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TITLE

SATA 6Gbs: Meeting the Need for Speed Today and Tomorrow

ABSTRACT

SATA-IO will soon release the third generation Serial ATA specification that doubles the maximum transfer speed from three to six gigabits per second (Gb/s), enabling end-users to move large amounts of data at even faster rates.

Data transfer rates become crucial as businesses and consumers amass ever-increasing amounts of high-res photos, videos, music, and other multimedia files. In addition to doubling data transfer speeds, SATA 6Gb/s also maintains backward compatibility with earlier SATA implementations. By keeping the existing SATA connector form factor, SATA 6Gb/s preserves the same cost-conscious design while minimizing changes to existing implementations and infrastructures. In addition to ushering in SATA 6Gb/s technology, the SATA Revision 3.0 Specification also will feature advances for data streaming and better power management.

SATA 6Gb/s enhances the appeal of the high-performance, low-cost interface, solidifying its ubiquity as a long-term storage interface. Since its introduction in 2001, SATA has become the primary storage interface with more than 650 million SATA hard drives shipped to date. According to John Rydning of IDC, more than three-quarters of new desktop and mobile systems shipped in 2007 were equipped with SATA hard drives. SATA technology has been adopted by other devices, including optical disk drives, solid state drives, and is moving into multi-user storage applications.

To bring the advantages of SATA technology "outside-the-box," the Serial ATA International Organization (SATA-IO) developed a specification for the External SATA (eSATA) interface. eSATA is an extroverted version of the SATA interface that uses slightly different connectors designed specifically to withstand constant wear and tear and static electricity.

Applications for eSATA include external direct attached storage for notebooks, desktop, consumer electronics and entry servers, as well as support for multiple streams of content such as parallel write and read on a digital video recorder.

Benefits of eSATA include: * Up to six times faster than existing external storage solutions * High performance and cost-effective expansion storage * Robust and user-friendly external connection * Shielded cables and connectors up to two meters in length * Port multiplication to attach multiple disk drives on a single eSATA cable

The external interface is catching on. "eSATA penetration in retail PCs is about 15%, and there is a similar penetration into external storage boxes," reports Thomas Coughlin of Coughlin Associates. "Channel motherboard penetration (an indication of future developments) has eSATA penetration as high as 60%. By 2008, retail computer and external box penetration could increase to 25% or more."

Lightning-fast speed is the key advantage that eSATA has over the other interfaces. Using an eSATA interface, end-users can back up their computing systems up to six times faster than existing external storage solutions.

BIOGRAPHY

Conrad started his career in Silicon Valley in the early 80's at Dyan Corp. He worked as an R&D Manager at Dyan and was over new product design and development of hard drive and floppy media alignment machines. Then he went into Product Management over Retail and O.E.M. products lines for GTL Ltd. / ComputerLand, Samsung and Everex. From retail/O.E.M. Product Management, Conrad went on to semiconductors, working for VLSI Technology in Strategic Marketing and managing their investment into new peripheral technologies (audio and graphics). From there he went to Conexant Systems Inc. (formerly Rockwell), and was the Director of Technology Planning in their PC/Peripheral products. Then for a few years, he ran Maxwell Consulting Associates, a firm that helped companies with their Technology Planning, Business Planning and Business Development, IP Licensing, Management and Technical Marketing. Currently he is the Senior Product Line Manager for the SteelVine™ Storage Processor Products of Silicon Image, Inc.

Conrad has an Electrical Engineering Degree, a B. S. from CSU, East Bay, and an MBA from ASU. He has been published in a technology textbook, magazines, technical journals, conferences, helped write multiple industry standards and has patents and patents pending. He was the Chairman of the Interactive Audio SIG -Three Dimensional Working Group, Member of the Board of Directors for the HomePNA and ACR SIG, and a voting member of the Bluetooth PAN working group, WECA/WiFi WG, 802.11 WGs, 802.15.4WGs, DVD Forum, USB WG, PCIe, T13 and VESA work groups. He currently serves as Chairman of the SATA-IO Marketing Work Group.