Summary of Discovery Projects Applications for Funding to Commence in 2006

Queensland

University of Southern Queensland

DP0663414 Dr H Wang

Approved Project Title **Protect information sharing within distributed collaborative environment**

2006 : $47,254
2007 : $25,000
2008 : $25,000
Primary RFCD 2801 INFORMATION SYSTEMS

Administering Institution University of Southern Queensland

Project Summary

Industries require secure information accessing and communication. This project continues development of new delegation frameworks and information assurance requirements in Internet-based collaborative environments. The frameworks will be systematically upon policy-based models to set up a reliable, secure information sharing and communication medium. We also aim to develop techniques for setting up secure group communication and providing accesses to group members for many database systems. The approach leads to a great understanding of advocating selective information sharing in role-based systems. The project develops fundamental enabling methodologies for the information and communication industry.

DP0665216 Dr P Wen; Dr Y Li

Approved Project Title **Inhomogeneous tissue conductivity influence on the forward and inverse electroencephalogram problems in realistic head models**

2006 : $75,000
2007 : $30,000
2008 : $30,000
Primary RFCD 2915 BIOMEDICAL ENGINEERING

Administering Institution University of Southern Queensland

Project Summary

The brain dysfunction indicators have been extremely difficult to obtain, largely because many disorders of higher brain function reflect abnormalities of brain function rather than apparent brain structure. The neuronal generator localization and identification in this project will provide complementary information about source and timing of neural activities sub-serving higher brain function and form sequences of spatial-temporal brain activity image. That will enable the information from MRI, which has a good spatial but poor temporal resolution, and the information from EEG, which has a high temporal resolution on the scalp, to be combined to provide clinical psychologists and brain researchers a more efficient diagnostic tool.