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LOUISIANA STATE UNIVERSITY

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LSU Student Team Breaks Teraflop Barrier at SC10

LSU students Kenny Barron, Alex Chretien, Austin Howick, Jason Kincl, McKendon LaFleur, and Tung Le competed in the Student Cluster Competition at Supercomputing 2010 (SC10) in New Orleans November 15-17. The one computer engineering student and five computer science students comprised one of eight teams that were selected to compete from the 16 teams of world-wide applicants.

The Student Cluster Competition showcased the computational impact of clusters and open source software in problem solving. The teams had to design and build clusters to solve real-world applications without exceeding the dictated power limit. Teams were judged on scientific visualization output and interviews.

The LSU team broke the one Teraflop (Tflop) barrier at the SC10 competition, using 144 cores.

The team's coach, Unix Services Manager Isaac Traxler of LSU's High Performance Computing (HPC) and Center for Computation & Technology, solicited volunteers for the competition at the Association for Computing Machinery student chapter meetings. "The students volunteered to spend one night a week for six months in class as well as many nights on their own learning to apply concepts they had only read about in textbooks," said Traxler. "They learned the concepts of HPC research from the point of system administrator to the domain science perspective."

CCT Director Joel E. Tohline commended the students' dedication. "The students worked very hard to compete in the Student Cluster Competition, and they learned HPC skills that just can't be picked up in a normal classroom. The SC10 competition was an excellent experience for them, and Isaac Traxler is to be commended for his work in getting the team to SC."

IBM, HP, and NVidia have offered to partner with the LSU team for SC11's Student Cluster Challenge.

The eight competing teams for the SC10 Student Cluster Competition were:
• National Tsing Hua University (Hsinchu, Taiwan) � Acer Incorporated, Tatung Company, and National Center for High-Performance Computing (NCHC)
• Nizhni Novgorod State University (Nizhni Novgorod, Russia) � IBM, Microsoft, nVidia, and PGI
• Florida A&M University (Florida, USA) � Atlantic Computer, LLC (HP Partner for Higher Education)
• Louisiana State University (Louisiana, USA) � HP and LATG, Mellanox, PGI, Adaptive Computing
• University of Colorado (Colorado, USA) � Dell, AMD, Mellanox, and FusionIO through the HPC Advisory Council
• The University of Texas at Austin (Texas, USA) � Dell
• Purdue University (Indiana, USA) � HP and AMD
• Stony Brook University (New York, USA) � Cray, Inc.
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