M&S Leadership Summit 2009
In cooperation with the
Congressional Modeling and Simulation Caucus

Led by:
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• Discussion of numerous individual projects with companies, such as John Deere, in which M&S technologies were applied to improved production performance. The production time for the company was improved substantially through the use of system modeling technologies.

• There are several plans across states to identify the use of M&S technologies to improve performance of business processes and capabilities.

• A need identified by the universities for continued emphasis on research and development initiatives, and on funding to support the use of M&S in new and emerging areas, such as homeland security and homeland defense.

• A call for the region to come together to create a stronger voice for M&S across their states, and across regions of the central and south central United States.

The legislative issue identified by the panel is:

• Continue the commitment of R&D dollars to encourage the development of common architectures for applicability of M&S technologies across domains.

Panel #4: Regional Initiatives in Modeling & Simulation: Far West

Moderator: Mr. Fred Hartman, Institute for Defense Analyses

Panelists: Dr. Ron Fuchs, The Boeing Company

Mr. John Illgen, Northrop Grumman

Dr. James Peery, Sandia National Laboratories

CDR Joe Sullivan, MOVES Institute

The Far West Panel was comprised of leaders in modeling and simulation from government, academia and industry. Several recurring ideas came across in this panel that was perhaps unique from other panels. One such point was to reinforce the need and applications for M&S in the test and evaluation process, both on the government acquisition side and from industry as they bring their products to market. Both government and industry panelists agreed on this point. Another was the challenge of moving to enterprise level M&S infrastructure and reuse in the emerging service oriented architectures being embraced across industry and government.

The comments made by the panel members included commentary from government, academia and industry. A summary of the highlights of this panel include:
M&S LEADERSHIP SUMMIT
2009 Report

- A description of the Naval Postgraduate School's Modeling Virtual Environments and Simulation (MOVES) Institute. MOVES, an academic program, was founded in 1996 with the launch of the Master of Science program, followed by the Doctoral program in 1999. Its program purpose is to research and reorganize the way we look at problems. Some of the key issues going forward were identified as: increasing enrollment of civilians and placement of MOVES graduates; continued evolution of the research agenda; improving M&S interoperability, composability and reuse through improved VV&A; and leveraging medical simulation advances.

- Sandia Labs provides a classic example of the necessity for using M&S for design, testing and certification when for reasons of safety, security and treaties, live testing is not an available or economic option. Key national leadership is provided in the area of research in high performance computing (HPC). The challenges in this area include: getting the work done by the traditional super computers on a chip the size of a dime that has the same peak performance, power and sustainability issues, and leveraging existing M&S software base.

- From an industry perspective, The Boeing Company has experienced 48% savings as a result of increased use of M&S in aircraft manufacturing processes and believes that M&S can replace large amounts of testing. The Operational Test and Evaluation community is frequently told to perform extensive live testing by OSD or Congress that could be more productive if properly integrated with an M&S program. Decision support and training also can benefit from greater use of M&S in broader areas (whole of government), examining unintended consequences (second order effects) and rapid model development using game concepts.

- With respect to simulation-based acquisition issues and initiatives, M&S applications should be employed through all processes and spanning the life cycle of SBA, as it can serve to reduce risk and cost throughout the system acquisition life cycle. The applications range from concept analysis to system/platform/weapon system design and development.

The legislative issues identified by this panel are:

- Continue Congressional level interest and support for HPC technologies
- Provide incentives for research into massively parallel computing in M&S applications
- Facilitate the establishment of STEM initiatives to provide the future technical workforce required to maintain the US competitive position across M&S domains and related applications
- Establish an M&S infrastructure to coordinate, facilitate, and apply M&S to the systems acquisition process
- Develop an in-depth DoD-wide M&S Plan
- Select experienced personnel to lead/report on M&S to the USD(AT&L)