Where were you in '83?

WHEN CP/M POWERED REAL ESTATE PRACTICES

It all began with a Kaypro II. . . .

Sometimes we forget how far we've come in a relatively short time. As part of our 15-year anniversary celebration, *The Lawyer's PC* is presenting a series of interviews with legal professionals who were among the pioneers. These are some of our readers who were computing when the newsletter began publication in September 1983.

Joshua Stein is a New York real estate and finance partner in the law office of Latham & Watkins. He chairs the Practising Law Institute's annual seminar on commercial mortgage finance, the New York State Bar Association Commercial Leasing Committee and the ABA Subcommittee on Hotel Loan Workouts. Stein publishes extensively on real estate law topics. His writing has appeared in the *ABA Journal*, *Real Estate Review*, *The Practical Lawyer*, *The Practical Real Estate Lawyer* and elsewhere. Our electronic interview follows.

When did you start using a computer, and what made you do it? What model was it, and how much did it cost? Were you the "first lawyer on your block" to get one?

In 1982, a friend who had an Osborne "portable" computer persuaded me that microcomputers could actually do useful work. He convinced me microcomputers were finally no longer just programming toys for computer geeks, or potential computer geeks like me. (I am one of those people who seriously considered buying an Altair home computer kit to learn how to do binary programming.) Anyway, just in time to claim a deduction for 1982 for the sales tax, I bought my first desktop computer.

It was a Kaypro II, which cost about $1,700. It had 64K of memory (1/1,024th as much memory as many of today's desktops), two floppy drives (versus just one floppy, which I think the Osborne had), and a 9-inch-diagonal (larger than the Osborne!) green-on-black screen. My Kaypro II probably had less computing power than one of those children's books where my 4-year-old daughter Julia can push a button and the book makes 1 of 12 different annoying noises.

Within a few weeks after buying my first Kaypro II, I decided to use it at the office to do all my short or medium-length written work. So I bought a second Kaypro II for home, also for about $1,700. For quite a few years I was the only lawyer in my firm, and one of very few lawyers I knew, who had a computer on his desk. I was quite an oddity.

> **JOSHUA STEIN**
> **LATHAM & WATKINS**
>
> **885 Third Ave., Suite 1000**
> **New York, NY 10022-4802**
> **e-mail: joshua.stein@lw.com**
> **www.lw.com**
> **www.real-estate-law.com**

What were some of your early frustrations?

My Kaypro wouldn't let me change floppy diskettes without rebooting. (Remember, it had no hard drive and certainly no network, so the only place to store anything—software, documents, whatever—was on a floppy diskette. The Kaypro diskettes had capacity for about 181,000 characters.) If you changed floppies and then tried to save your work, the machine would crash and you'd lose all your work since you last saved it. Eventually, someone came out with an upgrade to the Kaypro's CP/M operating system to solve this problem. But it didn't work per-

fectly all the time. Sometimes documents would get saved with words in the wrong order. I'm not making this up. It was definitely not very good. But I eventually figured out a way to solve this problem.

If a document was longer than about 25,000 characters (including, for example, almost any mortgage), you had to break it into more than one document, because PerfectWriter couldn't handle documents any longer than that. To print, you had to "chain" all the separate documents together.

These last two characteristics of my Kaypro made it extremely difficult to use for long documents. It was almost impossible to develop substantial form documents and then copy them for particular transactions.

When I bought an HP LaserJet printer in 1984, I had to "configure" my software to get the printer to work. I figured out how to tweak PerfectWriter to get it to transmit certain "escape sequences" at the beginning and end of each print job, and to change fonts. The printer also wanted to move each page of printing down another inch or so, until I figured out how to stop this by sending yet another "escape sequence" at the beginning of each job.

To get the printer to work right, I also had to figure out "pin out" assignments in the printer cable, and go to a cable store to have them move wires around in the cable. You had to connect Wire 20 to Wire 3, and swap wires 5 and 6 at one end of the cable—something like that.

> **"On Day One you think you're really smart because you have some great new computer capability. On Day Two you look up and see that everyone else has it."**

Did you feel pressured to computerize, initially? Have you felt pressured to upgrade and expand your high-tech arsenal over the years, as you've watched rival law firms computerize? Do you feel "threatened" by the press of technology even now?

I felt no external pressure to computerize. When I put a Kaypro II on my desk as a second-year associate in 1983, I knew I was way ahead of the curve, and liked it. I remember sending around a memo at my firm—at that time Irell & Manella in Los Angeles— inviting all my colleagues to stop by my office and see how a lawyer could put a computer on his desk and get value out of it.

It took 10 years of using computers before I felt any sense at all that the rest of the legal industry was catching up with me. Today in our business, computers are as common-place as cars on the highway at rush hour. The nature of the beast dictates perpetual improvement, perpetual pushing to the next level. Intel produces a new, more powerful chip, and then the software industry (*i.e.*, Microsoft) figures out new ways to push its limits. So Intel has to go back and produce an even more powerful chip. And so on and on.

The same process applies in the legal industry. You have to keep upgrading everything and pushing harder and moving faster, because the next guy is. On Day One you think you're really smart because you have some great new computer capability. On Day Two you look up and see that everyone else has it, too. If the whole economy is functioning this way, you can see why we're doing so well these days.

Even in the early years of microcomputers, futurists were predicting computers would "change the way we practice law—in OUR generation." Do you think the impact of computers on the way you work has turned out to be of little significance, fairly important or more profound than you possibly could have imagined in 1983?

I'd say "fairly important." I knew computers were going to affect us in some very powerful ways, including many of the incredible ways that they now have. Computers have given us power over our written work, and they've given our written work power over us. We turn out much better work, much faster, than we did in 1983. We take for granted instant access to an incredible range of information and information processing power. We communicate with our clients and the rest of the world at a volume and pace unlike anything imaginable in 1983.

Today, what hardware, software and peripherals do you and your secretary use?

All attorneys and secretaries at Latham & Watkins use Pentium processors and shared HP LaserJet printers. Most systems have been upgraded to Windows 95. Our standard software menu includes Microsoft Word 6.0; DocsOpen document management system; Lotus CCMail electronic mail system; proprietary software we wrote ourselves for timekeeping (it's DOS-based and it's pretty simple but it works—I just hope we don't try to upgrade it for Windows); Delrina electronic forms for internal information flow; and Netscape Navigator 4.0. I personally use Act 3.0 contact manager, which I share with my secretary and can also use to make my address book database available to other attorneys who work with me.

Are you able to handle more clients and more cases today as a result of technology?

Computers help me get more work out faster. I can probably handle twice as much work today as I could in 1983, even after adjusting for whatever increases I've otherwise achieved in knowledge, efficiency and competence over that period. On the other hand, because it can be done, it *must* be done. The transactions and the client expectations move faster than ever. It's very hard to provide clients with a strategic view of anything beyond tonight's distribution of documents.

Are you satisfied computerization has enabled you to provide higher-quality work for your clients? Would you discuss one or two examples of the improvement?

Our papers are better, longer, more complete and more thorough than ever. We can revise our written work endlessly, and this probably makes it better. But it also invites endless negotiations—continuing until the last minute —which increases the level of stress and the possibility of mistakes in closing documents. Your clients may love you today for getting the deal closed in record time and meeting their deadlines, but they need to remember that they will have to live with those documents—and won't necessarily be able to change them—for years and years.

Also remember there's a lot more to transactional work than producing paper, which computers are so good at. Computers don't help much in reviewing title, ordering surveys, reviewing leases, coordinating third party deliveries, dealing with local counsel, setting up escrows and prorations and bank accounts—all the other stuff we have to do to bring about a closing. And that stuff (which isn't too streamlined to begin with) often ends up being a bottleneck when the computerized part of the closing, the document preparation, is going a million miles an hour. It is much more fun and interesting and intellectually stimulating, too.

Would you go so far as to say you don't believe you could practice law today without a computer?

Yes. I could not practice modern law in the modern world of today's instant deadlines without a computer. But after using computers in law practice for 15 years, I am becoming very aware of how *not* to use computers.

I started using the dictating machine again about five years ago. It's great for certain kinds of work—for example, routine letters and memos that require more clerical overhead than legal drafting.

If some situation or problem comes up, I've always been very oriented toward pushing a couple of buttons and creating a letter or a memo or a document—something very easy to do on the computer. But rather than do that, I ask myself whether a quick phone call, or no action at all, might be the most effective way to respond. Often it is.

And although it's always easy to put together and send out a quick first draft of a settlement agreement or a term sheet after a meeting where everyone's very anxious to start seeing papers, you often achieve better momentum and a better result in the long run by letting events unfold some more first. Sometimes you want to take some extra time to think through which direction you really want to go and how you want to get there. Sometimes the paper should wait.

How has the "paperless office" affected your practice?

So far I haven't had great success personally in achieving a "paperless office." I generate and keep more paper than ever. I don't trust computers to maintain a reliable record of my finished work, over time. Large numbers of computer files are hard to keep track of and control. I have over 5,000 computer files of completed documents and some of the other work I've done. In that collection, you can't always be 100-percent sure which is the final version and whether someone played with it, intentionally or unintentionally. Software becomes obsolete, and you might lose access to your data files that went with that software.

I'm now on my third document management system, seventh word processor, fourth Great Logical System to Keep Track of Archives, and third database system for my chron file. Magnetic signals degrade. Computer files get corrupted for no reason at all. Archives get purged. So I am more religious than ever about keeping paper, and not just computer files. I have vast and ever-growing piles of paper. I even keep paper printouts of occasional random e-mail messages that might be worth saving (one in a hundred). Even the paper is unreliable, of course, but at least it gives me a second chance of finding something.

As a firm, we are working on some ways to solve these problems, so that attorneys will be willing to rely on computer records instead of paper files. If we can make the "paperless office" work, we will ultimately create a much more powerful and effective way to maintain and use our own records. First, though, we have to persuade users that when they want something they will be able to find it. They won't trust the system until they see it works.

The "paperless office" is one of the top priorities in our use of computers, and we are working on some pretty interesting ideas in that area. As a threshold issue, we will first have to figure out exactly what we want to keep. That's not always an easy question to answer.

> *"Sometimes you want to take some extra time to think through which direction you really want to go and how you want to get there. Sometimes the [document production] should wait."*

Can you say decidedly that time and billing software (or any computerized time and task tracking system you've devised) has resulted in better collection rates and, at the bottom line, greater revenue?

Most of my work involves complex multistate mortgage loan closings for lenders based in New York. Borrowers pay the legal fees, but they pressure lenders to keep those fees down or lose business. At closings, because everyone knows we can generate some form of "interim" bill, we are required to do so every time. We are urged to make these bills as low as possible and fully justifiable. At the same time, we have to commit that they cover all possible past, present and future charges for the transaction, at a time when we are not entirely sure our billing system includes every hour of time already worked, and we cannot predict with 100-percent certainty just how much more work we will need to do post closing. If we successfully do all this and guess right, then we probably collect about the right amount at the closing and avoid any collection problems. On balance, however, we might have been better off if we could still roughly estimate a number based on our experience, and get paid at closing.

In 1983, there was a growing concern among clerical staff and paralegals that technology would replace them. Has this happened at your firm or at other firms with which you're familiar? By and large, have computers cost legal secretaries their jobs, or have they simply altered the humans' job descriptions?

Soon after we put computers on all the attorneys' desks, we switched to a 3-to-1 secretarial staffing ratio. This probably means some secretaries were phased out, although any positions we lost were probably outweighed by new positions in computer support and central word processing for overflow work.

How well 3-to-1 staffing works in a particular case depends on who the three attorneys (or paralegals) are, and their workload. Even when the people are balanced about right, a secretary's job is a very full assignment.

Even with computers, a secretary still has a tremendous amount of paper jockeying and other work to do—making copies, running redlines, sending letters, sometimes running changes to documents, printing labels, answering the phone, typing envelopes, tracking things down in the file room, e-mailing documents to people, updating my Act database. A secretary in a 3-to-1 assignment has little or no time for any kind of "project work" like reorganizing files, keeping and indexing a well-structured "chron" file, organizing model documents. The new model probably gives secretaries more varied work and responsibility than they had 10 years ago, a more interesting position.

Give an example (or two or three) of a work or deadline crisis in which technology was a lifesaver for you.

I can give you a dozen stories where one client or another faced a very short deadline and I met it because I could get work done incredibly quickly with my computer. But this is all a self-fulfilling prophecy. If you meet one very short deadline—and I always do—the deadline on the next project is even shorter. Because our clients know we can use computers to produce "instant" work product, we must produce "instant" work product every time, and the closing schedules tighten accordingly. If we won't commit to meet the deadline, the next guy will.

To stay competitive in our business today, we have to figure out how to a) meet these deadlines every time; b) deliver top-quality work every time, with whatever thought process and legal analysis the transaction requires; and c) keep the cost within expectations. In that sense, computers have made our jobs harder, not easier.

What's the worst computer disaster or time waster you've ever experienced?

Personally, I am not a big fan of Windows. In my opinion, the mouse and the "graphical user interface" are a tedious pain in the neck, replacing perfectly workable and user-friendly DOS-based software with a tiresome, slow, clumsy, clunky, complicated and counterintuitive user interface that requires far too much computing power and user effort. I would much prefer to enter all commands on the keyboard as opposed to carefully wheeling around a piece of plastic on my desk and squinting at the screen to find a little arrow all the time.

The one great value I see in Windows is that it runs more than one software application at the same time (at least until it crashes). Except for that one useful capability—a very substantial one!—Windows mostly gets in my way. That does not make it a whole lot worse than many other software packages I've bought over the years, except that I can't rip Windows off my machine and send it back or throw it away. On the other hand, plenty of people who know what they're doing seem to think Windows has some value.

Do you think hardware/software tech support today is as satisfactory as it was in '83? Do you think it ever was satisfactory?

I've never been satisfied with any support from any vendor of software or hardware. This is basically because the market is not willing to pay those vendors for support. They don't have much of an incentive to provide good support. Market incentives work great in lots of areas—including, by the way, the delivery of legal services—but they produce lousy support from vendors. You can't really blame the vendors. I get around their shortcomings in user support by figuring out how to solve most problems myself.

What is the best software you ever used?

The XyWrite word processor was incredibly powerful, flexible, fast and sophisticated. It was way too complicated for most users, but I loved it. In the days before everyone was using computers, I could use it because I didn't need to be compatible with the rest of the world. But I had to give it up around 1990. I would gladly throw Microsoft Word 6.0 out the window if the world would shift to XyWrite—even as it existed when I abandoned it.

Today's standard, Microsoft Word, is quite tedious to use (at least Version 6.0). It does have some neat features, but a number of those were already implemented in XyWrite. Microsoft Word 6.0 tries to do too much for users, treating them as idiots who have no idea what they want, so the software tries to figure it out for them. Unfortunately, in my experience, the software is quite often wrong. In the web of complexity and sophistication woven by Microsoft Word 6.0, it can't even do basic dumb things right, like nested section numbering. PerfectWriter on my Kaypro 15 years ago did a better job! (More recent versions of Microsoft Word may have fixed this problem, but I'll believe it when I see it. We upgrade only every few years, and we're not quite ready to move on from Version 6.0.)

What's the best piece of software you regularly use today?

Act 3.0 contact management software. It is flexible, powerful, easy to configure and easy to use. You can set up groups for different kinds of mailings and clients and prospective clients. You can easily take name and address information out of Act and use it in Microsoft Word.

A couple of things in Act I don't use are the calendar and to-do list modules. They just complicate something that is really very simple: I have one word processing file called "todo" and another called "calendar," and that's the end of it. A doctor scheduling patients every 20 minutes might feel differently.

Do you find yourself using incidental utility software that came with the computer? For example, while working in a word processing document, are you likely to click the calculator utility to the screen?

With Windows 95, it takes so long to find and load any software that I wouldn't bother to use incidental desktop accessories like a calculator. Maybe I just haven't figured out the best way to set up Windows 95 for my needs.

How many different computers do you regularly use? How do you keep track of which work is where?

I use my desktop at the office and a portable at home and during a long train commute. I also have a few more computers at home, but these are mostly used by my wife and children. A couple are antiques—extensions of my typewriter collection.

Both my main desktop computer and my laptop have a standard subdirectory structure. Each one has a certain place for a particular category of files: "todo" list, calendar, timesheets, and instructions to my secretary; documents I've checked out from the Latham & Watkins document management system; completed work for my secretary to transfer into document management; other stuff I'm working on that isn't ready to go anywhere; database synchronization packets; batch files and computer programs; templates; and so on. I wrote a process that packs all these files onto a floppy when I am finished working on one computer. Then the same process unpacks all the same files in all the right places on the next computer. And it keeps various backup copies of everything, a record of what was

transferred, extra copies of files that people at the office might want to look at, history files and logs, and so on. This system keeps everything straight, so there's no danger of unintentionally editing two different copies of the same document. I also check to make sure I'm not unintentionally overwriting useful information on the floppy disk I use as my transfer diskette. And if someone stole either of my computers or my transfer diskette—or all three—I could fully recover in a second. I would lose nothing more than, at most, whatever work I did since I last left my office.

I wrote 27 "batch files" and a BASIC program to do all this—shifting a couple of hundred files back and forth on one floppy disk, in various different ways, all by launching a single process from the main desktop. I modify these transfer procedures all the time as I see ways to improve them, or my needs change. The updated transfer procedure files get moved around automatically from computer to computer, and backed up, just like all my documents.

> "Programmers are prone to go off and do things they think are cool but are not worth the time they take."

Doesn't computer programming like that take a great deal of time?

This is pretty minor league, as programming goes. For this kind of thing, it's easier for me just to program what I want than to spend more time to explain it to someone else and then understand what they did and tell them how they missed the target.

Generally, to get the most benefit from computers—and to control programmers and consultants—it always helps if you have some hands-on comfort and familiarity with how computers work, the possibilities, what the software will do. Programmers are prone to go off and do things they think are cool or interesting but are not worth the time they take. If you say "lawyers don't do computers" and believe whatever the consultants and program-grammers tell you, you are at the mercy of whatever priorities, rules and limitations the consultants and programmers think apply. You lose control. When someone says "the computer can't do it all," or will only do it a certain bad way, that's not acceptable. The computer serves us. We don't serve the computer.

Why aren't all routine legal documents being generated by computer today?

Automated document assembly really hasn't caught on. Why? Because it's basically computer programming but requires a tremendous amount of hands-on legal knowledge, too. It's a weird combination, and not too many people can really deal with it. If you have an attorney and a programmer work together, the coordination and "interfacing" (I can use this word here) will consume a tremendous amount of overhead and time.

Any computer programming project is very hard work. It requires a big up-front investment. You would not believe the level of detail and decision making required to program even the most "routine" legal document, let alone a set of documents like a note or mortgage and all the incidental documents that travel with them. And it all has to be identified, understood and coded. Computers are utterly stupid—they have absolutely no intelligence of any kind whatsoever—so you have to tell them precisely what to do in tedious detail, every step of the way. At the end of the day, document assembly is just a computer program whose output is legal documents. And they need to be right. Once you debug it all and make sure it's working right, automated document assembly can be great. But the investment to get there is likely to be more than you expected. It's much harder than it looks.

Does your firm maintain a Web site?

Latham & Watkins has a good Web site (www.lw.com) that we keep updated and use to give the world a useful view of who we are and what we are doing. We've cut way back on the use of graphics in favor of providing specific news updates about the firm and our attorneys that we hope viewers will find useful.

I have my own personal Web site (www.real-estate-law.com), where I post anything I feel like posting. Some of it's valuable and useful and some of it isn't. In the first category, I use my site to post information about the New York State Bar Association commercial leasing committee (which I chair), such as our meeting schedule and agendas, reprints of some of our previous publications, and so on. If you get tired of commercial leasing, you can go read reprints of articles I've written. I also have a good outline on "how to buy a cooperative apartment," which is quite funny but also makes some helpful and nonobvious points. (I don't do co-op closings myself, but have watched and advised on enough of them from the sidelines.) The site has some other useful information, such as an online directory of e-mail addresses of selected real estate lawyers. You can click on any name and send that person e-mail. I call it an e-mailing machine. If you want to look at it, you'll be asked for your username and password, which are "lex" and "terrae," respectively. Don't send any crank mail!

If you get tired of being serious, you can take a look at some more frivolous stuff, mostly under the category of "Useful, Perhaps, But Not Legal." And of course you can find the usual lists of "cool links" to other sites that have caught my eye. But I hate Web sites that just point to other Web sites and have no substance of their own.

I have no particular marketing or promotional strategy, except to make everything accessible, simple and fast. I've banned all graphics on my Web site, to keep it lean and mean.

I write the Web pages in HTML code using the ASCII text editor that was part of the WordPerfect "Library" package, released in 1992 or so. I usually do this on my portable computer on the train. Periodically, I transfer my whole Web site from my portable up to the Web server over the phone lines and Microsoft Network, using a bulk ftp process. I configured the ftp package so I can basically push a button and the entire Web site gets updated.

Have you gotten new business via the Net? Do you think you're likely to, in your areas of practice?

A few people have sent me legal inquiries through my personal Web site. These inquiries usually start with a long, complicated story about someone's mother and a fight about the family house. I've told the inquirers to go hire a competent local attorney.

How excited are you about the Internet? Is it the "law office building" of the future?

The Internet is amazing and unbelievable and incredibly powerful. The Internet turns every Web site anywhere into potentially an extension of your own hard drive. Coincidentally, every fax machine on the planet is already your auxiliary printer. Net result (no pun intended): Your own personal computer system stretches around the planet at the speed of light!

As with so many other advances in communications, though, expectations expand to match the new techniques available. Now everyone expects documents by e-mail. Five minutes after you send a document, you start getting phone calls about why it hasn't arrived yet. And sometimes e-mail takes hours, particularly when a) you have a file attached and b) the recipient is particularly anxious to get the message.

I've figured out a way to distribute documents using the Internet that's even faster and more reliable than e-mail. With a few procedures I wrote, it can be done almost entirely automatically from my portable.

> *"E-mail can be dangerous because it's usually written with the carelessness and spontaneity of oral conversation."*

Do you see any shortcomings of e-mail?

For some people, e-mail is a terrible form of communication. They either never read their e-mail or they receive such a volume that your messages to them get lost, ignored, forgotten. Maybe they see your e-mail and decide to deal with it later, and then it gets lost. You have to figure out what communications medium works best for each person.

E-mail can be dangerous because it's usually written with the carelessness and spontaneity of oral conversation, but it has the permanence, impact and inflexibility of the written word, once it's sent. People sometimes say stupid things in e-mail. The likelihood of this seems to go up exponentially as the message is distributed more widely.

Some of the new e-mail upgrades might offer a "sender's remorse" option to let you claw back an e-mail message after you've sent it (as long as the addressee hasn't opened it yet). An option like that will get a great deal of use, or at least it should.

Are you concerned about security and confidentiality on the Internet?

When you send something out on the Internet, it bounces around out in cyberspace from computer network to computer network, over various "backbones" and "routers" and undersea cables and who knows what else or where else. If you send a message from 53rd Street to 42nd Street, it might go via Australia. A lot of people think that's a pretty scary proposition for information that might be confidential or sensitive. So I try to be very sensitive to this concern. If something's in any way sensitive, I'll ask the client if it's okay to use e-mail or other Internet communications tools, and whether they want me to encrypt anything I'm sending. Often the answer is yes to the Internet and no to encryption, but it's the client's decision, not mine.

For my own personal information, it's my own personal decision, and I'm personally not all that concerned about the issue. But that doesn't mean I should be cavalier about client-related confidential information. There is genuine sensitivity about this issue. Part of client service in 1998 consists of letting the client make this decision.

How do you use the World Wide Web yourself?

Like most software, most Web sites are a waste of time. All they have are pretty pictures or way too much information that takes forever to download. I usually click on "stop" and go do something else.

On the other hand, there are some Web sites that are quite useful and well done. It's great to be able to look up any attorney in Martindale-Hubbell, to order books from Amazon; to find articles; to get car prices or stock prices or whatever, to look at paintings from the Louvre, to find a list of all the recordings of a particular musician by going to their personal Web site, and so on. Some of the title companies are starting to post lots of useful information for real estate deals, like different states' acknowledgments, recording requirements, state requirements for UCCs, that kind of thing. Everything's right there out on the Web, if you know where to look.

> *"I still have one of my Kaypro II computers. It works, or at least it did the last time I turned it on 10 years ago."*

At Latham & Watkins, we're trying to use the Web to achieve "information transparency"—where nothing and no one comes between the information user and the information they need—within our own organization. Our internal intranet web page has information on firm policies, model documents, closing sets from deals, lists of local counsel—all kinds of information that previously might have been very hard to find when we needed it. To the extent we can successfully roll out this new intranet, we've made ourselves a much more internally "knowing" organization, better able to take advantage of our own resources and experience.

Over time, you will probably see more and more of our internal information flow (both to and from the "center" of our organization) shift over to our intranet page. Any internal report, any internal information system, our accounting records, our billing system, new matter reports, L&W phone directories—everything is ultimately a candidate for our intranet web page. The challenge will be figuring out how to give each person the information they want in a single digestible chunk, without forcing them to wander around all over our web site looking for it.

Over the past 15 years, what has been the average lifespan of the computers you've bought?

Three years. The lifespan of computers is lengthening, though. At home I have a Pentium I bought more than three years ago. It performs just fine, even with Windows 95 and the newest software. My laptop is more than two years old and shows no signs of becoming outdated.

Printers last longer than computers. I ordered my first HP LaserJet as soon as it hit the market in 1984. When it arrived from Hewlett-Packard, it turned out to be a large, ugly box that weighed about 50 pounds, I think, and cost $5,000, list price. It printed and printed and printed and became hopelessly obsolete. For years I hoped it would finally die, but it wouldn't. Finally, around its tenth birthday, it gave up. Today you can buy better print quality at almost the same print speed for under $400.

I still have one of my Kaypro II computers. It works, or at least it did the last time I turned it on 10 years ago.

What word processors have you used over the years?

I started out with PerfectWriter, which was better than WordStar, the market standard at the time. Today I'm using Microsoft Word 6.0. Along the way I used XyWrite and WordPerfect 4.1, 4.2, 5.0 and 5.1 for DOS. At home I sometimes use WordPerfect 7.0 for Windows, because it will translate directly into HTML code for my Web site.

What was the first legal application program you used? What do you use today?

What's a legal application program? Everything's a legal application program! Probably the first software I used that was specifically directed to lawyers was LEXIS search software. Either that or CompareRite, which I bought as soon as it was first released, sometime in the middle or late '80.

Today I use all kinds of software, some of it daily and some of it only very occasionally. Here's a list of the Windows-based software I can remember: Microsoft Word 6.0; Act 3.0; Netscape Navigator; Microsoft Internet Explorer; DocsOpen document manager; Microsoft Excel; WordPerfect 7.0 for Windows, at home; Microsoft Access; Lotus CCMail; and AllCLEAR flowchart maker.

Also I still use quite a few DOS programs for particular applications: PC-Outline (released around 1988 and still terrific for outlines!); DOS batch files and related utilities (mostly for my file transfer and Web site procedures);

QBASIC for programming; WordPerfect Library text editor; WordPerfect Notebook database manager and Lotus Agenda (I use both for restaurant databases); WordPerfect 5.1 with or without PC Docs document management; Xtree Gold; and Citibank Direct Access for banking. (I've used it since 1985—I think it even worked on my Kaypro—and it has never been meaningfully upgraded. The "Windows" version is basically the same as the DOS version I started using in 1985.)

Did you "study" technology, or did you just learn from doing?

At Berkeley as an undergraduate I took a few computer-related courses—effectively a "minor," if Berkeley had such a thing. I did a reasonable amount of programming in FORTRAN, COBOL, PASCAL, assembly language, a few others. Berkeley had a Control Data 6400 mainframe that filled up the basement of Evans Hall. You would write programs on big stacks of punched cards that you would hand to computer operators, who I think wore white lab coats. Then you'd have to wait your turn for your program to run and the output to get printed.

Computers were already moving away from punched cards at that time, and Berkeley also had a PDP 11/70 "real-time" system (without punched cards), primarily for word processing. You would use a program called "ed" to edit your work and another one called "roff" to run it off—print it. Ed was based on line numbers. You'd tell ed to find Line 7 and change the word "blue" to "green," then tell ed to show you how Line 7 looked so you could make sure the change was done right. You would edit your entire document this way, with one little command after another. Supposedly ed could also let you edit directly and see your work as you went—something called "open mode." But if you ever actually tried to use "open mode," you could never get out of it. So that wasn't too good.

If another computer user happened to send you a message across your computer screen while you were using ed, the message was likely to end up in your document. My roommate Don Oppenheim learned this the hard way when I sent him some nasty or stupid comment through the computer and it ended up in his business school term paper. We both also learned a lesson that still applies today: When you edit on the computer, your work isn't finished until you print it out on paper and read through it one last time from beginning to end!

For a while I worked part-time in the computer center at Berkeley, in a little room where people would come to me and my job was to figure out why their program wasn't working, regardless of whether I had ever before seen the programming language they were using. Usually I found the problem. This was a great way to be a hero and get dates. My job title was "senior coder" and the computer center paid me $5.20 an hour.

My computer work at Berkeley gave me a general sense of how computers work, what to expect from them, how utterly dumb they are and how to deal with them. The rest I picked up along the way, typically by reading computer reference manuals and by tinkering. And I attended part of the Latham & Watkins training program for Microsoft Word, when we started to roll it out.

Do you have children? If so, do they frighten you with their computer savvy?

We don't encourage our children to use computers. We reluctantly buy them as little software as possible. We teach them that computers are useful tools for certain tasks, like hammers and nails and toothbrushes and bread knives. Computers are part of their lives, but not a focus of their lives. We encourage them to have play dates and run around in the back yard with their friends rather than spend time with computers or watch TV. As they need to learn new computer skills, they'll learn them. We have no concern that they will fall behind if we don't push them.

Our 9-year-old, Helaina, uses the computer for her book reports. She handwrites them, then types them on the computer and edits from there. (This is the same technique my father uses to write books on mathematics.) I started sitting with Helaina sometimes at the computer, teaching her how to edit her work. I don't edit it for her; I just take her through the thought process I go through as an editor. Both of us make comments on her work, line by line. Then she suggests changes to make and we make them together on the screen. We talk about how her edited work sounds and she decides if she wants to edit some more. It's a terrific learning process. It's great fun for both of us. ✧

So where were *you* in '83? How far have you come, technologically? If you'd like to be profiled in *The Lawyer's PC*, simply drop a note to the editorial office at P.O. Box 40760, Charleston, SC 29423-0760; e-mail lpc@logicsouth.com.