



## Topical Thread Support to Military Operations



Our research in the **Support to Military Operations** thread addresses technical issues in *Decision Support* (e.g., new models, methods, and tools for making judgments), *Communications and Networks* (e.g., improving networks and mobile communications for stressing operational environments) and *Sensors and Environment* (e.g., improving sensor management, cross-cueing, and fusion). Eight projects address various aspects of the challenges faced by military decision-makers. A **one-hour guided tour** (starting at **Thread Central** at **1pm**) 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).

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### Decision Support

Tour

#### **DS-17 Analysis Support to Predictive Battlespace Awareness**

The most critical need in PBA is for analytic tools to support tracking information and predicting future enemy actions. This effort focuses on developing a framework for PBA experimentation.

Tour

#### **DS-08 Improving Time-Sensitive Team Decision-Making**

Research in operational decision-making, particularly in team contexts, is focused on reducing timelines, operator stress, cognitive load, confusion, and decision errors; all critical to improving command and control decisions.

#### **DS-15 Applying User Models to Improve Team Decision Making**

Developing models of users of collaborative environments can promote common situation awareness and understanding that can lead to successful collaborative decision making.

#### **DS-06 Indications and Warning (I&W) for Countering Terrorism**

New processes, models, and tools can reduce analysis timelines and increase the quality of the analytic product, with the goal of achieving more accurate and timely warning.

### Communications and Networks

Tour

#### **CN-07 Wireless System for Below Decks Shipboard, Underground, and Urban Warfare**

Technology for RF-challenged environments such as onboard ships (below-deck), underground facilities, urban warfare, and urban search and rescue / first responders.

#### **CN-11 Mobile Ad Hoc Networks for the Transformed Army (MANTA)**

Development and simulation of routing algorithms, topology and channel access methodologies for high data rate, low probability of detection, and jam-resistance mobile networks.

### Sensors and Environment

Tour

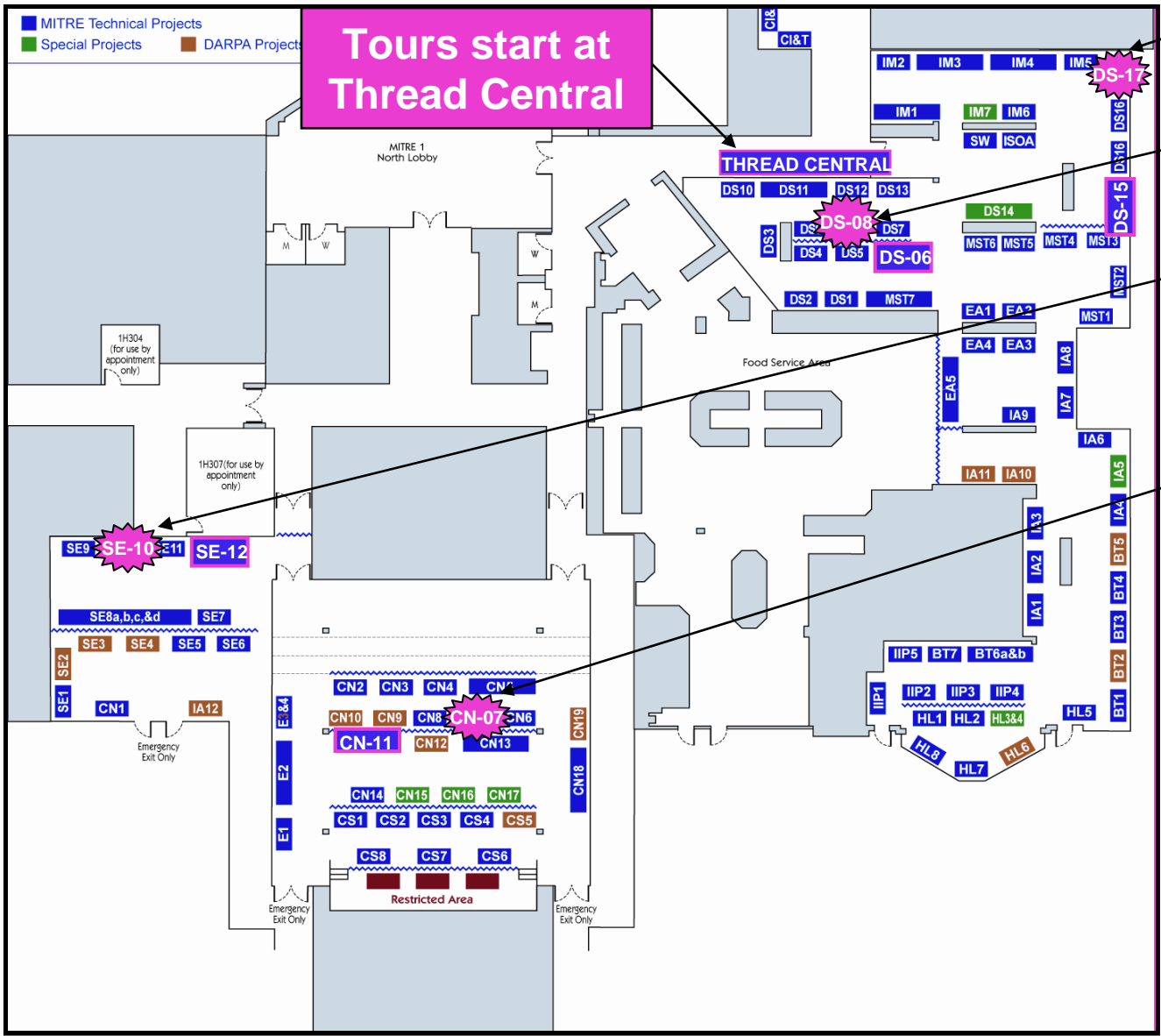
#### **SE-10 Dynamic Scheduling for Command and Control Constellation (C2C)**

Developing techniques for real-time, dynamic management of multiple, dissimilar platforms and sensors to optimize the performance of the Command and Control Constellation (C2C).

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

Innovative multiple-sensor fusion approaches are being developed to improve performance on tracking and identification of time-critical targets.

# Support to Military Operations



## Thread Tour

- DS-17** Analysis Support to Predictive Battlespace Awareness
  - DS-08** Improving Time-Sensitive Team Decision-Making
  - SE-10** Dynamic Scheduling for Command and Control Constellation (C2C)
  - CN-07** Wireless System for Below Decks Shipboard, Underground, and Urban Warfare
- Please also visit:
- DS-15** Applying User Models to Improve Team Decision Making
  - DS-06** Indications and Warning (I&W) for Countering Terrorism
  - CN-11** Mobile Ad Hoc Networks for the Transformed Army (MANTA)
  - SE-12** Multi-Sensor and Multi-Platform Sensor Exploitation for Combat ID