

Affordable Moving Surface Target Engagement (AMSTE)

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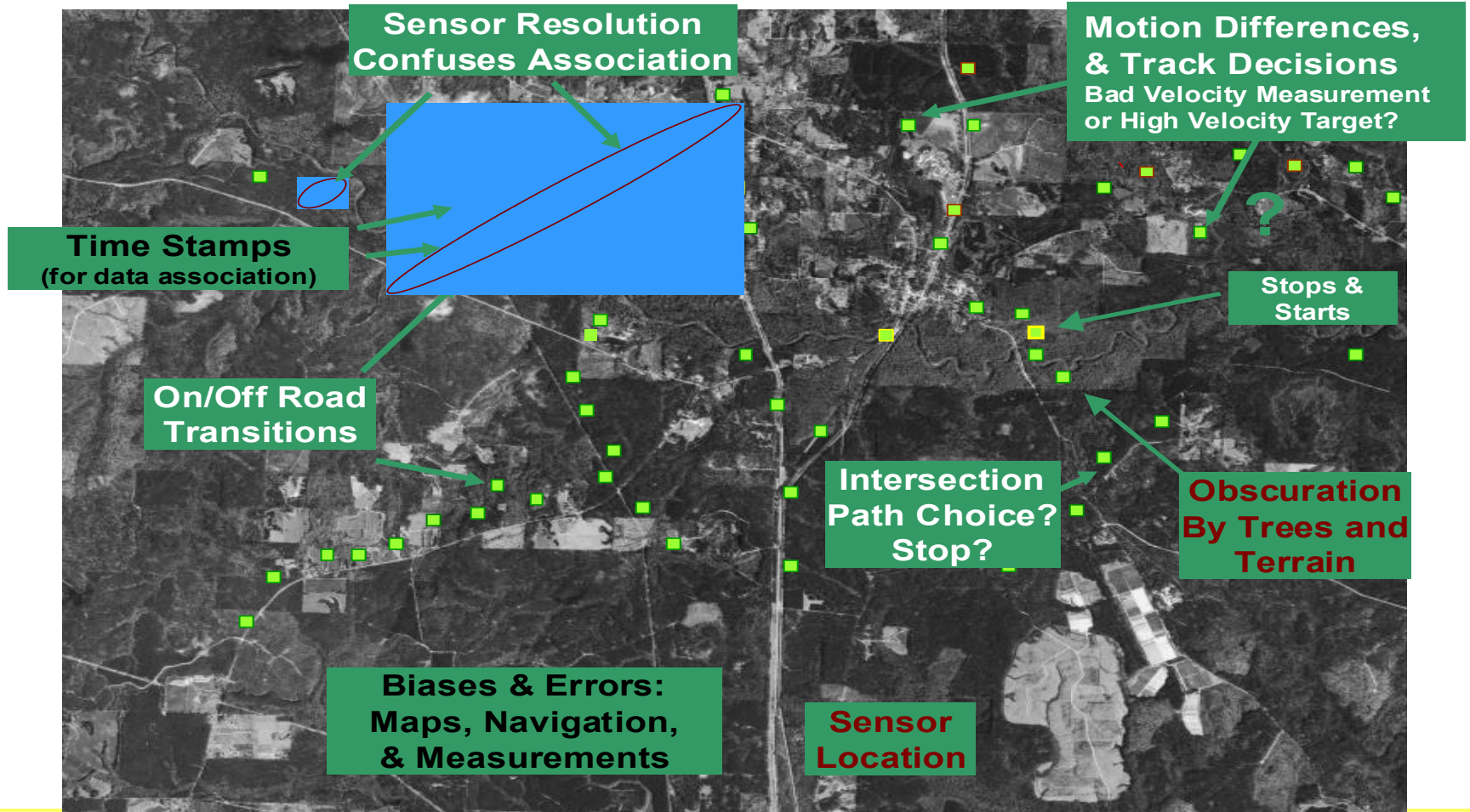
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DARPA/IXO



Problem



GMTI Tracking in Dense and Mobile Target Environments Is Challenging, But Is Required for AMSTE

Background

- Significant Materiel and Technology Investment Has Enabled US Forces to Hold **Fixed** and **Stationary** Targets at Risk
- AMSTE Will Extend US Battlefield Dominance to **Moving** Threats

Objective



- **Develop and demonstrate an all-weather netted system-of-systems approach for networked targeting of moving threats using:**
 - **Multi-platform fused GMTI**
 - **Long-term track maintenance**
 - **Precision fire control tracking (PFCT)**
 - **Guided weapons**

Deny opponents the sanctuary of maneuver



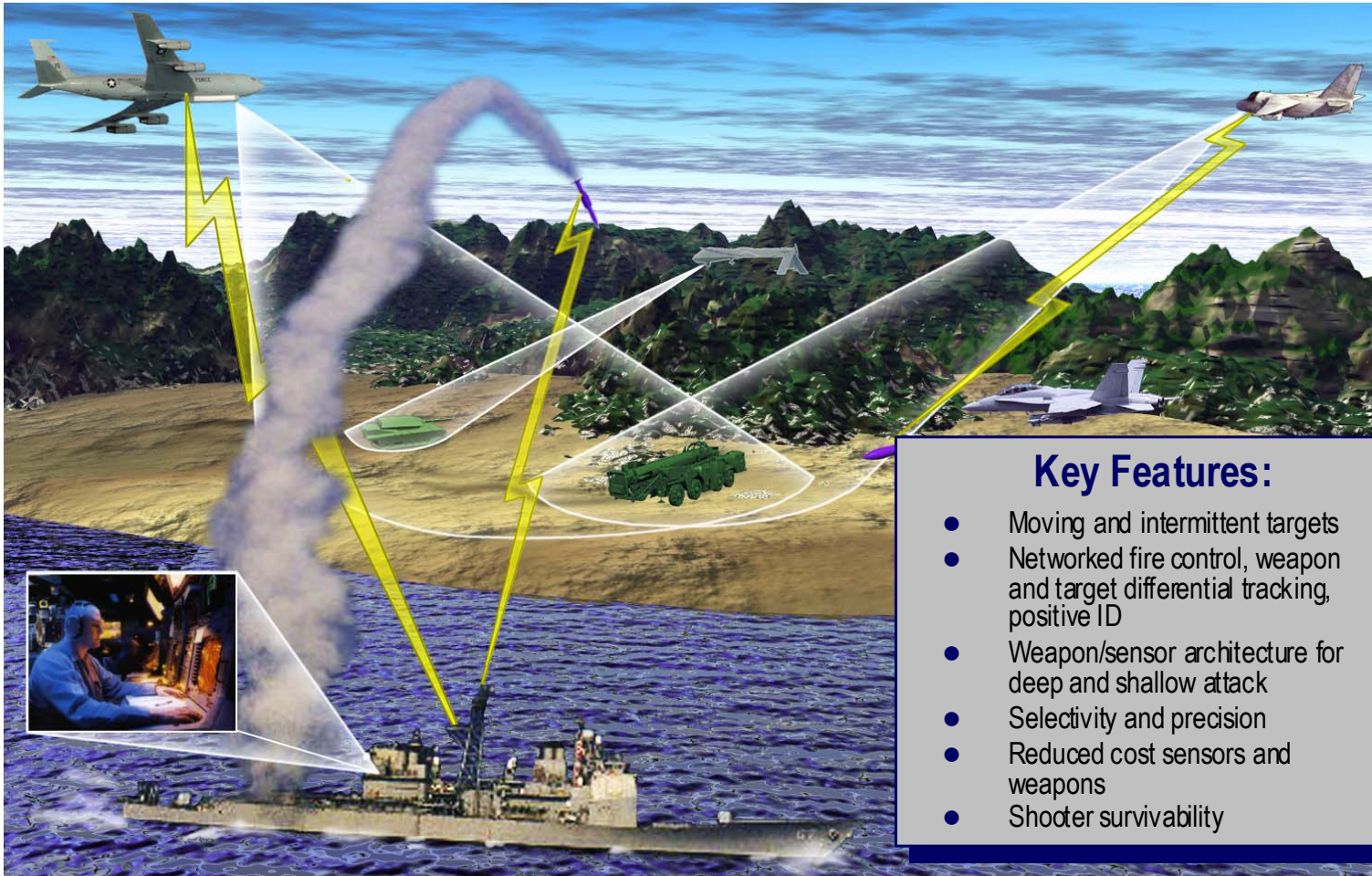
Activities



- **AFRL and MITRE are leading a government analysis team supporting DARPA.**
 - **Includes Lincoln Labs, Toyon, SAIC, Black River Systems and MTSI**
- **MITRE Tasks:**
 - **AMSTE II sensors and tracking analyses**
 - **Feature-aided track maintenance support**
 - **AMSTE II field demonstration support**
 - **Weapons data link support studies to aid sensor-to-weapon communications**



Highlight



Key Features:

- Moving and intermittent targets
- Networked fire control, weapon and target differential tracking, positive ID
- Weapon/sensor architecture for deep and shallow attack
- Selectivity and precision
- Reduced cost sensors and weapons
- Shooter survivability



Highlight

Direct Hit on Moving Truck



Error Budgets Are Established, Managed, & Verified via Experimentation



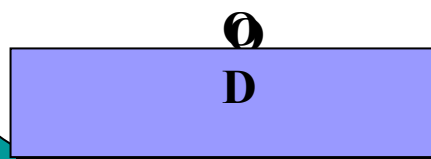
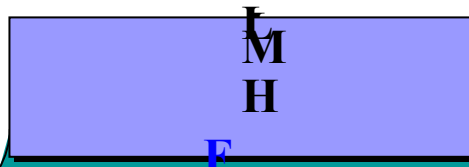
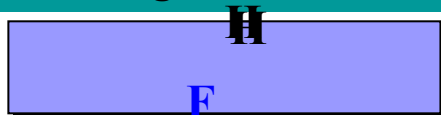
Impacts

- **AMSTE will extend US battlefield dominance to **moving** threats and will deny opponents the sanctuary of movements and maneuver.**



Future Plans

AMSTE Program Provides an Opportunity to Prove TCT Engagement Requirements



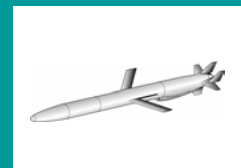
4 Separate Flight Test Series

3 Flight Test Series with Weapon Drop

1 Flight Test Involves Tracker Test Exclusively

User Community Support and Requirements Are Driven from Interoperability Requirements for B2 and Global Hawk Transition Requirement for E8C and

MP-RTIP Equipped E8-D/Global Hawk



AMSTE Experimental Verification of Performance Leads to Rapid Transition to Operational Systems