



STORAGE VISIONS® 2010

AN ENTERTAINMENT STORAGE ALLIANCE™ EVENT



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TITLE

Making Hard Drives Work Smarter

ABSTRACT

The latest cable and satellite DVR-capable set-top boxes (STBs) can record TV programs, download and stream digital media from the Internet and make entertainment content available throughout the home. Recording and playing multiple streams simultaneously, however, places huge demands on the hard disk drive (HDD) and on the conventional PC file systems used by most DVRs.

Many widely used file systems, such as ext3 and FAT32, have no inherent ability to distinguish between a streaming application, such as playing a movie or viewing a photo. In streaming applications, the video frames or audio data must be delivered to the display, HDD or speakers in a predictable, uninterrupted way. So when conventional file systems are used in heavily loaded streaming environments, at some point, the deadlines for time-critical streaming tasks cannot be consistently met. As a consequence, frames are dropped, drives are overworked, operating temperatures rise, and quality of service (QoS) begins to diminish. Over time, as these file systems age, heavily fragmented disks can lead to chronic performance degradation and sometimes hard failure. Many of the quality and reliability problems normally attributed to HDDs can be mitigated by a different approach to streaming file management.

John Osterhout of Hitachi GST will bring a unique perspective to consumer electronics storage, and talk about new technologies that are on the horizon for the DVR/STB market to make disk drives work smarter, and handle multiple HD streams while maximizing HDD performance.

BIOGRAPHY

John D. Osterhout is the director of marketing of Consumer Electronics at Hitachi Global Storage Technologies. Before joining Hitachi Global Storage Technologies in January 2003, John Osterhout led the worldwide marketing effort behind IBM's revolutionary Microdrive products for more than two years. He was instrumental in establishing IBM's market leadership in high capacity storage for handheld digital products.

Prior to joining IBM in 1998, John held various marketing management and business line management positions at Eastman Kodak Company in Rochester, New York. He has a broad marketing background in consumer and high-tech products, and has been instrumental in bringing numerous innovative products to market. His industry knowledge and experience spans several key sectors: photography, consumer electronics and information technology.

John has served on the board of directors of several industry associations, including the Consumer Electronics Manufacturer's Association (CEMA), the Interactive Multimedia Association (IMA) and the CompactFlash Association (CFA).

John holds a B.A. in Economics and an MBA from the University of Rochester.