

VIEW FROM THE TOP: MILITARY CHALLENGES FOR THE SIMULATION COMMUNITY

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ABSTRACT

The Department of Defense (DoD) has become increasingly reliant on models and in particular on simulation models. The military-defense establishment and its combat-preparation orientation is one of the most complex systems in existence, particularly in the extremely dynamic modern world. Simulation models form the basis for analyses spanning issues ranging from force structuring to acquisition prioritization. These analyses, and the subsequent decisions they support, mold and shape the DoD thereby influencing the posture of the US defense establishment. This panel brings together a set of the military's influential decision makers directly involved in the development and use of simulation models. The panel will discuss their current and anticipated needs for the future of simulation and pose the challenges the simulation community must meet to ensure those future needs are met.

1 INTRODUCTION

The Department of Defense (DoD) has become increasingly reliant on models and in particular on simulation models. The military-defense establishment and its combat-preparation orientation is one of the most complex systems in existence, particularly in the extremely dynamic modern world. Simulation models form the basis for analyses spanning issues ranging from force structuring to acquisition prioritization. These analyses, and the subsequent decisions they support, mold and shape the DoD thereby influencing the posture of the US defense establishment.

The DoD and the Services rely heavily on Modeling and Simulation (M&S) and are in the process of completing a new DoD M&S Master Plan. Two of the stated goals of DoD M&S are 1) to enable an iterative process of innovation and experimentation that permits new insights to guide future investments decisions and 2) to support capability needs analysis, concept definition, analysis of alternatives, the acquisition of systems (and systems of systems), and the continuous test and evaluation of those systems.

2 CHALLENGES

Some of the challenges for DoD M&S analytical tools is that they must permit the evaluation of key emerging war-fighting concepts and capabilities such as Effects Based Operations, Special Operations, Information Operations, Network Centric Warfare, and Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR). In order for the DoD to perform analyses of these emerging concepts and capabilities, a couple of things must occur. They include the following. First, a partial but not a complete move away from the bounding threat scenarios currently employed. As the DoD moves toward capabilities based analysis, the threat environment must still be considered but more importantly other phases of conflict must also be considered. Secondly, a framework for analysis must be built which integrates the contributions of all combat capabilities that can be measured – no stovepipe analysis focused on single military system capabilities.

3 CONCLUSION

This panel brings together a set of the military's influential decision makers directly involved in the development and use of simulation models. The panel will discuss their current and anticipated needs for the future of simulation and pose the challenges the simulation community must meet to ensure those future needs are met.

PANEL MEMBER BIOGRAPHIES

DR. GEORGE AKST is the Deputy Director of the Studies and Analysis Division, Marine Corps Combat Development Center. The Studies and Analysis Division serves as the cognizant agency for the Marine Corps on all matters pertaining to studies and operations analysis. Specifically, the division provides: study and analytical support to the Marine Corps' combat development process; assists the Fleet Marine Forces and other Marine Corps agencies with operations analysis support; and conducts a continuing

program of studies and analysis to assist the Marine Corps in making decisions concerning combat development and applications of warfighting capabilities.

JIM BEXFIELD, a member of the Senior Executive Service, is the Director of the Study and Analytical Support Division, Program Analysis and Evaluation, Office of the Secretary of Defense. Mr. Bexfield is responsible for the development of the Department of Defense's next generation campaign-level model called Joint Warfare System (JWARS), conduction studies and analysis, and providing data for Department of Defense studies.

LISA DISBROW, a member of the Senior Executive Service, is the Deputy Director for Wargaming, Simulation and Analysis, Force Structure, Resources, and Assessment Directorate (J-8), the Joint Staff. Ms. Disbrow is responsible for planning and accomplishing exercises, demonstrations, experiments, war games, studies and analysis, including politico-military gaming and total military force capability analyses, conducted by the J-8 Directorate; and qualitative and quantitative gaming and analysis methods involving participation by the Services, the unified commands, the Joint Staff, the Directorates, Defense agencies, foreign nations, other government organizations, and the private sector. She is also responsible for defining, developing, acquiring, operating, and managing the life cycle of models and simulations, operations research tools, decision support tools and automation support systems used by the Directorate and its subordinate organizations.

DR. W. FORREST CRAIN, a member of the Senior Executive Service, is the Director of Capability Integration, Army Deputy Chief of Staff for Operations (ODCS, G3). He ensures that ODCS, G-3 priority information requirements are identified and effectively supported using analysis, analytic simulations, information management, and command, control communications and computers for Information Infrastructure Systems. ODCS, G-3 functional areas include: strategy formulation; politico-military policy; joint matters; force management; user testing; mobilization doctrine, planning, programs; training policy, resource management; security; readiness management; special weapons; space applications; programmatic planning and prioritization; Army command and control; and military support to civilian authorities.

DR. JACQUELINE R. HENNINGSSEN, a member of the Senior Executive Service, is the Director, Air Force Studies and Analyses Agency, Office of the Vice Chief of Staff, Headquarters U.S. Air Force, Washington, D.C. In this position, she leads the Headquarters Air Force Direct Reporting Unit responsible for independent decision-aiding studies for the Chief of Staff and the Secretary of the Air Force.

GREG MELCHER, a member of the Senior Executive Service, is the Deputy Director of the Assessment Division, Deputy Chief of Naval Operations for Resources, Requirements and Assessments. The Assessment Division provides capability based analyses and assessments of the complex naval warfare and support requirements and serves the Navy staff by providing campaign analysis support and providing overarching Planning, Programming, Budgeting System (PPBS) analysis and guidance.

AUTHOR BIOGRAPHIES

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