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Sony Group, Toshiba and IBM Renew Cell Broadband Engine Center with Georgia Tech

By Jai C.S., TMCnet Contributing Editor

The Georgia Tech College of Computing, which is designated as the first Sony-Toshiba-IBM (STI) Center of Competence, announced that it is renewing the STI Cell Center and has announced a series of new research projects handled at the center to develop applications and productivity tools based on the Cell Broadband Engine (B.E) microprocessor.

The College of Computing at Georgia Tech is well recognized in the research and creation of real-world computing breakthroughs. The STI Cell Center of Competence at Georgia Tech focuses to expand the community of Cell BE users and developers by performing research and service in support of the Cell BE processor. The center further enables students to experience Cell BE technology and apply in future career opportunities.

Georgia Tech also will also host the Second Annual Cell/B.E. Processor Workshop from July 10-11, 2008, focusing on software, tools and applications for the Cell/B.E. processor, including high performance computing applications and programmability tools.

"Today, we are carrying out the vision we always intended - to generate breakthrough innovations using Cell/B.E. technologies working hand-in-hand with researchers at Sony Group, Toshiba and IBM," said David Bader, professor and executive director of High-Performance Computing in the Georgia Tech College of Computing.

Bader added, "We are very encouraged that our initial research results are showing the multi-faceted applicability of this technology."

Through continued applied research is the use of Cell/B.E. technology, researchers will be focusing to arrive at a solution that can better monitor an aircraft's structural safety in commercial and military airplanes.

"IBM has invested in a strategy that applies the use of technology to solve grand challenges with our trusted university partners," said Jai Menon, IBM Fellow, vice president, Technical Strategy and University Relations.

Menon added, "In our collaboration with Georgia Tech, we are working together to better predict airline mechanical failures to make flying in airlines safer for passengers like you and me."

The other joint research projects that are under consideration include a useful signal processing kernel needed for oil and gas exploration and seismic monitoring; data compression, used for file compression or reducing the size of messages sent between computers required in multiple industries; financial services applications for consolidated debt optimization, as well as European and American options pricing; encryption libraries for securing communications for privacy; high-speed multimedia codecs, such as MPEG2 and JPEG2000 encoders and decoders; bioinformatics, such as DNA sequence alignment and comparison; software productivity enhancement tools that involve a cross-platform profiler, performance estimation and tuning

system with IDE type features and single-source automatic translator for generating PPU and SPU codes from a monolithic C/C++ application.

"We anticipate a paradigm shift in computing and our collaboration with the Georgia Tech College of Computing will create innovative applications for Cell/B.E. processors," said Yasu Yokote, general manager, CELL Application Development Center, Sony Corporation.

"The future will see growing demand for multi-core processor applications, and we are delighted that the Center is playing a key role in anticipating and responding to such demand," said Mitsuo Saito, chief fellow, Toshiba Corporation Semiconductor Company.

Jai C.S. is a contributing editor for TMCnet. To read more of Jai's articles, please visit his columnist page.

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