RANDOM THOUGHTS

I may be crazy, but I'm not stupid.

William Blinn
COMMUNICATIONS
179 Caren Avenue
Worthington, Ohio 43085
614-785-9359
Fax 877-870-4892
www.Blinn.com

2003:10

TechX New York continues to shrink

In the 15 years or so that I've been attending TechX NY, I've never seen a smaller show. When the entire show was still called PC Expo, it reached the high point by filling the enormous Javits Convention Center with more than 1000 exhibitors and by attracting something like 150,000 visitors to the area.

Then came the dot-com implosion, a soft economy in the tech sector, 9/11, and further slowing in the overall economy. In addition, the German show CeBit somehow managed to usurp TechX's June dates this year; that left a September date (too close to the CeBit show for some companies to come back to New York and too close to Comdex for other companies to participate in an East Coast show.) As a result, TechX this year featured no more than 500 exhibitors, smaller exhibits, and a surprising emphasis on outsourcing that brought companies from Netherlands, Romania, Philippines, several former soviet bloc countries, and even Transylvania to the show. Companies such as Palm, Gateway, and Dell were absent. AMD had a small presence; Intel was nowhere to be seen.

While this year's show had enough new products and services to warrant my attention, I was glad that I'd made plans to come home on Thursday instead of Friday. The show was easily covered in the Tuesday afternoon and Wednesday morning I had allocated – there was no need to continue looking Wednesday afternoon. Certainly no need to return on Thursday.

Because this year's show was so small, I am refunding the annual "report fee" to all clients who already paid it. There simply was not enough new information this year to justify the paid report. All clients (even those who didn't pay) are receiving a copy of this abbreviated report. Plans for next year are uncertain: I may give CeBit or Mac World a try, or I might choose to attend Comdex. I could also decide to stick with TechX for one more year to see if the show shows signs of returning to its former life. Or ... ? Do you have a suggestion, recommendation, or wish list?

Are you ready for a disaster?

This is a good year to talk about emergency preparations. Disk drives hold more and more information each year and it's important for us to understand that the value of the data is almost certainly more than the value of the computer. Yet for many people, replacing the computer would be far easier than replacing the data.

If you hadn't been concerned about the electric grid prior to this summer, your opinion may have changed. An area that experiences several severe storms in a short time can easily have enough power system damage that some areas will be without power for a week or more. Severe winter weather can be even worse, as the residents of Maine, Quebec, and eastern Ontario learned a few years ago when ice storms caused several transmission towers to collapse. And seemingly minor power fluctuations can cause widespread power outages.

The way we generate and transmit power is outmoded and much of the equipment is antique. Why? Research the "tragedy of the common". In short, we're not going to see much improvement in the electric system anytime soon.

Add to this threats from abroad, viruses and worms, simple component failure, accident (tripping over a power plug, deleting a critical file), and the transitory nature of data stored on any magnetic medium and you'll understand that the data on your computer is much more fleeting than it might seem.

Backup may seem annoying and cumbersome; disk drive failure rates may seem low. **Still, you need only one critical failure of an essential component that isn't backed up and you may be facing total loss of important data or partial recovery of important data at a cost of thousands (or tens of thousands) of dollars.**

Every computer should be protected by surge/noise suppression equipment, an uninterruptible power supply, and a regular verified backup. If you haven't tested and verified your backup, **you don't have a backup**. If you haven't tested your UPS unit, you don't have a UPS unit.

In short: Will you spend a few hundred dollars and a few minutes now to protest your system realistically or would you prefer to spend several days and tens of thousands of dollars later to recover some (maybe most and perhaps even all) of your data?

Let's look at the components.

Random Thoughts or Dead Trees?

Dead Trees seemed to be a somewhat negative name for this publication. Starting with this issue, the new name is *Random Thoughts*, suggesting – if not deep analytical articles – that at least minimal thought during development of the articles. Please note that I still bear no particular animosity toward trees.

ISSN 1543-1525 (print) – ISSN 1543-1533 (electronic)

Surge suppressor

Don't buy a $20 surge suppressor at Wal-Mart! In fact, you probably shouldn't buy a surge suppressor. Surge suppression is built in to any good UPS unit, so the only reason to buy a separate surge suppressor would be to protect a computer that doesn't need a UPS unit (a notebook computer, for example) or for any computer that you don't care if it experiences a data-wrenching power failure.

Unless you pay at least $60 for a surge suppressor, it will be of insufficient capability to stop any but the smallest surge.

UPS unit

UPS units start around $75. At this price, the unit will be adequate to power a small computer for a short time – perhaps 5 minutes or so. That's just enough time to power the computer off in an organized manner. You'll have time to write open files to disk, close open applications, and run the shut-down procedure. You won't have enough time to continue working through a storm or a power outage.

UPS units come in small sizes, such as the InternetOffice 500 at the left, and in larger sizes, and in larger sizes such as the Smart 1200 XLHG at the right. Buying a more expensive unit will generally give you longer run-time or the ability to run more equipment. Some devices (laser printers, for example) should never be attached to a UPS unit. General rule: If it has a motor or a heating element in it, it should not be connected to a UPS unit. Tripp-Lite is the brand I use. Some units will connect to your computer and automatically shut it down in the event of a power failure and others make it possible to attach external batteries for even longer run times.

Before buying a UPS unit, you'll need to know what it needs to power and for how long. If you have a "workstation" class computer, you'll need a larger UPS unit. Or if you have a server that must have sufficient emergency power to remain operational for 12 hours, you'll need a UPS unit with connections for external batteries. Operations that must not shut down during even extended power outages will need gasoline or diesel generators. Knowing what you have and how long it must operate is the first step in determining what power equipment you need to buy.

For most of us, the right choice is a unit in the $200 to $1000 range – enough to power a computer, a monitor, and possibly a desk lamp. You'll need to "size" the unit or add batteries depending on how much run-time you need. I prefer to give myself enough time to work though outages up to 30 minutes with another 20 or 30 minutes of reliable coverage so that I can copy work off to CD or some other medium. If power is restored within 30 minutes, I lose no time; after 30 minutes, I start copying data to move to another location that still has power.

The general rule is to power only essential equipment. That means the computer and monitor; for me, it also means a lamp with a high-output, low wattage lamp. UPS units should not be used to power any device with a motor or a heating element and all printers have at least one of those.

Backup

Tape? CD? DVD? External hard drive? There are lots of ways to backup data. Tape drives are cheap but slow; they're also the least reliable medium. Because they read data sequentially, I've spent 2 hours waiting for the backup system to find a file on a tape and 2 seconds (literally) writing that file back to disk.

If you're never in a hurry, tape is a good choice. Otherwise, there are numerous better options available.

CDs are appealing, but too small. At most, you'll get (even compressed) no more than about 1.5 GB of data per CD, so a half-full 120GB drive might need 60 CDs and 2 hours of sitting in front of the computer to feed it discs for a single full backup. DVDs hold up to 7 or 8 GB of compressed data, so you'll at least be able to do something else between disk swaps. Still, you'll be tied to the computer. An external (Firewire or USB2) hard drive can solve the "stuck in front of the computer" problem.

My favorite backup device ever! I remember when it was possible to back up an entire hard drive to a stack of 10 1.4MB floppies in about 15 minutes. I remember slow tape drives that could consume 90 minutes just to find a file that could then be restored in 6 seconds. I tried CDs and DVDs (and still use them for some operations) but being able to finish a 5GB differential backup in less than 30 minutes and then to be able to unplug the drive and take it to another location for safekeeping really sold me on a 200GB external Firewire/USB2 drive from Western Digital. These drives are available for about $300 and you can also buy smaller drives (80GB and 120GB) if you need less storage space. You'll never look back!

A removable hard drive is handy, too, because it can easily be stored elsewhere. No backup should ever be stored in the same building as the computer from which the backup came. Even if the computer and the building housing it are destroyed, you must be able to recover the data. Have your neighbor store it or take the office backup home.

Some people install a second hard drive or a second partition on an existing hard drive to use for backup. This is a bad idea for two reasons. First, both the data and the backup are lost if the computer is destroyed. Second, failure of the hard drive or the disk controller can corrupt both the data and the backup. Use this technique if you wish because it can provide quick access to recover a file that's been damaged or deleted, but don't count on it for disaster recovery.

Test it, too! If it's hard to convince people of the need to back up their data, it's even harder to convince them of the need to test the system. Yet every year there are people who try to restore data from a backup tape, CD, or disk only to learn that the media contains no data or is unreadable. If there is a problem, this is not the time you want to learn about it.

After a successful backup, try restoring a file to a different disk drive and then see if the application can read it. Until you've confirmed the backup, you don't really have a backup.

For critical data, you may want to consider an on-line service. This might be a good choice for accounting data and other files that contain information your business needs to survive. These files often are not huge, but change frequently and lend themselves to on-line backup services such as Iomega's I-Backup.

If the worst happens

A catastrophic drive failure should be nothing more than a moderate annoyance. The computer will be out of service until you obtain a new disk drive, install it, and format it. From that point forward, restoration of the applications may be as simple as restoring them from backup, along with the appropriate Registry data.

Or you may have elected not to back up applications. In that case, the programs must be reinstalled and, if you backed up the special settings files, restoring them from backup. If not, then you'll need to configure each application so that it will work the way you want it to.

The rest should be a snap – restore all of the data from backup. You may have one or more "full" backup sets and one or more "differential" or "incremental" backup sets. Incremental backups (those that back up only the files that have changed since the previous backup) are faster, but the restoration process takes longer. I prefer differential backups between full backups because each differential backup captures all files that have changed since the previous full backup.

Or, if you don't have a backup, you'll be calling a company such as Drive Savers in Novato, California. You'll then send them your disk drive, tell them what data you want to see again, wait a week (or just a day if you're willing to pay for expedited service) and pay $1000 or more (sometimes a lot more) for a CD that contains the data you could have backed up.

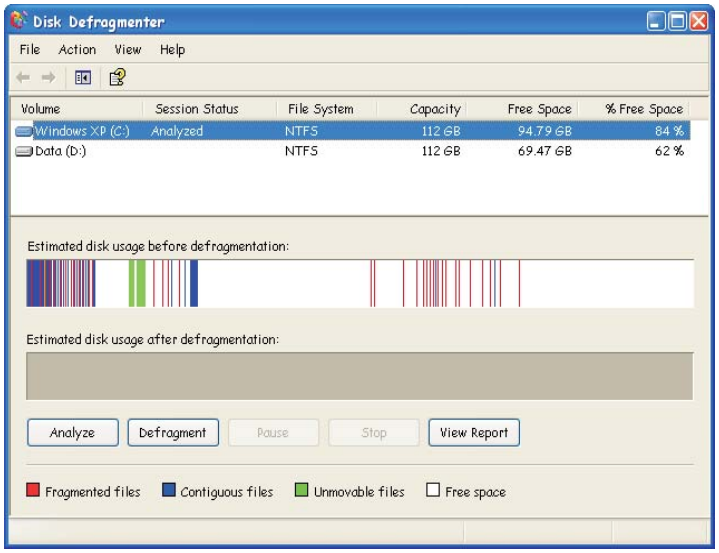
Defragment your disk

The more you use your computer, the slower it gets. Honest. It's not the result of aging parts, but of "disk fragmentation". And that's a misnomer, too. The disk doesn't become fragmented, but the data on the disk does become fragmented. Some people consider that an operating system fault. Actually it's an operating system feature. In other words, it's intentional.

Let's say you have two word processor files you're working on. You write on of those files to the disk and start working on the next one. When you write the second file to the disk, you have two files on the disk that fit together this way: 1111122222.

Then you do more work on the first file and add some information so the file is stored this way: 1111122222111.

The next day, you delete some of the text in each file and add more text to both, so the result might look like this: 11 1222 2112221.



Some versions of Windows come with a built-in Disk Defragmenter applet. This is a fine solution if you don't mind that you can't use your computer while it's running and that it can take hours and hours to do its job. There's also the problem that it won't even run unless your disk has more than 15% free space (nearly fully disks are almost always in need of defragmentation.) And when the Windows Disk Defragmenter is finished doing its job, you'll find that a lot of files are still fragmented. So you can spend all day running an application that doesn't do a very good job, or you can spend a few dollars for a 3rd-party utility that runs fast, doesn't need 15% free space, and leaves no fragmented files in its wake. Two of the better known applications are PerfectDisk from Raxco and Diskeeper from Executive Software. The two companies argue over which is better, but either is a vast improvement over the Windows product.

When you next open the first file, the disk reads the first two sectors of data, then has to skip a sector. Then the heads have to find the 4th and 5th sectors, skip more, and find the 6th sector. This same process occurs with every file on your disk and eventually the drive will spend as much time looking for data as it does reading and writing the data.

There's a quick, easy solution, but like most quick, easy solutions, it's also wrong. If you open My Computer and select the C drive, then right-click and choose Properties, you'll see a tab called Disk Tools. On that tab is a process called "Defragment". Choose that option and go out for a long walk. The Windows disk defragmenter is slow (it can easily take an hour) for a modest-size disk), it can perform defragmentation on just one drive at a time (if you have 2 drives, physical or logical, plan on going for two long walks), it won't work if your diskis more than about 70% full (the more full a disk is, the more likely it is to be fragmented), and besides all that, the Windows defragmenter doesn't do a very good job (when the process is finished, you'll still have a lot of fragmented files.) Oh – by the way – the Windows file defragmenter can't defragment the Windows swap file or any of several other files it considers "untouchable". Unfortunately, those files are likely to be fragmented and the swap file in particular is likely to be fragmented.

Except for that, the Windows defragmenter is a perfect solution. Just perfect.

The solution is a 3rd-party defragmenter product such as Perfect Disk 6.0 from Raxco or Diskeeper 8.0 from Executive Software. Either of these products is far superior to the built-in Windows service. The one you choose depends on the features you need, how many computers need disk defragmentation, and how you want to accomplish the job.

Spam

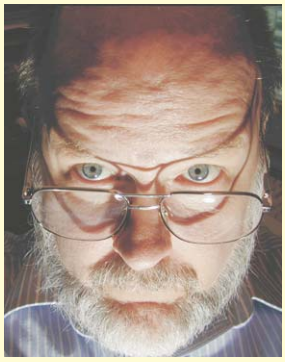
Are you convinced yet that spam is an evil thing? That it's a security risk? That anti-spam legislation has no chance of solving the problem? That legislators don't have even the faintest clue about the problem?

Or how about this: The head of the FDA says that there is no legislative answer to the problem of spam. And guess what he's right! Legislation will not cure this problem. Only when we as consumers resolutely ignore the spam, only when off-shore spam operations become unprofitable, only when Internet service providers work co-operatively to shut down open relays will spam go away.

I'm looking now at solutions to the spam problem. If you collect your mail through your website, you've probably already seen SpamAssassin in action. You may have tried (or still be using) GoodbyeSpam.com, an Internet-based solution that works well now that they've taken care of some hardware problems. There's also an open-source application called SpamPal that is both free and flexible. Using SpamPalinvolves understanding a little bit about "ports" and how to use "port forwarding", but it may be a good interim solution.

I use the term "interim solution" advisedly. There is no permanent solution. Spammers may be unprincipled creeps, but they're not stupid. Every anti-spam measure has a workaround. This is not a battle that will end anytime soon. ß

Apple needs a "killer app"



Sales of Apple's Macintosh systems continue to account for less than 5% of computer sales. There is simply not enough difference between a Mac running OS X and a PC running Windows XP to convince Windows users to switch.

If Apple can continue to hold on and position itself so that it can quickly take advantage of the "next big thing" (whatever it turns out to be) the company could regain some market share. It's even possible that Apple could turn the tables on Microsoft.

Is this the "next big thing"?

Microsoft's users have been hammered time after time in the past six months because of shortcomings in Windows "security". When Microsoft developed DOS, there was no need to consider security. DOS ran on a single-user machine that wasn't connected to a network. The first two versions of Windows wasn't network-aware, either. It wasn't until version 3.11 that Windows could deal with network communications. Any security had to be retrofitted – both into the operating system and into Microsoft's corporate culture.

Apple says the new G5 computers are the fastest in the world, even with a lower "clock speed" than is available on Windows PCs. Apple's partner, IBM builds the main boards and the CPUs for the machines.

Apple could capitalize on the legendary strength, stability, and security of Unix. Those who have seen their company invaded by a worm or a virus might be willing to consider a different operating system — one that comes with more than 30 years worth of security designed by Bell Labs, UC Berkeley, and the Department of Defense Advanced Research Projects Agency (DARPA).

Security. Maybe that's the "killer app" that Apple's been looking for! ß

CORNER on the market by A.J. Stinnett

An executive or manager becomes a leader when she or he does all the right things consistently and does them well.