



University of Tennessee, Knoxville
**TRACE: Tennessee Research and Creative
Exchange**

School of Information Sciences -- Faculty
Publications and Other Works

School of Information Sciences

10-1-1984

Database Access Software

Carol Tenopir
University of Tennessee - Knoxville

Follow this and additional works at: https://trace.tennessee.edu/utk_infosciepubs



Part of the [Library and Information Science Commons](#)

Recommended Citation

Tenopir, Carol, "Database Access Software" (1984). *School of Information Sciences -- Faculty Publications and Other Works*.
https://trace.tennessee.edu/utk_infosciepubs/278

This Article is brought to you for free and open access by the School of Information Sciences at TRACE: Tennessee Research and Creative Exchange. It has been accepted for inclusion in School of Information Sciences -- Faculty Publications and Other Works by an authorized administrator of TRACE: Tennessee Research and Creative Exchange. For more information, please contact trace@utk.edu.

Database Access Software

By Carol Tenopir

DATABASE access software, which is also called "gateways," "front end processors," or "computer intermediaries," promises to have great impact on online searching in the next year. These software packages allow a microcomputer with a modem to be used for online searching by handling the telecommunications process and automatically logging on to the host system. More important, they often make searching easier in several ways. Access software allows the user to make choices from a menu instead of having to know search system commands. It assists users in database selection, and it greatly simplifies search language so that the user can search several online systems without learning several query languages.

Although database access software is most often aimed at the end user market, it offers many advantages to experienced intermediary searchers as well. In addition to allowing access to online systems to those who do not know the full range of a system's query language, access software facilitates uploading of stored search strategies to the host computer and downloading of search results to the local microcomputer. Online connect costs can thus be reduced and post-search services can now be offered that were too difficult before.

Database access software for microcomputers has been around in experimental form since the 1970s¹ and some has been operational for several years.² However, the widespread use of microcomputers with gateway software is just beginning and the number

of packages available should increase dramatically in the next year.³ Librarians are now being asked to identify and evaluate packages for patrons and must choose the best packages for their own use. There is a list of selected database access packages and vendors below.

The scope of these packages varies. Some, such as *Search-Helper* (described in my June 1 *LJ* column, p. 1105), are used only to access specific databases and are usually designed for end users rather than intermediaries. Other database access packages target a complete online system and can exploit the full powers and capabilities of that system. An example is *In-Search*, described in detail below. The database access software with the most complex task and broadest scope translates user input into the query languages of several selected online systems. The Institute for Scientific Information's *Sci-Mate* is the best-known example.

In-Search

In-Search, the package for accessing DIALOG, is the first product of Menlo Corporation, a new software firm in Santa Clara, California. I will look at it in some detail as one of the newest of the single system database software packages.⁴

The attractive packaging and attention to detail of *In-Search*, and the ambitious promotion plans for it reflect Menlo's strength and the vast potential market they envision. *In-Search* is being sold through computer stores and marketed to intermediaries, novice end users, and subject specialists.

In-Search provides access to DIALOG through IBM, IBM-compatible, and Texas Instruments microcomputers. Two double-sided floppy disk drives or one floppy drive and a fixed-disk drive are needed, as is a Hayes modem, and Novation modem, or an acoustic modem. A color monitor is not required, but is a nice addition because

In-Search makes impressive use of color.

The DIALOG searching process is broken down into three logical steps in *In-Search*: 1) database selection, 2) searching the selected database, and 3) retrieving records. The first step, database selection, assumes no prior knowledge of individual databases. Users first choose from among four broad categories (arts, education, and social sciences; biology and medicine; business, government, and news; or engineering, mathematics, and physical science). A list of 30-40 more specific subjects then appear for the chosen broad category. When the specific subject is selected, the user is shown short descriptions of each DIALOG database within their chosen subject. With so many different databases now on DIALOG, I found that *In-Search* reminds me to try databases I might not have otherwise searched.

The strength of *In-Search* in this process is its innovative Database Selection Screen and the amount of information it delivers about each database. Categories, subjects, and databases each appear in separate windows on the same screen. As a user chooses a category it is highlighted in the window and the cursor automatically moves to the first entry in the list of subjects in that category. Up and down arrow keys move the cursor through the alphabetical list of subjects or any letter of the alphabet may be entered to move quickly to that point on the list. When the user chooses a subject (by hitting the return key) that subject is highlighted and the cursor moves to the database window. Databases on the subject are arranged alphabetically in index card format. The screen display really "looks like a row of index cards in a library card catalog" as the *In-Search* manual claims.

Each of the database "cards" contains a short description and the cost of a database. If more information about a

Carol Tenopir is Assistant Professor at the Graduate School of Library Studies, University of Hawaii, Manoa



database is needed, pressing a function key will display the full DIALOG "blue sheet." It is convenient to have all this information on the screen rather than having to turn to the printed DIALOG manual. It is also available online through DIALOG, but at the connect hour price. With *In-Search* all the database selection tasks take place before connecting to DIALOG.

Once a database is selected, a screen appears that corresponds to the second step in the search process, searching that database. The Search Keywords and Phrases screen is a table with prenumbered lines corresponding to set numbers. Users enter terms or phrases and logical operators onto the table. A particular index (e.g., author) can be specified.

After the initial search strategy is entered, a phone function key is pressed and *In-Search* automatically connects with DIALOG. The previously entered strategy is run on the preselected database and the number of references found is posted in the search table. The three-step searching process can then be completed by viewing (or downloading or printing) the retrieved citations with a retrieve command from a command list.

In-Search supports most DIALOG commands and features. Simply pressing a function key (e.g., help, phone) will make many of these work. Some require selecting a command from a list (e.g., expand, retrieve). Other features work automatically. For example, if a blank space is left between two words in the search strategy, *In-Search* automatically inserts the word proximity operator (unless the searcher overrides this default by putting the words in quotes). If a stop word is entered in a search statement, *In-Search* will automatically replace it with the appropriate word proximity operator.

Experienced searchers need not be limited to all of the *In-Search* conventions. DIALOG database numbers can be directly entered without going through the subject selection windows. Proximity operators or field identifiers can be entered in standard DIALOG format instead of relying on the *In-Search* table. Parentheses can be entered in logic statements to change the natural search order. Multi-word descriptors can be searched without the automatic proximity feature by enclosing them in quotes.

In-Search does impose some minor limitations on the DIALOG system. Individual search statements are limited to 50 characters because the *In-Search* table column is 50 spaces long. Phrases from more than one additional index (e.g., author or journal title) can't be searched on the same set line. To search for the journal name *Forbes* OR the journal name *Business Week*, you

must enter each on a separate line. There is no use for the "search/save" command in DIALOG since searches are saved on the microcomputer disk.

In-Search makes good use of function keys and cursor movement. The function keys work like toggle switches—press the help key once to get a help message, press it again to return to the search. The cursor highlights the text and moves automatically in blocks. Arrow keys make it easy to move around on any screen. Word processing editing control keys make input and changes easy.

Innovative use of windows is another strong feature of *In-Search*. When you are searching a database and wish to check the cost of your search, for instance, a smaller cost window appears in the middle of the search display. In the database selection step, the database card window appears to flip through database cards as different subjects are chosen.

In-Search disks are updated to reflect changes or the addition of new DIALOG databases monthly. Currently these updates are mailed free-of-charge. Online updates are promised in the future. Menlo is working on database access packages for other online systems; each will be separate rather than parts of a single, multi-system package. There are also plans for versions of *In-Search* for other computers.

There are some things that *In-Search* cannot do. No database access package yet offered provides real help with search strategy development or improvement of search results. *In-Search* cannot remind a searcher to try different synonyms or that word choice may vary among databases. If results are unsatisfactory, it does not suggest alternative strategies. In short, the intellectual side of searching still depends on the human brain, and on experience with databases and search strategy development. The experienced intermediary brings these elements to searching with *In-Search*.

On the whole, *In-Search* is a visually appealing, well thought-out database access package that has set a new high standard for such software. The instructions on the bottom of the screen, the help function keys, the excellent user manual, as well as the fact that experienced searchers may use regular DIALOG features make it an easy matter to begin searching with *In-Search*. Even with *In-Search*, practice and familiarity with the databases will result in better searches. *In-Search* should make that learning process faster and less expensive. For experienced searchers, it can save search preparation time, lower search costs, and help to provide the extended services that downloading of search results makes possible.

Selected Database Access Software

DATABASE SPECIFIC PACKAGES:

Search-Helper

Information Access Company, 11 Davis Drive, Belmont, CA 94002. \$200/year.

Microdisclosure

Disclosure, Inc., 5161 River Road, Bethesda, MD 20816. \$250.

SYSTEM SPECIFIC PACKAGES:

Naturalink (for Dow Jones News/Retrieval Service)

Texas Instruments, Data Systems, P.O. Box 402430 H-666-A, Dallas, TX 75240. \$150.

In-Search (for DIALOG)

Menlo Corporation, 4633 Old Ironsides Drive #400, Santa Clara, CA 95050. \$399.

Searchmaster (logs on any system, emphasizes ORBIT)

SDC Information Services, 2500 Colorado Ave., Santa Monica, CA 90406.

MULTI-SYSTEM PACKAGES:

Sci-Mate

Institute for Scientific Information, 3501 Market St., Philadelphia, PA 19104. \$440 for Universal Online Searcher.

Ol'Sam

Franklin Institute Research Laboratory, Inc., Philadelphia, PA. \$995.

Searchware

22458 Ventura Blvd., Suite E, Woodland Hills, CA 91364. New in 1984.

IT (Information Transfer)

Data-Ease, Inc., The Civic E212, 3130 Mayfield Rd., Cleveland Heights, OH 44118. Available fall 1984.

References

1. Preece, S. E. and M. E. Williams, "Software for the Searcher's Workbench," in *Communicating Information: Proceedings of the 43rd ASIS Annual Meeting*. Knowledge Ind. Pub., 1980, p. 403-5; and Marcus, R.S. and J.F. Reintjes, "A Translating Computer Interface for End-User Operation of Heterogeneous Retrieval Systems," *Journal of the American Society for Information Science*, July 1981, p. 287-317.
2. Toliver, D. E., "OL'SAM: An Intelligent Front-end for Bibliographic Information Retrieval," *Information Technology and Libraries*, December 1982, p. 317-326; and Crystal, M. I. and G. E. Jakobson, "FRED, A Front End for Databases," *Online*, September 1982, p. 27-30.
3. Spigai, F., "Gateway Software: A Path to the End-User Market?," *Information Today*, February 1984, p. 6-7.
4. Markoff, J., "Trends in Telecommunications: On-line Search Software and Faster Modems," *BYTE*, July 1984, p. 341-56, reviews *In-Search* for the home computer user.

