End User Search Services: A Comparison

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A COMPARISON

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There are now several time sharing search systems available to the home computer user. These systems provide to home subscribers access to online encyclopedias, electronic mail, shopping services, airline schedules, factual information, news stories, bibliographic databases, and many other services. Because some of the systems require start-up fees or charge monthly minimums and because the specific characteristics and offerings vary, it makes sense to examine each system and make choices among them.

The five services I will describe and compare are:

1. KNOWLEDGE INDEX, DIALOG Information Services, Inc., 3460 Hillview Avenue, Palo Alto, CA 94304, (800) 227-5510 or (415) 858-3796
2. BRS/AFTER DARK, BRS, 1200 Rt. 7, Latham, NY 12110, (518) 783-1161
3. THE SOURCE, Source Telecomputing Corporation, 1616 Anderson Road, McLean, VA 22102, (800)572-2070 or (703) 734-7500
4. COMPUSERVE, 500 Arlington Centre Boulevard, Post Office Box 20212, Columbus, OH 43220, (800)848-8990 or (614) 457-8600
5. DELPHI, General Videotex Corporation, 377 Putnam Avenue, Cambridge, MA 02139, (800) 544-4005 or (617)491-3393

Knowledge Index

DIALOG's Knowledge Index is a simplified and scaled-down version of the DIALOG information retrieval system that has been available online for approximately ten years. The parent service is used primarily by librarians or other information intermediaries who search the DIALOG databases for others. Knowledge Index allows home computer users to search databases themselves during evening hours at greatly reduced rates.

As of September 1983, Knowledge Index offered approximately twenty-four databases for searching. Most of these databases are bibliographic databases; they provide only citations (and sometimes abstracts) of articles rather than the complete text of the articles or facts. Databases are available on the following subjects in Knowledge Index: agriculture, books, business, computers and electronics, corporate news, education, engineering, government publications, legal information, magazines, medicine, news, and psychology. Most of these categories contain only one or two databases.

Databases of special interest to home computer users include:
International Software, which is a listing of commercially available software for mini- and microcomputers; Microcomputer Index, which contains citations with abstracts of articles about microcomputers; Magazine Index, which gives citations from 370 popular American magazines; National Newspaper Index, which indexes major daily newspapers; and Newsearch, the daily indexing of the magazines and newspapers covered in the above two databases plus the PR Newswire full text.

In order to use Knowledge Index, users must learn a set of basic commands. (The commands are slightly different from the parent DIALOG...
The command approach makes the user's manual (which is excellent) indispensible. Once the simple commands are mastered, Knowledge Index is fast to use. Good help messages can refresh your memory online if you forget a command, but Knowledge Index charges by the time spent online. Infrequent users should check the manual before searching. Knowledge Index has the powerful DIALOG searching features such as word proximity, logical operators, truncation, etc.

An electronic mail function will be added this fall, and other features are promised. Right now Knowledge Index is primarily a reference searching service and secondarily a fact searching service. Many researchers will find such a service valuable, but each potential user needs to weigh the $24.00 per hour search costs, $35.00 start-up fee, and restricted night time hours versus the value to them of the type of information available.

**BRS/After Dark**

Like Knowledge Index, BRS/After Dark is an outgrowth of a popular online search service and most of its offerings are bibliographic databases. After Dark has chosen to place its approximately thirty databases within five broad subject categories, rather than initially having one or two databases in many categories as in Knowledge Index. The categories are: science/medicine, business/financial, reference, education, and social science/humanities. Two databases are of particular interest to the general home computer user: the full text of the Academic American Encyclopedia; and DISC, which reproduces the tables of contents of microcomputer journals.

As of September, After Dark and Knowledge Index had nine databases in common. More Knowledge Index databases are of general interest, but users should check current lists of databases from both systems to find which has more on a particular subject.

After Dark is menu driven. Although there is a manual, the system can be searched without having to refer to the manual. (The manual has some disturbing features such as the lack of an index and database information sheets that don't give the subject category.)

When searching in an After Dark database, all of the powerful BRS features of word adjacency, logical operators, and truncation are offered. After Dark can be frustrating, however, because if you enter something incorrectly (such as type the wrong character in a menu choice) the system either repeats the entire previous menu selection or asks you to try again, rather than offering real help. When you do get a help message it is often of little help. Regular users may soon tire of the long menu lists that are repeated frequently.

After Dark lists several services in addition to the search service in its main menu and manual, but none were yet available as of August. A newsletter, software delivery, electronic mail, and a swap shop are promised in the near future. Like Knowledge Index, BRS/After Dark was first and is primarily still a reference searching service.

Costs are $6.00 per hour, sometimes with an additional royalty fee that varies with the database. Total costs are between $6.00 and $16.50 per hour. After Dark has a $50.00 start-up fee and a $12.00 per month minimum charge.
CompuServe

Although the methods of searching differ, BRS/After Dark and Knowledge Index are similar services, both of which grew out of library database search services. They have the same kind of databases, similar powerful search capabilities, and an emphasis on locating references to literature. CompuServe is a different kind of service, first developed specifically for the home computer user.

A wide variety of types of information and services are available through CompuServe. Much of the information is entertainment oriented, including games, "The Hollywood Hotline", CB radio simulator, special interest group discussions, etc. Much of it is informative text for the general home audience to scan, such as information on hobbies or clubs, human sexuality, fashion, buying a used car, farming, cooking, etc. Full texts of newswire stories, magazines (eg. Popular Science), and an encyclopedia are available for reading and home shopping services and swap shops abound. It is easy to spend several hours reading these things or interacting with other CompuServe users as a more costly (but less passive) alternative to television.

CompuServe also has a business and finance section featuring stock quotes and access to the Standard and Poors database. There is a professional services section with such things as communication forums for medical professionals, agricultural information, and aviation information. Reference searches on databases offered by BRS and DIALOG and other services can be purchased from a CompuServe vendor, but cannot be performed on CompuServe.

The scope, audience, and type of information on CompuServe are different from the other two services mentioned thus far, and the capabilities of the search system reflect this. Text is selected to be read on CompuServe based on the titles of articles either from a menu choice or an alphabetical list. You do not first search for subject words to see if they appear in the articles. To find an article in the Academic American Encyclopedia for instance, you have to enter the article title exactly right. In BRS/After Dark you can search for words or word forms anywhere in the text of the encyclopedia.

In most cases CompuServe menu options are clear and help messages suggest alternative actions. There is such a variety in the types of information on the system and who has created it, however, that there is a problem with inconsistent or differing menu levels in different databases. It is all too easy to get "lost" down several levels in a complex database. This can be confusing, so CompuServe is best used by combining shortcut commands from the manual with the menu system. (Unfortunately, there is no index in this manual either.) In addition to the User's Guide manual, users should keep the printed subject index from the monthly CompuServe magazine next to them as they search.

CompuServe has different per hour rates for day time and night time hours, access via a commercial telecommunications service or the CompuServe network, and whether you search at 300 or 1200 baud. Costs range in the contiguous U.S. from $5.00 to $45.00 per hour. Some databases impose an additional surcharge. Only prime time users have a monthly minimum charge. The start-up price is $23.95 from Radio Shack stores.
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The Source

Like CompuServe, the Source provides an extensive variety of information types and services. There are many similarities between the two systems. Electronic mail, shopping services, teleconferencing and bulletin boards provide interactive services, while reading is available on entertainment, personal, and professional topics. Games, home information and things such as travel services are plentiful. Educational drills are attractive to the family. UPI newswire, business information and stock market quotes are all available on the Source. SourcePlus offers financial programs for an additional fee. There is so much information on the Source and CompuServe and so many choices to make, that I doubt anyone would ever use everything.

One years worth of Management Contents, the business bibliographic database, is a SourcePlus feature, but the searching powers are much more limited than the more sophisticated search systems. Reference searches on other databases have to be ordered from an information vendor.

The Source is a menu driven system. In most cases users locate information by going through menu choices or from titles and then scan the information to see if it is of interest. Some files such as the UPI file have better search capabilities, however, allowing subject searches with up to three terms linked by "and" or "or". The manual is newly revised and very clear. (I've said this before, but the lack of an index keeps this manual from being really terrific.)

The number of databases and services on the Source and their differences in levels, capabilities, and type of information can be confusing. The manual helps, as do help messages and generally clear menu choices.

The Source requires a start-up fee of $100.00. Per hour costs vary depending on whether you search during daytime or evening hours and whether you search at 300 or 1200 baud. Prices in the contiguous U.S. vary from $7.75 per hour to $25.75 per hour, with additional charges for access to "SourcePlus" services. There is a $9.00 per month minimum.

Delphi

Delphi is the newest of the services described. It combines the home information/financial services with access to database literature searching as a gateway to the DIALOG Information Service and DIALCOM system.

Services on Delphi include a bulletin board, home shopping, electronic mail, and games. It allows creative writers to participate in writing a novel or keeps track of your appointments and schedules.

Delphi has many information services. Securities advice, mortgage computing, travel services, etc. (all of which are available in some form on CompuServe or the Source) are also on Delphi. The UPI newswire and Kussmaul Encyclopedia are available. Only titles of articles are searched in the encyclopedia, but if no exact match is found the system will automatically search for all possible shorter variations. Extensive cross references also aid searching.

Several of the most useful services require separate registration and passwords. For security reasons, the home banking service that allows you to electronically transfer funds from your bank account to pay bills requires another level of password. DIALCOM and DIALOG services have significant extra
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DIALCOM offers a sophisticated array of business, computing, statistical, and computational programs. The full set of over 100 DIALOG databases on every subject is accessible, not just the subset on Knowledge Index. You pay for this full set, however, and anyone with a regular DIALOG account pays the same amount without going through Delphi. The convenience of accessing DIALCOM and DIALOG though Delphi as one gateway service, combined with Delphi's home information services make Delphi an attractive combination service. It is useful for home and business uses, as well as research.

Delphi is a menu driven system. Some of the databases have many levels, but if you know the levels and their order you can bypass the menus and go directly to a desired function. There seems to be general consistency in terminology and menu choices across databases, which makes shortcutting easier.

Help messages on Delphi are usually clear and available at most levels and alternative actions are often suggested for incorrect input. When you ask for help you are put into a separate help mode with all of the commands input in this mode interpreted as a request for an explanation of that command. It is easy to forget that you must get out of the help mode before continuing to search and I found myself lost in help several times.

Delphi's Guided Tour program is a friendly tutorial good for first time users and as a refresher for infrequent users. The manual does not need to be used if you go through the tutorial, but it is a useful supplement. An index and tabs are needed, but the style and organization is good. (The manual was under revision at the time of this writing.)

Delphi has a start-up fee of $49.95. Per hour charges vary for evening/weekend service or daytime service, for 300 or 1200 baud, and for telecommunications service. Rates range from $5.00 per hour to over $30.00 per hour. Additional fees are charged for several services and DIALOG access is billed at DIALOG's database charges, which vary from $25.00 to $330.00 per hour (averaging around $60.00 per hour.)

Conclusions

All of the systems described are good with exciting information offerings and all of the systems have flaws. Knowledge Index and After Dark are good for research and fact retrieval, Compuserve and The Source are good for entertainment and business, Delphi is good for all of these uses but has fewer entertainment and home choices and costs more for research. Infrequent users may find that Knowledge Index's command system does not lead them by the hand enough, while frequent users may tire quickly of the After Dark menus. People with a specific information need may not want to cope with all of the extraneous programs and limited search capabilities on Compuserve or the Source, but families may appreciate the variety and not need powerful search features. Some users will find that their relatively infrequent use of literature searching justifies the higher cost of accessing it through Delphi so they can use the same system for all information needs. A combination of either Compuserve or the Source and either After Dark or Knowledge Index offers the most choices.

The choice of which system or systems to use, however, must be based on individual needs, expected frequency of use, and, ultimately, personal reaction to the system and its features.
### End User Search Systems: A Comparison, Tenopir

<table>
<thead>
<tr>
<th>Feature</th>
<th>Knowledge Index</th>
<th>BRS/After Dark</th>
<th>Compuserve</th>
<th>The Source</th>
<th>Delphi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost per hour</td>
<td>$24.00</td>
<td>$6.00 - $16.50</td>
<td>$5.00 - $45.00 + extra for some services</td>
<td>$7.75 - $25.75 + extra for some services</td>
<td>$5.00 - $34.50 + extra for some services</td>
</tr>
<tr>
<td>Start-up fees</td>
<td>$35.00</td>
<td>$50.00</td>
<td>$23.95</td>
<td>$100.00</td>
<td>$49.95</td>
</tr>
<tr>
<td>Monthly Minimum</td>
<td>NONE</td>
<td>$12.00</td>
<td>2 hours (for prime time users only)</td>
<td>$9.00</td>
<td>NONE</td>
</tr>
<tr>
<td>Databases Offered</td>
<td>Approximately 24. Mostly bibliographic. International Software, Microcomputer Index, Magazine Index, National Newspaper Index</td>
<td>Approximately 30. Mostly bibliographic. Academic American Encyclopedia, DISC (tables of contents for microcomputer journals)</td>
<td>Entertainment, home information, financial, newswires, travel, etc. Wide variety and many topics.</td>
<td>Entertainment, home information, financial, newswires, travel, etc. Wide variety and many topics.</td>
<td>Some entertainment and home information. Also financial, newswire, travel, etc. Gateway service to DIALOG and DIALOG</td>
</tr>
<tr>
<td>Other Services</td>
<td>Electronic mail promised Fall 1983. Document delivery</td>
<td>Electronic mail, swap shop, software delivery promised</td>
<td>Electronic mail, swap shops, bulletin boards, teleconferencing, home shopping, programming, etc.</td>
<td>Electronic mail, swap shops, bulletin boards, teleconferencing, home shopping, programming, etc.</td>
<td>Electronic mail, swap shops, bulletin boards, teleconferencing, home shopping, programming, etc. Gateway services.</td>
</tr>
<tr>
<td>Newsletter</td>
<td>Yes, monthly (new)</td>
<td>Promised</td>
<td>Monthly magazine</td>
<td>Monthly magazine</td>
<td>Yes, monthly</td>
</tr>
<tr>
<td>Search Method</td>
<td>Command</td>
<td>Menu</td>
<td>Menu</td>
<td>Menu</td>
<td>Menu</td>
</tr>
<tr>
<td>Search Power</td>
<td>Logical operators, word proximity, truncation, etc. Very powerful.</td>
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<td>Limited but varies. Can search for keywords and use some logical operators in some databases.</td>
<td>Gateway service provides access to other systems with powerful searching, otherwise fairly limited.</td>
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</tr>
<tr>
<td>Manual</td>
<td>Excellent</td>
<td>OK. Lacks index.</td>
<td>OK. Lacks Index</td>
<td>Very good, but lacks index.</td>
<td>Good, but lacks index</td>
</tr>
</tbody>
</table>