# Dynamic Scheduling for MC2C

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Air Force MOIE

MITRE Technology Program

# Problem

- Today, there is a lack of understanding on how to design dynamic scheduling or retasking algorithms to optimize MC2C cross-platform operations.
  - Multiple sources of tasking
  - Dissimilar platforms
  - Dissimilar yet complementary functions
  - Multi-mode platforms
- Effective utilization of the MC2C constellation requires that we obtain efficient solutions to cross-platform tasking.
  - Pre-planned operations
  - Pop-up, time critical targets
  - Additional tasking from multiple sources with multiple priorities

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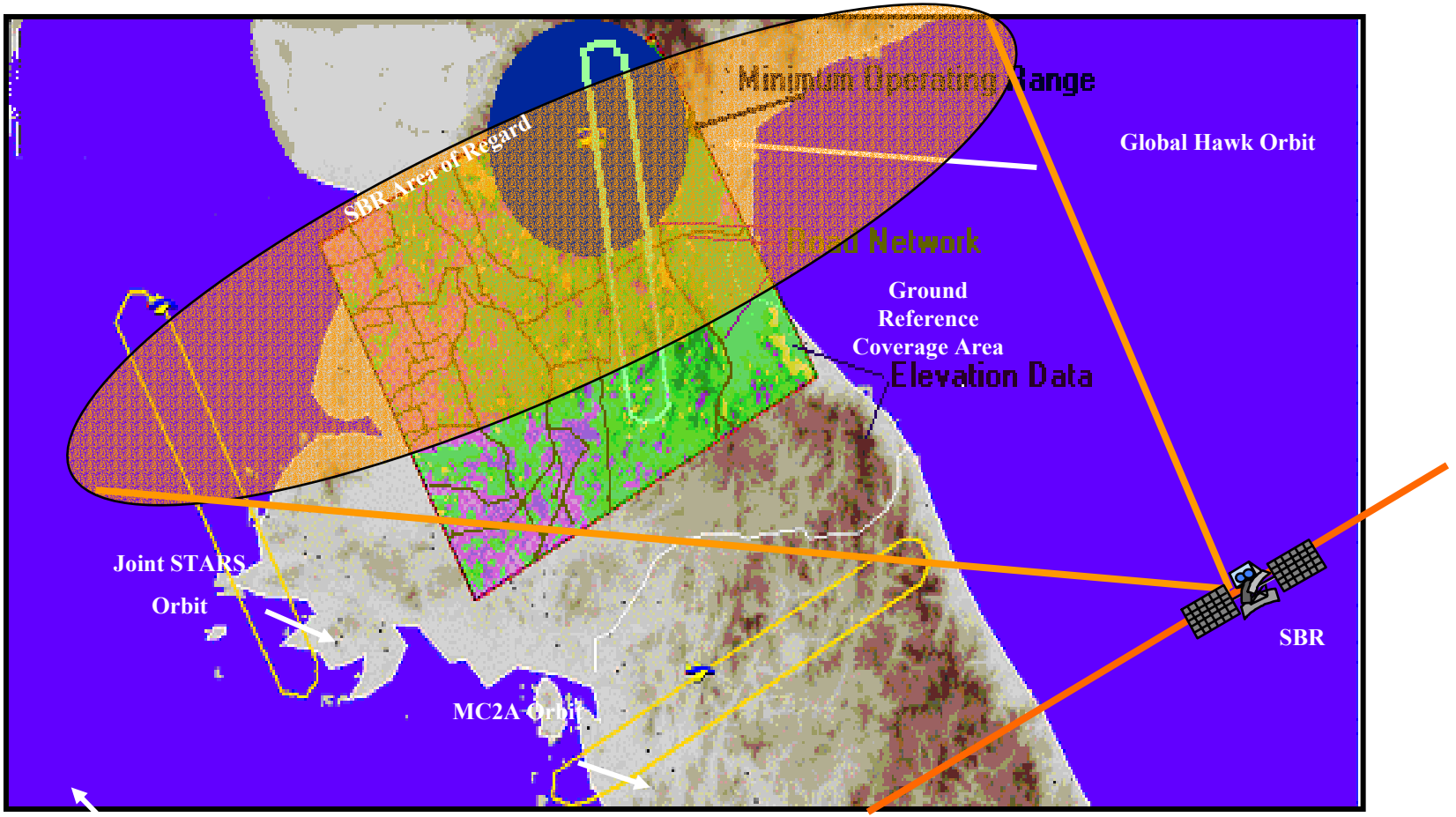
# Background

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# Objectives

- Develop techniques to automate real-time dynamic management of platforms and sensors
  - High degree of machine assistance
  - Human-in-control oversight
- Develop strategies to
  - Achieve efficient operational performance
  - Optimize performance of MC2C ground moving target detection and intelligence, surveillance, and reconnaissance assets

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# Activities

- Investigate alternative resource allocation concepts using existing MC2C sensor and sensor control models
- Apply decision support theory to enable robust planning and dynamic retasking under conditions of uncertainty
- Coordinate multi-asset collection plans to service pre-planned and “pop-up” high priority targets and tasks

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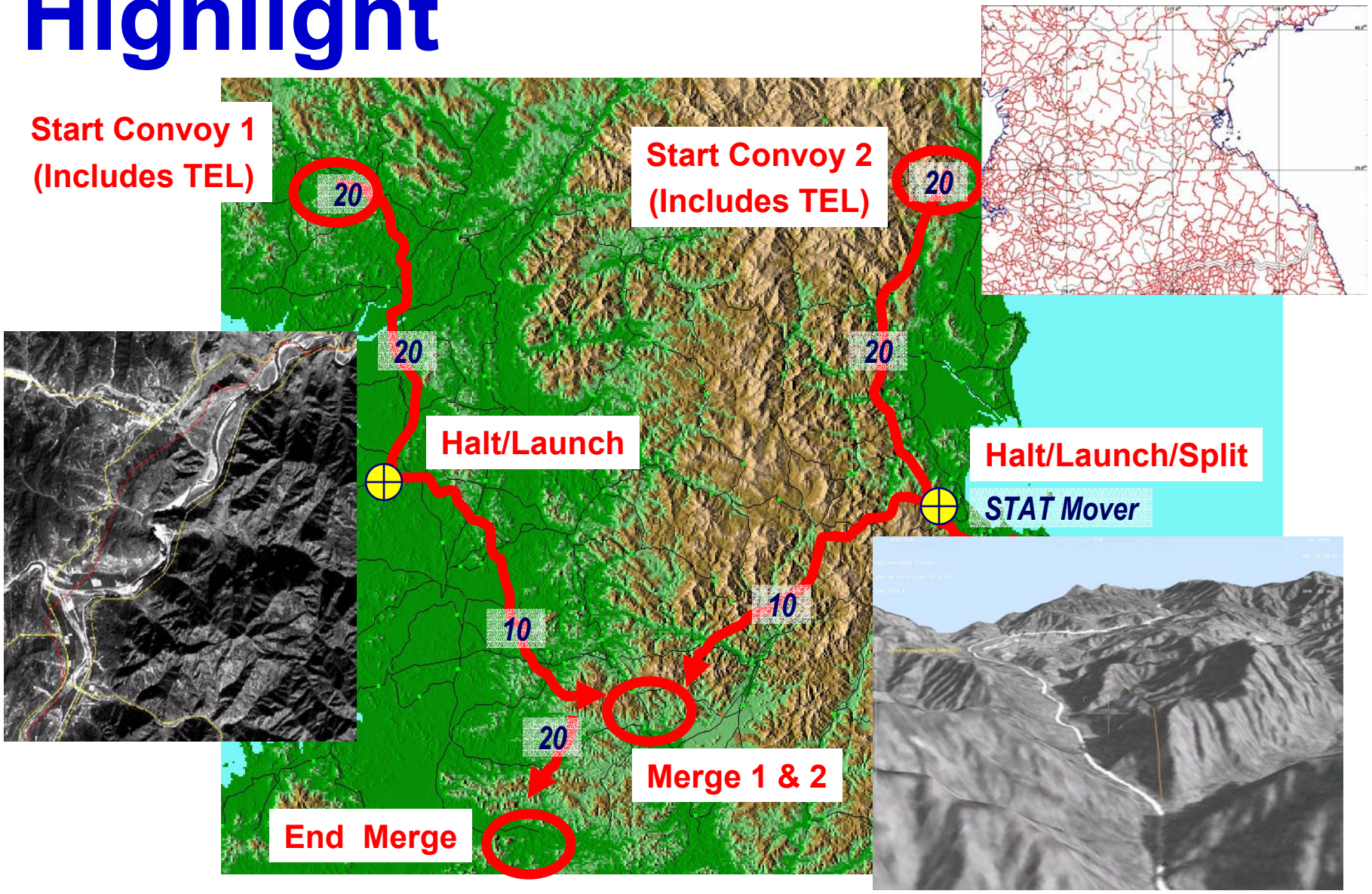
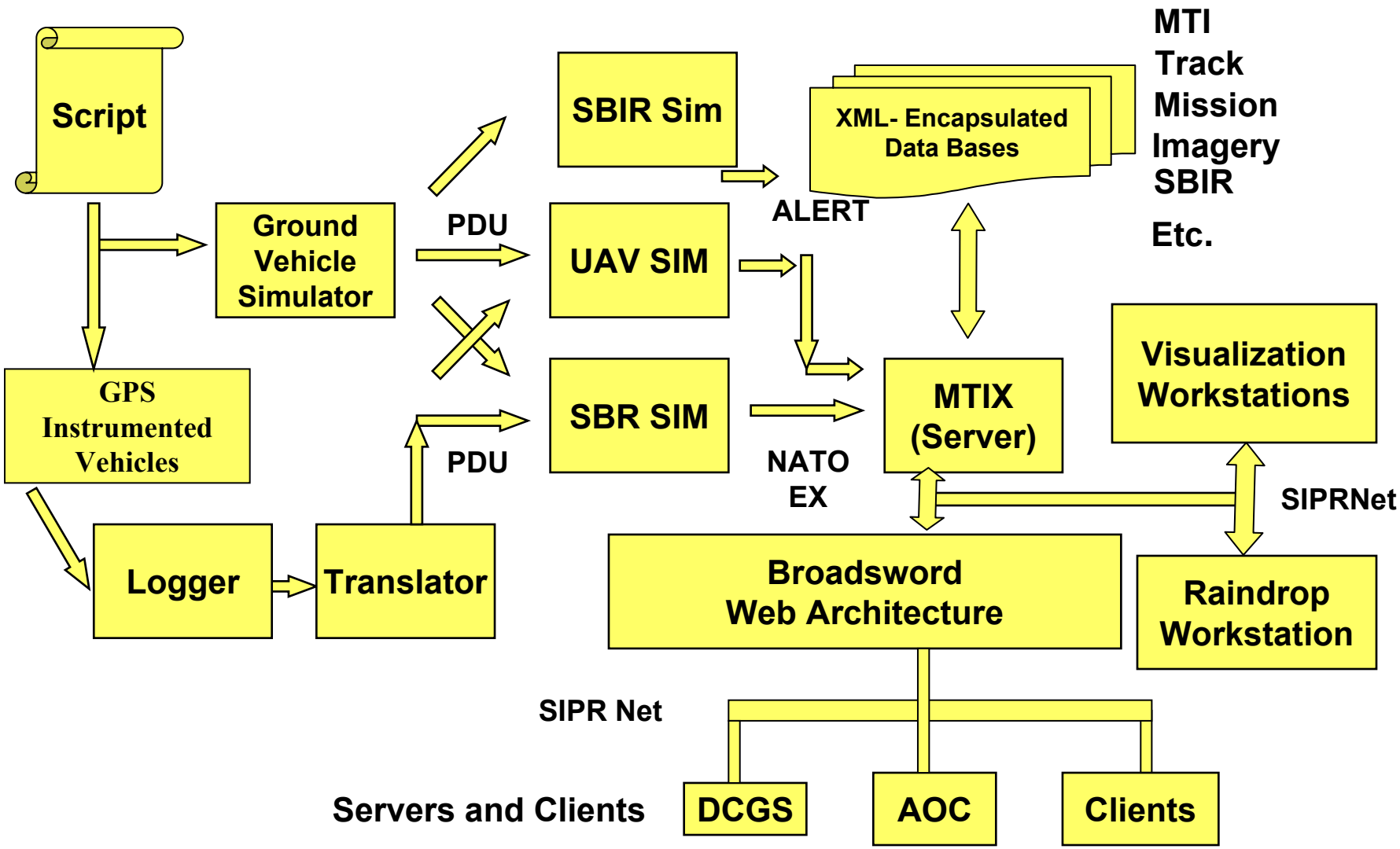
# Highlight



# Highlight

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# Impacts

- Help build sound technology base from which ESC can execute a robust integrated BMC3 program in support of MC2C
  - Support Multi-Mission Command and Control Aircraft and Radar Technology Improvement Program studies
  - Support interfaces to national community
  - Support space-based radar acquisition
  - Support Ground Moving Target Indication Assessment of Alternatives

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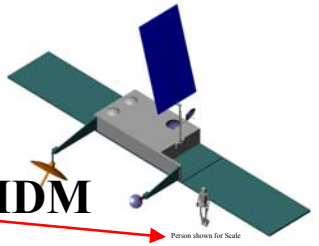
# Future Plans

**Real-Time**
**Operator in the Loop**
**Exercises**



PC-IDM

JSTARS

MTI / SAR data

Link-16

Gridlocking

EPLRS

Link-16

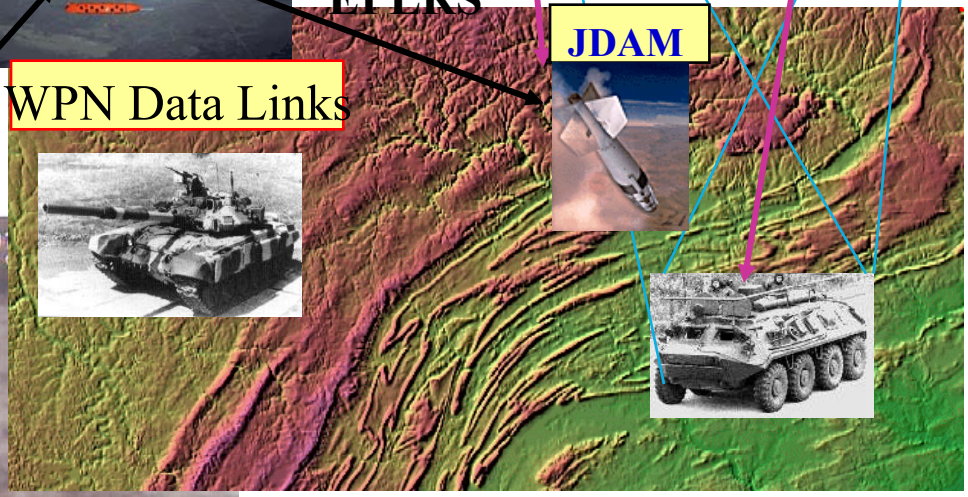
JDAM

WPN Data Links

JSOW













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