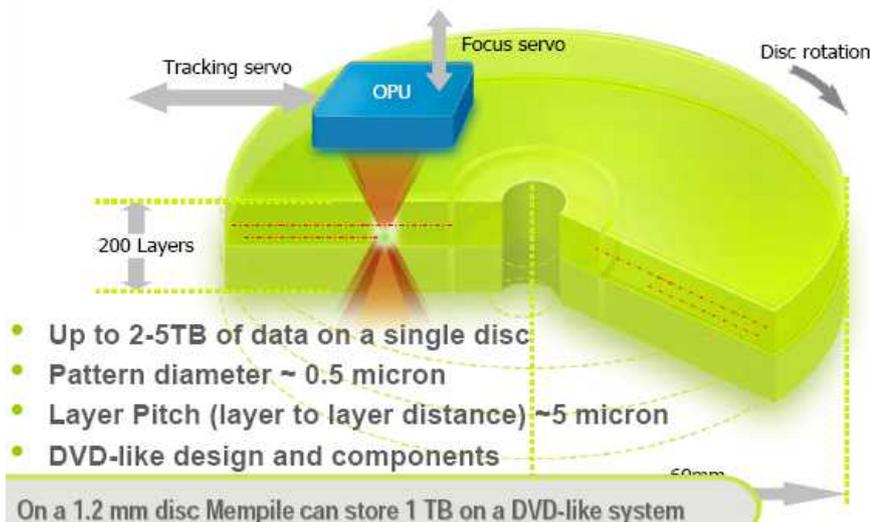


500GB TeraDisc DVD

Written by Administrator
13 February 2008

Schematic Two-Photon System



A new study published by Coughlin Associates says consumer data storage needs will quickly outpace the max capacity of current Blu-Ray and HD-DVD storage solutions by 2010.

Mempile hopes its TeraDisc™ technology can step in: their format can store one Terabyte of data on a single DVD-sized optical disc and has a roadmap up to 5TB. Their discs are made of a Plexiglas-like material and 0.6 millimeters thick. Half a terabyte (500GB) holds about 20 high-def movies.

The Coughlin study says by 2013 the average household will accumulate a combined total of nearly 9000 Gigabytes (GB) of commercial and personal data.

"The current crop of blue-laser media is being pushed to its limits and will not be able to support the archival storage demands consumers will expect in the very near future," says Dr. Beth Erez, Executive VP of Mempile. She argues existing optical media, including Blu-Ray and HD-DVD, record data through light-reflective, semi-transparent layers. So the capacity is limited to around eight layers of recordable material (approximately 200GB) because as light passes through these layers it becomes diminished and distorted by the reflections of other layers, making accurate data reading and recording impossible.

500GB TeraDisc DVD

Written by Administrator
13 February 2008

Mempile's two-photon technology overcomes this limitation by enabling a TeraDisc to remain completely transparent -- both before and after recording. This allows the laser to remain in focus even when reading and writing through previously recorded layers. Using a red laser, a TeraDisc can record and read 200 virtual layers five microns, each layer capable of storing approximately 5GB which can be accessed randomly (yielding 1TB).

TeraDiscs are made from an inexpensive monolithic plastic similar to Plexiglas™, and its drive components are comparable to today's optical drives. The TeraDisc could offer consumers a low cost, high capacity archival storage solution, with plug and play functionality and a data lifetime of more than 50 years.

In early 2007, Mempile held a live technology demonstration for top Japanese electronics manufacturers. Towards the end of 2008, the industry can expect to see a demo of a prototype of the TeraDisc technology.

Go [Terabyte on TeraDisc](#)