SEARCHING THE LITERATURE ON-LINE AT THE UNIVERSITY OF GUELPH (RECHERCHE BIBLIOGRAPHIQUE EN LIGNE A L'UNIVERSITE DE GUELPH)

Ellen M. Pearson
Head, Special Information Services
University of Guelph Library
Guelph, Ontario N1G 2W1

John B. Black
Associate Librarian
University of Guelph Library
Guelph, Ontario N1G 2W1

ABSTRACT

The University of Guelph library system has become actively involved in accessing a variety of on-line data bases during the past year. This paper discusses the considerations underlying the decision to enter this advanced area of library service and Guelph's experience in using a number of on-line systems. Specific reference is made to participation in the CAN/OLE Pilot Project. Organizational approaches, cost factors, the concept of "fee for service", staff training, as well as user interaction and response are considered. (Au cours de la dernière année, la bibliothèque à l'université de Guelph a participé activement avec l'accès en ligne avec divers fichiers. Cet oeuvre discute les considérations précédant la decision de commencer cette service bibliographique et nos épreuves utilisant divers systèmes en ligne. Nous référons spécifiquement à notre participation dans le projet CAN/OLE; nous discutons ici comment nous avons résolus les questions d'organisation, de finances, et d'éducation de nos employés, ainsi que les réponses de nos clients.)

ON-LINE SEARCHING AT GUELPH

The Library

When the University of Guelph was established ten years ago, it embraced existing veterinary, agricultural and home economics colleges dating from 1862, 1874 and 1902. Planning for a new central library began with two basic assumptions: first, the need for a subject-oriented, open access library, and second, that the building must be extremely flexible since it was almost impossible in 1965 to predict exactly the influence of changing technologies on library collections, methods of organization and operational systems, or on the needs of academic library users. The McLaughlin Library reflects these assumptions, both in the building itself (Langmead and Beckman 1970) and in the organization of the library services within the building (Brown and Evans, in prep.). The library system, serving an academic community of just over 10,000, has a subject dividional organization. Automation has been used extensively in all aspects of the library system. In addition to the products of the automated systems used in library operations and management (Beckman 1974), various listings are produced on a regular basis to aid the user in making the most effective use of the library system and its resources.

Early in 1973, Special Information Services was established to co-ordinate the various SDI programs offered by the library system using in-house files and accessing data bases available through CAN/SDI and other centres. Special Information Services was also charged with the responsibility for general supervision of profile preparation and for providing search editor training of other library personnel.

Taking the Plunge

In the fall of 1973, the University of Guelph Library was invited by the Canada Institute for Scientific and Technical Information to participate in the CAN/OLE Pilot Project by becoming one of the fifteen initial CAN/OLE Centres. On-line searching was a natural progression of the already established Special Information Services.

A positive decision to participate was based on several considerations:

- on-line access to machine-readable indexing and abstracting services is a logical extension of traditional reference service
- this type of service permits offering to faculty and students an additional reference service, in-depth literature searches
- the increased level of service may be accomplished without undue increase in the work load of present staff members, a very important consideration when library budgets and staff establishments are stabilizing or decreasing but demands upon them are not
- a favourable reaction to the proposal by the University Administration

ON-LINE SEARCHING AT GUELPH

- Special Information Services was already established as an organizational unit and had sufficient expertise to begin this programme
- suitable terminal equipment was available in the Library, and the flexibility of the Library's physical design permitted a central location for a terminal and associated personnel

In the initial stages, we felt that our use of the CAN/OLE system would not exceed two to four connect hours per month. This reasoning was based on the size and nature of the data bases offered vis a vis the university's subject emphasis and because we planned to enlarge our access to machine-readable data bases by subscribing to other systems such as QL Systems, SDC ORBIT and Lockheed DIALOG - specifically for access to the CAIN, NTIS, Psychological Abstracts and ERIC files.

Co-ordination of activities associated with computer searching of machine-readable data bases was assigned to Special Information Services, including staff training, operating the on-line terminals, and publicising the various services. Initially, until staff training had been done, all requests were handled by the Head of Special Information Services and one or two library staff members from other areas who had previously related experience.

Fee for Service

De Gennaro (1975) states "A strong case can be made for adopting user fees for certain special services - particularly those based on expensive new computer technology - not to support libraries or to make profits, but simply to enable libraries to introduce, develop and support these new services for the benefit of their users." He also notes that "If the library begins by offering these expensive services free like its traditional services, the demand will expand and eventually create an overload situation requiring some form of rationing based on rules or by the imposition of charges." and goes on to observe that "Experience shows that when users are asked to pay for these services many decide to forego them or severely limit their use."

Because we wished our users to benefit from these new advances in information retrieval techniques without straining our staff or budget resources, because we wanted a measure of usefulness, and because we had been enjoined to attempt cost recovery, a price schedule was devised that would permit access to the various systems without discouraging student use, particularly from the undergraduate community. The fee is based on an access charge of $15 for members of the University of Guelph plus connect time costs, off-line printing charges when applicable, and telecommunications charges for more than 30 minutes' use. The access charge for users from other universities in the area is $20; special arrangements are made for non-academic users when extensive staff time is involved in profile preparation.

ON-LINE SEARCHING AT GUELPH

Present connect time charges vary from $25/hour for the ERIC data base to $150/hour for the CLAIMS (chemical patents) data base; off-line printing costs range from $1/BSN (up to 300 citations printed) to 25¢/citation printed. A reasonably specific search may use about 20 minutes connect time, with the average total charge ranging from $20 - $50, depending on the data base(s) selected. The costs incurred may be charged to a grant or trust account, to departmental funds, or paid directly.

It is our experience that this fee structure does not limit on-line searching to faculty members with grants or contracts, or to graduate students supported by a faculty member's grant. Undergraduate students have been using the service individually or as a group. We have not attempted to measure the cost benefits of on-line interactive searching, but from comments received from both first- and multi-time users we can say that the relatively short time involved and the speedy receipt of printout make this service both economical and effective - particularly in our thirteen week semester environment.

Staff Training

At the outset, two levels of training were required: an intensive seminar for all Reference Librarians from the Subject Divisions, and a shorter, general knowledge or appreciation seminar for the rest of the professional staff. These are repeated for new librarians and will be extended to include at least all library staff in the Subject Divisions.

A series of search editor training sessions was conducted by Special Information Services over a period of three months. These were attended by all the librarians and senior associates from the Subject Divisions as well as any other professional staff members who wished to come.

The first session, an afternoon, covered the history and development of CAN/SDI and instruction in the preparation of interest profiles (including interviewing the prospective subscriber, choosing profile terms and appropriate data bases, and formulating search expressions). Other current awareness services were discussed and participants were required to prepare an interest profile, ready to be submitted, for the next session. The following morning, each participant presented his 'practice profile' to the group for discussion. This was followed by an introduction to the advantages of on-line searching and its techniques, and a demonstration of the CAN/OLE system using one of the prepared profiles.

After these initial training seminars, the Reference Librarians were encouraged to publicize both the current awareness and on-line retrospective search services.

When such a search is requested, the Reference Librarian, working with the prospective user, prepares the interest profile, with the final editing done in Special Information Services. In the beginning, all on-line searches were performed by Special Information Services, with both the user and the Reference Librarian who had prepared the profile present. To permit the Reference Librarians to gain experience using a terminal, they may perform the search under supervision and some of the connect time and telecommunication costs are charged to staff training, rather than expecting the library user to bear the full cost of an on-line search done by a less experience operator. As they become more proficient at the terminal, the Reference Librarians will be able to handle the complete search.

Several three-hour seminars were conducted to give other professional staff members an overview of literature searching by computer, using a prepared profile to illustrate both current awareness and retrospective search techniques and to demonstrate an on-line search.

In the fall of 1974, the Library sponsored an in-house training session on the SDC ORBIT system. This one-day seminar was presented by one of the staff of System Development Corporation; the six participants were selected on the basis of general aptitude shown during the search editor training sessions. Four were from the Subject Divisions, one from the Catalogue Department, and one from the Circulation Department.

Introducing On-line Searching to the User Community

Ideally, one should introduce a new service when all staff training is complete and all systems are 'go' - however, ideal conditions seldom obtain in real situations and ours was no exception. We took advantage of opportunities for publicity when they arose.

Library orientation classes are conducted throughout the year at the beginning of each semester, but the fall term is traditionally the busiest, and a large number of new faculty arrive at this time. Reference to Special Information Services was included in most orientation sessions, especially those for faculty and graduate students. Demonstrations were given which included an explanation of current awareness and on-line or interactive searching, discussion of available data bases and probable search costs, and an on-the-spot search for references relevant to the group present at the time. A short account of the extended service was published in the university news bulletin, and, most important, as emphasized by Lawrence (1974) satisfied customers spread the news for us.

In the preparation of a search profile, first emphasis is placed on assembling relevant key words, terms or phrases into a schematic search, and selecting the appropriate data base(s). When the basic

search has been prepared, the techniques of interactive searching are explained to the first-time user and a rough cost estimate is prepared. Users are welcome to perform their own searches, but thus far they have preferred the trained intermediary approach, with the search editor to handle the terminal and the search program system while they concentrate on the subject, their area of expertise. When the bibliography print-out is received, usually 3-5 days later, a search editor reviews the search strategy with the client to check its relevancy and retrieval and to point out the areas where there was no retrieval. This latter may well be very useful information for the researcher and as valid for him in many instances as finding pertinent references.

Using more than one System

Because we have been involved actively in on-line searching somewhat less than a year, we have not yet attempted an extensive evaluation of the systems we currently use. The choice of system is governed by the availability of the data base(s) required at the time and the structure of the search itself. While we use Biological Abstracts, CAIN and Psychological Abstracts files most frequently, with the NTIS and ERIC files at a second level, we have used most of the currently available data bases over the past few months. On-line searching is approached very similarly by the three systems of our major use - CAN/OLE, Lockheed DIALOG and SDC ORBIT. All of them do the job efficiently and effectively. Each has features or niceities that the others do not have or do not do quite as neatly. We have emphasized the 'trained intermediary' approach because we do not expect occasional users to master the intricacies of several search systems.

At the beginning, each of the three core searchers or operators specialized in one system and taught the others so that we would have some back-up. After the basic learning period, which varied in individual cases, none of the core searchers experienced any real difficulties in switching search systems, even in one terminal session. It seems to us to be rather like speaking more than one language - once one is immersed in the milieu of the second, one does not find undue confusion with the first.

Because most of the search systems operate on a pay-as-you-go basis, we see no need or reason to choose one over another, but instead we prefer and would strongly recommend subscribing to any system that offers access to data bases needed by the user community.

User Acceptance and Satisfaction

The enthusiastic acceptance of this 'new-for-us' and very powerful search technique by the users has been almost overwhelming. On more than one occasion we have experienced line-ups waiting for a chance at a

terminal. We have tried to offer the user immediate access to the service in that he may drop in and have his search done on the spot if his request is reasonably straightforward and if the appropriate data base is available. Otherwise, an initial reference interview is done and he is asked to return later when the data base is available or to complete his search profile if his request is more extensive.

We have found, as did Lawrence (1974) that the quality of searches is generally good, even though some data bases are easier to use than others. It is very important for the searcher to know both the structure of the data base or file and the search program being used. Because the client is present, the interactive process alleviates the requirement of in-depth subject knowledge for the searcher himself.

We have also found that the users like the flexibility permitted by interactive searching. They may vary their strategy as the search progresses, from a broad overview to a specific set of terms, and may check potential retrieval first before modifying or narrowing their request. The latter is particularly useful for us in preparing current awareness profiles because it almost eliminates the need for the search editor to revise or check the SDI output each time it arrives for the first month or so of a subscription.

When we were thinking about joining the CAN/OLE Pilot Project one additional and basic consideration beyond those previously outlined was our view that this seemed too exciting and potentially rewarding to our user community for us to miss giving it a try. The results of less than a year's involvement in this area have clearly justified our decision to take the plunge.

REFERENCES

Beckman, M., ed. 1974 "Automated Cataloguing Systems at the University of Guelph Library." *LARC Computerized Cataloguing Systems Series*, v. 1, no. 1, 1974.

Brown, N.A. and C.E. Evans 1975 Subject division library service. (in preparation)

De Gennaro, R. 1975 Pay libraries & user charges. *Library Journal*, v. 100, no. 4: 363-367.

Langmead, S. and M. Beckman 1970 *New Library Design; Guide Lines to Planning Academic Library Buildings*. Toronto, Wiley.

Lawrence, B., B.H. Weil, M.H. Graham 1974 Making on-line search services available in an industrial research environment. *ASIS Journal*, v. 25, no. 6: 364-369.