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The Technology You Need To  
Project The Vision Of Your Case

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# THE TECHNOLOGY YOU NEED TO PROJECT THE VISION OF YOUR CASE

**James W. Martin**

*It doesn't cost a fortune, but the results are invaluable.*

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**LAWSUITS ARE WON AND LOST**, in court and out of court, before suit, during suit, and after suit, on the basis of perception and persuasion. If you can persuade the judge or jury to perceive your case the way you and your client perceive it, you win. If you can persuade your opponent or its lawyer to perceive the case the way you do, you may win without

trial. So, how can you project your vision of the case to others? The first step is to create your vision of the case in a tangible form using photos, charts, timelines, graphs, copies, and so on. In the past, this required time and money. Today, with the help of technology, it requires know-how. Here are a few technology tips to help you on your way.

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**OUTPUT: WHERE THE FUN IS** • Here's where you can let your imagination, and your pocketbook, run wild. Every glossy business magazine today is filled with ads touting the latest in fancy output devices, usually laptop computers, color printers, and LCD projectors. Here are the ones I use.

### 1. Laptop Computer

Toshiba 1.2 gigahertz with built-in WiFi 802.11b wireless network connection (be sure to use encryption). You can download all your client files, deposition transcripts, and evidence from your desktop computer to your laptop and take it with you to depositions, hearings, and trial. (Cost: \$1,000-\$2,000.)

### 2. LCD Projector With Desktop Screen

InFocus with InFocus portable screen is a small projector that projects onto a 5-inch desktop screen whatever is on my laptop computer screen, so I can run PowerPoint presentations, surf the Web, show videos, and draft documents in a group setting. (Cost: \$1,000-\$2,000.)

### 3. Color Printer

Xerox Phaser 8200DP 15-page per minute color printer uses crayon-like ink rather than wet ink to produce high-quality brochures, handouts, graphs and even good-quality photos. (Cost: \$2,000+.)

### 4. High-Speed Black And White Printer/Copier/Scanner

Xerox Document Centre 545 prints, copies and scans black and white at 45 pages per minute with essentially no jamming or stopping. It works as a walk-up copier as well as a network printer. It's awesome. (Cost: about \$500 a month)(see my article *Jim's Three Favorite Technology Tools*, in the Florida Bar News, July 15, 2003.)

### 5. Broadband Cellular Internet Service

Verizon Express Net using a Sierra Wireless PC Card in my laptop computer allows access to the Internet anywhere by using its own built-in cell phone number at 128k (two times usual land-based telephone dial-up speed). So, you can pull up cases using Westlaw and Lexis at a hearing or trial or use Google to check background facts during a depo. (Cost: unlimited usage for under \$100 a month; card is separate cost of few hundred dollars.)

**INPUT: IT HAS TO GO IN BEFORE IT COMES OUT** • The old computer saying "garbage in, garbage out" means the results of processing data are directly related to the input. At the beginning of a case, you really don't know what evidence you will need at mediation and trial, so it's best to capture all of it and set it aside for a rainy day. This means scan all documents, photos, and other evidence as you receive it and photograph the physical evidence, too.

### 1. High-Speed Document Scanner

Scanners turn paper into digitized computer graphics files. Lawyers accumulate a lot of paper. Scanners running a few pages to 15 pages per minute are too slow. Scanners without automatic document feeders are a nightmare. High-speed means at least 30 pages per minute. My first scanner in 1987 could read a few pages per minute. Most desktop scanners today aren't much better. To capture all of your documents, contracts, correspondence, you'll need a very fast and accurate scanner. My Xerox Document Centre 545 scans 45 pages per minute accurately, without jamming, which means I can walk up to it with a 45-page contract and one minute later have it sitting on the hard drive of the computer on my desk. (Cost: Few hundred dollars for a slow scanner to \$500

a month for a fast one with built-in network printer and copier.)

### *A Word About Graphics Formats*

You probably know what JPG and GIF files are since that is what most photos on the Web are. You probably also know what PDF format is since Adobe has given away Adobe Acrobat Reader for so long that everyone has it on their computer. You may not know what a TIFF file is, but it is important because most scanners save the scanned image as a TIFF file because TIFF files keep a lot of the detail in the scanned image and make for a good scan.

### *Scanner Capability*

Better scanners allow multiple pages to be scanned at once with a document feeder and then save the files as a Multi-Page TIFF file. If you have Windows XP Pro as the operating system on your computer, clicking on a TIFF file opens it up in a very handy viewer (Microsoft Office Document Imaging) that allows you to move pages around within the file and delete unneeded pages.

Some newer scanners save directly to PDF because some people believe that PDF files will become the de facto standard for sharing of graphics images. I still like Multi-Page TIFF better, but not everyone can read them. My Xerox scanner allows me to select whether the scanned document's page images will be saved as a Multi-Page TIFF file or a PDF file. This is good because I like to keep my options open. Sometimes I scan documents as both TIFF and PDF.

## **2. Optical Character Recognition (OCR) Software**

ScanSoft OmniPage ProOffice 14.0 is a must. This program reads a scanned file and converts it to text and saves it as a word processing file or to the clipboard. This allows you to later search

through all of your scanned documents using search terms ala Westlaw, Lexis, or Google. (Cost: about \$500; sometimes bundled with other software.)

## **3. Digital Camera (Still)**

Your job as a lawyer is not to take photos, but sometimes there's no time to wait for the investigator or photographer. Just about any digital camera today takes good pictures. Be sure that it has at least 2 megapixels, saves photos in a non-proprietary format like JPG, and has a Compact Flash or similar removable storage card so that you can carry spares. And be sure to get a spare battery; some of these digital cameras burn through a battery in 30 minutes or 30 pictures, whichever comes first. Mine is a Canon Digital Elph, and I love it. It's small enough to carry in a pocket, and even though it's a few years old, it still takes good photos at 2 megapixels. It holds over 200 photos on the removable 128 megabyte Compact Flash memory card. Don't forget to buy a memory card reader to connect to your computer's USB port to download photos to your hard drive. I also use a Canon Digital Rebel SLR that takes 6 megapixel photos for really good photography. (Cost: \$300-\$1,000.)

## **4. Digital Camera (Video)**

Professional videographers use expensive equipment and have years of training and experience in how to properly record evidence. But, there's no harm in a lawyer making videos to record what he or she sees as important at the time. To make downloading to your computer simple, be sure the format is Digital Video ("DV") and outputs through an IEEE 1394 Fire Wire port or a USB 2.0 port through a cable to your computer. Look for a camera with built-in image stabilization, low-light (lux) capability, and an LCD monitor as well as a viewfinder. Forget trying to find a video camera that also

takes still photos; the reviewers still say the still photos are inferior to a still camera. I use a JVC video camera, and it works very well. (Cost: \$500-\$800.)

## 5. Color Graphics Scanner

Unless your high-speed document scanner reads color, you'll need one of these to scan photos, magazine articles, brochures, evidence, and so. Look for one that has a large platen so that you can scan large pages. (Cost: few hundred dollars on up.)

### PROCESS: GOOD GRAPHICS REQUIRE LOTS OF POWER

• As an English teacher once told me about a paper I wrote, "You've got all the right words; now put them in the right order." When I learned to be a lawyer, I learned to play with words, to put them in the right order. It's the same thing with graphics. All of that digitizing of photos, videos and evidence is graphics-intensive work, as opposed to text-intensive work. While computers over the last two decades have far surpassed the ability to process words in text, only the latest and fastest computers with the largest hard drives have the ability to quickly render and allow you to modify graphics.

## 1. A Big Desktop Computer

When dealing with graphics, it's good to have a really big computer. Otherwise, get used to waiting and waiting and waiting. Here are the specs on the computer I use, which handles graphics very well:

- Processor—Intel 3.06 gigahertz hyper-threading;
- RAM memory—1 gigabyte;
- Hard drives—four 100 gigabyte Western Digital drives in a RAID array to stripe for speed and mirror for backup;

- Optical drives—DVD/CD writer and 52x CD-R writer;
- Ports—IEEE 1394 Fire Wire, USB 2.0, parallel, Ethernet; and
- Operating System—Windows XP Pro. (Cost: about \$2,000.)

## 2. Microsoft Office XP With Word And PowerPoint

While I still use WordPerfect 5.1 DOS as my word processor of choice, I convert my text to Word and PowerPoint to project my perceptions. They are powerful programs that everyone has, even us old DOS hangers-on. (Cost: about \$500.) Aside: I tried the beta test version of Microsoft Office 2003 and did not find anything worth spending the thousands of dollars it would cost to upgrade all my computers.

## 3. Adobe Acrobat 6.0 Professional

This latest version of the popular PDF program allows you to select multiple files of different types such as scanned documents saved as PDF files, scanned images saved as TIFF files, and legal documents saved as Word documents, and then save them as one PDF file with the file name of your choice. It even has a new compression algorithm that makes the files smaller than PDFs usually are, which is nice since they used to be awfully big. (Cost: about \$500.)

## 4. Microsoft Visio XP

This is a really good diagramming program that lets you cut, paste and move objects around the piece of paper on the screen until you get the visual picture you want to convey. It's great for flow charts, organizational charts, time lines, and so on. (Cost: a few hundred dollars.)

## 5. Case Management Software Like TimeMap, CaseMap, NoteMap, Summation

This is a whole subject in itself. Suffice it to say that you may need some type of software to help organize what you have digitized and input into your computer. (Cost: hundreds of dollars each.) (Until you get something, see my article *A Simple Computer File Management System* in the September 15, 2003 issue of the Florida Bar News and available on my Web site at [www.jamesmartinpa.com](http://www.jamesmartinpa.com))

### BACKUP: A STITCH IN TIME SAVES NINE

- Or, in this case, a backup every day keeps the computer blues away. It's boring, it's unbillable, and it's necessary. It's like legal ethics: something we must do because we're professionals. And if we don't like it, maybe we should do something else. Because if you're going to use technology, you're going to have crashes, you're going to lose data, and you're going to have to rebuild from backups. I learned about twenty years ago the importance of backing up my work. About two hours into typing a contract from scratch, my brand new IBM Displaywriter special purpose computer ate it and would not give it back. I had to rewrite it again, from scratch. Ever since, when I draft documents I hit the save key at the end of every paragraph, and I print out hard copies every hour. But, you can't do that when you've digitized your entire case; it would defeat the purpose of digitizing. So, here's some technology to make backing up quicker and to reduce the risk of damage that would require using a backup.

#### 1. Maxtor Personal Storage

This is my newest best tech friend. It's a 200 gigabyte hard drive in a plastic case with an IEEE 1394 Fire Wire cable that connects to my computer as a separate drive. I copied all of the files from my desktop computer to my Maxtor. It's the same size (200 GB) so it all fits. Then every day I copy files to it throughout the day,

and at the end of the day I copy all of my backup files to it. It comes with some backup software of its own that runs when you hit the button on its front, but I haven't had time to read the manual for that yet and haven't really needed to since it copies files quickly and easily. (One time I accidentally hit the backup button and it started to whir and make a lot of noise so I shut it down real quick; now I just stay away from that button.) At night when I shut down the computer, I take Maxtor home with me, where I can continue work and write articles on into the night, and take them on my Maxtor back to work the next day. My wife will probably bury Maxtor with me unless I include a direction in my will to the contrary. (Cost: about \$300.)

#### 2. CD Writer

Before I had Maxtor, my daily backups were made to my Yamaha 52X CD writer. It burns a 700 megabyte CD in about three minutes. That leaves no room for excuses; everyone has three minutes at the end of the day to burn a CD with that day's most important work and backup files. I burned permanent ones (CD-R) since they're so cheap. After doing this for a few years, I found that the 200 plus CD's were beginning to take up room, so I bought a CD shredder so destroy the dailies and just keep the monthlies. (Cost with shredder: about \$300.)

#### 3. Surge Protector And Uninterruptible Power Supply ("UPS")

If you add up the cost of the above-listed technology, you'll see that this is no time to scrimp. Go ahead and buy the most expensive surge protectors you can buy (each of mine cost \$60), ones that say they will stop lots of joules. Don't buy one cheapy surge protector for your high-tech office equipment. Buy lots of good ones. And don't forget to buy the UPS, as well, since your computer needs a little time to shut down when the power goes out. The UPS is really a rechargeable battery with a fast switch and a

sensor. When the sensor senses a change in the power curve from the AC outlet, it lickity-split switches the computer over to battery power. But, like Scotty on the Starship Enterprise, your little UPS will soon be saying, "I'm giving her all she's got, Captain, and we'll have to shut down entirely any minute or she'll blow," so you better be there when the power goes out to turn it off when the outage happens. In other words, don't leave your computer on at night thinking that the UPS will protect it when you're not there.

#### *On? Off?*

In the '80s the original thinking about personal computers was to shut them down at night since the mean time between failures (MTBF) of hard drives was such that running them at night would cause them to fail sooner. Then in the '90s the sage advisers of the computer world told us not to shut them off at night but keep them running continuously since the starting and stopping of hard drives led to more failures than the passage of time. This always reminded me of the advice to leave fluorescent lights on if you are coming back in less than x hours since it used more power turning them off and on than leaving them on all the time. Somewhere along the line, I decided that no one really knows the answer to these things and I adopted a practical approach. I live in Florida, the lightning capital of the world. Whenever my computer is plugged into the state power grid, it is at risk of damage from a surge. The risk is worth bearing when I am at work; it is not worth the risk when I am not there. So, when I go home at night, I not only turn my computer off, but I pull its plugs to the AC outlet, phone outlet, network outlet, and any other connection to the outside world that might surge if hit by lightning.

#### **4. Firewall**

Think you're safe when you're accessing the Internet and only you know you're there? Think

again. Go to Google and enter "Shields Up" to go to the Gibson Research site that, for free, checks the ports in your computer to determine whether your computer is potential hacker prey. Unless you are a real techie or have a firewall, chances are your computer will fail this test miserably. The fix is very easy: buy a hardware firewall/router/Ethernet hub/Internet gateway device. They are sold in Office Depot and Staples stores and online at TechDepot and PCCConnection. Mine is the 3Com Office Connect Gateway, and it connects with an Ethernet (network) cable between my computer and other computers and network devices so it acts as a hub. It also connects between my computer and the Road Runner modem so it acts as a sharing device for Internet access among computers on my office's network and it acts as a firewall to block intruders outside my office network from even detecting my computers, so far. (Cost: a couple hundred dollars.)

#### **5. Norton Antivirus 2004 And Windows Update**

First thing we do every morning at home is brush our teeth, and first thing we do at work every morning is run the antivirus and Windows updates. Why every day? Just like those nasty germs in your mouth that are up all night doing bad, there are hackers who stay up all night thinking up ways to do bad. Think of Norton Antivirus and Windows Update as toothbrushes for hackers, and use them every morning. (Cost: peanuts.)

**CONCLUSION** • The technology you need to project the vision of your case is here now, ready and waiting for you. You can use it to assemble and organize the evidence and theory of your case in a tangible form that's so clear anyone can see it. The more compelling your visuals, the less oral persuasion you'll need to make your case.