



## PROTECTING YOUR COMPUTER

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At first blush this article presents information which is slightly more interesting than watching paint dry on a humid day. But think for a moment about the impact on your practice and the service of your clients if your computer and its information were suddenly unavailable. If you've properly incorporated the computer into your law firm life as a way to work smarter instead of harder, the idea of it becoming suddenly unavailable should make you wince. This article is a simple one, focusing only on some essential steps you should take to protect your computer and its data.

**POWER** Most people plug a surge suppressor between the outlet and their computer, and think their power problems are solved. Some of you even purchased the more expensive suppressor which accommodates telephone lines, and plugged your modem line in there, realizing that electrical surges can travel through a telephone line. Well, if your computer is merely a workstation on a network, and the network's data is stored elsewhere on a file server, this solution is ok. But if your computer is the actual server in a peer-to-peer set-up, or is a standalone where the data is stored, it is NOT adequate.

Take a look at California, with its history of rolling brown-outs. Did you know that power drains are just as or more harmful to your computer as surges? Did you know that they occur regularly throughout the day? Ours may not be as long in duration or as dramatic as California, but we have them. For that reason, you should invest in a back-up UPS (uninterruptible power supply) for the computer which houses your data, instead of a surge suppressor. It will guard against both brown-outs AND surges, it will clean and condition the electrical current, and it will provide power for a limited time during a power failure, so that you can properly close your files and turn off your computer and other devices.

APC (American Power Conversion) is the "name brand" of UPS devices. You can order from them directly from their web site at [www.apcc.com](http://www.apcc.com). They are sold through Dell and Gateway, and even at local computer and office supply stores. You buy based on the total wattage you need, which of course is based on what you want to plug in.

I started with the Back-up UPS Pro 420, which powered my computer, monitor, scanner, and one of my two printers. It cost a little over \$200 when I purchased it from Dell many years back. Now I use a more robust model, with more items plugged into it. I know I have brown-outs during the day, because I hear the UPS kick on for a few seconds here and there, and see the indicator light on the front of it confirming a brief period in which the power dips enough to trigger the UPS. Without it my computer would likely continue to run, but I might have a software glitch, or damage to electronics from the low current could blow out the power supply, hard drive, or other critical components, either immediately or by weakening them cumulatively over time until they finally fail.

**VIRUS PROTECTION** Email has changed forever the way we communicate with clients, colleagues and family. Members of the Pennsylvania Bar Association Solo & Small Firm Section seek and find collegiality and support on the section's listserv. They also occasionally used to find viruses as well. Viruses which damaged their documents, destroyed application software, and sometimes cost literally days of otherwise billable time recovering. Once the Rules of Netiquette required that virus protection software be used and kept up-to-date by participants, the exposure to viruses all but disappeared.

Opening up our computers to email, internet downloads, and document exchange opens us up to a world of danger. And the danger is not just lurking on the internet. The worst virus I ever experienced on my personal computer came in through shrink-wrapped software. It can even come in on a box of blank disks. The worst virus I experienced at a law firm came from a vendor doing demonstration of software. He didn't even know his disk was infected from the last law firm he visited. Nothing we did got rid of the virus. We eventually trashed the computer in question.

If you do not have virus protection software, run to your nearest store or the internet to purchase it. You will probably purchase McAfee or Norton anti-virus software. I use Inoculate, and it is also very good.. If you have a high-speed internet connection like a DSL or cable modem, you will also need additional firewall protection. That can come in the form of software, hardware, or a combination. Lynksys routers are probably the most frequently used solution for combination hardware/software firewall solutions.

It's not enough to purchase and install the software. You must properly configure it to scan your files automatically, and especially to scan your emails and downloads. And then you must update the virus definition set regularly by



downloading the latest “.dat” file. I have configured my Inoculate software to update itself in the background with the latest definitions every hour. I don't even realize it's happening. With approximately forty new viruses / worms being released into the world each day, this is not something to relegate to a weekly basis.

If you don't want to purchase and upgrade a virus protection package, you should at least consider an outside service like Message Patrol. Message Patrol pre-scans your email with a carrier-grade virus scan, content filtering and spam prevention engine. It acts, in effect, as an intelligent barrier, placing a pre-processing layer between your internal email system and the Internet. In this way you can not only protect yourself from the latest “ILOVEYOU” or “MELISSA” strain, but also scan all inbound and outbound messages for offensive material or other unauthorized activity. You can block inappropriate file attachments like \*.mp3, and successfully repel unsolicited bulk e-mail blasts. And best of all do it with zero administration on your part.

Message Patrol is an application service provider (ASP) e-hosted application that is compatible with all major email environments. You subscribe to the service for a set monthly fee of approximately \$2 per user per month. The minimum term is one year billed quarterly in advance. There is no hardware or software to buy. Contact Steve Hatch at Network Alternatives (215-702-3800 x214) for additional information. (If you remember, tell him that I sent you. I'll call in my marker for the Pennsylvania Bar Association later.) Remember that this service will ONLY prevent viruses coming through your email. It will not protect you from viruses which might come to your computer through other means. But at least it's a start.

**BACKUP** This is simple. You should back up all your data, programs and registry every single night onto a single tape or external hard drive, and you should take that backup off-site each day. Bring it back the next day and take the newer tape off-site. Keep a two week rotation of backup tapes, meaning 14 days worth of your data. Keep the end of month one for twelve months. Replace each tape when it has been used repeatedly for about a year or 50 – 60 uses, whichever comes first.

Some attorneys balk that spending as much as \$1,000 for reliable backup is too much. (That includes the drive, software, and sufficient tapes). Do the math. That's only the equivalent of 7 hours of one attorney's time. Isn't that a small price to pay for the security of all your data and all the time it would take to get back up and running in the event of a hard drive failure or site disaster?

I've had very good luck with my Colorado Tape Drive, which holds 20GB/40GB of data all on one tape, which is small enough to fit in a shirt pocket.



(The first number is uncompressed data, the second number is compressed). It cost me under \$300. I have used it now on four different computers for over eight years, and it has never failed me. I have occasionally had the need to restore individual files I messed up beyond repair or erased by accident, and have found them safe and sound on the backup tape each time. I use Veritas Backup Exec software ([www.veritas.com/us/](http://www.veritas.com/us/)). Alternative backup software is Arcserve for Small Business Server ([www.ca.com](http://www.ca.com)) or Second Copy ([www.centered.com](http://www.centered.com)), which is extremely easy to set up and use, inexpensive, and very versatile.

Manufacturers of backup drives and tapes come and go. For that reason I make no further mention here of specific pricing or vendors. What you need to know is that pricing continues to drop, and external storage devices have become smaller and therefore more portable, have a much larger capacity, and keep becoming more affordable. For that reason I recently converted to external USB hard drives for storage. At only two pounds per drive, it's still easy to take the backup off-site.

Depending on how much data you have, you may be able to get away with a CD-RW drive. Most firms, however, have too much data for one CD, and the idea is to back up automatically, unattended, in the middle of the night. This provides a "clean" backup because files are not open and in use, and it means that a person doesn't forget to make it happen. Another limitation of the CD drive—the reason I don't recommend it—is that it will not backup the registry or your software. That means that you will have to be prepared to spend at least a full day, maybe two, getting yourself back to the same point of functionality, in the event of a hard drive failure. And probably you will never reach that goal. First, you may not have all the software registration numbers, or as I often find, may not even be able to locate the original CDs for installation. If you get past that point, you then have to successfully reinstall every upgrade and security patch you had before. Miss one anywhere, and you will never get back to where you were. And then of course, are the many customizations you may have had created on your computer. Links between packages; custom macros and so forth may not be easily recreated, especially if the person who set them up for you is no longer available.

Finally, for those of you who don't want to mess with doing your own backup in-house, you can use online backup services. That way you don't have to worry about periodically testing your tapes to make sure they are backing up reliably, or worry about taking them offsite regularly.

You'll need at least a DSL connection to make online backup feasible. This is an application service provider (ASP) solution. The initial investment is minimal.



There are no tapes to buy or equipment to maintain. SystemSafe from NetMass ([www.systemrestore.com](http://www.systemrestore.com)) and Midnight Manager ([www.midnightmanager.com](http://www.midnightmanager.com)) and Connected ([www.connected.com](http://www.connected.com)) all get honorable mention from your fellow attorneys. They are described as simple, inexpensive, secure, and of providing an added advantage of access to your data from any internet connection.

This quote from ABA-noted technologist Ross Kodner drives home the point about backing up the computer, “Salvation comes from the strangest sources. . .a good friend once told me that her company’s entire Outlook-based email system self-immolated, and the system hadn’t been backed up for months. Everything was gone—all their calendars, rolodexes, and their emails. Except for my friend. . .who realized that she had at least her critical info synched to her Palm Pilot.”

**CONCLUSION** There is a lot more you CAN do to your computer to enhance your ability to get up and running quickly in the event of a disaster. But at a minimum this is what you SHOULD do. Don’t wait until disaster strikes (which it will eventually do—ultimately computers can and do fail) to wring your hands and realize you should have done this already. Do it now. All the information is here for you. There really is no excuse left.

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