

## Optical WORMs Into Enterprise

Thanks to new technology and compliance regulations, optical storage vendors are looking to WORM their way into the enterprise, despite numerous challenges.

Let's take it from the top. Optical storage, which uses light to record and read data, has historically been used by organizations that need a method of preserving information for long periods of time. The chief advantage of optical storage over other techniques has been its WORM (write once / read many) capabilities. As an archive technology, optical storage has faster access times than tape and is cheaper than magnetic disk.

Now that there's simply more data to store, optical storage is enjoying an uptick. [IDC](#) forecasts that approximately 30,000 UDO and PDD drives will ship this year, rising to just over 40,000 by 2007.

Within the last few weeks, several vendors have rolled out optical storage products based on the emerging Ultra Density Optical (UDO) format. [Plasmon plc](#)'s UDO and [Sony Corp.](#)'s (NYSE: [SNE](#) - [message board](#)) Professional Disc for Data (PDD) formats give optical even more of a boost, by using blue laser technology to improve capacity and lower the cost of magneto optical (MO) drives.

Thanks to the sharper focus of the blue laser that reads and writes UDO and PDD drives, those drives store much more capacity than older optical technology. UDO disks hold 30 Gbytes, and PDD disks store 23.3 Gbytes. [MO](#), which uses a red laser, maxes out at 9.1 Gbytes per disk.

Since mid-May, Plasmon rolled out two midrange optical UDO libraries and an UDO appliance for healthcare applications; [FileNet Corp.](#) (Nasdaq: [FILE](#) - [message board](#)) and [KOM Networks Inc.](#) announced their software supports UDO; and [StorageQuest Inc.](#) brought out an appliance that supports UDO and DVD optical libraries. (See [Plasmon Extends G-Series](#), [FileNet Intros P8 ASAR](#), [KOM Supports Plasmon's UDO](#), and [StorageQuest Demos Net Archiving](#).)

An even more advanced technology -- holographic optical -- is also on its way, pioneered by [InPhase Technologies Inc.](#), [Aprilis Inc.](#), and Japanese-based [Optware](#) (see [Compliance Hoists Holograph Hopes](#)). Holographic disks hold 200 Gbytes of data. [HO](#) is more than a year away from commercial availability and will likely show up first to store high-definition TV images for broadcast companies.

All these developments signal a surge in optical storage, particularly in industries such as healthcare and financial services that have heavier-than-ever data retention requirements due to new regulations.

There is a downside. Despite recent advances, optical isn't a dominant archive medium. Tape and magnetic disk drives also feature WORM capabilities now, and content addressed storage ([CAS](#)) systems such as [EMC Corp.](#)'s (NYSE: [EMC](#) - [message board](#)) Centera, based on low-cost disk, are making inroads in compliance-heavy organizations.

"Optical is finding new customers and new applications, but it still faces the same old struggles," IDC analyst Wolfgang Schlichting says. "Tape is more cost effective, and now low-cost disk is becoming a strong competitor as well." Several vendors see optical storage as a supplement to CAS or other disk-based archiving systems.

Another challenge is that not all optical storage is created equal. Industry sources agree Plasmon's UDO is running well ahead of Sony's PDD as far as blue laser optical formats. Plasmon got its drives out first, and insiders say it's done a better job of marketing them than Sony. Plasmon has an OEM deal with [Hewlett-Packard Co.](#) (NYSE: [HPQ](#) - [message board](#)), and it anticipates an OEM deal with [IBM Corp.](#) (NYSE: [IBM](#) - [message board](#)). (See [HP Expands Tiered Storage](#).)

"There's a transition from MO, and it's clearly going more to UDO," says an executive of a company that partners with Plasmon and Sony. "Sony hasn't made a big enough impact to make anybody take notice."

More competition is in the works, too. HP and Verbatim -- a division of [Mitsubishi Corp.](#) -- are also looking to ride the UDO train. HP sells optical jukeboxes through its OEM deal with Plasmon, and Verbatim sells UDO WORM disks for HP and Plasmon drives and jukeboxes.

— Dave Raffo, Senior Editor, [Byte and Switch](#)