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HONG KONG'S FIRST SUPERCOMPUTER UNVEILED AT CHINESE UNIVERSITY

Research capability of the territory's seven government-funded tertiary institutions is greatly boosted today with the inauguration of Hong Kong's first supercomputer.

Funded by the Research Grants Council (RGC), this powerful machine can process 13 billion instructions in one second and speed up computation by hundreds of times. Stationed in and managed by the Chinese University of Hong Kong (CUHK), it is accessible to the other six tertiary institutions on site or through remote login.

Supplied by Digital Equipment, the DECmpp 12000 Massively Parallel Processing System cost some HK$4.5 million after a significant discount.

"The introduction of this supercomputer signifies a major step in our drive to become a centre of high technology research and development," said the Vice-Chancellor of the Chinese University, Prof. Charles Kao, at today's ceremony.

"It will help our universities to launch forefront research for the benefit of the scientific and economic developments of Hong Kong," he said.

An Intelligent Chinese Information Processing project, which aims to produce computing software as powerful as current English language versions, will be the first in CUHK to make use of the supercomputer.

Other projects include massively parallel computation, computational electromagnetics, simulation and design of very-large-scale integrated circuits, simulation of neural networks, artificial intelligence and three-dimensional image processing.

The supercomputer can also help tackle problems of critical importance to the society such as mathematical analysis of water pollution in Hong Kong's harbour; modelling of wind shears in the vicinity of the new airport to achieve safety design; and prediction of earthquakes, landslides and floods.

The supercomputer was one of the first projects to be supported by the RGC's Central Allocation Vote.

"Our aims were not only to help stretch a bit further the Government's funding for academic research, but also to support cooperation among the UPGC-funded institutions through the acquisition of major equipment for collaborative research work," said the RGC's Chairman, Prof. David Todd.

"Through the generosity of Digital Equipment Hong Kong Ltd and Digital's External Research Programme, the RGC's investment of HK$2.5 million has enabled the universities to acquire a major computing resource worth more than HK$12 million," he said.

The new facility will support research collaborations in a diverse variety of fields, ranging from Engineering, Social Sciences, the Arts to Medicine.

"These areas of academic research have exciting possibilities and immense potential benefits to the social, industrial and economic development of Hong Kong," he said.

Also speaking at the ceremony, the General Manager of Digital Equipment Hong Kong Ltd, Mr Bruce Dahl, said the market potential for high performance computing is phenomenal, and it is one of the three key environments on which Digital targetted its engineering resources.

"Market for high performance computing is currently worth more than US$10 billion. By 1995, it will have grown 250 per cent to more than US$25 billion," he said.

The DECmpp 12000 has more than 8,000 processing elements and 13,000 MIPS (Million Instruction Per Second) of processing power. A problem is decomposed into many parallel tasks which will be executed on the 8,000 processors simultaneously, so that a job which used to take 8,000 steps can now be completed in one step.

The Chinese University, which initiated the application for the RGC's Central Allocation Vote, contributed HK$1.2 million towards the purchase. Four other institutions -- the University of Science and Technology, the University of Hong Kong, Hong Kong Polytechnic and the City Polytechnic of Hong Kong -- also contributed HK$125,000 each.

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