Headquarters U. S. Air Force

The Air Force’s Perspective

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Modeling and Simulation (M&S)

- M&S – “The Good”
  - F/A-22
  - Ranges
  - Hardware in the Loop

- M&S – “The Bad”
  - Complex Threat Simulators
M&S – A Word of Caution

- Joint Modeling and Simulation System (JMASS)
  - Requirements Creep
  - *We built but they did not come*
  - Blue Model Challenge
T&E Resources

- National Defense Authorization Act (NDAA) ’03
- Support Contractor Reduction (25%) over FYDP
- Personnel Reductions
- Smart Operations 21 (SO-21)
F-35 JSF Testing Challenges

- International Partner Participation
  - Desired Level of Involvement
  - Data Requirements
  - Security Guidelines
Initial Operational test and Evaluation (IOT&E)

- “Effective” – adequate to accomplish a purpose
- “Not Effective” –
- Experience
  - JSTARS
  - Predator
Performance Improvement

1. Make operational testing more realistic, time and resource constrained, and limited in its ability to create additional performance requirements.

2. Create a new category for Initial Operational Test and Evaluation results that allows Combatant Commanders to accept useful capabilities for deployment which the Director of Operational Test and Evaluation would otherwise determine to be Not Operationally Effective.

3. Require that test planning and criteria development for Operational Test and Evaluation reflect testing in environments and against the range of threats that are identified by the Combatant Commander -- not by the test community.

4. Give Program Managers explicit authority to defer non-Key Performance Parameter related requirements to later acquisition . . .

5. Require Joint Requirement Oversight Council approval of all test plans that require operational testing in environments other than those established in the Test and Evaluation Master Plan.
## Critical Operational Issues (COI) Rating Definitions

<table>
<thead>
<tr>
<th>COI Rating</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Fully Mission Capable (FMC)</td>
<td>Mission can be accomplished in the intended operational environment</td>
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<tr>
<td>Mission Capable (MC)</td>
<td>Mission can be accomplished, but with increased operational cost</td>
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| Partially Mission Capable (PMC) | Only some aspects of mission can be accomplished  
and/or    Mission can only be accomplished under some conditions |
| Not Mission Capable (NMC)   | Mission cannot be satisfactorily accomplished                               |