

TRANSPORT CERTIFICATION AUSTRALIA POSITION DESCRIPTION

Position Title: Electronics Engineer

Incumbent: Position Vacant

Reports to: Hardware Manager Telematics

Direct Reports: Nil

Date: October 2015

The Environment

1. Background & Business Environment

Transport Certification Australia (TCA) is a national government body responsible for providing assurance in the use of telematics and related intelligent technologies, to support the current and emerging needs of Australian Governments.

TCA's mission is to provide assurance to governments, industry sectors and end-users in the use of telematics and related intelligent technologies to enable improved surface transport outcomes in productivity, safety and efficiency to be realised.

TCA provides three broad categories of service, providing opportunities to realise positive outcomes through the deployment of telematics and related intelligent technologies:

- **Advice** founded on a demonstrated capability to design and deploy operational systems and services as enablers for reform
- **Accreditation** in the type-approval and certification of systems and services that give confidence to all stakeholders
- **Administration** of programs for, and on behalf of Members and other relevant stakeholders.

TCA upholds and promotes the principles of the Policy Framework for Intelligent Transport Systems in Australia, which has been endorsed by Australian Governments.

2. Our People

TCA promotes a culture of professionalism, innovation and integrity, with a commitment to accountability, quality and excellence in the delivery of all TCA programs and services.

We recognise the unique skills and abilities of each individual, who come from a wide range of disciplines and backgrounds, to become a vital element of the TCA team.

We support our people through ongoing development and learning opportunities, and create a supportive team environment for all our staff. We strive to be an employer of choice.

TCA welcomes the opportunity to work with enthusiastic and committed people interested in what is an emerging area of strategic interest for Australian governments and other stakeholders.

The Role

3. Purpose of the Role

The Electronics Engineer will have responsibility for providing engineering support and assistance to the Hardware Manager Telematics as well as having project management responsibility for the delivery of key projects. The Electronics Engineer will extend their support across the full breadth of programs and functional and technical specifications. In doing so to deliver outstanding performance across all areas to achieve TCA's purpose and function.

4. Major Responsibilities/ Accountabilities

Electronics Engineering Responsibilities

As part of the Technical Services team, the Electronics Engineer's responsibilities in engineering area include the following tasks/activities as directed by the Hardware Manager Telematics:

- Project management of designated projects from commencement to closure
- Development and maintenance of quality systems, records and technical documentation
- conduct testing of In-Vehicle Units (IVU), Alcohol Interlocks, Taximeters, GNSS enabled equipment and other equipment (Hardware) in the field and in the Test Laboratory
- Conduct analysis of IVU hardware when conducting certification, re-certification, audit and type approval
- Assist in the development of specialised test equipment and methodologies to test Hardware
- Data analysis, presentation and reporting
- Conduct maintenance and enhancement of TCA test assets

Operational Responsibilities

As part of the Technical Services team, the Electronics Engineer's operational responsibilities include the following tasks/activities:

- Audit of electronic equipment to ensure compliance with the clauses contained within the relevant functional and technical specifications
- Liaison with members of IAP jurisdictional focus groups and IAP service providers focus groups regarding hardware related matters
- Independent work with direction received on objectives and unconventional and/or complex problems and solutions
- Assisting in maintaining of NATA accreditation

Project Management Responsibilities

In addition to engineering and operational responsibilities, the Electronics Engineer will be responsible for the delivery of tasks in TCA projects for design, technical testing, reporting and documentation.

- Under the direction of Hardware Manager Telematics take leadership in the delivery of projects including full accountability for the quality and timeliness of project tasks
- Identify and report project risks
- Assistance in the scoping, development and sign-off of detailed project plans, if required
- Written and/or oral reporting on project progress and issues to internal stakeholders and members or the board from time to time, if required.

General Responsibilities

- Publication of journal and conference papers
- Assist with the on-going support, maintenance and enhancement of the functional and technical specifications, audit program, test protocols and other associated documents
- Work across, and maintain knowledge of multiple projects and programs delivered by TCA.
- To maintain and adhere to Quality Systems processes and procedures associated with your role.

5. Major Challenges of the Role

Challenges associated with the positions include:

- Providing advice in the amendment and revision of testing procedures arrangements, whilst maintaining high quality testing service delivery and outcomes
- Providing expeditious response and reporting to management
- Working on projects with emerging technology in an innovative environment
- Working on multiple projects with competing demands
- Staying abreast of all of TCA's key projects and the issues and challenges of different service providers

The Person

6. Qualifications, Knowledge and Experience

Essential

- Educational qualifications in an engineering discipline from an institution recognised by Engineers Australia
- Excellent written and oral communication skills
- Experience in GNSS
- Experience in general electronics design environment, including microcontrollers, embedded firmware and schematic hardware design
- Experience in writing design documents and test procedures
- Familiarity with environmental testing and EMC
- Experience in calibration and operational maintenance of systems based on electronic equipment
- Familiarity with compliance of designs with all relevant legislative/technical requirements
- Demonstrated ability in use the computer applications in development and preparation of technical reports, including experience in Microsoft Word, Excel and Access
- Well developed analytical and problem solving skills, together with an ability to deliver within tight timeframes
- Familiarity with microprocessor interface standards (e.g. I2C, UART, RS232, USB)
- Self-starter with good self-management skills

Desirable

- Having studied subjects in electronics engineering
- Demonstrated ability to undertake statistical analysis and report for the purpose of determining compliance to agreed standards

- Knowledge of the legislative, administrative environment within which certification and audit processes operate
- Experience in the development and implementation of test protocols
- Experience in engineering planning and design of specialised electronic equipment, including for testing and verification purposes
- Experience in the development of specifications for technical products