



INTERDISCIPLINARY ENGINEER, GS-14

PURPOSE OF POSITION AND ORGANIZATIONAL LOCATION:

The primary purpose of this position is: To serve as a Systems Engineering and Integration (SE&I) Division, Nuclear Command, Control, and Communications (NC3) Enterprise Center (NEC), Senior engineer and Liaison Officer (LNO) to Engineering Directorate, Air Force Nuclear Weapons Center (AFNWC). Responsible for maintaining strong and effective relationships between the NEC; USSTRATCOM; AFNWC and other Joint, Service and government agencies in the support of programs and projects supporting NC3 systems and capabilities enterprise-wide. **The organizational location of this position is: Air Force Nuclear Weapons Center (AFNWC), Hill Air Force Base, Utah.**

ORGANIZATIONAL GOALS OR OBJECTIVES:

The organizational goals or objectives of this position are: Serves as a senior Nuclear, Command, Control, Communications (NC3) Enterprise Center (NEC) engineer and liaison officer (LNO) to Air Force Nuclear Weapons Center (AFNWC) providing professional and scientific expertise in performance of work requiring knowledge and application of electronics, mechanical, aerospace, mathematics, statistical analysis, modeling/simulation, and/or other scientific principles, methods, techniques and/or other engineering disciplines in the field of testing, evaluation and certification supporting NC3 systems. Provide end-to-end NC3 subject matter expertise; to lead, direct and synergize nuclear program studies, evaluation efforts, identify gaps and shortfalls in existing efforts, facilities, products and plan and execute a way forward in coordination with the NEC, AFNWC elements at Hanscom AFB, Kirtland AFB and Air Force NC3 Center (AFNC3C) and Air Force Global Strike Command (AFGSC) at Barksdale AFB. Serves as an NC3 expert advisor to the Chief Engineer, AFNWC and serves as a Team Lead in planning, implementing and executing NC3 project and integration work.

DUTY 1: 40% Critical

Serves as a technical expert, performs a broad range of technical analyses and system engineering projects, uses innovative techniques, advanced approaches and/or new technology. Principal advisor to the Air Force Nuclear Warfare Center (AFNWC) Director of Engineering on technical matters of a complex nature with significant impact to national defense and strategic deterrence; concerning legacy and future systems. Utilizes computer scientific/engineering principles, theory and innovative solutions to analyze and develop current and future Nuclear Command, Control, and Communications (NC3) technologies in support of DoD-wide joint strategic deterrence. Leads cross discipline (electronics, mechanical, aerospace, and or other engineering disciplines) teams regarding highly complex projects, programs, and/or studies in the development, acquisition, and continuing



refinement of operational capabilities of weapon systems, sub-systems, support systems, or an equivalent product. Applies advanced engineering theories, principles, concepts, standards, and methods to ensure assigned projects remain consistent with program objectives, schedules, performance criteria, and existing policies. Defines problems and develops and coordinates study/project plans that may routinely cross organizational lines within Service(s) and agencies (i.e., NSA, DISA). Plans, organizes, directs, and coordinates significant and complex projects which represent critical segments of major NC3 programs which entail a variety of complicating factors, interaction with other engineering specializations, and consideration of the lifecycle of items/systems. Keeps abreast of continuing advances in information technology to guide the developmental and implementation of experimental/novel approaches to improve system operations, security and processes in support of United States Strategic Command (USSTRATCOM) mission sets. Utilizes mathematical and statistical techniques, elements of system engineering theory, and systems modeling/simulation to develop new solutions to new problems or problems which may be totally lacking in precedent; develops recommendations regarding significant changes to program objectives, existing policies, and procedures; implements appropriate corrective actions and guides project managers in integrating these fixes into plans.

DUTY 2: 30% Critical

Provides technical guidance, advisory support, and assistance on an entire project and/or major phases for broad and varied program operations. Performs very complex, difficult studies/evaluations on an individual basis or as a team member/leader responsible for completing phases of an overall work effort. Provides guidance and assistance to lower level analysts. Serves as an authority and consultant to other organizations, commands, and/or agencies. Promotes interchange of information on mission requirements, capabilities, deficiencies and technology applications. Analyzes problems revealed by prior studies and advises higher officials of the feasibility of different approaches which provide a basis for action or the solution to a specific problem. Develops recommendations to significantly change, interpret, or develop policies or programs throughout the NC3 Enterprise.

DUTY 3: 15% Critical

Serves as the NC3 Enterprise Center consultant and technical expert to senior subject matter specialists and/or agency officials responsible for broad program operations. Initiates and provides technical direction, management, and administration for assigned engineering programs and projects. Exchanges engineering and technical information with other organizations; status and advisory services on problems, issues, and projects in assigned program areas. Resolves functional area problems related to assigned programs and projects. Prepares and presents technical papers and briefings at technical interchanges and briefings. Topics include but are not limited to complex subject matter such as complicating factors, and functionality of joint operational capabilities. Identifies and conducts testing and evaluation analysis of various systems, relationships, and models of new capabilities for integration into operations. Identifies and defines major/critical problems; advises management officials of advantages or disadvantages of various alternatives. Develops and maintains strong working relationships with other government agencies, industry, and professional groups in order to provide guidance and leverage external efforts to support the implementation of high priority projects/policy initiatives and foster cooperation and technology transfer, specifically related to the research and development and operation of legacy and future systems to the DoD. Meets with key customers and coordinating officials to assess customer satisfaction, explain organization policy and procedures, and resolve problems that arise. Advises on the development of background data and documentation; establishes procedural policies, technical interpretations and opinions related to complex NC3 issues.



DUTY 4: 15% Critical

Attends and/or leads discussions, meetings, committees related to program planning, advanced technologies and support system concepts. Prepares and presents recommendations and reports on project progress and results. Presents clear, concise and well-structured oral presentations that address designated issues. Identifies problems and coordinates the contributions of professionals and specialists, notes problems that arise and resolves differences. Interfaces with DoD Component staff offices and other technical/analytical agencies on advances in state-of-the-art technology. Prepares technical reports and/or documents issues, progress, solutions and results. Provides briefings and develops recommendations concerning long-range information system objectives. Provides technical input in the development of acquisition documents and Concepts of Operation/Employment to meet NC3 mission and capabilities. Applies security procedures are adhered to and maintains control of classified information.

KNOWLEDGES, SKILLS, AND ABILITIES (KSA):

1. Professional knowledge and mastery of a broad range of engineering, mathematics, statistical analysis, modeling/simulation, and/or other scientific concepts, principles, standards, methods, techniques, practices, and procedures to project execution and advisory services.
2. Knowledge of qualitative and quantitative techniques and methods used to develop, adapt, modify, and apply models to resolve problems or define and clarify alternative solutions.
3. Knowledge of NC3 program goals and objectives; mission, roles, functions, organizational structure and operation of DoD, Services, and Laboratories as they apply to inter-agency science and technology, programmatic and advocacy interactions.
4. Skill in identifying significant variables and determine their underlying relationships; negotiating complex issues and resolve conflicts.
5. Skill in identifying actual or potential problem areas, trends, and/or similar factors to improve NC3 and Service program operations and systems.
6. Ability to lead and participate in study/project teams; originate new ideas, projects and methodologies; and execute projects and/or studies within established financial and/or time constraints.
7. Ability to effectively organize and analyze information; produce authoritative reports, position papers, and briefings; present clear and concise findings; and effectively advocate for a position.
8. Ability to communicate effectively, both orally and in writing, clearly, concisely, and with technical accuracy; negotiate complex issues; and maintain good working relationships with diverse groups and senior level management.