

# **M&S Leadership Summit**

## **Professional Development**

**The purpose of this discussion area is to identify the most serious problems with the development of Modeling and Simulation professionals, including initial and continuing education, certification, and workforce metrics.**

**Bill Tucker**

**The Boeing Company**



# M&S Leadership Summit

## Status of Issues from 2006 Summit

<b>Top Issues</b>	<b>Recommendation</b>	<b>Status</b>
<p><b>M&amp;S Knowledge Skills, and Abilities</b></p> <ul style="list-style-type: none"> <li>- Identify Body of Knowledge (BOK)</li> <li>- Sponsor M&amp;S Research to enhance BOK</li> <li>- Establish industry and labor codes to track workforce size and investment</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Establish National M&amp;S Advisory Council</i></li> <li>• <i>Charter body to sponsor M&amp;S research</i></li> <li>• <i>Support establishment of DOL/DOC tracking codes</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Concept paper drafted</i></li> <li>• <i>Significant effort applied to DOL/DOC. Neutral to negative response</i></li> </ul>
<p><b>Workforce Development</b></p> <ul style="list-style-type: none"> <li>–M&amp;S accreditation standards</li> <li>–Education and curricula standards</li> <li>–Make education resources broadly accessible</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Charter National body to establish M&amp;S accreditation standards</i></li> <li>• <i>Support establishment of education standards</i></li> <li>• <i>Support establishment and acceptance of professional certification</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>None</i></li> </ul>
<p><b>Workforce Management/Maintenance</b></p> <ul style="list-style-type: none"> <li>–Provide resources for workforce development projects</li> <li>–Continue and grow existing service programs</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Charter and support National body to provide M&amp;S research grants</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>None</i></li> </ul>

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## Issues for Consideration in 2007

- M&S Knowledge Skills, and Abilities
  - Identify Body of Knowledge (BOK)
  - Sponsor M&S Research to enhance BOK
  - Establish industry and labor codes to track workforce size and investment
- Workforce Development
  - M&S accreditation standards
  - Education and curricula standards
  - M&S professional certification
  - Make education resources broadly accessible
- Workforce Management/Maintenance
  - Provide resources for initiative to expand workforce development projects across government.
  - Continue and grow existing DoD Service M&S workforce programs

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## Professional Development

- **IDENTIFICATION:** M&S Knowledge Skills, and Abilities
- **CIRCUMSTANCES:**
  - National Body/Council Concept white paper drafted, circulating
  - Significant effort applied to DOL/DOC. Neutral to negative response
  - Effort under weigh on Body of Knowledge Index
- **ISSUE/OPPORTUNITY:**
  - Support National Body/Council concept to coordinate BOK development, enhancement
  - Identify Body of Knowledge (BOK)
  - Sponsor M&S Research to enhance BOK
  - Establish industry and labor codes to track workforce size and investment
- **PROPOSED ACTIONS:**
  - Support ongoing broadly participatory program to identify BOK
  - Charter body to sponsor M&S research to extend BOK, following research agenda
  - Support establishment of DOL/DOC tracking codes to support need prioritization

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## Professional Development

- **IDENTIFICATION:** Workforce Development
- **CIRCUMSTANCES:**
  - Increased M&S offerings from several universities
  - Work toward undergraduate M&S education program in Arizona
  - M&S skill code in major industry
- **ISSUE/OPPORTUNITY:**
  - M&S accreditation standards
  - Education and curricula standards
  - Make education resources broadly accessible
- **PROPOSED ACTIONS:**
  - Charter National agency to establish M&S accreditation standards
  - Support establishment of education standards
  - Support establishment and acceptance of professional certification

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## Professional Development

- **IDENTIFICATION:** Workforce Management/Maintenance
- **CIRCUMSTANCES:**
  - Better coordinated approach to DOL, DOC
  - Multiple local activities
- **ISSUE/OPPORTUNITY:**
  - Improved cooperation among initiatives
  - Provide resources for workforce development projects
  - Continue and grow existing service programs
- **PROPOSED ACTIONS:**
  - Collect labor and industry metrics to guide industry and academic investment in the workforce
  - Charter and support National body to coordinate and lead M&S prioritization, leading to academic recognition

# M&S Leadership Summit

## Professional Development *Out Brief*

The purpose of this discussion area is to identify the most serious problems with the development of Modeling and Simulation professionals, including initial and continuing education, certification, and workforce metrics.

**Chair:**

**Bill Tucker**



# M&S Leadership Summit

## Out Brief – *(Professional Development)*

<b>Top Issues of 2007</b>	<b>Actionable Recommendation</b>
<b>M&amp;S Education</b> <i>Professional and continuing education, as well as undergraduate through PhD academic education</i>	<b><i>Establish M&amp;S as National Critical Technology to seed investment in M&amp;S Education</i></b>
<b>M&amp;S education in K-12</b> Use M&S to both increase interest in field, and to teach math, science, and technology	<b><i>Working with other education oriented Caucuses, encourage application of M&amp;S to attract, motivate, and educate students</i></b>
<b>Improve, Strengthen Certification Program</b> Add levels and areas of certification, obtain broader adoption, less competition	<b><i>Endorse requirement for rigorous M&amp;S certification in government programs</i></b>



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Out Brief – *(Professional Development)*

<b>Top Issues of 2007</b>	<b>Actionable Recommendation</b>
<b>Department of Labor and Commerce Statistics</b> Provide data about business and workforce numbers, economics	<i>Endorse and support Industry efforts to establish tracking codes for businesses and individuals</i>
<b>Establish and support Body of Knowledge</b> Maintain BOK as basis for education, certification, and research programs	<i>Establish M&amp;S as a National Critical Technology</i>
<b>National M&amp;S Entity</b> Body to provide research grants, support certification programs, accredit education programs, provide visibility of industry	<i>Participate in development of strategic plan, support results</i>

