Panasonic and Facebook develop optical disc-based data archive system for data centers

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Panasonic Corporation today announced that it has developed Freeze-Ray, an optical disc-based data archive system in collaboration with Facebook. By collaborating with Facebook, Panasonic was able to design Freeze-Ray to meet the growing demand for more efficient and sustainable ways to store and access cold data—infrequently or never accessed data stored for the long term—in the world's data centers.

The Freeze-Ray solution reduces data center operating costs and energy use with strong data integrity. This data archiving solution provides optimal cold storage for protecting data integrity and reducing costs in data centers thanks to the special characteristics of optical discs, including their longevity, immutability, backward compatibility, low power consumption and tolerance to environmental changes. Both companies see the Freeze-Ray data archiving solution, incorporating hundreds of optical discs, as a viable solution for data centers to enable the industry to enjoy the benefits of the solution with greater economies of scale.

Panasonic's main contribution to the effort was its high-density optical technology, key devices (optical discs, drives and related robotics) and library software to control the system easily in the data center. Facebook collaborated by providing its unmatched expertise in designing, deploying, managing and servicing storage systems in data centers. In addition, Facebook provided extensive technical and real-world data center feedback at every stage of the development. Both companies have been working on two generations of the Freeze-Ray solution. Facebook

is deploying the first-generation 100 GB Blu-ray Disc-based archive system into its data centers now, and expects deployment of the second-generation 300GB Archival Disc-based archive system later in 2016.

Learn more about the Panasonic-Facebook collaboration on the freeze-way website.

"As Facebook continues to grow, we needed to address some of our fundamental engineering challenges with an efficient, low-cost and sustainable solution that matches our speed and exabyte-scale of data," said Jason Taylor, PhD, VP of Infrastructure, Facebook. "We're seeing exponential growth in the number of photos and videos being uploaded to Facebook, and the work we've done with Panasonic is exciting because optical storage introduces a medium that is immutable, which helps ensure that people have long-term access to their digital memories."

"Panasonic is delighted by the opportunity to collaborate with Facebook, with its strong position and influence in the data storage market and expertise necessary to develop the optical data archiver in validation with actual data center environments," said Yasuji Enokido, President of Panasonic's AVC Networks Company. "With this data archiver, we expect the industry will be able to enjoy the benefits of the optical technology that Panasonic has been refining over the past 30 years both in the consumer market and B2B applications."

Both companies plan to continue to collaborate in the study of and eventual development of next- generation systems utilizing higher densities of 500 GB-and one-terabyte Archival Discs to realize a multi petabyte cold storage archive system that will provide even greater benefits to the data center industry.

Provided by Panasonic