Pushing More Processor Power: Georgia Tech Lands Development Center For New ‘Cell’ Chip Technology

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ATLANTA – The first “Center for Competence” designed to support development and support for the new “Cell” microprocessor will be established at Georgia Tech.

The university’s College of Computing has been selected by industry backers Sony, Toshiba and IBM to help train programmers and seek more support for the Cell Broadband Engine, or Cell microprocessor.

Georgia Tech won the site over more than a dozen other competitors, such as the University of Texas at Austin. The Center will receive more than $300,000 in support from Sony, IBM and Toshiba as well as other grants, according to media reports.

“In many ways, we found them to be much more grounded about focusing on what's needed not 10 years from now but what's needed today and tomorrow,” Hina Shah, an IBM Cell development program director based in Texas, told the Austin American-Statesman. "That made a huge difference."

The new Cell was developed by IBM, Sony and Toshiba and is being used in new products such as the Sony PlayStation 3, which only recently went on sale around the world. The Cell and IBM’s “Power Architecture” includes eight processors that are synergistic and are designed to deliver faster performance for applications such as virtual reality, wireless downloads and multimedia-capable handheld devices.

“The Cell processor... promises to be a new architecture optimized for broadband media and 3D graphics performance, but with uses beyond the game console,” said Microprocessor Report when it named the Cell as its “Best Technology of the Year” award winner for 2004.

The Cell chip followed development of the “Power” chip IBM developed for use in Microsoft and Nintendo game platforms.

Cells are also used in IBM “blade” servers known as QS20. The high-end servers, which IBM is developing along with Mercury Computer Systems, are intended for use by aerospace, defense, medical imaging and other markets.

“The College of Computing at Georgia Tech firmly believes that the Sony-Toshiba-IBM Cell BE processor represents the future of computing using heterogeneous multi-core processors, and we are pleased to work with three leading technology companies in a broad collaboration that will demonstrate the extreme performance of Cell,” said David Bader, the executive director of high-performance computing at Georgia Tech. “By supporting the growth of the industry-changing Cell BE processor technology, the College of Computing at Georgia Tech will drive the continued advancement of computationally-intensive applications that will directly impact the global growth of our industry and the evolution of our society."

Bader will also act as director of the new Center. It will offer discussion forums and workshops, provide remote access to Cell blade hardware at Georgia Tech, as well as create and disseminate software optimized for Cell BE systems. The Center also will conduct Cell-centered research.

“The joint collaboration by IBM, Sony and Toshiba on the Cell processor has led to tremendous advancements in computing applications and innovations,” said Sharon Nunes, vice president of business development and strategic growth initiatives for IBM’s Systems & Technology Group. “We are pleased to be collaborating with the College of Computing at Georgia Tech to enable a team of engineers, professors and students to create breakthrough solutions, share information among various industries and other universities, and further the Cell ecosystem overall.”
For more about the Cell project, see: [www.research.ibm.com/cell/](http://www.research.ibm.com/cell/)

**College of Computing at Georgia Tech:** [www.cc.gatech.edu](http://www.cc.gatech.edu)

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