ASIDIC newsletter

No. 46, Spring 1983

ASSOCIATION OF INFORMATION AND DISSEMINATION CENTERS

SPRING MEETING ON INTERFACING WITH USERS HELD IN CHARLESTON

The Spring, 1983 ASIDIC meeting was held in the delightful city of Charleston, SC, at the Sheraton Hotel. Its topic was the user interface to online information systems, with emphasis on training. The meeting followed the usual ASIDIC meeting format: a keynote address (by Charles Meadow of Dialog Information Services), then five formal talks and several small discussion groups. The meeting ended with a reports from the discussion groups and a general discussion session. There was a business meeting notable for its brevity (7 minutes) which is an excellent model for many other meetings! Host for the Charleston meeting was David Grooms of NTIS; he deserves a vote of thanks for choosing Charleston as the meeting site and also for the excellent and comfortable arrangements. A summary of the talks and the discussion group conclusions is included in this Newsletter. The meeting summary will also be published shortly in *Information Services and Use*; full papers will appear later in that journal.

The attendees enjoyed the beautiful city of Charleston, with its gardens in bloom (a treat for those from more northern climates) and historic houses. The Monday evening activities featured trips to a restored dungeon from the Revolutionary and Civil Wars, a buffet dinner, and a dance band.

Fall, 1983 Meeting

The Fall meeting will be held September 18-20, 1983, at the Franklin Plaza Hotel in Philadelphia, PA. It will continue the general theme of interfacing with the user and will concentrate on marketing and pricing of information. In spite of Philadelphia being the city where American independence was declared, the Fall meeting will have a decidedly British flavor; Cyril Cleverdon has accepted ASIDIC's invitation to deliver the keynote address.

Committee Reports

At the Charleston meeting, David Grooms reported that ASIDIC continues to be financially healthy. The Program Committee, chaired by Marvin Wilson, now numbers seven members; they are actively soliciting ideas and suggestions from the members for topics of future meetings. The Membership Committee reported that ASIDIC membership now stands at 106, with 63 full and 43 associate members. A list of new members since the last issue of the Newsletter appears below.

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Database Producers as Online Search Vendors

A recent trend in the online information industry is for database producers to become vendors of their files. Several new services operated by database producers have recently appeared: CAS ONLINE, Pergamon's Info-Line, and the ISI Search Network are examples. An interesting note on this subject recently appeared in Learned Information's newsletter, *Monitor*. It contained the extract of a letter from the Executive Director of the American Chemical Society to EUSIDIC, ASIDIC's European counterpart. Since this topic is of keen interest to many ASIDIC members, a copy of the article from *Monitor* (reproduced with the kind permission of Learned Information) is appended to this Newsletter.

New NFAIS Newsletter on Training

The National Federation of Abstracting and Information Services (NFAIS) has inaugurated a new quarterly newsletter entitled *NFAIS Trainers Circuit*. The editor is Ann Marie Cunningham of the Institute for Scientific Information (ISI). The purpose of *NFAIS Trainers Circuit* is to provide "a fresh channel for the interchange of practical information among specialists directly concerned with the efficient use of information systems, the trainers." Contributions to the newsletter are solicited by the editor. To subscribe, contact NFAIS, 112 South 16th Street, Philadelphia, PA, 19102. Subscriptions are $10.00 per year; bulk rates are available.

New ASIDIC Members

ASIDIC welcomes the following new members:

Fachinformationszentrum Energie
(Dr. W. Rittberger)
Germany

INACOM International
4380 S. Syracuse St., Suite 600
Denver, CO 80237
(Mr. Berle E. Larned, VP Marketing & Product Development)

North Holland Publishing Co.
Molenwerf 1 (1014 AG)
P. O. Box 1991
1000 BZ Amsterdam, Netherlands
(Dr. R. L. Hunsucker)

Western Union
1 Lake St.
Upper Saddle River, NJ 07458
(Jerry Carp)

Keynote Speech

Charles Meadow, Dialog Information Services

Charlie traced much of the history of online systems in the context of his career, went on to discuss some of the issues relating to the user interface today, and concluded with some predictions for the future. (He came to the library and information world from the computing field, which colors his thinking.) In 1954, some of the things we take for granted today--file handling, sorting, updating, and searching--were considered unusual applications for computers. There was no querying of files because it was expensive, and users had little knowledge of the work of programmers. By 1961, batch information retrieval systems, in which users' queries were cumulated and run against the database, had begun to appear. Turnaround time was from a few minutes to a day or more. Batch searching systems generally gave poor results because there was no interaction with the database and no browsing, because of costs. In 1962, a proposal for an online system was scorned, primarily because of the attitudes of potential users.

By the late 1960's, the RECON system had been developed. (There was a parallel to the BASIC programming language developed about the same time: people could use it directly and did not have to depend on professional programmers to get their work done.) The language was simple--users will not start with a sophisticated system unless they can interact with it on an elementary level and then work up if desired. One must trade off ease of learning the system with the ability to get work done. (This tradeoff is one basis for the recent appearance of simpler versions of today's online searching systems.)

When online systems appeared, librarians became intermediaries for them. They obtained terminals, helped people to use them, and did searches for others. Library schools began to see that online searching was a new and desirable professional skill and began to offer courses in searching so that students would be qualified for better jobs.

At present, the need for intermediation is changing; it is NOT going away. Drexel's IIDA and MIT's CONIT systems are notable attempts to improve the user interface. These are not systems to teach online searching; they help the end user to conduct a search. Database producers are also entering this area and are taking a more direct role in helping the user. (Disclosure's MicroDisclosure system for the IBM Personal Computer is an example.) So we are entering the age of the end user--a "glorious promised land." We should not worry about this trend, but welcome it.

Dialog's training courses are now being attended by end users as well as librarians. A recent session had a patent attorney, chemist, secretary, and an information broker in the audience. This diversity affects the presentation and makes training difficult.

The following are the responsibilities of some of the participants in the online business today:

Library schools should teach the fundamentals and general principles, not details or mechanics. There is a time lag in teaching; non-bibliographic databases are coming into vogue now but are not taught much in universities.

Database producers must offer training, but they are not the major force because their courses are, naturally, specialized to their own databases. Users cannot go to all the courses offered by all producers. Producers must make information available, understand users, and structure their products and courses around user needs.

Intermediaries are not responsible for mass training, but they can offer on-the-job training. They must upgrade their own performance and become experts at doing the difficult and complex searches, letting the users do the easier ones. (There is an exact parallel here with the programming professionals have become the systems analysts, designers, etc., and who are in great demand.)

Database Processors (search services) bear the heaviest burden of training today, although in time this burden may shift back to the schools. There are more types of users now and more end users, so processors must broaden their training courses. Some people still don't know what a citation is; others are programmers who are interested in searching from a systems viewpoint. One answer to the diversity of audiences and the demand for training is the development of different types of training media: audiovisuals, CAI, home study. However, face-to-face training will remain important for a long time.

End users do not have any training responsibilities; they are the ones being served.

Training costs are remarkably low compared with other professional courses, such as those given by the American Management Associaton and other organizations. Dialog's training charge, typical of the industry, is $135 for a 1-1/2 day course; most of the fee is returned to the user as free practice time. Most users do not consider online searching training costs to be a burden (although their managers might). The training fee is probably only about 1/3 of the total training cost to the attendee's organization; travel costs and salaries account for the rest.

How much training is necessary? One can begin to search with as little as two hours instruction; however, a graduate of a beginning course is not an expert. The ideal amount of initial training is probably about two days and would cost the attendee about $200. Instructors in beginning training courses must not let the user depart thinking he or she knows it all. The training situation is complicated because many users want to do more than simply retrieve; they want to process information.

In the future, training needs will continue, and users will demand more education covering a variety of skills. The end user does not want raw data; searchers will have to be taught how to format, process, analyze, and interpret search results. Intelligent systems are just beginning to impact the training market; their use will certainly grow. In the long run, the phasing out of query languages in favor of plain English searching will abolish the need for training. But this will not happen soon.

Training Opportunities in Library and Information Schools

Ann E. Prentice, School of Library and Information Science,
University of Tennessee

Many courses in the information world are unusual because they must be redesigned every semester, in contrast to courses in other fields that may be relevant for at least two years. Two questions that need to be answered are, "Is online searching a reference or information science skill?" and "What is the role of the library school in teaching online searching?" Inevitably, library schools need more time, more money, and more people to do the best job; they are always playing catch-up.

The University of Tennessee library school covers the following concepts in its courses on online retrieval: history of database design, searching systems, strategy development, differences between print and online databases, underlying concepts of searching, and introduction to question analysis. Demonstrations are done, and the students get some hands-on training. Students must do the same search manually and online in the same database so that they can observe the differences between the two versions of the database. After this course, students are ready for specialized courses on databases, such as those offered by the vendors or database producers.

The role of the school is to present the theoretical bases of information retrieval, hone skills and concepts, teach search formulation, and offer the first steps of hands-on training. After the first degree, the real learning takes place in a practical environment. The school can give an overall view, but details must come from on-the-job knowledge. It is important for the schools to define where their role stops and others take over.

A recent survey showed that 94% of library and information science schools offer courses in online searching. Many offer up to 1/3 of their courses. The strongest programs are where the Ph.D. is offered. In the area of continuing education, the library school can serve as the host for online vendors to hold short courses.

One User's View of Online Training

Carol Tschudi, Engineering Sciences Library

Carol manages a large on-demand searching service. In her view, training online searchers is difficult because:

New searchers have diverse skills, backgrounds, and learning rates.

There are over 1200 databases available today; which ones should be taught?

Online searching has its own jargon which is unfamiliar to people desiring to be searchers; resistance to the unfamiliar must be overcome.

Stereotypes of the male-female role in libraries must be overcome.

Most searchers joining the Engineering Sciences Library come from the library world and like information and research. Carol also feels that library schools are lagging; they must begin to enter the online age and accept online searching as a fully legitimate tool. Vendors and database producers are doing the training, but it tends to be mechanical in nature, in contrast to in-depth education. There is no complete online searching training program available to the general public. Many searchers are not teachers, and there are too many one-semester courses. Students need time to practice and experiment with the system, but too often, homework uses up all the students' time.

An ideal training course for online searching would cover theory, limitations, databases, file creation principles, and terminology. A system running on a microcomputer would be useful for training because it would not incur any costs. After the student learned the mechanics by practicing and browsing on the microcomputer system, then the real system could be approached.

Developing a Self-Training Manual

Don Fleck, Halcyon Associates

Documentation can be a good training aid. It is not hard to do, but it is not often done because resources are allocated elsewhere. Testing the documentation on end users is very important.

Don was responsible for developing the documentation for the Dow-Jones News Retrieval Service, which consists of:

A self-teaching manual,
A free-text search manual written for occasional users,
The master menu online,
A free online newsletter,
A user's magazine (Dowline).

Dow-Jones had no training staff at the time much of the material was being written. Good documentation was therefore as critical to building revenues for the system as building the database.

Writers are often too close to the product; one should therefore test the documentation on end users and have a feedback mechanism between the test subjects and the writers. Journalists often excel at writing documentation because they know how to explain difficult concepts simply. The right balance between detail and economy of words is needed, and the audience for the documentation must also be defined. Some questions to be asked are:

Is the documentation to be printed or online, or both?
What is the proper mix?
What is the role of a newsletter?

The areas that Dow-Jones found to be important are:

1. Illustrations
2. Physical convenience (size, layout, etc.)
3. Content
   a. Getting started (equipment, dialing up, etc.)
   b. Tutorials
   c. Examples
   d. Reference
   e. A reference card
   f. Advanced features
   g. Index
   h. Table of contents

Training Programs for End Users

Aldona K. Valicenti, Standard Oil Co. of Indiana

Standard Oil has a geographically dispersed site, with eight buildings and 1500 people. Many of their end users wanted to search and turned to the library for help and training. In a research environment, scientists have terminals for other purposes; online searching is a natural extension of their capabilities. Two training courses were therefore developed to meet these needs. One course was devoted to *Chemical Abstracts* and was primarily focused towards chemists. The other was for engineers and other researchers; it covered files such as INSPEC, Compendex, Derwent, etc. Both courses consisted of three one-hour sessions. Sample questions from attendees were encouraged and were used in demonstrations of the online systems.

The introductory courses were open to anyone desiring them. After attending them, those who wished further training were required to obtain a commitment from their supervisor and a charge number for billing. They were then assigned an intermediary in the library as a mentor and were given their own password. The mentor worked individually with the trainee to teach basic sign-on procedures, commands, etc. Trainees were also encouraged to take the vendor training courses.

End users have expressed positive views about doing their own searching. About 100 people have taken the two introductory courses; some 35 of these went on to do their own searches. They usually specialize in databases relevant to their own research, leaving other searches to the experts in the library. The intermediaries found that those who took the courses became better users of the library service because of their understanding of the limitations of the online systems. End users suggested shorter vendor training courses and more online tutorials.

TRAINER: A Simulator for Online Training
Elaine and Nicolas Caruso, University of Pittsburgh

TRAINER is an teaching emulator for the Dialog and Orbit systems. It is available at the University of Pittsburgh, Carnegie Mellon University, and on the Edunet network. It contains tutorial modules, emulators, and quizzes, all under student control. Virtually all documentation is online; the manual is only eight pages long, of which four are the index. It teaches skill development and encourages comprehension with frequent quizzes.

Students can enter the module at any of 23 points. The tutorial modules teach basic commands and telecommunications protocols. At the end of the third module, students are encouraged to go into the emulator. Quizzes were added because people are used to bringing the learning process to completion in the form of a test. In grading the quizzes, a correlation was made between the time spent on TRAINER with the grade and the student's age group. There seemed to be a positive correlation with time and age (older is better!), and younger persons spent less time online than older. Typing skills also correlated positively with both time and grade.

Almost all the work of TRAINER is done on Dialog, and frequent references are made to the Dialog documentation. TRAINER is designed for people who have no computing experience but an awareness of online databases.

Discussion Groups

After the formal talks, attendees dispersed into five discussion groups and examined three questions bearing on interfacing with the user. Following the discussion group meetings, attendees reassembled to hear reports from each group. The meeting concluded with a summary by Charles Meadow, who moderated the final session.

Question 1:

> How can the effects of the multitude of databases and processing hosts be minimized in the training process?

One group felt that the effect cannot be minimized in today's environment. A common command language or standardized data fields are probably impractical and unlikely to be developed. Another group took

a similar view, concluding that it probably is not necessary for the end user to be competent on more than two systems (in this context, "end user" does not include intermediaries). One discussion group noted that business users may be more familiar with numeric databases than bibliographic ones; training to tie bibliographic and non-bibliographic systems together is needed.

There was a consensus among attendees that good documentation is essential in helping users to cope with today's many databases and vendors (it was noted that the problem lies more with a multiplicity of databases than vendors). The test of the marketplace and the demise of systems and services that do not best serve users' needs may help resolve the complexity issue.

There was also a strong sentiment in favor of intelligent front-end systems, emulators such as TRAINER, and gateway systems such as CSIN, CONIT, or IIDA which help the user conduct a search. Microcomputer-based simulators will be useful because users can be trained with them at low cost.

Question 2

> How can training responsibilities best be divided among producers, processors, intermediaries, library schools, consultants, etc?

Although there is a continuum of training responsibilities, there was a general consensus that database producers are now the best qualified to train on specific databases since they are so intimately involved with their construction. Vendors can explain their own system but may be unfamiliar with the details of all the databases.

There was a strong sentiment in all groups that both producers and vendors should share the responsibility for the preparation of documentation. Producers called on vendors to ensure that they were given the opportunity to review any vendor-written documentation on their database before it was released.

When a transparent interface is developed, training will be easier. The environment in which training is occurring is rapidly changing, especially as microcomputers continue to proliferate. Producers and vendors must therefore cooperate in training users. Shared facilities were suggested; a centralized training facility for a region was also mentioned, but the question of financing such a facility remains unresolved.

Library schools can also have a role in training online searchers. They should do more than just introduce basic theory and concepts. Simulators such as TRAINER are encouraged because they can help cut costs. Internships or work-study programs were mentioned as possible training methods; they have been used successfully in some cases.

A strong need was expressed for a directory of available training programs or materials; such a directory does not exist today. A sug-

gestion was made that the preparation of a training materials directory would be a good project for ASIDIC to undertake.

Question 3

> What are the barriers to effective training and how can they best be overcome?

The barriers fall into two major areas: resources, and user attitudes. Training costs are seen as a major barrier, especially in organizations where management may not recognize the value of online searching. Frequently, trainees must travel to a central location for training; travel costs are especially sensitive to budget-cutting. Some ways to overcome the cost barrier are through vendor-produced training files, courses on floppy disks, videodisks, self-study manuals, computer-aided instruction, emulators, and gateway systems. A regional training center for use by all vendors was mentioned as a possible partial solution to the obstacles hindering effective training, such as the lack of proper facilities at some sites. Technology is available today to do effective training; wide-screen video projectors and special training rooms were mentioned.

A major barrier in training is identifying the users being taught. Determining the skill level of the trainee in advance is difficult, and it can be costly to tailor the training session to individual audiences. As mentioned in the keynote presentation, the mix of searchers is changing rapidly today as more end users avail themselves of training courses.

End user attitudes may also impede training. Many users still have a fear of computers or are not interested in minor system refinements. They tend to be unsophisticated and will give up if they cannot make efficient or quick use of the system to find what they are looking for. Marketing efforts are therefore needed to overcome these attitudes.

Final Summary

Charles Meadow

The problem of the user interface continues to exist and will not go away; however, it appears that people are willing to live with it. Standardization is not a solution because of the varying nature of the databases; it is impossible to make everything look alike! Gateway and front-end systems show promise. The information industry may be one of the last free markets in the world, and training plays an important role in it. Training programs should therefore continue.

There is no need for a national training center in such a rapidly changing industry; the market should be tested to see who can do the training. No single group can; we will continue to have a division of responsibilities.

The largest single barrier to effective training is the total cost. The fees for the courses are not high, but when travel and trainee salaries are included, the total cost may be large. The location of the training is therefore a major factor--managers who do not value training will not send people to courses.

End user searching is here to stay and is a whole new world to deal with. We cannot rely solely on library schools for training because end users do not go there. Search training must be done in other than library schools and departments (maybe even in high schools!).

Acknowledgement

Thanks are due to Betty Unruh of Dialog Information Services for her help in taking notes of the meeting.

Database producer gives reasons for 'Do it yourself'

The major online bibliographic services — such as Dialog, SDC, BRS, ESA-IRS — offer large numbers of different databases; currently some 180 in the case of Dialog, the largest of the bibliographic services. But, of course, usage of the system is not spread evenly over all files; major-major files attract a disproportionate percentage of usage, and there have for a long time been signs that major producers, such as Chemical Abstracts and Derwent, are becoming increasingly thoughtful over the fact that it is *their* files that are, in some ways, subsidising smaller files. As online usage has grown — around 25–40% per year according to whichever expert one consults — so the amount of revenue to database producers has grown *as has the amount of revenue database producers see their products earning for the online vendors*.

In a letter just published in *Newsidic*, (No. 58, March 1983) the newsletter of Eusidic, the European Association of Information Services, John K. Crum, the new Executive Director of the American Chemical Society, reviewed some of the ACS's thinking on its Chemical Abstracts Service. With permission from Eusidic, we reproduce the letter below.

In a different news announcement, it was announced that Chemical Abstracts Service has joined with Ohio State University, CompuServe Inc. and M & R Cos. to form *Columbus Teleport Corp*. The declared aim of the new corporation is to build and operate a telecommunications facility in Columbus (the home of CAS) for transmitting and receiving audio, video and data signals via satellite. If work goes ahead after the initial studies, the total cost is estimated to be in the $2m–$4m region.

The letter from the American Chemical Society

" . . . . . The concerns of various groups in Europe, and other parts of the world, over the directions they perceive the ACS to be taking with its Chemical Abstracts Service are, of course, well known to us . . . . . Although the American Chemical Society is concerned about the unease felt by all interested groups in the community, our primary concern quite naturally must be, and indeed is, the interests of the scientists and engineers around the world who are the end-users of the information to which we provide access. We are fully confident that the policies and long-term strategy we have set for Chemical Abstracts are in the best interests of users of chemical information worldwide.

I am pleased to confirm that the American Chemical Society has indeed entered the online service area, and am particularly pleased to report that this decision has been greeted with an overwhelming positive response from users all over the world. Our entry into the online service arena has, of course, met with less than enthusiastic response from some of CAS's longstanding critics, but this was to be expected. Our decision to provide online access to CAS files directly from Columbus was motivated by factors too numerous and complex to delineate in this letter. However, the fundamental overriding motivations were to provide a single, comprehensive, online system that would be superior in its utility for scientists and engineers worldwide to any online system available today; and, to increase the probability that CAS can maintain its economic viability during the uncomfortably rapid migration of use from printed to online services. Whether we will accomplish these objectives remains to be seen. However, should we be unsuccessful, it will not be due to lack of resolve on the part of the ACS Board of Directors, nor lack of their support for CAS staff.

. . the ACS Board of Directors believe their ability to ensure the economic viability of CAS and the quality of the CAS database during the coming transition period would be placed in considerable jeopardy should CAS become dependent for a substantial portion of its revenues on a few online vendors whose primary motivations

are something other than maximizing service to users. The universal refusal of online vendors to make known to CAS the identity of the users of our database was also a major factor in our decision. We believe it is not possible to produce a user-oriented database, and to provide optimum service to users, if we do not know in some detail who those users are.

. . . making abstracts available for display through CAS ONLINE will make that service more attractive to users . . . . you will also recognize the potential risks in doing so. There is some risk that the demand for abstracts online will not be sufficient to justify the investment we have made. You will recall that, until recently, CAS made a very substantial portion of its abstracts available to the public in machine-readable form under license (POST, CBAC, ENERGY AND ENVIRONMENT, FOOD AND AGRICULTURAL CHEMISTRY, MATERIALS). However, none of the major commercial online vendors chose to offer services based on these files. Apparently, online vendors, in general, did not perceive the benefits to them to be sufficiently large to warrant the necessary investment in offering the abstracts online.

. . . Eusidic members will also be aware of another risk to CAS inherent in making the abstracts available online. Should there indeed be great demand for this service, there is some risk that the impact on CAS's revenues from printed services could be enormous. In such a case, it is essential that CAS be in a position to react very quickly to sudden migrations, and adjust accordingly. Making the abstract file available to other online vendors under license would reduce the speed and flexibility with which CAS could react under crisis conditions, and could jeopardize the financial viability of CAS itself.

. . . Chemical Abstracts Service exists solely for the purpose of providing service to information users worldwide, and CAS is under the full control of the American Chemical Society — a society of scientists and engineers from all over the world, dedicated to the free and open transfer of scientific and technical information. We will do our utmost to ensure that all files of CAS are available to users in every country through CAS ONLINE at a fair and reasonable price."

Reactions invited

Further comment by *Monitor* would be superfluous: we have already talked extensively and, we hope fairly, about Chemical Abstracts Service's policy in December 1982 and June 1982; (a contact at Chemical Abstracts claims that our title *Who's afraid of Chemical Abstracts?* has started a trend in titles, and has shown us an item in a recent French publication entitled *Qui a peur de Lexis?* (Who's afraid of Lexis?).

We are sending copies of this article to the main online vendors who currently mount the Chemical Abstracts files and are inviting *them* to comment. If they do, we will (probably) publish again on this question which, otherwise, will join the archives with the Rapra question until something new happens.

One point to pick up and to make, however, concerns Mr Crum's emphasis on the importance in Chemical Abstracts' calculations of the refusal of hosts to provide CAS with names and addresses of its customers. We have mentioned this point before, and we fully understand online vendors' reluctance to hand over lists of hard-won customers to potential competitors such as CAS, Derwent, the National Library of Medicine, ISI, *et alii*. But we think the point is well made by Mr Crum that without a detailed knowledge of who is using what, producers of online files cannot really design, market and monitor effectively and are surrendering the right to vital data concerning their products. Perhaps an acceptable compromise would be for online vendors in the course of, say, a five year contract, to provide details of users only for the first three years; this would provide database producers with detailed data as long as the contract still had at least three years to run but would withhold from them up-to-date user information during the last two years of a contract, until renewal. This could safeguard many of the concerns of both parties.

Over to Bruce Peters, Bill Marowitz, Roger Summit, Marino Saksida, Michel Bos and others!

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