

SYMPOSIUM ON INTEGRATED APPLICATIONS (B5)
Tools and Technology in support of Integrated Applications (2)

Author: Dr. Naomi Mathers
ANU Institute for Space (InSpace), Australia

Mr. Roger Franzen
Australian National University (ANU), Australia

AUSTRALIAN NATIONAL UNIVERSITY'S (ANU) MT STROMLO OBSERVATORY –
TRANSLATING BETWEEN ASTRONOMICAL INSTRUMENTATION TECHNOLOGIES AND
SPACE SYSTEMS APPLICATIONS VIA AN INTEGRATED APPLICATIONS GROUP

Abstract

The ANU Research School of Astronomy and Astrophysics (RSAA) has a proven record of converting the complex scientific requirements of Astronomers into precision instrumentation. This has required the establishment, and maintenance of a substantial multi-discipline engineering capability. This strong foundation has allowed the RSAA to diversify and embrace the opportunities of an emerging space industry in Australia.

In 2003, catastrophic brush fires destroyed the laboratories and fabrication facilities that formed much of the engineering capacity at RSAA. The construction of a new facility provided a unique opportunity to conceive a centre that capitalises on existing expertise and provides a focus for innovation and integrated applications.

In 2006, Australia began a process of investment in a 10

This important realisation precipitated a transformation of the engineering processes adopted by the RSAA Technical Program. Strong emphasis has been placed upon the professionalisation of the Technical Program and the utilisation of structured processes for financial management, project management, systems engineering and quality management. The RSAA actively sought and captured participation in supporting space projects as varied as a satellite to deliver broadband communication to Antarctica, sensors to measure greenhouse gases and the development of a plasma thruster.

This multipurpose investment strategy is a sound model for emerging space nations to expand capability and develop a strong skill base. Within Australia it is stimulating collaboration and innovation and giving students and young professionals practical experience. The journey is not yet complete but already considerable operational gains have been realised and these will be discussed. Australia is now also a competent partner for international space missions.