

# 2007 Creative STORAGE<sup>SM</sup> CONFERENCE

AN ENTERTAINMENT STORAGE ALLIANCE<sup>SM</sup> EVENT



## 11:15 AM Session B. Supporting Digital Storage for Content Distribution

This session explores the support and service requirements for digital storage used in content creation and distribution. The session explores logistical requirements for data storage for optical, hard disk and tape as well as storage systems used for the entertainment market.

Moderator: Guy Finley, Associate Executive Director, IRMA, Content Delivery & Storage Association

Bob Saffari, LSI Logic

Mark Pastor, Seagate Technology

Don Ritzman, WhiteNoise Systems

Andy Mills, Ciprico

Q&A Panelist: John Christopher, DriveSavers Data Recovery



**Mark Pastor, Senior Director Market Development, Seagate Research/Trusted Computing Group**

### Trusted Storage

Storage systems, such as disk drives, and other computing-system peripherals, are critical components of a security, privacy, and trust configuration of a computing platform. In fact, data spends most of its productive life in storage. This session provides a framework with which to understand why and how peripheral devices should be secured as independent roots of trust. The framework provides a generic security model for all peripheral devices, and shows how peripherals can be configured as roots of trust, each playing a complementary role in establishing the overall security and privacy goals of platform-based and networked computing.

The session begins with security measures for storage systems that exist today and their relative effectiveness. It will then go into where and how to secure access control of the storage system, discussing in detail what needs to be controlled and how to grant control in a secure manner. The Trusted Computing Group's Trusted Storage Use Cases will be reviewed in depth, highlighting the technical requirements being solved by the formal specifications. Relationships and cooperation with other industry storage standards (eg, SCSI and ATA, SNIA) will be discussed, and the TCG's specification for secure and trusted storage will be outlined (anticipated publication: first quarter 2007; the presentation will include an overview of the Trusted Storage Architecture detailed in the Specification).

Representative use cases for trusted storage include:

- Enrollment and Connection: trusted relationship – Storage Device (SD) + host
- Protected Storage: for storing sensitive data
- Locking and Encryption: mating SD and host; encrypting stored data at rest
- Logging: for forensic purposes
- Cryptographic Services: supporting a variety of security services • Assigning Storage Device Feature Sets to Hosts: trusted/exclusive use
- Secure Download of Firmware: trusting firmware upgrades

All major hard drive manufacturers are participating in the development of these specifications, as well as flash, optical, and tape memory representatives. The result will be that storage systems, where sensitive data spends most of its life time, will be a source of trust for multi-component trusted platforms of the future.

Having Trusted Storage with its own secure application-programming environment will create a dramatic shift in programming paradigms, which have been traditionally host and operating system centric. Now, a root of trust can reside where data spends most of its productive life: in storage.

Mark Pastor is Senior Director Market Development in Seagate's New Business Initiatives Unit. In this role, Mark is responsible for defining and developing markets and business opportunities with current focus on digital media and entertainment content markets.

Since joining Seagate in 1997, Mark has led the business, planning, and market development efforts for several key initiatives including the industry development and launch of LTO tape technology, Seagate's entrance into the handheld hard drive market, and the development of Seagate's security and content business initiative. Prior to his current role, Mark led the Strategic Market Development Team which managed market development, business planning, and the portfolio management process for new business concepts. Mark joined Seagate as Director, Strategic Planning for the removable storage division.

Prior to joining Seagate Mark was a business unit general manager at a leading manufacturer of commercial printers and imaging products. Before that Mark held several management positions in sales, marketing, R&D, and operations.

Mark holds a BS Engineering from the University of California at Los Angeles.