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Bulletin

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# New supercomputer gives University world-class facilities

THE INSTALLATION of the State's first high performance Cray supercomputer has provided The University of Queensland with a world-class supercomputing environment.

The Cray Y-MP 2D/2-16 has been installed in the University's Prentice Centre under a joint agreement with Cray Research (Australia).

It complements the existing MasPar MP-1204 massively parallel computer, purchased by the University in 1991.

Cray Research northern region manager Mr Alan Ryner said the University was now among an elite group of worldwide academic institutions able to carry out research on problems that were once insoluble.

"It can now simulate phenomena that were once too large and complex and it can understand existing problems at a level of detail never thought possible," he said.

The University has built up a body of expert academic and support staff able to work on scientific, industrial and commercial application, and the system will be available to other universities and research centres.

Vice-Chancellor Professor Brian Wilson said the agreement placed the University in a strong position to meet challenging research problems of the future.

He said the Cray Y-MP would provide supercomputer support to established University research programs and a number of national research centres on campus. It would also support both undergraduate and postgraduate teaching.

Professor Wilson emphasised the need for collaborative arrangements with government and industry to ensure supercomputer facilities and expertise were used for the maximum benefit of the State and the nation.

The University has established a Vice-Chancellor's Committee on High Performance Computing, chaired by Pro-Vice-Chancellor (Academic Services) Mr Derek Fielding, with the aim of formulating a strategic plan for high performance computing.

As a first step, the Committee has set up a High Performance Computing Unit under the directorship of Professor Kevin Burrage.

Professor Burrage said the University could conduct scholarly research into high performance computing methodologies.

For example, joint programs with Department of Primary Industries research staff had enabled the development of a complex drought model and data visualisation systems for better understanding of land management.

For more information contact Dr Gary Allen at the Prentice Centre on phone 365 3701.

## TECHNICAL INFORMATION

The Cray Y-MP 2D/2-16:

- has two main central processing units (CPUs) each with a clock speed of six nanoseconds;
- uses compact liquid-cooled emitter coupled logic (ECL) circuits to achieve its high performance;
- has 128 megabytes of ECL memory with access speeds of 15 nanoseconds and 256 megabytes of conventional complimentary metal oxide semiconductor (CMOS) memory with slower access speeds;
- has 10 gigabytes of disk storage with a throughput of 96 megabytes per second;
- is primarily a vector processing computer with its CPUs providing optimal performance with vectors of 64 elements or more;
- has a peak 64-bit floating point performance of 666 megaflops.