Summary of Linkage Infrastructure Applications for Funding to Commence in 2006

Victoria

Swinburne University of Technology

LE0668398 Prof P Hannaford; Prof A Sidorov; Dr BV Hall; Dr AM Akulshin; Prof HA Bachor; Dr P Lam; Dr JD Close; Dr CC Harb; Dr CJ Vale

Approved Project Title **Advanced Microwave Facility for Quantum-Atom Optics**

2006 : $177,900

Primary RFCD 2404 OPTICAL PHYSICS

Partner Organisation(s)
Swinburne University of Technology
The Australian National University
The University of Queensland

Administering Institution Swinburne University of Technology

Project Summary

Atoms can be controlled using light in visible and infra-red regions, as well as electromagnetic waves of longer wavelength in the microwave (MW) and radiofrequency (RF) part of the spectrum. We presently use optical radiation to control atoms at the quantum level where they can behave like waves and can interact with light to store and manipulate information. The MW and RF facility will extend our abilities and enable more complete control of the atoms, which will help us develop the first generation quantum technology. This will enable the creation of quantum devices such as atom lasers, atom interferometers and quantum information networks for communication and ultra-sensitive measurement applications.

LE0668473 Prof SH Masood; Prof M Brandt; Prof PD Hodgson; Dr BF Rolfe; Prof YS Morsi

Approved Project Title **Direct Metal Deposition Freeform Fabrication Facility for Rapid Tooling and Manufacturing**

2006 : $710,000

Primary RFCD 2903 MANUFACTURING ENGINEERING

Partner Organisation(s)
Swinburne University of Technology
Deakin University
Victorian Centre for Advanced Materials & Manufacturing Ltd

Administering Institution Swinburne University of Technology

Project Summary

Tools, dies and moulds produce approximately 87% of plastic and metal products for industries ranging among automotive, medical, electronics, aerospace and consumer products. The industry appears to be in a state of decline with domestic demand for tools, dies and moulds shrinking because manufacturing facilities are relocating to foreign countries to take advantage of low-cost labour and manufacturing costs. The new technology of Direct Metal Deposition offers an opportunity to reverse this trend by providing tools that are faster to manufacture, allow for old tools to be refurbished and to incorporate special features into the tools, to deliver competitive advantages.

LE0668334 Prof J Thomas; Prof GJ Williams; A/Prof RE Tiffen; Dr PA Strangio; Prof B Costar; A/Prof JD Spoehr

Approved Project Title **Australian Policy Online Development Project**

2006 : $158,844

Primary RFCD 3602 POLICY AND ADMINISTRATION

Partner Organisation(s)
Swinburne University of Technology
The University of New South Wales
The University of Sydney
Monash University
The University of Adelaide
National Library of Australia

Administering Institution Swinburne University of Technology

Project Summary

Australian Policy Online provides easy access to a large selection of research reports, papers and articles from centres and institutes throughout Australia. In 2006, the scope of APO's listings and its related research resources will be significantly broadened, increasing the value of the site to its users, including researchers in universities and the public service, journalists, teachers and students. Australia's relations with its neighbours in Southeast Asia will be a particular focus of this expansion, and the APO Briefings series of short, topical books will provide an additional, innovative publishing option for researchers.