Anticipating Technological Change: Predictions, Trends and Gadgets

Carol A. Watson
University of Georgia School of Law Library, cwatson@uga.edu
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Carol A. Watson
Alexander Campbell King Law Library
University of Georgia School of Law
Athens, GA
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I. Introduction

With the current economic downtown, today's business environment is more competitive than ever. Businesses that distinguish themselves in any small way and provide cost-savings, can gain a significant advantage over their rivals. To emphasize the point, note that the ABA Techshow 2009 has a session titled: If You’re Not Serving Your Clients Online, Someone Else Will Be. It is, therefore, essential that attorneys harness technology and remain up-to-date on the latest computer developments.

In this paper, I will begin by discussing technologies that are currently available on the web that will increase your abilities to collaborate, reduce your office overhead and provide you with a competitive edge. I will highlight current technology trends and predictions and include examples of new gadgets that illustrate these predictions. Finally, I will conclude with a list of frivolous gadgets that will hopefully make you smile, provide food for thought and excite you about the coming prospects of technology.

II. Current Resources Available on the Internet

A. Web-based Collaboration Tools

More and more attorneys are interested in collaborating online with their clients and with other attorneys. While there are many expensive solutions which provide lots of bells and whistles for online collaboration, fortunately, there are also several free or inexpensive productivity suites available on the web that can enhance your collaboration efforts while simultaneously reducing your office overhead. Google Docs and Zoho are two popular market leaders that are worth taking a closer look at. However, you might also consider other viable tools such as BaseCamp, Sharepoint,
WebEx and Cross Loop.

If you are interested in learning more about this topic, Dennis Kennedy and Tom Mighell recently co-authored a very good text for the ABA Law Practice Management Section titled: *The Lawyer's Guide to Collaboration Tools and Technologies: Smart Ways to Work Together* (March 2008).

1. Google Docs and Google Sites

Google has done an excellent job of providing a suite of online collaboration tools that are user-friendly and effective. Anyone who has registered for a free gmail e-mail account can use Google Docs to supplement or replace their office suite of word processing, presentation and spreadsheet software. Documents created using Google Docs are stored on Google's servers and are accessible from the internet. Documents are accessed through a web browser and all commonly used functions are available. Documents can be easily shared with other users who have gmail accounts. Edits by various users will show up in a different font color making group collaboration simple. Basic Google Docs with 10 GB of storage is free. However, you can subscribe to a premier service for $50 per year that includes no advertising, additional storage space and technical support.

Google Sites take collaboration one step further by creating an intranet that allows you to share files quickly and easily. Using Google Sites, you can create a web page that allows you to unify documents in one secure location whether their format is text, video, spreadsheet or presentation.
2. Zoho

A major competitor of Google Docs is Zoho. Zoho has been in the web-based applications market longer than Google and has many loyal followers. Like Google, it offers word-processing, spreadsheet and presentation capabilities. Zoho currently offers more features than Google such as a database application and project management capabilities.

3. Gears

Before readily embracing web applications, I strongly suggest that consider adding Gears, formerly known as Google Gears, to your arsenal of productivity tools. Gears is a web extension that allows you to access compatible programs such as Google apps and Zoho even when you’re offline. Consequently, if your internet services is unavailable or you’re stuck somewhere like on an airplane with no web access, you can still work on your Zoho or Google docs.

B. Online Dispute Resolution Services

Another application that has successfully moved to the web is dispute resolution. Virtual ADR services can provide an inexpensive and speedy alternative to using live mediators. These services began with a simple format. Originally, they were set up to provide a forum for a party to enter a demand to resolve an issue and wait for a reply. If the other party agreed to participate, a counter offer could be made through the service. Negotiations continued online in a back and forth manner.

The services have evolved to become much more sophisticated. For example, one
service advertises that it includes game theorists and computer scientists on staff who use mathematical theories to develop dispute resolution systems. Examples of online dispute resolution services include Resolve My Dispute.com (http://www.resolvemydispute.com/), Fair Outcomes, Inc. (http://www.appellex.com/) and Cybersettle (http://www.cybersettle.com). If you'd like to learn more about online dispute resolution, the ABA TechShow 2008 provided a presentation about online dispute resolution services on its program that is available at the following web address: http://www.abanet.org/techshow/nosearch/2008/materials/presentations/onsite/lt/abatecho8_lt4_new_frontier.pdf

C. Online Mock Jury Review

The cost of expensive focus groups and jury consultants may now be reduced by instead using an online jury to evaluate your case. Services such as Trial Juries - Online Jury Review (http://www.trialjuries.com/trialjuries/) offer online jury review of your pending cases. Typically lawyers may submit a written, audio or video version of their trial materials and receive feedback or verdicts from virtual jurors based upon questions the lawyer has drafted. It is the responsibility of the lawyer to develop the list of questions for feedback. Some trial consulting firms offer jury experts who will write a corresponding report to accompany the feedback.

D. Secure Online Backup and Data Recovery Systems

As attorneys embrace new technologies, it is important to reassure clients that you are taking steps to guarantee the security and confidentiality of their data. If you
have a security disaster, clients will not care about your explanation, they will leave you without question.

Many vendors offer secure online backup and recovery systems for your data. From natural to man-made disasters, every law office must be prepared for data emergencies. Many lawyers are reluctant to consider online solutions because they falsely believe that they will be sending their confidential data through an unsecured internet connection to the online vendor. In fact, the data is securely encrypted before transmittal and not vulnerable to hackers. Many lawyers don't realize that traditional backup systems using tape or other media such as DVDs, hard drives, etc. are at much greater risk of failure than an online solution. Storing an unencrypted copy of your legal data on portable media such as tapes or hard drives is a much greater security risk than backing up encrypted data via the web. Examples of online vendors include: AmeriVault, EVault and Mozy.

The ABA's Legal Technology Resource Center has written an article on the importance of backing up business documents and provides links to several resources that discuss online backup. The article can be accessed at the following web address: http://www.abanet.org/tech/ltrc/fvidocs/databackupfyi.html

There was also a presentation on online backups at the 2008 ABA Legal Techshow titled: Open Sesame: Is Online Backup Ali Baba or the 40 Thieves? Available at the following web address:

E. Social Networking Sites

You might think that social networking is limited to facebook or myspace and is only relevant to high school or college students. However, more and more business applications are weaving social aspects into their products. Also, more market sectors are starting to establish social networking sites and the legal profession is no exception. At the 2008 ABA Techshow, speakers and attendees were invited to blog, twitter, flickr and facebook about the event. In addition to providing useful educational info and a gold mine of information about clients, rivals and business prospects, social networks can be useful in a variety of ways. For example, they can help you get to know a fellow lawyer on a more personal level so that you’re more able to judge whether you’d be compatible in situations such as co-counsel or client referrals. Other uses of social networking or web 2.0 technologies in the legal community include:

1. **Legalonramp** - a members-only online community of corporate in-house counsels and leading law firms with facebook/linked in functionality. As Paul Lippe, the founder of the one year old Legalonramp service says, “"The number one predictor of income as a lawyer is the size of your network." The condition for law firms to register is that they must contribute substantive content on one or more legal topics in their area of expertise and introduce a client to the service. The idea is that in-house counsel would have an online source of expertise when deciding to retain outside counsel, etc. Everything about LegalOnramp is geared to information sharing, collaboration and (its main reason for being) negotiating honest value for legal work. In place of surfing from one law-firm Web site to another in search of legal updates, FAQs, forms, templates and the like, LegalOnramp offers all that and more in a single, limited-access site. As of
November 2008, about 6,000 lawyers participate with the site.

2. **LinkedIn** - LinkedIn seems to be based on the Six Degrees of Separation premise. The gist of the service is that you can create a free account and include a profile with relevant background facts about yourself, such education and work history. LinkedIn will provide you with matches of people similar to you. You can then explore matches they have included in their LinkedIn profile. The end result is a ready made network of business contacts.

Many lawyers and other types of professionals are already registered with LinkedIn. In fact, Martindale.com allows attorneys to provide links to their LinkedIn profiles. You might discover that the service is an efficient way for you to locate contacts, identify referrals, develop your professional reputation or cultivate clients.

3. **Twitter** - Twitter is a service that allows you to answer one question: What are you doing right now? You’d be surprised how many people might be interested in what you are doing. Twitter allows you to send a short message (140 characters or less) to mini-blog about yourself on the Twitter website. That message can be sent to your friends by instant messaging or you can send a text message to your friends’ cell phones. Lawyers could exploit the public relations potential of Twitter. Perhaps you want to publicize that you’ve added an entry to your blog or updated your website. Or perhaps you’d like to ask friends for a referral for a nonlegal service. Twitter is a good mechanism for receiving and delivering quick informal messages between friends and acquaintances.

If you’re feeling overwhelmed about the number of social networking tools, don’t feel that you are alone. Many individuals are weary of taking the time to recreate their
profiles on the various social networking websites so in the future, watch for the
development of more applications such as Facebook Connect and OpenSocial which
allows users to share their profiles across multiple platforms. Users are becoming
reluctant to rebuild their social networks on every new site they join.

III. Technology Trends or Predictions for the Future

Predicting the future is always a gamble, particularly when it comes to
technology. If we believed all of the technology predictions that we've heard over the
years, we'd be driving flying cars and would have robot maids by now. Fortunately there
are a few technology trends that can be safely predicted.

A. Green Technology Boom

Many market sectors have embraced consumers' desires for greener products and
technology is no exception. Technologists have discovered that green savings can
translate into cost-savings. Consuming less energy has a direct connection with energy
costs. Consequently, technology manufacturers are all racing to ensure that their
products are rated energy compliant. The ABA Legal Technology Resource Center
(http://www.abanet.org/tech/ltrc/fyidocs/gogreen.html) has provided tips on its web
page on how to make your law office technology greener. Note that besides being a
responsible environmental steward, going green can have the added benefit of also
helping you to attract new clients who might be impressed by your sustainability
policies.

1. Belkin Conserve Surge Protector - The California Energy Commission
estimates standby power losses in the average household to be as much as 15% of household electricity use. The Belkin Conserve is an 8-outlet surge protector that eliminates wasteful standby power to your electronic devices. A remote control allows you to completely shut off the power to devices that consume standby power, such as TVs or computer monitors, when you are done using them.

2. **Motorola Renew** - the first certifiable carbon free cell phone. The Motorola’s casing is made from recycled water bottles. Additionally Motorola offsets the cost of production, distribution and operation with carbon credits.

3. **Magno Wooden Radio** - An award winner from the International Design Resource Association, the Magno wooden radio is made of sustainably grown wood. It is an AM/FM radio as well as a MP3 player. The radios are hand by carpenters in an Indonesian village with high unemployment.

4. **Iqua SUN Bluetooth headset** - Iqua’s wireless solar powered headset does not require electricity to be recharged. Merely use the sun to do the job.

B. **Increased Portability**

Let's face it . . . if you've ever carried a laptop for a significant distance, you'll readily admit that most of them are not really that portable. In fact, your shoulder will likely be aching fairly soon. However, at the ABA TechShow 2008, several speakers emphasized that a laptop is one of a lawyer’s most important and flexible tools.

Luckily ultra-thin and highly portable laptops are becoming abundantly available and affordable. The new MacBook Air caused quite a stir when it was publicly unveiled in January 2008. It weighs three pounds and is three quarters of an inch thick when
closed. The new netbooks typically range in size from 5 to 13 inches. They weigh between 2 and 3 pounds and are based on the One Laptop per Child model. Their sales are starting to pick up significant market share. Gone are the days of needing a rolling backpack to carry your technical gear. True portability for laptops will be a reality.

One word of caution, however. Laptops are easily stolen. In fact, it is estimated that approximately 10% of laptops are stolen. Consequently, you must be extra careful with the security of your laptop. The loss of confidential client information due to the theft of a laptop could be devastating to your practice. At a minimum, you should encrypt confidential documents. Never leave your password or authorization codes in your laptop case. And finally, consider using track and wipe software solutions (such as Absolute software) that allow you to erase the contents of your laptops hard drive remotely if it is stolen.

1. Kindle2 (http://www.amazon.com) - Amazon’s wireless second generation e-book reader weighs less than 10 ounces, is hardly a third of an inch thick and will hold approximately 1500 books. It retails for $359 from Amazon.com. Kindle’s main selling point is that users can download more than 230,000 titles directly from Amazon.com for approximately $10 per title. The Kindle connects directly to Amazon’s website without the user having to connect it to a pc for downloading the titles.

N. Nokia 888 Concept Phone - Tired of digging to carry around for your cell phone in your bag? Try wearing it around your wrist. Nokia’s testing a flexible, bendable cell phone that you can wear as a bracelet or bend into different shapes if it pleases you to do so. You can hang it around your arm or around your belt.
C. Expanded Mobility

Increased mobile internet access has made portable computing more and more popular. Factors such as the Bluetooth wireless protocol, the ubiquity of wireless hot spots and cell phone internet services have all contributed to this boom. The number of wireless devices available is overwhelming. A few of the recent mobile gadgets that you might be interested in include:

1. **Bluetooth Sunglasses** (http://trispecs.com/) - no more funny attachment hanging from your ears. Disguise your bluetooth in the frames of your sunglasses. TriSpecs Bluetooth Sunglasses allow you to listen to music or talk on your cell phone without the clunky bluetooth ear bud. Instead you’ll just be cool in your Ray Bans.

2. **Flip Mino HD Video Camera** (http://www.theflip.com/) - Named Gadget of the Year by the Detroit Free Press, the Flip video camera is U-Tube-ready and user friendly. Slightly larger than a deck of playing cards, the Flip contains 4GB memory and can store up to 60 minutes of recording.

3. **BluAlert Vibrating Bluetooth Detector Bracelet** - No more missed calls due to loud noises, weak ring tones or because your phone was buried in your bag. Instead of having to walk around with your Bluetooth ear bud, the bracelet subtly buzzes your wrist to let you know that you’ve got an incoming call, text message, or email. To find websites that sell the BluAlert bracelet, simply google BluAlert.
D. Still Battery Powered

When predicting technology trends for the future, the topic of battery power inevitably comes up. While manufacturers have made some progress in extending the power of batteries for portable devices such as cell phones and laptops, the expansion of features that portable devices offer is also growing exponentially. Cell phones such as the iPhone and Blackberry Storm can perform myriad new tasks and consequently require much more battery power. As new features are added to portable devices, the battery must likewise produce more energy. Unfortunately significantly longer battery life is still in the distant future and we’re still obsessed with powering all of gadgets. While we can’t be battery free, there are many more creative solutions for recharging and improving batteries. Some of the prototype gadgets related to batteries that are just now starting to be available on the market include:

1. **Rechargeable Solar Batteries** - Referred to as SunCats, these batteries are wrapped in a flexible solar panel. You can leave them on the window sill or anywhere there is ample sunlight and they’ll recharge themselves. Of course, they are slow to recharge, but the potential for the future is significant.

2. **Wind up Cell Phone Charger** - Never find yourself stranded with a dead cell phone battery again. As long as you can turn the crank on this charger, you can charge your cell phone. The product is available from many locations on the web, simple google the term: wind up cell phone charger.

3. **USB Cell Batteries** - Rather than replacing expensive batteries or carrying around a clunky battery charger, consider this alternative. Simply recharge the batteries using your computers USB slot. The recharged batteries can later be used to power any
electronic gadget that requires AA batteries to operate.

4. Environmentally-Friendly Batteries - Many companies are rushing to produce more environmentally friendly batteries. For example, Fuji has developed EnviroMAX eco-friendly batteries. They contain no toxic mercury, cadmium, or PVC plastics. A high-purity, quick decomposing, iron electrolyte is at the core, and more landfill friendly plastics are used in the insulating sleeve. Even the packaging is made from recycled cardboard.

5. Eclipse Solar Gear (http://www.eclipsesolargear.com/) - Eclipse has developed line of carrying cases such as backpacks, messenger bags and camera bags that include solar panels on their sides. The solar panels are capable of charging most portable devices such as pdas, iPods, cell phones, GPS units, and also rechargeable double AA batteries.

IV. Frivolous Gadgets I Wish I Had Invented

Finally, this section lists some recently available frivolous gadgets that I wish I had invented. Hopefully they will whet your appetite or at least make you smile.

A. Puzzle Alarm Clock - The alarm clock wakes you up by firing four puzzle pieces into the air. The alarm will not turn off until you retrieve the four pieces and place them back in their original position.

B. Optimal Office mouse - Available from the U.K., the Optimal Office mouse has sensors on its side that monitor your stress level. When your stress level is too high, it suggests exercises to reduce stress.

C. Transparent Toaster - One of those simple ideas that we all should have
thought of sooner. The clear toaster allows you to visually inspect the brownness of your toast. It is predicted that the clear toaster should be available in 2009.

D. Aptera (http://www.aptera.com/) - I couldn’t resist including this final item in the list of tech gadgets . . . the Aptera, a three-wheeler, two-seat transport that is hoping for a 300 miles per gallon rating. With fully electric power cars being too expensive and not practical to drive more than 120 miles on a single charge, this might be just the mode of transportation that we’re looking for.

E. Invisibility Cloak - Technically referred to as Optical Camouflage, the invisibility cloak is not as far-fetched as you might think. And it’s not magic either. Basically the cloak is made of opaque material that acts similarly to a movie screen with the image of the background being displayed upon it. To learn more about invisibility clocks, visit one of my favorite websites How Stuff Works at: http://science.howstuffworks.com/invisibility-cloak.htm