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Georgia Tech Drives Cell Broadband Engine Processor Research

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The revolutionary Cell/B.E. processor "supercharges" compute-intensive applications for computers and handhelds, virtual-reality, wireless downloads, real-time video chat, interactive TV shows and other "image-hungry" computing environments.

The College of Computing at Georgia Tech will host the Georgia Tech Cell Broadband Engine (Cell/B.E.) Processor Workshop from June 18-19, 2007, focusing on applications for the Cell/B.E. processor, including gaming, virtual reality, home entertainment, tools and programmability and high performance scientific and technical computing.

The two-day workshop is sponsored by Sony Computer Entertainment Inc. (SCEI), Toshiba and IBM and will be held at the Klaus Advanced Computing Building on Georgia Tech's campus. Keynote speakers at the event include Bijan Davari, IBM Fellow and Vice President, Next Generation Computing Systems and Technology; Dominic Mallinson, Vice President, US Research and Development, SCEI and Yoshio Masubuchi, General Manager, Broadband System LSI Development Center, Toshiba's semiconductor company. More information on the workshop may be found at http://sti.cc.gatech.edu/.

"We are very excited to be able to support the growth of this breakthrough technology by bringing some of the top minds in the industry together at Georgia Tech to stimulate discussion about the future of Cell/B.E. technology," said David A. Bader, Associate Professor and Executive Director of High-Performance Computing in the College of Computing at Georgia Tech. "The Cell/B.E. processor represents the future of computing using heterogeneous multi-core processors, and we are proud to help drive the continued advancement of computationally-intensive applications that will directly impact the global growth of our industry and evolution of our society."

The revolutionary Cell/B.E. processor is a breakthrough design featuring a central processing core, based on IBM's industry leading Power Architecture technology, and eight synergistic processors. Cell/B.E. "supercharges" compute-intensive applications, offering fast performance for computer entertainment and handhelds, virtual-reality, wireless downloads, real-time video chat, interactive TV shows and other "image-hungry" computing environments. The processor was created through a collaboration of IBM, Sony Corporation, SCEI and Toshiba Corporation (Toshiba).

The College of Computing also announced today that it is one of the first universities to deploy the IBM BladeCenter QS20 Server for production use. The QS20 uses the same ground-breaking Cell/B.E. processor appearing in products such as Sony Computer Entertainment's PLAYSTATION 3 computer entertainment system, and Toshiba's Cell Reference Set, a development tool for Cell/B.E. applications. The Georgia Tech installation includes a cluster of 28 Cell/B.E. processors (14 blades) and supports the operation of Cell-optimized multi-core applications in areas such as digital content creation, gaming and entertainment, security, scientific and technical computing, biomedicine, and finance. Georgia Tech will grant users access on the cluster to test drive the Cell/B.E. processor and support independent software vendors (ISVs) that develop products and tools for the Cell/B.E. processor. The Georgia Tech Cell/B.E. processor installation will use Altair Engineering's PBS Professional job scheduling software that increases the utilization of the IBM Blade Center QS20.

Directed by Bader, the STI Cell Center of Competence at Georgia Tech has a mission to grow the community of Cell/B.E. processor users and developers by performing research and service in support

of the Cell/B.E. processor, and further enable students at the College to grow their skills and experience around Cell/B.E. technology to apply in future career opportunities. The Center will sponsor discussion forums and workshops, provide remote access to Cell/B.E. processor based blade hardware installed at Georgia Tech, create and disseminate software optimized for Cell/B.E. processor based systems, and perform research on the design of Cell/B.E. processor based systems, algorithms, and applications. A collaboration with SCEI, Toshiba and IBM supports the Center's activities and research efforts in support of broadening the Cell/B.E. processor's impact into multiple sectors and industries, including scientific computing, digital content creation, bioinformatics, finance, gaming and entertainment.