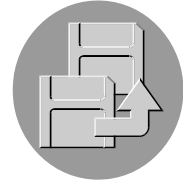


COMPUTER BACKUP



When people think about losing all the data on their computer they often get in a hurry to make a backup. User error, hardware failure and virus attacks are the most common ways data gets lost. There are a number of points to consider:

- 1) What should be backed-up; data, programs or both?
- 2) Do I have the right hardware for the job?
- 3) Do I have the right software for the job?

- Of course if you want you could "Build Your Own Data Center"
1. Erect a structure with thick cement walls and bullet-proof glass
 2. Hire security guards.
 3. Install an expensive lightning protection and grounding system.
 4. Install backup diesel generators.
 5. Conduct regular fire drills and maintain your fire protection system.

just kidding !!

Here Are Some Options For Home And Small Business Computer Users:

Computer Hardware Options;

- Floppy disks
- Tape drive
- Magneto-optical drives (Zip, Jaz or Imation)
- CD or DVD recordable (or ReadWritable?)
- Another hard drive

Computer Software Options;

- DOS commands
 - Backup, diskcopy, copy, xcopy
- Windows utilities
 - Simple copy & paste
 - Backup (included on XP Pro – in XP Home - Simply insert the XP CD, and run "Ntbackup" a program from the folder D:\Valueadd\msft\ntbackup
 - System Restore – create restore point
 - Windows CD burning
- Other companies
 - Iomega Tools
 - PowerQuest Drive Image 2002
 - Nero Burning ROM or Roxio Easy CD Creator

Restoring Data

This typically involves the reverse procedure from the way the data was backed-up. Thus if DOS backup was used then use DOS restore command. If you burned data to a CD then copy it from the CD back to the hard drive.

PS. They say that really prudent people have three backups in three different buildings and that there is no such thing as a really prudent person!

Develop a Backup Plan

Fortunately, the backup procedure has become much easier with the commonality of CD and DVD writable drives.

1. Identify what files to back up: Unfortunately, which files to back-up may be a little trickier than people first think! Consider the following files:


- downloaded music & programs
- digital video and pictures
- e-mail messages & your address book
- internet browser Favorites
- data files – typically stored in My Documents

Note: not all programs default to storing data in My Documents!

2. Determine which hardware to use: Today, a CD or DVD burner is the hardware of choice for most backups. CDs hold up to 700 megabytes and single layer DVDs hold 4.7 gigabytes. New technologies, such as Blu-Ray will allow much more data to be written (Beta is testing 50 GB 5 ¼ inch media).

Note: I personally don't like CD-RW's or DVD-RW's. They are slow to format and I don't trust them with my data.

3. Software for back up: Which software you use will depend on which hardware you choose. If you are using CD's or DVD's I would recommend using the software that came with the burner. Windows XP has the capability to burn CD's and many people like this simple method.

It is **worth noting** that you can compress your data prior to backing up. Historically people used programs like WinZip. Many people found that this program was not that easy to use. Fortunately zipping and unzipping has become very easy with Windows XP. If you create a new folder the option is available to create a “  Compressed (zipped) Folder ”. Any files copied or moved to this folder are automatically compressed. To decompress files simply copy or move them out of this “compressed folder”.

4. How frequently should you backup your files? The frequency of backing up is a function of how much data you create over time. If you are adding many files at once you could backup when done. If you do not create much new data then every couple or three weeks may be enough. Businesses often back-up every day.

I also backup if I hear there is some new weird virus around or if my hard drive is acting a little “funny”.

5. Label your backups and store them carefully: Many people develop a reasonable backup strategy and then don't file the backup or store the disks properly. It is not recommended to write on CD/DVD's or stick stickers on them. You can write on the center clear part of the disk.

Disks should be stored at room temperature, in a dark place with average humidity.

Tips on Data Recovery & Removal

When data is lost there may still be hope !!!

1. If you have deleted files and they are in the Recycle Bin and then you empty the Recycle Bin the files may not be gone forever. Similarly, if you format a disk you can unformat it!



Unfortunately, the programs to perform these tasks are not free. You can get demo's and test them. Use your favorite search engine and you will find many of these utilities on the Internet.

2. Hard drive failure: It is not uncommon that when a hard drive dies, they don't last forever, people have not backed up for some time. In my experience, if SpinRite won't get the data, nothing will www.grc.com
3. Erasing a drive: It may sound easy to erase a drive before discarding it but that is not the case. To erase a drive so that data cannot be recovered you may want to use a commercial utility. The old DOS command FDISK used three time, once with the /MBR switch does a very good job.