



POSITION DESCRIPTION

Position Title:	SATCOM R&D
Position Reference Number:	ECRCEWD005
Division:	Cyber and Electronic Warfare
Position Classification:	S&T3-4
Position Location:	Edinburgh
Security Level:	NV1
Minimum Academic Qualification:	Bachelor
Enquiries:	Dr. Gerald Bolding, Group Leader Protected Satellite Communications 08 7389 6400, gerald.bolding@dst.defence.gov.au

Academic Disciplines

Aerospace/ Aeronautical Engineering, Naval Architecture	Chemical, Radiological, Biological, Food sciences	Materials Science
Computer Sciences, IT, Software Engineering, Telecommunications	Mathematics and physics	Psychology and Social Sciences
Mechanical and Mechatronic Engineering (including robotics)	Electronic/ Electrical Engineering	Other

Position Overview

The initial focus of the position is to participate in the implementation of current research outcomes using practitioner skills in Software and/or Firmware development in Military Satellite Communications (SATCOM). The position will also involve participation in trials and experimentation and contributions to SATCOM facilities maintenance and development. The longer term role includes developing an understanding of Military Satellite Communications to a level sufficient to participate in research activities and to provide advice to the Australian Defence Force. The position will operate within a collaborative team under guidance from senior staff. The research priorities in Protected Satellite Communications are in Digital Signal Processing techniques and the use of Software Defined Radio systems, and in SATCOM Network Defence inclusive of the application of Machine Learning techniques.

Position Duties

- Design and development of software and firmware for novel embedded Satellite Communications systems for the ADF
- Design and development of novel SATCOM network defence systems including the application of machine learning and anomaly detection techniques.
- Conduct test and evaluation of Satellite Communication systems on Defence satellites using DST's state of the art facilities.
- Participation in demonstrations and trials.
- Documenting development and/or other activities in accord with Defence quality requirements.
- Participation in multi-disciplinary teams in Satellite Communications Systems including sharing knowledge and expertise with others.
- Provision of expert scientific and technical advice to Defence stakeholders on the performance and acquisition of Satellite Communications systems.
- Communicating the broader context of the Satellite Communications program to Defence stakeholders.
- Engaging in external relationships with industry, academia or allied partners, and contributing expert advice into collaborative partnerships.

Other Requirements

- Appointees will be initially be engaged on a **NV1** security clearance with an upgrade to a **NV2** upon commencement.
- The position will involve occasional rural and interstate travel and may involve occasional overseas travel.
- The position may involve participation in sea trials.