## Join the Metron Team

Metron recruits professionals from across a wide range of job functions, business areas, and regions. We value the expertise and fresh perspective new employees bring into our organization. We offer you not only the chance to build a successful career—we offer you an opportunity to make a difference in the world.

Metron's comprehensive employee stock ownership plan and excellent benefits package are comparable to larger corporations.

Metron, Inc. is an Equal Opportunity employer. We encourage women, minorities, persons with disabilities and Veterans to apply.

## **DoD Security Requirement**

Successful candidates will be subject to a DoD security investigation and must meet eligibility requirements for access to classified information. U.S. Citizenship is required.







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Scientific Solutions To High Technology Problems For Defense, Space, And Business

# Operations Research and Cyber Analysis (ORCA) Division

Metron's Operations Research and Cyber Analysis (ORCA) Division employs sophisticated analytic methods to solve some of the DoD's most challenging Command, Control, Computer, Communication, Intelligence, Surveillance and Reconnaissance (C4ISR) issues. The Division's professional staff is composed of highly qualified and motivated mathematicians, physical scientists, computer scientists, engineers, and military operations analysts. Staff members develop and utilize state-of-the-art modeling and simulation tools to deliver sophisticated analyses addressing challenging problems in the development of high technology systems.

Analysts are responsible for the analysis and modeling of each project. Software Developers are responsible for implementing software prototypes incorporating the models. Project teams typically average 2-3 people. Each person is involved in the entire analysis process, from concept through design and implementation to demonstration.

Metron staff members use their strengths in mathematical and physical modeling to solve a broad class of technically challenging problems for our clients. Examples of recent project areas are:

• A study focused on cyber threats to Navy networks. The results were instrumental in raising the Navy's understanding of the difficulty of operations in a highly networked environment and the importance of cyber superiority in the warfighting domain.

• Metron's PED Utilization Model and Analyzer (PUMA) tool supported a series of studies assessing the processing, exploiting and disseminating (PED) process of intelligence data collected by a range of Navy platforms. The results identified efficiencies that could be gained through investment and continue to be used as a foundation for additional analysis.

• In support of the SPAWAR Chief Engineer, Metron demonstrated an Executable Architecture that provides decision support to Navy program managers and engineers. The Executable Architecture provides a rigorous Systemof-Systems Engineering (SoSE) approach to capability assessments and links top-down requirements to individual program elements using modeling and simulation.

### **Current Projects**

Metron's ORCA division, working directly with the Office of the Chief of Naval Operations (CNO) and the Space and Naval Warfare Command (SPAWAR), has participated in the design and execution of C4ISR analyses since 2009. The Division also works directly with industry partners. Below are a few of our software analysis tools.

#### BANDWIDTH ANALYSIS TOOLKIT (BAT)

BAT employs machine learning to predict the bandwidth utilization of military assets under userspecified scenarios and conditions. The toolkit includes a bandwidth visualization component that provides detailed near real-time analysis of network traffic and bandwidth utilization.

#### CYBER SECURITY SYSTEM (CSS)

CSS is a discrete time, agent-based model which employs Artificial Intelligence-based techniques to determine agent behavior in support of cybersecurity analyses. The model can be used to assess the state of a network's security due to personnel, policy or technology, and quantifies changes on the security posture of any network or collection of networks.

#### TARGET INPUT GENERATION ESTIMATOR (TIGER)

TIGER is a general-purpose track management tool which calculates a sequence of detection events for a given force laydown and search plan. The tool models track kinematics and sensor performance including dynamic search plans, complex sensor geometries, RF propagation, and allows for the scripting of platform actions.

#### NAVAL SIMULATION SYSTEM (NSS)

NSS provides a comprehensive forceon-force modeling and simulation capability. NSS models individual platforms, weapons, sensors, and the responsive tactical decision making of commanders.