

WESTLAW ... an early history

Bill Voedisch

employed by West Publishing Company, Thomson-Reuters - 1970 to 1996

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by Bill Voedisch

Background

This being 2015, the 40th anniversary of the commercial launch of WESTLAW, it seemed the right time to do an early history. Creating this history, from five or more years before its launch in 1975 to 1985, was a challenge. It was a test of my ability to be a mini-WESTLAW of sorts: what could I *recall*, and how *precise* was it? Going back through some dusty materials but mostly digging in my memory as far as back as 45 years, has produced what follows.

For a WESTLAW sales meeting in 1985 I created a history presentation, based on a skeleton script that I used to narrate over a video. By some miracle, my better half found the script, and that timeline helped keep me on track. Still, I ask the reader's indulgence, indeed, your forgiveness, for any errors or omissions that may exist here.

For context, in the early 70's there was no screaming google search engine and no Internet. WESTLAW was the search engine and we initially had to build our own network. There were no personal computers, just the possibility of connecting not-so-smart terminals to mainframes. You're phone was on your desk or hanging on a wall at home. Yet the desire for instant information was percolating.

A heartfelt acknowledgement to all who worked so hard and creatively in those early years, laying the foundation for what was to become the premier Computer Assisted Legal Research Service in use today. I considered mentioning the names of key contributors to WESTLAW, but there were so many, and my fear was missing some folks. This history therefore mentions only a few industry players from outside the company.

Except for one. Any history of WESTLAW would not be complete without a tribute to Dwight D. Opperman, our President and visionary leader in those early days. He faced the competition from without as well as strong winds of resistance from within, and WESTLAW prevailed. We are all in his debt, including the newest employee of Thomson-Reuters.

I should also note that this is a history of the product, the service, that was WESTLAW. A history of the organizational shifts that paralleled the history of the product would, I think, detract from the story, and is not contained here. Nor do I cover important side issues that kept us busy, such as "star paging." Instead, this history remains focused on WESTLAW the system, the product.

The form of this history

What follows is in two parts. First is a narrative, with an emphasis on the background, the *why* and the *how* of what happened at key points along the way. After the narrative there is a timeline of events, starting in the late '60's. Each helps in the presentation of this interesting story.

Respectively,

Bill Voedisch

NOTE: For the history of "Computer Assisted Legal Research Systems" before WESTLAW, I acknowledge the use of the publication *Automated Law Research*, the proceedings of the "First National Conference on Automated Law Research" held March 16 to 18, 1972 in Atlanta, GA, as published by The American Bar Association, Copyright 1973.

WESTLAW ... an early history

1. INTRODUCTION

It must be said up front that a history of WESTLAW, and events leading to its creation and evolution, must be tied to the commercial launch of LEXIS by Mead Data Central in 1973. A seminal moment was the “First National Conference on Automated Law Research” held in Atlanta GA, March 16 to 18, 1972. Sponsored by the American Bar Association’s “Standing Committee on Law and Technology,” this conference featured among other topics, speakers representing four full-text search and retrieval systems:

STAIRS	“Storage And Information Retrieval System” Steven E. Furth, IBM
LEXIS	Jerome S. Rubin, Mead Data Central (MDC)
JURIS	“JUstice Retrieval and Inquiry System” B. W. Basheer, U.S. Dept. of Justice
QUIC/LAW	“Queens University Inquiry into Computers / LAW” Prof. Hugh Lawford

LEXIS was in the hands of lawyers before 1972 under the Ohio and New York state bar projects, but was not available commercially until 1973. Quite interesting was that the other three systems all became available in 1972. This conference then was really a convergence point for this emerging technology.

In time, West would meet with IBM, Page Basheer of the Dept. of Justice and Hugh Lawford of Queens University, Kingston Ontario. More on this later.

The participants at this conference reached two conclusions:

1. These systems should be based on full-text, word searchable databases, not merely searchable via companion indexes.
2. Once materials are found, the legal research process, that which the lawyer does to determine final relevancy of retrieved materials, and how it will shape the arguments and affect their case, is not what these system do. They are “search” systems that assist the lawyer’s “research.”

The term “Computer Assisted Legal Research” (CALR) system, which became common usage, supports the second conclusion.

Mead goes public with LEXIS

It was at this conference where Jerome S. (Jerry) Rubin, President of MDC, announced that Lexis would be made commercially available to lawyers in early 1973, and would contain the full text of selected legal materials from the states of Ohio and New York, as well as some Federal tax materials.

The conventional wisdom depicted West Publishing Company, the nearly century-old legal publisher, as a sleeping giant on the banks of the Mississippi in St. Paul, not so much unaware but unprepared, to respond to Mead's announcement. There is some truth to this, but we were not without the resources and skill sets to enter into the world of CALR.

A review of West's technical history during that time is helpful.

The beginnings of West's published information going "on-line" for the maintenance of publication databases

My first experience with West Publishing was most interesting. I came to a job interview with the "Publishing Systems" half of the MIS department in September, 1970, with several years of software development and systems design experience under my belt, and over three years in "on-line" systems development, linking terminals to mainframes, a rare skill in those days.

(See NOTE next page)

(Until 1980, at West there was a "Publishing Systems" MIS department and a "Business Systems" MIS department, with separate managers, computers, support staffs, and in-house client users for each. This arrangement was actually helpful in the early years as it allowed our team to totally focus on publication systems and databases, computerized typesetting and the creation of WESTLAW. The two departments were merged in 1980.)

During the interview, I was handed a brochure for a piece of hardware. I responded that yes, we can attach this terminal (the Harris 1100 CRT text editing terminal) to an IBM System 360 mainframe ... as I'm reading the technical specs on the back of the terminal's marketing brochure ... *so long as they build their IBM 2265 terminal emulation interface correctly.*

The conversation switched when I asked: What exactly does West want to do by going "on line" with this terminal? This led to a description, the goal, of being able to call up a text document on the screen from a (random access) publication file on the mainframe, changing it on the terminal's screen by applying additions or corrections via the terminal's "word processing" features, and sending it back to the mainframe to replace the existing document, so a current/accurate version of the file (the "publication") could then be computer typeset.

This struck me as pretty heady stuff for the day. As we talked further, I learned that "digest" files were being maintained via batch (paper tape) transactions subsequently applied to a magnetic tape, and were then being computer typeset for digest "pocket parts," and ultimately the re-compiled bound volumes, as West's initial entry into computerized "cold type." Work on this began in 1967, that year marking West's first use of computerized typesetting. The digests would then be the first publishing "databases" targeted for the on-line update system that, during my interview, *was just an idea.*

Then, in a somewhat soft voice, making sure his door was closed, the interviewer talked about a future where a lawyer, with a terminal in their office, could do a computer-based search of legal

information stored on a mainframe at West, have the results displayed on their screen, and print it. At that moment I believed that the opportunities to do great and exciting things at West were seemingly limitless ... interactive and updatable publication databases, computerized typesetting, then available for searching by lawyers. Sort of dumbfounded I think I said something pretty odd, like ... “Well, we’ll need a different terminal than the expensive Harris for the lawyers.”

This was an early “WESTLAW”-type discussion held in 1970, and surely similar discussions took place before I showed up for a job interview.

I was offered a position and accepted.

NOTE:

Minnesota was the place to be in the late 50’s and early 60’s if computing was your passion. There was nothing much in CA. While Hewlett and Packard were deciding whose garage they were going to use to develop their first piece of technology, computers were in use at the University of Minnesota. When my brother was a freshman in 1958, he found two computers at the U, one in engineering as I recall, and he began programming in the language of choice at that time, Fortran.

When I arrived on campus in 1962 there were four computers at the University from the following companies: Univac, Control Data, Honeywell, IBM. If you asked any of these companies why they provided computers to various schools within the University, their response would likely be something like this ... well, we think it might lead to something. And lead to something it surely did since you could take for-credit programming courses on any of these machines. The great part about this was, these computers weren’t just there for the use of faculty and grad students, they were main-streamed into the curriculum of each school that had one. That’s what was so visionary by both the computer providers and the University.

Minnesota was the computing hotbed at that time, and secondarily, Massachusetts. The University was at the center of it all in terms of its “user community,” and I found myself taking programming courses starting immediately, fall quarter, freshman year. I spent most of my time on the Math department’s *solid state* CDC 1604, and also on the Business School’s Univac 80, a vacuum tube machine that had to be shut down periodically due to heat build-up.

When I graduated in 1966, Fortune 500 companies were swarming the campus looking for graduates who could program. None of these companies cared what your degree was in ... could you program a computer was the only question. I could have joined any number of companies but stayed at home, and joined Cargill’s computer department.

While at Cargill I was fortunate enough to land on a project that would shape my career. Before “electronic mail” was even an idea, our team of five built an early *email* system ... from scratch, including the operating system, since IBM’s S/360 operating systems of the day, DOS and OS, were not up to the task. It was to replace a mechanical perforated torn tape (teletype) based “messaging” system that had been in use at Cargill for decades.

I wrote the “line handler,” the Input / Output (I/O) interface that communicated with the terminals in the hands of the users. Another programmer wrote the underlying operating system, while a third programmer wrote the message “database” portion ... where the messages were stored before they were forwarded on. We were under the guidance of two IBM systems engineers, toiling over this *skunk works* project for 1.5 years. When complete I was an “I/O bit flipper” of a programmer, a rarity.

My previous programming experience at the U, not so much Fortran but my machine and “assembly” language experience, was invaluable. And after the Cargill “email” system, the notion of connecting terminals to mainframes and letting terminal operators communicate with an application and a database, like WESTLAW ... it all just followed.

West goes “on line” with Digests

We began working on the task at hand, developing an on-line, inter-active update system for Digest publication databases, while linking an eventual room full of Harris 1100 CRT text-editing terminals to the IBM S/360 mainframe. We hired additional experienced software developers, worked with the really great staff of folks currently responsible for maintaining these files in “batch” mode. The primary pieces of software we developed were: a front-end telecom interface that the “application” could use to communicate with the terminal operators; a “database” interface; the interactive application. In not all that long, we were taking magnetic tapes of digests (case headnotes for a regional reporter, in West’s Key Number classification order), loading them as random access (disk) files in a file format of our design, and the staff began accessing, via the Harris terminals, our latest mainframe application, WODEN, “West’s Online Digest Editing Network.”

When WESTLAW was first offered in 1975, it was with headnotes (digests) and not the full text of cases. There was a rationale for this ... it wasn’t just because the digests were the dominate computer readable publication files that we had, although the availability of the digest files was a factor in the initial “headnotes only” decision.

More on the all-important “*headnotes only vs. full text*” question later.

We had good “techies” ... folks who became telecommunication *sponges*

A valuable off-shoot from this project was the telecommunications and terminal-to-mainframe connectivity knowledge gained by a small group consisting of primarily hardware types and one systems programmer, as distinguished from applications programmers. The Harris terminals were attached via inexpensive modem simulators we had custom built, hanging on our own wire, but looking to the mainframe (through a front-end processor and communications software interface) as if they were all sharing a remote leased line that could have run to ... Chicago, Cleveland and New York City. This was important stuff to know for later connecting the first WESTLAW users to our mainframes.

The job interview discussion about lawyers doing computer-based searching was still rattling around in my head, but no active work developing a CALR system was being done at West. There were those at West who were tracking the state bar sponsored projects in Ohio and New York that featured lawyers doing computer-based searching of case law, but it didn’t translate into CALR systems development efforts at West at this point (1971).

President Opperman gives the directive

The 1972 announcement of the commercial launch of Lexis in early 1973 changed not only our focus, but our intensity. The directive came from President Opperman, and I can't give you the exact date:

We are getting into the Computer Assisted Legal Research System business, and it starts now.

Some of us wondered: What exactly were we up against with Mead and Lexis?

We needed to find out.

The Ohio Bar project - OBAR; the New York Bar project; Mead Data Central

In 1964, the Ohio State Bar Association launched a three year inquiry into automating the research of law. The conclusion of that inquiry was that, no system existed that met the standards set by the study committee, and they resolved to develop their own system based on full-text searching and retrieval.

In 1967, OBAR, the “Ohio Bar Automated Research” Corporation, was formed, a non-profit affiliate to the Ohio State Bar Association. OBAR entered into an agreement with a technology company in Dayton, Ohio, *Data Corporation*, to modify its search and retrieval system called “Data Central,” to operate with legal information. In 1968, the Mead Corporation acquired Data Corporation and made the commitment to underwrite the development of the system. The new company, Mead Data Central, Inc. (MDC), assumed the contract with OBAR, and continued the development of the Data Central system.

Between *Data Corporation's* and MDC's work, it took *five years* to develop a legal information version of the Data Central search and retrieval system, re-designed to be used by lawyers, searching legal information such as case law.

In New York, the Lawyers' Center for Electronic Legal Research (LCELR) was formed in 1966, and did the same type of inquiry as OBAR. It concluded in 1970 that MDC's system was best suited for the delivery of a legal search and retrieval system for lawyers, and recommended that the New York State Bar adopt Mead's system as its standard.

In both states, terminals were placed in conspicuous places like state and county bar offices. In Ohio, terminals were placed in a court setting, the Ohio Legislative Service Office, the Ohio AG's office, and Case Western Reserve Law School in Cleveland.

During the years 1967 through 1972, MDC had accomplished the following:

- Using the Data Central system as a starting point, design and develop a database and indexing architecture, and data import software, geared to legal documents
- Simultaneously design and develop enhancements to the Data Central search and retrieval software to operate against the new database architecture
- Design and development a new user interface, with lawyers in mind
- Capture the billions of keystrokes needed to construct large databases of documents, that is, a sufficient base of documents to make search and retrieval worthwhile
- Attach CRT terminals at any location to MDC's Dayton mainframe (a network)
- Train users how to use the system
- Begin building a field staff
- Provide documentation (a user's manual)
- Establish a customer service presence at an “800” number
- Establish a core of *early adopters*, lawyers who have used the system, and are talking about it
- Begin marketing and selling the service

So, how far behind were we?

We didn't know, but of course, it didn't really matter. We knew we had a huge job ahead of us, but we also believed we were up to the task. Looking back and remembering now Mr. Rubin's mention of five calendar years for just systems (software) development, it's probably a safe statement to say today, that, in 1972, we were a minimum of six years behind Mead, but likely more.

What's life without a challenge?

2. WESTLAW'S EARLY DEVELOPMENT

Of all the pieces necessary to develop and launch a Computer Assisted Legal Research Service, by far the biggest component is system and database design, and (software) development. To build it ourselves, we would need to attract a few of the right people, solid software types with advanced backgrounds in linguistics, library science, text parsing, perhaps statistical analysis and weighting. We had on-line and database programming folks, and we would have been excited to work on something as bold as this, from scratch.

By any measure, this was going to be a major undertaking. After staffing, it would take several months of systems design before even a line of code is written, and perhaps four or more calendar years of systems development and testing, consuming 20 or more programmer-years.

It was not a schedule we could live with; we needed a faster path.

Reviewing the “build” vs. “buy” scenarios, “buy” ... or more accurately, “buy and modify” ... was the route we chose. We were in good company as Mead got their start by acquiring *Data Corporation* and the Data Central system. But which system, and could we negotiate the key pieces, such as rights to the source code?

North American Newspaper Association Convention, 1972

In the summer of 1972, perhaps three months after Mead's Lexis announcement in Atlanta, I attended the *North American Newspaper Association* convention in Toronto. I reviewed the program and noted the presence of Prof. Hugh Lawford discussing the QUIC/LAW system, and I knew I had to be at his presentation.

For this audience Prof. Lawford talked about the *newspaper morgue file* application. He was pitching QUIC/LAW to newspapers as a way to create a searchable database of the newspapers they were publishing daily. By sending the text that drove their daily computerized typesetting of the newspaper ... assuming they were doing “cold” type ... off to a QUIC/LAW text scan and load process, and with the QUIC/LAW software operating on the newspaper's IBM mainframe (assuming they had one for other reasons), reporters and editors could access yesterday's newspaper today, on a CRT terminal at their desk. Or a newspaper from a month ago, or a year ago. Articles from past newspapers could be loaded and made available to search and retrieve.

When he was done fielding some questions, I was the first person waiting for Hugh at the bottom of the stairs leading down from the stage. I introduced myself as being from West Publishing, to which he responded that he'd been trying to get in to see West for over a year, without success. I said that I wanted him to come down as we were interested in learning more about QUIC/LAW. He readily accepted my invitation.

STAIRS, JURIS or QUIC/LAW?

STAIRS

We asked IBM for an overview of STAIRS. They brought in a STAIRS guru who gave us a presentation including as I recall, a dial-up demo of the system, running on an IBM mainframe in White Plains, NY. It had its strengths but what looked like some real weaknesses. It was a run-time (object code) IBM product that now had a price, that is, a monthly license fee. When the discussion turned to getting access (license) to the source code, things fell apart. They may be willing to do a custom version for us, with IBM making the software changes we needed, but licensing the source code gave them a real problem. Our local IBM account team wanted us to leave the door open, which we did.

JURIS

Page Basheer of DoJ, one of the nicest fellows you would ever hope to meet, came to West on several occasions. Discussions centered on the JURIS system possibly “hosting” West’s system, that is, a special West version of JURIS operating on the DoJ computers in D.C. As I recall, they were not in a position to provide us even the run time (object code) version of JURIS, and the source code was definitely not going to be available.

QUIC/LAW (This is the way it was spelled in those days, not the now familiar QuickLaw.) From Queens University, Kingston, Ontario came Professors Hugh Lawford and Dick von Briesen, who headed up the technology and development team for QUIC/LAW. Dick spent time with West’s techies understanding what we had in the computer room for mainframes, random access memory, front-end processors, and IBM systems software, especially telecommunications software. We mutually concluded that West had all the pieces necessary to operate QUIC/LAW, and the skill sets to run it.

These were extremely nice fellows and were also a source of enjoyment for the company. You see, Hugh might have been 5’6” and Dick was all of 6’8”, a fun pair to watch on their way to the West cafeteria.

Attention turned to the form in which QUIC/LAW would be licensed to West, and we requested rights to both the run-time (object) version as well as the source code, since there would need to be many changes made to the software. Yet we would not be sufficiently knowledgeable with their source code for some time, and we would initially have to rely on them making changes to the software at our request. They understood and agreed, and in time we had a licensing and support agreement that covered all of this.

1973 - we begin developing a CALR system at West.

Specifically we did the following:

- Two West programmers were assigned to work with the QUIC/LAW software and with Queens University staff, with an initial goal of loading a small amount of Digest material as a searchable QL database. (Easy to say, but there were many fits and starts involved.)
- Dick von Briesen and his crew made changes to the system at our request.
- Two West editors were assigned to work with the system and act as both the editorial directors and as our first “users.”

We were off but came to realize that Dorothy’s yellow brick road was pretty tame traveling compared to the journey we were now on.

“KeySearch”

The system was initially called KeySearch. In 1974 it was in the hands of a few user “alpha sites” under non-disclosure, with this name. One problem: the name implied it was a system based on searching only by West’s Key Number System, and we could have been dismissed by reviewers and the market on that basis alone. Before its commercial launch, it became **WESTLAW**. There could be no other name, and over time you would hear some in our field staff chant: “WESTLAW is best law”

“If the books are going to die ...”

A true story from 1974 gives real insight into the conviction Dwight Opperman had to keep moving forward. We were knee deep in our efforts to get the product built and we were struggling somewhat, while starting to incur some real costs. During a meeting with just a few key departments involved, a comment was made to the effect ... *If we follow Lexis we will only be legitimizing this online thing, and the (our!) books will die all the faster.*

Dwight thought for just a moment, and then responded ... *If the books are going to die, then we have to be the ones who kill them. It’s the future ... we have to do this!* In 1996, 22 years later when West was acquired by Thomson, WESTLAW was roaring and ahead of Lexis in the market, yet we shipped more books that year than at any time in our history.

We had long since converted everything to “cold type,” and through this lengthy and mammoth conversion to automation, including WESTLAW, *no one lost their job to technology*. This was a stated goal of Mr. Opperman. Working for this man was a privilege.

Headnotes only vs. full-text

A way bigger issue than the name was the content. Our decision in 1973 to build the system with only headnotes was something it took us nearly five years to recover from, and actually put us further behind as each year went by without full-text.

How could West have made such an error?

What follows is not a defense as it is an explanation of the editorial decision to provide headnotes only. In legal research, finding precedence is key. The big research task facing lawyers is the huge mass of material found in over a century of judicial cases (the haystack), and how you go about finding cases on point to your issue (a few needles). West's headnotes ... points of law, and our proprietary Key Number System under which headnotes were classified, was the premier case law indexing and finding tool of the day. The Editorial decision to *not* put up the full text of cases, but rather the Digest (headnote) databases, was based on the goal of offering, on our computer, the ability to search these succinct points (paragraphs) of law with your search terms, and when you found one on point, take that key number right back into the system for more headnotes *that never mentioned your search terms at all*.

But there was more to it than this, and the lead editor described it this way. Different court cases can contain language uses, drafted by hundreds of different judges/clerks over the years, where such language uses are all over the map, and yet deal with the very same point of law. Because of this, searching just the raw court cases can never find you anywhere close to all the relevant cases. West provides order out of the raw court cases. We not only find errors in case manuscripts (a later topic of this history), but we also create a headnote for each point of law. There is an evolved language of sorts used by West's case editor/annotators, a language that permeates the headnotes. If a CALR lawyer/user is familiar with West's headnotes, they may enter search terms that map into this "headnote language," and they will do way better in *recall* compared to using their search terms run against a raw case-only (no headnotes) full-text system like Lexis.

In fact he would say ... give me KeySearch (WESTLAW) with just headnotes, and put me up against an experienced Lexis user, on a case law database of the same jurisdiction/state and years of coverage, and I will beat them every time in terms of recalling more relevant cases, and fewer off-point cases, for whatever the legal issue is.

This may have been totally true, but it eventually made no difference. The 1972 ABA conference concluded that full text was the way to go. Lexis was in the hands of Ohio and New York lawyers well in advance of its commercial launch in 1973, and these users were full-text advocates. Lexis was in the marketplace for two years (1973 to 1975) before WESTLAW, which only helped to cement full-text in the minds of many.

The debate went on for a year or so after WESTLAW was launched, and it was over.

We had to go full-text

Our biggest decision concerning CALR was, to do it or not. The second biggest decision was to abandon headnotes-only and go full-text, and in November 1976 the directive came from Mr. Opperman ... *we will be full-text by January, 1978*. Of course, the bulk of this task fell to us on the development team.

3. WESTLAW GOES FULL-TEXT ... *and then some*

This was a huge *challenge* ... the software and database architecture re-engineering of the entire system and rebuilding all the databases, *in 13 months* ... yikes! But it was also a great *opportunity*. We decided immediately to implement word level indexing. First, with cases being much larger documents than headnotes, we could no longer tolerate needing to do a “text scan” to see if “A was in the same sentence as B” ... we needed to be able to determine this from the index structure alone. A future opportunity also became apparent. By implementing a new database architecture that indexed each word down to its position within the document, we could, at some point, *allow Lexis users to enter their Lexis commands, and have those commands work on WESTLAW*. For the second player into any new technology, this approach can pay big dividends as you try to capture users experienced in the other guy’s protocol.

(A parallel: When you are second into a market with a product, you want to make your product easy for users of the existing product to use, or exactly the same but cheaper, faster, etc. When John Deere got into the motor-grader business, Caterpillar had been in it for decades, so Deere made the hand controls match those in use on Caterpillar motor-graders.)

We also knew that, once the “headnotes only” stigma was dismissed, the real power of having clean cases, enhanced by annotation, would rise to the top ... what we eventually called “Full Text PLUS.” Much more on this later.

“word position searching” vs “grammatical structure searching”

At some point during our early development of WESTLAW, it had been suggested by our QUIC/LAW friends that their grammatical connector (sentence and paragraph) searching was superior to Lexis’ word position searching, as searching without regard to sentence and paragraph boundaries ruined *precision*. That is, you will get back documents not on point at all with Lexis just because of their indexing structure and search system. Hmmm ... ?

My first exposure to Lexis was reviewing a copy of their User’s Manual. After a general system orientation and introduction to the searchable databases, the search mechanics were introduced. To do *this* type of search use “A within 5 words of B,” and to do *that* type of search use “C within 10 words of D.” This compared to our “A in the same sentence as B.”

It wasn’t rocket science to see how word position searching could ruin precision, since documents would be retrieved where your search terms occurred in different sentences or even different paragraphs, and as such, the document could easily be totally off point. However, we also knew there were thousands of Lexis users out there trained in word position searching, and at some point we will want to let them use their Lexis query structure on WESTLAW, if that was still their choice. Eventually we would introduce them to grammatical searching.

Aspects of our WESTLAW system re-design strategy:

- When going full text, make the case look as it appeared in the West Reporters, with Synopsis, Key Lines and Headnotes along with the *corrected* court opinion.

- Index to the word level so as to accommodate word position searching as well as make phrase searching more efficient.
- Retain sentence and paragraph breaks for grammatical structure searching.
- Implement a form of text compression.

There was more to it than this, but these were the key goals.

We change software consultants

To accomplish this formidable task we had to go faster than the QUIC/LAW team was able to go. This led us to retain Mobius Systems (I need an umlaut over the o) out of Ottawa, Ontario, a small software consulting firm which had some staff level experience in the QUIC/LAW system. This was no indictment of our friends at Queens University, who had other customers and needs to fulfill, it's just that Mobius could indeed concentrate on WESTLAW, and get us to where we needed to be, faster.

Full Text cases available January, 1978

After an extremely feverish 13 months, we launched the new system, which included the new database architecture and search software, and all databases reloaded. *OK, now what do we do with it?*

The field staff was eager to show both the full text of cases and faster search results. But we knew the benefits were going to be much broader and would, over time, help shift the market in our favor. It would eventually be called "Full Text PLUS," but we weren't ready for prime time yet. Not nearly ready to tackle Lexis in the large law firms.

4. What to do while getting ready for prime time?

There were several missing ducks, some as big as golf course geese, that we needed to get into place before we could take on Lexis in its most profitable market, the large firms. Here, in no particular order:

- Lexis was the CALR system in the Federal Courts, and young attorney-clerks were using Lexis in that setting and then, they used Lexis ... or asked for Lexis ... when they landed their next position, usually in a large law firm.
- We lacked database breadth and depth. Mead was quite good at playing the “database game,” and was continually ahead of us.
- Mead had an easy-to-use custom terminal, the UBIQ. We needed our own.
- Eventually Mead offered a shared high-speed printer, which we also needed.
- Lexis was building a strong presence in law schools, which was working against us with young attorneys, just as in the Federal Courts setting.

We knew there was a long way to go here before we were going to be ready to take them on in the large firms, but while tackling these big tasks we had to make progress where we could, and that was in the small law firms.

So a two-pronged approach was taken: work on the major pieces needed to do battle in the large firms, while attacking vigorously the small firms right now. We were able to work on both simultaneously.

The small firm strategy

There were a few key pieces needed to get into the small firms.

- WESTLAW and Lexis were expensive products, and to reach smaller firms we needed lower pricing. By developing dial-up access we were able to dramatically reduce our network costs to reach a customer, and thus, lower pricing.
- Parallel with this we began working with technology companies who provided equipment into law firms, beginning with stand-alone word processors, to make their products “talk to WESTLAW.” This was our “WESTLAW Compatibility Project” and it proved to be extremely successful. And again, since we didn’t have to provide our equipment to the firm, the cost of WESTLAW to them could again, be further reduced.

I went to COMDEX every year in Las Vegas, where all manner of new technology was introduced. There were “techies” there from all walks of business, including law firms. I remember in the early 80’s, stopping by booths of office vendors who called on law firms. Either because we had worked on a compatibility project with them, or because I could tell from their specs that they could access WESTLAW (via something we dubbed “character mode”), I would walk the floor and place “I talk to WESTLAW!” stickers on equipment. The vendors were tickled.

Mead would dismiss all this as so much nonsense in the small firm market, a segment that could never afford CALR in the first place. The more they ignored our efforts, the better we liked it.

WESTLAW Compatibility Project – the next step

Another key piece for linking lawyers to WESTLAW was our creation of software that would turn your IBM PC into an emulation of “WALT”, our custom West Automated Law Terminal, with full printing and downloading features. Dubbed the “WALT Emulator” internally, it was launched with the name *WESTMATE* and was given away to anyone one who wanted it.

As firms were beginning to run individual (date) phone lines to desktop PCs and later, linking desktop PC's into Local Area Networks (LANs), *WESTMATE* became a critical piece of the overall strategy. In time we did an Apple MAC version.

Proven in the small firms, *WESTMATE* became a key part of our large firm strategy as well.

5. Getting ready for prime time

“Full TEXT PLUS”

The seeds of what was to become “Full Text PLUS” were sown when we made full-text available in January of 1978. Over time, we were able to document the following:

1. *The mere presence of the synopsis, key lines and headnotes added a full 15% to the number of cases recalled by a search.* This was huge, and easy to demonstrate to customers. It arises out of the language used by West’s editors in crafting these editorial enhancements often being *different than the language used by the author of the case.* Even researchers who wanted nothing to do with using West’s editorial enhancements, and were in fact Lexis zealots, were impressed by this.
2. *The synopsis could be used to quickly dismiss a case as being off-point.* On Lexis with only the text of the original case, you had to do a fair amount of reading to determine if the case did not apply at all. Using West’s synopsis you could typically dismiss a case in short order, which was a *precision* feature Lexis could never provide.
3. *West corrects over 250,000 referenced citations a year in the cases we publish.* Besides the typos and such found in every case, West cross-checks every internal citation, where a case cites other cases. The errors in these citations were routine for West to find and correct as we published the cases. WESTLAW and its users were immediate beneficiaries of this “plus.” Again, Mead could not compete with this since they were not a *publisher*.

All this evolved into a marketing message we called “Full Text PLUS,” and it was a key weapon against Lexis when we eventually made our push into their historic stronghold, the largest law firms. But other things had to also catch up: a presence in the Federal Courts; a law school strategy; broader and deeper databases, especially in key federal topics; a custom terminal (WALT); a shared high-speed printer.

As each necessary piece was developed, Mead kept up their deflection strategy of continued and brisk database development. We knew, and we suspected they knew, that in the end, WESTLAW would become the market leader because of the quality of our product ... clean, editorially enhanced cases that would give you more and better search results, results you could trust. It was a matter of time and perseverance.

But as long as Mead spent the money to keep ahead on databases, they could cloud the real issues, claim leadership, and protect their ground. This strategy was successful for a long time, until it wasn’t.

6. Large firm “displacement strategy”

It wasn't until 1984 that we felt we had the key pieces in place to go back into the large firms and win over Lexis users. We were mostly in these firms already, but Lexis had most of the CALR usage. To eat into that usage, you had to do it, one Lexis user at a time. There was no magic here, just a lot of hard work by our excellent field staff.

The term “displacement” did not mean removing Lexis from the large firms. What it meant was to move Lexis usage to WESTLAW in those firms, displacing Lexis hours for WESTLAW hours. It became co-existence and a gradual migration of users and usage, to WESTLAW, with many of those users up to that point, seeing us as also-rans.

The competition was fierce. If Lexis was down, folks would switch to WESTLAW for the day. The same would happen in reverse if WESTLAW was down. It was about building and maintaining loyalty, and the daily war took place over many years.

But the end result, we believed, was clear. Mead, a paper products company, got raw information from the courts, did nothing to it, and loaded it onto a search and retrieval system. They called on customers with representatives who were not legally trained and didn't understand the basics of legal research.

West was the opposite. Our history of legal publishing produced cases that were accurate in every detail, and our proprietary enhancements came to the top with better *recall* and *precision*. Our field people who called on you were lawyers and understood legal research.

Over time we prevailed.

WESTLAW ... an early history

Timeline

- 1965** West's first computerized typesetting on an IBM 650; "H & J" galleys
- 1967** IBM System 360 – a system was developed and implemented to apply "batch" updating to digest publication databases maintained on magnetic tape. Edits, corrections and parallel citations were entered on keyed paper tape.
- 1971** Began computerized typesetting of West Reporters, starting with New York Supp.
- 1972** Contact made in Toronto with Prof. Hugh Lawford of QUIC/LAW
- 1973** Decision reached to develop a Computer Assisted Legal Research (CALR) system. Licensing agreement reached with Queens University, Kingston Ontario to use QUIC/LAW as the platform for developing West's initial CALR system.
- 1974** *KeySearch* became our initial CALR system, available on an experimental basis to people within the company, especially Editorial, and to some customer sites under non-disclosure. It was QUIC/LAW software, modified to operate against databases of West's headnotes of cases (digests), organized to track West's National Reporter System. Each headnote was a document.
- 1975** WESTLAW goes live with our first customer in April, Case Western Reserve Law School. Initial commercial pricing: \$1,200 a month, \$2.50 a search, all else no charge.
- Terminal and network: IBM 3271 via leased line, multi-drop, modem connection; IBM 3285 printer.
- The sales "demo" unit was an IBM 3275 in a large wheeled case; WESTLAW was demo'd with an acoustic coupler dial-up to West's computer facility in St Paul.
- Customer Service was an "800" phone in the computer room, answered by the lead Computer operator, or anyone else who heard the phone. It was *red*.
- 1976** A small staff of Customer Service representatives were trained to be totally familiar with the system and with our customers. The 800 number was now staffed
- 1976** November, decision made to go "full text" for case law, with each case as a document, including the corrected court opinion and enriched with our synopsis, keylines and headnotes. This West-enriched case would later become known as *Full Text PLUS*.

- 1977 Complete re-engineering of the system. Slow inroads made into large firms and law schools. The lack of full text cases is a weakness in the marketplace.
- 1978 We launch *full-text* on schedule, January 1978.
- 1978 First discussions of a dial-up offering of WESTLAW, and in parallel, allow that same dial-up terminal to access complimentary services such as DIALOG, to blunt Nexis.
- 1978 Switch from the IBM 3270 to the AT&T Dataspeed 40/4, still via leased lines. Demo unit replaced with a custom unit designed by Mobius. Lighter and easier to transport.
- 1979 WESTLAW offered via dial-up connection, first via Tymnet and then, Telenet. We offer our first dial-up terminal, the AT&T Dataspeed 40/2. Costs for terminal networking dropped significantly, and we begin pushing into smaller firms with lower pricing.
- 1979 The “compatibility push” where we begin to certify law office equipment as being “compatible with WESTLAW, where it could then be used to access the system. The first was the CPT 8000 where we worked with CPT (a Twin Cities company) and guided them in their development of a custom software interface.

Following CPT were NBI, Wang, DEC and a slew of others. Along with dial-up, equipment compatibility was another important entre into small firms. (It took Mead about 4 years to figure out that this was a very fruitful strategy.)

- 1979 Decision to create federal *topical databases*, containing federal cases, code, regulations and supporting administrative material, starting with tax, securities and labor, and growing to 17 topical databases by 1985. We began with significant retrospective additions (going back in time) to all federal case law databases.
- 1979 Decision to do significant retrospective additions to our case law databases for all 50 states.
- 1979 Enter joint venture with Shepard’s to deliver their materials via WESTLAW.
- 1979 Announce WESTLAW System II (in today’s vernacular, WESTLAW 2.0), featuring the following:
- Dial-up access via Tymnet and our own bank of “800” lines
 - Lower cost dial-up price plans
 - Database extensions featuring Full Text PLUS for all cases
 - Shepard’s Citations
 - Access WESTLAW via *your own office equipment*
- 1979 Began building a specialized field staff to sell the service, and train attorneys in its use
- 1980 IBM 3101 terminal replaces the 40/2 as the West supplied dial-up terminal. The 40/2

companion printer is replaced with an HP printer, beginning a long relationship between West and HP for the provision of printers into WESTLAW customer sites.

- 1980** Telenet added as a second major dial-up network
- 1981** West book sales representatives begin selling WESTLAW. All are brought in to the home office to learn the system and their demo gear.
- 1981** WESTLAW made available in Europe through our relationship with Eurolex and David Worlock
- 1981** Decision to build a highly customized WESTLAW terminal to answer Mead's UBIQ
- 1982** Culmination of a two year software development effort, leveraging the database architecture launched in 1978, to provide enhanced search and retrieval features
- 1982** WALT, West's Automated Law Terminal, first offered at customer "beta" sites
- 1982** The exclusive, customized VENDEL auto-dial / auto-logon modem, developed and provided to West customers and sales representatives.
- 1982** October, West awarded the Federal Courts CALR contract, kicking out Lexis!
- 1983** February, first production shipment of WALT
- 1983** WESTLAW beats Lexis in the first DataPro survey of CALR services!
- 1983** Via a new interface called "character mode," virtually every piece of customer owned office equipment with a keyboard and a screen can now access WESTLAW. (Mead is just beginning to figure out that allowing customers to access via their own equipment is a good idea.)
- 1983** While the bulk of new orders are via dial-up access, our leased line network is being used to link high-speed law office mini's, with their clusters of attached terminals, to WESTLAW. The first is the Wang V/S. DEC and others follow.
- 1983** Renewal of the Federal Courts contract
- 1983** Heavy push into law schools
- 1983** The MCI Mail email service is placed in the hands of home office and field staff.
- 1984** Lexis search commands now available on WESTLAW, although we continue to promote the obvious strengths of grammatical (same sentence) searching over word position (within 10 words) searching

- 1984** West develops and launches “Insta-Cite,” our own citation verification system
- 1984** “Off-line Print” launched, featuring a high-speed West supplied HP printer that all users in a location could send their WESTLAW print requests to. This was a Lexis feature we had to match.
- 1984** CCH materials available on WESTLAW
- 1984** MCI Mail now available to all WESTLAW subscribers!
- 1984** Allstates and Allfeds databases now available
- 1984** WESTLAW beats Lexis in Data-Pro survey *again*.
- 1984** Law Reviews and periodical added
- 1984** WESTLAW queries appearing in West publications, beginning with the Hornbook series
- 1985** We celebrate the 10 year anniversary of WESTLAW.
- 1985** We begin the development of “WALT emulator” software for the lawyer’s desktop PC, later dubbed *WESTMATE*. An Apple MAC version would follow.