

Front End Software for Computer Searching

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More and more front end software packages for computer searching, including some which ease end-user searching, are becoming available. Since the nature and use of these packages will have a great effect on the role of the searcher in the future, searchers need to be aware of what front ends are, what their capabilities are, and how they may affect libraries and end-user searching.

What is a "front end" for searching? Although the literature of librarianship has not yet settled the terminology in this area, let me offer a definition. A front end is a software package which is used with a microcomputer and a modem to ease access to and searching of databases. It can often save money by uploading and downloading information. Although they are often lumped together, front ends should not be confused with gateway systems which are more like dial-up, use-as-needed services.

The front end packages currently available provide access to different vendors and databases and they are aimed at varying audiences. Some access only a few specific databases, some only one vendor, and some several vendors. Audiences include everyone from nonprofessionals with no knowledge of searching, to professionals in subject specialities with no knowledge of searching, to experienced professional searchers.

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This article will describe in some detail some front ends which have been around at least a year and on which more literature is available. I will concentrate on the packages that I have the most experience with and those which seem to have the greatest potential for end users. There are also many packages available which are targeted for the professional intermediary which are outside the scope of this paper. A list of articles is appended; they describe front ends in more detail than is given here. The article by Carol Tenopir in *Library Journal* and the one by Suzana Lisanti in *Byte* are good overviews of front ends and both provide addresses of vendors and prices.

OL'SAM

One of the earliest available front ends is OL'SAM (Online Database Search Assistance Machine), offered by the Franklin Institute. OL'SAM is aimed at the professional searcher and at the end user who is a professional subject specialist. It accesses several vendors and allows for uploading and downloading of information, as well as aiding in searching, so that the searcher only needs to know one search language for several vendors. At \$995, it is rather expensive. The history of OL'SAM is discussed in more detail in the Toliver article, listed below.

SCI-MATE AND SEARCH HELPER

In 1982-83, two front end packages appeared and became prominent. I have had personal experience with these two packages; they are Sci-Mate, created by the Institute for Scientific Information (ISI), and SEARCH HELPER, a product of the Information Access Company (IAC). ISI produces the Science Citation Index, the Social Science Citation Index, the Arts and Humanities Citation Index, and the corresponding databases. IAC produces several databases available only through DIALOG. These include the Magazine Index and the Trade & Industry Index.

Sci-Mate is intended for the professional researcher who has specialized information needs and who does not want to learn the details of several search systems. Sci-Mate uses a menu-driven approach to allow the user to enter a search which the Sci-Mate software then translates into the languages used in DIALOG, BRS, SDC, or NLM, as requested. One can search any database on any of these systems, then download the results as desired. Uploading of search

strategies is also possible. An optional companion software package, called the Personal Data Manager, is available. This makes search results and other information entered by the user into personal databases.

Sci-Mate is a good combination of user friendliness and sophistication. The end user who is a researcher but not a trained searcher benefits from both characteristics of the system. All options are specified clearly on menu screens. Except when a search term must be entered, the user is only called on to enter a single letter or number to indicate his or her choice. The manual for the package is very clearly written and easy to use, and some online instruction is available. The Sci-Mate "language" does allow the searcher to do all the basic search functions and provides most of the capabilities of the "native" languages, including browsing search terms, limiting to fields, and using proximity operators. The capability for using the "native" language is also present if needed. The Universal Online Searcher is even more useful when combined with the Personal Data Manager, since the researcher can then easily keep files of information drawn from searches.

The drawbacks for the end user are that little useful instruction is given in the logic and process of searching. He or she will not learn how to set up a strategy, or how, or why, to use synonyms for the desired terms. A lot of trial and much error will probably result. In addition, documentation for the different vendors and their databases is still needed to do effective searching. For example, one needs to know what the different field names are before one can limit a search to them. The software also involves something of an investment, particularly if one also wants to acquire the Personal Data Manager — \$440 for the search software, \$540 for the database software, and \$880 for both.

Sci-Mate may be the best choice for the researcher who must search several systems, especially if a friendly, knowledgeable librarian with a set of documentation is available. Users with more limited needs, though, may wish to look elsewhere.

SEARCH HELPER is also aimed at the end user. SEARCH HELPER is a software package which provides limited, but easy, searching access to seven databases produced by IAC. The software is sold along with a package of searches for which one pays in advance. The buyer is usually a library, which may then make searching directly available to its patrons. IAC's aim is to make searches inexpensive by using SEARCH HELPER to do uploading and downloading of information, and to make searches easy to perform by providing a simple, menu-driven system with on-screen explanations.

The databases available through SEARCH HELPER include Magazine Index, which is much like the *Reader's Guide* in nature; National Newspaper Index, which indexes *The New York Times*, *Wall Street Journal*, *Christian Science Monitor*, *Washington Post*, and *Los Angeles Times*; Legal Resources Index, which covers over 730 legal periodicals; Trade and Industry Index, which indexes 300 trade and business journals and is particularly good for company-specific information; Management Contents, which provides access to 700 management and business journals; the Computer Database, which covers all aspects of computers in 600 periodicals; and Newsearch, which indexes the most recent 30 days of all the above databases.

The user of SEARCH HELPER can search for a subject or a person as a subject. A number of subjects can be combined, or "anded" together to make the search more specific. Proximity searching is possible, and terms can be truncated. The knowledgeable searcher can do other types of requests, such as for an author or a particular article type, but this is not indicated on the screen, nor is it particularly easy to do. "Oring" is not possible, that is, one cannot say "college" or "university" and "South Africa." One must do one search for "college" and "South Africa" and one for "university" and "South Africa." It is also not possible to save strategies to run in several databases without rekeying. This is all rather limiting, but it does make the system much easier to understand and use.

Another limitation of the system is that the searcher only retrieves the 20 most recent citations on the requested subject. If more than 20 citations are found, one can easily retrieve 20 more at a time, but each group of 20 citations counts as a search. Twenty citations on a topic are enough for many users.

As mentioned above, the SEARCH HELPER software is made available with a prepaid package of searches. Seven hundred searches can be purchased for \$2.50 each, plus \$200 for the software, for a total of \$1950. Three hundred searches can be bought for \$3.50 each, plus the software price, for a total of \$1250.

I have extensive experience using SEARCH HELPER. Although I have not been in a library where it was used with end users, I have become familiar with its capabilities, the results one can expect from it, and its usefulness in an academic reference department. Although its capabilities are limited, SEARCH HELPER has proved invaluable in providing computer searching at a low cost. Its ability to combine concepts and its currency have been particularly useful. For ready reference and obtaining brief subject bibliographies, it has proved its usefulness and it has been used extensively even by librarians with little or no searching experience.

Libraries that have used SEARCH HELPER with end users generally report that it is popular and useful. There are some problems reported. Although online "help" is provided, patrons still have difficulty with the concepts of searching and they often need help from librarians. There have also been problems with charging for the searches. If searches are free, patrons use them up quickly. Charging for searches can be troublesome, since three or four searches are often necessary to get satisfactory results. At this point, however, SEARCH HELPER is one of the best ways to provide low cost searches for the general public and for undergraduate students.

IN-SEARCH AND SEARCH MASTER

Two other front ends have appeared in the last year or so, also aimed at different target audiences. In-Search, aimed at a broad end-user audience, was developed by the Menlo Corporation and costs \$395. Search Master, which is \$300, is a product of SDC,

In-Search has received some attention in computer magazines aimed at the end user. (See the bibliography.) It provides access to DIALOG, giving a user-friendly interface and ample online information on possible databases for searching. It also uses attractive graphics. I have only worked with a demo disk for In-Search, but it was impressive.

The user of In-Search first chooses a database from a list of four broad categories. He or she then moves to a list of 30 to 40 subjects in the chosen category and picks one. The screen then displays descriptions of appropriate databases from which the user chooses one. In-Search provides DIALOG bluesheets online, if needed; this solves most of the problems of documentation for the end user.

Next the search is entered. The screen displays a table of lines with DIALOG set numbers. The user enters the search terms and logical operators desired. In-Search dials in and executes the search, allows the user to retrieve the results, and logs off. The user can then view the results offline. Most DIALOG search features are available on In-Search; one selects the commands from a list. The use of graphics and windows and the attention to screen detail make In-Search a pleasure to use.

In-Search would be best for the professional with special subject needs in business, science, etc. It allows more sophistication and access to more information than SEARCH HELPER. It is easier to use than Sci-Mate and gives database documentation. It still doesn't solve the problem of teaching the end user the logic

and process of searching, nor does it make this teaching unnecessary through its features.

The author has never used Search Master and has seen little information in the literature on it, but it appears to be aimed at the information specialist in a business environment, who needs to design scripts for recurring searches. The end user then inserts different search terms as needed in the appropriate places, by using a menu-driven access. Search Master will search Orbit, BRS, DIALOG, and NLM. It will upload strategies, allow user interaction with the system, and download information.

IN SUMMARY

This was a brief review of some major front end software packages currently available for searching with a microcomputer. Others are available and new ones will appear soon. One must keep in mind that specifications on the packages discussed here may change, IAC recently revamped the SEARCH HELPER software for at least the second time, and the Menlo Corporation recently came out with a new version of In-Search called Pro-Search, aimed at intermediaries. This means that some of the problems and limitations of today's packages may be remedied tomorrow.

What will front end searching software mean for libraries and end users? At present, this avenue toward easier computer searching is not the most likely one for the individual with a home computer to take, since it involves fairly large sums of money for the purchase of expensive software. At-home users who want to access online databases may be more likely to use the gateway services such as BRS After Dark because these don't involve such a large initial investment.

For the businessman, the physician, the research scientist, or the faculty member who wants to search at work the front end search software package is ideal. These people's employers can usually afford the software. Purchasing it will save money in the future because of the advantage of being able to upload and download and because the searcher will become thoroughly familiar with the software. The professional at work will be able to use his or her own subject knowledge to increase the relevance of the search and will not have to go to a library to fill emergency or small information needs. This seems to be the most likely setting for use of a front end for searching, except in the case of a software package like SEARCH HELPER which is really aimed at the unsophisticated non-specialized user.

What, then, is the role of the librarian? The librarian will still

probably do the searches that are more complicated and search in disciplines the end user is unfamiliar with. The user may not even want to try a very complex search. The front end packages work best with simple searches and may not have the capabilities needed in some instances. The end user may do many searches that would not have been taken to the librarian anyway.

We must be prepared to accept another consequence of the use of front ends and related aids to end-user searching. The expert searcher will now become the search instructor, advisor, and problem solver for those who want to do their own searching. This is particularly needed, since the information industry makes searching sound much easier than it actually is. If we decide we'd rather not take on this role, we should be ready to be totally bypassed in the search for information. I hope we can instead try to change to fit user needs and look on it as a great new challenge.

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