

Multi-Sensor and Multi-Platform Exploitation for Combat ID

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Air Force MOIE

The logo for the MITRE Technology Program, featuring a stylized graphic of stacked blocks in yellow, orange, and blue to the left of the text.

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Problem

- **An unresolved issue with multi-sensor and multi-platform surveillance systems is a robust method of adaptively controlling the sensors to yield optimal target tracking, target classification, and target ID performance.**

Objective

- **Develop and implement adaptive sensor tasking and sensor fusion methods for combat identification (CID) applications using Markov Decision Process (MDP) methods as an analytical framework**
- **Evaluate these approaches using “engineering quality” simulated data**

Activities

- **Develop MDP adaptive multi-sensor tasking and resource management procedures capable of improving target tracking and target ID performance**
- **Develop an “engineering quality” multi-sensor adaptive fusion testbed**
- **Compare the performance of multi-sensor fusion operators that are appropriate for target tracking and target ID applications**

Impacts

- **Combat ID, sensor fusion, and adaptive sensor tasking are integral to multiple ESC programs responsible for acquisition and fielding of fusion and correlation systems**
 - C2C
 - NCCT
 - 707 C2ISR Testbed
 - MC2A
 - Space Based Radar (SBR)
 - DCGS



- **The Multi-Sensor and Multi-Platform Sensor Exploitation for Combat ID MOIE will continue to develop and evaluate sensor processing and exploitation technology to assist in achieving the JV2020 information superiority and Global Awareness visions that are IC2S target end states.**

Future Plans

- Evaluate the performance of MDP adaptive multi-sensor tasking and resource management procedures using an “engineering quality” multi-sensor adaptive fusion testbed

