

Do Burned CDs Have a Short Life Span?

Optical discs may not be your best bet for storing digital media long term, expert says.

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Opinions vary on how to preserve data on digital storage media, such as optical CDs and DVDs. Kurt Gerecke, a physicist and storage expert at IBM Deutschland, has his own view: If you want to avoid having to burn new CDs every few years, use magnetic tapes to store all your pictures, videos and songs for a lifetime.

"Unlike pressed original CDs, burned CDs have a relatively short life span of between two to five years, depending on the quality of the CD," Gerecke says. "There are a few things you can do to extend the life of a burned CD, like keeping the disc in a cool, dark space, but not a whole lot more." The problem is material degradation. Optical discs commonly used for burning, such as CD-R and CD-RW, have a recording surface consisting of a layer of dye that can be modified by heat to store data. The degradation process can result in the data "shifting" on the surface and thus becoming unreadable to the laser beam.

"Many of the cheap burnable CDs available at discount stores have a life span of around two years," Gerecke says. "Some of the better-quality discs offer a longer life span, of a maximum of five years." Distinguishing high-quality burnable CDs from low-quality discs is difficult, he says, because few vendors use life span as a selling point.

Similar Limitations

Hard-drive disks also have their limitations, according to Gerecke. The problem with hard drives, he says, is not so much the disk itself as it is the disk bearing, which has a positioning function similar to a ball bearing. "If the hard drive uses an inexpensive disk bearing, that bearing will wear out faster than a more expensive one," he says. His recommendation: a hard-drive disk with 7200 revolutions per minute.

To overcome the preservation limitations of burnable CDs, Gerecke suggests using magnetic tapes, which, he claims, can have a life span of 30 years to 100 years, depending on their quality. "Even if magnetic tapes are also subject to degradation, they're still the superior storage media," he says. But he's quick to point out that no storage medium lasts forever and, consequently, consumers and business alike need to have a migration plan to new storage technologies.

"Companies, in particular, need to be constantly looking at new storage technologies and have an archiving strategy that allows them to automatically migrate to new technologies," he says. "Otherwise, they're going to wind up in a dead-end. And for those sitting on terabytes of crucial data, that could be a colossal problem."

Digital Preservation Suggestions

<http://www.case.edu/its/archives/Records/digipres.htm#11>