



Skill Profile

Principal / Senior Wireless System Engineer

Role

RF/baseband validation testing of wireless user terminals, combined with consultancy on RF/baseband performance and testing. The more experienced Principal Engineer role would also involve team leading and business development for our test services.

Responsibilities

- Generation of test plans, requirements, procedures and test coverage cross-reference matrices
- Setup and management of RF test equipment, including spectrum analysers, power meters and signal generators
- Test execution, including RF measurements and use of bespoke software-based test tools
- Management and execution of environmental testing
- Scripting and test automation
- Generation of test logs and assignment of pass/fail verdicts
- Analysis and debugging of RF issues
- Liaison with customer personnel regarding equipment usage, test procedures and results
- Writing test reports and presentation of results
- Entry and tracking of problems in bug control systems
- Specification and management of equipment calibration
- Writing user manuals for equipment and common test methods
- Development and delivery of training courses on RF testing

For the Principal Engineer role (in addition to the above):

- Team leading of system engineering and test staff
- Project management against schedules and budgets, with progress reporting to the senior management and customer
- Proposal writing and estimating
- Customer liaison and account management

Essential Skills and Experience

- Knowledge of common RF measurement parameters and units in mobile and/or satellite communications
- Knowledge of typical RF test equipment and usage
- Calculation of RF level budgets
- Cable calibrations and losses through system components
- Appreciation of the characteristics and performance of different modulation schemes

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Essential Skills and Experience cont'd

- Experience of RF performance parameters and degradations in wireless modems, such as noise, multipath fading, interferers and non-linearities
- Excellent presentation and written skills

Desirable Skills and Experience

- Experience with ETSI and/or 3GPP specifications for RF performance and testing
- Environmental testing (temperature, vibration, EMC/EMI etc)
- Knowledge of satcom systems such as Inmarsat
- Knowledge of different RF transmit and receive architectures
- Appreciation of typical RF/baseband modem control loops such as AGC, AFC and APC
- Understanding of the OSI 7-layer stack model definition and operation as applied to a typical air interface stack
- Working knowledge of TCP/UDP/IP/Ethernet
- Hardware lab skills such as soldering and cable making

For the Principal Engineer role, additional desirable skills and experience would include prior team leading, MS Project and business development.

Qualifications

Good university degree in Electronics Engineering, Physics, Maths or Computing.

Personal Profile

- Self-motivated and enthusiastic, able to follow through tasks thoroughly and with a focus on delivery to deadlines
- Continual desire to learn new technologies, tools and techniques
- Logical and methodical approach to task management and problem solving, with attention to detail in planning and execution
- Ability to debug and characterise problems in both breadth and depth, going to a level that is sufficient and appropriate for the particular issue in hand
- Focus on pragmatism, system impacts of issues, problem prioritisation and concise communication of status
- Adaptable to new requirements and flexible to change
- Ability to function effectively within a team
- Ability to operate under pressure and with tight deadlines