The Barcelona Supercomputing Center has a new prototype to investigate the supercomputing of the future

Based on Cell and Power6 processors, it will increase the computing capacity at the service of the European scientific community

Barcelona, 30th July 2008.- The Barcelona Supercomputing Center (BSC) has a new supercomputer prototype, to be used in the European project PRACE (Partnership for Advanced Computing in Europe, http://www.prace-project.eu/). PRACE aims to consolidate the bases of a European supercomputing infrastructure, and the BSC is one the main partners.

The work done with this prototype, called MariCel (in Catalan means Sea and Sky), will help to define the hardware components and the software stack of a future machine. The future system will have a minimum capacity of 10 Petaflops and will be at the service of the European scientific community. This represents a calculation capacity of ten times more than the current most powerful in the world, according to the last Top500 list.

"MariCel is part of an initiative to create a common supercomputing structure for Europe. On this prototype, similar to the architecture of the American Roadrunner, we will test the latest software technologies, some of them developed at the BSC. We think that in Spain we will be able to install supercomputers 100 times more powerful than the current MareNostrum in 2011 or 2012", says Francesc Subirada, Associate Director of BSC.

The Kaleidoscope project' code will be run on this new prototype. Kaleidoscope is carried out by BSC and Repsol and its focus is to optimize and execute in MareNostrum, as well as in Cell processors, the Reverse Time Migration (RTM) codes used in next generation seismic imaging technology. It is expected that these codes will accelerate and streamline oil and gas exploration by several orders of magnitude compared to current industry standards.

About BSC

The Barcelona Supercomputing Center - Centro Nacional de Supercomputación (BSC) houses the MareNostrum, one of the most powerful supercomputers in the world. Their mission is to investigate, develop and manage information technology in order to facilitate scientific progress. With this objective, there has been taken special dedication to research areas such as Computer Sciences, Life Sciences and Earth Sciences. In the context of this multi-disciplinary approach, the BSC has a large number of researchers and experts in HPC (High Performing Computing), which facilitate scientific progress together with state-of-the-art supercomputing resources.

This Spanish multi-disciplinary supercomputing center, headed by Professor Mateo Valero, was established by a consortium made up by the Ministry of Science and Innovation, by the Government of Catalonia and by the Universitat Politècnica de Catalunya (UPC).

Further information about the BSC, please visit www.bsc.es

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