



Topical Thread Geospatial Intelligence



Our research in the **Geospatial Intelligence** thread addresses technical issues in *Sensors and Environment* (e.g., new processing and exploitation techniques for sensor data), *Decision Support* (e.g., new models, methods, and tools for making judgments), and *Information Management* (e.g., new techniques for finding and sharing information amongst organizations and coalitions). Ten projects have been highlighted that address challenges associated with Geospatial Intelligence. A **one-hour guided tour** (starting at **Thread Central** at **1 pm**) provides an overall orientation of the work being done in each technical area plus in-depth presentations by four projects. Please visit the remaining projects using the map provided (over).

Sensors and Environment

Tour

SE-01 Next-Generation Analyst Environment for Geospatial Intelligence

Geospatial intelligence analysts need an easy-to-use environment that incorporates “upstream processing” to handle the large volumes of imagery available.

SE-11 Three Dimensional (3-D) Sensor Exploitation

A systems level methodology is needed for the design, analysis, and implementation of highly capable 3-D automatic/assisted target recognition (ATR) systems.

SE-09 Vegetation Forensics

Environmental indicators, particularly stress to local vegetation, can be used as an indirect method to detect nefarious activities that today are susceptible to denial and deception.

SE-12 Multi-Sensor and Multi-Platform Sensor Exploitation for Combat ID

Theoretical approaches to target ID/ATR can provide the ability to analyze and predict performance, thereby allowing sensor systems developed for one application to be readily assessed in other problem domains.

Decision Support

Tour

DS-17 Analysis Support to Predictive Battlespace Awareness

We are developing a framework and a tool box for performing predictive analysis across multiple data sources.

Tour

DS-07 Nonlinear Visualization Techniques

Nonlinear visualization techniques for graphical data can support faster and better-informed decision making.

DS-12 Counter Deception Decision Support

The psychology of decision-making and deception is combined with existing belief management and planning technology to produce a counter-deception decision-support system.

DS-16 Lightweight Collaborative Whiteboard

Browser-based whiteboard based on Scalable Vector Graphics and industry standard Web services technologies to support interactive services and insertion of a collaborative capability into virtually any application.

Information Management

Tour

IM-06 Peer-to-Peer Information Sharing Architecture and MAJIIC ACTD

A DoD/Coalition information sharing architecture that will promote secure horizontal information fusion.

IM-04 Algorithms/Techniques for Location-Based Publish and Subscribe Services

Automatic and scalable distribution of location-based information is needed to support network-centric operations, including joint blue force situational awareness.

