

New South Wales

University of Technology, Sydney

LP0883580 Prof JK Debenham; Prof SJ Simoff; Adj/Prof JR Leaney; Mr NB Sheridan-Smith; Mr MA Hunter; Mr V Pizzica; Dr DG Verchere

Approved Project Title **Smart communications network management: Delivering bundled interdependent services across internetworked heterogeneous domains.**

2008 : \$ 55,000
2009 : \$ 100,000
2010 : \$ 85,000
2011 : \$ 40,000

Primary RFCD 2802 ARTIFICIAL INTELLIGENCE AND SIGNAL AND IMAGE PROCESSING

APA(I) Award(s): 3

Collaborating/Partner Organisation(s)

Alcatel-Lucent (Australasia) Pty Ltd

Administering Organisation University of Technology, Sydney

Project Summary

Sophisticated communications network management (data, voice, video) is crucial to the global economy. The field is worth several billion dollars per annum. This project will generate expertise that addresses and solves an important problem in communications management, will enable Australia to use communications networks more effectively, and will advance communications technology.

LP0884112 Prof G Dissanayake; Dr S Kodagoda; Dr S Huang

Approved Project Title **Precision three-dimensional localization system for underground mining vehicles, offering improved productivity and personnel safety**

2008 : \$ 60,000
2009 : \$ 115,000
2010 : \$ 105,000
2011 : \$ 50,000

Primary RFCD 2903 MANUFACTURING ENGINEERING

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

Pempek Systems Pty Ltd

Administering Organisation University of Technology, Sydney

Project Summary

The advanced machine guidance and monitoring technology developed by this project will significantly enhance the partner organisation's capacity as a leading supplier of mining machine control systems. The deployment of such enhanced machine control systems will offer an immediate national benefit to the Australian Mining Industry by dramatically improving productivity and occupational safety. The national interest will also be served by this project's significant contribution to Australia's leadership position as an innovator in frontier technologies for mining and robotics. Furthermore, the research outcomes will help to solve similar positioning problems in hazardous, GPS-denied environments such as urban search and rescue.

Summary of Linkage Projects Proposals for Funding to Commence in 2008

LP0883485 Prof S Vigneswaran; Dr JK Kandasamy; Dr HK Shon; Mr A Chanan; Dr T Cummings; Prof RM Ben Aim

Approved Project Title **Cost effective treatment system for stormwater harvesting for medium scale developments**

2008 : \$ 30,000

2009 : \$ 60,000

2010 : \$ 60,000

2011 : \$ 30,000

Primary RFCD 2911 ENVIRONMENTAL ENGINEERING

Collaborating/Partner Organisation(s)

Kogarah Council

Enersave Australia Pty Ltd

Administering Organisation University of Technology, Sydney

Project Summary

Stormwater harvesting is central to the integrated water cycle management approach now being formally endorsed by all tiers of governments as the best way to manage our water resources. Despite its immense potential, stormwater harvesting in urban centres throughout Australia is largely limited to household rainwater tanks. By developing economical and efficient treatment systems suitable for medium density developments, this project will maximise the resource value of stormwater, and reduce demand on water supply systems. The project will lead to the development of medium sized communities within larger urban centres that maximises its use of stormwater for water needs.

LP0884159 Prof KJ Waldron; Dr D Liu

Approved Project Title **Use of CT Scanned Data in automation of Carcass Processing**

2008 : \$ 25,627

2009 : \$ 51,254

2010 : \$ 51,254

2011 : \$ 25,627

Primary RFCD 2901 INDUSTRIAL BIOTECHNOLOGY AND FOOD SCIENCES

APA(I) Award(s): 2

Collaborating/Partner Organisation(s)

Machinery Automation & Robotics

Administering Organisation University of Technology, Sydney

Project Summary

Meat production is important to the Australian economy. The industry is threatened by inability to obtain sufficient labor for meat processing. Automation represents a potential solution, but brings challenges. Piecemeal automation has produced haphazard interspersing of automated and manual workstations. In meat processing automation, the greatest benefits are obtained when the process is integrated and data is passed down the process line. The outcomes of this project, a practically deployable robotic system, enabling methodologies and a common database, represent a big step towards integrated meat processing and bring enormous economic and health benefits to Australian community.