

**ADDRESS BY LOW WONG FOOK, PRINCIPAL, SINGAPORE POLYTECHNIC, AT THE OFFICIAL LAUNCH OF THE GRID COMPUTING COMPETENCY CERTIFICATION AND APPOINTMENT OF SINGAPORE POLYTECHNIC AS TRAINING SERVICE PROVIDER ON MONDAY, 10<sup>TH</sup> OCTOBER 2005, AT THE TULIP ROOM, SINGAPORE POLYTECHNIC**

Rear-Admiral Richard Lim, Chairman of National Grid Steering Committee and Chief Executive of Defence Science & Technology Agency;

Prof. Lawrence Wong, Director of National Grid Office;

Colleagues, Distinguished guest;

Ladies and gentlemen;

Good afternoon.

**On Grid Computing at Singapore Polytechnic**

Singapore Polytechnic has embarked on several projects to solve practical problems using Grid Computing technology. Grid computing started at SP some three years ago when the idea was first mooted to create a supercomputing cluster for research.

**In research projects**

A year later in 2003, the School of Info-Communications Technology and the Technology Centre for Life Science, Singapore Polytechnic, in collaboration with the Bioinformatics Institute began to use grid computing for drug design studies. Investigation work to identify drug leads requires massive computing power. That kind of computing would take years to do instead of months if grid computing is not used. The objective of the investigation was to discover drugs to fight dengue virus. The supercomputer cluster helps to quickly screen literally millions of possible small chemicals for leads to make drugs to fight against the dengue virus.

Another project carried out by SP is the E-Cell and Gene Simulation project. This project which was conducted in collaboration with the Institute for Advanced Biosciences at Keio University was to develop a gene simulation system on a

multi-processor platform. It helps to speed up the study of gene by running E-Cell and Gene simulation on a distributed platform.

**In teaching** At the School of Info-Communications Technology, groups of final year project students from the Diploma in Information Technology have collaborated with the Keio researchers to develop distributed cell simulations middleware for the E-Cell system, and to develop an integrated modeling environment for E-Cell3. As a result of this collaboration, two papers were published in the 15th International Conference on Genome Informatics (GIW 2004).

For the digital media students and lecturers, we used grid computing to create a digital media rendering server farm. This digital rendering farm makes use of workstations working in parallel to create digital movies in a few hours instead of days. Students who use the digital rendering farm now have the means to create and view digital animations of what they could only imagine not too long ago.

So in Singapore Polytechnic, we have made grid computing into a tool to solve practical problems. We also have a pool of experienced staff to be able to conduct such training with competence and confidence which was build through various R&D projects as well as training of students in the past few years.

**Conclusion** In closing, I would like to thank the National Grid Steering Committee for selecting Singapore Polytechnic as its training partner. Singapore Polytechnic is committed to continue its strong support for Grid computing as a training service provider and a collaborator in Grid projects.

Thank you.