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ADVISING POTENTIAL ENDUSER SEARCHERS  
IN A MARINE SCIENCE LIBRARY

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ABSTRACT

A researcher in the marine sciences who inquires about doing his or her own database searching is a potential enduser searcher. As a librarian, what do you say during such an advisory transaction? To offer advice, a marine science librarian needs a specific knowledge base and a framework for incorporating this knowledge into an informed response. Since the marine sciences are multidisciplinary, advising the library's clientele requires a database-searching knowledge base that has a multidisciplinary science orientation. Using a framework suggested by the author for the advisory transaction, comments made by the inquirer during the initial reference interview point to specific recommendation(s). Further discussion with the potential enduser searcher regarding specific aspects of database searching assists the inquirer in arriving at a decision.

PAPER

Marine science librarians can be asked by their clientele for information regarding direct access to bibliographic databases. Searching done by the eventual recipient of the information is referred to as enduser searching. Potential enduser searchers are then library clients who express interest in doing their own database searching. What do you say to them? Where do you begin? Answering these inquiries, however tentative they may be, requires two things; the marine science librarian needs a specific knowledge base and

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also a framework for incorporating this knowledge into an informed response. This paper presents a multidisciplinary science orientation that is pertinent to a marine sciences library; potential enduser searchers may ask about direct access to information in marine chemistry, marine geology, marine biology, marine engineering, etc. Advising them requires that the marine science librarian acquires a multidisciplinary knowledge of science databases and searching. This paper is a blueprint of one facet of the information services of the Scripps Institution of Oceanography Library; as such, this approach is specific to the environment of the Scripps Library and will not be totally applicable to every marine science library. However many comments will be applicable to most marine science libraries; the author's intention is to share his approach and reasoned biases, and to stimulate discussion and sharing among marine science librarians.

The marine science librarian needs a specific knowledge base in order to advise potential enduser searchers. General knowledge of database searching is required e.g. the range of databases available, the database services on the market, the costs involved, how to open an account, how to do a search, etc. It is also highly desirable to have a working familiarity with those software and systems designed for enduser searchers and called user-friendly systems, microcomputer-based frontend software, and gateways. While it is beyond the scope of this paper to discuss these at length, some general comments are necessary for placing them in perspective with the regular (non-user-friendly) mode of database searching. References cited at the end of this paper provide more extensive commentary.

The mechanics of database searching can be simplified in three ways: at the database service, at the searcher's microcomputer, or at an intermediary computer between the searcher and the database service. A database service can offer a user-friendly search system by using simplified search software instead of its regular search software; examples of user-friendly systems are Dialog's Knowledge Index, BRS' AfterDark, and BRS' Brkthru. It is especially useful to gather product information on these three user-friendly systems because they offer major cost savings at night and on weekends; they also offer a few databases of interest to the marine sciences.

A microcomputer-based frontend software is a command-translation software mounted locally on the searcher's

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microcomputer. The term "frontend" means that the software is in-front-of or between the searcher and the database service. Examples of microcomputer-based frontend software include Pro-Search, MicroCambridge, Dialoglink, and SciMate Searcher. It is useful to be familiar with microcomputer-based frontend software by gathering product information and possibly demo disks. While most of them simplify database searching for the enduser, they do not offer major cost savings like the user-friendly systems offered by the Dialog and BRS database services. Some microcomputer-based frontend software (like Dialoglink) is designed specifically for the experienced searcher and is not oriented to the less experienced enduser searcher. In addition microcomputer-based frontend software may suffer from a lack of updating; databases and database services evolve but the software may not.

A gateway is an intermediary computer with its own command-translation frontend software. The gateway computer is between the searcher and the database service; it simplifies searching and billing for access to any database service's databases. The best known example of a gateway is EasyNet. EasyNet promises to be a major player in the future of enduser searching so it will be helpful to gather product literature on it and follow its future development. EasyNet is geared to retrieving up to ten references per fixed-fee search; thus its usefulness is limited at this time to an inexpensive retrieval of a handful of references.

A framework is then needed to incorporate a knowledge base of database searching into an informed response to the potential enduser searcher's query. What does one say when asked about enduser searching? How does one avoid sounding like a babbling idiot? A wide range of user-friendly and frontend products and services designed for enduser searchers are available on the market; one cannot start talking about them all in addition to providing information about database searching in general. It is extremely important to avoid giving too much advice! What is needed is a structure or framework to the advisory transaction which will guide the marine science librarian in providing a recommendation.

An advisory interaction with a potential enduser searcher may include several components. A reference interview constitutes the first part of the advisory transaction. The reference interview is intended to find out the inquirer's subject area, and the frequency with which the inquirer

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expects to search for information. Open-ended questions are deliberately used to draw out as much information as possible from the potential enduser searcher. After the brief reference interview and a discussion of the costs of database searching, a specific recommendation can usually be made. Finally a brief discussion of a few searching-related topics could follow with the possibility of a database searching demonstration when appropriate.

Reference interview question number one:

"What are your subject interests or area of research?"

The library's clientele can encompass a wide range of marine science disciplines from marine biology to physical oceanography to marine geology to marine engineering. The enduser's subject interests tip the librarian to the appropriate database(s) that will satisfy the enduser's needs. It then follows that the database(s) of interest define the database service(s) that the enduser needs to access. A database directory like Cuadra's Directory of Online Databases can be helpful if uncertainty prevails.

Reference interview question number two:

"How often do you think you might wish to search for information?"

Addressing the enduser's expected frequency of searching is a key point in the interview. This author views frequent searching by endusers as more than once a month; infrequent searching is then once a month or less. The expected frequency of searching indicates whether enduser searching is a viable option; if searching will be very infrequent, why bother learning something new and then forgetting it before the next usage occurs?

The expected frequency of searching indicates the searching approach that the enduser can master to yield good results. Infrequent searchers may appreciate the searching approach of a menu-driven searching system (like BRS' Brkthru, SciMate Searcher, or MicroCambridge). A menu-driven search system presents the command choices to the searcher for each step of the search; the searcher does not have to know the appropriate command for each step. Menus are useful if the searcher does not search often enough to retain searching

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skills; a searcher searching less than once a month is going to have a difficult time remembering system commands. BRS' AfterDark, while useful for infrequent searchers due to its menu-driven searching system, has a monthly minimum charge and thus is inappropriate for infrequent searchers. Infrequent searchers may not incur search costs greater than the monthly minimum of BRS AfterDark. Menu-driven search systems can become tedious if used regularly by frequent searchers.

A command-driven searching system (like Dialog's Knowledge Index or Dialog's or BRS' regular full-price daytime service) is more appropriate for frequent searchers. Command-driven searching systems require that the searcher know the appropriate commands to enter at each step of the search. Frequent searchers will have enough searching reinforcement to remember the range of commands; they may also appreciate the extra features that command-driven searching systems have compared to most menu-driven searching systems. Command-driven searching systems typically offer greater searching power and flexibility than menu-driven search systems; in addition they are usually faster to use than running through a series of menus.

Discussion of "wallet potential":

Next a discussion of the costs involved is launched; the bottom line is usually "how much is going to come out of my pocket?" Cost discussions oftentimes cool ardent inquiries; therefore it is important to talk about costs early in an advisory transaction. Generally talk about the range of database costs encountered in searching and specifically the costs of the database(s) in the inquirer's subject area. Start off by referring to the database services' regular daytime prices. Mention that the database service's per-minute and per-citation pricing schemes penalize the less experienced searcher. EasyNet attempts to mitigate this pricing penalty with its flat-fee searches but then dilutes its attractiveness by offering a very limited number of references (up to ten) for its fixed fee. Mention the reduced per-minute charges available for after-hours access on Dialog's Knowledge Index, BRS' AfterDark, or BRS' Brkthru. Verify in your product literature file if the inquirer's database(s) of interest are available on these after-hours user-friendly systems. These systems offer a limited selection of databases of interest to the marine

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sciences; however some of the big ones are available like BIOSIS, Compendex, Inspec, and Chemical Abstracts. Don't build up the possibility of a lower cost after-hours option if the inquirer's database(s) of interest are not available! Knowledge Index offers the least number of databases of interest to the marine sciences but it does have BIOSIS, Inspec, and Compendex. AfterDark has the lowest hourly charges of these three systems but it has a monthly minimum charge. Knowledge Index falls in the middle of the three in terms of cost with Brkthru having the highest after-hours rates for certain science databases. AfterDark and Brkthru both have citation charges on certain science databases like BIOSIS and Compendex; Knowledge Index does not have citation charges.

Database searching products and services, whether oriented to the enduser or not, can be broken down into two categories -- 1) those offering significant savings in cost, and 2) everything else. Cost is a major issue to potential enduser searchers in the author's experience. Library users in general and potential enduser searchers specifically are not fully aware of the value of information and thus attach self-defined monetary limits to the value of database searching. Engaging in extended discussion on this point engenders a risk of being viewed as a used car salesman. Therefore reduced-cost user-friendly systems like Dialog's Knowledge Index, BRS' AfterDark, or BRS' Brkthru oftentimes form a primary grouping from which to recommend.

Making a specific recommendation:

At this point, the potential enduser searcher's information needs have been assessed for the database(s) of interest, by extrapolation for the database service(s) of interest, for the expected frequency of searching, and for "wallet potential". A specific recommendation(s) can usually be made. For example a cost-conscious inquirer interested in marine biology information who anticipates searching once a month or less could be steered to BRS' Brkthru; this after-hours reduced-cost service offers the BIOSIS database and is menu-driven. If search frequency is expected to be more than once a month, then the inquirer could be steered to Knowledge Index or AfterDark. Knowledge Index provides good value for BIOSIS searching since Knowledge Index has no citation charges. AfterDark is the best deal of all with its very low hourly rates (it does have citation charges however);

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AfterDark is attractive only if the inquirer expects to incur monthly search costs greater than AfterDark's monthly minimum.

A physical oceanographer would be interested in the Inspec database and also Aquatic Sciences and Fisheries Abstracts; Inspec is available at reduced cost on all three after-hours services but Aquatic Sciences and Fisheries is currently available on none of them. Since cost seems to be the driving issue with most potential enduser searchers, they will probably be content with Inspec's coverage of physical oceanography at the reduced rate of an after-hours service.

A marine geologist needs the GeoRef database and has to resign himself to the regular daytime prices of the database services offering GeoRef; GeoRef is not currently available on the after-hours services. To facilitate searching GeoRef on Dialog or Orbit, a microcomputer-based frontend software may be in order for an infrequent searcher.

In the Scripps Library, any potential enduser searcher who is a marine chemist or a geochemist is steered to Chemical Abstracts' academic discount program offering a 90% discount for searching Chemical Abstracts. Called CAS Online, this search service is available through the Scripps Library's regular search service or through passwords doled out by the Library to enduser searchers. Marine science libraries with a chemistry or geochemistry clientele should investigate the academic discount program of CAS Online; the discount is substantial, five passwords are available (leaving four passwords to dole out or to pool among enduser groups), and the search commands closely mimic Dialog. Individual password charges are noted on an invoice so that a marine science library could have one password from the five available through a mother university's account.

And so it goes depending on the inquirer's database(s) of interest.

Discussion of a reasonable expectation of search results:

Be sure to briefly mention the difficulties with being comprehensive in retrieval; do not belabor this point however. Point out that the inquirer can get great search results but should not expect comprehensive retrieval without some knowledge of and experience with the structure and

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content of a particular database's records. Point out that any software or system recommended will make the mechanics of searching more friendly but will not make the databases themselves more friendly. Additionally, being comprehensive in retrieval requires keeping up with database changes by the database producer and the database vendor. Be sure to point out that comprehensiveness is not always needed; some but not all pertinent references do suffice for most needs.

Discussion of the benefits of the reference librarian doing the searching:

Now it's time to pitch the advantages of an expert searcher doing some or all of an inquirer's database searches. An experienced searcher can find relevant information quickly. Mention that an experienced searcher searches quickly to minimize costs but that low after-hours rates for enduser searching are very attractive. However only a select few databases are available at reduced after-hours rates. In addition, an experienced searcher keeps up with database and database service changes. The Scripps Library offers an on-demand sit-alongside database search service. This is popular with the Library's clientele; it allows direct input into the search by the search requestor with immediate delivery of results. For many potential enduser searchers this mode of service delivery becomes quite appealing once they hear what's involved with doing their own searching. A sit-alongside database search service provides for the same level of enduser input to the search as if the enduser had their own fingers on the keyboard. Mention that the library covers the hidden costs like paying for mistakes, documentation, and training and also covers the hidden hassles like equipment problems, vendor invoices, and contact with the trouble desk.

Database searching demonstration:

The intent of a potential enduser searcher advisory transaction is to make the inquirer fully aware of the upside and downside of do-it-yourself searching and what can be reasonably expected for money and effort. A database search demonstration may be in order at this point to make the discussion more concrete. Since most database searches done

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by the Scripps Library are sit-alongside database searches, every search session presents an opportunity to incorporate elements of a potential enduser searcher advisory transaction. The Scripps Library views most search requestors as potential enduser searchers. Most search sessions are oriented to providing enduser searching information whether the search requestors recognize themselves as potential enduser searchers or not.

#### Providing assistance:

If the inquirer expresses an interest in going solo, make a standing offer of personal assistance should searching difficulty arise. The marine science librarian could organize enduser searcher training sessions should a sufficient number of clients express interest; however this can become complex if a marine science library's clientele is spread out over several disciplines. Training sessions would have to be database-specific in order to be most effective. Enduser searcher training is not offered at this time by the Scripps Library due to the complexities of training Scripps' multidisciplinary research personnel, the Library's limited staffing, and a lack of expressed demand for enduser searcher training.

#### Looking ahead:

Currently, the Scripps Library is in the process of setting up an Aquatic Sciences and Fisheries Abstracts compact disc database searching workstation. Free searches of a multidisciplinary marine science database should address fairly well many of the information needs and financial constraints of the Library's clientele. The author looks forward to assessing the impact of this new option for enduser searching as opposed to the current enduser searching options available.

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