Live-Virtual-Constructive Distributed Environments in Support of Test and Evaluation

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Air Force Agency for Modeling and Simulation

NDIA 22nd Annual National Test and Evaluation Conference
Outline

LVC Distributed Environments in Support of T&E

- Air Force Agency for Modeling and Simulation (AFAMS) Mission
- Air Force Modeling and Simulation (M&S) Thrusts
  - Accelerated Acquisition
- Live-Virtual-Constructive (LVC) Distributed Environments
  - Air Force Integrated Collaborative Environment (AF-ICE)
  - Joint Mission Environment Test Capability (JMETC)
- Test and Evaluation Activities using LVC Distributed Environments
  - Multi-Service Distributed Event (MSDE)
  - Joint Expeditionary Force Experiment (JEFX)
- Joint Test and Evaluation (JT&E) / Joint Feasibility Study (JFS) Activities using LVC Distributed Environments
  - Joint Test Environment Methodology (JTEM)
  - Joint Command and Control of Net-Enabled Weapons (JC²NEW)
- Our Future
  - Net-Centricity and Ultimately Net-Enabled Decision-Centricity
  - Testing in a Joint Environment
  - Key Pieces to Success

Integrity - Service - Excellence
Role

*Air Force lead for translating policy/direction into effective M&S capabilities integrated across the Air Force and with the rest of the Department of Defense*

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<th>Chain of Command</th>
<th>Laying the Foundation</th>
<th>Warfighter Applications</th>
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<td>SAF/XC</td>
<td>Databases/Repositories</td>
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<td>SAF/XCO</td>
<td>Standards/Coord Tools</td>
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<tr>
<th>People</th>
<th>Building the Community</th>
<th>Concept Visualization</th>
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<tr>
<td>74 Total</td>
<td>Publicizing M&amp;S Story</td>
<td>Portal into M&amp;S Exercises &amp; Activities</td>
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<td>19 Military</td>
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Air Force M&S Thrusts
AF-ICE is to Acquisition what DMO is to Training
Begin with the End in Mind . . . T&E

**Goal** – Reuse data across the acquisition timeline… reduces risk and cycle time
Joint Mission Environment Test Capability (JMETC)
Joint Expeditionary Force Experiment (JEFX)

- JEFX ’06: Exploration of Network Centric Operations (NCO)
  - 9 Air Force Initiatives (ConstellationNet, AOC Fusion, Homeland Defense, etc)
  - 5 Army Initiatives (Future Combat Systems)
  - 1 Navy Initiative (Global Hawk Maritime Demonstration)

- Theater Battle Management Core Systems (TBMCS) Version 1.1.4 Development Test
  - Theater Battle Operations Net-centric Environment (TBONE)
  - Spirals Nov 05, Jan 06, Mar 06
  - Execution Apr-May 2006

- JEFX ’08 Theme to Focus on Joint Command and Control
Net-enabled weapons complete the “Kill-Chain” – from desired actions to direct effects on the battlefield, while providing the conduit for near-real-time feedback to decision makers.
**Net-Centricity**

**Platform-Centric Operations**
- Limited Situational Awareness
- Limited Real Time Control
- Limited En Route Planning

**Net-Centric Operations**
- Distributed Forces
- Family of Integrated Operational Pictures
- Real Time Situational Awareness
- Precision Engagement
- En Route Planning & Targeting

*The Ultimate End State is Decision-Centric Operations*  
*Employing a Network-Centric Infrastructure*  
*“NETWORK-ENABLED WARFARE”*
Decision-Centricity
Joint Integration through the Global Information Grid
Key Pieces to Success

Experimentation

Development

T&E

Integration
Key Pieces to Success
An Iterative Cycle

Integration
Integration
Integration

Experimentation
T&E
Development

Integrity - Service - Excellence
Key Pieces to Success
An Iterative Cycle
AFAMS
Advancing Air Force M&S
To Support the Warfighter