



LEAD SATCOM 5G R&D ENGINEER

COMPANY: e2E SERVICES LTD.
JOB REF: RES.064
TYPE OF ROLE: PERMANENT
LOCATION: Head Office in Welwyn Garden City



Our Company

We have been at the forefront of innovation in the satellite communications industry for two decades, offering to all its stakeholders unrivalled expertise to design, develop and operate state-of-the-art solutions and systems, world-wide. Our portfolio of services and technology know-how covers the entire spectrum of any satellite communication project, from market opportunity sizing and end-user requirements, through systems specification, development and qualification, to ground network development, commissioning and operations. To both commercial and defence related domains, we also offer unique understanding and insight to enable a more user-friendly and accessible use of satellite communication resources.

Innovation and ingenuity, coupled with finding dependable solutions are the guiding principles of anything we do for our customers. Working with e2E requires a high level of dedication and personal motivation, commitment and a drive to continually seek to improve things. The results we have consistently achieved over the years, at personal and team levels, are outstanding and make e2E a great place to work.

Job Description

We are expanding our R&D team and are seeking a Lead Satcom 5G R&D Engineer to shape and deliver e2E's growing capabilities in the convergence of satcom and terrestrial cellular technologies. The objective is to support e2E's Head, R&D in defining technology-driven projects, and in winning and delivering those projects with the R&D team. These will be in e2E's primary areas of interest for satcom/ 5G+ convergence namely in air interface and terminals, but in the context of the 5G



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network architecture. The full emergence of NR-NTN will take place over the next 5 years and e2E is developing capability to participate, contribute and support client projects.

This role has a focus on working with the 5G+ standards and with emerging NTN standards for the RAN, to define solutions or tools for Proof of Concept projects and to directly support development with the R&D team. Although projects will be typically focused in a specific 5G technology area, it is important for e2E to retain the system view as well. This system view allows participation in the specification and implementation of wider satcom-enabled 5G system demonstrators with e2E's partners.

The role is likely to be suitable for someone with an in-depth understanding of mobile comms and 3GPP through industrial, PhD or post-doc experience in relevant topics, with skills and interests aligned with those of e2E.

Key Responsibilities

- Technical authority within e2E for cellular/ satcom convergence. Maintain awareness and potentially suitable level of participation in 3GPP standards evolution, especially NR-NTN.
- Support Head, R&D to develop and maintain e2E strategy and focus areas for 3GPP Satcom/Cellular 5G+ convergence.
- Define projects in line with strategy, mostly technology focussed or analytical; contribute to proposals.
- Take technical lead role in project delivery. This will include developing system architecture, communications models, and developing software or hardware components
- Carrying out systems engineering work in accordance with methodical approaches across the lifecycle in a variety of R&D tasks.

Skills, Character and Experience

- Ability to see the context of a problem, to understand its driving factors, to generate ideas and apply an analytical approach.
- To work constructively in a team, to be willing to make and follow plans but also to question and challenge appropriately in a spirit of robust technical discussions.
- Be a fast learner and have a willingness to acquire and develop new technical knowledge and skills.
- Desire to shape new capabilities for e2E and to exploit and support use of cellular 3GPP standards in a space environment.

Essential

- Strong technical breadth of 3GPP systems and mobile networks, likely to have PhD or 5 years industrial experience in this area.
- An understanding of the whole 5G architecture RAN, Edge, network, core.
- Have technical expertise in radio/ RAN/ air interface and an appreciation of the demands and challenges of direct satellite to ground links. i.e. NR and NTN.
- To be able to demonstrate detailed knowledge in at least one of the 5G use cases (eMBB, mMTC, URLLC), with an appreciation of the others.



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- Familiarisation with the 3GPP organisation processes and roadmaps; understanding of the direction of travel.
- Ability to lead technology developments of models, real-time software or hardware.

Desirable

- Understanding of satcom.
- Experience of putting together mobile communications demonstrators or Proof of Concepts
- Knowledge or experience of Open RAN.
- Radio propagation expert, noting that further learning may be needed regarding higher frequencies for 6G.
- Hands-on experience of using 5G innovation facilities in the UK, e.g. ESA 5G Hub, 5GIC, Westbrook, others.
- Experience or understanding of the systems engineering lifecycle including development of concepts, requirements, design and implementation through to validation and deployment.
- Underlying interest in space and space systems, an enthusiasm for what space solutions can offer and the problems they can solve.
- Experience in the 5G/6G Communications Management concepts including, cognitive networks and intelligent radio resource management.
- UK National or ability to be security cleared (due to potential sensitivity of some work to be undertaken).

Salary

- Competitive salary dependent on skills/experience plus a growing list of Company benefits

Background

Keeping pace with the developments taking place in space systems and satcom is a challenge, e.g. applying 'new space' technologies like nanosatellites in LEO, augmenting RF comms with optical, and the progressive alignment of cellular comms standards with satellite systems. e2E works at the cutting edge directly with its clients, contributing to ongoing innovation and learning in the process. In addition, e2E has established a Research and Development (R&D) division that focusses on e2E-owned goals for new capabilities applicable in a 3 – 5 year timeframe. Such work is intended to support us in providing the best and most current support to our clients and with the potential to develop our own intellectual property.

Engineers working in R&D carry out studies, analyses and developments within the division and also work directly for clients across the lifecycle to provide a valuable connection between what is possible and what is practical.

Submission

By submitting your CV/application you are consenting to e2E Group using and storing information about you for monitoring purposes relating to your application of future employment. This information will only be used by e2E Group.



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e2E Group is committed to achieving workforce diversity and welcome all applications irrespective of social and cultural background, age gender, disability, sexual orientation or religious belief.

