



## Backup Means Never Having to Say "I Lost It"

THE DISK DRIVE IN YOUR COMPUTER CONTAINS A HIGHLY-POLISHED SURFACE SHAPED LIKE A DISK (HENCE THE NAME) THAT'S SPINNING AT 5400RPM OR 7200RPM (OR MAYBE EVEN AT 10,000RPM). FLOATING LESS THAN A HAIR'S BREADTH ABOVE THE DISK IS A FRAGILE BIT OF ELECTRONICS KNOWN AS THE READ-WRITE HEAD.

Given the speed and the tolerances involved, this is rather like flying a Boeing 747 airliner at 500MPH 10 feet off the ground. If the head touches the spinning disk for even a millisecond it will be destroyed and the data on your drive will be lost. Even though disk manufacturers now routinely quote meantime between failure rates that equate to a century or more, you'd be foolish to bank on having the drive continue to perform flawlessly.

What's on your computer that, if it suddenly disappeared, you would be at least mildly distressed? Financial records. Photographs. Word documents. E-mail files. Music. Videos.

You could get some of the files back but most of the files, if lost, are simply lost. Gone. Unrecoverable. For that reason I use external backup drives that I store at the office and Carbonite (whose servers are hundreds of miles away). That covers most of the potential disasters but what if the computer stops working and I need my files right now? This is not a hypothetical situation. It has happened to me.

When Vista crashed for the last time, I was out of business for about 5 minutes because I was able to start up a laptop computer and attach it to a couple of local backup drives. The notebook computer has most of the applications that are on the desktop so I can continue working as long as I

*What does a Lamborghini have to do with backup? Read the article and you'll find out.*



have access to my data. That's what's on those local drives that sit beside the computer. (Following that crash, I upgraded the computer to an older version of Windows XP and continued to use it until Windows 7 became available.)

I'm a bit of a fanatic when it comes to backup and someone I know recently learned an important lesson about backup.

### Lesson Learned

TWO LESSONS, MAYBE. FIRST WAS NOT TO BUY AN OFF-BRAND USB DRIVE. SECOND WAS NOT TO DELETE FILES FROM THE COMPUTER AFTER BACKING THEM UP. IF YOU HAVE ONLY ONE COPY, YOU DON'T HAVE A BACKUP.

The inevitable happened, of course. Just as the "backup" files were needed, the drive failed.

When I opened the enclosure, I found a disk drive with no label to identify the manufacturer. The best guess was that the drive was a recertified Western Digital or, more likely, a counterfeit Western Digital.

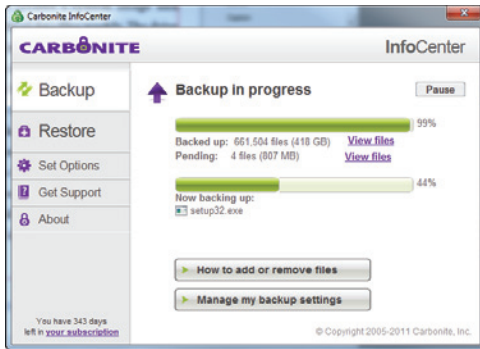
The cost of online backup services and large-capacity USB drives has changed the backup landscape. By definition, any file that exists in only one location is not backed up but the cost structure is now such that you can have many copies of your files.

The story for my acquaintance ended reasonably well because many of the files were also available on CDs and DVDs.

### My Process

I DON'T BELIEVE IN TRUSTING A SINGLE SOURCE OF BACKUP SO I USE A VARIETY OF TECHNOLOGIES TO STORE FILES:

- Norton Ghost creates a system image and backs up all critical data files weekly. The drive (currently it's just a single 3TB drive) with these backups is stored at my office.
- Carbonite backs up essential data files. The online service doesn't create a system image file but it does keep all of my Word documents, Excel documents, Access databases, digital images, video files, and such on a server in Boston. Restoring all of these files via the Internet would be slow so I consider this my second line of defense.



Carbonite (above) stores copies of my files in Boston, hundreds of miles away.

- Data files are backed up locally with GoodSync. Anything I'm working on is backed up within seconds to one of two local USB drives. Because these drives sit beside the computer, I can't consider them to be a true backup but if the main computer suffers a catastrophic failure I can attach the USB drives to a notebook computer and continue working as if nothing had happened.

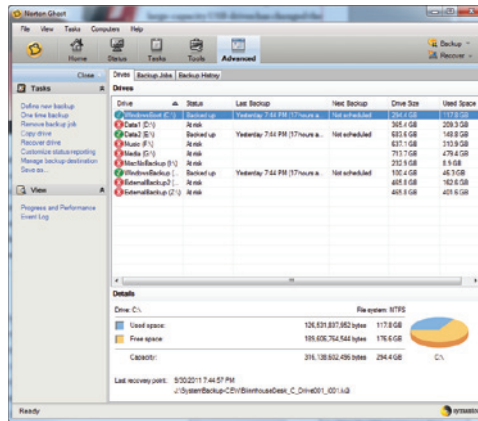
So far I've never lost a file. I've used each of the systems to recover files that were deleted or damaged and that's my primary message: I have been able to recover lost or damaged files.

You may think of your computer as being expensive but it isn't. You may think of the applications running on your computer as being expensive but they aren't. You may not give much thought at all to the documents you've created but they are more valuable than the computer or the applications on the computer.

## Why Three Backups?

FILES I STORE ON THE BACKUP DRIVE AT THE OFFICE WILL BE AT LEAST SEVERAL DAYS OLD AND I'LL HAVE TO RETRIEVE THE BACKUP DRIVE AND RESTORE THE DATA. FILES BACKED UP TO CARBONITE ARE IMMEDIATELY AVAILABLE BUT I WOULD HAVE TO DOWNLOAD THEM. SO LARGE NUMBERS OF FILES OR LARGE FILES WOULD TAKE SOME TIME TO RETRIEVE. FILES STORED ON MY LOCAL DISASTER-RECOVERY DRIVES ARE AVAILABLE IMMEDIATELY EVEN IF THEY'RE NOT REALLY BACKUPS.

By definition no file backed up to a device that's in the same physical location as the device it's backing up can be considered a backup. But it can be considered good insurance against hard drive crashes, errors, forgetfulness, and plain old human stupidity.



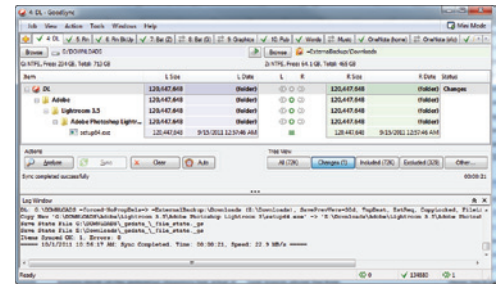
The trick is keeping them up to date.

To do this, you need a file synchronization program. Until recently I used Allway Sync but some recent software additions caused Allway Sync to fail and I began looking around for another application. What I found is called GoodSync.

After downloading and installing the trial version and even before I could notice that the user interface was far superior to what I had been using, I was astonished by the speed of the application. Instead of a 1973 Chevy Vega, I now had a 2010 Lamborghini Cabrea. Well, maybe the difference wasn't quite that extreme but within half an hour I was sure that I would buy the Professional version. The free version works only when the backup job contains no more than 100 files and you're not allowed to define more than 3 jobs. During the trial period and when you buy the professional version, both file count and job count are unlimited.

These days you can buy a 3TB USB hard drive for about \$130 so it's easy to set up a local hot-backup drive in addition to whatever offsite backup you have. GoodSync doesn't back up system files so it's not the right choice for backing up your operating system. For that you need Norton Ghost or Acronis True Image. GoodSync is more than capable of ensuring that all the data on your local hot backup is current.

Here's how it works: When I update a Web page or create a new page, I want to be sure that the page and any files the page depends on (CSS, graphics, audio, RSS, and such) are immediately copied to my local hot backup. These files will be also copied to Carbonite within a few hours and to my local offsite backup drive at the next weekly backup. Because no new content will ever be added to the backup drive directly, I don't want the "synchronize" option although GoodSync offers that capability.



Norton Ghost (left) creates an image of the computer's boot drive. Although Ghost could back up files on the other drives, I use GoodSync (above) for local copies and for backups of non-system drives.

All I need to do is define the source of the data and the destination. The source is the internal hard drive directory that contains all websites I'm working on. The destination is a directory on the external drive where I want the files to be stored. Although I have taken steps to ensure that the local backup drive will always mount as drives X and Z, GoodSync realizes that the drive is a USB device and that it might someday be mounted as a different drive letter. When offered the option to refer to the device by name instead of by letter, I accepted the suggestion.

By default GoodSync will propagate deletions and that's a reasonable choice for synchronizations. For backups, it's not. I'd prefer not to lose the backup copy of a file if I accidentally (stupidly?) delete it from the source directory. For that reason, I visit the Options panel and deselect "Propagate Deletions" for most backup jobs.

Once you've set up a backup or synchronize job, all that's left is determining how and when it will run. For most jobs, I set GoodSync to copy new or modified files to the external drive the instant it sees them. For some backup jobs, I use the built-in link that connects to the Windows scheduler, but other backup jobs make more sense not to be scheduled. I run these manually as needed.

Disk drives are far more reliable than they used to be but they can still crash. When that happens to you, having a recovery system in place will be remove much of the stress. Ω

