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Latest Revision: 16 August 2010

# Position Description

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| **A. Position Details** | | | | | | | | | | | | | |
| **Position title:** | | | Software Tools Engineer | | | | | | | | | | |
| **Department/Unit:** | | | Software Tools Team/Product Development | | | **Location:** | | | Lindfield, NSW | | | | |
| **Employment status:** | | | Full time, Permanent | | | **Position No.:** | | |  | | | | |
| **Core hours of work:** | | | 09:00 – 17:00\* Monday to Friday.  *May be required to work reasonable additional hours outside the above hours of work to meet the requirements of the position.’* | | | | | | | | | | |
| **Approval Date:** | | | 22 August 2018 | | | | | | | | | | |
| **Reporting relationships:**  Reports to (primary):  Reports to (secondary):  Direct reports:  Team: | | | Software Tools Engineer/Software Manager  n/a  Nil  Software Tools (H/C 3) | | | | | | | | | | |
| **Key relationships:**  Internal:  External: | | | Other teams & stakeholders  Suppliers, customers | | | | | | | | | | |
| **Primary purpose of the position:** | | | Design, develop, test, and maintain tools to requiredspecifications | | | | | | | | | | |
| **Key challenges of the position:** | | | Needs flexibility and ability to think “outside the box”, to come up with  innovative solutions to unusual problems. | | | | | | | | | | |
| **B. Key Responsibilities** | | | | | | | | | | | | | |
| * Develop drivers (ROS) and tools (calibration, static analysis, etc) and improve existing ones (customer facing application, BarajaViewer) * Develop (automated) tests * Work with systems, production, quality management, and customer support teams to resolve technical issues * Guide technicians and junior engineers * Present design alternatives and experimental results to the product development team for review, and review other team member’s designs | | | | | | | | | | | | | |
| **Key responsibility area** | | | | **Major activities** | | | **Outcomes/Measures** | | | | | | |
| 1. Drivers and Tools | | | | Simulate, prototype, test, and document new code  Work with other teams within product development to resolve cross-discipline design trade-offs | | | Design risks identified and mitigated where appropriate  Sufficient evidence gathered to make design decisions  Best effort made to design a great product regardless of difficulty  New design concepts documented according to company standard | | | | | | |
| 50% time/effort | | | |
| 2. Testing | | | | Create (automated) tests for the different levels of test:   * Unit tests * Integration tests * System tests   Improve test systems and processes | | | Ensure a sufficient level of test coverage for all code  New hardware and/or frameworks for improved testing | | | | | | |
| 20% time/effort | | | |
| 3. Resolve technical issues | | | | Work with field application engineers, production, and systems engineering teams to identify the root cause of problems  Devise method of containing/ resolving issues in the form of process or design changes | | | Develop a solution, communicate any changes in the process and/or design to the production team | | | | | | |
| 20% time/effort | | | |
| 4. Guide technicians and junior engineers | | | | Teaching/coaching junior engineers in good design practices  Developing processes with technicians  Fostering a productive and professional work environment | | | Improve the standard of engineering and manufacturing within the company | | | | | | |
| 5% time/effort | | | |
| 5. Present designs for review | | | | Evaluate designs against design specifications and standards  Provide recommendations and/or design alternatives | | | Communicate design pros & cons against requirements  Catch and communicate issues in other people’s designs | | | | | | |
| 5% time/effort | | | |
| **C. Person Specification** | | | | | | | | | | | | | |
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| **Knowledge, skills, abilities, experience, qualifications** | | | | | | | | | | | **Essential** | | **Desirable** |
| *Bachelor’s or higher in Computer Science, Software/Electrical/Electronic engineering or equivalent* | | | | | | | | | | |  | |  |
| *Experience developing C++ code* | | | | | | | | | | |  | |  |
| *Experience creating GUI applications (Windows, QT, GTK+ or other)* | | | | | | | | | | |  | |  |
| *Experience developing Python scripts* | | | | | | | | | | |  | |  |
| *Experience with Jenkins build/test automation* | | | | | | | | | | |  | |  |
| *Experience using GIT or another version control tool* | | | | | | | | | | |  | |  |
| *Passionate about software engineering* | | | | | | | | | | |  | |  |
| *Great communication skills, oral and written* | | | | | | | | | | |  | |  |
| *Enthusiasm and motivation to take ownership of a project* | | | | | | | | | | |  | |  |
| *Professional, customer-focussed attitude* | | | | | | | | | | |  | |  |
| *Experience with Labview* | | | | | | | | | | |  | |  |
| *Experience using Linux* | | | | | | | | | | |  | |  |
| *Experience creating and configuring virtual machines* | | | | | | | | | | |  | |  |
| *Familiarity with pointcloud libraries (PCL)* | | | | | | | | | | |  | |  |
| *Experience with product development in a regulated environment (medical, automotive, defence, rail)* | | | | | | | | | | |  | |  |
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| **D. Acknowledgements** | | | | | | | | | | | | | |
| **Manager** | Name: |  | | | Signature: | | |  | | Date | |  | |
| **Incumbent** | Name: |  | | | Signature: | | |  | | Date | |  | |