

# Summary of Linkage Infrastructure Applications for Funding to Commence in 2006

## Victoria

### Deakin University

**LE0668504** Dr MR Barnett; Prof PD Hodgson; Prof X Wang; A/Prof DM Cahill; Dr SR Clarke; Prof M Brandt; Dr Y Durandet

**Approved Project Title** **Real-time Observation of Thermal and Mechanical Response at the Nano Level**

#### Project Title

**2006 :** \$648,000

**Primary RFCD** 2913 METALLURGY

#### Partner Organisation(s)

Deakin University

Swinburne University of Technology

The Flinders University of South Australia

CAST CRC

VCAMM

**Administering Institution** Deakin University

#### Project Summary

The requested facility is an electron microscope dedicated to observing, in real-time, the nano-scale mechanisms that control the response of materials to stress and temperature. The insight provided by this facility is needed for the development of the next generation of materials, particularly "nano" materials based on particles, fibres, whiskers, nano-tubes, thin films and other micro-formed parts. These materials will underpin the next generation of technological advances and new applications such as nano-machines. The facility will also be used to train the future scientists who will develop these exciting new technologies.

**LE0668447** Prof AM Goscinski; Prof DA Abramson; A/Prof Z Tari; A/Prof P Roe

**Approved Project Title** **Enterprise Grid Laboratory**

#### Project Title

**2006 :** \$320,000

**Primary RFCD** 2803 COMPUTER SOFTWARE

#### Partner Organisation(s)

Deakin University

Monash University

RMIT University

Queensland University of Technology

**Administering Institution** Deakin University

#### Project Summary

Parallel and distributed processing can improve company profit, lower costs of design, production and deployment of new technologies, and create better business environments. To achieve this, new inexpensive parallel and distributed systems are needed. Research and initial developments show that such systems can be built based on enterprise grids. The understanding of enterprise grids, and in particular their operating systems, scheduling algorithms, load balancing, heterogeneity, transparency, applications deployment, is of the most critical importance for their development and taking them by industry and business. The new laboratory funded by this grant will place Australia at the forefront of research into the future generation of grids.