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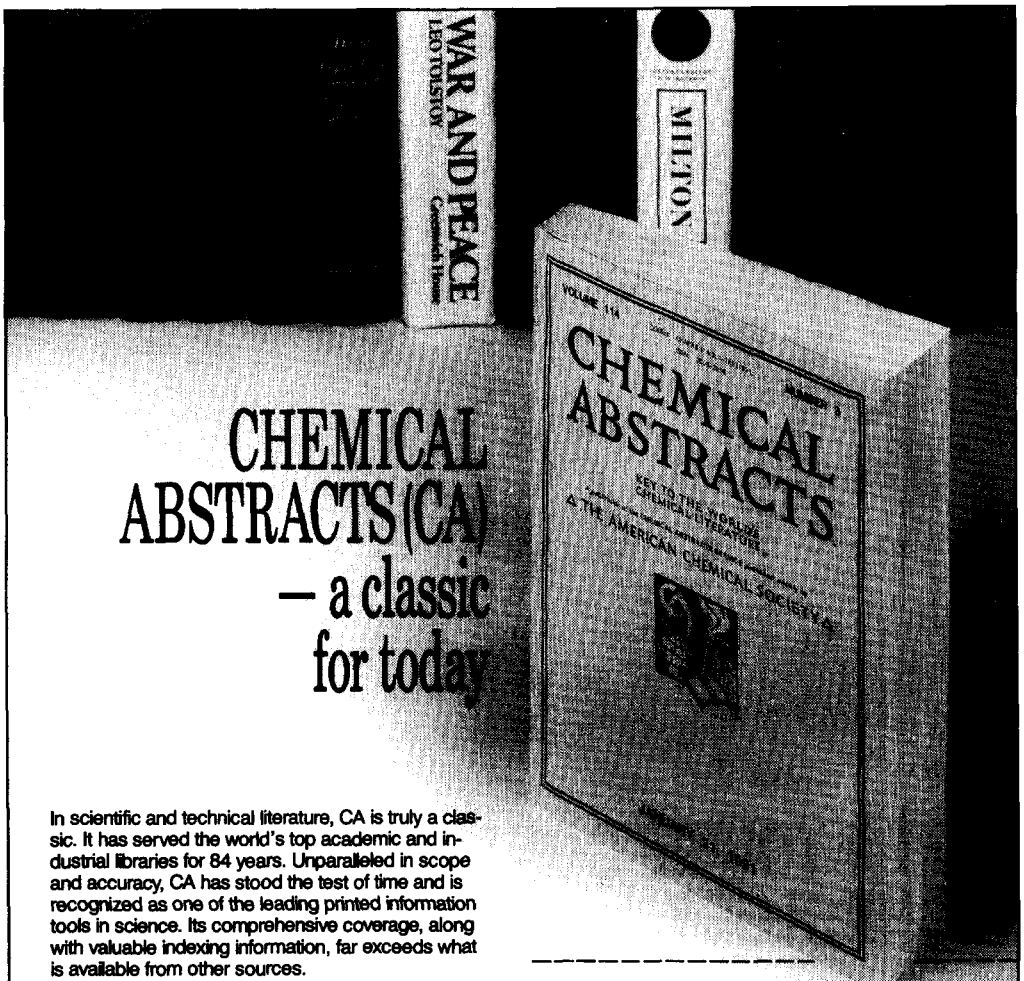


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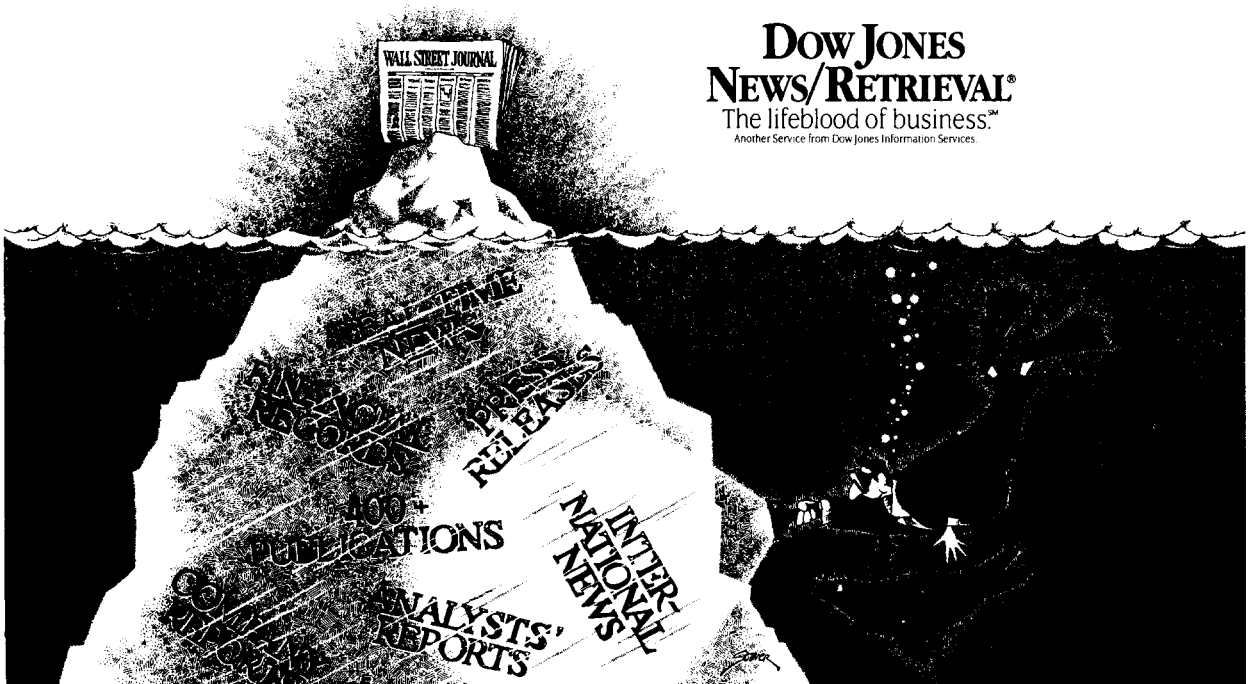

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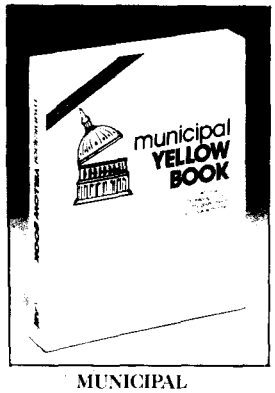


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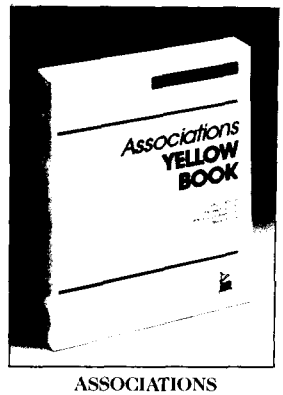


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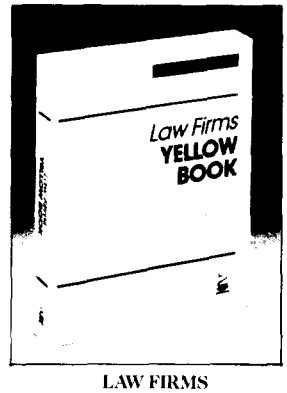


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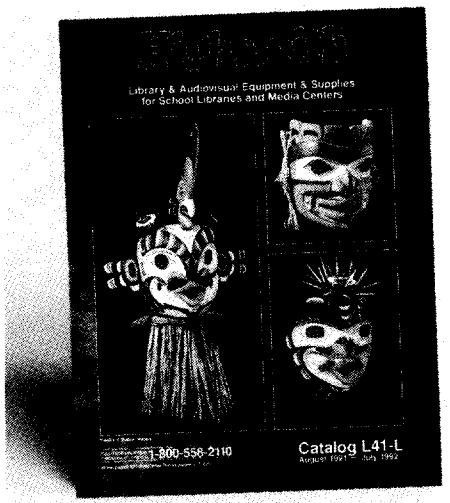

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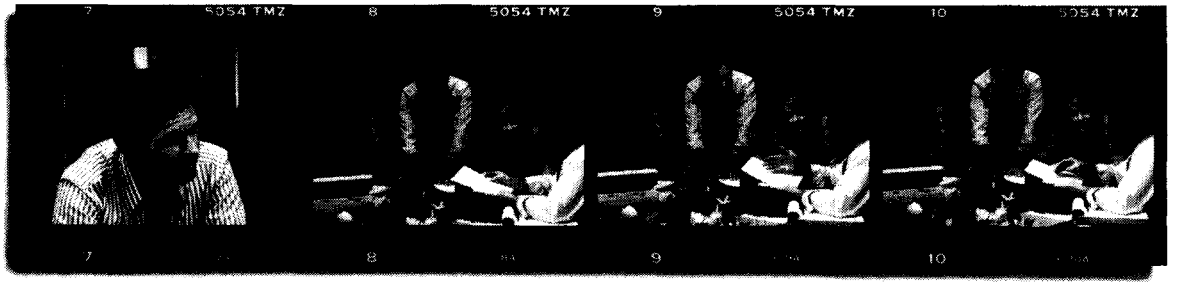


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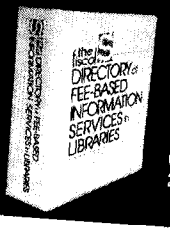


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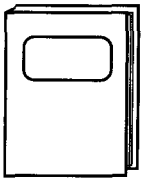

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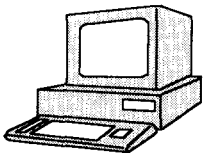

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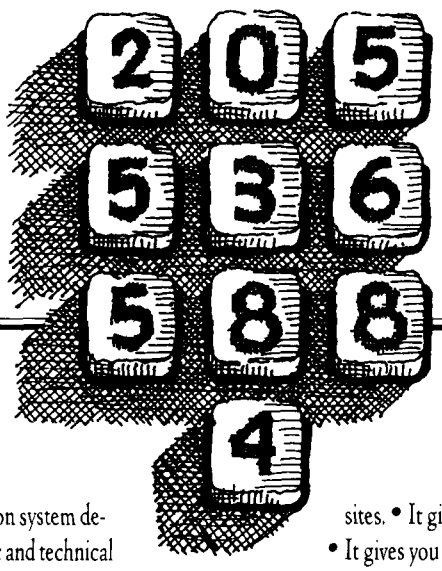


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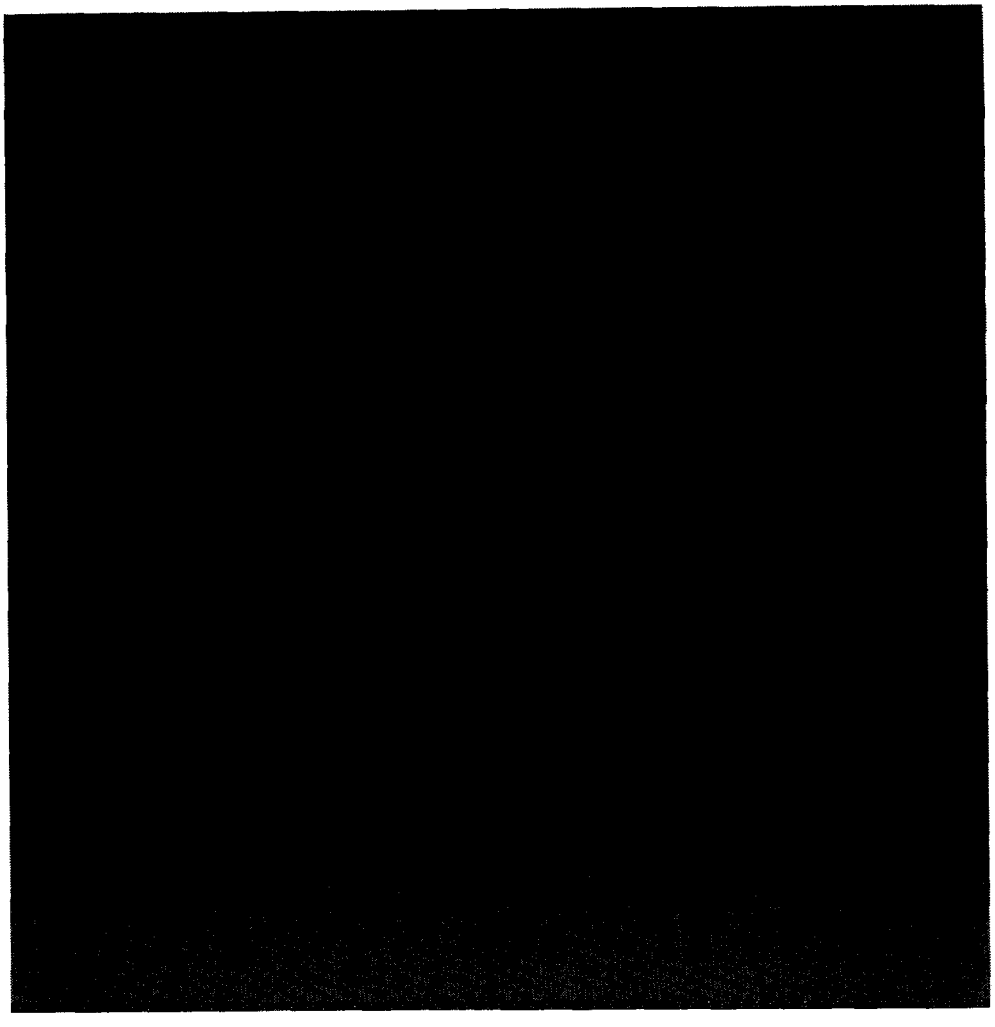

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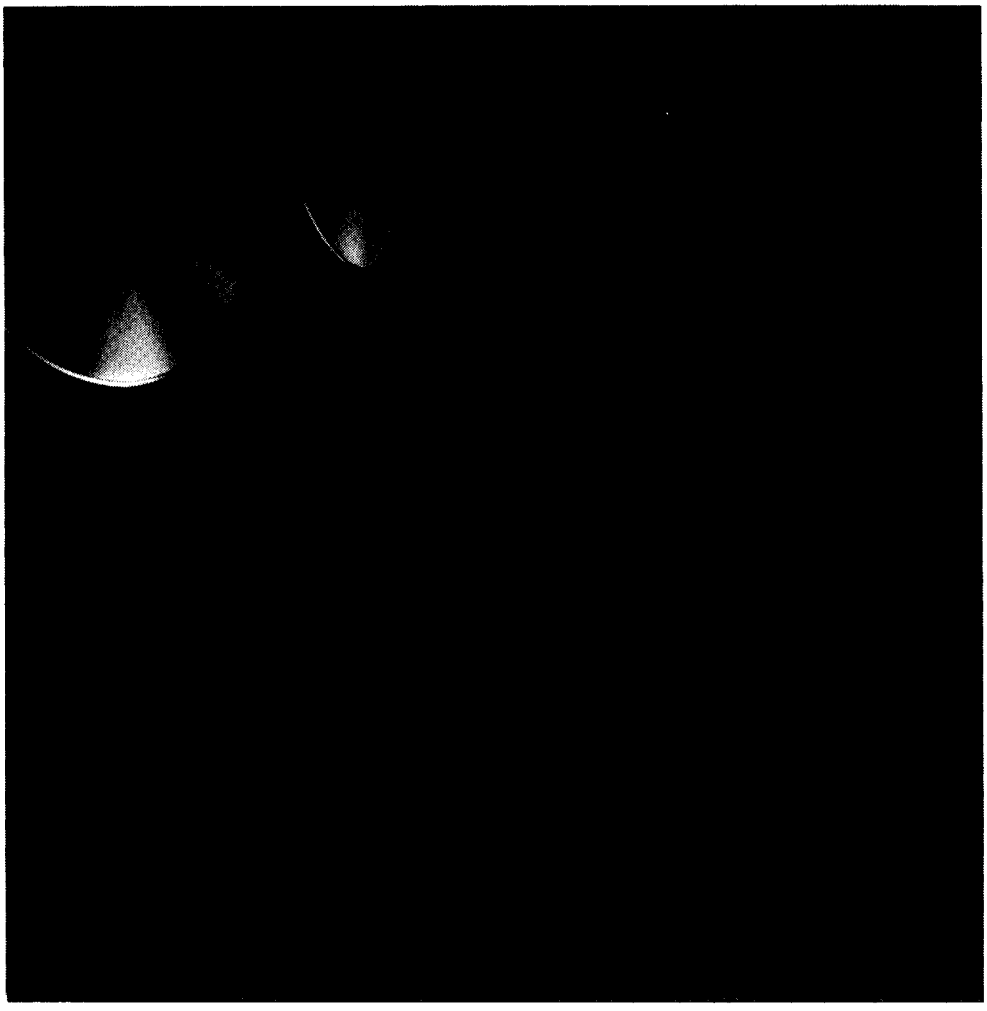

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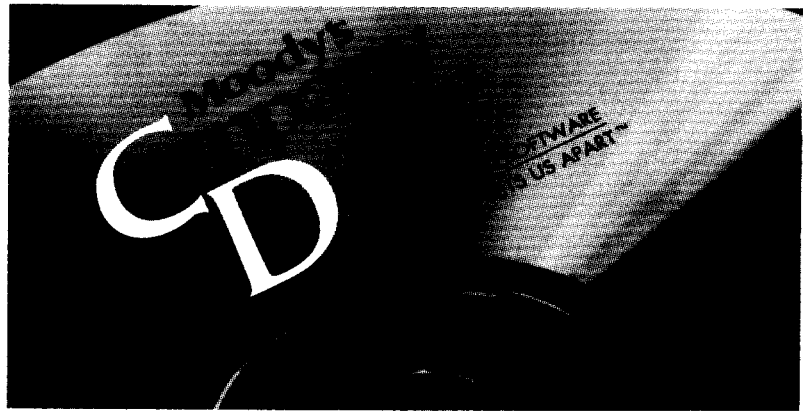


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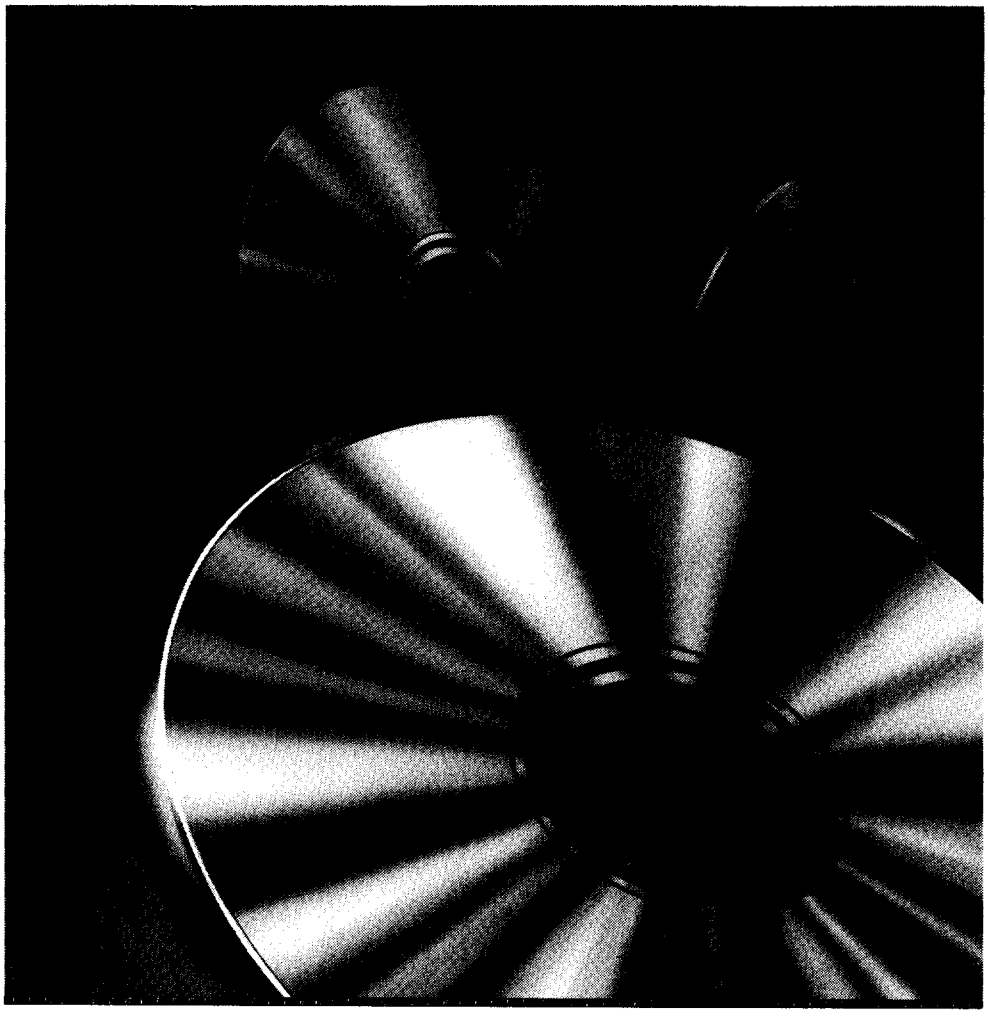

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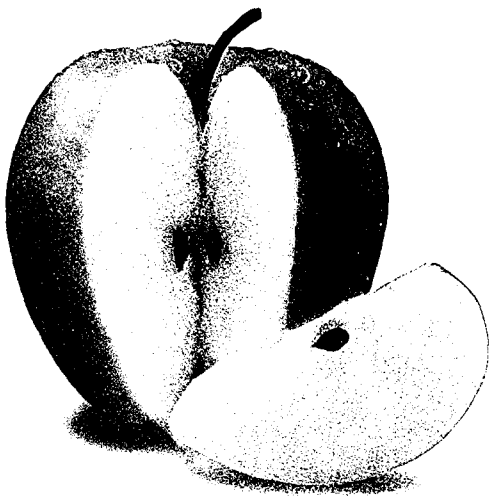

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# Time Management in State Libraries

*by Helen M. Gothberg*

■ **The study surveyed the 50 state librarians in the United States in regard to how they spent their time, delegated authority, ranked time-wasters, and leadership style. In addition, data related to a profile of the respondents was also collected. Frequency and chi-square programs in SPSS-x were used to analyze the data. One of the results indicated that meetings were viewed by most of the state librarians as their first ranked time-waster, and they also spent a great deal of time working with various committees. A second result had to do with gender. There were no significant associations for females which suggested that at least for time management, there are no difference between male and female state librarians.**

The decision to undertake the time management study for state libraries was based on several factors. To begin with, there is very little information available in library literature about time management, and yet the subject prevails in business literature. A recent search of the business database ABI/INFORM turned up 470 citations between February 1985 and January 1990. In addition, there are a number of books that have been written on the subject. In looking over many of these articles it became clear that time management was no longer a matter of time and motion studies, PERT diagrams, and Gantt charts, but rather had to do with self management, and that it was tied into administrative skills such as delegation of authority and management style.

A prior study by Gothberg and Riggs[1] had provided useful information for academic library directors. However, state libraries are different from academic libraries so a time management study of state librarians was undertaken. State libraries are especially important because as Parker[2] pointed out, state librarians see themselves as creative and open to new challenges. In addition, state libraries are important players in a world demanding change and innovation. More than any other group of library leaders, state librarians are in a unique position to be role models for other librarians.

## Utility of the Survey Results

Today's technology has made many library operations more efficient, but the human factor remains. As tax supported institutions whose budgeting has been focused on cost benefits as opposed to cost efficiency, library directors will need to look at library management in new ways. The high cost of new technologies and demands by taxpayers for increased accountability will dictate innovative ways of looking at efficiency. One way to do this is through better time management practices and possibly new organizational models. Finally, the results of such study give librarians the opportunity to look at what others in the profession are doing.

## Goals of the Study

Two goals were identified for the study. They were as follows:

Goal 1: The primary goal of the study was to collect data related to time management practices and the leadership styles of directors in state libraries.

Goal 2: The second goal was to analyze and interpret the data in order to provide recommendations for future consideration by library directors and to provide a basis for the


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education of library managers and inservice training for staff.

## Sampling and the Plan of the Study

The overall plan of the study involved the development and use of a mailed questionnaire dealing with time management. Essentially items were the same as for the academic library survey with some modifiers changed to fit state library organization. The population surveyed consisted of the heads of 50 state libraries in the United States. A first mailing resulted in an over 60% return which normally is considered reliable, but due to the small size of the population a second mailing was sent out, resulting in an 84% return.

## Data Collection

Data for state libraries were collected in five areas:

- A profile of the respondents which included items dealing with the size of the library staff, number of years in current position, years as a library director, years as a library administrator, age, and gender. A four point interval scale was used for this section of the survey.

- The second section of the survey instrument collected data about how the respondents spent their time in doing ten traditional management activities including planning, reporting, supervision, budgeting, personnel work, and meetings in four categories. A six-point interval scale of hours per week was used to collect this data. Also covered in Section Two of the survey was the number of hours spent on fund raising and the number of days per year spent away from the library. The latter collected data based on a four-point interval scale.

- Section Three covered the principle of delegation of authority. The ability to delegate work is frequently mentioned in the literature on leadership as a key element in effectively managing time. Respondents were asked to agree or disagree with 11 statements, some of which were negatively worded. These statements were taken from the work of time experts Merrill and Donna Douglass.[3]

- Section Four examined time-wasters. Time experts generally agree with what activities waste time. Respondents were asked to rank their top ten out of 15 time-wasters. The list was based on a study by Michael LeBoeuf,[4] which in turn was based on the work of time expert Alex Mackenzie.[5]

- The final section of the survey asked participants to rank five statements covering how they dealt with conflict. This scale was developed by Blake and Mouton[6] as a tool to determine leadership style based on their famous Managerial Grid. The Grid locates responses on a square grid which suggests an individual's leadership style.

## Data Analysis

The SPSS-x statistical package was used to analyze the data collected in the time management survey of state library directors. Three analyses were calculated for the data. The first was frequency analysis which tabulated how many responses were in any one category. Since there were too few responses in certain areas, some were combined to reflect a more reasonable display of the data. Frequencies were carried out on sections One through Three.

The second analysis of data was used to determine rank analysis for sections Four and Five and was based on an overall mean for each item. The third analysis was crosstabs with chi-square. Chi-square is a discrepancy statistic that tests for independence among variables. Chi-square was used to determine significant associations among respondent characteristics, and how they reportedly spent their time and handled delegation of authority.

**Table 1** **State Library Profile**

| | | | |
|---|---|---|---|
| **Size of Full-time Equivalent Staff** | **1–33** | **24–67** | **68 and up** |
| | 12.5% | 32.5% | 55.0% |
| **Number of Years in Current Position** | **1–5** | **6–10** | **11 and up** |
| | 52.5% | 27.5% | 20.0% |
| **Number of Years as a Library Director** | **1–5** | **6–10** | **11 and up** |
| | 23.1% | 28.2% | 48.7% |
| **Number of Years as a Library Administrator (Including Experiences as a Department Head and Assistant/Associate Director)** | **1–5** | **6–10** | **11 and up** |
| | 0% | 10.0% | 90.0% |
| **Age** | **45 and under** | **over 45** | |
| | 42.5% | 57.5% | |
| **Gender** | **Female** | **Male** | |
| | 45.0% | 55.0% | |

## Results, Frequencies

### Respondent Profiles

The results for Section One of the survey data dealt with the profile of the respondents. Over half of the state librarians managed staffs of at least 68 or more (see Table 1). Over half of the respondents had only been in their positions between one to five years, yet these were experienced individuals with nearly half having been the director of a library 11 years or more, and with 90% having served as administrators for 11 or more years. They were mature individuals with more than half being over the age of 45. Forty-five percent were women.

### Time Spent on Management Activities

Section Two of the survey determined how state librarians spent most of their time (see Table 2). A large percent of the state librarians spent eight hours a week and up doing planning. Reporting took up fewer hours, and supervision was split about equally throughout the three categories of hours per week. Areas where the majority spent less time were in budgeting, personnel work and meetings with boards, legislative committees and councils. Fifty-eight percent of the state librarians spent eight hours and up in meetings with library administrators and less time in state library committees.

The survey also determined to what extent they were involved with external fund raising, and this was the lowest category of all with 89% spending only three hours a week or less. Well over half of the respondents were away from the library at least 31 days or more each year attending professional meetings or work-related events.

### Delegation of Authority

Section Three of the survey provided a list of 11 statements that dealt with delegation of authority. Positively worded statements were numbers 1, 2, 5, 6, 8, and 11. Negatively worded items were numbers 3, 4, 7, and 10. An effective delegator would agree with the positively worded statements and disagree with the negatively worded ones (see Table 3). State librarians had very high scores on the delegation of authority. The lowest was for the statement: "I frequently allow my staff to make mistakes;" followed by "I frequently do tasks that my subordinates should be doing." It is not surprising to find that permitting staff to

**Table 2** **State Librarians' Percent of Time Spent on Management Activities**

| Hours per week: | 0–3 | 4–7 | 8 and up |
|---|---|---|---|
| Planning | 12.8 | 33.3 | 53.8 |
| Reporting (Internal & External Communication) | 28.9 | 42.1 | 28.9 |
| Supervising | 35.9 | 30.8 | 33.3 |
| Budgeting | 56.8 | 29.7 | 13.5 |
| Personnel Work (Including Collective Bargaining, Labor Relations) | 55.6 | 36.1 | 8.3 |
| Meeting with Administrators (e.g., Governor, Legislative Board, Board of Education) | 31.6 | 42.1 | 26.3 |
| Meetings with Library Administrators (e.g., Assistant/Associate Directors, Department/Division Heads) | 5.3 | 36.8 | 57.9 |
| State Library Committees | 44.1 | 47.1 | 8.8 |
| Boards, Legislative Committees, Councils | 47.2 | 38.9 | 13.9 |
| External Fund Raising | 88.6 | 8.6 | 2.8 |

| Days away from the library per year attending work-related events: | 1–10 | 11–25 | 21–30 | over 31 |
|---|---|---|---|---|
| | 2.5 | 17.5 | 22.5 | 57.5 |

err was the least favored statement of the 11. Library operations are based on public monies with a service rather than production orientation which does not encourage risk taking. Doing subordinates' tasks may have to do with inadequate staffing since 100 percent of the respondents said that they delegated most library operations to their staffs. Ninety-seven percent of the state libraries agreed with the statement, "My staff make most of the day-to-day decisions about their work without my prior approval. " Taking statements 2 and 8 together, state librarians show a very strong interest in giving their staff authority over their work.

## Results, Rankings

### Time Wasters

Respondents ranked their top ten out of 15 time wasters in Section Four (see Table 4). The top five time-wasters are of particular interest. Number one was meetings (scheduled and unscheduled). In the second and third positions were telephone interruptions, attempting too much at once, and estimating time unrealistically, in that order. Fourth was lack of self-discipline and fifth, drop-in visitors. Of equal interest were those items which were not ranked as time-wasters. They tell us something about the qualities that go into leadership style, which is related to time management principles. Unranked were: leaving tasks unfinished; lack of objectives, priorities and deadlines; ineffective delegation and involvement in routine and detail; indecision and procrastination; and confused responsibility and authority. Strong leadership skills of the state librarians are evident in their lack of response to these last five items. Their top five time wasters, with the exception of meetings, are in one sense part of what goes with the job, but in another, could be dealt with through better time management practices.

### Leadership Style

Much has been written about leadership

style over the years. In the beginning there was an effort to identify the traits of a leader. Later, researchers in the field of industrial psychology believed that leaders were either process, i.e., people oriented, or they were task oriented. Today there is a trend toward team leadership styles, incorporating both aspects of leadership—task and process other than viewing them as separate.

Although a task leader may get more work out of subordinates in the beginning, eventually revenge psychology sets in, and the creative thinking necessary to today's organization is lost. A manager who is people oriented at the expense of task will lead a less productive organization. In the operation of today's library, reduced budgets mean increased productivity on the part of all employees in addition to the use of incorporating new technologies to make operations more efficient.

Section Five of the survey provided data about the leadership style of the respondents based on how they dealt with conflict (see Table 5). The state librarians were asked to rank five statements about how they handled conflict from one to five, with one being the **least** typical and five being the **most** typical. Table 5 shows how these statements were ranked based on a numerical position found on the Managerial Grid—indicated in parentheses after each statement. Each of the positions on the grid is explained below:

9.9 **Team Leadership.** "Work accomplishment is from committed people; interdependence through a 'common stake' in organization purpose leads to relationships of trust and respect."

5.5 **Organization Leadership.** "Adequate organization performance is possible through balancing the necessity to get out work with maintaining morale of people at a satisfaction level."

1.1 **Impoverished Leadership.** "Exertion of minimum effort to get required work done is appropriate to sustain organization membership."

1.9 **People-Centered Leadership.** "Thoughtful attention to needs of people for

**Table 3**

**State Librarians' Delegation of Authority**

| Statement | Agree | Disagree |
|---|---|---|
| 1. I frequently allow my staff to make mistakes. | 69.2 | 30.8 |
| 2. My staff make most of the day-to-day decisions about their work without my prior approval. | 97.4 | 2.6 |
| 3. I frequently do tasks that my subordinates should be doing. | 20.0 | 80.0 |
| 4. The library does **not** function smoothly when I am absent. | 5.3 | 94.7 |
| 5. I seldom revise decisions made by my staff. | 90.0 | 10.0 |
| 6. I give my library staff considerable authority over their work (including personnel, finances, facilities, and resources). | 95.0 | 5.0 |
| 7. I frequently make decisions that are part of my subordinates' jobs. | 12.8 | 87.2 |
| 8. I delegate most library operations to my staff. | 100.0 | 0 |
| 9. If I were incapacitated for six months, there is someone on my staff who could readily take over my job for that period of time. | 89.7 | 10.3 |
| 10. The department heads under my leadership do **not** delegate work to their own subordinates. | 10.3 | 89.7 |
| 11. My key people take the initiative for projects without waiting for me to think of them. | 94.7 | 5.3 |

**Table 4**

**State Librarians' Ranking of the Top Ten Time-Wasters***

| Rank | Time-Wasters |
|---|---|
| 1 | Meetings (Scheduled and Unscheduled) |
| 2 | Telephone Interruptions |
| 3 | Attempting too Much at Once and Estimating Time Unrealistically |
| 4 | Lack of Self Discipline |
| 5 | Drop-in Visitors |
| 6 | Inadequate, Inaccurate, or Delayed Information |
| 7 | Crises (Personal and/or Staff) |
| 8 | Inability to Say No |
| 9 | Cluttered Desk and Personal Disorganization |
| 10 | Lack of, or Unclear Communication or Instructions |

**Unranked Time-Wasters**

Leaving Tasks Unfinished
Lack of Objectives, Priorities, and Deadlines
Ineffective Delegation and Involvement in Routine and Detail
Indecision and Procrastination
Confused Responsibility and Authority

* Respondents ranked as number one the item which hindered them the most in getting their work completed on time, and number ten as the item which hindered them the least.

satisfying relationships leads to a comfortable, friendly organization atmosphere and work tempo."

9.9 **Authority-Obedience Leadership.** "Efficiency in operation results from arranging conditions of work in such a way that

gree."[1]

The state librarians' most preferred response (ranked number five in this section of the survey) was a 9.9 or team leadership style of management. In today's organizations this style is viewed by many to be the most desirable and productive leadership style. It is one that will lead into new forms of organization that are characterized by a less hierarchical model; one that is people oriented but motivational by giving employees more authority over their work.

Ranked number four, or the second choice of leadership style, was number 5.5. There are some advantages to this organization centered style of leadership, but it may also be viewed by employees as a kind of country club type of leadership in which the manager is task oriented in the morning and people oriented in the afternoon. The third choice was a 1.1 style or people nor task oriented. A fourth ranked style was 1.9—or a people oriented leadership—and last ranked was an authoritarian leadership style, 9.1.

It is reassuring to find that team leadership ranked first with state librarians, and there is nothing surprising about finding an authoritarian leadership style ranking last. Strong task leadership which ignores people concerns is not appropriate for a service oriented organization. It is not reassuring to find that an impoverished style of leadership ranks in third position. It is the least desirable of the leadership positions according to the developers of

the Managerial Grid. It would have been preferable to have found it ranked fourth.

## Results, Cross Tabs with Chi-Square

Chi-square is a statistical subprogram of SPSS-x. It was used here to determine significant associations among respondent characteristics and the variables reflected by the data collected in sections Two and Three of the survey instrument. Six pairs of significant associations were found for state librarians using the Pearson test of significance with acceptance at the P=.05 level of confidence (see Table 6).

**Size of Full-Time Equivalent Library Staff**

Staff size was significantly associated with the statement: "I frequently do tasks that my subordinates should be doing." State librarians who had middle sized staffs, that is 24 to 67 people, were more likely to agree with this statement than those with larger or smaller staffs. One might expect to find this response associated with smaller staffs since there are fewer people to whom the manager can delegate authority. State librarians with smaller staffs should become aware that the need for efficiency through the delegation of authority is the same regardless of staff size. There is no clear trend for either one end of the scale or the other.

**Number of Years as a Library Director**

The number of hours spent on reporting (internal and external communications) was significantly associated with this variable. Those who had been a director from six to ten years spent the least amount of time in this activity. The most likely interpretation of this finding is that effective communication is a combination of not only education, but also experience.

**Number of Years as a Library Administrator**

This variable was designed to provide information about overall management experience as well as that of being a director. There were three variables for which there were significant associations. The first was with meetings with library administrators (e.g., assistant/associate directors, department/division heads). Those with less experience in this area were in the middle range of the number of hours spent on such meetings (4-7 hours ) per week.

The second association was with the statement, "I frequently allow my staff to make mistakes." Here we find that the fewer years of experience, the more the respondents disagreed

**Table 5**

**State Librarians' Leadership Style***

| Rank* | Conflict Statement |
|---|---|
| 5 | When conflict arises, I try to identify reasons for it and seek to resolve underlying causes. (9,9) |
| 4 | When conflict arises, I find a compromise that everyone will be satisfied with. (5,5) |
| 3 | When conflict arises, I try to remain neutral. (1,1) |
| 2 | I avoid causing conflict, but when it does appear, I try to smooth things over so everyone will be happy. (1,9) |
| 1 | When conflict arises, I try to cut it off or win my position. (9,1) |

* Number five is the most typical response; number one the least typical response.

**Table 6** **State Librarians Associated Factors**

| | value | dif. | p. |
|---|---|---|---|
| **Factor: Size of Full-time Equivalent Library Staff** | | | |
| Associated Factors | | | |
| 1. Statement: "I frequently do tasks my subordinates should be doing." | 8.44 | 2 | .01 |
| **Factor: Number of Years as a Library Director** | | | |
| Associated Factors | | | |
| 1. Reporting (Internal & External Communications) | 10.05 | 4 | .04 |
| **Factor: Number of Years as a Library Administrator (Including Experiences as a Library Department Head and Associate Director).** | | | |
| Associated Factors | | | |
| 1. Meetings with library administrators (e.g., Governor, Legislative Board, Board of Education) | 7.66 | 2 | .02 |
| 2. Statement: "I frequently allow my staff to make mistakes." | 4.09 | 1 | .02 |
| 3. Statement: "I give my library staff considerable authority over their work (e.g., including personnel, finances, facilities, and resources)." | 3.74 | 1 | .05 |
| **Factor: Age** | | | |
| Associated Factors | | | |
| 1. Planning | 7.51 | 2 | .02 |

with this statement. Less experience suggests that there is less confidence in staff and therefore less willingness to take risks in granting authority to others.

The third variable with which experience was a significant association was the statement, "I give my library staff considerable authority over their work, (e.g., including personnel, finances, facilities, and resources)." The fewer the years of experience, the more the respondents disagreed with this statement, which supports the findings related to the second variable noted above. Delegation and experience appear to be related factors. It may be that less experienced managers tend to trust their own judgement before that of others, but the innovation and entrepreneurship needs for the next century will demand a high degree of skill in motivating employees.

**Age**

The one significant association for age was in planning. The younger the state librarian the less time they spent in planning. This result raises questions such as, "Do younger administrators spend enough time in planning"? They spent only zero to three hours a week. Do older state librarians spend too much? These are questions that are not easily answered, but the significance of planning has been emphasized in the library literature for a number of years and was given much needed revitalization with the introduction of strategic planning.[8]

## Generalizing Survey Results

The degree to which any other group of individuals fits the description of the population surveyed is the degree to which the results of the survey can be generalized. The charac-

teristics of the state librarians who responded to the survey are part of the frequency data in Section One.

## Limitations of the Study

One of the major concerns in a study such as this one is whether or not the responses truly represent reality. Do the state librarians who responded to this survey actually do what they say they do? There is no way to ascertain this fact other than doing in-depth case studies and observations. This approach is a time-consuming and costly process with sample size limited. Given the level of maturity and responsibility of the population surveyed for this study, it is reasonable to believe that discrepancies, if any, are not so great as to seriously affect the outcome.

## Discussion

The major time management issue to emerge from this research is an organizational one. It has to do with the committee structure of all libraries as well as state libraries. State librarians ranked meetings as their number one time waster. In addition, they spent a great deal of time in committee meetings. Forty-two percent, or nearly half, spent time in meetings with administrators to whom they report. It is not likely that they will be able to make any radical changes in this area. Over half (58%), however, spent eight hours a week and up on meetings with library administrators, and nearly half (47%) spent four to seven hours a week involved with state library committees. In addition, there were meetings with boards, legislative committees and councils which, although they took up less time than the others, added to the large amount of time spent in meetings.

Because of the need to stay in touch with their constituents, and the breadth of their responsibilities, state librarians more than any other group of library leaders may find change in this area difficult. What kinds of ways might state library organization change to limit, but not necessarily exclude, this profusion of committee meetings? Books such as *The One Minute Manager*, *In Search of Excellence*, *Every Man a Manager*, and *Further Up the Organization*[9] are management classics which suggest more of a team approach to organization which will not stifle employees and strangle productivity. Libraries are just beginning to explore new alternatives in organization to either replace or supplement the traditional hierarchical structure in a bureaucratic system. They may involve using a matrix design, quality circles, or other innovative practices in organization.[10] All of these new ideas are designed to be both humanistic as well as efficient.

Another important result which came out of this study was that there were no significant associations for gender. There were only two variables in Section One for which there were no significant associations. One was the number of years in the state librarians' current positions, and the other was gender. This information should be encouraging to women seeking management positions as state librarians. Where time management is concerned, and its related management styles, women's responses were no different from men's. In this study females made up 44% of the respondents. There is currently an environment of changing attitudes toward women in leadership roles; there is an environment of changing organizational models which will be more efficient but also nurture and trust employees. Where time management—the need for the '90s—is concerned, female state librarians are as accomplished executives as males, and their numbers are growing.

■

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# Information Technology Changes in Large Newspaper Libraries

*by Kathleen A. Hansen and Jean Ward*

■ **The study identifies the state of information technology use in large metropolitan daily newspapers in 1990. A total of 105 newspapers with circulations of 100,000+ were included in the study. Newspaper librarians and newsroom managers described the availability of electronic news libraries, commercial database subscriptions, fax and other information technologies. Sixty-seven percent of newspapers have an electronic library and 90% have commercial database subscriptions. Implications of electronic information technologies for public access to the news content of local papers are discussed.**

The year 1985 was identified as a "watershed" for installation of electronic library systems in newspapers. A trade press article estimated that more than 50 papers were using electronic systems to store and retrieve the newspaper's contents, with installations expected to double in the following twelve months.[1] Indeed, by 1987, well over 100 newspapers had electronic library systems installed.[2]

The electronic library system is created by each journalist keystroke as the daily newspaper content is produced. Once the completed edition is ready for printing, the contents are sent to the presses and to the news library for enhancing by news librarians. Keywords are added to each story, some material (such as sports statistics and obituaries in agate type) is stripped out, and the electronic text of each story is checked to see that it corresponds to the printed version of the newspaper. Two major companies, Vu/Text and DataTimes, offer service bureau arrangements to newspapers who wish to have one or the other company install, service, and support the computer software for an electronic news library.

The newspaper library in a metropolitan daily newspaper has been recently recognized as a major source of information and ideas in the production of news.[3] The contents of previous issues of the newspaper, whether stored in paper clip format in rows of filing cabinets or electronically, help journalists meet many information needs. In addition, the reference collections and staff of the news library play an important role. Journalists generally need "fact checking" types of information such as spellings, dates, biographical information and so forth, and "background" information that may help identify interviewees, previous story treatment, story angles and ideas, and comparison coverage. With the availability of new information technologies in the news library and throughout the newsroom, there is great potential for change in newsroom routines. In particular, the role of the news librarian as a contributor to the news process has come into sharper focus.[4]

In light of the technological changes evident in major metropolitan daily newspapers, the research questions for this study were: How are new information technologies being incorporated into large metropolitan daily newsrooms? What impact are these new technologies having on journalist-librarian interactions? Is the "information culture" in communities changing because of changes in the newspaper library?


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## Method

A total of 108 metropolitan daily newspapers (a census) with daily circulations of 100,000+ were contacted in spring 1990 for inclusion in this study. Three newspapers in this population refused to participate; a total of 105 newspapers (98%) participated. Information was gathered using two methods. The 1989 *Editor and Publisher International Yearbook* and the 1990 *Editor and Publisher Market Guide* provided information about circulation, ownership, competition, population and community characteristics, and news wire totals. Then a 92-item telephone questionnaire was administered to the head news library staff member at each of the newspapers in the study, after each had been contacted in advance by letter to arrange for the interview. A computer-assisted telephone interviewing package was used to record and tabulate data during the telephone interviews with newspaper library staff. Some of the published information was confirmed during the telephone interview. Follow-up interviews with newsroom managers was done when necessary to answer questions the library staff weren't sure about.

The newspapers in the study have a median daily circulation of 193,445; for the 90 papers with a Sunday edition, the median Sunday circulation is 318,774. The communities where these newspapers published have median city population of 397,781, with a median household income of $34,383. Seventy-one percent of the papers publish in the morning, 16% publish in the evening, and 12% publish all day. Seventeen percent are independently owned; 83% are owned by a chain. The newspapers subscribe to a median of five wire services.

Median news staff size for these newspapers is 193 editorial employees (reporters, editors, newsroom managers). Median full-time news library staff size is seven, with one part-time staff member. News libraries have a median of one staff member with a professional library degree. The ratio of full-time library staff to newsroom employees is a median of one to 30. Eighty-eight percent of the news libraries contacted are members of the News Division of the Special Libraries Association.

## Results

The availability of an electronic library for news storage was fairly widespread: 70 of the 105 newspapers, or 67%, have an electronic library. Thirty-five newspapers do not, but 30 of those intend to have an electronic library system installed. Table One refers to the companies that have installed the systems in these newspapers. Vu/Text is the system used by the largest number of newspapers with an electronic system (34%), followed by a library system developed in-house by the newspaper (29%), DataTimes (20%), and some other type of system (17%). Among those libraries planning a conversion to an electronic system, 53% do not know which system they will use, 17% plan to use Vu/Text, 10% plan to go with DataTimes, 3% plan to develop their own system, and 17% plan to use some other system. For those newspapers with a service bureau arrangement with Vu/Text or DataTimes, their own content is available through the chosen company, and they may receive reduced-rate access to other newspapers' files on the same system.

### Table 1

**Electronic Library Systems at US Newspapers with 100,000+ Circulation**

| System | Number | Percent |
|---|---|---|
| Vu/Text | 24 | 34.3 |
| Own System | 20 | 28.6 |
| DataTimes | 14 | 20.0 |
| Stauffer Gold | 1 | 1.4 |
| Other | 11 | 15.7 |
| Total | 70 | 100.0 |

Note: Thirty-five of the 105 newspapers studied do not have an electronic newspaper library system.

The median start date for those papers with an electronic library system was 1985. Fifty-one percent say that there is an unscheduled shut-down of the electronic library system fewer than two times a month. Perhaps that is

why 79% of the newspapers do not keep a duplicate clip file to back-up the electronic library. For those libraries with some paper clip files as back-up, most do by-line clipping only.

Among those papers with an electronic library, 87% say the files are available to commercial subscribers. Ninety-seven percent of those say the newspaper file is vended by one of the major database vendors, rather than vended in-house. Forty-four percent of the papers do not generate a profit from the sale of their electronic library files; 39% do generate a profit; 16% refused to answer or do not know.

Training of news staff in the use of the electronic library is a major issue for these news library staff members. Librarians say that only 6% of the news staff are very proficient at using the electronic library. According to the librarians, 79% of the news staff are moderately or somewhat proficient. Eighty-three percent of the papers did do news staff training when the electronic library was installed; the majority (52%) had the library staff do the training; the electronic library company did training in 19% of the cases, and the library staff and company both did training in 12% of the papers. Eighty-four percent of the papers train new staff members in using the electronic library when they join the paper.

A number of the questions asked in the study regard the news library's connections to the outside "information universe." While the newspapers' own backfiles are the most important information resources for reporters and editors, the new technologies allow for a much wider "information net" to be cast for those who choose to do so. The study asked about use of commercial databases, outside libraries, and public records.

Table Two refers to commercial database subscriptions at these newspapers. Among all newspapers, 95 (90%) say they subscribe to at least one commercial database service. This is high compared with previous studies of newspapers' online database use.[5-10] The median number of database subscriptions is four. Nexis, Vu/Text, and DataTimes have the largest number of subscribing newspapers.

**Table 2**

**Commercial Database Subscriptions at US Newspapers with 100,000+ Circulation**

| Database | Number | Percent |
|---|---|---|
| Nexis | 74 | 77.9 |
| Vu/Text | 72 | 75.8 |
| DataTimes | 70 | 73.7 |
| Dialog | 55 | 57.9 |
| Dow Jones | 33 | 34.7 |
| Lexis | 17 | 17.9 |
| Compuserve | 11 | 11.6 |

N=95

Note: Of the newspaper librarians surveyed, ten said their newspapers did not subscribe to any electronic databases. The other 95 respondents were asked to name all the databases to which they subscribed. Thirty-eight newspapers subscribed to one or more lesser-used databases not listed above.

When the librarians were asked to name the one database service that gets the most use, Nexis was mentioned by 37%; Vu/Text (35%) and DataTimes (15%) followed. A variety of other services (particular to a region or topic such as business or law) were mentioned as the most-used service by 8% of the librarians. All of these services are primarily full-text systems. Dialog, a service offering both full-text and bibliographic files, was mentioned as the most-used system by 5% of the librarians. One can only speculate about how this might change with Knight-Ridder's (parent company of Vu/Text and owner of 31 newspapers nationally) purchase of Dialog; it remains to be seen how the Vu/Text system will incorporate its subscribers into the Dialog subscriber base, or vice versa.

Table Three refers to database search costs. The median monthly cost for searching in databases is $1,000; costs range from $50/month to $38,000/month. Some of the newspapers with the highest database search costs are falling in that range because they do not have unlimited access to their own newspaper's

electronic files. In other words, they are creating the content for inclusion in an electronic system, but are then turning around and paying to have access to it through a commercial database vendor, rather than having a service bureau arrangement with the company to allow for in-house access. Several of these papers have their content available on more than one commercial vendor's system, and have the option of searching their own contents on any of the two or three systems that include their files.

## Table 3

### Monthly Costs for Database Searching at US Newspapers with 100,000+ Circulation

| Monthly Cost | Number | Percent |
|---|---|---|
| $0 | 19 | 20.0 |
| 50-250 | 10 | 10.5 |
| 251-500 | 8 | 8.4 |
| 501-1000 | 13 | 13.7 |
| 1001-2000 | 11 | 11.6 |
| 2001-5000 | 22 | 23.2 |
| More than 5000 | 12 | 12.6 |
| Total | 95 | 100.0 |

Note: Of the 105 newspaper librarians surveyed, ten said their newspaper did not subscribe to any electronic databases.

The librarian-journalist interaction during database searching is one area of controversy. Fifty-five percent of the librarians who do database searching say that the journalist is rarely present during the search. Only 15% of the librarians say the journalist is given all of the material from a search. Some of the verbatim comments from librarians regarding this were insightful. Most said that the amount of material given to the journalist depends on the type of information request: if the search topic is narrow, the librarians give the journalists everything they find, but if the topic is very broad or the search results in many "hits," the librarians give the journalists a citation list and ask them to choose, or may do the selection themselves.

Another interesting aspect of the journalist-librarian relationship is evident in the information about who searches databases. Ninety-one percent of the librarians said that they were responsible for database searching; only 13% said that reporters can search commercial databases, and 12% said editors can (the question allowed for more than one answer). This establishes the role of the librarian as gatekeeper or mediator between commercial database information systems and journalists. The librarian may be able to answer a journalist's information request in many ways, and since the journalist is rarely present during an information search, the librarian may use a database search that is, in essence, invisible to the journalist. The journalist gets the information request filled, and the librarian may not even indicate that the information came from an electronic search.

Another element of the relationship between the news library and the outside "information universe" is evident in the figures regarding use of outside libraries. The news librarians said that they used outside libraries in a number of ways, including using fax technology to quickly gather information. The introduction of fax technology into the library is significant; 89% of the librarians say they receive fax information from other libraries. Eighteen percent of the librarians say they use community libraries once a week, 20% say they use community libraries twice a week, and 28% said they do not use community libraries at all. Table Four includes information about which types of community libraries get the most use by news librarians.

Use of electronically-available public records is another measure of the "information universe" news librarians may tap. While most news librarians (65%) were not aware of the use of electronic public records, those who did say they used them were most likely to be tapping into state records. Local and county records were not usually available. The median number of searches in electronic public records by news librarians is once a week; it could be that the journalists using online pub-

lic records are searching via their own microcomputers in the newsroom and bypassing the news library for these types of information searches. Sixty-four percent of the newspapers have personal computers in the newsroom for journalist access.

## Table 4

### Use of Outside Libraries by Librarians at US Newspapers with 100,000+ Circulation

| Outside Library | Number | Percent |
|---|---|---|
| Public | 92 | 97.9 |
| University | 62 | 66.0 |
| Special | 21 | 22.3 |
| Municipal | 7 | 7.4 |
| Historical | 5 | 5.3 |
| Legislative | 4 | 4.3 |

N=94

Note: Of the 105 newspaper librarians surveyed, 94 said they used outside libraries, one did not, and ten said reporters do their own outside library research.

Questions about the public's access to information from the newspaper and the newspaper library were also of concern. The news librarians were asked whether their newspaper contents were indexed; 73% said no. For the 27% who said yes, 82% said the index was produced by University Microfilms (UMI). In most cases, UMI produces very few copies of the newspaper index, which usually are available only in the public and university libraries in the region. Another concern arises with the finding that 71% of the news libraries in the study are not open to the public. As recently as 1984, two-thirds of respondents in an Inland Daily Press Association survey said that they allowed free public access to their news library files.[11] With the recent widespread adoption of electronic news libraries in large metro dailies, the community resource that used to be represented by the newspaper index and clips system may no longer be available to the community. The newspaper contents are more widely available electronically, for those who can afford to pay for searching, but the unique *community* resource may be lost. Indeed, a 1987 study found that only 35% of public libraries serving populations of 25,000+ offered online database searching to patrons, with no consistency in pricing.[12]

A final area of concern in the study was the role of the news librarian in the news process. Fifty-four percent of the librarians say they do not get byline or story credit for their research work for a news story. They do have slightly more authority regarding financial information. For those librarians who have an electronic library system, 79% get income statements about the use of the electronic library by commercial customers. Eighty-four percent of librarians see actual reports about the use of the system by commercial users. In a competitive newspaper market, this can be a very interesting situation. Rival papers that previously subscribed to and clipped competitors' papers can now access that content electronically. News librarians receiving use reports can see how much the competitor newspaper is searching the electronic library database, and how much the competitor is spending to do so.

## Discussion

This study identified that state of information technology use in large metropolitan daily newspapers in 1990. Both the availability of an electronic library for newsroom use, and the availability of commercial database search capabilities are fairly widespread at newspapers in this group. This is in contrast to findings just a few years old. Large daily newspapers are becoming much more sophisticated in their use of electronic information technologies, and in the types of library staffs they have in place to assist journalists in information searching.

Unlike some early predictions in the news trade literature, journalists do not have unlimited access to electronic technologies. While most newspapers in this study allow journalists access to their own newspaper's electronic libraries, very few have given journalists un-

limited access to commercial information systems. Librarians are still playing the role of information gatekeeper or mediator when it comes to access to electronic database information and other kinds of costly information search systems. Some previous work has indicated that journalists make less use of commercial database searching than they might wish to because they consider the librarian-mediator process unsatisfactory.[13]

As newsrooms update their production equipment and eliminate the old dumb terminals journalists used to work on in favor of networked but powerful stand-alone personal computers, there may be pressure to allow journalists more access to outside commercial systems.[14] This will raise serious questions about training and journalist proficiency.[15,16] The development of sophisticated gateway systems to assist naive searchers conduct transparent searches in multiple files may help,[17] but it is likely cost and inadequate journalist training will always be a factor in unlimited journalist access.

Another issue regarding unlimited use of such systems revolves around whose budget gets charged for database searching. At some nespapers, search costs are charged to the library's budget; at others, searching comes out of the newsroom budget.[18] As long as database searching is considered outside the newsroom's normal budgetary concerns, database searching may be less incorporated into normal newsroom information-gathering procedures. Librarians may feel the need to "protect" their budgets by doing fewer database searches than might otherwise be usefully done to meet journalists' information needs.

Inexpensive fax technologies are bringing community information resources into play in news reports. The vast majority of news librarians said their news libraries were equipped with fax, that they used fax technology to gather information from other libraries, and that such information resources were considered a regular part of the "information universe" they tapped into on behalf of journalists' information needs. This may mean that news reports are better reflecting the variety of perspectives and information sources available on any topic. Where a library collection may once have been too distant in location for a reporter on deadline to utilize, there may now be the ability to put those information resources to use. Even if the journalist does not know that the information came from such a collection, the news library staff may be answering journalist requests more thoroughly because they have such access themselves. The news library staff uses the indexes or database citations they gather themselves to identify information they then request from other libraries through fax technology. Also, news librarians are able to meet the information needs of journalists in the field by faxing the background information.

The implications of electronic information technologies for public access to the news content of their local paper are more distressing.[19] While the old newspaper clip library may have never been truly open to the public, many communities did have access to their newspaper contents through an index that may have been published by the newspaper itself, by the public library, or by some other commercial index producer. Since so many newspapers are now available electronically, it is no longer profitable for these index producers to continue issuing a print index. This means that unless the community libraries are subsidizing database searches in the newspaper files for the public, only those who can afford a search are able to locate information from the newspaper. This could be a serious loss to the community; the newspaper is one of the best sources of information about a community's collective history. It is ironic that at the very time newspapers are making better use of the information universe around them, they may themselves be less accessible to information searchers who cannot afford to pay. ■

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# Small Newspaper Libraries: The Libraries That Time (and Automation) Passed By

*by Judith L. Hegg*

■ **This descriptive study was designed to compare information storage and retrieval methods in small newspaper libraries with differing circulation size and in various locations in the United States. It was specifically intended to determine whether automation had made as significant an impact on the operation of the library as it had on the rest of the newspaper's departments. The author hypothesized that automation efforts would be minimal, that local news stories would still be stored in traditional clipping files, perhaps supplemented by computerized subject indexes or abstracts, and that any major computerization efforts would be most prevalent in the use of online databases for accessing national and international news stories. The smaller the newspaper's circulation, it was theorized, the more likely it would be to fit the above profile. Membership in Special Libraries Association (SLA) would be correlated with automation efforts as well.**

## Background of Newspaper Libraries

The typical newspaper library remained virtually unchanged for decades as library personnel in newspapers of all sizes and in all locales maintained information for their editors and journalists in a clipping file or "morgue." The earliest organized newspaper libraries were probably established in the 1850s. From that time until the late 1970s most of these facilities were a repository of reference books, a collection of clippings from the parent paper filed in alphabetical order, and, somewhat later, photographs as well. Usually the library staff clipped a single news article several times, filing it in a number of subject categories to provide access to the material at many points.[1]

Those persons who worked to maintain and manage the clipping files, as well as those who made use of the materials they contained, could easily recite a long litany of reasons why this method of storing information was less than adequate: the task was labor intensive; the fragility of paper led to torn and/or damaged clippings; the user was limited to relatively few indexing terms; the library's space needs grew unchecked until they exceeded that which was available; the likelihood of loss or misfiling of "clips" increased with their usage; and the difficulty the staff (never enough for the task!) inevitably experienced in clipping and filing materials on a timely basis.[2]

The computer age presented newspaper librarians with a solution to many of their concerns since automated systems could offer the power of online information retrieval to journalists and editorial staffs previously limited by manual information files. The system would provide both power and speed to satisfy specific information retrieval needs, as well as allow simultaneous use by several persons. In addition, it meant the ability to automatically create specialized files and indexes that the library had never had the resources to offer in the past.[3]

The computer "invasion" as it relates to newspapers did not enter the scene until the


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late 1960s with the introduction of the New York Times Information Bank which offered computerized index and abstracts to articles in its publication. By the mid seventies a few papers had hybrid systems involving computerized indexes with the news articles available on easily searched microfilm. The early eighties saw others with their own full-text retrieval system. By this time a number of vendors had begun selling the software capabilities to interested newspapers and the floodgates opened as others began using this new technology to solve their many problems with the old clipping morgue.[4] In a presentation to the Newspaper Division of SLA in 1983, Homer Martin prepared a comparison of the nine available online systems. Just six years later the eighth edition of the list compared 19 systems—each provided by a vendor with many subscribers.[5]

Large metropolitan newspapers were first to adopt the technologies which created an electronic library. Journalists and editors at these daily papers now have ready access to three or more of the massive databases that contain the full text of a number of newspapers and magazines. They obtain information from in-house databases created by local investigative reporters to analyze data on such hot issues as political contributions, real estate loans, racketeering families, crime. Management also markets its daily publication in a computerized format to libraries, local subscribers, and rival newspapers. The 20 or more members of the library staff at these newspapers no longer clip stories from the daily editions, but, sitting at a VDT (video display terminal), may enhance the computerized version of the published articles by providing additional access points and information. They might key in indexing terms, bylines, descriptions of accompanying photographs, and/or notes of corrections. Foley and Briscoe in describing a typical day at the *Washington Post* Library note a myriad of activities that are common in a major newspaper in the electronic age.[6]

However, there has been a dearth of literature reported, to illustrate how the new information technology has affected the small newspaper library—one outside a large metropolitan area and with a modest circulation. The 1986 survey reported by the Newspaper Division of SLA indicated that 30% of the respondents to its membership survey were from papers with circulations of less than 50,000. In that study of the papers that indicated they had only one full time person in their library (i.e., small newspapers), 40% were making use of a microcomputer in some portion of their operations, 5.3% were currently using an automated retrieval system, and 10% were expecting to have an automated system within the next year.[7] Except for this survey—which related only the experiences of a sample of SLA members—there has been no significant report of automation activities in the small newspaper library.

Newspaper librarianship in a small paper, where individuals are often working alone and with no one in the building who understands the peculiar problems of indexing and filing, can be a lonely business—albeit in the midst of fast-paced activity, daily deadlines, exciting news stories, and interesting journalists and editors. If these persons are not members of SLA (as apparently many fewer than one-third are),[8] it is probably unlikely that they would have found the time to investigate the advantages and prepare procedures for using a computer in some way in their operations. This is doubly true if they are not familiar with the capabilities and workings of computer technology. The question then becomes "Has the computer really changed the work of the library staff in the small newspaper library?"

## Method and Organization of Study

Two newspaper librarians in New Jersey (neither to be included in the final sample) were contacted prior to the study in order to discuss the assumptions of the research—i.e., that the operation of a small newspaper library has not significantly changed in the past decade, and that the impact of automation would be most noticed where the librarian had earned a MLS and/or was a member of SLA. In addition, the first draft of the questionnaire was piloted with one of the librarians and several changes were made.

It was determined that site visits would

provide more valuable information than mailed questionnaires which are always susceptible to the vagaries of return rates and the possible skewing of results in favor of the population which has responded. In this case it was deemed likely that those newspapers that had no official librarian as well as those librarians who felt too busy (a newspaper librarian in a small library who returns from vacation is automatically two weeks behind in clipping papers that accumulated while he or she was gone) might respond with a lower return rate than others. This had the potential for skewing the analysis in favor of those which had larger staffs, more extensive operations, or more organizational support. Further, the author wished to see the actual use of a computer if one had been installed to evaluate the library qualitatively.

Because the 1986 Newspaper Division survey had indicated that newspapers on the Atlantic seaboard were among those most likely to be contemplating library automation, site visits were planned for 20 daily papers in a number of states in the East and with a variety of circulation sizes from approximately 5,000 to 50,000. These sites were selected for the travelling convenience of the researcher since there had been no evidence to indicate any individual state was more or less advanced in providing automated reference service. Thus locations were chosen from six states—Alabama, Florida, Maryland, Massachusetts, New Jersey, and Virginia. All visits were scheduled to be completed within a 3 1/2 month period beginning September 1989.

To assure participation in the study by the librarians or editors contacted, it was decided that telephone calls rather than letters would be employed in making the request. Individuals identifying themselves as the "person responsible for the library or morgue operation" were given information regarding the purpose and scope of the research, the time necessary for the librarian or editor's involvement, and the researcher's qualifications. All were assured of the anonymity of the newspaper in the final published report. Although there was initial reluctance expressed by some of those contacted—often because of the time constraints of the staff or the perceived inadequacy of the library—all 20 selected sites eventually agreed on participation. The researcher's early concern of rejection by potential interviewees proved unfounded. Many persons, in fact, were ecstatic at having the opportunity to talk about the difficulties of providing library support to journalists and editorial staff in their specific operation. This was as true for editors as it was for librarians.

## Sample

Of the 170 daily newspapers published in the six states visited, 120 fall into the criteria of small papers as defined by this study—i.e., approximately 50,000 or under. (Circulation figures and the list of newspapers were obtained from *Standard Rate and Data Service: Newspapers*, July 1989. An attempt was made in site selection to visit newspapers in each circulation size up to 50,000. Two newspapers slightly exceeded 50,000 which accounts for the 52,000 circulation figures in the rest of the paper). 16.7% of those eligible were visited, or 11.8% of the total population of small daily publications in these states (see Table 1). The states themselves varied greatly in the percentage of papers that fell into the small categories. One state, for instance had more than 90% of its papers in the under 52,000 category while another had only 43.5%. In two states approximately half of all newspapers were under 15,000. In an effort to distribute visits to as wide a range of circulation sizes as possible, in no state was more than one paper from each circulation category visited. Therefore, 11 papers or 55% of those sites visited had more than 25,000 circulation although this represented 39 or 33% of the 120 papers designated as "small" (see Table 2). In other words, the study was slightly skewed toward the larger of these small papers.

A four-page questionnaire was designed to be used with those persons interviewed to assure uniformity in the basic questions. Areas to be covered included qualifications and length of tenure of the librarian, library staff size—both full and part time, librarian's experience with computers, presence of microcomputers in the library and their use, procedures for

**Table 1 Profile of States By Circulation Size And Percent of Papers Visited**

| State | Number of Sites Visited | Number of Newspapers In State | | Percent of Newspapers Visited | |
|---|---|---|---|---|---|
| | | Under 52,000 | Total | Under 52,000 | Total |
| A | 1 | 17 | 21 | 5.9 | 4.8 |
| B | 8 | 27 | 45 | 29.6 | 17.8 |
| C | 6 | 10 | 11 | 60.0 | 54.5 |
| D | 2 | 32 | 41 | 6.3 | 4.9 |
| E | 2 | 10 | 23 | 20.0 | 8.7 |
| F | 1 | 24 | 29 | 4.2 | 3.4 |
| Total | 20 | 120 | 170 | 16.7 | 11.8 |

**Table 2 Number of Newspapers Visited In Each Circulation Size**

| Circulation Size | Total Number of Newspapers In 6 States | Total Number Visited | Percent Visited |
|---|---|---|---|
| 5,000 | 9 | 1 | 11.1 |
| 5,000–10,000 | 29 | 2 | 6.9 |
| 10,000–15,000 | 26 | 3 | 11.5 |
| 15,000–20,000 | 5 | 1 | 20.0 |
| 20,000–25,000 | 12 | 2 | 16.7 |
| 25,000–30,000 | 5 | 2 | 40.0 |
| 30,000–35,000 | 14 | 2 | 14.3 |
| 35,000–40,000 | 8 | 2 | 25.0 |
| 40,000–45,000 | 6 | 1 | 16.7 |
| 45,000–50,000 | 3 | 2 | 66.7 |
| 50,000–52,000 | 3 | 2 | 66.7 |
| Total | 120 | 20 | 16.7 |

providing information to journalists and editors from either an automated system or traditional clip files, use of outside databases for retrieval of information, type and quality of other reference material, future plans for automation in the library, and computerization efforts in other newspaper departments. In addition, the interviewee was to be encouraged to talk about successes and difficulties in satisfying the newspaper staff's information needs. These open-ended questions would allow the researcher to determine whether the librarian or other individuals were making the professional decisions relating to the day-to-day operation.

All visits were to include a library tour if possible. Background information on the household income of the surrounding community, circulation size of the paper, and ownership of the publication was to be determined prior to the visit.

## Findings

"The 'Morgue' is Dead" trumpeted the initial article in a 1977 *Editor & Publisher* series

discussing the positive changes taking place in newspaper libraries including electronic information centers and automated storage and retrieval systems.[9] This 1989 research indicated, however, that for most small papers this heady optimism was grossly overstated. For instance, 6 of the 20 daily newspapers visited (30%) had no library at all! In most of these "library-less" papers, reporters were responsible for keeping their own clips and in each case the editor interviewed was clearly not happy with either the procedure or the results.

Of the other 14 newspapers, a variety of clipping techniques and sophistication was seen: one paper was in the process of installing and debugging the software for an automated retrieval system (5%); two of the largest papers were in the throes of planning for an automated facility in 1990 (10%); and the remainder (55%) had no plans for any major changes in the foreseeable future. Thus 85% of the sites visited were either without a library or were continuing the traditional clipping and/or indexing files. Yet in every paper visited computers were being used in the editorial system, the circulation, advertising and business departments, and, in many cases, the layout operations.

A few librarians with responsive supervisors had made some attempts to use the new technology in their day-to-day work. One was using a personal computer program which had been designed by one of the reporters to access abstracts of the locally written stories from the paper. Another was using a computer for a list of subject terms used in her clip files as well as a Macintosh for accessing photographs that had appeared in the paper. At least three other librarians and/or editors were valiantly trying to make the best of a technologically-inferior situation by creatively using the storage in the paper's computerized editorial system for lists, dates, obits, or headlines. All recognized this as a make-do solution. Except for these few tentative and faltering attempts, the vast percentage of the remaining 13 sites with libraries were proceeding as a century of librarians before them—virtually an oasis of technological unsophistication in a world gone wild with electronics and computers. (The 14th newspaper had no current library but one was actively being developed with reference materials and equipment already ordered or purchased. This paper was visited, but the library itself could not be further evaluated since it did not fall neatly into either the category of sites with libraries or sites with no libraries.)

The reason for this lack of progress and technological advancement is undoubtedly multifaceted. First, seven of the 13 sites had the equivalent of fewer than one full time staff person in the library (in several cases the individuals were spending half-time or less on library responsibilities), two had one full-time person, and only four locations had more than one FTE working on library tasks. Almost all of the staff interviewed indicated they were stretched, barely able to keep up with the work. Unfortunately, this situation leaves no time for librarians to think, plan, reevaluate procedures and operations, read, visit other facilities, or attend newspaper library workshops. In other words, the status quo is likely to be maintained no matter how ineffectual it may be. Furthermore, in at least four settings the person responsible for the day-to-day operation of the library was treated more as a clerk than as a knowledgeable professional. These persons were told what newspaper articles to clip as well as where and how to file them: personal initiative by the individual closest to the operation was neither expected nor encouraged.

Second, in only six of the 13 newspapers with libraries was there a library staff member who had a basic understanding of computers and their potential use for a news library. Several persons had extensive experience with the editorial or front end system of the newspaper's operation, but this knowledge did not seem to translate into an appreciation of automation in general or an understanding of computer applications for libraries.

Third, only two sites had individuals on the library staff with a MLS degree and only one person had SLA membership. Although these credentials certainly don't assure excellence of service and technological advancement, they do indicate an understanding and appreciation of the field of information science. Such a staff member is also likely to be aware

**Table 3 Status of Library by Increasing Circulation Size of Newspaper**

| Newspaper (Smallest to Largest) | Presence of Library | Staff Size (FTE) | Quality Points |
|---|---|---|---|
| 1 | Yes | .5 | 1 |
| 2 | No | - | - |
| 3 | No | - | - |
| 4 | Yes | .5 | 2 |
| 5 | Yes | .5 | 1 |
| 6 | Yes | .5 | 2 |
| 7 | No | - | - |
| 8 | No | - | - |
| 9 | Yes | .5 | 1 |
| 10 | Yes | .5 | 2 |
| 11 | No | - | - |
| 12 | Yes | 1.3 | 3 |
| 13 | Yes | .8 | 3 |
| 14 | No | - | - |
| 15 | Yes | 1.0 | 3 |
| 16 | Yes | 2.0 | 3 |
| 17 | Library currently being established. | | |
| 18 | Yes | 2.0 | 4 |
| 19 | Yes | 1.0 | 4 |
| 20 | Yes | 2.5 | 5 |

of the heights to which service to constituents could be reached given sufficient staff and financial support. In other words, these individuals will likely recognize high quality in a library operation and will hopefully strive for it. In addition, such qualifications in staff members indicate a level of commitment by the managing editors to a quality library.

In an effort to rate the quality of the library operations, the researcher considered the following: whether there were centralized clips with an individual responsible for their organization and maintenance, whether there was use of multiple clips to provide several access points, whether specialized indexes or abstracts were available, whether there was a staff member available to assist journalists and editors at least eight hours a day, whether and to what extent automation was employed to assist with operations, whether photographs (if included in the library) were managed on a systematic basis, whether there was a reference book and periodical collection which was kept current by an individual on the library staff, whether the librarian had a budget for operations, and whether there was any provision for online database searching. Of course no site in this population of small newspapers was able to reach perfection in all or even most of those areas. However, one of the 13 newspapers with libraries seemed to be significantly more advanced than the others visited and thus was arbitrarily ranked with a score of five. (This library was using a computer-generated subject list that was updated regularly as well as employing computerized access to its photo file. Additionally, it was also the only location where online database searching was available. The reference collection was centralized and current. One of its staff of 2 1/2 persons has a MLS and the other was to have earned hers by May 1990. Yet there was no automated full-text retrieval system or additional computer use planned for the near future and the staff was struggling to maintain its excellent clip file.) Of the remaining 12 librar-

ies, two scored a four, four scored a three, and the rest were scored with either a two or one.

In using this technique to analyze the operation, the researcher determined that both circulation and staff size were highly correlated with the quality of the library in the sites visited for this study. That is, in general, the larger the circulation of the newspaper and the larger the library staff size, the more likely the library appeared to be able to serve the newspaper's information needs (see Table 3). In all seven of those papers which scored a three or above the newspaper librarian was treated as if he or she was a professional. Further, the only two library sites that had persons with the MLS degree were among those with the highest quality scores, the one location with an individual with SLA membership was the site with the highest quality score, and the only location where there was online database searching for editors and journalists was in the single newspaper that scored five. Although these last three variables appear to correlate with quality, the incidents were so few, that it is unwise to generalize to the population of newspaper libraries at large.

On the other hand, there seemed to be no relationship between the community's yearly household income and quality. (Although it was true that the library that ranked highest also had the highest community household income and the community with the lowest household income was served by a paper with no library.) In addition, no correlation—either positive or negative—could be ascertained by examining the corporate ownership of the paper, the state in which the paper was published, or the population of the city.

## Discussion

Although the researcher's hypothesis—that there would be limited use of new computer technology in small daily newspaper libraries—was supported unequivocally, the shockingly low level of information support for journalists and editors for 2/3 of the papers was a surprise. Comments from those contacted included "In jest, does a broken typewriter count as automation?" "Automation?—I can't even get a new file cabinet." "You don't want to come here; we have absolutely nothing for you to see!" "There is no support from the publisher for spending dollars on a library." "The library is not a priority."

Most of the editors who were interviewed when there was no other person assigned to library responsibilities recognized the plight of a newspaper without a centralized library and were interested in suggestions the researcher could offer. Explanations for their situations were usually noted as ones of time and money, but the lack of publisher support for a non-revenue producing department was also frequently mentioned. The appeal for help came at almost all such newspapers; more than one editor suggested the author set up a consulting group to assist these small operations. It must be stated that despite their many daily deadlines, almost every editor was willing to take H–1 hour to talk with the researcher. The plea for help was unmistakable!

More extensive research should be undertaken to determine why some small papers do move toward automation and improved information services (computerized and manual) while others remain sleepily in the decades gone by. From conversations with editors and librarians for this study, some variables that seem likely to provide additional insight include the following: commitment to the library by the newspaper's publisher, management and journalists; role of newspaper's ownership; profile and employment background of the editorial staff; expectations by management and/or publishers on such issues as investigative reporting, analytical articles, and in-depth reporting which require more substantial library support; the organizational structure—i.e., does the library report to a business manager (where there may be more movement for automation as suggested by some writers[10]) or to an editorial manager?

The smallest of papers may not need much automation at the outset, but all those the author of this study visited needed improvement if they were to provide the resources necessary for journalistic quality. Many papers are still at the stage of trying to determine the best way to set up a library with little staff

and even fewer financial resources. The challenges seem insurmountable.

Two groups of organizations should become involved in remedying the situations observed in this research. The first are the local state press associations which should be encouraged to offer workshops at convenient locations for small newspapers—bringing experts to design and present them.

The second organization is the News Division of SLA. Three avenues are suggested to assist this population of small newspapers. The first is a recommendation that additional research be undertaken, perhaps starting with the development of a questionnaire for distribution to all newspapers in the U.S. with circulations of 50,000 or less. This would enable the News Division to determine how it could assist in improving their libraries. The second is a suggestion of initiating a consulting service—free except for travel costs—to all small newspapers. And third, an aggressive attempt should be made to reach newspaper managers and business personnel to explain the benefits of quality libraries, automation, and regular contacts of their library staff with other librarians.

Perhaps, the audience that should be targeted for information on the benefits of SLA membership is not the library staff person, but the managers and editors of these papers. When money is tight, as it is in virtually all these operations, librarians have a difficult time convincing the management to spend dollars on a non-income producing center in the paper. This is especially true when the persons hired for operating these library departments are neither viewed nor treated as professionals.

In summary, the area of librarianship in small newspaper libraries awaits further study and extensive work to meet the challenges of the last decade of the 20th century. ■

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# Training Endusers on MathSci Disc

*by Beatrice Sichel*

■ **Small academic branch libraries are sometimes reluctant to purchase the latest electronic reference tools because of their narrow subject scope and limited number of clients served. This paper describes how a specific science library successfully installed a CD-ROM database for providing access to the mathematics literature. The librarian presents ways of providing three levels of training so as to ensure that all user groups receive end-user instruction. The three modes include: informal demonstrations, self-instructional guides, and formal class presentations. Patron satisfaction indicated that the expenditure of funds for MathSci Disc was well warranted.**

## Introduction

The decade of the '80s greatly expanded the availability of electronic reference sources. In addition to the increasing array of databases searchable through commercial online search services, many databases were made available in a CD-ROM (compact disc-read only memory) format as well. CD-ROM technology has been accepted enthusiastically in libraries by both patrons and librarians. On the basis of a mid-1980s survey one author predicted that by 1990, 65 percent of libraries would subscribe to at least one database on CD-ROM. [1] The accuracy of that prediction appears to be on target. This paper describes how an academic branch library introduced a mathematics database on CD-ROM and trained its patrons to conduct their own searches. The specific database discussed here is the Mathematical Reviews database entitled *MathSci Disc.*[2]

## The Library Environment

The Physical Sciences Library is a branch library of the Western Michigan University Libraries. It maintains the collections for four disciplines—geology, computer science, mathematics, and physics. Online databases in all of these subjects are available from commercial vendors and had been utilized on a cost-recovery basis. When news of the availability of the *MathSci* database as a CD-ROM product was announced by the American Mathematical Society (AMS), the library submitted a request to Administration for the purchase of a subscription to the *MathSci Disc* and the necessary hardware and software required for its use. The *MathSci Disc* is prepared by SilverPlatter International, who provides software support. Hardware requirements are a monitor, a compact disc (CD-ROM) drive, and an IBM PC or compatible microcomputer. A printer is not mandatory but is very useful. The workstation assembled in the Physical Sciences Library consists of a Zenith monochrome monitor model ZMM-149-A, a Zenith PC model ZCV-2525-EY, a Hitachi CD drive model CDR-1502S, and a Hewlet Packard DeskJet printer. *MathSci Disc* is a subset of *MathSci Online.* It contains all reviews from the printed index *Mathematical Reviews* and all citations from *Current Mathematical Publications* (CMP), a current awareness journal. Both of these reference tools are published by the American Mathematical Society and are the most widely used sources by the mathematics community. *MathSci Disc* currently covers material from January 1990—June 1991 and is divided into two disks. It is updated semi-annually.


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Why was the Physical Sciences Library so anxious to subscribe to *MathSci Disc*? Although patrons could request to have a search run on the *MathSci* online system, they submitted requests very sparingly. One obstacle was the cost of the search.[3] There were no university funds available to cover online search costs. Patrons either had to pay for them out of their own pockets or out of a research grant. Very few patrons were willing to pay for searches personally when the printed indexes were available free of charge and only a few faculty researchers had external funding that would cover searching costs. Students usually do not have research grants and would have to use personal funds for online searches. Another reason patrons did not have searches run frequently is that an online search could only be conducted by a librarian. Having an intermediary between the patron and the information sources is a disadvantage, especially in a highly technical field like mathematics, in which the librarian may have only an elementary knowledge of the subject. Therefore, the introduction of a self-contained searchable database, that can be directly accessed by the enduser and that offers no time or money constraints promised to provide a substantially more productive and efficient research environment.

## Identifying Potential Endusers

The pool of potential endusers was quite large. All of them have, as a common link, an interest and understanding of mathematics although at varying levels of expertise. We separated them into four groups: 1) mathematics faculty, 2) mathematics graduate students, 3) undergraduate students, and 4) others. Faculty members who are engaged in mathematical research will have the greatest in-depth knowledge of the field. They will most likely be very familiar with the printed *Mathematical Reviews* and *Current Mathematical Publications*. Some of them, however, have limited exposure to online databases and are a bit hesitant to use them. Since the Western Michigan University Mathematics Department offers both masters and doctoral programs requiring either a thesis or dissertation, graduate students comprise a large portion of potential users. They often have had quite a bit of exposure to various online retrieval systems and consider this just a variation of some already familiar system. Most undergraduate students find the *MathSci Disc* too specialized. Exceptions are mathematics majors and those taking many mathematics courses as a requirement for some other technical field. All other users can be designated as belonging to a heterogeneous group that includes: faculty from other departments, staff members, visiting scholars, faculty from nearby colleges, advanced high school students, and area residents. This diverse group would be expected to demonstrate only sporadic interest in the database.

## Methods of Training

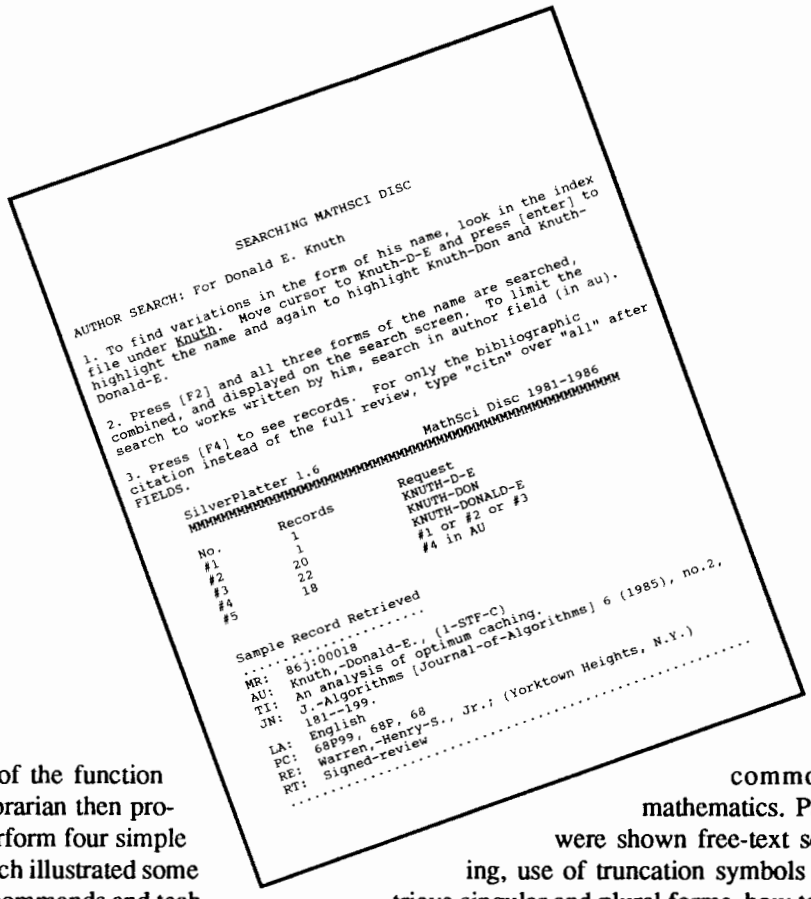
Whenever a library contemplates introducing a "hands-on" system for patron use, it must carefully consider the amount and type of training that will be required. Harter and Jackson ask "...whether intended users will be able to conduct searches successfully without special training or assistance." They counsel that, "Once an estimate of the required amount of end-user training has been established, training aids and methods must be considered."[4]

### Informal Demonstrations

One of the quickest and least painful methods of introducing database searching to patrons is for the librarian to give demonstrations of basic searching techniques. Since the *MathSci Disc* workstation is small, the Physical Sciences librarian decided to limit demonstrations to groups of three persons. A group of three people can see the monitor easily and can interact with the instructor without feeling self-conscious about posing elementary questions. A letter was distributed to faculty and graduate students in the Mathematics Department announcing the installation of *MathSci Disc* and requesting that individuals sign up for an hour-long demonstration. These were offered twice a week.

Each demonstration began with an overview of the *MathSci* database, followed by an

**Figure 1**



SEARCHING MATHSCI DISC

AUTHOR SEARCH: For Donald E. Knuth

1. To find variations in the form of his name, look in the index file under Knuth. Move cursor to Knuth-D-E and press [enter] to highlight the name and again to highlight Knuth-Don and Knuth-Donald-E.

2. Press [F2] and all three forms of the name are searched, combined, and displayed on the search screen. To limit the search to works written by him, search in author field (in au).

3. Press [F4] to see records. For only the bibliographic citation instead of the full review, type "citn" over "all" after FIELDS.

SilverPlatter 1.6 MathSci Disc 1981-1986

| | Records | Request |
|---|---|---|
| No. | 1 | KNUTH-D-E |
| #1 | 1 | KNUTH-DON |
| #2 | 20 | KNUTH-DONALD-E |
| #3 | 22 | #1 or #2 or #3 |
| #4 | 18 | #4 in AU |
| #5 | | |

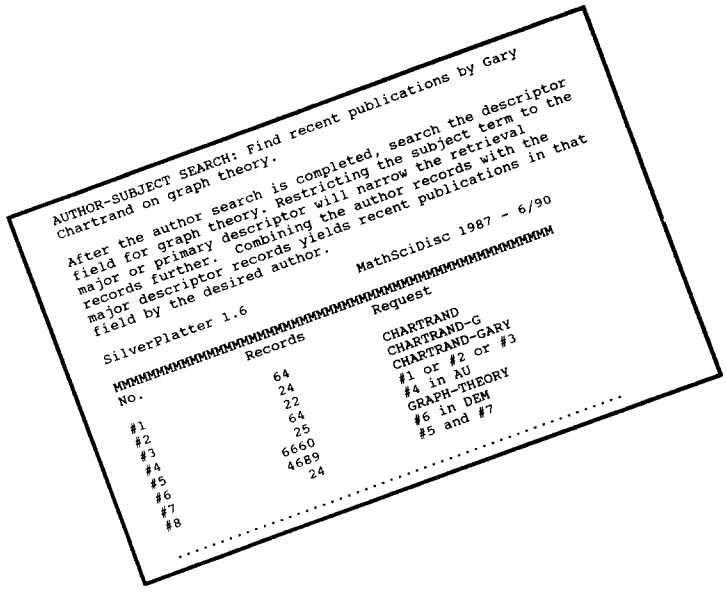
Sample Record Retrieved

MR: 86j:00018
AU: Knuth,-Donald-E., (1-STF-C)
TI: An analysis of optimum caching.
JN: J.-Algorithms [Journal-of-Algorithms] 6 (1985), no.2, 181--199.
LA: English
PC: 68P99, 68P, 68
RE: Warren,-Henry-S., Jr.; (Yorktown Heights, N.Y.)
RT: Signed-review

explanation of the function keys. The librarian then proceeded to perform four simple searches which illustrated some of the basic commands and techniques. Participants received print-outs of both the search strategy and search results. Search number one was an author search (Figure 1). Users were shown how to browse through the index and to use variant forms of a personal name. The Boolean operator "or" was demonstrated as was how to limit the search to the author field. (Without introducing this limit, records of that author's reviews prepared for *Math Reviews* would also be retrieved.) Users were then shown how to display the record on the screen and how to restrict the record to the bibliographic citation when they did not wish to see the entire review. The print function was then demonstrated and patrons were shown how to override the set limit of five records. The first five records were printed and distributed with explanations of the fields and field names given. Searches 2, 3, and 4 were for subject information on two-word phrases that were not descriptors. This type of phrase is common in mathematics. Patrons were shown free-text searching, use of truncation symbols to retrieve singular and plural forms, how to limit the language of retrieved records to English (very important in an international database if the user is not multilingual), use of the Boolean operator "and" to narrow a search, and how to limit the phrase to the title field and by document type.

Search number five was for publications by a known author in order to compile a subject bibliography for an individual (Using the name of a colleague as an example in this search heightens the interest for the audience.) (Figure 2). Finally, patrons were shown how to download the results of the search to a floppy disk so that it may be taken back to their homes or offices. At the conclusion of the demonstration, patrons were invited to ask questions and provide feedback. A frequent question asked by faculty members was whether they could access the *MathSci Disc* from their office through the campus VAX network.

**Figure 2**



AUTHOR-SUBJECT SEARCH: Find recent publications by Gary Chartrand on graph theory.

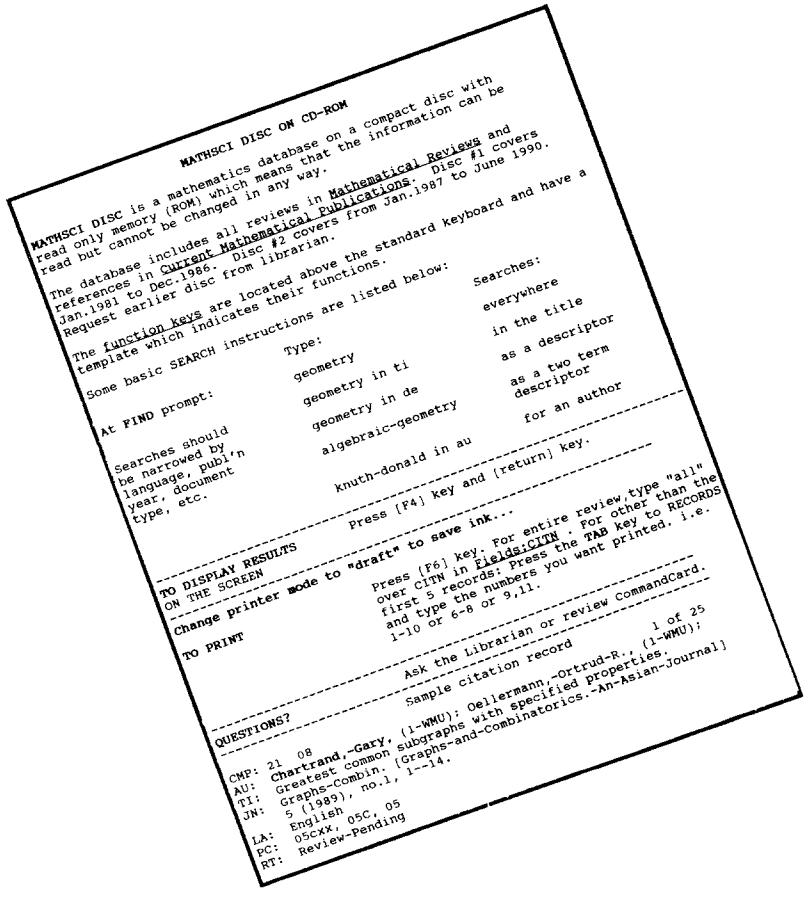
After the author search is completed, search the descriptor field for graph theory. Restricting the subject term to the major or primary descriptor will narrow the retrieval records further. Combining the author records with the major descriptor records yields recent publications in that field by the desired author.

SilverPlatter 1.6

MathSciDisc 1987 - 6/90

| No. | Records | Request |
|---|---|---|
| #1 | 64 | CHARTRAND |
| #2 | 24 | CHARTRAND-G |
| #3 | 22 | CHARTRAND-GARY |
| #4 | 64 | #1 or #2 or #3 |
| #5 | 25 | #4 in AU |
| #6 | 6660 | GRAPH-THEORY |
| #7 | 4689 | #6 in DEM |
| #8 | 24 | #5 and #7 |

**Figure 3**



**MATHSCI DISC ON CD-ROM**

**MATHSCI** DISC is a mathematics database on a compact disc with read only memory (ROM) which means that the information can be read but cannot be changed in any way.

The database includes all reviews in Mathematical Reviews and references in Current Mathematical Publications. Disc #1 covers Jan.1981 to Dec.1986. Disc #2 covers from Jan.1987 to June 1990. Request earlier disc from librarian.

The function keys are located above the standard keyboard and have a template which indicates their functions.

Some basic SEARCH instructions are listed below:

| At **FIND** prompt: | Type: | Searches: |
|---|---|---|
| | geometry | everywhere |
| | geometry in ti | in the title |
| | geometry in de | as a descriptor |
| Searches should be narrowed by language, publ'n year, document type, etc. | algebraic-geometry | as a two term descriptor |
| | knuth-donald in au | for an author |

**TO DISPLAY RESULTS ON THE SCREEN** Press [F4] key and [return] key.

**Change printer mode to "draft" to save ink...**

**TO PRINT** Press [F6] key. For entire review, type "all" over CITN in Fields:CITN . For other than the first 5 records: Press the **TAB** key to RECORDS and type the numbers you want printed. i.e. 1-10 or 6-8 or 9,11.

**QUESTIONS?** Ask the Librarian or review CommandCard.

Sample citation record 1 of 25

CMP: 21 08
AU: **Chartrand,-Gary**, (1-WMU); Oellermann,-Ortrud-R., (1-WMU);
TI: Greatest common subgraphs with specified properties.
JN: Graphs-Combin. (Graphs-and-Combinatorics.-An-Asian-Journal) 5 (1989), no.1, 1--14.
LA: English
PC: 05Cxx, 05C, 05
RT: Review-Pending

### Self-instructional guides

Some patrons preferred to explore the database on their own. They may have familiarity with other automated retrieval systems or just want to begin with hands-on experience and then ask specific questions as the need arises. For them, various guides were posted near the workstation. The two commercially produced guides that were made available were the SilverPlatter Command Card and a function keychart. The function keychart defines how each of the ten numbered function keys works and how to use the "ESCAPE" key for additional functions. The SilverPlatter Command Card, which was purchased separately, presents a thorough and concise explanation of basic and advanced searching steps. It has a drawback, however, the search examples are taken from the ERIC database so the patron is not shown some of the unique features of the *MathSci* database. The library produced its own guide for patrons to use which is a short, one-page handout that serves to get a searcher started (Figure 3). It explains how to start a simple search, how to display results, and how to print results. It also includes a sample record of a citation and encourages patrons to ask questions. It shows how to narrow a search to specific fields, but stops short of demonstrating the varied possibilities of combining terms in Boolean search strategy.

The *MathSci* database has a comprehensive tutorial available on screen. It includes the complete list of fields with an explanation and example of each field, a thorough description of each record and the type of information offered, and several sample searches. This extensive tutorial requires over 40 screens and provides the user with a fairly complete guide for mastery of this database.

### Class presentation

The Physical Sciences Library also invited faculty members of the Mathematics Department to request a class presentation for students in upper level or graduate courses. The nature of the presentation varied with the class size. If the class had ten or fewer members, arrangements were made for a demonstration where students gathered around the workstation. For larger classes, the presentation was made in the classroom using overhead projections of sample screens. At the conclusion of the presentation, the students are invited to search the database on an individual basis. The instructor may reinforce the presentation by assigning each student some test questions to be answered as a practice exercise.

## Conclusion

This paper describes how one particular academic branch library installed a CD-ROM for the Mathematics Literature (*MathSci Disc*) and the various training approaches that were used to introduce patrons to this new electronic reference tool. The librarian quickly recognized that patrons will only avail themselves of a valuable new search tool if they are helped to feel comfortable with it. She is in complete agreement with Stephen Zink, who recently stated that "Despite the best intentions and efforts of CD-ROM manufacturers, the user interface is not intuitive."[5]

Employing the various methods of training described above, the Physical Sciences Library has been able to reach the entire range of potential users. Substantial use of this CD-ROM and the accompanying satisfaction detected on the faces of successful searchers has more than justified the expenditure for *MathSci Disc*. An additional benefit of training patrons to use this CD-ROM system is the carry-over that it provides to other electronic bibliographic databases. With the knowledge gained about the structure of databases, search strategies, and search techniques, patrons are more comfortable in utilizing both Western Michigan University's online catalog and other subject-specific databases. ■

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# Technology Used in Online Searching

*by Norman Howden and John Dillard*

■ **How rapidly is technology incorporated into libraries? A survey of equipment and software used by online searchers is used to update the notions we have of technological advances over the past decade. Conducted in a population of special libraries and online search services, results are related to type of library, staffing, and end user searching. Use of CD-ROMs and local area networks is reported. Interrelationship of intermediary searching and end user searching is explored.**

The continued existence and development of many special libraries and information centers may depend upon our response to technology. Online searching is a major component of our advance into new areas of technology. Within the past several years it has become commonplace to use gateway software packages such as ProSearch and SciSearch, to use CD-ROMs, and to use telecommunications to transmit search results to patrons.[1,2] Libraries may also be using computerized catalogs, telefacsimile, and local area networks. The rapid thrust of microcomputer technology into every nook and cranny of the library has inspired many people to make utopian predictions. Wilfred Lancaster was one of the first, with his essay on "The Paperless Society."[3] Predictions have evolved to more realistic levels as evidenced by Phillip Young's essay on "Library Research in the Future" in January 1989.[4] Young expects to see end users aided by intelligent retrieval systems that dispense full text.

The important change that occurred between Lancaster's and Young's forecast has been the microcomputer revolution, followed rapidly by the trend to develop local area networks. These seem to be very integrative technologies that bind people together in the workplace. At the same time they demand more of the user in terms of knowing how to manipulate functions and locate data in relatively complex user environments.

Two approaches have been taken toward getting us ready for whatever future technology has in store. On one hand, surveys have been made to determine what librarians think should be taught in library school. On the other hand, a few assessments have been made of what technology is being used in libraries and what we can expect to be used in the future. From the library school viewpoint we find the Clevelands who suggest that technology is important in curricula.[5] In an entire issue of *Special Libraries* devoted to education, Miriam Tees pointed out that online searching was important to 85.6% of respondents.[6] Technology was assessed by Watson in 1977.[7] He found that only 32% of commercial libraries conducted online searches, only 31% of academic libraries, and 21% of governmental libraries conducted online searches. He also found that at that time, 95% of all searching was done by intermediaries. Things have changed as Jackson ably points out in a 1989 article.[8] Rapid growth of CD-ROM technology is impacting libraries with a massive need to train endusers in how to search.

From the study by Tees and a recent survey by Buttlar and DuMont,[9] it seems that technology plays a varying role in the life of special librarians. In a first professional position there is a great deal of involvement with technology. Buttlar and DuMont found online searching to


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be the most essential skill among experienced special librarians. Unlike larger public or academic libraries, however, special libraries do not usually provide a niche for a person to pursue technology as an end in itself. Nevertheless, one suspects that technology has become an essential ingredient to adequate performance in an entry-level position. Another variable that makes the amount of technological knowledge hard to assess is the variety of support parent organizations provide. In some settings librarians must do all of their own wordprocessing, install their own microcomputers and software, and train staff. In other organizations these tasks are all performed by support staff. Library educators have largely chosen to educate everyone in technology to some degree, probably assuming that it would be essential to some and an enhancement to others.

Understanding how technology is being used also gives us perspective not only about how closely we come to fulfilling utopian objectives, but how we must formulate policy to insure the best use of resources. As we move toward greater information dissemination in electronic format, whether hypertext or electronic mail, we need to be aware of the resources that are typically available to support such efforts.

## Objectives

Questions that need to be answered in order to understand technology at work in libraries and to construct effective curricula include:

- How computer literate do new graduates need to be?
- What systems can graduates expect to work with frequently?
- Do many libraries use CD-ROMs and local area networks?

Answers to such questions must come from ascertaining which librarians use which advanced technologies. It is reasonable to expect that the more technology used, the more computer literate librarians need to be. This is tempered, of course, by some consideration as to the type of responsibility librarians are likely to have—whether they are merely providers of packaged products or whether they must set up and manage systems.

## Methodology

As a first effort at assessing the availability and utilization of technology by various types of libraries, a survey was conducted in a relatively high-technology area. The Dallas-Fort Worth area is headquarters for a growing number of high-technology companies, including IBM, Texas Instruments, and Tandy. It would seem that librarians in such a metropolitan area would have maximum encouragement to own and use technology.

To further increase the likelihood of identifying users of high-technology products, two professional organizations were selected as target groups. The Special Libraries Association Local Planning Group and the North East Texas Online Users Group were selected as being composed of frequent online searchers. It seems reasonable to expect that membership in one of these organizations signals a commitment of personal and institutional funding to acquiring and using state-of-the-art technology. Membership dues are required in both cases, meetings take place outside of normal office hours, and members are asked to develop and support the organization on a frequent basis.

A survey form was developed in the fall of 1988 (Appendix 1). Subjective review of the instrument was conducted with library science students and academic librarians. The survey form was prepared and distributed to members of the two professional organizations targeted in November. Most of the surveys were returned by mid-March of 1989. Of a total 120 surveys distributed, 68 usable forms were returned for a return rate of 56 percent. The returns were distributed by type of library as shown in Table 1. Distribution of returns across the types of library is probably proportioned as we would expect within the groups surveyed.

## Results

Survey recipients appear to have been relatively candid in appraising the technology they use in online searching. A total of 32 narrative comments were entered on the returned surveys. Most were concerned with specifics of which software is used or expanded on the context of their answers.

Modem control programs are probably the most elementary technology in use (Table 2). There is a suggestion that modems and modem programs were purchased with an eye to quality—as represented by the use on Smartcom which is sold with Hayes modems. Hayes modems have set a de facto standard in microcomputing, and that appears to be mirrored here, accounting for 41% of used programs as shown in Figure 3. Three "shareware" programs PC-Talk, ProComm, and Kermit, account for 25% of the total modem programs in use. When asked for their preference in modem control programs respondents clearly favored Hayes Smartcom, followed lethargically by ProComm. These choices parallel the general popularity of Smartcom, although it is often outsold by Crosstalk.[10] Crosstalk is not normally sold with modems.

The next most elegant technology likely to be used would seem to be gateway software. Various names have been given to this kind of software. For purposes of the survey a "gateway" is defined as software that allows uncomplicated access to database systems via asynchronous telecommunications. The software may also facilitate a search by prompting the user or interpreting Boolean logic into search system commands. Two very similar programs that run on IBM PC compatibles were the most popular, ProSearch and Dialog Link (Table 3). Only 28 librarians reported using gateways.

Recipients responded to the questions about owning CD-ROMs and participating in local area networks by indicating that 26 owned CDs and 28 participated in LANs. These two technologies may well serve as the primary indicators of the degree of participation in high technology, with roughly 40% of respondents

**Table 1 Survey Respondents by Type of Library**

| Type of Library | No. of Respondents |
|---|---|
| Company | 37 |
| Academic | 15 |
| Public | 3 |
| Consultant | 3 |
| Producer | 1 |
| Other | 8 |

**Table 2 Modem Control Programs in Use**

| | Number of Libraries | |
|---|---|---|
| | Using | Preferring |
| Hayes | 43 | 12 |
| Procomm | 11 | 5 |
| PC-Talk | 9 | 0 |
| Crosstalk | 10 | 2 |
| Hyperaccess | 0 | 0 |
| Telpac | 0 | 0 |
| Kermit | 6 | 0 |
| Grateful | 4 | 0 |
| Weslaw | 8 | 0 |
| Other | 14 | 1 |

**Table 3 Gateway Software Packages Used**

| Software | Responses |
|---|---|
| ProSearch | 7 |
| SciMate | 1 |
| DialogLink | 14 |
| Other | 8 |

**Table 4 Hi-Tech Factors by Type of Library**
**Analysis of Variance**

| Type of Library | Beta Value (CD-ROM) | Beta Value (LAN) |
|---|---|---|
| Academic | -.449535 | -.059298 |
| Public | -.321217 | -.039547 |
| Company | .029802 | -.317568 |

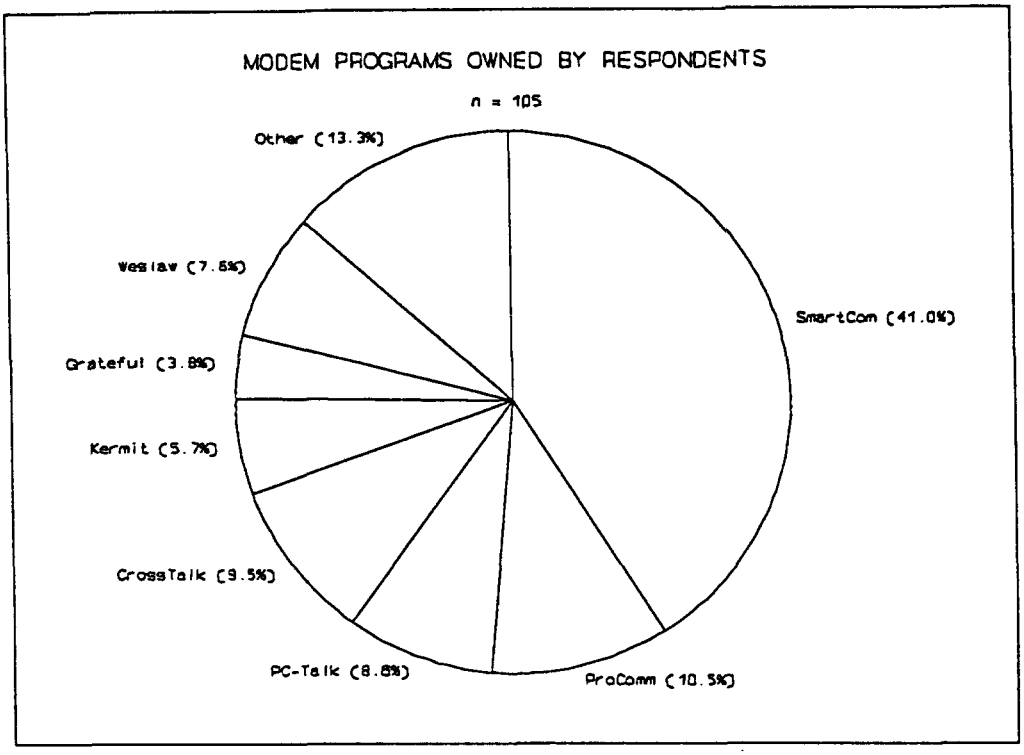


**Figure 1: Distribution of Modem Programs by Brand Name**

participating in each of them. When related to the type of library, as shown in Figure 2, it is clear that corporate and academic libraries are the types of libraries participating most actively in these technologies.

The questionnaire also asked respondents whether they intended to purchase either CD-ROMs or LANs in the coming year. Adding those respondents who indicated an intention to those that already posses the technology brings the number who will have CD-ROMs to 39 and those who will have LANs to 35. Altogether, 57% would own CD-ROMs and 51% would own LANs.

In an attempt to analyze the relationship between high technology and factors that may favor its use, multiple regression tests were used to determine the relationship between "hi-tech" and type of library. For this purpose hi-tech is defined as owning either CD-ROMS or a local area network. The relationship between hi-tech and type of library is shown in Table 4. There is a tendency for academic and public libraries to have CD-ROMs and a tendency for corporate libraries to have local area networks.

Another variable, the amount of staff devoted to high technology, did not seem to have an identifiable link to the presence of high technology. Only 10 librarians reported having a staff member devoted to online searching and there was no significant relationship between this factor and the presence of high technology. Of those librarians in organizations with local area networks, only 17 reported that they use them and only 11 offer library services via the LAN. Clearly personnel may represent a resource constraint associated with these uses of technology. Further study might well explore the degree that librarians feel lack of personnel is a hindrance to use of technology and how they perceive librarians with technological talents. We already know that some librarians perceive that technological ability lends a "mantle of technology" effect to promotions. The question that may need exploration is whether this is true in all types of libraries.

Use of technology must also be related to need. This is intuitively demonstrated by the

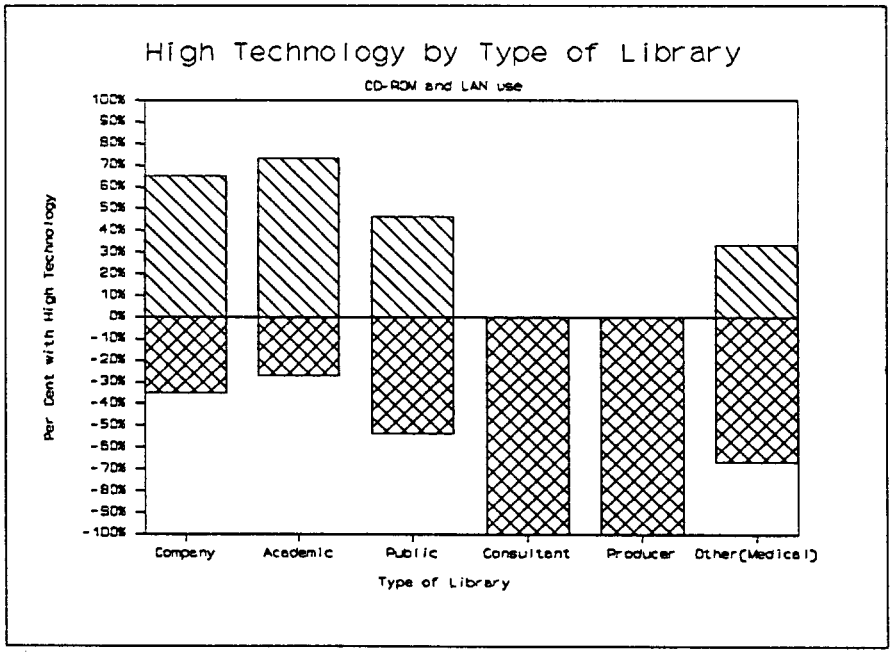


**Figure 2: Prevalence of Higher Technologies by Type of Library**

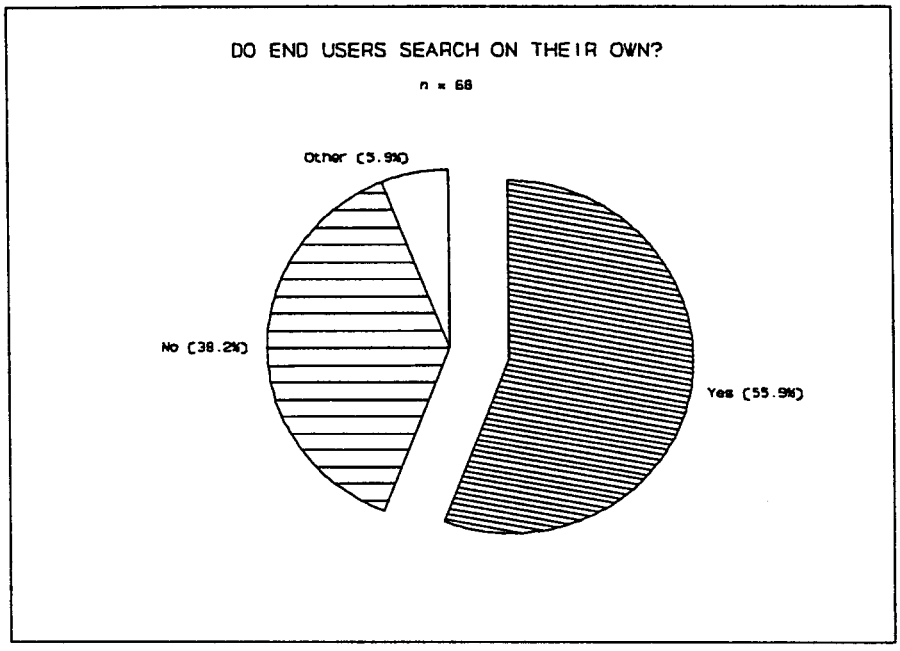


**Figure 3: Percentage of Respondents Whose Users Search for Themselves**

lack of "hi-tech" use by consultants and producers (Figure 2). Obviously members of these two groups belong to organizations that do not have an internal library and are not large enough to justify investment in a local area network. A further test was undertaken to see if end-user searching related to type of library. A relatively large proportion of respondents indicated that end users do their own searching (Figure 1). The result of the multiple regression test revealed no significant relationship between enduser searching and type of library, however.

## Conclusions

The libraries sampled give a clear baseline for assessing the technological environment. Only five librarians, or 7%, report not doing online searching, yet all but one have modem control programs. A personal computer is a basic piece of equipment for these librarians. The percentage of librarians reporting involvement in "hi-tech" is a strong basis for appreciating the growth of technology in use in libraries. We can reasonably expect most librarians in these libraries to benefit from being computer literate and having experience using computer software.

Progress towards a more encompassing electronic environment is obvious when compared to studies a decade ago. Evidence of the growing availability of CD-ROMs, local are networks, and communications suggests that librarians have been exploiting these technologies very successfully. Library school students and those making career changes should find a definite advantage in understanding these technologies. Clearly we must use the ability to deal with microcomputer-related technology as a foundation for initial professional training and for continuing education. ■

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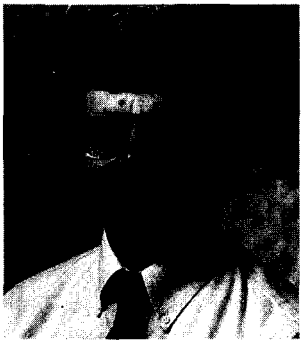

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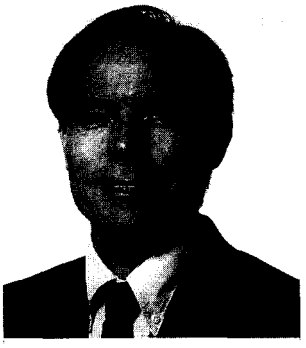

**John Dillard, M.S.L.S., is Minority Affairs Librarian at the University of Texas at Arlington.**

# 1991 Salary Survey Update

*by Ann Thompson*

To aid special librarians in determining competitive salaries, the Special Libraries Association conducts an in-depth salary survey every two years. During the intervening years, between full membership surveys, a random sample of 25% of the membership is polled to collect current salary data. These results provide an overview of special librarians' salaries and a measure of annual increases since the most recent in-depth survey.

During April 1991 survey forms were mailed to a random sample of 2,783 SLA members and associate members. This sample was divided between 2,524 survey recipients in the United States and 259 recipients in Canada. From this sample 1,332 valid responses were received from U.S. members and 143 from Canadian members. This represents a 53% valid return rate from both the United States and Canada combined. An additional 152 responses were rendered invalid for lack of salary information. Overall this represents a 58.5% response rate.

This response rate is extremely high for a mail survey. The level of response has several implications for its results:

1) It indicates a high degree of interest and involvement on the part of SLA members in their organization generally, and in SLA's efforts to obtain their input;

2) It provides a high degree of confidence that the results of the survey will be indicative of the membership group as a whole; and

3) It provides a smaller margin of error in any statistical estimates which may be made of the membership population based on the sample data.

Table 1 reports changes in both mean and median salaries from April 1, 1990 to April 1, 1991 within nine U.S. Census Divisions, the overall United States, and Canada. Mean and median salary figures are included for both 1990 and 1991 along with the percentage change.

Overall U.S. mean salaries broke the $40,000 level through increases of 6.76% between April 1, 1990 and April 1, 1991. By contrast for the same periods ending April 1, mean U.S. salaries increased 4.27% for 1990 and 6.1% for 1989.*

For Canada mean salaries increased by 7.71% for the year ended April 1, 1991. For similar periods mean Canadian salaries increased by 7.37% for 1990 and 7.2% for 1989.*

Both median and mean salaries showed increases for all Census Divisions in the United States. Increases in median salaries ranged from 2.24% in the East South Central to 8.82% in the East North Central. Mean salary increases had a much larger range from 1.67% in New England to 9.44% in the Middle Atlantic.

Table 2 examines median salaries in rank order by Census Division within the United States and for Canada overall. Two Census Divisions remained unchanged in rank since 1989. These were New England and East South Central. All others moved up or down one place except West South Central which dropped from fourth place to sixth place. The Pacific Census Division switched places with the


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## Table 1 1991 Mean and Median Salaries by Census Division in Rank Order or Percentage of Change in Median from 1990 to 1991 including National Overall Figures

| Census Division | 1990 | Median % increase | 1991 | 1990 | Mean % increase | 1991 |
|---|---|---|---|---|---|---|
| East North Central | 34,000 | 8.82% | 37,000 | 36,072 | 7.13% | 38,643 |
| Pacific | 38,000 | 7.69% | 40,923 | 39,519 | 7.77% | 42,588 |
| West North Central | 31,398 | 7.65% | 33,800 | 33,628 | 7.14% | 36,029 |
| Mountain | 31,000 | 7.15% | 33,216 | 32,558 | 7.48% | 34,993 |
| South Atlantic | 35,335 | 6.13% | 37,500 | 37,833 | 4.70% | 39,612 |
| Middle Atlantic | 38,189 | 4.74% | 40,000 | 40,694 | 9.44% | 44,534 |
| West South Central | 32,760 | 3.79% | 34,000 | 34,382 | 2.46% | 35,227 |
| New England | 36,421 | 3.73% | 37,780 | 38,775 | 1.67% | 39,421 |
| East South Central | 31,620 | 2.24% | 32,327 | 32,084 | 6.96% | 34,317 |
| Overall United States | 35,700 | 5.81% | 37,775 | 37,761 | 6.76% | 40,312 |
| Canada* | 41,360 | 3.97% | 43,000 | 42,691 | 7.71% | 45,984 |

* Salaries reported as of April 1 in Canadian currency. April 1, 1990 $1.16 (Canadian) = $1.00 (U.S.); April 1, 1991 $1.15 (Canadian) = $1.00 (U.S.).

## Table 2 Geographic Salary Distribution in Rank Order of 1991 Median

| Census Division | Average Lowest 10% | 25% | Median 50% | 75% | Average Highest 10% | Number | Mean |
|---|---|---|---|---|---|---|---|
| Pacific | 23,722 | 34,000 | 40,923 | 48,000 | 74,431 | 246 | 42,588 |
| Middle Atlantic | 23,941 | 32,748 | 40,000 | 51,000 | 87,452 | 301 | 44,534 |
| New England | 24,688 | 31,500 | 37,780 | 44,400 | 65,813 | 102 | 39,421 |
| South Atlantic | 23,611 | 31,000 | 37,500 | 44,752 | 69,866 | 219 | 39,612 |
| East North Central | 23,030 | 28,500 | 37,000 | 44,100 | 65,574 | 224 | 38,643 |
| West South Central | 21,554 | 29,000 | 34,000 | 38,220 | 57,550 | 79 | 35,227 |
| West North Central | 22,120 | 26,800 | 33,800 | 42,000 | 62,875 | 69 | 36,029 |
| Mountain | 21,305 | 28,000 | 33,216 | 41,000 | 57,576 | 54 | 34,993 |
| East South Central | 20,343 | 28,000 | 32,327 | 39,104 | 58,196 | 38 | 34,317 |
| Canada* | 28,505 | 37,623 | 43,000 | 50,465 | 75,881 | 143 | 45,984 |
| Overall United States | 22,923 | 30,800 | 37,775 | 46,000 | 72,680 | 1,332 | 40,312 |

* Salaries reported as of April 1 in Canadian currency. April 1, 1990 $1.16 (Canadian) = $1.00 (U.S.); April 1, 1991 $1.15 (Canadian) = $1.00 (U.S.).

## Table 3 1991 Salary Distribution by Job Title—United States

| Job Title | Average Lowest 10% | 25% | Median 50% | 75% | Average Highest 10% | Number | Mean |
|---|---|---|---|---|---|---|---|
| Manager | 26,729 | 36,600 | 44,057 | 55,260 | 87,442 | 506 | 47,886 |
| Assistant/Section Head | 25,040 | 32,000 | 39,952 | 45,822 | 60,392 | 139 | 39,893 |
| Libr./Info Specialist | 22,252 | 28,000 | 33,550 | 39,480 | 54,679 | 654 | 34,801 |
| Support Staff | 18,519 | 22,500 | 25,000 | 27,000 | 43,640 | 15 | 26,917 |

**Table 4** **1991 Salary Distribution by Job Title—Canada***

| Job Title | Average Lowest 10% | 25% | Median 50% | 75% | Average Highest 10% | Number | Mean |
|---|---|---|---|---|---|---|---|
| Manager | 38,525 | 45,000 | 52,146 | 64,548 | 81,748 | 53 | 55,201 |
| Assistant/Section Head | 32,498 | 37,872 | 45,700 | 49,000 | 57,000 | 13 | 44,428 |
| Libr./Info Specialist | 27,059 | 32,237 | 39,300 | 44,000 | 57,243 | 73 | 39,493 |

* Salaries reported as of April 1 in Canadian currency. April 1, 1990 $1.16 (Canadian) = $1.00 (U.S.); April 1, 1991 $1.15 (Canadian) = $1.00 (U.S.).

**Table 5** **Mean and Median Salary Increases by Job Title from 1990 to 1991***

| Job Title | United States Mean | United States Median | Canada Mean | Canada Median |
|---|---|---|---|---|
| Manager | 7.49% | 4.89% | 14.31% | 13.36% |
| Assistant/ Section Head | 7.80% | 9.73% | 9.64% | 1.55% |
| Librarian/Information Specialist | 5.01% | 4.84% | 4.99% | 6.21% |
| Support Staff | 4.68% | 15.21% | (**) | (**) |

* Salaries reported as of April 1 in Canadian currency. April 1, 1990 $1.16 (Canadian) = $1.00 (U.S.); April 1, 1991 $1.15 (Canadian) = $1.00 (U.S.).

** Response was not statistically significant

Middle Atlantic Division to become first. East South Central remained last.

Comparing median salary changes between 1990 and 1991 reflected only three changes in rank. West North Central moved from eighth to seventh; Mountain moved from ninth to eighth; and East South Central moved from seventh to ninth where it had been in 1989.*

Tables 3 and 4 reflect salaries by job title for both the U.S. and Canada. All positions have a wide range for salaries which is indicative of the diversity in the size of the libraries and job tenure of the individuals covered by the survey.

Table 5 reflects percentage increases by job title for both mean and median salaries from 1990 to 1991.*

## Unemployment

Out of 106 valid Canadian responses eight or 7.5% indicated they were either unemployed or had been unemployed during the period April 1,1990 through March 31, 1991. The average number of months unemployed was six.

For the United States there were 1,159 valid responses on employment status, out of which 77 or 6.6% had been unemployed for some portion of the year ending March 31,1991. The average number of months unemployed was five. ■

* Figures for 1990 are based on a full membership survey whereas figures for 1989 and 1991 are from a random sample.

**Ann Thompson is Director, Research, Special libraries Association.**

# On the Scene

# Sources for Information on Foreign Companies: An Update

*by Flower L. Hund*

**■ In your summer issue of *Special Libraries*, "Sources for Information on Foreign Companies," by Flower L. Hund, provides a resource list for a rapidly growing area of need in the information world. Section 3 of the article provided names of online databases; since online technology is a constantly-changing field, the list below updates and adds to Ms. Hund's valuable resource list.**

Online databases provide a breadth of coverage and searching flexibility impossible to obtain on paper or film. New databases are becoming available at a rapid rate and many established ones are expanding.

The list below is not exhaustive. A much more complete list of directory type databases, a description of their contents and their vendors is appended to Reva Bach's article, "A Survey of International Company Directories" in the April 1989 issue of *Database*, or can be found in standard database directories.

Dialog seems to still be the major online vendor of international company information in the United States, but it does not have the monopoly. DataStar, a relative newcomer from Europe, has some unique databases. Unless noted, all those listed below are available through Dialog although they may also be available elsewhere.

**Cancorp Canadian Corporations, Micromedia Limited, 158 Pearl Street, Toronto, Ontario M5H 1L3 Canada**

CanCorp provides directory, financial, and text information on over 7,300 public and private Canadian companies. Records run for several pages and include rankings, SIC codes, and substantial financials for the most recent five years. The text section may include information about company ownership and excerpts from the annual report. Most elements are searchable.

***Extel International Financial Cards, Extel International News Cards*, Extel Financial Limited, Fitzroy House, 13-17 Epworth St., London EC2A, 4D1, U.K.**

This is an important source which covers 7,000 major public and private companies in Europe, North America, and Asia. Records are substantial, containing five years of financials, ratios, description of activities, discussion, and accounting notes. The many search options and availability of financial data in both U.S. and local currencies allows cross country comparisions. The *News Cards* contains current news.

***Financial Times Fulltext*, Financial Times Business Information, 1 Southwark Bridge, London SE1 9HL, England**

This is the full text of all articles published in the London and International editions of the *Financial Times* from 1986 to the present. This is not the place to look for directory information, but it offers a European perspective on the international business scene. The database may prove particularly valuable in locating information about small companies


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not covered elsewhere (all significant words in the text can be searched). It also includes information on industries, markets, economics, and relevant political developments.

### *Hoppensted Wirtschaftsdatenbank Gmbh*, Wolfgang Benscheck, Halvestr. 9 D-6100 Darmstadt, West Germany

This company produces both paper directories and databases of companies in Germany, Austria, and the Benelux countries. Only the German directory is available on Dialog. The others can be accessed through DataStar. *Hoppenstedt Germany* and *Hoppenstedt Benelus* are in both German and English, the others are in German only. All contain both public and private companies, some degree of product coding or description, and minimal or no financials.

### *Hoppenstedt East Germany*

This is a new database with directory information on East German companies. At present it contains over 8,600 records.

### *Hoppenstedt Treuhandanstalt*

Compiled by the Treuhandanstalt, these are state owned companies in East Germany which are being privatized and offered for sale. There is a print version, *Offizielles Firmenverzeichnis der Treudanstalt.*

### *Kompass Asia/Pacific*, Rutistrasse 38, 8044 Zurich-Glockhausen, Switzerland

Kompass was begun to assist companies in locating products and services in post-World War II Europe. The ability to identify who makes or does what is the database's major strength. A special coding was devised to indicate products or services and is now used in all databases (no SICs). Emphasis is still on manufacturing and industrial production. Except for *Kompass UK*, these databases are not good sources for financial information. The Komapss databases are being expanded and the publisher warns that not all records will contain all data elements.

*Kompass Asia/Pacific* currently covers some 167,000 companies with 300,000 records expected by 1992.

### *Kompass Europe*, Reed Information Services Ltd., Windsor Court, East Grinstead House, East Grinstead, West Sussex RH19 1XE, U.K.

At present, *Kompass Europe* covers about 333,000 companies and includes data in directories published for 12 western European countries. The foreign trade status (exporter or importer), products produced, and languages spoken are give.

*Kompass U.K.* includes almost 155,000 U.K. registered companies and three years of financial data.

### *Teikoku Databank: Japanese Companies*, c/o Mr. Akiteru Minobe, International Business Director, SCAN C2C, Inc., 500 E Street, S.W., Suite 800, Washington, DC 20024

Information on Japanese companies has been notoriously difficult to find. *Teikoku Databank* extracts this data from credit investigations and survey reports done in Japan. Financial figures are in yen with dollar equivalents. Records are for both listed and unlisted Japanese companies that have overseas business dealings. The numerous search fields include executive name, Japanese SIC, credit rating, number of employees, number of shareholders, sales and sales ranking, profits, and other financials. ■

**Flower L. Hund is Manager of the Business and Economics Research Center in the College of Business and Economics at Central Missouri State University, Warrensburg, MO.**

# Corporate Records Management and the Librarian

*By Craig Wright*

■ **Centralizing corporate information resources by combining the library and the records center provides a cost savings to the company. Consolidation eliminates duplication in equipment and systems and overlap in staff duties. Because of their similarities, records centers and libraries form an effective information team. Librarians are uniquely qualified to administer the combined resource center.**

Information is a vital resource to a corporation. We in the information business know it is as essential as the people the company employs, the product it sells, and the money it makes. In fact, some corporate records are considered so vital that copies are made and sent to an offsite storage facility to protect them in case of a disaster, such as fire. Business can be resumed with the help of these "vital records."

Nevertheless, the value of information is often overlooked for several reasons. Information may be scattered in various departments. It may be in different forms which are not recognized as information sources. It may be stored in varying systems. It may be published material from a source external to the company, or unpublished material created within the company itself. Different divisions or administrative levels may be in charge of it, creating duplication because of lack of communication. It has been estimated that a professional employee spends at least 12 hours a week "reading, editing, thinking about, searching for, collecting, organizing, storing and retrieving information" related to work.[1] Translated into dollars this time represents over $1,500 per month for each professional employee.[2] The high-tech community would like us to believe that only sophisticated computer systems, acronymically named, installed, and managed by them can handle the information needs of the corporation. I applaud their technology; it is an indispensable tool. But there is a difference between managing technology and managing information.

If the control of corporate information, published and unpublished, were centered in one office which combined the functions of the library and records center, a cost savings could be realized in terms of "soft" dollars. In this case, soft dollars represent that nebulous unit of cost related to employee time and information values. This paper discusses the similarities of information handling by corporate records managers and librarians, and proposes combining their functions and physical locations into a central information center for more efficient service at less costs.

## Records Management

Equating records management with filing systems is a mistake. Often records management is dismissed as a clerical effort not worthy of attention by anyone with an advanced degree. Such a limited viewpoint is like judging library management only by the cataloging function. Though cataloging and filing represent the basic organization of information service, they are *not* the only activities involved.

Several books on records management have "filing" in the title. This is misleading. Records management includes active and stored records, retention schedule development, vital records protection, microform systems, and litigation support. Due to the need for systems to organize the vast paperwork of the federal government, records management has grown up quickly since World War II.[3] For this reason, the profession has not had time to see itself as the information service that it is.

The skills required for personnel in records management are much greater than knowledge of filing systems. The professional manager needs salesmanship, diplomacy, the ability to negotiate, and all the cunning of a federal politician. These skills are in addition to the technical knowledge about budgets, equipment and layout, systems analysis, and development. To improve the efficiency of the operation, knowledge must be updated constantly. As computers pave the way for the metamorphosis of records management into information management, expertise in information systems will be essential.

What impact does all this have on librarians? With information provision as a field of the future, the salaries and opportunities in records management will reflect the demand for trained people. At this time no one is better educated to handle the challenges of records management than librarians. The broad concepts of organizing information taught in library schools apply to this field. Library science offers the perfect framework for records management.[4,5] Library science graduates have the temperament, the meticulousness, for the job. Librarians, this is an opportunity we should not ignore. This is another field in which we can excel.

## Differences

What could be more diverse than the library's acquisition, organization, and retrieval of published documents and the corporation's creation, maintenance, and disposition of corporate records or unpublished material? Publications, as maintained by libraries, are controlled and easily referenced through indexes, bibliographies (both printed and online), online cataloging services, union lists, etc. There is no end to the tools available to locate published information. Library systems are well established; their uniformity varies little from one library to the next. However, for unpublished information like corporate records, there are no indexes or established systems available that can be purchased to make this information readily accessible. The only valid framework for organizing corporate records is the system created by the records management staff. And that system will vary with each company and within each industry. Consequently, there is no established classification available to records managers.

The diversity doesn't end here. Differences in education exist between librarians and records managers. Whereas a master of library science degree is mandatory for every professional library position, a bachelor's degree and records experience are currently the only requirements for most professional records management positions. There is a trend, however, toward seeking the master's-degreed person for records management. Courses are offered by the business schools of two-year colleges and some universities.[6] Recently, a few library schools have begun to add records courses to the curriculum, thus supporting the concept of combining the two services in the corporation.[7,8]

## Similarities

Putting the differences aside, the similarities of libraries and records centers are noteworthy. Their routine functions like reference, circulation, user surveys and training, procedure and policy development, and statistics keeping are interchangeable. Other activities are similar but have different names, due to jargon. (See Table 1.) Another element that links the two fields is the emphasis on services.

## Advantages of a Merger

A search of the literature on information science reveals an awareness of the need to

**Table 1 The Common Elements of Libraries and Records Centers**

| Library | Records Center |
|---|---|
| philosophy: service | same |
| catalog and classify information | create filing systems |
| maintain indexes | provide subject inventories |
| weed collection according to certain criteria | disposal according to retention schedule |
| plan and promote services | make records and equipment surveys |
| establish satellite information centers | establish active records centers |
| provide: information in various media, reference, circulation | same |
| survey and train users | same |
| write policy and procedure | same |
| keep statistics | same |
| archive | same |
| equipment: reader-printers, computers, data transmitters, shelving | same |
| personnel: clerks, technicians, managers, subject specialists | records analysts |
| restrict access to: reference material | proprietary material |

centralize the management of information resources.[9–11] Moreover, the consensus is that librarians are qualified to oversee that centralization.[12–18] A study of library and information services in 200 companies shows that only 32 of the respondents were responsible for the records management program.[19] Judging by this survey, few companies have combined their library and records functions under the same administration. My experience in special libraries and in corporate records management has convinced me that there are some quantifiable advantages in combining the library with the records center. Some of the cost savings of a centralized information center are:

- **Shared administration.** One coordinating group is fully responsible for all information of the corporation, thereby eliminating the previous fragmentation and duplication of information.

- **Personnel.** Cross-training clerks and technicians to handle both published and unpublished material eliminates overlap. Subject specialists or records analysts in specific departments serve as the authority for their information needs whether published or unpublished.

- **Physical proximity.** The user benefits by having only one contact point for information, which reduces frustration and saves time.

- **Systems and equipment.** Sharing the circulation, database, and shelving systems eliminates the need for expensive duplication.

- **Acquisitions.** Centralizing the ordering of books, periodicals, and supplies avoids duplication and cuts costs. How many subscriptions to a periodical does a company need? What about the duplication in book purchases, reports, etc.? How often are information brokers contacted?

## Conclusion

The key to this reorganization is an informed upper management that (1) regards information as an economic resource having both cost and value, (2) recognizes the simi-

larities of the library and the records center, and (3) realizes that consolidation provides a cost savings by eliminating duplication in personnel, equipment, and systems. Finally, librarians trained to organize and retrieve information have the expertise to administer the combined information center. They should seize the opportunity. ■

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# Information For Contributors

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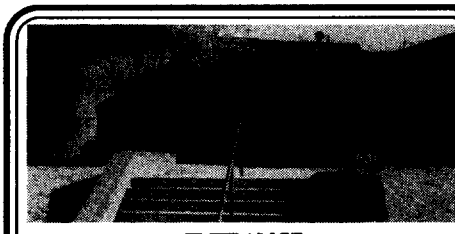

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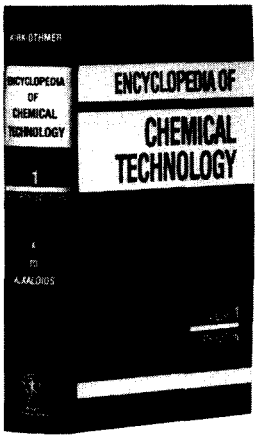


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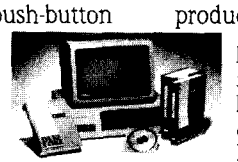

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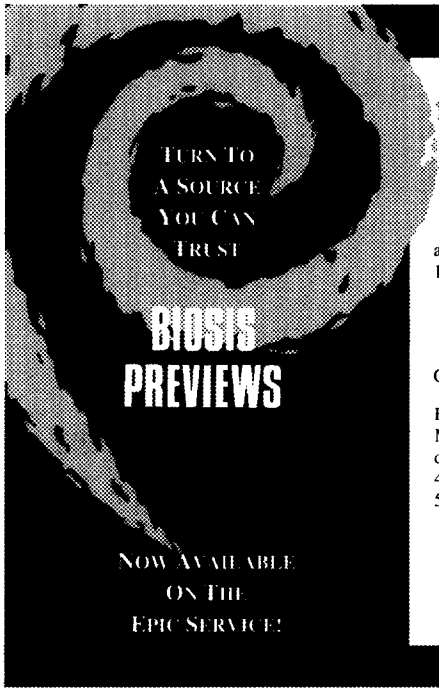


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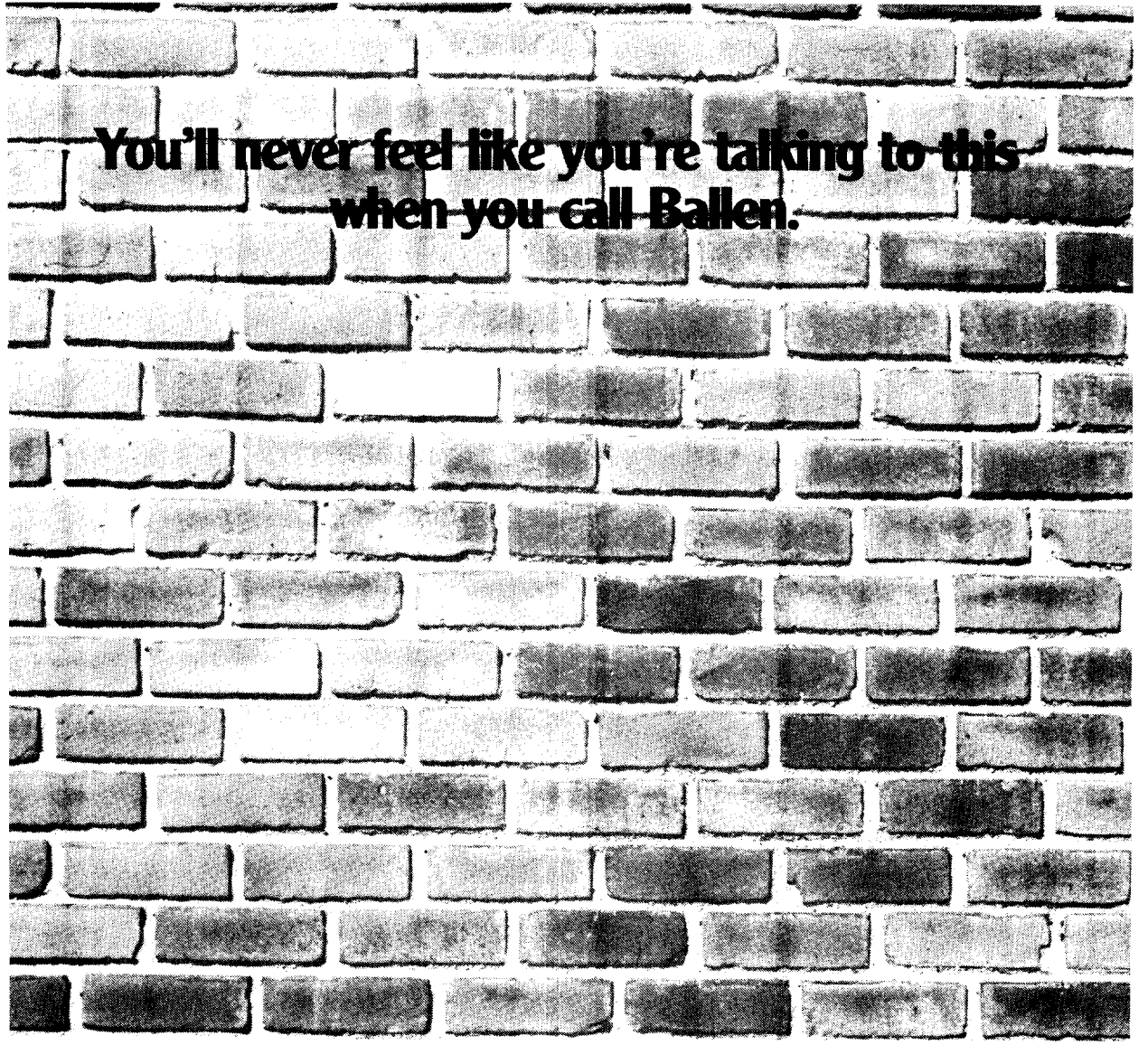


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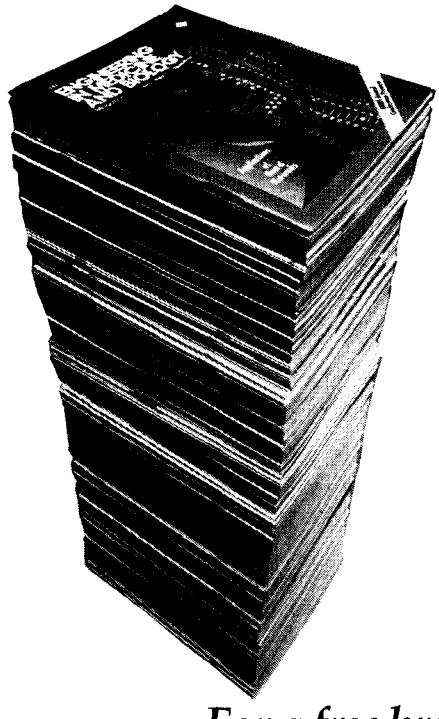

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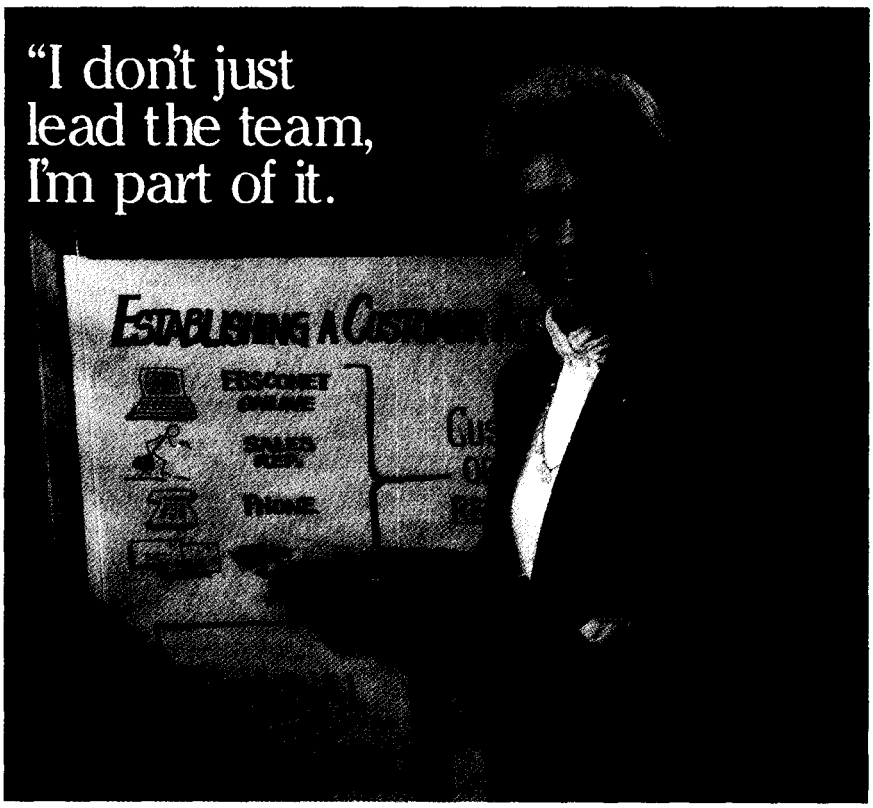


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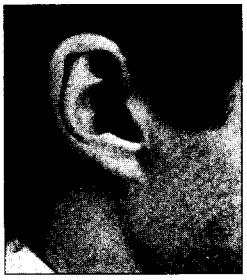

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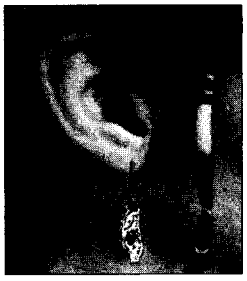

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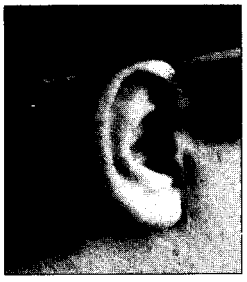

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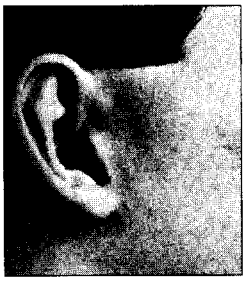

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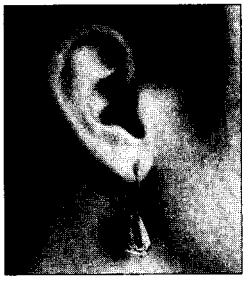

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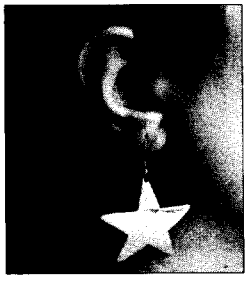

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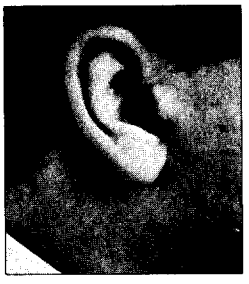

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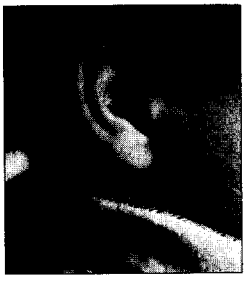

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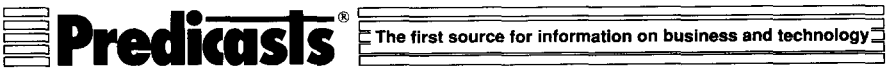


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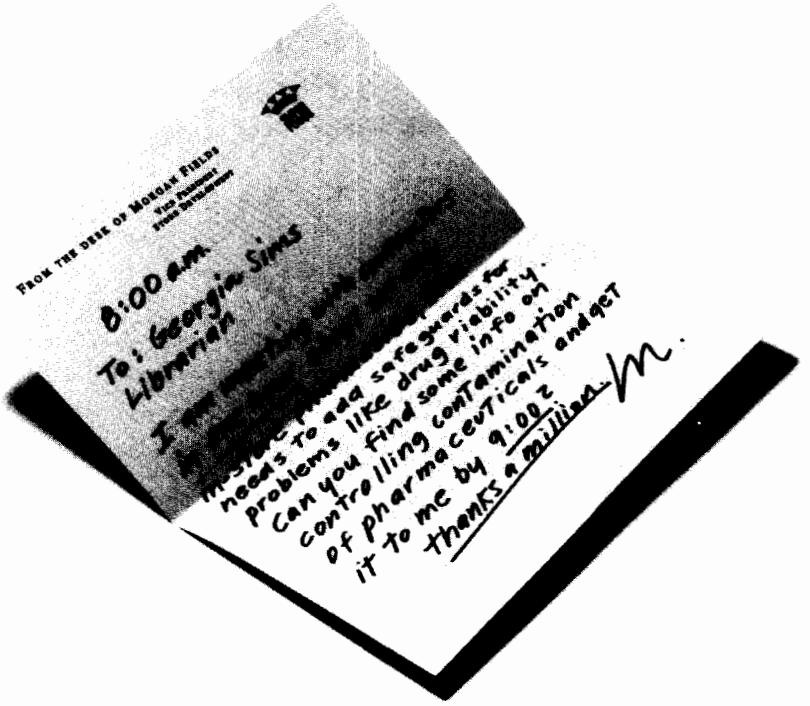


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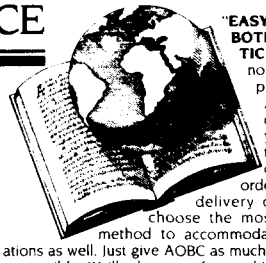

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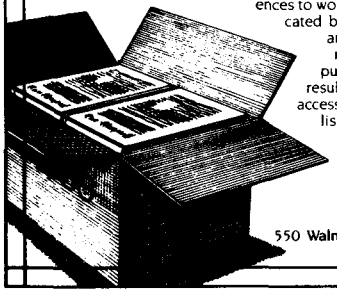

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