



## Job Description: Senior RF Engineer

- Summary:** Sr. Radio Frequency Engineer is responsible for the analysis, design, implementation, optimization and enhancement of wireless telecommunications networks. Responsibilities include link budgets analysis, system dimensioning for coverage and capacity including traffic analysis, initial system design and dimensioning, coverage planning, site identification, evaluation and zoning support, frequency planning, interference analysis and optimization. The individual will typically oversee and guide the work of Associate and Design Engineers, in charge of managing the day to day operations of the projects, and interface with Project Managers. The Senior Engineer will answer technical questions as well as day to day operational questions.
- Education:** Masters in Physics/Computer Science/Management Information Systems with Bachelors in Electrical and Electronics Engineering or Telecommunications
- Certifications/Training:** Nortel/Nokia GSM/TDMA/CDMA/UMTS wireless network optimization
- Work Experience:** Minimum 5 years of RF experience, with at least 3.5 years of Nortel equipment
- Reports To:** Manger, Operations
- Physical and/or Special Requirements:** Ability to lift up to 40 lbs
- Working Conditions:** Flexible to work long hours including weekends and be ready to fly to the client's location on a very short notice.

### Responsibilities: (Described as essential functions of the job):

- Fully proficient in set-up, calibration, utilization, and data processing of various design and optimization equipment and software (HP, Grayson, Comarco, TEMS)
- Perform site candidate evaluation and selection
- Support of leasing/zoning teams
- Comprehensive knowledge of at least two of the common industry propagation tools (Planet, Tornado, Wizard, Odyssey, dB Planner, etc.) for model calibration, drive test data post-processing, map generation, frequency planning and interference matrix analysis, site database maintenance, etc.
- Verify RF related site engineering drawings
- Perform design criteria, system dimensioning, link budget and traffic analysis  
Perform frequency and BCC planning
- Understand equipment co-location requirements for multiple operators and perform inter-modulation analysis
- Good knowledge of system topology and air interface parameters for at least 3 of GSM/GPRS, EDGE, CDMA, TDMA, iDEN, network technologies
- Understanding of system topology and air interface parameters of at least one of the main 3G technologies (UMTS, 1XRTT/3XRTT, OFDMA, etc.)
- Excellent knowledge of the main equipment vendors like Nokia, Ericsson, Nortel
- Carry out optimization techniques (proper antenna selection for optimal horizontal/vertical performance, mechanical/electrical tilting, appropriate transmit power setting, antenna clearance, neighbor list analysis, etc.) for optimal site/cluster performance
- Generate RF engineering related reports in Excel, Access, SQL as required.
- Assume the RF lead role, manage and co-ordinate activities of the RF team as required.
- Play an active role in recruitment of RF engineering staff and be a mentor to other engineering colleagues as required
- Help to define processes and procedures for RF engineering tasks.
- Communicate RF team budget, milestones and deliverables to project management and implement plans to accomplish the milestones within budget, as required.



**Special Skills:**

- Proficient on MapInfo software
  - PlaNET
  - Ericsson TEMS
  - Other duties as assigned
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**Intent and Function of Job Descriptions:**

Job descriptions assist organizations in ensuring that the hiring process is fairly administered and that qualified employees are selected. They are also essential to an efficient appraisal system and related promotion, transfer, layoff and termination decisions. Well constructed job descriptions are an integral part of any effective compensation program.

All descriptions are reviewed to ensure that only the essential functions and basic duties have been included. Peripheral tasks, only incidentally related to each position, have been excluded. Requirements, skills and abilities included have been determined to be the minimal standard required to successfully perform the positions. In no instance, however, should the duties, responsibilities and requirements delineated be interpreted as all-inclusive. Additional functions and requirements may be assigned by supervisors as deemed appropriate.

In accordance with the Americans with Disabilities Act, it is possible that requirements may be modified to reasonably accommodate disabled individuals. However, no accommodations will be made which may pose a serious health or safety risk to the employee or others or which impose undue hardship on the organization.

Job descriptions are not intended as and do not create employment contracts. The organization maintains its status as an "at-will" employer. Employees can be terminated for any reason not prohibited by law.