Victorian Premier Brumby Announces Plans to Build World's Largest Life Sciences Supercomputer Facility during Visit to SDSC

$100 Million Supercomputer Will Aid Breakthrough in Disease Discovery in Australia and Beyond

June 17, 2008

Jan Zverina

Australia's Victorian Premier John Brumby today announced a $100 million (AUD) initiative to build the world's largest life sciences supercomputer facility to assist in discovering cures and therapies for such life-threatening diseases such as cancer, brain disorders and 'flu pandemics.

In making the announcement at the San Diego Supercomputer Center at UC San Diego, Premier Brumby said the Victorian government is investing $50 million in the supercomputer facility, complementing University of Melbourne and other funding of an additional $50 million to establish the Victorian Life Sciences Computation initiative at the University's Parkville Precinct.

The University of Melbourne will release initial expressions of interest for the peak computing facility later this year, with major installations planned for 2009 and 2011.

"I am delighted to make this important announcement here at the University of California, San Diego," Brumby said, adding that the Victorian government is looking forward to collaborating with the San Diego Supercomputer Center and other UC San Diego research units in advancing disease research through high-performance computing.

""If you want the very best in cancer diagnosis, and want the very best in cancer treatment, you need a supercomputer," said Brumby, adding that the Australian government has seen an "explosion" in the level of brain diseases such as Alzheimer's, and that the country must be able to better anticipate and treat 'flu pandemics. "The one missing link in our life sciences initiative was a supercomputer facility, and now we will have not only the largest supercomputer in Australia, but the biggest life sciences supercomputer in the world."

The $100 million supercomputer will accelerate ground-breaking research by using large databases of genetic information, complex models of analysis of human systems, and hundreds of teraflops of computing power to increase speed to discovery. "This huge new facility will be able to process 400 trillion pieces of information per second," noted Brumby. "Teamwork and collaborations in projects such as this one are essential, and this is an exciting time for SDSC as we get ready to open our new building that will double the size of the center and add another 5,000 square-feet of machine room space," said Fran Berman, Director of SDSC, in welcoming Premier Brumby and his delegation to SDSC and the UC San Diego campus. "We very much look forward to working with the Victorian government and the University of Melbourne on this exciting project."

Joining Premier Brumby in making the announcement was Peter Rathjen, University of Melbourne's Deputy Vice Chancellor of Research; and Gavin Jennings, Victoria's Minister for Innovation. "This partnership will allow us to generate, store, manage, and manipulate huge amounts of data," said Professor Rathjen. "It bumps up the underlying capability into visibility and reality, for everything we do."

Jennings noted that since 1999, the Victorian government has invested more than $2 billion in key research infrastructure to foster new life-saving discoveries. "The supercomputer adds the future dimension, and that's where the real breakthroughs will happen," he said.

UC San Diego has already been collaborating with the University of Melbourne on high-performance computer projects, the latest one being high definition and digital cinema video streams that are part of the "OzIPortal" project between the University of Melbourne and the California Institute for Telecommunications and Information Technology (Calit2), a partnership of UC San Diego and UC Irvine. Earlier this year the two universities conducted "telepresence" sessions using the 100-megapixel OzIPortal constructed earlier this year, connecting via a transpacific gigabit lightpath on Australia's Academic and Research Network (AARNet).

Led by Calit2, SDSC, and the University of Illinois at Chicago's Electronic Visualization Laboratory (EVL), the OzIPortal is based on the OptIPuter project funded by the National Science Foundation. OptIPuter's dedicated network infrastructure and supporting software uses dedicated lightpaths to form end-to-end uncongested 1- or 10-Gbps Internet protocol (IP) networks., allowing researchers to discover, reserve, and integrate remote computers, storage, and instruments to promote global collaborative research among a wide variety of disciplines.