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PENTUM GROUP INC. DEMONSTRATES WORLD'S FIRST WIDE AREA NETWORK OPERATING AT 40 GIGABITS PER SECOND

RENO, Nevada, Supercomputing 2007, (November 12, 2007)–Pentum Group Inc (PGI), a leading-edge developer in high-performance computing and networking today announced Swift40e, the world's fastest single-stream wide area network (WAN) interface card. Capable of downloading an entire HD DVD or Blu-ray™ DVD in just 10 seconds, the new Swift40e interface is designed to stream content across a WAN at a blistering rate of 40 Gigabits per second (Gbps).

The Swift40e has been developed through a collaborative effort involving PGI, Intel Corporation, SGI (NASDAQ: SGIC) and the US Naval Research Laboratory (NRL). The project is being showcased at the Supercomputing 2007 conference with Swift40e enabled SGI® Altix® server systems located in the Intel (#820) and SGI (#502) booths.

Delivering single-stream WAN bandwidth that is four times faster than that found in today's fastest WAN networks, Swift40e provides unprecedented access to remote data storage, distributed sensor analysis, and wide-area data analysis. The interface is designed to work with OC-768c IP Packet over SONET.

"Data volumes are growing rapidly as scientific and engineering applications provide greater detail and fidelity in today's models and simulations, and as high-resolution digital content puts enormous demands on digital content management systems," said Dr. John Brown, CEO of Pentum Group, Inc. "Increasingly, the bottleneck to productivity is the network. The Swift40e interface enables organizations to overcome that bottleneck, allowing them to speed data transfer across the WAN at unprecedented speeds."

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NRL initiated the Swift40e project as part of its ongoing efforts in the area of enterprise-wide, distributed net-centric operations. The Swift40e furthers NRL's ability to support the high-speed and high-volume requirements of next-generation integrated theater-wide weapons and sensors systems.

“One of our missions is to develop technologies that will enable the next generation of net-centricity for the warfighter,” said Dr. Henry Dardy, chief scientist for advanced computing at NRL's Center for Computational Science. “Our global net-centric information infrastructure is undergoing significant change as data increases faster than Moore's Law. IP convergence has allowed the warfighter and the analyst to build a virtual enterprise. Swift40e technology ensures that the enterprise communicates and shares data effectively in near realtime.”

According to Dardy, a high-speed, high-volume WAN can help meet the varied requirements of both the DOD and supercomputing communities by:

- Providing real-time access to large amounts of shared data to enable remote computing, remote visualization and remote analysis.
- Supporting secure distributed multi-group or multi-agency collaboration.
- Allowing better continuity of operations in the case of local or national emergencies or outages.

“Intel takes keen interest in the complete platform challenge of making Intel architecture-based HPC solutions with both performance and utility,” said Dr. Stephen R. Wheat, Intel’s director for HPC. “The combined efforts of Pentum, NRL, SGI and Intel have given all of us a baseline performance level for WAN bandwidth in industry-standard HPC platforms. With Swift40e, we have another key ingredient for the continuation of significant growth in the application of HPC technology to more areas of government and industry where maintaining balance in technology is key to enhancing both innovation and production.”

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“Through its 25-year history of pioneering interactive graphics and high-bandwidth servers and storage systems, SGI has developed considerable expertise in data-intensive applications. These include the movement, ingest and processing of massive data streams or volumes that would challenge typical networks and servers,” said Dr. Eng Lim Goh, chief technology officer at SGI, one of the initial collaborators on the Swift40e project. “SGI is pleased to be involved with NRL, Intel and Pentum in this leading-edge program. We are excited that the SGI Altix server can host a full OC-768c stream via this attached Swift40e interface. Moreover, the capability of the Altix server to scale its processors, memory and I/O independently should allow it to host multiple such streams. In addition to applications for government, defense and intelligence operations, this solution can also be employed in digital content management and the Grid.”

“The Swift40e provides a unique architecture for stream data processing,” said Dr. Bodo Parady, CTO of Pentum Group. “The interface features a unique ability to support high-bandwidth data preprocessing seamlessly tied with powerful host systems, such as SGI Altix servers.”

The Swift40e can be configured with up to two PCI Express® x16 interface cards to support full duplex 40Gb per second optical streaming transmission, and it supports up to 16GB of onboard memory. The Swift40e also supports special-purpose data grooming applications and can be configured to provide several Tera Ops per seconds of processing power for network, security and signal and image processing applications.

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