



Ross Ipsa Loquitur

A Wisconsin Law Journal Bi-Monthly Column

Putting the ePen to Digital Paper: Lawyer's Ultimate Technology Fantasy?

by

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Scene: The busy litigator has spent the last two hours in a heated negotiation with opposing counsel in a case involving "bet the company" litigation. Powered by three cups of overly strong Kenya AA, the lawyer reviews her notes - a legal pad filled with various comments, concerns, thoughts, ideas, suggestions and a few nervous doodles for good measure. In short, the substance of a key discussion which may lead to settlement for her client - a prescription for saving a business under fire. She thinks: "I barely had time for this meeting that was supposed to take 15 minutes - how am I ever going to find the time to re-write all these notes back at the office?"

A common scenario for lawyers and legal professionals everywhere. We live amidst an unending sea of paper. Piles proliferating, threatening to spill over under their own weight into waves of paper confusion on our desktops. Legal pads, red rope files, random briefs, pleadings, correspondence, Bates-stamped exhibit copies, phone message pink slips - all festooned with so many sticky notes they look like paper porcupines. In other words, a normal day in the organizational chaos that lawyers have tolerated for decades, perhaps centuries.

Reduced to the base economic level, consider this question - one so painful for most lawyers that it has become the object of more psychotherapy sessions than one would care to imagine: How many other billable hours have been wasted just looking for case-critical information that can only be found somewhere on a scrap of paper? What is the cumulative cost of subsidizing a paper-centric law practice? The mere thought inspires a desperate reach for the nearest bottle of Prozac. Is it a lost cause or can legal technology come to the rescue with a practical remedy for this paper-clogged insanity?

For years, lawyers have been on a holy quest for the mythical and fabled "paperless office." This endlessly elusive concept is likely the "Greatest Lie of the Technology Age." We're never going to become "paperless," at least in the foreseeable future. We just need to accept the fact that even if we reduce the amount of paper we generate, others will continue to send us paper.

Microfiche was supposed to be the answer, at least at one point. But microfiche just really isn't used very often in law firms because of the general inability to access the material from the PCs we use to do our work. Scanning was the next great answer. But let's be realistic. How many lawyers have had "bad scanning experiences"? Yes, we see all of you raising your hands out there.

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And why has scanning been so generally unsatisfactory? Because since the dawn of document scanning, the term "scanning" has been synonymous with "OCR" (Optical Character Recognition). In other words, most people equate scanning with trying to use software to identify the characters on a page and turn it into an editable word processing document. Good idea conceptually, but in practice, even with the latest greatest technology available, this process is far from perfect. Even with the cream of the modern OCR software crop hitting text recognition accuracy levels as high as 97%, it's just not good enough. There are four problems here and any OCR veterans/victims will immediately identify with all of them:

- 1) 97% accuracy in text recognition is akin to a package of bologna proudly trumpeting its 97% Fat-Free status. Since about 90% of the calories are from fat, the thing is a veritable artery-clogging, love-handle expanding nightmare. With OCR, think of 97% accuracy this way: that's three screwed up characters out of every 100 and with a single-spaced page of text containing about 2200 words on average, that's 66 errors per page on average. And what if one of those errors is a nearly-impossible-to-detect-but-a-bet-the-case-on-it number? Not good. Not at all.
- 2) OCR software tends to have a significant number of problems retaining the formatting and layout of the original scanned document. For example, you get a local state court pleading and give it to your secretary to scan. Seems like a pretty simple request, doesn't it? It's a "clean" document that has all appearances of being a solid candidate for being OCR'd: a mainstream typestyle and an original laser printed document (not some smudged, skewed third generation photocopy of a FAX of a photocopy). Should be NO problem, right? Wrong. What you likely get back could very well be a nightmare of reformatting, with a caption that defies clean-up, line spacing and odd tab stops that are equally baffling. OCR software tries its best to figure out what codes or styles to apply in the target word processing format--but it's really guessing at best and often it guesses wrong.
- 3) OCR is not terribly speedy. And in this Short Attention Span Age, even if you have a new high-end 3.4 ghz Pentium 4-equipped PC the OCR process can be intolerably slow, and it seems with every increase in accuracy we have a geometric leap in the processing requirements. So even if you can afford one of the megabuck Intelligent Character Recognition systems like those from Kofax (<http://www.kofax.com>) that use costly processing boards you need heavy-duty PC horsepower for adequate text recognition. Forget about those 733 MHz Pentium IIIs with 128 meg of RAM. But either way, with OCR there's waiting involved.
- 4) And finally there's the always wide expectation gap between what we think is OCRable and those documents that actually can be OCR'd. How often have you talked to someone who said, "When I try and scan this thing, all I get is garbage. How come??" and what they show you is a pre-printed state-specific divorce financial disclosure form replete with boxes and lines. You figure, it should be able to at least read the text right? Wrong. What we have to

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realize is that the average lawyer user who expects this to work has a more legitimate claim to reality than those of us who make excuses for present technology by saying, "well of course it won't be right--look at all those lines and boxes--nothing can recognize those."

So the bottom line is that equating scanning with OCR is a fallacy that no longer needs to be the case. This is the case where my "Paper LESS Office™" concept comes in. First put forth in an article of the same name in Law Office Computing back in late 1995, presentation audiences all over the world have favorably received the concept. Here's the concept in a nutshell:

Using several methods, such as low-cost, high-simplicity image scanning, physical paper is turned into "digital paper." Image scanning is the process of using a scanner and using it to effectively photocopy your documents onto your computer system. This creates "digital paper," ideally stored in the universally readable PDF format. More recently, a series of innovations has quietly been transforming the march to digital paper beyond what scanning can accomplish and even more in line with what lawyers have fantasized about.

This Microsoft-brainstormed innovation involves the traditional "lowest common technical denominator" - something every lawyer on the planet has already mastered. This means a set of capabilities that even legal techno-peasants - lawyers who still have VCRs - and whose VCRs even in 2004 are still flashing "12:00, 12:00." The common pen. And writing - remember writing? It came before typing. Lawyers know how to write. We learn how at an early age and the concept is usually perfected while furiously scribbling our grocery lists, trying to look "intense" and "engaged" during second year Advanced Torts class in law school. The concept of digital note-taking appeared on the scene in the last two years with the introduction and mainstreaming of Microsoft's Tablet PC Edition of the Windows XP operating system and on the back of "note-aware" software. Melding the oldest of human methods for recording information - handwriting with a pen and the newest office technology - personal computers. A match made in legal heaven. First, more background on the concept of "digital paper."

Digital paper takes up no physical space and is manipulated easily by software on your PC systems. And the beauty of digital paper is that it is perfect--in the case of image scanning, it is a picture of the original document, exact in every way without any of the vagaries of the OCR process. In the process of digital note-taking, it IS the piece of paper - just one made of electrons rather than processed wood pulp. Of course, with the scanned image you don't have editable text at this point--you merely have a picture of the document. But most of the time, that's all we need. However . . . what if you could have your eCake and eat it too? What if you could have that perfect electronic image of your pages of scrawled notes and still have fully searchable text that you can attach to your electronic matter files in your case management system? This is the point where the Pavlovian salivation response kicks in . . .

So you have your Digital Paper/PDF of the document you scanned or the digital notes you took on your Tablet PC. In the case of image scanning, a letter from opposing counsel, a set of interrogatory responses, the C.V. of a prospective expert witness, a stack of hospital records. With digital notes, your scribbles recording the gist of a phone conversation with an insurance claims adjuster. Or the notes you took while meeting with the consulting CPA on the merger and acquisition matter that is coming to a close.

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At the most basic level, what does it accomplish having all these pictures, these pieces of non-editable text? Glad you asked! What you accomplish is saving the time it takes to track down the physical file, or rummage through a roomful of banker's boxes to find the documents. All the document searching time costs money--economic dollars wasted whether it is lawyer time or staff time. In other words, we can use a scanner for its best purpose -- creating images -- rather than always using it for its less-than-perfect ability -- OCR.

But that's where scanning hits a practical wall and where digital note-taking comes in. So many of our documents are not neat and clean pages of text. Our own notes often hold the keys to our cases - and in handwritten form, no text recognition yet invented has had the ability to translate these into usable, searchable, organizable electronic text. Or has it . . . this is where digital note-taking steps in and fills this massive gap - a digital divide that has been as big as the Grand Canyon for most lawyers. Merely scanning a page of handwritten notes just to be able to find the page in a folder and view it with an image viewing utility has certainly been better than nothing, but not by a significant degree. The ability, with Microsoft Tablet PC Edition-driven technology, to take those notes, in raw handwritten form and then convert them reliably and accurately to electronic text is where some lawyers are today. It represents a step in the evolution of law practice management and technology akin to the invention of the light bulb - it's that dramatic.

Think about that: you write your notes. In your own handwriting. Even cursive text. You write them on your laptop screen, on what even looks like a ruled legal pad (which happens to be Microsoft OneNote 2003, but let's stay on track). The software converts your scratchings to editable text, as if you had typed in the notes. And your original notes are still there for visual reference. What lawyer anywhere on the planet wouldn't give their left arm for this capability? It's the only logical step - the next progressive in the quest for knowledge management and "thought processing." Microsoft OneNote and any digital note taking-aware applications represent a new class of software that has not previously existed for lawyers - "thought processors." In other words, just get your thoughts down on "digital paper" - using a pen and focus on practicing law, not manipulating a computer. The naturalness of the concept and the simplicity of it are instantly appealing. Take off the pocket protectors and propeller hats required to use far too much of modern legal technology. Forget about "RTFM." Just practice law.

That's what digital note taking accomplishes - the ultimate culmination of the Paper LESS Office™ process. Digital note taking should not be considered any type of "peripheral" technology for the law firm or legal department reviewing it's technology usage and systems. Rather, sanity and sound law practice management practices should acknowledge digital note taking as a core, mission-critical function - as basic as the traditional Big Four of legal technology: word processing, e-mail, time and billing and docketing. Digital note taking hovers above all of these critical toolsets - with the potential of offering the most common and best understood human (or as we like to think of it: "liveware") to computer interface - the pen.

Imagine the ability to write your case notes directly into your case management system. Take a few notes down on digital paper as you brainstorm using the case organizer in programs like CaseMap (www.casesoft.com) or trial practice management tools such as Summation iBlaze (www.summation.com).

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With a pen, not a keyboard, not a mouse. Notes the way we all know how to do it - just write. This IS the digital holy grail lawyers have quested for since the dawn of law practice.

And it gets better. One of the core problems in working on client files is that they are always split into two locations. The documents we create are located internally on our PC systems. The client documents we receive from outside sources are stored in our paper filing systems. So, if you want to view all the correspondence on a client's file, you have to look in two separate places--on-screen for your own documents and then you need to track down the paper file and rifle through it to view the externally generated letters and all your scanned note pages. That is, of course, if no one happened to have that particular file in their briefcase at home or sitting on a kitchen table in suburbia.

What the Paper LESS Office™ process accomplishes, powered by a combination of digital note taking and intelligent image scanning, is that all the digital paper is attached to electronic client and matter files. Whether Outlook folders at the most basic level, or more ideally using case and practice management systems such as TimeMatters (www.timematters.com), Amicus Attorney (www.amicusattorney.com), PracticeMaster (www.tabs3.com), ProLaw (www.prolaw.com) or any of the multitude of others, these are the tools to create the Paper LESS™ file. A completely contiguous digital client file. Searchable text allows lawyers to plow through mounds of content - their own client work product - much in the same manner as they might do with Google, Westlaw or Lexis. Clearly efficient, but also economically compelling to the point of being irresistible.

Following this process, next, whether you are using a great document manager like Worldox (www.worldox.com) or the document management capabilities inside case managers like TimeMatters, Amicus Attorney, PracticeMaster, ProLaw, etc. you go to that client file's folder/directory on your system and look in the "folder" where you store the correspondence for the client, you will see document names that begin with "Letter to . . ."-- which are word processed documents you created -- and document names that begin with "Letter from . . .", which are the scanned images of externally generated documents. Or "Notes about . . ." Now internally-created, digital note taken documents and externally-received pages are all in the same convenient place! Then just double click and up pops that perfect picture of your document in the Adobe Acrobat Reader software in the case of scanned images of externally received documents or perhaps digital notes in Microsoft OneNote.

The bottom line is that your client files become electronic and totally contiguous--they're all in one place. You just can't help but save all sorts of otherwise non-billable wasted time you would otherwise spend just LOOKING for things. Not to mention the ease at bringing a few client files home for the weekend, or take them on the road to a depo or a trial--without lugging back-breaking boxes of paper (and subjecting the potentially irreplaceable originals to coffee spills, misplacement and other forms of folding, spindling and mutilation).

And when you close the file, it's already "digital paper"-- you can store it in a convenient byte-sized package (sorry, pun intended). This is a far better alternative for closed file storage than the costly space-hungry

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storage requirements for physical paper files--which usually end up commandeering an area the size of small starter home.

You now have these images and digital notes in your computer system; with the next step being organizing and searching them. Document management and work product retrieval systems are the best answer. These software systems can gently impose a file cabinet-like consistency on the way any law practice organizes both its internally-created documents as well as its externally received and scanned documents. Worldox is the undisputed leader in the small firm marketplace and has been digging into the larger firm segment for several years with great success. For larger firms, iManage and Hummingbird Docs are popular. Most legal case management systems also incorporate document management functions that can adroitly handle scanned "electronic paper."

All document managers let you organize and search scanned image files. This presumes, of course, the images are stored in a format that actually permits content searching of what would otherwise be only a picture. In the case of digital notes, the documents appear either as Microsoft OneNote files or are just text somewhere in a system - case notes or phone notes in your case manager for example, exactly as if you had typed them in with a keyboard - with the digital note taking process being entirely transparent. Frankly, the goal is to have digital note taking be so transparent as to be almost incidental - just a tool to get text quickly and accurately stored in a client's electronic matter file - not as some techno.end in itself.

Documents scanned with Adobe Acrobat 6 or Adobe's Capture systems are stored in the universally viewable PDF format. PDF documents can now be "Captured image over text" documents. This means that if the software can recognize the underlying text, it may be searchable by a document manager that has PDF-search capabilities. Worldox excels at such a role as part of its overall complement of document organization, management and retrieval functions, but isn't the only tool that can accomplish this.

That covers the functional angle. The economics of digital note taking as a facilitator of becoming Paper LESS™ are stunningly compelling. As lawyers, we may have to acknowledge that most of us have come from liberal arts backgrounds. With few law schools providing any significant business education, basic business concepts like a "Return on Investment Analysis" seem foreign to us. But a Return on Legal Technology Investment analysis, or ROLTI, is just what smart, profit-focused lawyers need to apply.

This need not be complex, nor does it require an MBA to understand - a JD will do just fine. Think about how much time you, your fellow lawyers and your staff waste every single work day looking for your paper client files or information that can only be found in a paper file. What would it mean to you if you never had to waste that time again? Would it mean to your law practice as a business if every lawyer and staffer could generate 15 more billable minutes per day? 30 more billable minutes per day? 60 more minutes some days? The ROLTI approach then takes this data and converts it to something every law firm managing partner or corporate General Counsel understands - dollars - money - cash.

Generating 15 extra billable minutes per day for a lawyer billing at \$200 an hour is:

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- An extra \$50 per day, per lawyer
- An extra \$250 per week, per lawyer
- An extra \$1000 per month, per lawyer
- An extra \$12,000 per year, per lawyer

In a five lawyer firm that is as much as \$60,000 of “found” money yearly.

In a 10 lawyer firm, it is \$120,000. In a 50 lawyer firm, it can be as much as \$600,000. In a 500 lawyer firm, it could reach \$6,000,000.

And this doesn't even begin to take into account the recovered staff time that can often be billed or most certainly focused on far more productive client work than scurrying around digging through piles of paper in the corners of partners' offices.

These are realistic and practically achievable results based on field reports from firms worldwide who have followed and adopted the Paper LESS Office™ approach since it was developed in 1995. Firms that accomplish this by cutting the time wasted looking for their paper files - because they can instantly access exactly the same information in their digital files, whether in the office or on the road via the plethora of remote access tools and legal mobility methods. This is accomplished so simply - by reducing and/or regularly eliminating the wasted time looking for the paper files. Leveraging digital note taking and image scanning-to-PDF, many firms are close to realizing this - the key is making the connections - taking digital notes as a standard, firm-wide methodology and connecting all those scanned documents to electronic case files and then being able to actually search the text content of them. This is not complicated and typically not any more expensive to implement than the more traditional technology systems now being deployed.

A ROLTI analysis of the impact of Digital Note taking and PDF-focused image scanning as conduits to achieve the Paper LESS Office™ looks something like this. Note that since we lawyers tend to be hardcore cynics, the analysis is heavily discounted to project the most conservative posture:

Return on Legal Technology Investment Projection

For a 10 lawyer firm using Digital Note taking and PDF-based image scanning to deploy the Paper LESS Office™ process - connecting digital notes and digital paper to electronic client and matter files using a case and practice management system:

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	Projected Time Recovery Per Day	Value of Time Billable or Recoverable	Daily Dollar Value of Add'l Billable Time or Recovered Productive Time	Monthly Dollar Value of Add'l Billable Time or Recovered Productive Time (based on 22 workdays per month)	50% Conservatively Discounted Monthly Add'l Revenue in First Year	25% Conservatively Discounted Monthly Add'l Revenue in Next Three Years
Add'l Billable time projected for <u>Lawyers</u> per day	.3 hrs. per lawyer = 3.0 hours	Average rate of \$200/hr	\$600/day	\$13,200	\$6,600	\$9,900
Add'l productive time for <u>Staff</u> per day (6 staffers)	.5 hrs. per staffer = 3.0 hours	\$35/hr	\$105/day	\$2310	\$1,155	\$1,733
MONTHLY PROJECTED TOTAL RETURN ON LEGAL TECHNOLOGY INVESTMENT (ROLTI)				\$15,510	\$7,755	\$11,633
ANNUAL PROJECTED TOTAL ROLTI <i>(Figure in next row = First year Discounted Return of \$93,060 plus 3 subsequent years Discount Return of \$139,596)</i>				\$186,120	\$93,060	\$139,596
PROJECTED ADD'L BILLABLE AND RECOVERED TIME DURING 48 MONTH LEASE PERIOD					\$232,656	
PROJECTED LEASE PAYMENT TOTAL FOR ADDITIONAL TECHNOLOGY TOOLS (DIGITAL NOTE TAKING, IMAGE SCANNING TO PDF, CASE MANAGEMENT SYSTEM - PROJECTED TOTAL OF \$60,000) 48 month lease payment estimate = \$1600/month					\$76,800	
CONSERVATIVELY PROJECTED RETURN OVER 48 MONTHS (ROLTI less lease cost)					\$155,856	

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The Return on Legal Technology Estimate in this conservatively structured example shows a return of approximately 250%. One does not need an MBA from the Wharton School to see that employing digital note taking and image scanning, connecting and creating digital paper as part of the Paper LESS Office™ process is a complete economic “no brainer.” For the first time, we have a common-sense compatible way to see how legal technology can be transformed from the old-school view as nothing more than a bottom-line draining expense to a profit center. In fact, most firms can yield far better return on their dollars spent by deploying the Paper LESS Office™ process via digital note taking systems and image scanning, connected via case management, than hiring an additional associate.

So from a functional perspective, digital note taking, as well as image scanning (especially to PDF) are the enablers of the Paper LESS Office™ - the practical and functional alternative to the frustrating search for the elusive and mythical paperless office. Digital note taking can and should become entirely ubiquitous. If we can just convince Montblanc or Waterman to produce digital pens that work with Microsoft Tablet PC Edition-enabled digital note taking applications, lawyers will have reached law practice nirvana.

Ross Kodner is a “recovering lawyer” who saw the light and in 1985 founded Milwaukee, Wisconsin’s MicroLaw, Inc. an international legal technology consultancy and Continuing Legal Education company. He consults with and teaches lawyers worldwide about how to best integrate technology into the workflow of their practices. He can be reached at rkodner@microlaw.com, via www.microlaw.com and at 414-540-9433