NOTIS

NOTISes

Number 6

August 1, 1985

DOCTOR JOHN'S SURE-FIRE CURE FOR THE BAR CODIN' BLUES

Love long lines at your circulation desk? Enjoy hours of tedious matching of books and bibliographic records? If you do, this cure isn't for you!

But if you like to leave work at 5 pm occasionally, and want to retire sane, you might consider using one of these two programs from the NOTIS Office to speed up creating linked item records and storing item IDs (bar code or OCR numbers) in them. The key feature of these programs is that they create linked item records which contain the item IDs for the items. So you avoid manually creating the linked item records and storing their item IDs. Most importantly, you avoid moving every book to a terminal.

Program LD003BAL. This batch program reads every copy holdings statement within every copy holdings record. Basically, the program creates one linked item record for each copy holdings statement, if the statement passes the following three criteria: 1) No linked item record already exists for the statement; 2) Copy is not in-process (statement class code is not A, I, or Z); and 3) Copy is not withdrawn (Statement subfield is not x).

Six Options are set by each library.

Option 1: Ignore copy status code (otherwise the program creates linked item record only if copy status = 1 for single-volume work with all pieces received). If ignored, the program creates one linked item record for a multi-volume copy, too.

Option 2: Preassign an item ID number for this statement's item record (otherwise the program does not store an item ID value in new item record).

Option 3: Calculate a check digit which suffixes the item ID (otherwise the program does not calculate a check digit).

Option 4: Write a record to a label file to be sorted and sent to a vendor for printing item ID labels (otherwise the program does not write a record).

Northwestern University
University Library
1935 Sheridan Road
Evanston, Illinois 60201
312-491-7004

Option 5: Include as many characters as possible of title information on the label record for printing on the label (otherwise the program does not include title information).

Option 6: Collection location in statement matches one of the locations specified at the time the program is run (otherwise the program ignores the statement).

This program would typically be run one or several times by a library which has at least 10,000 copy holdings records and a manual or stand-alone automated punched-card circulation system. The program could first be run for all collections for which linked item records and item IDs are to be created. (This should include reference collections, for inventory and tracking purposes). The program could then be run a second time for any collections for which linked item records are wanted but not item IDs. An example is a rare book collection. If you want to be cautious, run the program for one or several collections, then again for others.

The label records are designed to contain two lines of information to be printed below or above the bar coding itself. The final format is between a library and the label vendor, although the NOTIS Office will be glad to advise, based on Northwestern's and others' experiences. The first line contains the call number of the item on which the label goes. This is from subfields b and c of the copy holdings statement. The second line contains the rest of the call number if necessary and title information if specified as an option. On the right of the second line is the item's collection location.

The sort sequence of the labels can be specified so the labels print first by group (e.g. all locations within a building), then by location and sublocation name, then by call number or title if unclassified.

It is critical that just after the program is run, processing staff begin to create linked item records and affix item IDs to in-process materials. If, say, the program is run on a weekend, then the following Monday procedures should be in place and labels available to minimize the number of items not given item records. Staff also need to know how to modify program-created linked item records which are in error, as when a copy is discovered to not exist.

A full description of program LD003BAL will be distributed shortly. Questions about its use and planning for it are welcome. Meanwhile, read on ...

Program LD008BAL This batch program reads every copy holdings statement within every copy holdings record and every statement within every volume holdings record. This program differs from LD003BAL in that it looks for item IDS from labels already affixed

to items. The item IDs come from archival (or archrival?) OCLC or RLIN records or are manually entered in the copy or volume holdings records when doing inventory and labelling. The latter procedure is quick if complete bibliographic and copy information already exists in NOTIS, and laser readers are used to read the labels.

When the program reads an item ID in a copy holdings notes field or volume holdings statement, it creates an item record for the copy statement containing the item ID and removes the item ID from the copy or volume holdings record. So program LD008BAL can accurately create linked item records for multi-volume copies (unlike program LD003BAL).

Five options are available for each library to use.

Option 1: Specify the item ID length (this is required).

Option 2: Validate the check digit which suffixes the item ID (otherwise the program does not validate).

Option 3: Specify an item loan code value with an item ID (otherwise the program uses the default item loan code value). This information is deleted after the item record is created.

Option 4: Specify enumeration/chronology data with an item ID (if extant, stored in item record enumeration/chronology field). This information is deleted after the item record is created.

Option 6: Specify accession number with an item ID (if extant, it is stored in the item record note field with subfield a prefix). This is useful for historical purposes, but the accession number is not indexed. This information is deleted after the item record is created.

This program would typically be run one time by a library. Processing staff should already have co-ordinated affixing labels to in-process materials once the labelling began. Creating and updating linked item records should begin after running the program, for the reasons mentioned in regards to program LB003BAL.

A full description of program LD008BAL will be distributed shortly. Questions about its use and planning for its use are welcome.

Watch for more sure cures from the good Doctor!

NEWS FROM SYSTEMS ENGINEERING

Randy Menakes installed NOTIS at the University of Texas at El Paso the week of July 15. Ned Taaffe installed NOTIS at Shell Oil and Tulsa the week of July 22.

NEWS FROM SUPPORT SERVICES

Ben Burrows did NOTIS training at Long Beach Public Library from July 1 to July 3. He also trained staff at Dallas County Community College District the week of July 29.

NEWS FROM NOTIS MARKETING

Jane Burke demonstrated NOTIS at Ball State University on July 17. On July 24 and July 25 she was at the University of Pittsburgh. Jim Meyer did demonstrations at Johns Hopkins University (July 17-18), Central Missouri State University (July 22), the Air Weather Service Library at Scott Air Force Base (July 24), and at the University of Pennsylvania (July 31-August 1).

All of the NOTIS Office and many members of the Northwestern University Library staff showed NOTIS to the hundreds of visitors to the NOTIS booth at ALA. We calculate more than 1500 people stopped by the booth.

A PRINTER BY ANY OTHER NAME ....

Beth Nicole at Auburn University's library recently told us about an experiment with a C. Itoh 8510 printer already on site when NOTIS was installed. (The Telex 281B printer is a modified version of this printer.) Ms. Nicole and others at Auburn connected the 8510 to a Telex 476L terminal to print screens. All went well until they printed screens with diacriticals or subfield characters. Each of these characters printed as a string of 8 digits and colons. Besides confusing the reader, this caused line overflow, which led to overprinting on the same line.

A different problem occurred when the 8510 was connected to a Telex 178 terminal. Here the subfield characters each printed as a "5".

The staff tried various modifications before resigning themselves to just printing screens without special characters.

So for the time being, you do need to use the Telex 281B for printing such characters with a 476L. An alternative if you're using the 178 or IBM 3278 terminal is to purchase an Interlynx 3287 protocol converter at approximately $1,500 and connect it to an IBM 3274 controller and the 8510 printer (or a Telex 281B).

Or, purchase an IBM 3287 printer, which connects directly to a controller. Either of these alternatives lets you use one printer with multiple terminals.

LIFE IN THE ONLINE ENVIRONMENT

Please see the attached graph gleaned by Jane Burke during her in-flight speed reading sessions. Perhaps it speaks to us who are involved in the processing of library information.

The article on main frames is also recommended by Jane.

HOW LONG CAN AN ORGANIZATION OPERATE WITHOUT COMPUTER INFORMATION PROCESSING?

When asked how long different business functions would be able to operate without the information processing capabilities of computers, 36 companies responded with the following results for all operational applications: On average, the companies estimated that only 28 percent of the operational activities would be functioning within 5.5 days without computer data processing. Finance companies in the sample estimated that only 13 percent of operations would be functioning after 5.5 days without computing. (Figures 1-1).

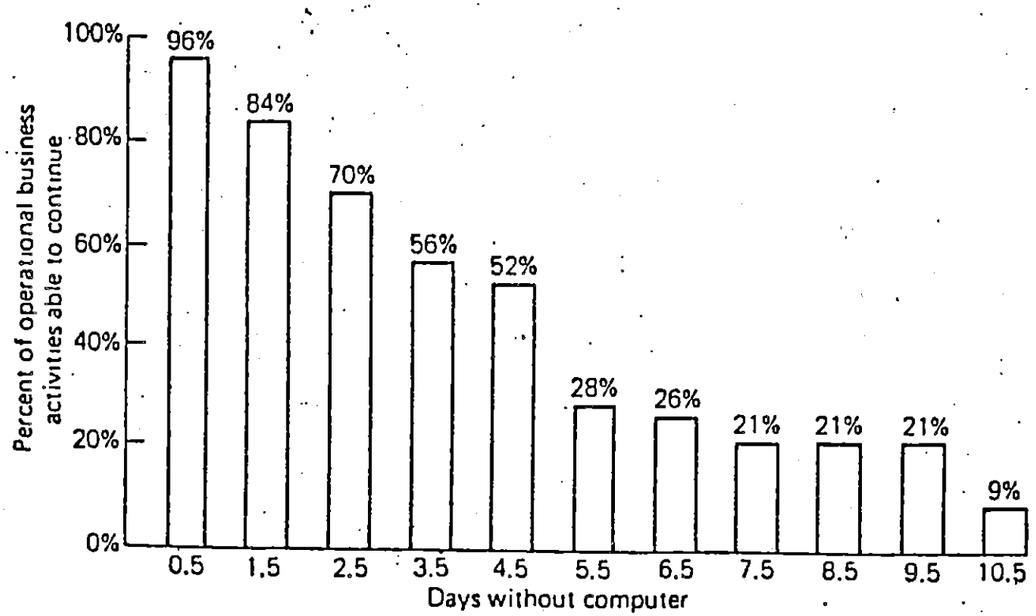

Figure 1-1
Decline in operational business activities following a complete computer data processing failure. (Source: D O. Aasgaard, P. P. R. Cheung, B. J. Hulbert, and M. C. Simpson, "An Evaluation of Data Processing 'Machine Room' Loss and Selected Recovery Strategies," University of Minnesota, Management Information Systems Research Center WP-79-04, p. 70.)

COMPUTER UPDATE

by Chris Kern

RETURN OF THE DINOSAUR

One of the slogans of the early days of the microcomputer revolution was "never trust a computer you can't lift."

The people who first brought microcomputers into the office also planned to bring about a fundamental change in the nature of business computing. To many of them, the office main frame was a "dinosaur" — a brute machine doomed to extinction by the accumulated weight of its peripheral devices, complex languages and command structures, and, yes, the data-processing personnel it carried around with it.

The personal computer was the antithesis of the big machine. It was simple, adaptable, and available to almost anyone. Since there was a one-to-one relationship between users and computers, there was no need for the exotic and expensive devices that allowed the big machine to efficiently juggle its multiple users and their multiple computing tasks.

The personal computer was much easier than the main frame to use, so it didn't require a retinue of expert attendants. It could be acquired for barely more than the cost of a good office typewriter. That meant it fit within a departmental budget.

Small was beautiful.

Alas, like many other revolutions, the microcomputer explosion didn't turn out quite the way its perpetrators had intended. Today the dinosaur is still very much alive. If anything, company main frames are gaining ground among managers and professionals who had very little use for them in the past.

This turn of events is directly attributable to the growing use of microcomputers in business. Instead of being replaced by the personal computer, the main-frame system is beginning to coexist with it.

The microcomputer first made it into the office as a personal device. It was a tool for word processing, a way to maintain small amounts of the kind of information an individual might keep on paper, and a means of performing rudimentary data-processing tasks, such as simple accounting problems that could be handled by a spreadsheet program such as *VisiCalc* or *Lotus 1-2-3*.

The model for this kind of computing was the way engineers and other technical professionals had put the previous generation of computer technology to work. By the time the microcomputer became available as a business tool, the minicomputer — a multiuser system that typically could support 5 to 20 simultaneous users — was well established in engineering departments.

Minicomputer users often had computational requirements that demanded faster response for each user than the company main frame could provide. They also had relatively small amounts of information to store and work with, so they didn't need the large disk capacity that went with the big machine. They had pioneered the concept of distributed data processing: spreading computers out around the company where each system could be tailored to the needs of its local users.

But as personal-computer users go beyond word processing and spreadsheet analysis and start to use the computer as a source of information, the minicomputer model of distributed processing does not always fit. They often find that the information they want to work with can't be maintained locally on a ple-

☞

thora of small machines.

That information resides, and belongs, on a large central system. Unlike the engineers, with their narrowly delimited requirements for data, many microcomputer users need access to the entire corporate data base.

For example, if a company official is interested in learning about compensation trends within the organization, queries might include:

- To what extent do salaries of employees correlate with corporate earnings over time?
- How does compensation in one department compare with compensation elsewhere in the company?
- Among different marketing departments, how do salaries correlate with revenues over time?
- Are management costs rising faster or slower than labor costs?
- What is the salary history of a particular individual?

In many cases, as in this example, it is necessary to juxtapose superficially unrelated information to acquire an understanding of a problem. In this case, revenues, internal organization, job roles, and salaries all need to be combined to come up with meaningful generalizations about compensation trends.

That means the data collected by many different organizational elements must be shared. If each department maintained its own information on its own machines, queries of this kind wouldn't be possible.

Security usually is an issue, too, and the need for security generally exists on different levels. Information about corporate earnings, for example, may not need any access protection at all unless it pertains to the current year. Information about departmental revenues may be available to managers above a certain level in the company hierarchy or to professionals with certain types of responsibilities. Information about salaries may be very closely guarded indeed, and information about the salaries of particular individuals may be available only to a handful of people within the company.

This is all the province of the large computer, with its enormous storage capacity, its multiple-level data-access controls, its sophisticated data-base-management software, and its staff of support personnel with the expertise to maintain and enhance the data base without undermining its reliability over time. Big bodies of information require mainframe-style support.

On the other hand, the kinds of queries offered in the example are based on an individual style of communicating with the computer that owes a lot to the personal-computer environment.

Because there were no data-processing professionals to mediate between the personal computer and its user, it was necessary for manufacturers to develop ways to communicate commands to the machine without requiring the user to become a computer expert first. It was the personal-computer industry that coined the term *user-friendly*.

Today the simplified user interface of the personal computer increasingly is becoming available on the large multiuser systems that maintain corporate data bases. New types of data-base-management software have been developed in the last decade that make it much easier for nontechnical users to access the information stored in the machine. The need to provide personal tools, such as electronic mail and reminder services, also is seen today as a legitimate demand on large computer resources.

In other words, as users accustomed to personal computers have started connecting to the company main frame, they have begun to demand the kind of service they get from their own machines. As a consequence the large computer system has been forced to imitate the comfortable personal-computer environment without sacrificing its traditional advantages.

The personal computer was a crucial factor in this evolutionary process for another reason. In the past, access to the corporate main frame by most professionals and managers required the installation of a dedicated computer terminal whose cost was hard to justify if it was only going to be used on an occasional basis. But a personal computer can be justified on entirely different grounds. Once it is available, the cost to make it function as a terminal on the main frame usually is very modest.

Once the micro-to-main-frame link has been established, it opens up new uses of the combined technology that previously were not widespread in either environment.

Companywide electronic mail — using the main frame as a mailroom — can eliminate the need for most kinds of paper messages. If someone needs a copy of a memo or report on paper, the document can be captured by that person's personal computer and printed locally.

Paper filing systems also can be reduced to a bare minimum of documents that are in continuous use by acquiring a "full text" retrieval system. These remarkable programs maintain a data base of ordinary documents that can be located and retrieved in seconds by searching their entire contents for designated words or phrases.

With current technology, it is possible to establish a computerized "office" that appears the same to users whether they are using personal computers at headquarters, dialing up the company main frame from home computers, or communicating via portable computers from almost anywhere in the world.

This new computing environment can grow only out of a symbiotic relationship between big and small machines. Together, the personal computer and the main frame are defining a new ecology of data processing — allowing all of management's automated creatures to exist, if not in perfect harmony, at least in balance.

Chris Kern, a part-time free-lance writer based in Washington, D.C., specializes in computer-industry developments.

Spring 1985

LUMIÈRES

Boolean Dogs and Cats

Over the next year and a half, the Middleton Library will be undergoing some significant changes in the way it produces and stores information on its collections . . . and, in the way it allows access to that information. During this time NOTIS, the Northwestern Online Total Integrated System, will be introduced.

NOTIS is an integrated computer system that allows the tracking and control of individual books, magazines, films, etc. in the collection from the time the item is ordered until it is eventually withdrawn. NOTIS was originally developed as an inhouse automated system by the Northwestern University Library in Evanston, Illinois in the early '70s. Now in its fourth version, NOTIS can be used for a variety of library operations including online catalog access, cataloging, circulation, acquisitions, and serials control.

Due to its complexity, NOTIS will be introduced in segments, or modules, over the next year and a half. As each new module is implemented, it will be linked with others already in place until the entire system is operating. The first segment to be installed is the **cataloging module.** The initial catalog database of about 325,000 records will be built using the machine-readable records of items cataloged by LSU since 1975. Catalog records will then continue to be added for both new materials and for older materials already in the collection, and it is estimated that close to 500,000 records will be entered by a year from now.

As a result of building the cataloging database, there will soon be online access to card catalog records through the **online public access catalog.** The online catalog will enable patrons to find materials using an author, a title, a standardized subject heading, or a nonstandard keyword. This online version of the catalog will eventually replace the traditional card catalog and offer a number of advantages. For example, subject access will become much more flexible than it is now. Not only will patrons be able to continue searching using standard Library of Congress subject headings, they will also be able to search using nonstandard subject and title words or keywords. This will be particularly helpful when the exact form of the subject heading or title is unknown, but one word is known.

As an added bonus, the online catalog will include a new feature not available in traditional card catalogs—**boolean logic** capabilities. Boolean searching will enable patrons to make searches much more specific than before and find the information much faster. For example, consider finding books containing information on *both* dogs and cats. In the past patrons would have had to look at all the catalog cards on dogs and either hope to spot relevant titles or compare all these cards with all the cards on cats and match duplicate entries. Now, using boolean logic, patrons will be able to enter the words dogs and cats and let the computer do the work of matching the duplicate entries and giving a complete list of relevant items. So, instead of thumbing through drawers of catalog cards, patrons will soon be able to sit down at a terminal, type in a request, and have the system display a list of items from which to choose—all from the comfort of their office, home, or classroom building, if desired!

The next segment to be implemented will be the **circulation module.** The new circulation system will use barcoded information, similar to that used by grocery stores, on individual books and patron IDs to keep track of which items are checked out to whom. It will allow the library to more accurately track materials in use and will offer more flexibility to patrons in checking items out, placing holds on them, or recalling materials. It will also allow the library to better manage the collection by providing faster, more accurate statistics on which portions of the collection are being used more heavily than others.

The final portion of the system to be implemented will be the **serials module.** Using this module, individual issues of journals, series, etc., will be checked in online, and patrons will be able to see immediately what the most current issues of a particular magazine are.

In an effort to make the system accessible campus-wide as soon as possible and to make use of expertise already available, the library will be using the IBM mainframe computer operated by the LSU System Network Computer Center, or SNCC. By using SNCC, patrons will be able to use their own microcomputer to dial into the system from home.

When all modules of the system are in place and are fully integrated, a vast improvement in access to library materials will be noticed. When the online catalog is searched for a particular author, title, or subject, patrons will be able to determine immediately whether the item is owned by the library and get its call number. For items not owned, the search will show whether it is on order, its anticipated date of receipt, and its progress through cataloging and processing. If the item is already owned, the search will tell if it is checked out, when it is due back, and will be able to place a hold or recall on the item. And all this can be done from the other side of campus—or town!

Beth Warner
Coordinator, Library Automation and Systems

Friends of the Library
Louisiana State University
Baton Rouge

The Annual Banquet

The Friends of the LSU Library gathered at the LSU Faculty Club on March 14, 1985 for the annual spring banquet. The evening was presided over by Friends president, Anne West.

This year's life membership award was given to Dr. Thomas A. Kirby for the gift of the Kirby's personal collection to the Middleton Library. Dr. Kirby's long career as a professor and head of the LSU English department was reviewed through a medieval tale referring to his fame as a Chaucer scholar.

Another gift to the library made note of by Chancellor Emeritus Cecil Taylor was the establishment of the Ellen Albright Taylor Memorial Book Fund, a memorial to his late wife.

The library director, Sharon Hogan, gave her impressions of the arduous activities and dedication of the book barn workers when she first arrived at LSU. She thanked the Friends for all of their hard work and support of the library and indicated how very much she looked forward to working with the organization in the future.

The report of the nominating committee was given by Chancellor Emeritus Taylor. The current slate of officers was nominated to serve another year and re-elected by acclamation of those present—Anne West, president; Marion Spann, vice-president; Anna Perrault, secretary; and Caroline Wire, treasurer.

The highlight of the evening was the after-dinner talk given by Richard Peck, well-known author of books for young people and adults alike, as well as anthologies of essays and verse. Mr. Peck has received many prestigious awards for his books including the 1977 Edgar Allen Poe Award for *Are You In the House Alone?* and the American Library Association 1981 Best Book for Young Adults for *Close Enough To Touch.* Mr. Peck has participated in workshops on young adult literature at the East Baton Rouge Public Library and local schools. Many of his Baton Rouge friends were delighted with his return visit. He spoke on the topic "Coming of Age With Friends." Mr. Peck told of school teaching experiences and of his writing as a way of communicating with young people. His audience found that his speech contained the same blend of reality and inspiration as his writings. Mr. Peck's remarks were warmly received by his listeners and provided the finishing touch to an enjoyable evening.

Dr. Patsy Perritt (left) and Mrs. Claude Kirkpatrick welcomed Richard Peck, the banquet speaker, and his mother, Mrs. Peck, to Baton Rouge for a return visit.

Dr. and Mrs. Thomas A. Kirby were honored at the annual banquet with a plaque and a life membership for the gift of the Kirby Collection.

Photographs by Don Morrison.

NOTIS USERS
(July, 1985)

User	System	Applications	Contact
Library System, Arlington County, VA 2100 14th St. N., Level G-3 Arlington, VA 22201	VSE Shared 4381 15 terminals	Cataloging & OCLC interface; (Circulation in test mode) (500,000 volumes)	Ken Bernstein Office of Technology & Info. Services 703-558-8912
Ralph Brown Draughon Library Auburn University Auburn, AL 36849	MVS Shared 3032 58 terminals	All except circulation & OCLC interface (1.3 million volumes)	Bobby E. Holloway AUL for Tech. Services 205-826-4500
Harold B. Lee Library Brigham Young University Provo, UT 84663	VSE 4341/Group 2 212+ terminals	All in 1985, incl. Circulation (RLIN interface) (2 million volumes)	John R. Taylor System Analyst 801-378-6278
Library Central State University Edmond, OK 73054	VSE Shared 4381 32 terminals	All, except circ; plus OCLC interface. (750,000 volumes)	Ron Curtis, Asst. Director for Technical Services 405-341-2980, ext. 2866
Robert Muldrow Cooper Library Clemson University Clemson, SC 29631	MVS XA Shared 3081 35 terminals (800 in network)	Luis; Cataloging; Acquisitions; & OCLC interface (1.2 million volumes)	Richard Meyer Assoc. Director of Libraries 803-656-3026
The Libraries Colorado State University Ft. Collins, CO 80523	VSE Shared 4361 19 terminals	Circulation (1,400,000 volumes)	Lou Andersen Asst. Director 303-491-1884
Dallas County Community College District 4343 North Highway 67 Mesquite, TX 75150	MVS Amdahl V7 Shared (50 terminals)	installed	David Bartley, Manager of LRC Support Services 214-324-7788
DeKalb Library System 3560 Kensington Road Decatur, GA 30032	MVS Shared 3083	installed 140,000 titles; 500,000 volumes	Vicki Williams Automation Coordinator 404-294-6641
University of Evansville P.O. Box 329 Evansville, IN 47702	VSE Shared 4361	installed	Grady Morein Director of Libraries 812-479-2376

Customer	System	Applications	Contact
Harvard University Library Cambridge, MA 02138	VSE Shared 3083 & 4341 120 terminals	Acquisitions; Serials (10 million volumes)	Dale Flecker, Head Office for Systems Planning and Research 617-495-3724
Central Library University of Cincinnati University & Woodside Cincinnati, OH 45221	Shared 3081D 12 terminals	For data conversion only	Marsha Deddens 513-475-3586
Libraries University of Florida Gainesville, FL 32611	VSE Shared 3033/3081 72 terminals	All except Circ; plus Univ. of of Florida OCLC interface	Jim Corey, Head Systems & Computer-based Operations 904-392-0796
University of Illinois at Chicago P.O. Box 8198 Chicago, IL 60680	MVS Shared 3081 50 terminals	Acquisitions; Serials; LUIS; (OCLC interface)	Beverly Lynch University Librarian 312-996-2716
Cunningham Memorial Library Indiana State University Terre Haute, IN 47809	VSE Shared 4361	LUIS	Edward A. Stockey, Head Systems and Research 812-237-2597
Library Building K Louisiana State University Baton Rouge, LA		installed	Beth Warren Systems Librarian
Long Beach Public Library 101 Pacific Avenue Long Beach, CA 90802	Shared 3081 140 terminals	Acquisitions; Cataloging; Circulation; LUIS & OCLC Interface	Cordelia Howard Director, Library Svcs. 213-590-6016
Library Montgomery College 51 Mannakee Street Rockville, MD 20850	VSE Shared 4341 65 terminals	installed	Ruth Sherrod Technical Services Room Ct. 303 301-279-5070

Customer	System	Applications	Contact
NASA STi Facility P.O. Box 8757 Baltimore/Washington Int'l Airport, MD	MVS 4341	installed	Charles Simmonds 301-859-5300
Pickler Memorial Library Northeast Missouri State Univ. Kirksville, MO 63501	VSE 4331	(300,000 volumes)	George Hartje Director 816-785-4526
Northwestern Univ. Library 1935 Sheridan Road Evanston, IL 60201	VSE 4361/Model 5 160 terminals	All plus separate word processing. (1.5 million volumes)	Jane Burke Director, NOTIS 312-491-7004
Patuxent River Central Library Building 407 Patuxent River, MD 20670	MVS Shared 4 terminals (100+ planned)	All & OCLC interface (125,000 volumes)	Suzanne M. Ryder Director 301-863-1930
State Library of Pennsylvania Box 1601 Harrisburg, PA 17105	MVS Shared 3081 D	LUIS; Cataloging; Serials; Acquisitions (960,000 volumes by 7/85)	David R. Hoffman, Director Division of Library Services 717-783-5968
University Libraries University of Pittsburgh Pittsburgh, PA 15260			Jo-Ann Michalak, Asst. Director for Automation Svc. 412-624-4406
Fondren Library Rice University Houston, TX 77251-1892			Ann Adler
Shell Oil Company 2 Shell Plaza, Room 1208 P.O. Box 4302 Houston, TX 77210-4302	MVS	---	Don Longwell User Coordinator 713-241-4994
University of South Alabama Mobile, AL 36688	VSE Shared 3081 19 terminals	All except authorities and circulation (200,00 volumes)	Patricia Ramage Automation Librarian 205-460-7021
University Library University of Texas-El Paso El Paso, TX 79968-0582		installed	Ken Hedman Associate Director 915-747-5683

Customer	System	Applications	Contact
Tulsa City-County Library System 400 Civic Center Tulsa, OK 74103	VSE Shared 4341/Grp 2 45 terminals	Circ; Cataloging; Acquisitions Serials; LUIS; (OCLC interface) (600,000 volumes)	Ruth Blake, Chief Technical Services 918-592-7929
Jean & Alexander Heard Library Vanderbilt University Nashville, TN 37203-5601	SSX (VSE) 4361-4 100 terminals	All & OCLC interface (1.5 million volumes)	Flo Wilson Asst. Director for Systems 615-322-7374
Washington University Libraries Lindell & Skinker Blvds. St. Louis, MO 63130	VSE Shared 4331/Grp 2 22 terminals	Cataloging; LUIS (1.1 million volumes)	Otha Overholt, Director Tech. Services & Data Proc. 314-889-5400
White Plains Public Library 100 Martine Avenue White Plains, NY 10601	VSE Shared 4331 6 terminals	Cataloging; Acquisitions & OCLC interface; (Circulation in fall, 1985)	Marie Donnelly Manager, Technical Services 914-682-4492
Wichita Public Schools Community Education Center 1847 N. Chautauqua Wichita, KS 67214	Shared 4341 (4381 7/85) 37 terminals	Cataloging; OCLC interface (1 million volumes)	Rhita Mucci, Library Project Media Specialist 316-268-7711
Media Resources Center Wichita State University Box 68 Wichita, KS 67208	Shared 3081 30 terminals	All & OCLC interface (750,000 volumes)	Jasper Schad Dean of Libraries 316-689-3586
Biblioteca Nacional A . Bernardo O'Higgins 651 Santiago, Chile	VSE	---	Rodrigo Alarcon Coordinator of Automation 011-56-2-38-32-06
Biblioteca Nacional Apartado 47570 Caracas 1041-A, Venezuela	VSE 4331	Cataloging; Acquisitions; Serials Authorities; Analytics; LUIS	Jorge Fernandez Rofin Coordinator of Automation Oficina de Infomatica 011-58-2-572-3623