News Release

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SERIAL ATA II WORKING GROUP NAILS KEY TECHNICAL MILESTONES

Specification Announcements and Product Demonstrations
Highlight Industry-Wide Adoption of Advanced Storage Connection

INTEL DEVELOPER FORUM, San Jose, Calif. Sept. 17, 2003 – The Serial ATA II Working Group, an independent group of companies leading the definition, design and adoption of Serial ATA silicon, cable/connector systems, storage appliances and storage systems, today announced three Serial ATA II enhancement specification milestones designed to speed the development and deployment of Serial ATA products in desktop, mobile, server, and networked storage market segments.

The Digital, Port Multiplier and Port Selector specifications meet key storage industry requirements and assure the industry that Serial ATA will continue its rapid rate of adoption.

"The focus of our group is on providing the engineering and technological ingredients required for the development and adoption of Serial ATA products," said Knut Grimsrud, Serial ATA II Working Group chairman and Intel senior principal engineer. "We have executed on our committed specification timeline to deliver foundation specifications that enable products with new features and capabilities to be developed and marketed. Intel Developer Forum is the ideal venue to update the industry on our progress."

Serial ATA 1.0 products are shipping in volume, and SATA is enjoying an incredible transition rate providing a platform for an aggressive rate of adoption among Serial ATA product segments. Serial ATA II builds on the solid Serial ATA foundation by providing further capabilities, including next-generation signaling speeds, that deliver the next steps in the promised technology roadmap and provide additional value to Serial ATA storage solutions.

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Digital 1.1

As announced today by the Serial ATA Working Group, the Serial ATA Digital 1.1 specification has matured to offer the following enhancements:

- Asynchronous signal recovery providing a recovery from a loss of signal or establishing communication after hot plug.
- Asynchronous notification for ATAPI devices relieving hosts from having to continuously poll for changes in media presence.
- Queuing optimization allowing additional commands to be issued to devices amid long data transfers.
- Device configuration overlay offering OEMs the ability to disable non-qualified SATA-specific features in hard disk drives.
- Enclosure slot to device correspondence for SAF-TE and SES management protocols.
- I2C enclosure processor address convention speeding initialization by keeping hosts from having to search the I2C address space to find an enclosure processor.

Port Multiplier 1.1

The Serial ATA II Port Multiplier 1.0 specification defines the means for attaching one SATA host connection to several devices. The Port Multiplier establishes a single host connection to a large number of devices thereby reducing the cabling burden and improving airflow in SATA storage subsystems. The Port Multiplier 1.1 specification adds the asynchronous notification scheme from the Digital 1.1 specification allowing Port Multipliers to notify the host if a device has been plugged or unplugged from a port. The upgraded specification eliminates the process of host polling to determine where devices have been added or removed.

Port Selector 1.0

The third specification announced at IDF is the Port Selector spec allowing two different host ports to connect to the same device in order to create a redundant path to that device. Port Selector 1.0 is an essential building block for RAID, NAS and disk-to-disk back-up manufacturers developing fully-redundant storage topologies. Additional capabilities include:

- In-band or protocol-based control avoiding additional signals from being routed between initiator and target.
- Side-band signaling providing a simple interface to third-party controls (e.g. enclosure services processor).

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Serial ATA Demonstrations

Serial ATA Working Group members have prepared the following demonstrations at IDF to illustrate the adoption of Serial ATA in various storage applications:

- SATA Low Cost Bulk Storage for near-line and fixed content application demonstrated by 3ware, Maxtor Corporation and Seagate, Serial ATA Working Group Booth 438.
- SATA Port Multiplier with multitasking controller demonstrated by Silicon Image, Intel and Maxtor, Intel Pavilion and Silicon Image Booth 436.
- Serial ATA system from JMR with Fujitsu 2.5-inch SATA hard disk drives, Serial ATA Working Group Booth 438.
- External SATA storage demonstrated by Maxtor, Silicon Image and Comax, Serial ATA Working Group Booth 438 and Silicon Image Booth 436.
- 4:16 SATA port multiplier demonstrated by Vitesse Semiconductor and CI Design, Vitesse Booth 315.
- SATA storage integrated into a FC SAN demonstrated and managed by Softek software, Vitesse Booth 315.
- "Data Center-in-a-Box" modular SATA/iSCSI storage demonstrated by Proximity Data, Vitesse Booth 315.
- 4:16 SATA Port Multiplier demonstrated by Vitesse Semiconductor and JMR, Booth 315.
- Native Command Queuing demonstrated by Seagate Technology and Silicon Image, Serial ATA Working Group Booth 438.

About the Serial ATA Working Group

The Serial ATA Working Group comprises the Serial ATA 1.0 Working Group and the Serial ATA II Working Group. The former organization was established in February 2000 to specify Serial ATA for desktop applications. Membership is at 153 member companies, and includes promoter group companies Dell, Intel Corporation, Maxtor, Seagate and Vitesse. The Serial ATA II Working Group was formed in February 2002 to further address the needs of servers and networked storage market segments and specify next generation transfer speeds. Visit www.serialata.org for more information.

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