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BY CAROL TENOPIR

CD-ROM Database Update

IN THE March 1 *LJ* (p. 68-69) I wrote about many of the new database products becoming available on optical digital discs (laser discs), especially on CD-ROM (compact disc-read only memory). CD-ROM allows database producers to distribute copies of their databases on a medium that is more durable than magnetic discs and that provides high-density capacity (up to 600 megabytes per 4¾ inch disc). Libraries can offer unlimited end user searching of these locally held databases, because they are priced on a subscription basis rather than a connect time basis and because the hardware, software, and database are all under local control rather than reliant on telecommunications networks.

Because laser discs are a new distribution medium for databases, there are still several unresolved problems. Different products use different software, making it difficult for a library to provide access to all the databases it wants. Laser discs are not yet standardized, so every disc cannot be played on the same disc player peripheral. Investments in multiple micro workstations made start-up costs high. Most disc updates are sent monthly, quarterly, or yearly so the information is not usually as current as corresponding online products. Finally, because the industry is so new, it is easy to get confused over who's in the business, what products they are offering, and how laser discs will complement or replace online or printed products. This column discusses some of this year's new developments.

DEC bows out

The instability of CD-ROM products is demonstrated by the exit of Digital Equipment Corporation (DEC) from the CD-ROM database publishing producers includ-

ing Engineering Index, NTIS, and Chemical Abstracts to produce and market subsets of their databases on CD-ROM. DEC's ambitious plans at the beginning of 1986 included future development of an entire "library" of CD-ROM databases. Instead, after only six months as database publishers, DEC decided to refocus on its traditional strengths of hardware, software, and services rather than continuing in publishing.

DEC still provides private compact disc production for in-house databases or for publishers who want to market their own databases. They also sell CD-ROM players and search software. For a library, this private production service could be a way to distribute the online library catalog to remote sites or it could be used as a backup to the online catalog.

Mary Berger of Engineering Index (EI), one of the database producers affected by DEC's decision, spoke at the 1986 Annual Meeting of the American Society for Information Science. Berger discussed three areas of consideration for database publishers who are contemplating CD-ROM products.

The first is financial/business. EI believed one advantage of CD-ROM over online was that it would maintain more control over its database. In reality, CD-ROM products are usually joint ventures involving, in addition to the database producers, software firms, disc mastering organizations, hardware vendors, and financial backers. Publishers do get more customer data than they do with their online products, but complete control is still not in the publisher's hands. In addition, the price of CD-ROM products must be set with the online, printed, and magnetic tape products in mind so no one customer segment is alienated.

The second area is marketing. EI first thought CD-ROM would be a great way to tap new end user customers, but they found that the existing online customers were most ready to adopt the new technology. Because they are experienced searchers, these customers want

software with search features and access speeds comparable to online.

Berger's final consideration is product design. CD-ROM databases are so new that no one is sure how to best package the information. EI marketed three subsets by topic, a tactic that Berger said seemed to confuse customers. It was difficult for the customers to understand what was on each disc; they would have preferred the entire database divided by publication years.

Other packaging options would be to put partial records from a complete database on disc (e.g., everything except abstracts), to put more than one database on a disc, or to mix bibliographic information with relevant numeric or full-text sources. This last option is "where we ought to be headed" according to Berger, because "we don't want CD-ROM to turn into another microfilm, a convenient storage medium."

New products

Although DEC's exit has removed some databases from the market, there seems to be an almost continual offering of new CD-ROM databases. A four-part directory by Bruce Connolly has attempted to describe and keep current with all of the laser disc databases on the market ("Laserdisk Directory," Part 1: *Database*, June 1986, p. 15-26; Part 2: *Online*, July 1986, p. 39-49; Part 3: *Database*, August 1986, p. 34-39; Part 4: *Online*, September 1986, p. 54-58).

The H.W. Wilson Company will make its CD-ROM *WILSONDISC* available in January 1987. As of November 1, Wilson was not ready to announce exactly which Wilson indexes or parts of indexes would be included on their CD-ROM product. A demonstration disc included portions of each Wilson index. Price had also not yet been set, but they anticipate it will be on a subscription basis with quarterly updates.

The *WILSONDISC* search software offers several choices for searchers with different levels of experience. Intermediary searchers may



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choose to use a replica of the regular WILSONLINE system or "Expert WILSONLINE" commands if they are very experienced. Less experienced searchers might opt to search WILSONDISC with the end user WILSEARCH software or an even simpler "browser mode" system, where users rely on paging through an alphabetical list of subject headings.

With a modem and a WILSONLINE account, users of the CD-ROM database can use the same microcomputer work station to dial up the Wilson mainframe system. This will allow great flexibility for intermediaries, as they can immediately update a CD-ROM search with the more current materials that are only available online. The Wilson work station acts as a combination CD-ROM system, front-end, and online system.

Information Access Company added a CD-ROM product to its 12" laser disc InfoTrac product line. *InfoTrac II* covers *Magazine Index* citations for the current year and three back years, plus three months of current indexing for the *New York Times*. Subscriptions include a microcomputer work station with built-in CD-ROM player, a printer, software, and monthly updates. The cost is \$4500 a year. *InfoTrac II* search software provides the same simplified searching that comes with the InfoTrac I system. Searching is done by browsing modified LC subject headings; no free-text searching or Boolean combinations are allowed.

R.R. Bowker Company introduced CD-ROM versions of two of its popular reference works this fall. *Books in Print (BIP Plus)* includes the 1986-87 records for the entire "Books in Print" series. In addition, the disc contains names and addresses of publishers. *Ulrich's Plus* includes records from the 1986-87 editions of *Ulrich's International Periodicals Directory, Irregular Serials and Annuals, International Serials Database Update*, plus an ISSN index and addresses of periodical publishers. Both databases will be updated quarterly. Prices for the database with software are \$895 for *BIP Plus* and \$395 for *Ulrich's Plus*.

SilverPlatter's databases (Psychlit, ERIC, AV-Online, PAIS, Excerpta Medica) have been available for several months, but prices were revised this fall. An ERIC CD-ROM starter kit is available for \$1500 per year. This includes a disc with the

three most recent years of ERIC records (including abstracts) that will be updated annually. The kit also includes a CD-ROM disc drive and the SilverPlatter retrieval software which includes such features as Boolean combinations, truncation, and free-text searching. Libraries must have their own IBM-PC.

Backfiles of ERIC may also be purchased on CD-ROM. Records from 1966-1982 for *Resources in Education (RIE)* are available for \$1500. *Current Index to Journals in Education (CIJE)* goes from 1969-1982 for \$750. Both archival sets (three discs) sell for \$2000.

The need for standards

A problem for CD-ROM consumers has been the lack of standardization. The lack of a disc formatting standard means that you can't simply purchase a CD-ROM player and assume it will work with all the discs you purchase. Many database producers have gotten into the business of leasing or selling CD-ROM players to ensure compatibility. A proposed ANSI standard for CD-ROM is now being voted on by members of the National Information Standards Organization (NISO).

The "High Sierra Group," a group of computer manufacturers, developed this proposed standard. The standard deals with volume and file structures—where information is located on each disc and how that information is addressed by the computer. (Standards for things such as external labeling and bibliographic description may be separate standards developed later.) The European Computer Manufacturers Association has proposed a similar data structure standard to the International Standards Organization, so a compatible U.S.-international standard for CD-ROM may be forthcoming.

Detailed technical explanations of the standards can be found in a new book, *CD-ROM Standards: the Book*, by Julie B. Schwerin with Parke Lightbrown, Connie Bailey, and Howard Kaikow (Learned Information Inc., \$75.).

Sociological Abstracts survey

Sociological Abstracts included a questionnaire on CD use in its April 1986 *Note Us* newsletter. Preliminary findings (reported in the October 1986 *Note Us*) show that 34.5 percent of the respondents feel they

would have a CD-ROM search station installed in their facility between 1986 and 1988. Only 23.4 percent feel they would not, the rest either don't know or have no answer.

Respondents split on what should be included in a Sociological Abstracts CD-ROM product, but by far the largest number (33.9 percent) favor the entire database from 1963 onward. The second most popular choice (17 percent) is English-language entries from 1974 onward. Price is definitely a factor in potential use, with only .6 percent indicating they would be likely to subscribe to the CD-ROM product in 1986 or early 1987 if the cost was between \$4000 and \$6000 per year.

The current state of the market

The Sociological Abstracts survey and Berger's observations help to summarize the current state of the CD-ROM database market:

- The existing online marketplace will be the first to adopt CD-ROM
- Users need computer literacy because it is more difficult to get the CD-ROM database system up than it is to start online searching
- Intermediaries will introduce end users to CD-ROM
- Database producers have a "long sell" and will not realize quick payoffs. Potential customers need many demos before they are ready to purchase and much hand holding once they purchase the CD-ROM system
- Training and hotline services are needed for CD-ROM databases just as they are for online
- CD-ROM products should be different products or be aimed at new users rather than just replicating the online database
- Software must be up to par in terms of access speeds and search capabilities
- Lower-cost products are needed if the CD-ROM potential is to be fully realized
- Many users want complete databases on CD or segregation by time periods
- Online will be used to supplement CD use for current information or seldom used databases, and
- Users would like database discs to be compatible so they can use the same equipment to access multiple databases.

