

**RDECOM**

# US Army Human Systems Integration UAS Efforts

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August 2001. Other requests for this document shall be referred to the U.S.  
Army RDECOM, ATTN: AMSRD-AMR.



**TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.**

11 August 2009

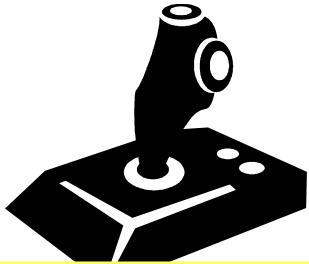
*Presented by:*

**Jay Shively, AFDD**

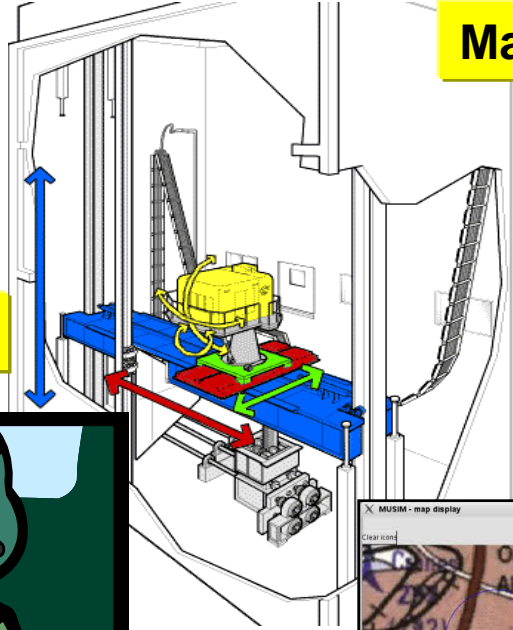
**Human Systems Integration, Lead  
Aviation and Missile Research,  
Development and Engineering Center**

**TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.**

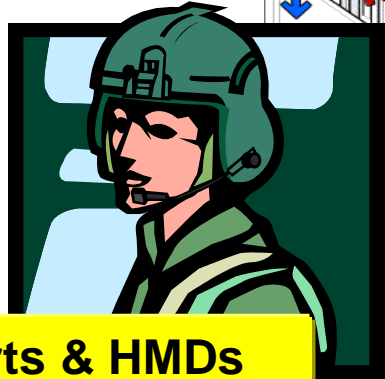
# Single Operator Background



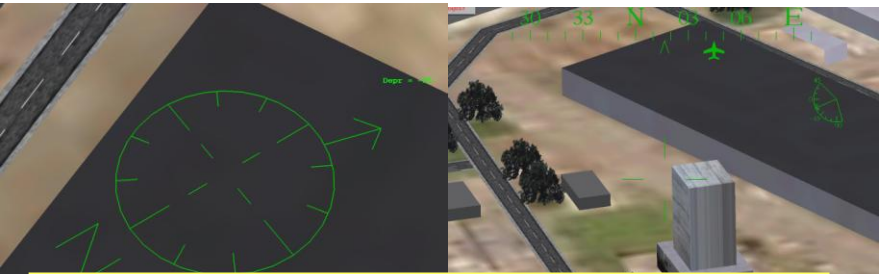
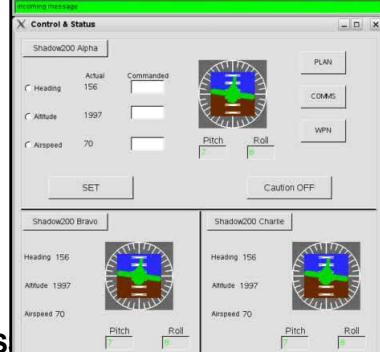
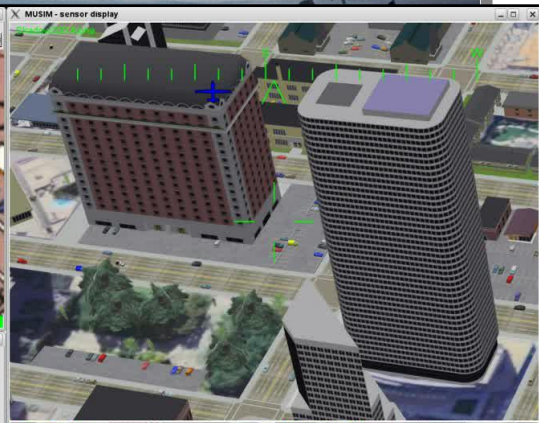
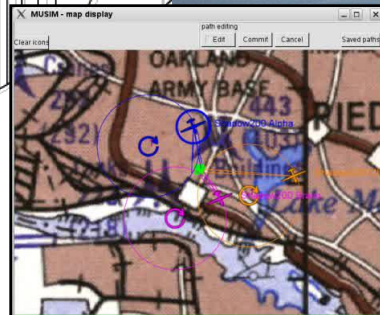
**Payload Control Devices**



**Manned-Unmanned Teaming**



**3-D Audio Alerts & HMDs**



**Payload Symbology Assessment**

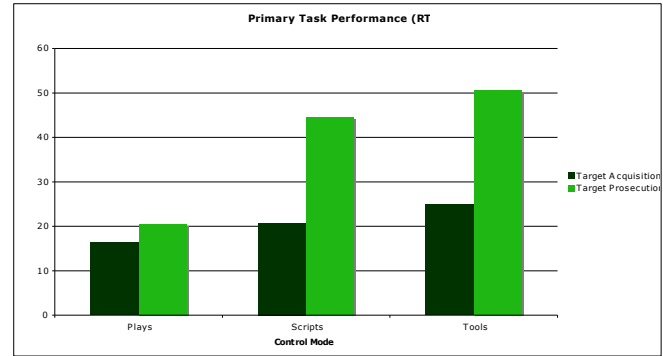


**Multi-UAV Control**

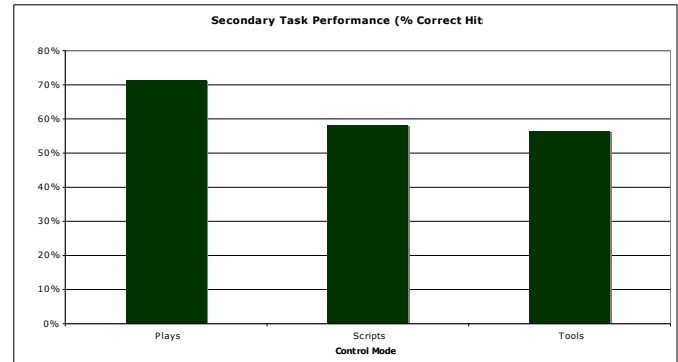
# UNCLASSIFIED Delegation Control: Playbook



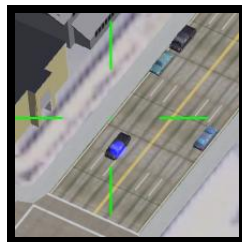
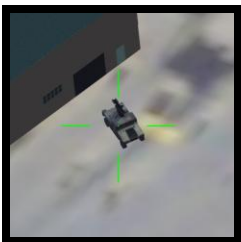
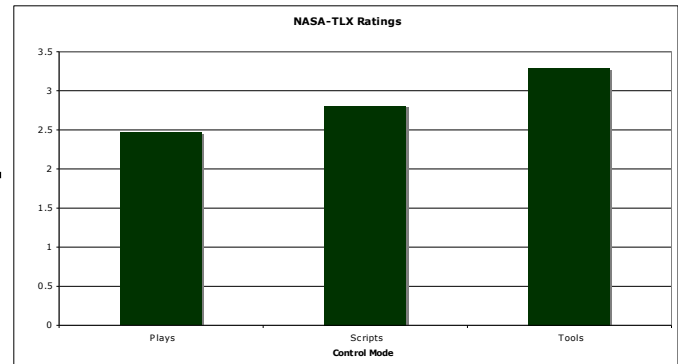
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## Goal:

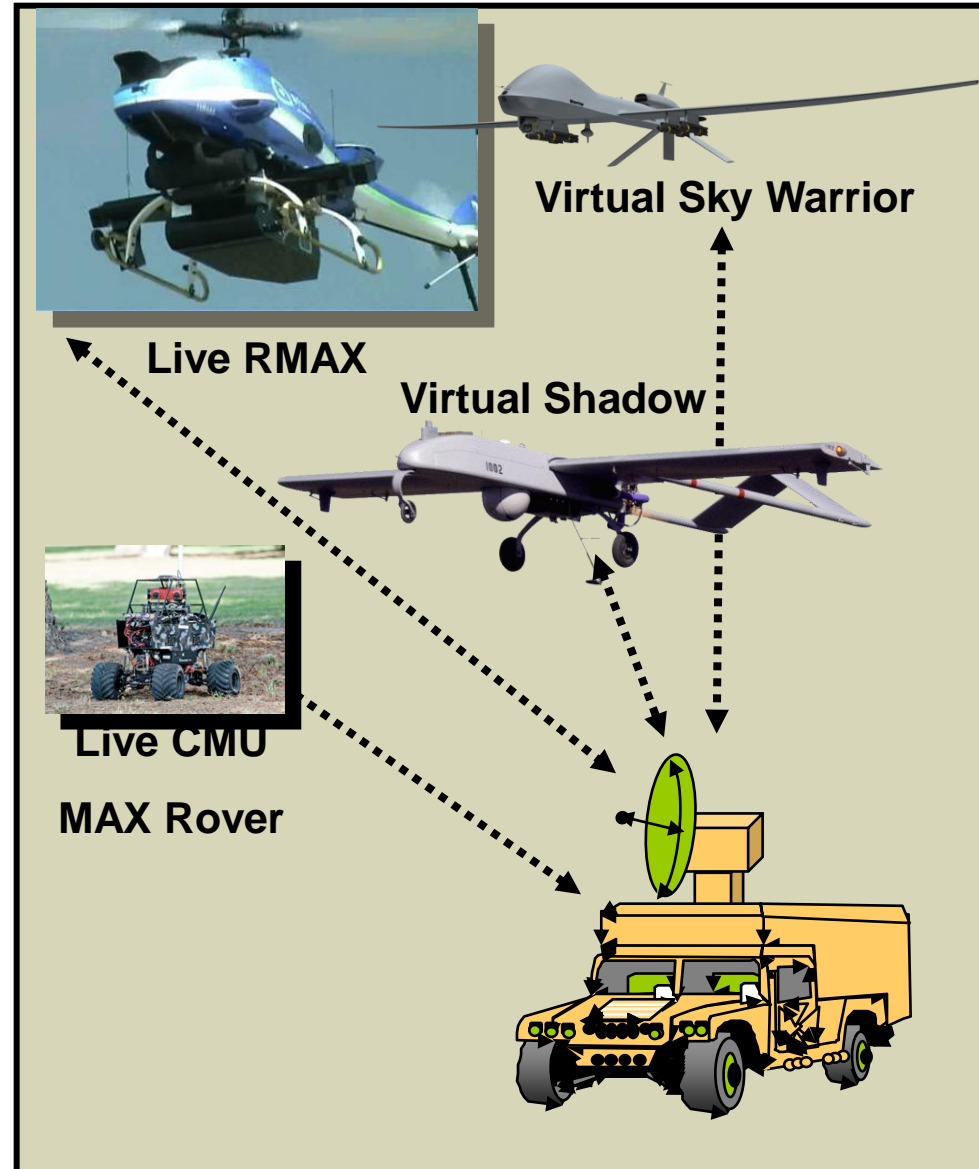
- Demonstrates Delegation Control (Playbook) in flight – supervisory control of multiple air/ground assets in MOUT Scenario

## Method:

- Live/Virtual Demo – Controlling RMAX, CMU MAX Rover and 2 virtual UAS with Delegation Control
- Voice RGN Control (USAF)

## Features:

- Delegation control human-machine interface supports control and monitoring 4 payloads
- Automation Transparency
- Live UGV-UAV coordination for slung load drop
- Reduced operator workload/ high situation Awareness



- Single operator control of Multiple UAS
- Airspace De-confliction
  - NAS
  - Battlefield
- Interoperability
  - Training/Selection
- Manned-Unmanned Teaming
- Sensor Interpretation/Augmentation