Duty Location: **Braine l'Alleud, BEL**

JOB DESCRIPTION
Senior Engineer
NATO Integrated Mobile Services Centre
Grade: **G17**

This is a position within the NATO Communications and Information Agency (NCIA), an organization of the North Atlantic Treaty Organization (NATO). To strengthen the Alliance through connecting its forces, the NCI Agency delivers secure, coherent, cost effective and interoperable communications and information systems in support of consultation, command & control and enabling intelligence, surveillance and reconnaissance capabilities, for NATO, where and when required. It includes IT support to the Alliance's business processes (to include provision of IT shared services) to the NATO HQ, the Command Structure and NATO Agencies.

The NATO Integrated Mobile Service Centre (NIMSC) provides NATO and its Partners 24/7 with scalable, protected, secure, reliable, and integrated Wireless Communication-based Services with a focus on NATO Operations, Crisis Response, Missions, Exercises and Business Continuity. The NIMSC Chief is responsible for planning and executing all lifecycle management activities for NIMSC services (strategy, design, transition, operation and continuous service improvement including subject matter expertise, research and development, acquisition and logistic support).

The NIMS Engineering Management Office (EMO) provides Engineering Resources with expertise in Mobile Infrastructure (e.g. Deployable, Dispersible and highly Mobile CIS), SATCOM and Wireless Communications in support of Projects, Services and the POWs (Program of Work). It represents NIMS Engineering at NATO, Academia and Industry. EMO is responsible for the management and control of the NIMS Technology Roadmap and leads the establishment and continuous service improvement through the NIMS Integration and Innovation Hubs. It ensures compliance, standardization and coherence of services & products and leads the efforts for seamless integration of new capabilities.

Duties:

Under the direction of the Principal Engineer, but largely under own initiative, the incumbent will perform duties such as the following:

– Provide technical support to acquisition projects, ensuring the delivery of integrated and interoperable technical solutions, preparing technical specifications, supporting evaluation processes, ensuring technical leadership throughout the implementation process and supervising acceptance testing;
– Take part in scientific programs and projects, as directed;
– Provide technical and professional contributions to the conception, development and execution of scientific programs and projects in the field of Mobile Infrastructure, SATCOM or Wireless Communications and technologies relevant to military scenarios. These contributions will support, but not be limited to, technical studies, development of STANAGs, prototyping and test bed applications, trials and demonstrations, military exercises, and operations;
– Give scientific briefings and presentations, write and/or review scientific reports and articles for publication;
– Maintain documentation and Solution Architectures for NATO Capabilities.
– Assist in the planning, preparation and hosting of formal and informal visits, meetings and conferences with representatives of military, civilian and industrial organizations;
– Act as a Subject Matter Expert in support to at least one of the following three areas:

- o **Mobile Infrastructure Specialization (Deployable, Dispersible, Mobile CIS)**
    - Plan, design, system engineer and integration of all CIS aspects of C4ISR Deployable Communications and Information Systems (DCIS), Dispersible and Highly Mobile solutions using the following technologies and disciplines:
    - Modern digital communication networking techniques, protocols and standards
    - Communication networks specification, design and testing, with an emphasis on IP networks
    - Infrastructure Services and associated virtualization technologies (i.e. software defined compute, storage and networking)
    - Environmental and Climatic protection measures and best practices for IT equipment.
- o **Satellite Communications (SATCOM)**
    - Full life-cycle support of Satellite Communications Systems, Infrastructure and Services within NATO, primarily connecting NATO static and deployed forces (operational and exercise communities).
    - Plan, design, system engineer and provide implementation oversight of all communication aspects of SATCOM Space and Ground Systems, SATCOM related Infrastructure, and Services, using the technologies, techniques, protocols and standards of Modern digital communications, with an emphasis on RF communications.
- o **Wireless Communications (WiCOM)**
    - Plan, design, system engineer and provide implementation oversight of all communication aspects of Wireless Communications from Strategic/Long Range to 5G operating on Mobile Platforms or any other Wireless infrastructure and technologies.
- – Deputize for higher grade staff, if required;
- – Performs other duties as may be required.

Experience and Education:

- – A Bachelor's degree at a nationally recognised/certified University in a related discipline such as Electrical and/or Electronics Engineering or Telecommunications Engineering and at least 3 years post-related experience;
- – Exceptionally, the lack of a university degree may be compensated by the demonstration of a candidate's particular abilities or experience that is/are of interest to NCI Agency, that is, at least 10 years extensive and progressive expertise in duties related to the function of the post;
- – Knowledge and engineering experience in state of the art technologies, across a broad spectrum, which should include multiple of the following:
    - – Deployable CIS, network design, switched multimedia networks, Infrastructure as a Service and familiarity with related international / commercial / industrial standards;
    - – Communication networks specification, design and testing, including IP networks;
    - – Modern communication systems technology trends, particularly in the area of COTS products;
    - – Satellite Ground Station and terminals design, development and verification activities, SATCOM Space Systems, Satellite power budgets, Frequency management, propagation in the satellite UHF, SHF, Ku and, Ka and EHF bands, Interference analysis, Antenna sub-system, Transmit and receive chains including up and down converters, Low Noise Amplifiers, High Power Amplifiers, MODEMs, Electronic Protected Modems (EPMs), and Computer-assisted Monitor and Control Systems (M&CS);
    - – Proven knowledge of radio wave propagation, including propagation mechanisms, impairments and associated mitigation techniques;
    - – Radio frequency (commercial and/or military) communication techniques (Modulation, digital signal processing, coding and security techniques), protocols, networking and standards (e.g. VLF, HF, VHF, UHF, MANET, MERLIN, HCLOS);
- – Experience in laboratory and field trials planning, execution and evaluation;
- – Experience in writing, analysing and commenting on technical documents;

– Proven ability to communicate effectively orally, using tact and diplomacy, and in writing with good briefing skills;
– Ability to understand operational requirements and translate them into technical and/or implementation requirements;
– Knowledge of project management methodologies;
– Strong problem solving and analytical skills;

Desirable Experience and Education:

– Knowledge and experience in applying ITIL, COBIT and eTOM principles and methodologies applied
– to effective Service Management and Control;
– Familiar with Architecture modelling language(s) (UML, SysML, ArchiMate, etc.), preferably in the context of an Architecture Framework (TOGAF, DODAF, Zachman, etc.);
– Knowledge and experience in the application of Federated Mission Networking (FMN) in service design;
– Prior experience of working in an international environment comprising both military and civilian elements;
– Knowledge of NATO responsibilities and organization, including ACO and ACT;

Language Proficiency:

– A thorough knowledge of one of the two NATO languages, both written and spoken, is essential and some knowledge of the other is desirable;
– **NOTE**: Most of the work of the NCI Agency is conducted in the English language;

Competencies or Personal Attributes:

– **Deciding and Initiating Action** - Takes responsibility for actions, projects and people; takes initiative and works under own direction; initiates and generates activity and introduces changes into work processes; makes quick, clear decisions which may include tough choices or considered risk;
– **Adhering to Principles and Values** - Upholds ethics and values; demonstrates integrity; promotes and defends equal opportunities, builds diverse teams; encourages organizational and individual responsibility towards the community and the environment.
– **Relating and Networking** - Easily establishes good relationships with customers and staff; relates well to people at all levels; builds wide and effective networks of contacts; uses humor appropriately to bring warmth to relationships with others.
– **Creating and Innovating -** Produces new ideas, approaches, or insights; creates innovative products or designs; produces a range of solutions to problems;