MIT, IBM team up on first PlayStation 3 course

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MIT's Department of Electrical Engineering and Computer Science and IBM have announced the recent completion of the first course in the United States structured around the capabilities of the Cell Broadband Engine (Cell/B.E.), the microprocessor that powers the new PlayStation 3 computer entertainment system.

During the four-week Independent Activities Period course in January, students not only learned about the new microprocessor, they designed and implemented projects to run directly on PlayStation 3 consoles. The student team with the best project--a 3-D version of the classic pong game--later presented its work and discussed the experience at the Game Developer Conference in March.

The course, which focused around introducing parallel programming to students, was taught by Saman Amarasinghe, a professor in MIT's Department of Electrical Engineering and Computer Science, and Rodric Rabbah of IBM.

"The fact that students--with no background in parallel programming or the Cell Broadband Engine--were able to get their projects done from scratch in just about one month largely goes to show the capability and determination of our students, coupled with the availability of a robust toolchain for Cell development," said Amarasinghe.

Throughout the course, students became familiar with the Cell/B.E. and how its design choices compare to other emerging architectures.

Students also formed small project teams and participated in a course-long project to develop applications to run on the Cell Broadband Engine using the IBM Cell SDK available from IBM developerWorks.

"The Cell Broadband Engine is going to be an underlying architecture that has the potential to be included in a wide range of industry applications and solutions in the future," said Rabbah. "This course was able to break down the details of a highly complex microprocessor and challenge students to see where the performance, power and versatility could be applied outside of gaming. Based on the feedback we received from the students, it was a tremendous success."

A web site hosted by the Computer Architecture Group at MIT posts information on the course, including lectures and recitation plans. It has been visited more than 100,000 times since the completion of the course.

IBM and the Department of Electrical Engineering and Computer Science, with sponsorship from Sony, plan to jointly offer the course again in 2008. More information can be found at cag.csail.mit.edu/ps3/.

IBM is also currently hosting a first-of-its-kind programming contest--the Cell University Challenge--for college and university students in 25 different countries, offering cash prizes and awards for the most innovative applications of the Cell Broadband Engine. All information on eligibility, rules and requirements, and entry applications can be found at www-304.ibm.com/jct09002c/univ … ests/cell/index.html .

Source: MIT

from https://phys.org/news/2007-05-mit-ibm-team-playstation.html