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□ ONLINE DATABASES □

BY CAROL TENOPIR

Options for Accessing Databases

LIBRARIANS HAVE an almost overwhelming variety of database search options to choose from these days. Databases are still being accessed regularly by intermediaries on the traditional online systems such as DIALOG and BRS or by end users on online systems such as Knowledge Index, BRS/AfterDark, and CompuServe. Local options, including CD-ROM and loading reference databases on an in-house computer, are gaining in popularity. Most of the major online public access catalogs (OPACs) now allow external databases to be loaded and accessed via the same search software as the library catalog. (The database itself may be loaded on each individual library's computer or, like Uncover on the CARL system, the database may be loaded at just one central site with dial-in access by all member libraries.)

Survey of ARL libraries

Recently Ralf Neufang, database searching coordinator at the University of Hawaii-Hamilton Library, and I surveyed the libraries that make up the Association of Research Libraries (ARL) to find out which of these database searching options each offers and how the different options interact. Librarians from 95 of 119 research libraries responded, sharing data on their current situations, their insights gained from experience, and their plans for the future.

We will be reporting the details of this study at the Online/CD-ROM '91 meeting November 11-13 in San Francisco. Some first impressions, however, show that choosing a single option is not the rule anymore. Almost all research libraries are offering two or more options for database searching so all patrons can have ac-

cess to some type of electronic reference sources. University libraries especially are offering multiple database searching options.

The 95 libraries surveyed are mostly university libraries, but also include some research institutions, large public libraries, and government libraries. The universities serve on the average about 20,000 students, and more than half of the universities have six or more libraries on campus.

Electronic resources are common

OPACs are common in this segment of libraries—93 of the 95 libraries have OPACs (but only 35 of them load periodical databases on the OPAC). NOTIS is by far the most popular OPAC, with 40 percent of the libraries. Other popular OPACs include Geac (14 percent), Innopac (six percent), Melvyl (five percent), and CARL (four percent). Almost all of the OPACs (96 percent) have dial-up capabilities offering access from faculty offices, dormitories, other campus locations, other libraries, or users' homes.

Widespread use of electronic resources extends to the reference area as well. Ninety-seven percent of the libraries that responded offer mediated online searching, with most having introduced the service in the 1970s. For years, intermediary searching was the only electronic database service in most libraries. The second service to be added by most was either end user online or CD-ROM and typically was not started until the latter half of the 1980s.

After mediated online, CD-ROM is the next most commonly offered option, with 96 percent of the libraries offering at least one CD-ROM database for public use. Multiple CD-ROM titles are the rule—84 percent of the libraries offer 11 or more CD-ROM titles, and almost 36 percent have more than 30 titles. CD-ROM searching was picked as the most "popular" searching option in their library by 67 percent of the librarians, and an additional five percent said CD and another search option were equally popular.

Online end user searching is offered by 44 percent of the libraries, with another 15 percent planning to offer it within the next two years. No libraries said end user online is used the most (although two said it was as popular as CD-ROM searching).

For most libraries, loading external databases on their OPAC is the newest search option. Thirty-seven percent of ARL libraries now have external reference databases available on their OPACs, while an additional 47 percent say they plan to load them on their OPAC in the next two years. When offered, reference databases on OPACs are often the most used search option or are close in popularity to CD-ROMs.

Are they all needed?

Are all of these searching options necessary? Almost no one plans to drop any service (94 percent said they did not anticipate dropping anything in the next two years), yet a majority of libraries are planning to add new search options and new databases on existing options. Many respondents commented that all are needed because they attract different users or because the services complement each other. Some typical comments include:

Each service tends to bring attention to the other. Consequently demand for all services increases.

These services are complementary to each other. I believe they answer various needs in the information cycle process.

We still use online for a lot of ready reference searching for which we do not charge patrons since CD-ROM products are not as timely as online sources.

Patrons who use CD-ROM frequently ask for online searches on different databases to complement their own searching, or on the same databases they search for assurance that they haven't missed something, or for retrospective or very current coverage not provided on disc.

OPAC databases are very popular be-



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cause of remote access, but CD-ROM offers greater flexibility for printing and downloading large sets of records.

Some patrons use all of the services, others use none. It depends on their information needs and on their comfort level with the technologies.

Others feel that CD-ROM and databases on OPACs have made end user or intermediary online searching unnecessary. One librarian commented that, "we have, in the past year, eliminated our fee-based end user online services program, due to a drastic decline in business. We find that our CD-ROM patrons are the same as were our end user online patrons, primarily graduate students. The CD-ROMs are attracting a larger undergraduate clientele, however, than were willing to pay even a small fee to use the end user online program." Another commented that "the availability of end user CD-ROM databases has all but eliminated the need for mediated online searching. An offering of end user online searching for about one and one-half years was not particularly successful and was a casualty—probably well deserved—of library budget cuts."

Mediated searching has decreased

Online mediated searching has decreased in 81 percent of the libraries, in many cases "dramatically." This occurs for a variety of reasons. Most importantly, almost all of these libraries charge for online searches, but do not for CD-ROM and OPAC searches. "Mediated searches are primarily used by individuals with grant funds," and one librarian commented that "we have concluded that most patrons would rather do a free search in a 'marginal' database than to pay a small fee for a search in a more appropriate subject-specific online database."

Another reason is that many libraries decide which CD or OPAC databases to purchase based on which databases have been used the most in the intermediary service. Once those databases are brought in-house, patrons are attracted or directed to the in-house version. CD-ROM versions often have friendlier interfaces and, as one librarian commented, "the availability of ERIC on a user-friendly CD-ROM will naturally pull users away from BRS/After-Dark and mediated searches."

Patrons also like the ability to search immediately, "without waiting for appointments with a librarian, and CDs can be searched on weekends and evenings, when intermediary searches are unavailable." Self-sufficiency is a big factor; many patrons who would never approach a reference librarian will now do CD-ROM or OPAC searches. Dial-up access especially offers the appeal of anonymity and convenience. "People like using the OPAC databases because they don't have to come to the library."

Who uses each option?

Each option seems to be attracting its own group of devotees. Faculty most often use mediated online searches, graduate students are the biggest user group for end user online searching, undergraduates and graduates favor CD-ROM, and OPAC is used by everyone. Mediated searches in most cases are now reserved for more complex topics or for specialized databases unavailable on other media. Some typical comments spell out these differences.

Online was (and is) for faculty and graduate students; CD-ROM is for undergraduates as well.

We have some faculty using the CD-ROMs (more faculty recommend it to their students, I suspect, than actually come to use it themselves), but, for the most part, they continue to rely on mediated online services when needing a literature search.

I think our CD and online users are fairly separate groups and likely to remain so. Using the CDs, which are free and available any time the library is open, is much more attractive to the undergraduates than the formal process of filling out a search request form and talking to a reference librarian There will still be faculty and some graduate students who prefer to have someone do the search for them. Also there will continue to be databases that students and faculty want to search that we will never have in CD either because they aren't available or because the use would never be high enough to justify the cost.

Although in most cases it is too early to tell, loading reference databases on the OPAC is expected to impact CD-ROM and end user online searching. One reason is the greater

convenience of OPAC access, which is available on a dial-up basis. Some librarians plan to take the most popular CD-ROM databases and switch them to their OPACs, which will impact CD-ROM searching much the same way CD-ROMs impacted online. The OPAC software is in most cases, however, less powerful than either online or CD-ROM software.

Some problems

All is not rosy with this sudden and widespread use of electronic resources. Several librarians decried the poor quality of the searches being done by end users. Poor quality comes from poor search strategies, but also from the tendency, especially among undergraduate students, to search any source available on CD ("it looks like fun") even if the resource is inappropriate for their topic. More than one librarian is concerned that this database selection "by convenience" rather than by what is appropriate for the topic will increase when more databases are up on the OPAC.

CD-ROM and OPAC databases are used by thousands of users, most of whom are new to electronic reference sources. Several reference librarians report a significant increase in their workload. "CD searching is creating a great demand on reference staff for better and more aggressive end user education." "We know the over 60 percent decrease we've experienced in online search requests has been more than taken up with instruction efforts—formal and informal—with CDs."

OPAC databases can also place demands on staff when it is the only service in an area. One library purposely offered liberal access to all of its OPACs, but now finds itself "dealing with serious service demands from nonaffiliated patrons who prefer to search an OPAC to the systems available at their own institutions. This is proving a real staff drain."

But popularity is high and the trend is undeniably for more electronic options and more databases. For reference materials such as indexes and abstracts and directories, the one option that seems to be losing popularity in libraries is that old-fashioned option called print. Many librarians note that paper sources are now being used only as a last resort. The days of many print reference sources may be numbered.

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