

RECIPIENTS OF RAeS AWARDS 2010

Meritorious Service Award 2010

The Meritorious Service Award is made by the Council of the Society, and recognises long term contributions and practical achievements in all sections of aerospace in New Zealand. The award takes the form of a certificate and a citation.

This Meritorious Service award is made to **Peter Beck**, CEO & Technical Director of Rocket Lab, in recognition of the development of the Ātea series of launch vehicles, and the achievement of one of these vehicles achieving sub orbital space flight in November 2009.

His professional career is unusual one. He started off as a tool and die maker and the plan was to get a good grounding in practical engineering then complete a degree. However, opportunities kept presenting themselves such that in actual fact he has been too busy to complete a degree.

Prior to Rocket Lab, Peter held a distinguished career at a Crown research institute, Industrial Research Ltd, where he was heavily involved in the development of smart materials and structures, focusing on composites and the manipulation and processing of superconductors for practical applications.

Peter has received the Cooper Medal, presented by the Royal Society bi-annually to those deemed to have published the best single account of research in physics and engineering. He has also been invited on the Hybrid Rocket Technical Review Committee in the USA. The committee is held under AIAA and mostly filled with NASA engineers.

Peter has five US and European patents and a provisional patent in hybrid rocket fuel. Following almost a decade and a half of propulsion research, market development and networking within the international space community Peter and Mark Rocket founded Rocket Lab Ltd in 2006 to develop the Ātea series of launch vehicles.

These achievements fully meet the criteria for the issue of the award, and the Society is delighted to present a Meritorious Services Award to Peter Beck.

George Watt award -2010

This award was established by Group Captain George Watt to recognise outstanding technical merit which enhances the efficiency of the RNZAF. The award takes the form of a silver medal, a certificate and a monetary award.

The George Watt Award for 2010 goes to **Squadron Leader Russell John McMullan** for his dedication and efforts in developing and implementing RNZAF policy and process in the engineering discipline of aeronautical software.

Over the last few years the RNZAF has entered into a period of significant change with respect to the use of aeronautical software on its aircraft fleet and associated equipment. The introduction of integrated Flight Management Systems, glass cockpits, advanced digital technology and fly by wire flight controls moves the RNZAF into this new era of technology. As a result, broad policy objectives were produced with the intent that the RNZAF will manage this facet of engineering to

a level commensurate with the criticality now evident with the upgrade and replacement aircraft entering service.

Squadron Leader McMullan's direct involvement with the design, certification and testing of aeronautical software came with a posting to the United States as part of the NZMOD resident project team on the P3K2Orionsystems upgrade project. In this capacity, Squadron Leader McMullan worked very closely with the Prime Contractor, L3 IS in the early days of the project as its definition and design solutions were developed. Most importantly, Squadron Leader McMullan also gained critical knowledge and understanding of the design standards, levels of competency and, most importantly, the actual processes required for an organisation to administer aeronautical software in an airworthy manner.

On his return to New Zealand in 2008, Squadron Leader McMullan took up a position as the inaugural Commanding Officer of the Technical Support, Aeronautical Software Office. He quickly set about developing and establishing a series of robust processes and practice within the RNZAF's technical airworthiness framework. This body of work leveraged off and complemented SAP Plant Maintenance, the RNZAF's recently introduced prime configuration and Technical Airworthiness management tool. Over this same period, Squadron Leader McMullan also undertook a series of specialist software courses and attended relevant conferences in order to further develop his individual competencies within this field. During this period Squadron Leader McMullan also established important relationships with key individuals from similar organisations from foreign militaries and commercial enterprises. His success in working with these outside agencies was demonstrated by their willingness to provide assistance in bench marking exercises against the work that he had previously completed.

Furthermore, Squadron Leader McMullan, now working at a more strategic level, also took it upon himself to produce and provide educational material around aeronautical software for all levels within the RNZAF technical and operational world. This program has been instrumental in raising the awareness and cementing the importance of the control of aeronautical software to those who now are routinely exposed to it.

Throughout his tenure, Squadron Leader McMullan has demonstrated a level of motivation and enthusiasm second to none. These attributes, coupled with his professional attitude have gained him a great deal of respect and admiration from within the Engineering Branch. The leadership shown by him to his direct team and to an extent, the wider RNZAF community on this topic has enabled him to achieve a great deal in a relatively short period of time. As a direct result of his efforts the RNZAF is now well placed to accept and manage the aeronautical software elements associated with the upgrade and replacement platforms.

Without question, Squadron Leader McMullan has demonstrated outstanding technical merit which will not only improve the efficiency but also the effectiveness of the RNZAF. A comprehensive framework has been established from which the RNZAF can confidently move its software efforts forward. Squadron Leader McMullan can take a great deal of credit for this result and is a particularly worthy recipient of the George Watt Award for 2010.

Presented this day in Auckland
November 11, 2011

Recommended for this award by Group Captain A.J. Woods, RNZAF Chief Engineer, NZDF Technical Airworthiness Authority.