

ONLINE DATABASES

In-House Databases I Software Sources

By Carol Tenopir

CREATION of in-house databases or "private files" is an increasingly attractive possibility for libraries. Librarians and patrons alike are becoming used to the many advantages of online access to information, hardware costs are coming down, and good software for information retrieval is now available. Even small libraries can now consider building their own online databases of local or in-house materials because of the great advances in microcomputers.

In-house databases take many forms. The online catalog is really an in-house database, but it is not the sole or even primary focus of this discussion. In-house databases can be library-created indexes or bibliographic references that point to the location of various library collections; a combination of internally-created citations to journal literature and relevant citations taken in machine readable form from commercial databases (with the permission of the database producer); or complete numeric or textual information that replaces paper copies. Database applications in public, academic, or school libraries include referral directories with names, addresses, and phone numbers; indexes to audiovisual collections; indexes to vertical file materials; abstracts of literature on popular topics; community calendars; continuing education or course scheduling information, etc. A special library's in-house databases often consist of indexes to special types of materials, such as engineering drawings or photographs; full text or abstracts of internally generated reports; or references to all of the literature on a specified topic.

One of the most difficult, but most important, decisions in designing any in-house database is the choice of software for the system. Poor or inappropriate software can lead to a series of frustrating experiences for the database

designer, the rest of the library staff, and, if it gets that far, the user. Software must provide the capabilities needed in the particular situation and choice of an appropriate package will vary in each library. Suitability of a software package depends on such things as the size of the database, the type of information to be input, the kind of output needed, the frequency of updating, the frequency of use, and the sophistication level of the potential users.

If the library or organization already owns a computer that must be used for the database application, suitable software choices will be even more limited. Evaluation of software packages must therefore be done by each library to match its individually identified needs and situation.

Write or buy?

Some libraries have written their own information retrieval software or hired consultants to write programs because they felt no available program could meet their library's complex or unique needs. While this may still be true in some situations, the number of commercially available, high quality information retrieval software packages has so increased in the past few years that most libraries are now able to pur-

chase or lease something that will meet their needs. Software packages for the creation of in-house databases are available with a variety of features (and at a variety of costs). Packages are now available for many main frame computers, minicomputers, and, increasingly for microcomputers. In almost all cases, it will be less expensive and less frustrating in the long run to lease or purchase a tested software package than to "reinvent the wheel" by writing your own programs from scratch, and your in-house database should be available for searching sooner.

Rather than creating a database using software on an in-house computer, an alternative is to use a private file service. Private file services allow you to load your database on the computer of a commercial database vendor such as DIALOG, BRS, or SDC and search it from a terminal in your facility through the telecommunications networks. All of the sophisticated searching features of these systems are available to the private file customer. The cost and nature of these private file services makes them most suitable for large databases that are infrequently updated and that are either accessed less than a few hours a day by a single location or that need to be accessed by multiple facilities in different locations. These services will not be included in



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this discussion of software for in-house databases, but the same decision-making process of identifying your needs and choosing software to meet your needs should be applied to creating a database on a private file service.

Too many choices

Software packages for the creation of in-house databases are available from commercial, government, and library sources. It is difficult to find out about these packages, however, and it is even more difficult to get enough basic information about them to narrow down your choices to those suitable for your situation. Many directories of software packages are available, some of which are massive multi-volume sets. Until recently most of these directories offered the librarian *too many* choices—out of hundreds of software packages listed only a few were suited for library database applications. The library's reliance on alphabetic rather than numeric information, its need for lengthy but variable fields, and the necessity of sorting large amounts of information make it desirable to purchase software that is specially designed for a library's in-house databases. There are now several directories that are limited to library or information retrieval applications, with some recent additions also offering evaluative information. This column will focus on these new library software directories.

Software directories

1983-84 Online Micro-Software Guide and Directory (Online, Inc., Department SD, 11 Tannery Lane, Westport, CT 06883, \$40) is a new directory published by the publishers of *Online* and *Database* magazines. This directory is limited to microcomputer software and includes many types of software, not just that for in-house databases. Still, it includes many packages suited to database creation and is valuable in its targeting of the librarian/information manager.

For each of over 700 packages, the *Online Micro-Software Guide and Directory* includes basic descriptive and availability information that has been supplied by the publishers of the software package. Over 90 software packages are listed under the category "Database Management Systems." Some of these packages will be suitable for creation of in-house databases, but the reader should be careful to watch for limits on field lengths and database size. Comparison and evaluation is left to the reader.

A nice addition to this directory is the inclusion of articles on hardware/software configurations for different budgets and choosing software for li-

brary and information center applications. Explanations of how software is developed, programming languages and operating systems will also be of interest to readers who wish to know more about software in general. Supplements will be published in October 1983 and 1984.

Most microcomputers are still not powerful enough for large in-house databases or databases that must support many simultaneous users. Software choices for microcomputer databases are still limited. Libraries that are contemplating a database with entries numbering in the hundreds to several thousand may consider using a microcomputer. This directory will be a valuable starting place in identifying software.

Another guide to library-related microcomputer software was published late in 1982. *Micro Software Report: Library Edition* (Jeanne M. Nolan, ed., Nolan Information Management Services, 21203-A Hawthorne Blvd., Suite 5323, Torrance, CA 90509, \$49.95) contains nearly 300 microcomputer programs of interest to libraries. Information on each software package includes a short description, cost, and availability. An interesting feature of this directory is the inclusion of sources of reviews, if any, for each package and an indication of whether or not the review was positive. This will aid in the evaluation process.

The information in *Micro Software Report: Library Edition* was compiled from 78 different sources, all of which are listed in the directory. The directory contains only half the number of packages in the Online, Inc. directory, perhaps due to this compilation technique.

Most of the software listed in both of these microcomputer directories is not for the creation of in-house databases. Although the directories are aimed at the library and information manager, they may be confusing for someone who just wants to identify in-house database software for microcomputers.

A library/information center software directory is forthcoming that will concentrate only on those software packages for in-house databases. *Directory of Information Management Software: For Libraries, Information Centers, Records Centers* (P. Cibbarelli, C. Tenopir, and E. Kazlauskas, eds., Cibbarelli and Associates, 11684 Ventura Blvd., Suite 295, Studio City, CA 91604, \$45 U.S. and Canada; \$55 elsewhere) will be published in spring 1983. Fifty currently available software packages suitable for the creation of in-house databases on main frames, mini- and microcomputers will be included. The directory also lists software for special applications and general purpose database management systems.

Information on private file services and "turnkey" systems (those where you purchase the hardware along with the software) will be included as well.

Information on each package or system will include a description, its capabilities and components, availability information, and prices based on several typical library scenarios. Added comments on each package will assist in the evaluation process. This directory is based on a seminar series on choosing software for in-house databases. The information on each package was verified by the software publisher.

Another directory that will not be limited to software for any one size of computer is the *UNESCO Inventory of Software Packages* (National Center of Scientific and Technological Information, P.O. Box 20215, Tel-Aviv, 61201, Israel.) The announcement for this directory says it will contain descriptive and comparative information about software packages for information work. I have not yet seen this directory, but it promises to contain evaluative and comparative information on all types of software for libraries and information centers. This evaluative information and its limitation to the library or information center marketplace should make it a valuable directory. Software entries were collected by soliciting information from libraries on the software packages they are using. Because this directory is international in scope and is not limited to commercially available packages, it may be difficult to obtain some of the packages listed.

Library and information application software that is available from the federal government is listed in a periodically published document from the National Technical Information Service. *A Directory of Computer Software Applications—Library and Information Sciences* (1978-September 1980, \$35) and *A Directory of Computer Software and Related Technical Reports* (NTIS, 1980, PB 80-110232) list government created software, but provide little information that will aid in evaluation. Much of the software developed in the government sector is excellent and the cost is low, but, unfortunately the quality varies tremendously, documentation is often poor, and ongoing service or maintenance are virtually nonexistent. These apparent bargains should be approached carefully unless you are already familiar with a particular package and its installations.

Periodical sources

A number of new periodicals also carry announcements of library software packages along with valuable reviews of software packages. Of special interest is *Software Review* (Meckler

Publishing, 520 Riverside Avenue, Westport, CT 06880, twice a year, \$38). The first issue came out in February 1982 with a promise to serve as "an exclusive forum for the exchange of information about particular software products in educational and library applications." *Software Review* is not limited to in-house database software nor does it serve as a comprehensive directory of available software, but it includes a section on new software and has substantive articles on selected packages.

The Electronic Library (Learned Information Ltd., Besselsleigh Road, Abington, Oxon OX13 6LG, England) is a new journal emphasizing mini- and microcomputer technology in libraries. One issue will include a directory of mini- and microcomputer software for library and information applications. Entries have been gathered from a variety of software publishers and, like the Unesco directory, will include information on software developed by libraries inhouse. These packages may not be readily available internationally.

Small Computers in Libraries (Graduate Library School, College of Education, University of Arizona, 1515 E. First St., Tucson, AZ 85721, monthly, \$20) and *Access: Microcomputers in Libraries* (P.O. Box 764, Oakridge OR 97463, quarterly, \$11) often review microcomputer software packages for all types of library applications and contain useful tutorial articles. *Monitor* (Learned Information Inc., Box 550, Marlton, NJ 08053 monthly, £98) surveyed interactive online software in April and May 1982 and *Program* (Aslib, 3 Belgrave Square, London, SW1X 8PL, England, quarterly, £23) devoted its July 1982 issue to software packages available in Great Britain. *Online and Database Online*, Inc., 11 Tannery Lane, Weston, CT) also increasingly discuss software packages as do long-standing library journals such as *Special Libraries*.

General directories

As mentioned earlier, there are also many general software directories. These may be confusing in the amount of information given, and most are expensive, but they can be excellent general resources. Some of the most useful are:

Auerbach Software Reports. Auerbach Publishers. 2 vols. Updated monthly, looseleaf. \$475 per year.

A Buyer's Guide to Data Base Management Systems. Datapro Research Corp., 1805 Underwood Blvd., Delran, NJ 08075, 1974- Updated annually. (Selected from Datapro 70 which is \$755 per year.)

Datapro Directory of Microcomputer Software. Datapro Research Corp., 1805 Underwood Blvd., Delran,

NJ 08075, 1981-, looseleaf, 2 vols., monthly supplements, \$360.

Datapro Directory of Software. Datapro Research Corp. 1805 Underwood Blvd., Delran, NJ, 08075, 1975-, looseleaf, 2 vols., updated monthly, \$420.

ICP Software Directory. Indianapolis, IN: International Computer Programs. Semi-annual, 5 vols., \$65 per volume.

Online directories

A new development in software directories that is of special interest to readers of this column is the online directory. The *International Software Directory* is available on DIALOG as file 232. It is the online equivalent of the *International Microcomputer and Minicomputer Software Directories* and includes descriptions of over 10,000 commercially available programs of all types for micro- and minicomputers. Descriptive, ordering, and pricing information is included for each package. The directory is updated monthly and costs \$60 per hour to search. Once a likely software package is found it can be ordered online from the database publisher via DIAL-ORDER, although the software will be then sent through the mail rather than electronically to your terminal.

Software reviews for microcomputer software can be located online via two new databases. BRS/DISC (Data Processing and Information Science Contents) and DIALOG's Microcomputer Index cover the microcomputer and general computing periodical literature. BRS/DISC offers access to the tables-of-contents of popular and professional computing journals with an emphasis on microcomputer literature. If you want to find a product review or pricing information for a specific software package for any size of computer, BRS/DISC would be a good place to start. Royalty charges for searching are \$9 per hour in addition to regular BRS subscription charges.

DIALOG's Microcomputer Index (file 233) provides abstracts to over 30 microcomputer periodicals. For \$45 per hour, searchers can locate information and reviews on specific microcomputer software packages. Additionally, software reviews can be located in Magazine Index (DIALOG file 47), ERIC, and INSPEC. Access to this information will help in the software evaluation process.

Of course, finding out what software packages are available and finding reviews of them are only first steps in the involved process of creating an in-house database. Next month's column will look at some representative in-house database software packages that are commercially available, and how to begin the process of evaluating these packages.

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