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Online services as reporting tools:

Daily newspaper use of commercial databases in 1994

by Bruce Garrison

■ *Use of online services is increasing with larger newspapers making greater use of them.*

An increase in personal computing power, combined with a decrease in cost, has made computer-assisted reporting (CAR) the dominant new newsgathering tool of this decade. In addition to local database analysis, journalists are using their PCs to connect to computers at distant locations to get needed information for their stories. This trend has developed so quickly that scholarship and even the professional literature have not kept up with the exponential growth in use. Articles such as this one are often dated before publication occurs.

■ *Online access to databases is not only convenient, it is very fast.*

The 1994 Gale Directory of Databases listed 5,564 publicly available online databases and 8,261 total databases worldwide.¹ These databases were produced by 2,744 different sources. There are many more private and proprietary databases. Vendors, the companies providing the services, often charge premium prices for access to their information. Certainly the online services most commonly used can be very expensive, but still worthwhile for journalists as reporting tools when compared to costs of obtaining the same information in

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person. In addition, governments sometimes provide direct access to the electronic data that they collect.

Databases are collections of related information, "an integrated, centralized collection of an organization's data".² Online access to databases is not only convenient, it is very fast. For a skilled news researcher, it may literally take only a few seconds using a commercial service to find the name of the owner of a piece of property a thousand miles away. Similarly, in some states it takes only minutes to locate the place of residence of an individual who has a driver's license and who was involved in a serious automobile accident just hours or minutes earlier.

As use of database-oriented news research has grown, so has the amount of information available.³ At least 125 newspapers in 33 states and the District of Columbia had their full-text contents online for public access at the beginning of this decade.⁴ There are literally hundreds of full-text databases available. The number grows each month.

Governments are the second-largest producer of publicly available databases.

Kathleen Endres found that larger daily newspapers and group-owned dailies

were using online databases in the mid 1980s, but many could not afford commercial services and some editors even felt that the services provided too much information. In general, Endres said relatively few dailies were online in 1985.

A reason some in-house full-text databases have caught on is economics. Not only are these services valuable to the newsroom staff, but also publishers have found home-grown and recycled databases have a public market value. In addition to being tools for their reporters and editors, these services, when sold publicly, are a source of revenue.⁵

Online databases used by journalists come in two major varieties, commercially available databases and Internet-located databases. Commercial database services contain information available for a fee. The Internet includes free and fee-based data, such as those databases found on the World Wide Web, bulletin boards, and other systems.

One recent estimate predicted as many as 20 million computer users of all types will be online in the United States by the end of the 1990s.⁶ A news magazine estimated 12 million users already online in the United States and 20 million users worldwide in 1993.⁷ Another estimate placed 6 million people subscribing nationwide to the mass market services by 1996. In contrast, fewer than a million people or businesses used such commercial online services in 1988.⁸ *Prodigy*, a widely popular commercial online service marketed toward a more general audience of computer users, was posting about 70,000 electronic mail messages daily in late 1992. *America Online* had grown from 50,000

members in 1987 to 4.5 million members in late 1995 to become the largest and fastest-growing commercial computer network.⁹

University of Illinois researcher Martha Williams has studied the worldwide database industry for more than two decades. She determined that the number of public databases grew from 301 in 1975 to 773 in 1982 and more than 8,000 in 1994. Williams stated that the number of producers and vendors has also increased dramatically. There were only 200 producers and 105 vendors of databases in 1975. In 1994, Williams reported 2,744 producers and 1,629 vendors.

In sheer number, the industry has grown from about 750,000 searches in 1975 to 51.8 million in 1992. To show the degree of recent growth, the number of searches jumped 50.1 percent above 34.5 million from 1990 to 1992. "While numerical growth is indicated by the statistics, the success of the database industry is largely a result of the transition of the information industry from paper-based services to computer-based services and can be measured in terms of the use of computer-readable databases, or the number of searches," Williams noted.¹⁰

Governments are the second-largest producer of publicly available databases. A growing number of these databases are available online through commercial services, direct government services, government bulletin board systems, and Internet World Wide Web sites. Private commercial and industrial sources are the clear leaders, responsible for 75 percent of databases available for public use. Government agencies produce about 15 percent of databases, while not-for-profit and academic sources - many funded by government grants - generate 9 percent. The remaining 1 percent is from mixed sources.¹¹

Another major online access advantage for journalists is that electronic news libraries never, or seldom, close. Reporters are no longer restricted to normal business hours for their news research. One study found that reporters use electronic libraries to develop compilations and lists of information for crime story investigations, business stories, political stories, local government stories, trend stories, and public figure stories.¹²

The *proficiency of use* issue is reminiscent of some fears expressed when computers used for writing and editing first arrived in newsrooms in the mid 1970s. Some veteran journalists, as well as beginners, express fears about using computers for something besides writing. As a cost-control policy, some newspapers even prohibit using online services until users are trained.¹³ Some journalists ignored computer-based research because they felt user interface was too cumbersome, they lacked the time to learn, online searches actually lengthened research time, online searches decreased the local perspective of a story, searches discouraged original work, and searches increased errors.¹⁴ Some reporters, if they used them at all, preferred someone else to search databases for them.¹⁵

Local beat reporters tend to use electronic news libraries more than other reporters, Deborah Wolfe's research showed. Beat reporters use database

information for backgrounding before starting on a story - to find names for interviews or contacts, to verify information, and for general education about specialized subjects. The most obvious advantages to using electronic libraries are greater perspective, more detail, time savings, identification of new sources, wider geographic coverage, and increased accuracy.¹⁶

Research questions

- What are the major reporting uses of online databases?
- What are the leading commercial databases and bulletin board services in use by newsrooms, news libraries, and research departments?
- Who, in newsrooms, is responsible for conducting searches?
- What is the frequency of online searching?
- How is the online information accessed?
- What are differences in online use among newspapers by size?

Methods

A national mail survey on the uses of computer-assisted reporting and online news research was conducted between December 1993 and March 1994. The survey consisted of an initial mailing of 514 personalized cover letters, questionnaires, and stamped, self-addressed envelopes to the nation's Sunday newspapers with a circulation of at least 20,000. The population was limited to only these newspapers to control research expenses. One follow-up mailing was sent about one month after the initial mailing and individual contacts were made by telephone and E-mail to encourage response, following procedures recommended by Don Dillman's total design method for mail surveys.¹⁷ The population was developed from listings contained in the **Editor & Publisher International Yearbook**.¹⁸

Editors of the selected newspapers were asked either to complete the questionnaire themselves or to forward it to the person in charge of online news research and/or computer-assisted reporting. Individual identifications were requested to permit follow-up. In some cases, however, as many as two or three persons completed various portions of the questionnaire. A total of 208 responses was received for a response rate of 40.5 percent.¹⁹

Findings

Of the newspapers responding, 36.1 percent were from the south and 28.4 percent from the midwest. The mean circulation was 121,361, with 56.3

Table 1: Most popular online services at U.S. daily newspapers, 1994

Database service	Most used	Among top three services named
CompuServe	18.6% (19)	13.3% (36)
Nexis/Lexis	16.7 (17)	15.9 (43)
Local database services	12.7 (13)	11.1 (30)
DataTimes	11.8 (12)	10.7 (29)
Dialog	11.8 (12)	14.0 (38)
In-house library databases	6.9 (7)	3.0 (8)
PACER	4.9 (5)	3.3 (9)
Vu-Text*	4.9 (5)	2.6 (7)
Federal government services	3.9 (4)	5.9 (16)
Internet	2.9 (3)	6.3 (17)
America Online	1.0 (1)	1.8 (5)
Prodigy	1.0 (1)	1.1 (3)
DataQuick	1.0 (1)	0.7 (2)
Dun & Bradstreet	1.0 (1)	0.4 (1)
AP Graphics Net	1.0 (1)	0.4 (1)
Bulletin board services		2.6 (7)
Presslink		1.5 (4)
FedWorld		1.1 (3)
ProfNet		0.7 (2)
Tristate Online		0.4 (1)
Info America		0.4 (1)
MetroNet		0.4 (1)
Business DB Plus		0.4 (1)
Disclosure II		0.4 (1)
Bell Atlantic Intelligate		0.4 (1)
Labor Market Info		0.4 (1)
NewsNet		0.4 (1)
Prentice-Hall Online		0.4 (1)
Infotek		0.4 (1)
Totals	100.0% (102)	100.0% (271)

* Formerly a separate service, Vu-Text is now part of Dialog and is also available through Knowledge Index on CompuServe. Since some respondents listed it separately from Dialog and CompuServe, a separate category was maintained.

N = 208

percent of newspapers under 75,000 circulation. It should be noted that for simplicity of the findings discussion, percentages are reported. Frequencies are reported with both absolute percentages and adjusted percentages (recomputed without missing data) in tables.

Leading databases used

Of the 208 newspapers responding to the survey, 58.9 percent, or 119, reported using online services in some form - commercial or otherwise. Those not using online services were smaller circulation newspapers. As **Table 1** reveals, the most popular services were commercial in nature. *CompuServe*, one of the largest and oldest online services, was the first choice the newspapers that reported using specific online services. *Nexis/Lexis* was the second-leading preference. *DataTimes* and *Dialog* were the other major international commercial online services of choice.

A significant 13.1 percent of the newspapers responding stated their first choice for database services was a local database service of some type - which could include a local or regional commercial service, a local link to local government records, or some bulletin board system. The Internet - World Wide Web, Gopher, or other network services - had not yet caught on. Internet tools were the first choice of only 2.9 percent of the newspapers in early 1994.

Among the services listed in the top three, *Nexis/Lexis* was the leader with frequent use from 15.8 percent of the 260 total top three database preferences expressed. *CompuServe* and *Dialog* were tied for second at 13.5 percent each, and *DataTimes* followed with 10.8 percent of mentions. Again, local services also ranked high in the top three with 11.2 percent of the listed favorites. The Internet was listed in the top three by 6.3 percent.

Reporting functions

News organizations using online research have produced thousands of stories at least partially dependent on this tool. Topics are widely ranging. Some examples taken from open-ended question responses included:

- The *Rochester Democrat and Chronicle/Times-Union* in New York researched breaking stories about automobile accidents and stories about small businesses in its region.

- The *Quad City Times* in Rock Island, Illinois, investigated businesses by reading annual reports and analyzed the new and growing gambling industry in its Mississippi River region.

- The *Orange County Register* in California researched property descriptions, ownership, assessments, and assessors' maps using online tools when covering the Laguna area fires that also became a story of national interest. The library staff also regularly conducted spot online research of major accidents such as plane crashes.

•The *Tallahassee Democrat* in Florida located background information about persons such as candidates for the city police chief position, candidates for the then-vacant presidency of Florida State University, and developers of real estate projects.

•The *Wisconsin State Journal* in Madison routinely searched other newspapers online to see what their reporters were covering on certain subjects.

For newspapers using services, online research is becoming a spot news reporting tool as well as a special projects research tool. In Rochester, the *Democrat and Chronicle* used online research regularly, assistant metro editor John Reinan

wrote on his questionnaire.²⁰ "We use it nearly daily. Metro and business are really the only users," he reported. "There was a fatal car crash last summer in which five people died. The driver was accused of running a stop sign and hitting another car. By logging onto the New York Department of Motor Vehicles database, we found that the driver had a previous conviction for running a stop sign, and we included that info in our first-day story. We had a business reporter doing a story on starting a small business which used a lot of information obtained from an SBA [Small Business Administration] bulletin board."

For other news organizations, online research was the first step in starting a major news project after an idea had been generated. "We begin most projects by checking online to see what other publications have done on the subject," *Houston Chronicle* Special Projects Editor Don Mason replied.²¹ "Some of our best successes so far have been early reports on the *Michelangelo* virus and issues involving encryption of telecommunications data, as well as recent reports on electronic barriers to government information."

The *Sarasota Herald-Tribune* in Florida used online research for backgrounding on stories. Assistant Managing Editor Richard Estrin said, "Our effort is in its infancy, but we hope to involve everyone. We use online research for background to many stories."²² Database Editor Griff Palmer, who helped find online sources for Oklahoma City's *Daily Oklahoman*, said his newspaper used online services such as *DataTimes* to take stories to a higher level of completeness. "We use online research daily to supplement our reporting. We constantly use *DataTimes* and our own electronic morgue, which is stored as a full-text database," he explained. "We used *DataTimes* to research allegations of improprieties in other states against a contractor under local consideration. We also used the Texas Ethics Commission BBS to download registration information on a company under investigation in Oklahoma for campaign contribution violations. We have also downloaded census data from the state commerce department BBS for use with analysis of voter registration data."²³

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Reporters and editors find they have a wider range of sources, since they can use online sources, such as articles from newspapers halfway across the country, to identify and locate these experts and other sources that enhance a story. Not only do sources used in other stories become easier to find; there are even online services designed to link reporters and news sources. Often these are public relations services - such as *ProfNet*, a computer network of universities and colleges that have on their faculties hundreds of experts on virtually every subject who are willing to help journalists.

Reporters are also more easily able to find officially released information. Press releases from government agencies (for example, found on some FedWorld BBSs), from corporation services (such as those on *PR Online*), from organizations (such as some of the Internet institutional BBSs), and other groups that want their word to be spread and have discovered that computer-wise reporters and editors use such sources when they are available at low cost or free.

Online search responsibilities

One of the concerns about online research in newsrooms is cost. Online time can be very expensive, depending on the amount of time used and the hourly rate. Some news managers were still deciding whether to assign the duty to anyone on staff with the skill, to the reporter on the story, to the supervising editor or a designated editor, or to news librarians/ researchers. A wide range of often-overlapping approaches was found, as shown in **Table 2**, but the largest number used either librarians (40.5 percent) or reporters (25.6

Table 2: Online search responsibilities at U.S. daily newspapers, 1994

Circulation	"Anyone"	Reporters	Editors	Librarians	No searches
Under 50,000	2.4% (2)	14.1% (12)	7.0% (6)	2.4% (2)	74.1% (63)
50,000-100,000	12.1 (7)	29.3 (17)	6.9 (4)	24.1 (14)	27.6 (16)
100,001-250,000	12.2 (5)	26.8 (11)	4.9 (2)	46.3 (19)	9.8 (4)
250,001-500,000	4.8 (1)	23.8 (5)	0.0 (0)	66.6 (14)	4.8 (1)
Over 500,000	<u>11.1 (1)</u>	<u>22.2 (2)</u>	<u>0.0 (0)</u>	<u>66.7 (6)</u>	<u>0.0 (0)</u>
Totals	7.5 (16)	22.0 (47)	5.6 (12)	25.7 (55)	39.3 (84)

Note: Some newspapers reported multiple responses. Percentage are for rows. N = 214.

percent) themselves. The data show some differences in how the problem was approached, depending to the size of the newspaper. The larger the newspaper, the more specialized the duties. Larger newspapers tended to use news researchers for searches while smaller newspapers took the *do-it-yourself* approach. *Anyone* searched at 23.1 percent, and editors did searches at 9.9 percent. A total of 41.8 percent of the newspapers did not answer the question, most likely because no in-house searches were conducted.

Frequency of online searching

Some responding news organizations said they used online research several times a day as part of their newsgathering routine. Efforts were underway to teach reporters how to integrate online news research into every reporting assignment. Online news research was an *everyday* part of reporting and editing at the *Seattle Times*, where Information Systems Manager Steve Wainwright said his newspaper spent over \$20,000 annually to use online tools to track down information about businesses and missing persons, for example.²⁴ At the *Dallas Morning News*, online news research had already become a routine part of the reporting process. "We use it nearly each hour of every day," Assistant Projects Editor Allen Pusey stated. "Online research has become a vital resource. Online research has given us a broader-based view of previous work on a subject *before* we begin stories. It has also given us a higher quality of context to our stories - be they economic, scientific, or legal/social."²⁵

Cost seems to be a factor in frequency of use. The mean amount of money spent on online services reported by newspapers for 1993 was \$16,025.⁵⁷

Table 3: *Frequency of online searching at U.S. daily newspapers, 1994*

Circulation	Daily	Weekly or greater	Monthly or greater	Monthly or less	Other	None
Under 50,000	2.4% (2)	7.3% (6)	1.2% (1)	8.5% (7)	11.0% (9)	69.5% (57)
50,000-100,000	23.6 (13)	10.9 (6)	9.1 (5)	1.8 (1)	21.8 (12)	32.7 (18)
100,001-250,000	41.5 (17)	17.1(7)	7.3 (3)	0.0 (0)	22.0 (9)	12.2 (5)
250,001-500,000	78.9 (15)	5.3 (1)	0.0 (0)	0.0 (0)	10.5 (2)	5.3 (1)
Over 500,000	<u>100.0 (7)</u>	<u>0.0 (0)</u>	<u>0.0 (0)</u>	<u>0.0 (0)</u>	<u>0.0 (0)</u>	<u>0.0 (0)</u>
Totals	26.5 (54)	9.8 (20)	4.4 (9)	3.9 (8)	15.7 (32)	39.7 (81)

Percentages are for rows. N = 204.

and the mean for 1994 was \$17,210.13. Spending in 1994 ranged from zero to \$115,000. But many newspapers that did conduct online news research did not wish to reveal what might be viewed as proprietary information.

The data showed a wide range of usage frequencies for online database searching among those daily newspapers conducting searches. **Table 3** shows a similar pattern of search frequency differences according to size of the newspaper. Larger newspapers search very frequently, some numerous times a day, or what they would call *constantly*.

Smaller dailies that did any online searches at all were quite careful, it seems, in using the tool. Smaller dailies searched less than daily, some less than weekly. For all newspapers, 26.5 percent reported using online services at least once daily. This represents 41.9 percent of those newspapers that reported using online services at some level.

Tools for access to online services

Data showed a diverse list of communication packages in use in U.S. daily newspaper newsrooms. Of those packages, *Procomm Plus* was the most popular, reported as first choice in 53.3 percent of newsrooms. *Crosstalk* (9.2 percent) and *Smartcom* (9.2 percent) were also in wide use. A total of 20.8 percent used other products such as *Terminal* - part of the basic *Windows* package - or an equivalent *Macintosh* systems program. Some users who did not access online services often found the communications tools provided in integrated packages, such as *ClarisWorks*, to be sufficient for their needs.

Conclusions

The results reported in this study suggest something quite obvious: Size still matters. Larger newspapers, with the financial resources, are heavy online services users. These newspapers reported spending thousands of dollars a year for online services and even more for salaries for news researchers in early 1994. But the power of the newsgathering tool is slowly creeping into the newsrooms of middle and small size dailies also.

While economics seemed to be the obvious reason for differences in use of online services in news reporting, other factors influenced the spread of this new reporting technology. One was human resources. Many newspapers lack personnel with the computer literacy to begin a regular program of online news research to supplement reporting. These newspapers do not have the resources to train an individual internally, if such expertise was available, or externally. It could also be argued that commitment of newsroom management to use of online tools is a factor. For some newsrooms, this is critical for success since management support brings involvement and promotion of its use.

Uses of online services were broadening in early 1994. Much of the use was primarily to check what the competition was doing, but more reporters

were also using online services for fact checking, story idea generation, backgrounding, and for greater depth of information for both long-term projects and breaking stories.

It is not the least bit surprising that the leading commercial databases would also be the leading services used by news organizations. While there was an emerging pattern toward greater use of highly specialized online services, such as those with specific types of public records, news organizations favored services that can provide a wide range of access to useful information for a fair price. The popular mass-marketed services had yet to become very valuable to news reporters because of the general consumer nature of the information available in early 1994.

The Internet was not a major research tool at the time of data collection, but there was a hint of growth indicated by use found at larger dailies. Newspapers were only beginning to discover this resource as the number of Web sites was beginning to grow.

There was also confusion evident in the newsroom about who should use online services for a story. The data suggested two schools of thought: (a) let anyone and everyone do online research for news reporting, or (b) give online duties to specialists. The findings show smaller newspapers took the first route and larger newspapers took the second; but this could be changing as more skills are learned and as costs drop, if they drop, for online fees.

Frequency of use also remains an issue driven by economic concerns. But as more skilled online researchers come into medium - and small-sized newsrooms, this could also change. Most CAR advocates would like to see online research become as regular a habit for reporters as checking filed clips or conducting telephone interviews.

Online commercial services are not some sort of fad, these data show. Usage patterns discussed in this study demonstrate that point. Perhaps the issue is not whether the services will be used, but how often, by whom, and for what purposes. As these new tools gain greater access and application, new research will be necessary throughout the rest of this decade to track growth of CAR. Research should investigate use patterns and use factors such as the economy, the complexity of the tools themselves, and the people involved. In the minds of some investigators, there has not been such an exciting prospect for information gathering since the telephone was first used for interviewing.

It is clear that new and continuing research about CAR and online services is necessary. Works, such as several of the contributions in Barbara Semonche's edited **News Media Libraries**, offer syntheses and interpretations of the new uses of online computer tools in reporting.²⁶ Further research will permit greater depth and more focus on specific aspects of online CAR, such as differences in institutional and individual uses that are not readily distinguished in this study. New research needs to probe into behavioral reasons for differences in responses that have been identified. Annual analysis of newspapers' uses of online tools will indicate the degree of change that is occurring. It

may also suggest manners in which online research impacts upon how communities are covered and what readers are learning from CAR-based news stories.

This study, representing only the first stage of a longitudinal design, has inherent shortcomings in its approach. But subsequent reports will offer deeper and, hopefully more meaningful, analyses.

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