

**October 16, 2006 ([Computerworld](#)) -- ... the Internet to keep it secure and accessible.**

When you want to store important data for safekeeping, the natural inclination is to make a copy of the file and put it on a separate disk or tape. If it's vital information, you might even encrypt the file and physically lock up the media. How 20th century of you.

According to Chris Gladwin, CEO of Cleversafe LLC in Chicago, even encrypted files are less secure when they're kept in one place. As many news stories have made clear, companies lose backup tapes, disk packs and even entire servers, Gladwin says. He adds that people who make multiple copies of precious files often suffer synchronization problems in determining which version is the correct one.



Protect your files by cutting them into pieces, says GLADWIN.

Gladwin, who is also entrepreneur in residence at the Illinois Institute of Technology, suggests breaking data into pieces (11, to be mathematically precise) and housing the fragments around the Internet. His company oversees the Cleversafe Dispersed Storage open-source project, which has developed software that uses linear algebra to calculate how to carve up and reassemble files even if the Cleversafe client can find only six of the 11 segments. Each piece of a file is useless on its own to a data thief, Gladwin says. Plus, the software encrypts all of the data. He says the odds are astronomical that more than five of the 11 storage servers at separate Web hosting sites will fail at the same time. In fact, he claims an uptime percentage extending to 12 nines — which amounts to about an hour of downtime every million years. Sometime next year, expect to see commercial services from Cleversafe and competing companies, Gladwin says. The Cleversafe software works only with Windows and Linux for now, but Macintosh and Unix ports should be ready in 2007.