

Why to Look for Disc Spanning when Choosing your Home/Office Backup Software

 <http://www.softwaretalks.com/disc-spanning/>

Fifteen years ago, increasing numbers of people had computers, but their important data consisted of small documents and perhaps a few basic programs. To backup all they needed was several blank floppy discs and a compression utility. Even a "power user" might find themselves with two megabytes of data to preserve.

As we collect more and more important data, our backup needs are growing. Like in the past, we still have easily compressible documents, but bulky multimedia files as well, like videos, graphics and music. Doubtless this kind of data needs protection – the first pictures or a home video of a newborn baby might exist only as binary code on a hard drive. If your hard drive fails and there's no backup – unlike with traditional film – those digital memories could be lost forever. Nowadays it's common to find full system backups of hundreds of thousands files, ranging between 30 and 120 gigabytes (GB). The problem is where to store this data.

There are a number of **media types** available to most computer users for their backup purposes. Many businesses use magneto-optical or large-capacity tape drives for their daily and weekly backups. With very high capacities, these drives are technically impressive, but the media is usually very expensive. The common backup media for home and office includes CD/DVD discs, dedicated internal drives and external hard drives that exist in capacities over one terabyte (1TB) with fast Firewire 800 and USB 2.0 interfaces. Companies like Iomega found little home market success with smaller drives such as the Jaz (1-2GB) and Rev (35GB) series.

Where **cost** is a priority, a better option for home and small business users is often **disc spanning**, where cheap blank media can be used to the same effect as a tape or a dedicated drive. The benefits in cost of disc spanning are easily measurable. For a 20GB backup set the cost per gigabyte (CPG) will be as cheap as 33c for a DVD-RW disc, compared with up to \$6 per gigabyte for an external hard drive of comparable size. Even for a larger backup of 250GB the optimal cost per gigabyte for external hard drive will be around 80 cents, still twice more than for a DVD-RW disc. A large internal drive can have a similar cost to a DVD-RW disc, but unless you make enough backup sets to fill it, your excess disk space is effectively wasted. In this sense, disc spanning is an attractive and economical option.

Cost per Gigabyte for different types of media.

Backup size, GB	CD-RW	DVD-RW	Internal Drive	External Drive	Iomega REV drive
0,7 gb	0,7\$	1,50\$	85\$	120\$	50\$
4,5 gb	0,7\$	0,33\$	19\$	26,6\$	11\$
20 gb	0,7\$	0,33\$	4,25\$	6\$	2,5\$
80 gb	0,7\$	0,33\$	1,06\$	1,6\$	1,9\$
160 gb	0,7\$	0,33\$	0,81\$	1,1\$	1,6\$
250 gb	0,7\$	0,33\$	0,58\$	0,8\$	1,6\$
500 gb	0,7\$	0,33\$	0,75\$	1,08\$	1,5\$

Based on BestBuy.com and Iomega.com prices from 20.12.2005

This table summarizes the cost per gigabyte for different types of storage media and various backup sets.

Moreover, disc spanning is **simple**. All you need is to choose the files, obtain some blank discs, and a good backup program will inform you of the total size, and how many media units are required for backup. Since a CD/DVD writing drive became a part of a basic PC configuration, you don't need to fiddle around switching external devices, adding hard discs, installing drivers and playing other "hardware games". The ability to store your backups on discs offsite is also a major advantage.

Not only is disc spanning a cheap, simple and flexible backup method, but it is also one of the most **reliable** backup forms today. Modern optical storage media has a shelf life of at least 30 years and some manufacturers even offer 100 year guarantees. Compared to an average lifespan of 5-7 years for hard drives and up to 20 years for a magnetic tape, optical discs are very long-lived. Disc spanning makes it possible that our backups will outlive ourselves.

DATA BACKUP:



Keep your backups small and secure

Backup to CD-RW, DVD, FTP or LAN with scheduler, ZIP compression and 128-bit encryption.

Finally, this backup method continues to gain popularity as technology develops. Next-generation forms of blue-laser discs using organic dyes, such as the Sony Blu-ray format (between 23GB and 54GB) and Toshiba's HD-DVD, will further reduce the cost of removable media, meaning that inexpensive and simple backups are within the reach of everyone.