# A Brief History of Computer-Assisted Legal Research*

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*Legal research by computer was unknown twenty years ago. It is now commonplace, even a necessity. This brief personal history of computer-assisted legal research, written by one of its founding fathers, traces the development of the approach from its beginnings in the OBAR project of the Ohio State Bar Association.*

## Introduction

First, a matter of terminology. The correct term is computer-assisted legal research, not computerized legal research. Does it make any difference? The lawyers who conceived of and developed the first practical computer-assisted legal research service thought it did. Because they considered themselves the creators of something new and important that might effect a revolution in the practice of law and the administration of justice, they thought it their responsibility to create the right terminology to go with it. The term "computerized" implied that the computer would take over the whole function, do it all; whereas "computer-assisted" suggested what they believed was true: that the computer would be a handy helper for the lawyer's intellect, not a substitute for it.

Looking back at the original technology, it now seems primitive, something from a distant past. Remembering the way many lawyers and librarians first reacted to the advent of computer-assisted legal research, it is hard to identify such Luddites with the twentieth century, much less with the past ten or fifteen years. Today a LEXIS or WESTLAW terminal, or both, can be found in nearly every major law office and law library. Still, computer-assisted legal research is less than twenty years old. The history is short in terms of time, but long in terms of achievement.

## How It All Began

It is not fanciful to say that the history of computer-assisted legal research began with the invention of cuneiform writing. Computerized information management, after all, is simply a late development in the ancient process

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of recording and later retrieving information, and computer-assisted legal research is only one manifestation of information-management technology. The bells and whistles have been arranged to suit the needs of legal research, but for the most part, the basic hardware and software is shared with the whole world of information management.

This is not, however, a history of the whole concept of using the computer as a means of managing large bodies of textual information. Let us go directly to specifics.

By the early 1960s, there was much talk in the legal profession about the geometric rate of increase in the amount of material a lawyer had to scan to do a comprehensive job of legal research. Simply said, there was more law. Lawyers had begun to see legal research as becoming an almost intolerable burden. What could be done about it? What about those huge, mysterious, and temperamental machines, computers? Could they somehow be programmed to do some of the work of legal research?

Committees were formed. Seminars were held. Panels were organized. Talk, talk, talk. And papers, learned papers. Progress? No. None.

## The Horty Project

At the University of Pittsburgh, however, Professor John Horty created an electronic library of the public health statutes of all fifty states. University employees, working at card-punch machines, converted those statutes into a digital form that a computer could read. The codes on the cards then were imposed on magnetic tape. The university computer could scan all those statutes and identify every one that used terms the researcher had included in the search command. By 1965, Professor Horty's team had begun to put some United States Supreme Court cases and Pennsylvania cases on tape to demonstrate how the system could cope with longer documents.

To a limited extent, the Horty group would accept search requests from outside lawyers. The search was communicated to the group by telephone or mail; it was run overnight, and the results were reported to the lawyer by telephone or mail the next day.

This was not just talk. This was the computer at work, beginning to do the kind of thing that lawyers were hoping it could do. The initial Horty system was, by today's standards, extremely primitive. Professor John Horty and his group deserve major credit, however, for demonstrating the feasibility of the concept of using the digital computer for legal research.

## Origins of the Ohio Project

Contemporaneously, another organization was passing from the talking stage to the point where it was ready to commit resources to the building

of a practical, working system. That organization was the Ohio State Bar Association.

The Ohio Legal Center Institute, under the directorship of James L. Young, already had done some preliminary exploration of the concept and technology and had been in contact with Professor Horty. Leading members of the bar association had heard Professor Horty speak at the annual dinner of the Ohio Bar Foundation in November 1965 and were intrigued.

The president of the Ohio State Bar Association for 1965-66 was James F. Preston, Jr., a senior partner in the Cleveland firm of Squire, Sanders & Dempsey. Preston was determined that his presidency should be remembered for the initiation of a computer-assisted legal research service for Ohio lawyers.

In November of 1965, William G. Harrington[1] became research counsel to the Ohio State Bar Association. He heard Professor Horty's talk and learned of Preston's commitment. He volunteered to take charge of the bar association's computer project, and for the next five years he would devote most of his time to the Ohio project.

Beginning early in 1966, Harrington began an examination of the available hardware and software that might be used for a system of computer-assisted legal research. He went to Pittsburgh to meet with Professor Horty and to work with the Horty system. He contacted various hardware and software suppliers and invited them to demonstrate their wares. A large number of suppliers came forward with extremely varied offerings, none of which could be evaluated rationally until the projected service had been defined. Until 1966 the idea of computer-assisted legal research had remained vague. Lawyers wanted it, but were not sure exactly *what* they wanted, partly because they had no idea of what was possible. The Ohio group set to work to write a definition.

This definition was the most important achievement of the Ohio project's first year—perhaps of the project's entire five years. The definition written by the Ohio group more than eighteen years ago is the basic definition of LEXIS and WESTLAW to this day.

## The Basic Definition

In a few words, the Ohio group defined what it wanted as a nonindexed, full-text, on-line, interactive, computer-assisted legal research service.

The Horty system was nonindexed. It operated by the application of Boolean-logic specifications to the text of legal materials. The distinction is by now well known and probably does not need a full explanation here.

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1. At this point I must ask the indulgence of readers. I became deeply involved in computer-assisted legal research from this point, and I must mention myself often. I will use the third person.

Suffice it to say that the Ohio group wanted to free the lawyers from the constraints of indexing. Boolean-logic searching, in effect, would allow each researcher to create an ad hoc index specific to the problem at hand. It is amusing today to recall the furor this proposition engendered when it was released for discussion. Self-annointed experts pronounced a nonindexed system a major error. Many law librarians were appalled to learn that the new concept of computer-assisted research would operate free of their dearly beloved, elaborate structures of indexes and digests. Some of them were intemperate in their scorn.

The next element of the definition was that the system was to search in the full text of legal materials, not in headnotes or digests. This, once again, was highly controversial. Some of the many objections included: that searching in full text would be a prohibitively expensive way of using the computer, that full-text searches would be too broad and never could be made sufficiently specific, that lawyers educated in the traditional index-based forms of legal research never would learn the new system, and that generations of scholarship were being thrown away.

"On-line" meant, of course, that the work was to be done by researchers in direct and immediate contact with the computer, not by intermediaries accumulating a number of searches and doing them at specified hours in a batch-processing mode. In short, the definition required what might be called "live" research. This time, objections came from the technicians, who pronounced on-line research in large full-text data bases impossible.

"Interactivity" meant that the researcher could conduct a dialog with the computer—transmitting a search, scanning the results or a part of the results, and amending the search as the results might suggest. Interactivity was to overcome the objection that full-text searching invariably would be too broad. If a search proved too broad, the researcher could narrow it by additional words and logic specifications.[2]

Perhaps it should be mentioned that the Ohio definition was reached with minimal interaction with other groups or their committees. The Ohio group struck out on an entirely independent quest, mostly because they were impatient with the endless reports and speeches being generated for ABA and other meetings. Harrington wrote the definition, presented it to the Ohio State Bar Association Executive Committee, and it was adopted. No one had any real sense of how great would be its ultimate impact.

Having defined what it wanted, the Ohio group insisted on this defini-

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2. WESTLAW is not to this day a completely interactive search system. A researcher cannot add to a standing search, as he can with LEXIS. When complex searches ran several minutes, the distinction was vital; now it is almost insignificant since virtually every WESTLAW search is completed in seconds. The researcher dissatisfied with a search can recall it to the screen, change it as he or she wishes, and retransmit it. The speed of the present WESTLAW system has created a sort of de facto interactivity.

tion. This frightened off many hardware and software vendors and reduced to a few the companies that offered to undertake to build a service so defined.

## Data Corporation

Originally, the Ohio group had hoped to enter into arrangements whereby the Horty system could be improved, expanded, and made the basis for the Ohio service. In time, however, it became apparent that this could not be done, and the group undertook an investigation of hardware and software to find an alternative. By December 1966, only Central Media Bureau, a New York company, remained in contention. The bar association opened negotiations for a contract whereby the bar would fund the software development necessary to build the service as defined.

When this contract was in draft form and probably within two weeks of being signed, Francis L. Dale, president of the Ohio State Bar Association, received a call from William F. Gorog, president of Data Corporation. Gorog had read an article in the *Wall Street Journal* about the Ohio project and believed his company could build the required system. Dale suggested Gorog contact Harrington.

Early in January 1967, Harrington travelled (most reluctantly) to Beaver Creek, a suburb of Dayton, to see a demonstration of yet another system. This one was called (Data) Central, and it was a nonindexed, full-text, on-line, interactive system that had been developed by Data Corporation for the Air Force, to search huge files of procurement contracts. An hour's demonstration was enough to convince Harrington that (Data) Central was by far the most advanced and sophisticated system he had seen. He returned to Columbus and persuaded the bar association to suspend negotiations with Central Media Bureau and enter into a discussion with Data Corporation. Those discussions, carried on over a period of months, resulted ultimately in the creation of OBAR—Ohio Bar Automated Research.

## Developments under OBAR

Although the Ohio State Bar Association was the sponsoring organization for a computer-assisted legal research system for Ohio lawyers, the association was without the funds to build a system. It had been understood from the beginning that when a project had been defined and a capable partner identified, the association would have to create a subsidiary organization to raise the necessary funds and administer the program on the association's behalf. When it became apparent in the spring of 1967 that Data Corporation was the partner the association had been looking for, the needed vehicle had to be created.

Ohio Bar Automated Research (OBAR) was a not-for-profit corporation organized under the Ohio corporation code. The executive committee

of the bar association was, ex officio, the board of trustees of OBAR. James F. Preston, Jr., was elected president and William G. Harrington executive vice-president. The contract for the development of the system (which also would be called OBAR) was entered into between Data Corporation and OBAR. OBAR raised funds by selling a bond issue to Ohio lawyers. Subsequently, it also would borrow funds on notes, chiefly from Squire, Sanders & Dempsey. In total, it raised and committed approximately a quarter of a million dollars. The amount turned out to be ludicrously inadequate, but this first quarter of a million dollars was the seed money that changed a nebulous concept into a reality that later would attract many millions of dollars of investment capital.

The original contract between OBAR and Data Corporation provided, in substance, that:

1. Data Corporation would modify its (Data) Central software to make it more suitable for legal research. OBAR would pay a fee for such modification and would own the exclusive right to use the resulting software for legal research in Ohio or elsewhere.
2. Data Corporation would convert a body of Ohio case law, plus the Ohio statutes, and make that data base available for computer-assisted research. OBAR would pay the cost of conversion and would own the data base.
3. Data Corporation would run the operating system, providing all the necessary hardware, software, communications, and personnel to offer and sustain a computer-assisted legal research service for Ohio lawyers.
4. OBAR would market the service.
5. Sales revenues would be divided between OBAR and Data Corporation.

The Data Corporation software had to be modified in many ways to make it suitable for legal research. To begin with, it was capable of Boolean searches but only on an AND, OR, and NOT basis; there was no proximity connector. OBAR regarded proximity searching as essential. (It was at this time, incidentally, that the decision was made to write the proximity logic on the basis of numbers of words, not sentences and paragraphs. That decision was made by the lawyers, not the programmers.) Also, the Data Corporation noise-word list, though it was standard for the industry, included such words as "will" (as a form of the verb "to be") and was unsuitable for legal research. A new list had to be defined. Data (Central) communicated on IBM printing terminals, and OBAR was to be teletype-compatible.

These are only examples of the many design changes that had to be made. What is more, converting hundreds of volumes of Ohio case law to digital form presented many problems. Two years were spent meeting the challenges of making Data (Central) a practical legal-research system.

During the years 1967-70, while OBAR was being developed and tested, visitors from all over the United States and from many foreign countries

travelled to Ohio to see it. Prominent among these were two men who subsequently would play important roles in making LEXIS a nationwide service—Thomas Plowden-Wardlaw of New York and Judge David Dixon of Missouri. Both of them became enthusiasts for computer-assisted legal research and returned to their state bar associations with optimistic reports. Many other visitors came, including delegations from France, Belgium, Germany, and Scandinavia.

Preston and Harrington travelled constantly in Ohio, selling the OBAR bonds and, perhaps more importantly, encouraging Ohio law firms to become the initial subscribers to the OBAR service. Squire, Sanders & Dempsey was the first subscriber, and a substantial number of other firms subscribed as well. They became the guinea pigs, investing time and money in what was still a primitive system. Their experience with OBAR—much of it negative—became an invaluable learning resource for those who shortly would set to work to make major improvements to the system. Other members of the Ohio group travelled to other states, speaking to bar groups and reporting on OBAR. Twice, Harrington published reports of the experiment in the *American Bar Association Journal.*[3]

By the middle of 1969, it was possible to evaluate the OBAR experiment. It was a mixed success. On the positive side, OBAR had demonstrated clearly the feasibility of computer-assisted legal research. It also had demonstrated something that its sponsors had not foreseen entirely: that computer-assisted legal research would be not just faster and more efficient but would be *better* research, more comprehensive, regularly finding cases that even the most careful conventional research overlooked.

On the negative side, the computer system and its communications were unreliable, the search protocol was less than transparent, there was an unacceptable degradation in response time when more than a few lawyers were doing research at the same time, and the data base was too small for much practical research. It was apparent that these problems could be solved. Their solution, however, would require more money than OBAR had available or

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3. Harrington, *Computers and Legal Research*, 56 A.B.A.J. 1145 (1970); Harrington, *What's Happening in Computer-Assisted Legal Research?*, 60 A.B.A.J. 924 (1974).

Although almost everything in those articles is by now outdated, the substance of another article published by a member of the OBAR staff remains valid and often has returned to haunt the proprietors of computer-assisted legal research systems. Diana Fitch McCabe, an assistant to Harrington in 1970, published an article critical of OBAR. McCabe, *Automated Legal Research*, 54 JUDICATURE 283 (1971). She wrote that the system was failing conspicuously to meet the promise some of its founders had held for it: that computer-assisted legal research would give solo practitioners and small firms as much research power as large firms had and, therefore, would benefit lower-income and middle-class clients. Instead, she wrote, OBAR was developing into a service only big firms could afford. This article by Mrs. McCabe (now Mrs. William G. Harrington) still is cited by those who remain disappointed with the social impact of computer-assisted legal research.

could raise, and probably more than Data Corporation could commit. The OBAR experiment was in danger of failure.

Within months, the Mead Corporation would commit the capital needed to save OBAR and create LEXIS. Before turning to that element of the story, it should be noted that the OBAR experiment was not the only experiment in computer-assisted legal research going on in the world. There were others in Canada, Italy, and in the United States. Unhappily, one purported service, widely promoted in the United States in these years, was an outright fraud.

### The Origins of Mead Data Central

In the spring of 1969, the Mead Corporation acquired Data Corporation as a wholly owned subsidiary. It did not acquire Data Corporation to become a partner in the OBAR experiment, but to acquire other Data Corporation technology more closely related to Mead's traditional lines of business in forest products, paper, and printing. Indeed, it has been said that Mead was not even aware that Data Corporation was committed by contract to an effort to build a computer-assisted legal research service. Nevertheless, Mead rescued the OBAR experiment from imminent financial failure and in time invested the tens of millions of dollars the development of a nationwide system for computer-assisted legal research would require.

In August 1969, Mead contracted with Arthur D. Little (ADL) to undertake a study of the potential market for computer-assisted legal research. Mead wanted to know if there was a sufficient market to justify a major investment. Mead also wanted to know how much further development OBAR would require to make it a marketable system and how much money that development would cost.

H. Donald Wilson, an ADL partner, was sent to Ohio as head of a consulting team. Wilson, a lawyer and former director of the Peace Corps in Ethopia, brought Edward J. Gottsman as a consultant in system design, and later, seeing the need for an actively practicing New York lawyer on the team, he added Jerome S. Rubin. The ADL study took six months. In February 1970, the team reported that its market survey indicated that computer-assisted legal research was potentially a profitable business, but making a marketable business on the basis of the OBAR experiment would require extensive redevelopment and a major investment. The ADL team also offered a business plan.

Mead accepted the recommendations of the ADL team. It separated the legal research applications of (Data) Central from all other existing and potential applications. It formed a new subsidiary, Mead Data Central (MDC), to develop and market a nationwide legal research service and entered into a contract with Wilson and Rubin for management services for the new cor-

poration. H. Donald Wilson became the first president of MDC, and Rubin became executive vice-president and general counsel. Many Data Corporation officers and employees were transferred to MDC.

During the years 1970-72, MDC made major improvements to OBAR. MDC had to make OBAR a practical, working service that lawyers would use, plus a potentially profit-making business that would justify further investment by Mead. For the most part, MDC provided technical and business expertise, and the Ohio lawyers who had created OBAR continued to speak for the profession. It should be emphasized that the basic definition of the system was never altered: it would remain a nonindexed, full-text, on-line, interactive system.

The most conspicuous change was abandonment of the printing terminals and the introduction of terminals with screens. This made the system faster and easier to use, and it also made the KWIC (key word in context) feature feasible. The first terminals used Sony color television sets for their screens, and the legal materials appeared on the screens in gaudy colors—case names in green, citations in yellow, KWIC words in red, ordinary text in white—all on a bright blue background.

Less obvious changes were equally important. The logic was made more complete and flexible, and a new system of notation was developed for it. The language with which the system communicated was revised to make it speak specifically about legal research and in more user-friendly terms. Efforts were made to eliminate the plague of communications failures. The system was made capable of working for more simultaneous users.

It is amusing today to recall that searches typically ran five minutes, often twenty or thirty minutes, and sometimes more than an hour—and still the lawyers thought the system marvelously fast. One demonstration search, run on a terminal in a hotel suite in St. Louis during an ABA convention, ran four hours! Wilson and Harrington took the interested lawyer—a partner in a major New York firm—to dinner while the search was running, and it was not finished when they returned. Still, the lawyer was impressed with the efficiency of the system, which had found a case his firm had overlooked after weeks of conventional research.

The chief designer during this period was Richard Giering of Data Corporation, who had been the chief designer of (Data) Central. William K. Thomson, also from Data Corporation, Arthur Dana, a consultant from California, and Edward J. Gottsman were other major contributors.

During this same period, OBAR as an organization gradually faded from the picture. It sold its proprietary interest in the legal research applications of (Data) Central, plus the Ohio data base, to MDC. In return, it was entitled to receive certain royalties for ten years. Since the system was not yet earning

revenues on which royalties could be paid, OBAR took advances against future royalties to enable it to pay its staff salaries and other expenses. It played an active role in the test marketing of the second-generation OBAR system in Ohio, and it assisted the MDC marketing staff in obtaining Ohio subscribers. Harrington continued to participate actively in the definition and implementation of changes in the system, and he continued to travel throughout the United States, showing the system to lawyers. As an organization, however, OBAR contributed less and less.

In February 1971, Harrington resigned as executive vice-president of OBAR and as counsel to the Ohio State Bar Association. He returned to the private practice of law and also became a consultant to Mead Data Central, which he would continue to be for thirteen years. The rest of the OBAR staff were dismissed or transferred to the association staff, and the organizational office of OBAR was moved to Cleveland. From that point, neither OBAR nor the Ohio State Bar Association made any further contribution to the development of computer-assisted legal research.

## The LEXIS System

By the end of 1972, the Ohio marketing test of the second-generation OBAR had been completed, and the system was almost ready for nationwide marketing. Before it could be offered as a service to the lawyers of states other than Ohio, however, it would need a new name. The new name was LEXIS.

Although some people assume that the word "LEXIS" means "law information service" ("LEX" for law and "IS" for information service), the name is not an abbreviation or acronym. It originated with a firm of consultants in New York whose business was to suggest corporate and business names. Their theory was that names with an X or two in in the middle (such as EXXON) were intriguing. Hence, LEXIS.

Two more changes are worth noting. The Sony television sets were retired as terminal monitors, and a new desktop terminal was introduced. The new LEXIS terminal featured function keys that allowed the researcher to give the computer commands with one tap, rather than two or three. Also, the keys were printed with legends appropriate to the legal research functions they performed. It was the first proprietary terminal, no good for anything but LEXIS research.[4]

4. Why proprietary terminals, incidentally? The company barely broke even on terminals, so there was no economic motive for insisting on proprietary terminals. Rather, it was because, at first, lawyers approached the terminals with fear and awkwardness, protesting that they had no idea how to type, much less how to control a computer. They called themselves technological illiterates, and MDC personnel were glad to join them in applying the appellation. Ten years would pass before MDC deemed it safe to turn lawyers loose on LEXIS with multipurpose terminals.

The second major change between OBAR II and LEXIS was the introduction of new data bases—a federal library consisting of the U.S. Code and a body of federal case law, and a federal tax library consisting of the Code, the regulations, and some cases. More state data bases, New York and Missouri, would be added shortly.

LEXIS was introduced to the world at a news conference held at the Overseas Press Club in New York in April 1973. Introduction was followed immediately by a concerted drive to sell subscriptions, principally to major New York law firms. The drive was successful, and by the fall of 1973 a few major New York firms—plus, of course, the Ohio firms that had hung in through thick and thin—were doing legal research with LEXIS.

From this point forward, the history of LEXIS was one of constant progress. New data bases were added. The software was improved. The amount of computer power committed to the system was increased constantly to cope with the growing demand. MDC opened regional offices throughout the United States. The number of subscribers and, more importantly, the amount of research done with LEXIS increased each year.

Beginning in 1980, LEXIS subscribers were given access to NEXIS, a data base of news and business information that could be searched on the same terminals and with the same protocol. NEXIS has expanded into what is probably the world's largest full-text data base of news and business information, offering research in a wide variety of publications, ranging from leading newspapers and magazines to wire services and newsletters.

During almost all of these years of progress, Jerome S. Rubin was president of Mead Data Central. He had replaced H. Donald Wilson in that position in 1971. Under Rubin's leadership, MDC turned the basic ideas inherited from OBAR into an actual working service and established it in the offices of scores of thousands of lawyers throughout the United States. In September 1981, Rubin and his principal subordinates were replaced. A new Mead management team now runs MDC from Dayton.

## The Development of WESTLAW

It was not until 1973 that the management of the West Publishing Company decided to enter the market with a system of its own—WESTLAW. The first WESTLAW subscriber went on-line in April 1975.

The initial WESTLAW system was primitive indeed. The software was balky and unreliable. Communication was by expensive leased lines. Worst of all, the data base consisted solely of West headnotes. If the OBAR and LEXIS experience had not proved the superiority of full-text searching over headnote or digest searching, the early WESTLAW experience certainly did.

In December 1976, the West management decided to begin building a full-text data base. The WESTLAW data base would consist of *both* the full

text of judicial opinions *and* the West headnotes and other West editorial features. The idea was to give the researcher the best of both worlds—the comprehensiveness of full-text research plus the research advantages afforded by the editorial features of the West National Reporter System.

The theory was good, but WESTLAW initially remained sadly deficient in execution, owing chiefly to the weaknesses of the software and difficulties of communication. Searches were slow. The sequence in which retrieved cases were displayed was mysterious. Searches were interrupted frequently by hardware problems or difficulties with the communications networks. From 1979 on, West undertook an aggressive program of data-base enhancement, creating new topical libraries of federal law, expanding state libraries backward chronologically, and entering contracts with other publishers, including Shepard's, so as to offer research in materials outside the West family of publications. The value of all this continued to be obscured, however, by the hardware, software, and communications problems.

Beginning in 1980, West began a thorough redesign of WESTLAW. Features were added as they were developed. One by one, the deficiencies were remedied. Search time diminished until most searches were completed in a few seconds. The reliability of the overall system was improved, so that interruptions became rare. New search features were added. Retrieved cases began to appear in reverse-chronological order (with the old order retained as an option). A LEXIS-style logic was offered as an option, so that lawyers originally trained on LEXIS easily could make the transition to WESTLAW—or, better still, readily could switch back and forth from one to the other as necessary. By 1983 or 1984, virtually all the software problems had been solved, and WESTLAW was a highly sophisticated, user-friendly research service.

West took the lead in offering its service on nonproprietary terminals. Although it introduced the WALT (West Automated Law Terminal) in 1982, it made WESTLAW available on virtually all minicomputers, microcomputers, personal computers, and mainframes.

In 1984, WESTLAW made MCI Mail available on its WALT terminals. This means that any WESTLAW subscriber with a WALT can send a message electronically, and at minimal cost, to any other subscriber with such a terminal, as well as to other MCI Mail subscribers. Through MCI Mail, WESTLAW subscribers also have access to Dow Jones News/Retrieval, an extensive electronic library of market and business news and other information.

WESTLAW, as much as LEXIS, is a beneficiary of the experience gained through the OBAR experiment. Although West elected at first to try a different approach, its computer-assisted legal research system today may be defined in the terms chosen by the small group of Ohio lawyers who created OBAR. LEXIS is the direct descendant of OBAR. WESTLAW is not, but

by experimenting with alternative approaches, WESTLAW proved once again the validity of the OBAR definition.

It is, of course, to the benefit of the law profession that there are competing computer-assisted legal research services. Each of the two major competing systems, LEXIS and WESTLAW, offers advantages unique to itself. We will not attempt here to compare their many features. We might point out, however, that many law firms and law libraries today subscribe to both services and have developed an informed sense of when to use each.

## The Future of Computer-Assisted Legal Research

From time to time someone is foolhardy enough to attempt to predict the future of information-management technology and its likely impact. Everyone who does it winds up eating his words. We have all eaten a few, probably, and none of us seems to die of it, so here are a few guesses.

Within a few years, all lawyers will have on their desks some form of computer or terminal that will give them access to the growing variety of services that will become commonplace and essential. Computer-assisted legal research services as we now know them have a limited life expectancy. Within a few years, lawyers will no longer be willing to use MDC's or West's big mainframes as their research computers. Their in-office computers will have the power and the memory capacity to perform almost all the functions the big mainframes now perform.

West and Mead Data Central will still offer an essential service, however—that of gathering information and putting it in such form that lawyers can find it and use it. They will be in the business of gathering cases, statutes, regulations, and so forth on a timely basis and sending them to the lawyers in electronic form. West will continue to do its editorial work on these materials and to facilitate finding, and MDC may decide to add finding helps to its data bases. These companies, in short, will be publishers—electronic publishers.

Electronic libraries will continue to expand, and there will be more and cheaper ways of using them. Print publication will not disappear, but electronic publishing will be the principal way the law profession obtains current information and digs through the world's archives.

Someday before long the computer in your office may be wakened at 2:00 a.m. by a signal from a satellite. Down from the satellite will come a stream of information, which your computer will receive and file in the appropriate electronic cubbyholes in its memory. When you arrive at your office in the morning, your computer will have prepared a daily digest for you of information selected according to instructions you have left with the computer. When you want to do research, you will use your own computer to scan the information in its own memory, information that is updated daily and perhaps even more often.

What happens to libraries and librarians? They become more important. The function of a librarian, after all, is not just to act as the custodian of an information warehouse; it is to make information useful, which of course means being able to call it out when it is needed. Already there are professionals who specialize in helping people to select the right electronic library and retrieve information from it. These specialists know what each library contains and how to use the various search protocols to retrieve it. With more and more information being created and stored, finding it and bringing it out becomes an increasingly important speciality. Rather than making librarians obsolete, the development of computer-assisted legal research makes librarians even more valuable.