

quire only a fraction of the records that exist in any collection. The information professional should be familiar with the many techniques that make it possible to identify useful records without having to examine all of the records that exist. The shelving or filing of records in classified sequence and various indexing and cataloging techniques can be used. Subject bibliographies, title, author, and publisher lists, and review services are available. Descriptions of the records in a collection can be searched by computer for individual words or names or for combinations of terms that indicate value to the user. The well-educated information professional knows how to use identification systems that already exist and how to create new ones for special purposes.

• *Economics.* Those who use records and those who sponsor or manage information activities are subject to economic constraints. They want to utilize or provide useful records at minimum cost and minimum expenditure of time, energy, manpower, space, equipment, and materials. The relative importance of each of these concerns varies widely from one situation to another. The information professional must be sensitive to economic considerations and should be familiar with administrative techniques that have proved useful in complex information activities (libraries, networks, and information services).

Danger in Specialization

Although current programs for training information professionals do not follow this outline explicitly, it would be better for students if they did. Students who have had inadequate guidance tend to specialize too narrowly in their studies, in the hope of qualifying immediately for a particular type of job. However, specialization at the expense of learning the basics can put the student in a position where further advancement is impossible. When a field is changing rapidly, the specialist can easily find himself or herself out of work because of changing technology and personnel needs. Many areas of librarianship and information service are experiencing such rapid change today, and some specialized professionals face difficulties. One possible remedy is further education, especially continuing education for working professionals. Again, however, the student may be tempted to specialize and to neglect basics. This could be forestalled if educational programs would recognize records, utilization, and facilitation as the fundamentals of the information profession and to insist on adequate study of all three. ■

REPORT: Trudi Bellardo

National Online Information Meeting

On March 25-27, 1980, the [first?] National Online Information Meeting was held at the Sheraton Centre, New York City. Sponsored and organized by the editors of *Online Review*, the meeting was generally of the same high quality, scholarly excellence, and depth as that publication. Comments in the lobbies and exhibit aisles were extremely favorable, which was particularly telling since they came from the seasoned war horses of the data-base industry who are not easily impressed. At this meeting, however, they listened attentively and commented frequently.

It's been only five months since the last major on-line conference (see the report, "Online '79", in the February 1980 issue of the *BULLETIN*, p. 15), but this meeting did not seem repetitive or superfluous. The many experienced searchers, data-base industry people, and on-line researchers among the more than 1200 attendees found enough research reports, state-of-the-art reviews, and novel ideas to chew on for three solid days. Most sessions were well attended—some were standing room only—and the exhibits were busy. The conferees had paid a dear price to convene about on-line, and they did just that, with grim determination, right through the very last session.

Attendees in search of free coffee or a convenient place to meet or sit and rest, flocked to the exhibit hall where they could view the latest on-line systems, services, and products. Traffic was respectably busy at all times, but the aisles were jammed during coffee breaks. Also crowded were the elevators, only half of which seemed to be operating at any given moment.

The sessions reviewed here do not necessarily represent the "best" but rather what I chose to attend (which in most cases was one out of three concurrent sessions). The absence of committee meetings, business meetings, and other miscellaneous events allowed us to concentrate on the papers, panels, and product review sessions, all of which were well attended.

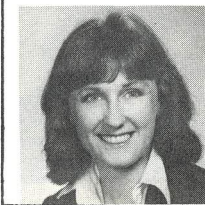
National and International Issues

In the opening session, Roger Summit (Lockheed Information Systems) blasted government-subsidized information services, which appear to be "free" but are paid for by taxes. Such situations, Summit argued, are not in the users' best interest because without competition these suppliers do not respond to users' needs and do not change with changing technology. He worried about tariff barriers that stifle competition and slow growth. What is needed is a users' Bill of Rights, which would affirm that access to information is a fundamental need in every society and which would codify users' rights to privacy, fair and equal charges, the benefits of competition, domestic and international telecommunications, and source documents at reasonable prices. From the audience Everett Brenner (American Petroleum Institute) asked where such a Bill of Rights should originate? Summit suggested that because it is primarily a political issue, it should come from users' groups.

Alex Tomberg (Chairman of EUSIDIC) described the problems of international telephone networks that were not designed for data communications (that's why modems are needed) and also international common carriers as well as multinational companies that are not common carriers and therefore can't use satellites. He agreed with Summit on the question of tariffs but argued that there is more to the problem because in Europe the cost of phone calls (and thus data calls) varies widely and wildly, with no apparent relationship to the costs involved. There seems to be a lot of "network fiddling" going on, he asserted. The trend to watch, Tomberg concluded, is transborder data-flow legislation.

Copyright

At a stimulating panel session entitled "Critical Issues in On-line Uses of Data Bases", Carlos Cuadra (Cuadra



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Associates, Inc.) raised the issue of how mini- and microcomputers could be used to copy large segments of data bases. Cuadra asked the panel if this was a copyright violation. Does it make a difference if the copying is being done for resale, or for reformatting, cleaning up printouts, labeling fields, or building a personal library? John Creps (Engineering Index, Inc.) responded that all these activities are illegal unless the user gets permission. Attorney Mort Goldberg (Schwab, Goldberg, Price and Danay) said that if the contract between the supplier and the user is not specific on this point, such copying would be an infringement of copyright. Art Elias (BioSciences Information Service), Creps, and Goldberg all agreed that even reformatting is an infringement if it is done without authorization from the data-base producer.

Pricing and Economics

Cuadra next introduced the issues surrounding pricing and declared that special pricing arrangements need to be made more public so that every user doesn't have to negotiate individually. The panelists argued that the data-base products vary widely, the different data-base producers charge different royalties, the terminal printer speeds vary, the effect of the migration from printed product subscriptions to on-line is difficult to assess, vendors provide various value-added services, and that all of this complicates the price. A member of the audience complained that pricing schemes can be so complex that it is extremely difficult for users to make choices. Summit mused that it's difficult also for search services to know whether it is in their best interest to make the most money possible over the short or the long term. Phil Williams (UMIST) said that new pricing experiments in which connect time is not the dominant factor should be encouraged. Connect-time charges penalize new and occasional users, and this isn't fair. Tomberg asserted that data-base producers should not implement complex pricing policies that cost more to monitor than the revenues warrant.

The panel also discussed subsidies for on-line access to low-income countries. Summit thought that they were a superb idea but that funds should come from various sources. He himself would contribute. Elias wanted special arrangements for education and training, in which royalties would not be charged. After more discussion of why on-line prices are so difficult to calculate fairly, the panelists agreed that the situation needs to be studied and researched more closely. The last comment came from Martha Williams (University of Illinois)

in the audience, who felt strongly that the most important point in this pricing debate is not to lay blame but to keep the data-bases alive.

Pricing and economics also dominated the afternoon session in which Sam Wolpert (Predicasts, Inc.) addressed "Big Brother and the Information Industry". The standing of countries in terms of how advanced they are in information handling, Wolpert asserted, is correlated perfectly with how extensive their *private* information industry is. Private corporations have to do a good job, make changes, and stay current to survive. They will sell to anyone and believe that information is for everyone, but the information must be paid for. Information systems that cannot compete in the marketplace should not be subsidized. Wolpert concluded emphatically that users are best served by information professionals "trying to make a buck, who give a damn, trying to serve your needs".

On the same program, Davis McCarn (Online Information International, Inc.) reported that studies show that there is a two-percent drop in on-line use for every one dollar increase in cost per hour. The optimum charge for the supplier, calculated according to formula, is \$65 per hour.

Donald Hillman (Lehigh University) developed stochastic models of the ELHILL 3 system of the National Library of Medicine (NLM) that can project the operational and cost performance of different configurations handling the same known workload as ELHILL 3. His model results replicated known NLM data and allowed him to simulate changes in component costs to optimize the efficiency and effectiveness of ELHILL 3.

Mike Furneaux (Commonwealth Agricultural Bureaux) described the Bureaux' pricing experiment, in which they lowered the hourly connect cost from \$65 to \$35 and at the same time increased the per-print charge from 15¢ to 25¢. They felt that this change would encourage users to spend more time interacting on-line, would discourage quick-and-dirty searches, and would reduce the penalty that fell on a novice searcher. Furneaux reported that users and suppliers liked the change and that the Bureaux is continuing the experiment.

At yet another session devoted to the economics of on-line searching, Robert Almond (ICI Americas, Inc.) created a stir by asserting that interactive on-line strategy development is usually not cost-effective in comparison with on-line "batch" searching, in which all or most of the strategy is formulated beforehand or between segments of an on-line search. His careful statistical analysis of

searching patterns over a six-month period showed, Almond felt, that costly on-line interactive searching is worthwhile only for the inexperienced searcher or the searcher who is unfamiliar with the data base.

Successful Searchers

At the session on "Research Toward Improved Information Retrieval" Carol Fenichel (University of Kentucky) reported her research project in which she tried to distinguish successful searches from unsuccessful ones to determine the characteristics of a good searcher. If these characteristics could be identified, they could be taught to novice searchers. Fenichel directed novice, moderately experienced, and experienced searchers (with and without ERIC experience) to perform pre-selected searches on the DIALOG system using ONTAP, the 1975 subset of the ERIC (Educational Resources Information Center) data base. Compared with the experienced subjects, the novices performed surprisingly well. In addition, the moderately experienced searchers performed the briefest, most cost-effective searches. She attributed this result to the fact that 75 percent of this group works in academic libraries that charge individual users for on-line connect time, and in this situation there is great pressure to keep costs low.

Judith Wanger (Cuadra Associates, Inc.) reported that her study of NLM users revealed that the type of training received, the institutional setting of the searcher, and the experience level had no effect on the success of an on-line search. Instead, the differences found seemed to be based on the difficulty of the search itself. She concluded that searchers should be trained in how to cope with "bad" (i.e., vague, complex, or difficult) requests.

The Information Age Begins

A press conference was held to mark "the beginning of the Information Age", that is, to announce a joint venture of OCLC, Inc. and Source Telecomputing Corp. (STC). OCLC, a nonprofit firm, operates a nationwide computer network used by more than 2000 libraries in 50 states. STC developed and operates The Source—an inexpensive information retrieval system that provides news, stock-market information, games, electronic mail, and nearly 2000 ready-to-use computer programs. The Source will be test-marketed in libraries across the country through a cooperative agreement with OCLC. During the press conference, The Source Library Service was demonstrated, and it was explained how, with the simplest of commands, information tailored to personal needs

can be immediately available for viewing on a computer terminal. For example, information about wine, income-tax preparation, UFOs, astrology, extrasensory perception, home decorating tips, and foreign language exercises as well as a complete domestic airline schedule will be available on electronic pages.

On-line User Groups

One of the feature events of the meeting was the Forum for On-line User Groups, held on the afternoon of the second day. It consisted of panel presentations, workshops, and a poster session. On the panel, Marjorie Hlava (Access Innovations) reported the results of her questionnaire that profiled practicing searchers. She found that three-fourths of searchers are female, two-thirds have master's degrees, many also have advanced chemistry degrees, and searchers' salaries range from \$8000 to \$26,000 with the average being \$19,900; the salaries are much higher for the men, who also tend to have the advanced degrees in chemistry.

The workshops, called CESI (Continuing Education and Special Interest Working Groups), were intended to serve as models, with the emphasis on leadership training, so that those who participated could lead similar sessions at their local OUGs (on-line user groups).

The poster sessions ("The OUG Information Exchange") were held to allow OUGs to present information and handouts on how they handle member needs for continuing education, training, and current awareness. The overflow from the panel session kept the poster session area filled with searchers throughout the afternoon.

Natural-Language Interfaces

On the last day of the meeting, Tamas Doszkocs (National Library of Medicine) discussed problems and limitations of existing natural-language interfaces. He argued that there is a strong case for direct end-user interface because of the desirability of exploiting subject expertise and relevance judgments. Intermediaries are not unneeded, but they should be doing only the very difficult searches. Doszkocs would like a system that is simple enough for end users who do not have any prior training. He plans to test his prototype system in the real world using medical students as subjects.

Product Review Sessions

The Product Review sessions held throughout the meeting were conducted by representatives of data-base producers, on-line suppliers, information

brokers, and other on-line organizations. The representatives were there to sell something, without a doubt, but their presentations were generally so interesting and informative that nobody seemed to mind. Each panelist highlighted the salient features of his or her product, service, or system or made future predictions about it.

For example, Ramune Kubiliunas, speaking for Predicasts, Inc., announced that their files will be available on BRS (Bibliographic Retrieval Services) in Summer 1980, with daily updating, and that users will be able to search all the Predicasts files simultaneously. At this session and at others like it, the overflow crowd sat on the floor and lined the walls and users hit their favorite suppliers with lots of pointed questions.

Banquet and Awards

I felt a little cheated at the banquet. Oh, I know that everyone says they hate head tables, floral displays, opening remarks and after-dinner kudos, introductions of notable guests, and other ceremonies, but without all that there is not

much point in paying \$30 to dine on chicken and green beans. Carlos Cuadra provided a brief bright spot with a delightfully witty, but very short, after-dinner speech. For my money, though, I still wish there had been a little more pomp and circumstance.

At the banquet, the winners of the Best Paper Awards were announced. The two papers receiving honorable mentions were those by Karen Markey, Claudia Newton, and Pauline Atherton (Syracuse University) entitled "An Analysis of Controlled Vocabulary and Free Text Search Statements in Online Searches of the ERIC Database" and by Carol Fenichel (University of Kentucky) entitled "An Examination of the Relationship between Searching Behavior and Searcher Background". The first-place winner was Brian Nielson (University of North Carolina) for "Online Bibliographic Searching and the Deprofessionalization of Librarianship". As Nielson accepted his \$500 check, he remarked that he was very grateful for it because it had allowed him to attend this meeting. ■

POSITION AVAILABLE

The National Commission on Libraries and Information Science (NCLIS) is seeking applicants for the position of Executive Director. The position will be open as of July 1, 1980.

Description of Position

Serve as Executive Director and Chief of Staff to NCLIS, an independent agency within the Executive Branch of the federal government. The Commission, whose Chairman and Members are appointed by the President, with the advice and consent of the Senate, is charged with developing or recommending to both the President and the Congress plans for the provision of library and information services adequate to meet the needs of the people of the United States.

Under the general direction of the Commission Chairman, the Executive Director: recommends new policies and programs for the Commission's consideration; implements Commission policies and reflects them publicly in the name of the Commission; conducts, directs, or supervises such staff studies and other staff work as is necessary to support the objectives and programs of the Commission; directs and supervises the members of the Commission's staff; maintains official relationships with Congressional and Executive Departments at levels appropriate for the conduct of daily Commission business; prepares an annual report to the President and the Congress; prepares a detailed annual budget and quarterly financial reports, and administers Commission funds in accordance with policies and guidelines established by the Commission; and develops study and grant proposals for

submission to foundations, government agencies, and private sector sources.

The position is in the Senior Executive Service at the GS-16 level which is equivalent to a GS-16, and has a salary range of \$47,889 to \$50,112.

Qualifications

Applicants must have outstanding qualifications in a number of areas: advanced degree in library science, information science, or other related field; significant experience in library and information services; ability to organize and supervise the work of a staff of professionals and support personnel; ability to develop and maintain effective relationships with other government organizations; ability to develop and maintain effective relationships with major professional constituencies with which the Commission works; ability to write and speak effectively; and management and leadership skills.

Method of Application and Screening

Written applications and resumes will be accepted until the close of business, Monday, Aug. 18, 1980. They should be sent to: Mrs. Bessie B. Moore, Chairman, NCLIS Search and Screening Committee, 712 Legato Drive, Briarwood, Little Rock, AR 72205.

Applicants whose qualifications meet initial screening criteria will be invited for interviews with the Search and Screening Committee. The final group of candidates will be interviewed by the full Commission.

The National Commission on Libraries and Information Science is an equal opportunity employer.