

the *economics* of Modeling and Simulation

The Simulation Based Acquisition conference on 14 May in Washington, D.C raised concerns, and 'good ideas' that apply not only to SBA but to M&S in support of the commercial product system life cycle as well.

One of the functions of this column is to broadly communicate information about events and activities that might otherwise reach only a limited audience. An instance of such an event, which I believe is both interesting and significant for the entire modeling and simulation community, was conducted during the week of 14 May in Washington, D.C., and addressed building the "business case" for simulation-based acquisition.

The US Department of Defense has established an initiative denoted *Simulation Based Acquisition* (SBA). SBA is conceived to be "[a]n acquisition process in which DoD and Industry are enabled by robust, collaborative use of simulation technology that is integrated across

of Defense for Systems Interoperability, sponsored a conference in order to pursue SBA execution. One panel in that conference focused on expressing the business case for SBA by way of establishing the rationale for executive commitment to SBA practices.

Using an operational definition of business case (i.e., an expression of how some given practice may be perceived as appropriate by the relevant stakeholders and thereby support their judgment to commit to the practice), the panel was tasked to explore "making the business case" for SBA. Although composed primarily of Defense executives, the panel considered the perspectives, perceptions and incentives of government and private industry organizations and agents,

Defence Analysis focused on the necessity of commitment to SBA by senior management officials at the "top of the shop." Finally, Lt. Col. Scott Ley of the UASF Electronic Systems Command provided suggestions for building the business case through action and success on current efforts.

Naturally, there is not enough room here to convey the conference proceedings, although details may be obtained from the sponsoring organization, the National Defense Industrial Agency (NDIA), or from me. Certainly, this SBA Conference is not the only forum in which the business practices associated with the aggressive use of modeling and simulation are being pursued—there will, for instance, be considerable attention on the subject at the Summer Computer Simulation Conference (SCSC 2001) in Orlando on 15-19 July. Nevertheless, this conference event was used with good effect to explore one significant facet of the economics of M&S—namely, the business case for SBA.

What opportunities exist, and what opportunities can we cause to exist, to establish a consensus and fruitful appreciation of the economics of modeling and simulation?

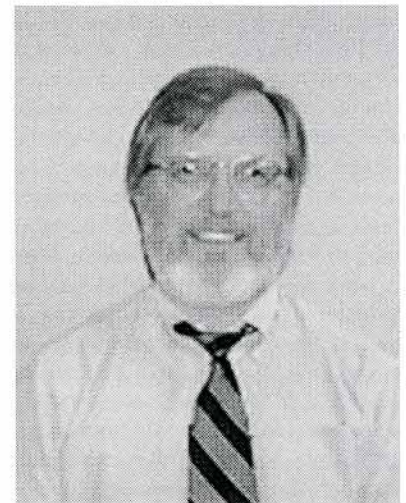
acquisition phases and programs" for military systems procurement and product life-cycle management. This practice involves the intimate and deliberate use of simulation and associated synthetic environments throughout the objective-system lifecycle. SBA is intended to manifest forms of distributed collaborative enterprise among stakeholders that heretofore have been impossible and that hereafter are hoped to become commonplace as the basis of significant economies of operation. While the SBA initiative is intentionally related to military systems acquisition, its characteristic dependence on modeling and simulation and its implementation as a Government and Industry collaborative effort, make it much more broadly significant.

Concerned about what forms of "enablement" are necessary and sufficient to support the effective adoption of such practices, Dr. V. Garber, the Deputy Under Secretary

system users, developers, and evaluators, technologists, systems analysts, program managers, contract specialists, financiers, and procurement executives alike.

The concerns, and "good ideas" offered by the panelists and raised in Q&A exchanges with the audience were certainly comprehensive and insightful—they were also obviously relevant not just to defense systems acquisition but to application of M&S to support the commercial product system life cycle as well. Dr. Hank Dubin with the Office of the Assistant Secretary of the Army emphasized the program manager's dilemma in understanding what tangible benefit will be recovered from any investment in M&S. Rick Cozby of the Army Developmental Test Command proceeded to identify practical strategies for business case specification by program managers derived in the course of research published in the Fall 2000 *Acquisition Quarterly Review*. Dr. Robin Miller of the UK's Centre for

What other opportunities exist? What opportunities can we cause to exist to establish a consensus and fruitful appreciation of the economics of modeling and simulation? Let us hear your comments and suggestions.



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