



Research Directions

Office of Research Services

Technology-Assisted Innovation in SME's

Professor Ross Chapman, Dr David Low and Kate Hayes from the UWS Centre for Industry and Innovation Studies (CIIS) are collaborating with researchers and investigators from the University of Melbourne, International partners ATB Applied Systems, and selected Australian and European manufacturing firms and technology providers. The objective is to develop processes for the successful application of Ambient Intelligence (Aml) technologies to support innovation in small to medium enterprises (SMEs), funded by a Department of Education, Science and Training International Science Linkages grant.



'Ambient Intelligence (Aml) technology is an electronic environment and represents the next strategic step in the application of leading-edge Information and Communication Technologies to significantly improve efficiency and productivity in business processes such as communication, data collection and analysis, service provision, and product development. Aml takes the presence and activities of people into account, and interacts with them invisibly to process information and assist them to perform such activities as monitoring production, use computers and communication devices and repair machinery. In this context, Aml would be embedded into lighting, machinery, and IT equipment in workshops, factories and offices to monitor and anticipate the needs of the workers using the devices' says Professor Chapman. 'This project aims to apply Aml technologies such as wireless multimedia, speech recognition and Radio Frequency ID tags in the working environments of small to medium manufacturing enterprises. This will allow the manufacturing industry to compete more effectively with firms in low cost countries, thus strengthening their financial stability.'

Working closely with the developers and providers of Aml technologies, the research team will assess the business processes of five SMEs to identify key areas where suitable technologies could be implemented to improve the way work is done in the manufacturing environment. Using this information, investigators will also develop an Aml technology toolkit that can be used by businesses and research partner organisations to assist with development and implementation of Ambient Intelligence technologies in SMEs. Total Australian project funding is \$183,560, shared between the research partners at the University of Melbourne and UWS. The European component has been awarded EC 5th Framework funding of €1.35million. The Australian collaborators are full partners in the European project.

This research will not only assist the future economic growth of the Australian and international manufacturing industry, but will also provide social benefits by demonstrating how SME's can stop the constant loss of manufacturing and services jobs to lower cost countries, and retain existing market share in the international arena.

Project Title: Ambient Intelligence Technology for Systematic Innovation in Manufacturing SMEs

Project Partners: ATB Institute for Applied Systems Technology, Germany; ARRK Australia and New Zealand; Cormack Packaging; InfoSys Technologies Australia P/L; Rotadyne Plastics P/L; SCS Plastics P/L; Sun Microsystems Australia P/L; The University of Melbourne, and Tresmine P/L

UWS Funding has been set at: \$82,602

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