered into the database and you have

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little control over the search strategy's details. (You do have the option to retrieve more citations for more money.) IQuest is designed for the non-expert who searches for this sort of information infrequently.

A number of Information Access Company (IAC) databases available on CompuServe: Business Database Plus™, Computer Database Plus™, Magazine Database Plus™, Health Database Plus™. Since these databases contain full-text journal articles, they can be sources for cost-effective document delivery. Searching these databases is more flexible than IQuest since you have the option of using menus to create search strategies or writing your own. The first time I tried it, I was looking for a particular citation. A few minutes and about \$5 later, I had retrieved my two-page article. I tried again with a second citation and retrieved it in less time and for less money. This particular article hadn't even made it to the newsstand! This service costs at least an extra .21¢ per minute plus \$2.50 for each complete article.

If used effectively, this sort of service could be a boon to the small library. Consider using this service to supplement ILL. Traditional ILL turnaround time is at least a few days. Telefacsimile will take at least an hour. At photocopy rates of .10¢ per page, a typical article will cost \$1 to copy an half and hour of time. With the CompuServe service, the article request can be filled in less than 15 minutes and delivered via email. The only thing you lose are any graphics within the text. In short, electronic full-text article delivery is becoming cost-effective with a computer, communications software, modem, and access codes.

Two unique services from CompuServe are the Electronic Mall and its monthly *CompuServe Magazine*. The Electronic Mall allows you to purchase a cornucopia of merchandise including books, computers and software, foods, office supplies, and apparel. Because of the merchants' low overhead, you can purchase these things more cheaply than in retail stores.

CompuServe Magazine features articles on CompuServe's services. It also describes how other people have used CompuServe to accomplish their own specific goals. Even though *CompuServe Magazine* is loosely disguised advertising, it can help you use CompuServe more effectively.

CompuServe's pricing structure rivals DIALOG's in its complexity. It comes in three flavors. The standard pricing plan includes unlimited connect time to use a wide variety of services for a membership of \$7.95 per month. The plan includes:

- the basic news, sports, and weather services
- the Reference Library (encyclopedia, Consumer Reports, Peterson's College Database and Healthnet)
- Electronic Mall
- Money Talks (Basic Current Stock Quotes, Issue/Symbol Reference, and Mortgage Calculator)
- Games & Entertainment
- Communications Exchange (limited electronic mail)
- Travel and Leisure

Notice that this plan does not include the extended services like electronic conferences. Any time you use services other than the ones listed above, you are charged for connect time (\$12/hour for 1200-2400 baud users and \$22.80/hour for 9600 baud users).

With the Alternative pricing plan, you are simply charged

\$2.00/month plus connect time (again, \$12/hour for 1200-2400 baud users and \$22.80/hour for 9600 baud users). If you are an infrequent user of CompuServe, then the Alternative pricing plan is for you.

The third plan is the Executive Service Option. For an extra \$10/month you can receive discounts on selected CompuServe products, access more extensive financial information, and increase your personal storage area.

Lastly, you should note that many of the services you may be interested in as a librarian will incur surcharges. These surcharges have their own pricing structures ranging from flat fees to the sum of connect time and reports, citations, or full-text articles.

CompuServe has grown up. It started out as a overgrown BBS. Now it has the potential of becoming a full-blown library. Since CompuServe changes at such an alarming rate, it is a good idea to purchase a book like *CompuServe from A to Z* by Charles Bowen (Bantam Books, 1991).

For more information about CompuServe call or write:
CompuServe Information Service
P. O. Box 20212
Columbus, OH 43220
(800) 848-8990

Summary

This article has listed a host of non-traditional information resources accessible with your modem ranging from the free to the quite expensive. The only limitation you have, besides money and hardware, is your ability to navigate these resources effectively. It takes practice to use these tools, just like it took practice to learn how to use the card catalog. When you look beyond the medium of these resources, you discover that they are very similar to the resources you traditionally have been using. They have their own strengths and weaknesses just like printed materials. These resources represent the new paradigm for librarianship.

Every profession has its tools. Surgeons have scalpels. Carpenters have hammers. We have computers. Our professional skills include retrieving, organizing, storing, evaluating and disseminating information. In the not-too-distant past, this information manifested itself solely in printed form: books and magazines. Nowadays, more and more of this information is located in computers, which are extraordinarily efficient tools for retrieving, organizing, evaluating, and disseminating information. What computers lack is intelligence; they don't know how to provide these services. That is where we come in. We can (and should) combine our professional skills with the efficiency of a computer to provide more timely and complete information services.

Appendix

This is a more detailed description of some of the bulletin boards sponsored by NCIN.

NCCAL — A calendar of meetings and continuing education programs for librarians in North Carolina and nationally. TO ACCESS: TYPE NCCAL.

NCDATA — A twice a month service of NCIN and the State Data Center of North Carolina. It provides the most current, authoritative statistical information available in 12 general subject areas: Population and Housing; Vital Statistics and Health; Social and Human Services; Education; Law Enforcement, Courts and Corrections; Environment, Recreation and Resources; Energy and Utilities; State and Local Government Finances and Elections; Employment and Income; Business and Industry; Agriculture; and Transportation. Information is given for each county. This data updates the 1984 edition of the County Profile Book. Updates will be posted every other Wednesday. Large data files will be transferred on a more frequent schedule. CURRENT FILE: 1990 Census State Population Counts. The Bulletin Board will be updated twice a month on Fridays. TO ACCESS: TYPE NCDATA.

NCJOBS — Listing of professional (MLS required) librarian positions open in North Carolina. For the audiotape version, telephone 919/733-6410. To list a job vacancy, contact Vicki Wheeler at the State Library at 919/733-2570 or use Electronic Mailbox #62953518. TO ACCESS: TYPE NCJOBS.

NCKIDS — Includes information for children's and young adult librarians contained in the State Library's youth services loose-leaf service mailed to public libraries and library schools. Updated weekly. If you would like to contribute to NCKIDS, send copy to Cal Shepard at Electronic Mailbox #62957236. TO ACCESS: TYPE NCKIDS.

NCLIBS — A general summary of constantly changing news about NC libraries and/or librarians. This board is updated on Fridays. The first week of each month will contain general library news. The second week will contain network news. Periodical holdings are provided as network news in the second and sometimes as general library news in the first week of the month when available. If you would like to contribute your holdings to be uploaded, send an ASCII diskette to Diana Young at the State Library. The third week will contain information customarily found in FLASH. The fourth week will contain recent acquisitions of the State Library in the field of library and information science. Questions and/or comments should be addressed to the person listed in each heading or to Diana Young, Email #62953515. TO ACCESS: TYPE NCLIBS.

NCMGMT — (Management) provides library management information about and/or from all types of North Carolina libraries. Content depends on what you are willing to share — planning documents, policies, procedures, statistical information, articles, surveys, etc. First priority will be given to information provided in machine readable form — either through the electronic mailbox or on an IBM compatible 40 - track floppy diskette submitted as an ASCII file. The information provided will only be available through the bulletin board. The board will be changed every Friday and will begin with public library five -year plans currently being submitted to the State Library. Submit information to Diana Young, NC State Library, 109 E. Jones Street, Raleigh, NC 27611; Email # 62953515; NCDCR Prime SLAD.DJY; Fax # 919/733 - 8748. TO ACCESS: TYPE NCMGMT.

NCNEWS — A summary of events in the North Carolina General Assembly. Produced by the North Carolina Association of County Commissioners and the North Carolina Information Network. Updated by 3 pm on Tuesdays and Fridays as material is available. TO ACCESS: Type NCNEWS.

NCBUS — A listing of all State contracts in these areas: Term Contracts; Automotive, Construction Equipment; Highway Maintenance Equipment; Drugs; Hospital/Laboratory Equipment/Supplies; Fuels. Also includes State contracts in these areas: Printing Forms; Publications; Office/Educational Equipment and Supplies; Institutional Furniture/Equipment, Food, Textiles and Chemicals; Contractual Services, Electrical Equipment, Telephones; Data/Word Processing Equipment; Copiers. TO ACCESS: TYPE NCBUS.