MSIAC M&S Newsletter

April 2006

The Modeling and Simulation Information Analysis Center (MSIAC) M&S Newsletter is now available as an automatic service. Simply send an email to digest-subscribe@pan.msiac.dmso.mil to be added to our mailing list. This list is for the Newsletter only and will not be used for any other purpose. Please note that it is not necessary to subscribe each month.

If you would like to submit an article to be highlighted in the *MSIAC M&S Newsletter*, please forward the article (along with its source data and URL, if available) to the MSIAC Help Desk no later than 15 workdays prior to the publication of the next Newsletter. Normally, the Newsletter is published on/about the first of each month. Potential articles as well as questions or comments on the Newsletter can be emailed to msiachelpdesk@msiac.dmso.mil.

The MSIAC also publishes the quarterly *MSIAC Journal On-line*. If you would like to see the current issue of the *MSIAC Journal On-line* visit: http://www.msiac.dmso.mil/journal. If you would like to submit an article for the Journal On-line, please email your paper or article to msiachelpdesk@msiac.dmso.mil at least 45 days prior to the next publication date.

UPCOMING EVENTS

11-13 April 2006
Modeling and Simulation Staff Officer Course (MSSOC)
Wright-Patterson, AFB, OH

17-21 April 2006
Defense & Security Symposium 2006
Kissimmee, FL

18-21 April 2006
7th Annual NDIA Science & Technology Conference & DoD Tech Expo
Lake Buena Vista, FL

27-28 April 2006
US-ROK Defense Modeling & Simulation Workshop
Seoul, Korea

1-5 May 2006
DoD Modeling and Simulation Conference
Baltimore, MD

2-3 May 2006
2006 Spring PC-based Simulation Working Group Meeting
Las Vegas, NV

4 May 2006
Navy Technical Interchange Meeting (TIM)
Baltimore, MD

15-18 May 2006
15th Conference on Behavior Representation in Modeling & Simulation (BRIMS)
Baltimore, MD

16-18 May 2006
17th International Training and Education Conference (ITEC) 2006
London, UK

28-31 May 2006
20th European Conference on Modeling & Simulation ECMS 2006
Bonn, Germany

29-31 May 2006
SimTecT Simulation and Training Conference 2006
Melbourne, Australia

DoD MODELING AND SIMULATION CONFERENCE, 1-5 MAY 2006, BALTIMORE, MD

The Department of Defense (DoD) M&S Conference is the seminal conference bringing together government and military executives, strategic planners, and senior technical managers to enable the DoD M&S community to develop a common view of the state of M&S practice, expose members to the broader M&S community needs (shortfalls, issues, and challenges), and examine M&S gaps associated with policies, procedures, and practices within DoD. The conference also serves as an important forum for discussing and coordinating future plans, goals, and programs within the DoD M&S community.

The DoD M&S Conference will be divided into two parts. The first part of the conference will focus on the Joint perspective to include an in-depth assessment of the M&S "State of the Practice" as well as a technical exchange on cross-cutting M&S issues. The second part of the conference will emphasize the Component-specific perspective. The conference agenda will include presentations by Senior Government leaders and representatives of key DoD M&S programs. For more information visit: http://www.msiac.dmso.mil/mscalendar/month.php?cid=&catid=&m=5&y=2006

RIBBON CUT FOR NEW JOINT TECHNOLOGY EXPLORATION CENTER

(SUFFOLK, Va. - April 10, 2006) - Government and military personnel gathered here today for a ribbon-cutting ceremony to mark the opening of U.S. Joint Forces Command's (USJFCOM) Joint Technology Exploration Center (JTEC).

The new 104,000 square foot facility helps reduce spending for large-scale training exercises by conveying the latest in modeling and simulation (M&S) training straight to the members in the field.

USJFCOM Deputy Commander Army Lt. Gen. John R. Wood and Joint Warfighting Center Commander and Director for Joint Training Marine Corps Maj. Gen. Jon Gallinetti both spoke during the ceremony attended by local civic and military leaders.

The facility houses the Joint Advanced Training Technology Laboratory (JATTL), an environment where scientists and engineers can work together to develop, evolve and certify M&S products that increase our forces' tactical effectiveness. The lab delivers these products and technologies directly to commanders in the field, offering added intelligence and information to improve warfighting capabilities.

"It is about being born joint so that the joint warfighter of the future does not have to resolve the differences between systems and the difficulties between commands on the field of battle in times of stress. It's best to do that here at a place like JTEC where we build joint and produce solutions immediately, early and available to joint warfighters," said Wood.

The command established the center so experts can share and evaluate new ideas, saving time and money for the military. This allows for safety improvements for our forces and better training opportunities.

"The JTEC represents a shared environment between researchers and engineers and allows them to work together on simulation and modeling," Gallinetti said. "Modeling those products and support efforts to increase our forces' effectiveness for engaging in the global fight on terrorism." For original article visit: http://www.jfcom.mil/newslink/storyarchive/2006/pa041006.htm

SOLDIERS LEARNING ART OF BODY LANGUAGE IN SIMULATIONS

(ST.LOUIS, Mo.) - An aid to soldiers and students, unspoken gestures can speak volumes and are gaining acceptance from researchers for accurately revealing how people think.

"It tells you what people have in their heads. As such, it is a clear window into what they're thinking," said Justine Cassell, a

professor of media technology and society at Northwestern University.

In Iraq, Afghanistan and elsewhere, this knowledge has found its way into a video game and training program the Pentagon uses to give soldiers a crash course in how to speak and gesture like the people they run across.

"Many of the conflicts in the world today could be avoided if people could communicate better," said Hannes Vilhjalmsson, a research scientist at the University of Southern California. Vilhjalmsson helped create the Tactical Iraqi and similar simulation programs with money from the Defense Department.

Details were presented Friday at the annual meeting of the American Association for the Advancement of Science.

The programs place soldiers in simulated, three-dimensional Middle Eastern environments and expose them to a variety of social situations.

The soldiers can interact with residents after learning basic language and gesturing skills. The residents react according to how well or poorly a soldier handles a situation.

A single woman will turn away - and a nearby group of men bristle - if a soldier charges up to her. Young children will warm to a soldier who stoops to their level and removes his sunglasses before asking simple questions, Vilhjalmsson said in displaying the program.

"They are building an impression of you as you interact with them," he said. Simple motions are important, such as placing a hand over the heart in greeting.

"Gesturing is not merely hand-waving. It conveys substantive information - thoughts that often are not conveyed in words," said Susan Goldin-Meadow, a professor of psychology at the University of Chicago. In the classroom, her work has shown that students who mimic a math teacher's gestures learn new problem-solving strategies more quickly than do their peers who do not gesture.

When researchers asked children and adults to do two things at once - solve a math problem and remember a short list of words - those who gestured outperformed others who did not. For original article visit: http://ebird.afis.mil/ebfiles/e20060308421322.html

VIRTUAL ENVIRONMENT SOFTWARE SANDBOX (VESS) 4.1.0 RELEASED

VESS is a suite of libraries based on lessons learned from years of virtual environment research and is used to create the software for various virtual reality research applications at UCF/IST.

The goal of VESS is to provide an application base that is useful and functional using today's hardware and graphics and audio libraries, extensible to support future hardware and software libraries, and easily portable to multiple platforms, graphics and audio systems, and application programming interfaces (API's). VESS 4.1.0 adds support for the PhaseSpace Motion Digitizer, native support for all Intersense motion tracking devices, a new "first person shooter" like motion model, a particle system class, and the OpenGL shading language (GLSL). For complete article visit: http://vess.ist.ucf.edu/

SPAWAR, CUBIC CORPORATION, TO DEVELOP WEAPONS THREAT ASSSESSMENT SOFTWARE

(SAN DIEGO, Ca. - March 23, 2006) - The defense segment of Cubic Corporation will develop new software tools for the U.S. Space and Naval Warfare Systems Command (SPAWAR), to help the U.S. military prepare for enemy attacks involving chemical, biological, radiological and nuclear (CBRN) weapons.

Cubic will design, develop, test and support the fielding of the new software applications for the Joint Operational Effects Federation (JOEF) program. Ultimately, the Department of Defense (DoD) and all branches of the U.S. Armed Forces will use the JOEF tools to assess and plan for CBRN threats to U.S.

military air, land, and sea operations.

"The JOEF software is going to revolutionize the way the Department of Defense conducts CBRN preparation activities," said Dr. Tom Stark, principal scientist for Cubic's Threat Technologies Division in Kingstowne, Virginia. "The software will standardize and automate estimating processes, and also add analytical underpinning."

Cubic personnel in Kingstowne and San Diego will work with both DoD and all in-theater combatant commands to determine user requirements. Cubic is expected to deliver a base set of networked, collaborative modeling, analysis and workflow management tools during the first two years of the program. These tools will help DoD and service users formally assess CBRN impacts from an opposing military force, so planners can coordinate logistics support to prepare for the threats.

"The planning process now is fairly non-analytical and based on the subjective judgments of each service," Stark said. "The new tool will automate the planning process, and offer modeling and simulation tools to improve analysis. It will also drive a standardization of the planning process among all branches of the armed forces."

In addition to military operations, the JOEF software could eventually be used in computer-based simulations used for training combat forces. For original article visit: http://www.asd-network.com/press_detail_B.asp?ID=7296

DoD's MODELING AND SIMULATION REFORM IN SUPPORT OF ACQUISTION

Modeling and simulation - M&S - has long been touted by the Department of Defense as being among its primary methods for reducing time to market for defense systems and reducing the cost of these systems at the same time. The following statement is contained in a letter dated March 21, 2000, addressed to the Office of the Secretary of Defense, Service Secretaries, the Defense Intelligence Agency, and the Joint Chiefs of Staff; it is cosigned by the Under Secretary of Defense (Acquisition, Technology and Logistics) (USD(AT&L)) and the Director, Operational Test and Evaluation, (DOT&E): "We have stressed that we must make better use of modeling and simulation (M&S) to improve the acquisition process, reduce costs, enhance T&E [test and evaluation], and shorten development times for our new systems. We are convinced that efficient use of M&S throughout the system life cycle will net great dividends in efficiencies."

Few people would argue that M&S is not an important element in the acquisition process. The question is this: Has there been progress within DoD to efficiently organize, fund, develop, promulgate, and maintain configuration control of the DoD's massive and diverse M&S activities to yield the efficiencies so clearly stated in the letter quoted above? Estimates for how much is spent annually on M&S in the DoD range from $5 billion to $30 billion, depending on how one defines M&S. Some of this is spent on M&S in support of training. The majority of the funds, however, are spent in support of the research, development, test, and evaluation of new defense acquisition programs.

In an article in the July 2005 issue of National Defense Magazine, David W. Duma, the Pentagon's Acting Director, Operational Test and Evaluation, wrote that "the Defense Department needs to better manage its simulation programs. I think we've kind of lost our way as a department with modeling and simulation. Multiple agencies are buying duplicate technologies, rather than coordinating efforts. We are using more modeling and simulation. But it's not focused, it's scattered. Everybody is building their own." For complete article from Defense AT&L Magazine, March-April 2006, visit: http://www.dau.mil/pubs/damtoc.asp

COMMANDER, CONGRESSMAN WELCOME ATTENDEES TO INDUSTRY SYMPOSIUM 2006

(HAMPTON, Va. - April 4, 2006) - Key civil and military leaders briefed more than 500 attendees at Industry Symposium 2006 at the Hampton Roads Convention Center here today.

Commander, U.S. Joint Forces (USJFCOM) Command Air Force Gen. Lance Smith and Rep. J. Randy Forbes (R-Va.) addressed the group of industry leaders about the command's relationship with industry to open the two-day event.

The symposium is the sixth co-sponsored by USJFCOM and the Hampton Roads Chapter of the National Defense Industrial Association. The theme for this year's event is "Building Knowledge for the Warfighter," focusing on situational awareness and understanding in joint, coalition, and interagency operational environments.

Smith spoke first, outlining how partnering with industry helps the command accomplish its mission of transforming the military, while delivering capabilities to the warfighter. Topics he touched on included enabling technologies to support joint, coalition, and interagency operations, modeling and simulation, and training, among others.

Smith emphasized technological solutions for the warfighter must be "born joint," meaning they should be designed from the initial planning stages for use by all the services, rather than having each service develop its own solutions and then try to make them work together after the fact. He cited his previous experience as deputy commander of U.S. Central Command as an example.

"We can't continue to do what we did in Iraq," Smith said, "where people brought systems into the battlespace, and the next thing we had to do was figure out how to make those systems talk to each other." For complete article visit: http://www.jfcom.mil/newslink/storyarchive/2006/pa040406b.htm

M&S CAUCUS ANNOUNCES SUMMARY REPORT OF FIRST ANNUAL LEADERSHIP SUMMIT

The Congressional Modeling & Simulation Caucus is pleased to announce the findings of the National Training Systems Association (NTSA) First Annual Modeling and Simulation Leadership Summit held in Suffolk, Virginia earlier this year.

The summit brought together professionals from government, industry, and academia, all of who have a long-term interest in modeling and simulation. Over 350 delegates gathered together to discuss and identify the strategic needs for the future advancements in the modeling and simulation industry.

Roundtable discussion groups were divided into four categories: Industrial Development, Business Practice, Professional Development and Technology. The roundtable discussions were considered a huge success among participants, and those present universally agreed that government, industry, and academia must share the burden of moving modeling and simulation forward.

Congressman Forbes (VA-04), in conjunction with the Congressional Modeling & Simulation Caucus, has already begun to implement recommendations included in the NTSA summary report of the event. Progress towards implementation of the recommendations will be reported in future newsletters. Additionally, Congressman Forbes will be discussing the Summit outcomes during the USJFCOM Industry Symposium on April 4th in Hampton, VA. For complete article visit: http://www.house.gov/forbes/documents/PostSummitLetter.pdf

The MSIAC Newsletter is compiled from various news sources, periodicals, and reports and is offered as a service by the Modeling and Simulation Analysis Center (MSIAC) solely for informational purposes. For comments and questions please send an email to msiachelpdesk@msiac.dmso.mil.